

INNOVATION AND LITIGATION: TENSIONS BETWEEN UNIVERSITIES AND PATENTS AND HOW TO FIX THEM

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ABSTRACT

Universities that own patents have a problem. While nearly all are keen to enhance their revenue generated from patents, few are eager or prepared to enforce them in court, alone or with their exclusive licensees, should a third party deploy a product or process covered by a university-owned patent. Yet strict prudential standing requirements imposed by the United States Court of Appeals for the Federal Circuit (“CAFC”) effectively require university participation as plaintiffs in enforcement lawsuits over their exclusively licensed patents, regardless of a university’s effective ability or enthusiasm to participate in a given action. Supported by forty years of lawsuit data and original survey and interview data collected from high-level administrators at universities that litigate patents, this Article explores in depth the complicated legal and policy tensions presented by university participation as plaintiffs in patent infringement litigation.

I offer two proposals for alleviating these tensions. The first proposal urges universities to move toward a coherent position on patent ownership and enforcement, particularly in light of recent trends in higher education finance. The second proposal outlines a potential legislative amendment to the Patent Act that would allow universities to enjoy the revenue-generation aspect of patent ownership while freeing them from the legal compulsion to participate as co-plaintiffs with their exclusive licensees in enforcement actions. This novel tweaking of the CAFC’s prudential standing requirement would save universities untold time and money that they currently spend pursuing litigation. By permitting universities to focus more on innovation and less on litigation, this proposal also would better align societal

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*expectations for university commercialization efforts with the
public interest.*

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INTRODUCTION

Universities that own patents have a problem. While nearly all are keen to enhance their patent licensing activity and revenue generated from patents, few are willing or prepared to enforce them in court, alone or with their exclusive licensees, should a third party deploy a product or process covered by a university-owned patent. Yet strict prudential standing requirements imposed by the United States Court of Appeals for the Federal Circuit (“CAFC”) effectively require university participation as plaintiffs in enforcement lawsuits over their exclusively licensed patents, regardless of a university’s effective ability or enthusiasm to participate in a given action.

Supported by forty years of lawsuit data and original survey and interview data collected from high-level administrators at universities that litigate patents, this article explores in depth the complicated legal and policy tensions presented by university participation as plaintiffs in patent infringement litigation. On the one hand, universities understandably are hesitant to take assertive postures in patent enforcement actions—given the financial and reputational costs such activity often entails—yet prevailing law conspicuously fails to account for this hesitancy. On the other hand, a patent is a government-granted right to sue, and universities’ reluctance to enforce their patents when warranted risks disrupting incentives inherent in the technology transfer system into which billions of federal research dollars are poured annually.

The attendant policy quandaries for university commercialization activities are many. How much involvement in enforcement activity are universities willing to bear? How much involvement in enforcement activity should a society intent on encouraging university research and innovation *want* universities to bear? The empirically supported answers to the first set of questions (i.e., not much) are poles apart from what the patent law requires of universities concerning enforcement activity (i.e., involvement as named plaintiffs in most instances). Meanwhile, normative responses to the second question are potentially varied, further challenging patent law’s capacity to reflect and encourage policies that further innovation.

A few guiding words on what follows. Part I introduces the relevant legal and policy tensions by first reviewing the judicial development of a prudential standing requirement for owners of exclusively licensed patents. I argue that the judicial rationale for this restrictive standing requirement is poorly suited to university patent owners, who suffer from the misfit. Part I then reviews legal

data and information on the historical involvement of universities as plaintiffs in patent infringement actions, and includes a discussion of the activity's unique consequences for universities.

Part II presents results from an original study conducted in 2011 of high-level administrators at universities that litigate patents.¹ Drawing on survey and interview data, this Part summarizes key findings as they relate to institutional policies and beliefs concerning the enforcement of patents through infringement litigation. Part II concludes with empirically based descriptions of the two major university approaches to patent infringement litigation. This schema—which describes most universities as somewhat erratic in their approaches to patent infringement litigation—provides footing for the policy and legal proposals advanced in Parts III and IV.

Part III advances the broad policy proposal that universities should move toward a coherent position concerning their ownership and enforcement of patents. In addition to articulating the adverse consequences of the current *ad hoc* approach toward enforcement followed by most universities, this Part discusses the imperative for universities to reframe their understanding of patents, as well as how their development of appropriate decisional infrastructures concerning patent enforcement could lead to improvements in their enforcement behaviors.

Finally, Part IV proposes a legislative amendment to the Patent Act that would allow universities to enjoy a principal upside of patent ownership (i.e., revenue generation), while also enjoying enhanced freedom to decline formal involvement in one of the biggest downsides to patent ownership (i.e., occasional involvement with exclusive licensees in enforcement actions). This novel tweaking of the patent enforcement paradigm would save universities untold time and money that they currently spend pursuing litigation. By permitting universities to focus more on innovation and less on litigation, this proposal would also better align societal expectations for university commercialization efforts with the public interest.

¹ This study was undertaken for my Ph.D. dissertation. See Jacob H. Rooksby, *Universities That Litigate Patents* (May 2012) (unpublished Ph.D. dissertation, University of Virginia) (on file with author). This Article is the first publication of the study's findings. Portions of the Article are adapted from the dissertation.

I. UNIVERSITY PARTICIPATION AS PLAINTIFFS IN PATENT INFRINGEMENT LAWSUITS

A. *CAFC Case Law Affecting University Participation*

1. *Legal Push or Market Pull?*

Patent infringement litigation is notoriously complex and expensive.² Involvement in such litigation can cost universities hundreds of thousands of dollars or more,³ and is in some cases correlated with a quantifiable decrease in the number of licensing deals they enter into with industry.⁴ University involvement as plaintiffs in patent infringement lawsuits also has the potential to alienate donors, upset politicians with ties to defendants, and potentially cause universities to be seen as undermining their public-service values.⁵ In light of these potential concerns, one might reasonably ask: What motivates universities to litigate their patents? This seemingly simple question has a multitude of potential answers. Universities might litigate to protect their investments in patents, to support commercialization efforts by

² See Colleen V. Chien, *From Arms Race to Marketplace: The New Complex Patent Ecosystem and Its Implications for the Patent System*, 62 HASTINGS L.J. 297 (2010) (discussing new litigation complexities and increased costs in the patent ecosystem).

³ A 2010 survey of U.S. law firms that specialize in intellectual property found that for patent infringement lawsuits with less than \$1 million at risk, the mean cost for one party to take a case through the end of the pre-trial period was \$490,000; further, the total mean cost for one party to take its case through trial and any appeal was \$916,000. AMERICAN INTELLECTUAL PROPERTY LAW ASSOCIATION, LAW PRACTICE MANAGEMENT COMMITTEE, REPORT OF THE ECONOMIC SURVEY I-153 (2011) [hereinafter AIPLA]. For lawsuits with \$1 million to \$25 million at risk, the mean costs rose to \$1,633,000 and \$2,769,000, respectively. *Id.* at I-154. For lawsuits with over \$25 million at risk, the mean costs were \$3,553,000 and \$6,018,000, respectively. *Id.*

⁴ Scott Shane & Deepak Somaya, *The Effects of Patent Litigation on University Licensing Efforts*, 63 J. ECON. BEHAV. & ORG. 739 (2007) (reporting statistically significant decrease in the number of new patent licenses executed by universities in years following involvement in patent litigation).

⁵ See generally James J. Duderstadt, *Delicate Balance: Market Forces Versus the Public Interest*, in BUYING IN OR SELLING OUT? THE COMMERCIALIZATION OF THE AMERICAN RESEARCH UNIVERSITY 56-74 (Ronald G. Stein ed., 2004) (noting the tension between universities' historic commitment to the public good and their growing embrace of market values and practices with patents); Mark A. Lemley, *Are Universities Patent Trolls?*, 18 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 611, 615-18 (2008) (noting industry sentiment that universities seem greedy when it comes to patents, in part because of their emergent interest in enforcing patents through infringement litigation).

their licensees, or even—perhaps controversially—to generate revenue.

While Part II of this Article empirically explores these and other potential answers, perhaps the more important antecedent question is a narrower, legal one: Must universities that own patents litigate them? As with nearly every challenging legal question, the answer is, “It depends.” In this instance, it depends on what the university has done with the patent in question. If the university has not licensed the patent, the university alone can determine whether to bring an infringement lawsuit, and could very well decide never to sue.⁶

But most university-owned patents are licensed patents. One of the primary goals of universities seeking patents is to commercialize inventions that their patents describe through negotiating advantageous agreements with industry. For universities with licensed patents, the answer to the question, “Must universities that own patents litigate them?” is complicated. In these instances, in fact, the decision whether to participate as a plaintiff in a patent infringement action does not rest with the university alone, assuming the patent has been licensed exclusively.⁷ A university can be bound both by private law—through contract with its exclusive licensee—and by public law—through CAFC interpretation of patent law—to participate in any enforcement action.⁸

Presumably society should not care if a university contracts to participate as a plaintiff with its licensee in any infringement lawsuit and then is ordered by a court to uphold the contract by participating in such an action. Freedom of contracting is generally regarded as good for industry and competition, and university technology transfer offices (“TTOs”) have demonstrated their ability to enter into all varieties of arms-length agreements without external intervention.

⁶ As further described in this Section, many universities that own unlicensed patents choose to litigate them. The reasons can vary. Perhaps a would-be licensee refuses to take a license to the patent, but decides to use technology covered by the patent. Or perhaps the university decides to deploy an assertion licensing strategy—sue first, license later—for fear of triggering a declaratory judgment action brought by the would-be licensee (potentially in an unfavorable jurisdiction) if the university sends it a letter suggesting that it might want to license one of the university’s patent.

⁷ For patents licensed non-exclusively, only the university has standing to sue for infringement. *See Sicom Sys. Ltd., v. Agilent Techs., Inc.*, 427 F.3d 971, 976 (Fed. Cir. 2005) (“A nonexclusive license confers no constitutional standing on the licensee to bring suit or even to join a suit with the patentee because a nonexclusive licensee suffers no legal injury from infringement.”).

⁸ *See* Megan M. La Belle, *Patent Law As Public Law*, 20 GEO. MASON L. REV. 41 (2012) (describing the public ramifications of private rights granted through patents).

But what if a university does not contract to participate in any infringement lawsuit brought by its exclusive licensee, and yet is still required by law to participate? One might perceive little societal justification for forcing universities to litigate their patents, given the innovative research activities they are much better suited and expected to undertake. Yet in fact, universities have far less flexibility in this situation than one might expect. The explanation for this incongruity involves restrictive judicial imposition of standing rules in patent infringement cases.

2. *Patent Licenses, Patent Assignments, and the “All Substantial Rights” Inquiry*

Determining who has standing to sue for infringement of a patent, and which parties must participate in any such action, requires identifying the patentee and discerning which rights the patentee and others may have in the asserted patent, whether by license or by assignment.⁹ “Patentee” is simply the legal word for patent owner, although the Patent Act rather circularly defines it as “includ[ing] not only the patentee to whom the patent was issued but also the successors in title to the patentee.”¹⁰ According to the Patent Act, a “patentee shall have remedy by civil action for infringement of his patent.”¹¹

The U.S. Supreme Court has issued two decisions, both of which substantially predate the current Patent Act, that provide the framework by which the CAFC has interpreted and developed a prudential standing requirement in lawsuits involving allegations of patent infringement. In an 1891 case, *Waterman v. Mackenzie*,¹² the Court determined that if a patent owner licenses his patent,

the title remains in the owner of the patent; and suit must be brought in his name, and never in the name of the licensee alone, unless that is necessary to prevent an absolute failure of justice, as where the patentee is the infringer, and cannot sue himself. Any rights of the licensee must be enforced through or in the name of the owner of the patent, and perhaps, if

⁹ See Timothy Denny Greene, “*All Substantial Rights*”: *Toward Sensible Patent Licensee Standing*, 22 FED. CIR. B.J. 1, 1 (2012) (calling this inquiry “easy to state, but difficult to apply”).

¹⁰ 35 U.S.C. § 100(d) (2006).

¹¹ 35 U.S.C. § 281 (2006).

¹² 138 U.S. 252 (1891).

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necessary to protect the rights of all parties,
joining the licensee with him as a plaintiff.¹³

Over thirty years later, the Court had occasion to further expound on competing interests in patent rights in *Independent Wireless Telephone Company v. Radio Corporation of America*.¹⁴ In that case, the Court explained its creation of a prudential standing requirement that exclusive licensees may not sue for infringement without joining the patent owner. It reasoned that

[t]he presence of the owner of the patent as a party is indispensable not only to give jurisdiction under the patent laws but also, in most cases, to enable the alleged infringer to respond in one action to all claims of infringement for his act, and thus either to defeat all claims in the one action, or by satisfying one adverse decree to bar all subsequent actions.¹⁵

The CAFC further interpreted this prudential standing requirement in a line of cases dating back to 1991. The relevant inquiry typically concerns whether a given agreement is an assignment of all substantial rights to a patent, or is instead an exclusive license to less than all substantial rights to the patent.¹⁶ In the first such case, *Vaupel Textilmaschinen KG v. Meccanica Euro Italia S.P.A.*, the defendant alleged in the district court that plaintiffs were merely licensees of the patent in suit, and as such, did not have standing to bring an infringement action without joinder of the party to whom the patent in suit originally issued.¹⁷ The district court concluded that plaintiffs were assignees of the patent in suit, not licensees, and accordingly joinder of the party to whom the patent in suit originally issued was not required. The

¹³ *Id.* at 255.

¹⁴ 269 U.S. 459 (1926).

¹⁵ *Id.* at 468. The Court noted one exception to this rule: “If the owner of a patent, being within the jurisdiction, refuses or is unable to join an exclusive licensee as coplaintiff, the licensee may make him a party defendant by process, and he will be lined up by the court in the party character which he should assume.” *Id.* Before this exception can be applied, however, the patentee must be given the opportunity to join the infringement action.

¹⁶ This Section reviews arguably the three most important of these cases. For a more comprehensive review of relevant cases, see Greene, *supra* note 9; and Jeffrey L. Newton, *Assuring All Substantial Rights in Exclusive Patent Licenses*, 44 LES NOUVELLES 235 (2009).

¹⁷ *Vaupel Textilmaschinen v. Meccanica Euro Italia*, 944 F.2d 870, 873 (Fed. Cir. 1991).

CAFC upheld this finding. Citing *Waterman*, the CAFC observed that “To determine whether a provision in an agreement constitutes an assignment or a license, one must ascertain the intention of the parties and examine the substance of what was granted.”¹⁸ In so doing, the CAFC noted an edict from the *Waterman* case: that “[w]hether a transfer of a particular right or interest under a patent is an assignment or a license does not depend upon the name by which it calls itself, but upon the legal effect of its provisions.”¹⁹ That is to say, calling an agreement a license or an assignment does not make it one. The actual substance of the rights conveyed is determinative. “All substantial rights” to the patent must be conveyed, with surrounding circumstances indicating the intent to do so.²⁰

In reviewing various contracts between plaintiffs and the patentee to whom the patent originally issued, the *Vaupel* court noted that the latter maintained the following rights: (1) a veto right on any sublicensing by plaintiffs; (2) the right to seek patent protection on the subject invention in countries outside the United States; (3) a reversionary right to the patent in suit in the event plaintiffs filed for bankruptcy protection or terminated production of the product covered by the patent; and (4) the right to receive a portion of any damages returned in an infringement lawsuit brought by plaintiffs.²¹ In reviewing these retained rights, the CAFC concluded that none “was so substantial as to reduce the transfer to a mere license or indicate an intent not to transfer all substantial rights.”²²

The *Vaupel* court also inspected those rights that plaintiffs obtained in the transfer. Notably, they received the right to sue for any past, present, or future infringements of the patent, subject only to the obligation to inform the original patentee of any lawsuit they brought. The CAFC deemed the conveyed right to sue for infringement “particularly dispositive.”²³ It reached this conclusion by explaining the policy concern of a legal regime in which a patent owner could decline to join its exclusive licensee in an infringement action: in such a world, a single infringer unfairly would be susceptible to two suits alleging infringement of the same patent—precisely the prudential standing concern raised by the Supreme Court in *Independent Wireless*.²⁴ Such would not be the

¹⁸ *Id.* at 874.

¹⁹ *Id.* at 875 (quoting *Waterman v. Mackenzie*, 138 U.S. 252, 256 (1891)).

²⁰ *Id.* at 874.

²¹ *Id.* at 875.

²² *Id.*

²³ *Id.*

²⁴ *Id.*

risk, the CAFC determined, based on the rights assigned between the parties in *Vaupel*.²⁵

The CAFC further applied the tenets of the *Vaupel* decision in a case it decided in 1995, *Abbott Laboratories v. Diamedix Corporation*.²⁶ The dispute involved an attempt by Diamedix, as original patentee of the patents in suit, to intervene as a party plaintiff in an infringement lawsuit brought by its exclusive licensee Abbott against Ortho Diagnostic Systems, Inc. The district court denied Diamedix's motion to intervene, despite the defendant's support of the motion.²⁷ The CAFC reversed.

Examining the relevant documents between the parties, the CAFC determined that Abbott was a licensee, not an assignee, of the patents in suit—i.e., that less than “all substantial rights” to the patents in suit had been transferred. Of particular relevance to the court in making this determination were the facts that “Diamedix retained a limited right to make, use, and sell products embodying the patented inventions, a right to bring suit on the patents if Abbott declined to do so, and the right to prevent Abbott from assigning its rights under the license to any party other than a successor in business.”²⁸ While Abbott enjoyed the right to bring an infringement action under its agreement with Diamedix, the court noted that, “it does not enjoy the right to indulge infringements, which normally accompanies a complete conveyance of the right to sue.”²⁹ Thus, in order not to expose the defendant to “the risk of multiple litigation or obligations,”³⁰ and so as not to prejudice Diamedix's interest in its ownership of the patents in suit, the court remanded the case for joinder of Diamedix under Federal Rule of Civil Procedure 19(a) as a required party.³¹

In a subsequent case, *Speedplay, Inc. v. Bebop, Inc.*,³² the CAFC made clear that simply retaining the right to sue for infringement does not automatically mean that “all substantial

²⁵ The court noted this outcome was consistent with Federal Rule of Civil Procedure 19(a), which concerns joinder. Complete relief could be accorded among those already parties to the case, and there was no risk of a party incurring double obligations. *Id.* at 876.

²⁶ 47 F.3d 1128 (Fed. Cir. 1995).

²⁷ *Id.* at 1130. Diamedix moved to intervene as a matter of right under Federal Rule of Civil Procedure 24(a)(2) or, in the alternative, under FED. R. CIV. P. 24(b), which permits courts to allow permissive interventions. The defendant noted that Diamedix may have been an indispensable party under FED. R. CIV. P. 19. *Id.*

²⁸ *Id.* at 1132.

²⁹ *Id.*

³⁰ *Id.* at 1133.

³¹ FED. R. CIV. P. 19(a).

³² 211 F.3d 1245 (Fed. Cir. 2000) (finding all substantial rights had been transferred and that plaintiff had standing to sue without addition of original patentees as co-plaintiffs).

rights” to a patent have *not* been transferred.³³ The case involved a purported transfer of patent rights between the original patentees and the ultimate plaintiff (*Speedplay*) in an infringement lawsuit. The original patentees retained the right to initiate an infringement action in their own names if *Speedplay* declined to do so. Distinguishing the facts in *Abbott*, the court determined that the original patentees’ retained right was “illusory, because *Speedplay* can render that right nugatory by granting the alleged infringer a royalty-free sublicense.”³⁴ In *Abbott*, by comparison, the original patentee was entitled to receive royalty payments on any sublicense granted by the licensee.³⁵ Thus, while “the nature and scope of the licensor’s retained right to sue accused infringers is the most important factor in determining whether an exclusive license transfers sufficient rights to render the licensee the owner of the patent,”³⁶ *Speedplay* suggests that a retained right to sue does not automatically mean that less than “all substantial rights” to the patent have been conveyed.

3. *Asymmetric Results*

The CAFC’s decisions in *Vaupel*, *Abbott*, and *Speedplay*, as well as several subsequent cases,³⁷ provide the underpinning for

³³ *Id.* at 1251.

³⁴ *Id.*

³⁵ Additionally relevant were the facts that the original patent owners in *Speedplay* did not enjoy the right to practice the patent or the right to participate in any infringement action brought by *Speedplay* (nor could they help manage any such action). *Id.*

³⁶ *Alfred E. Mann Found. for Sci. Research v. Cochlear Corp.*, 604 F.3d 1354, 1361 (Fed. Cir. 2010) (holding that the plaintiff’s exclusive license transferred to licensee substantially less than the complete right to sue, that the plaintiff’s retained right to sue was significant, and that the license agreement was therefore not a virtual assignment).

³⁷ *See, e.g., Aspek Eyewear, Inc. v. Miracle Optics, Inc.*, 434 F.3d 1336, 1344 (Fed. Cir. 2006) (“For the same policy reasons that a patentee must be joined in any lawsuit involving his or her patent, there must be joinder of any exclusive licensee.”); *Sicom Sys. Ltd., v. Agilent Techs., Inc.*, 427 F.3d 971, 979 (Fed. Cir. 2005) (finding all substantial rights had not been transferred where licensee could not “indulge infringers outside of the ‘commercial’ sphere,” i.e., where licensor retained right to sue noncommercial infringers); *Intellectual Prop. Dev., Inc. v. TCI Cablevision of Cal., Inc.*, 248 F.3d 1333, 1348 (Fed. Cir. 2004) (“As a prudential principle, an exclusive licensee having fewer than all substantial patent rights possesses standing under the Patent Act as long as it sues in the name of, and jointly with, the patent owner and meets [Article III standing] requirements.”); *State Contracting & Eng’g Corp. v. Condotte Amer., Inc.*, 346 F.3d 1057 (Fed. Cir. 2003) (finding all substantial rights had been transferred, even though contract conveyed right to sue for “past and present”—but did not mention future—infringements); *Prima Tek II, L.L.C. v. A-Roo Co.*, 222 F.3d 1372, 1377 (Fed. Cir. 2000) (“As a general rule, this court continues to adhere to the principle set forth in *Independent Wireless* that a patentee should be joined,

its decision in *AsymmetRx, Inc. v. Biocare Medical, L.L.C.*,³⁸ the only CAFC decision to date involving the prudential standing requirement as applied to a university patent owner. There the CAFC vacated and remanded a lower court's award of summary judgment to a defendant in a patent infringement lawsuit because the original patentee of the patents in suit (Harvard University) was not included as a plaintiff in the action. AsymmetRx, Inc., Harvard's exclusive licensee, brought an action for patent infringement against Biocare Medical, LLC, which Harvard had previously granted a commercial license to use certain antibodies later the subject of patents licensed to AsymmetRx. Under its license to the patents in suit with Harvard, AsymmetRx was to "give careful consideration to the views of Harvard and to potential effects on the public interest in making its decision whether or not to sue" for patent infringement.³⁹ Harvard retained the right to join any infringement action commenced by AsymmetRx and to jointly control any such action it joined.⁴⁰ Whether it elected to join or not, AsymmetRx could not enter into a settlement without Harvard's prior written consent.⁴¹ If AsymmetRx elected not to prosecute an infringement, Harvard retained the right to do so at its own expense.⁴²

The parties on appeal focused their arguments on the district court's finding of non-infringement by Biocare. The CAFC, however, raised what it called the "antecedent question: whether AsymmetRx had the statutory right to bring an action for infringement without joining the patent owner, Harvard."⁴³ The court held that it did not. Reviewing Harvard's contractual agreement with AsymmetRx, it found that Harvard had not conveyed all substantial rights to the patents to AsymmetRx. Comparing the facts *sub judice* with the facts presented in the court's previous decisions on point caused the court to deem the case more similar to *Abbott* than *Vaupel* or *Speedplay*.⁴⁴ In particular, the court noted that AsymmetRx lacked the ability to

either voluntarily or involuntarily, in any infringement suit brought by an exclusive licensee. However, this general rule—which we recognize as being prudential rather than constitutional in nature—is subject to an exception. The exception is that, where the patentee makes an assignment of all substantial rights under the patent, the assignee may be deemed the effective 'patentee' under 35 U.S.C. § 281 and thus may have standing to maintain an infringement suit in its own name.").

³⁸ 582 F.3d 1314 (Fed. Cir. 2009).

³⁹ *Id.* at 1317.

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² *Id.*

⁴³ *Id.* at 1318.

⁴⁴ *Id.* at 1320.

“indulge infringements” of the patents under its agreement with Harvard, an ability typical of a patent assignee.⁴⁵

In one of the opinion’s concluding paragraphs, the court noted its understanding of, but lack of sympathy for, universities attempting to avoid involvement as plaintiffs in infringement litigation involving their patents. The court stated:

The provisions of the AsymmetRx License may all have met the respective needs of the parties; after all, they negotiated and executed the agreement. *They may also reflect the perceived needs of a university attempting to balance the public interest with commercializing the results of its professors’ research.* Be that as it may, in attempting to meet these goals, the contractual result is that Harvard retained substantial control over the patent rights it was exclusively licensing, such that its agreement with AsymmetRx did not convey all substantial rights under the patents and thus did not make the license tantamount to an assignment. AsymmetRx must therefore be considered a licensee, not an assignee.⁴⁶

The court vacated the grant of summary judgment in favor of BioCare and remanded, with the admonition that if Harvard declined to join the suit voluntarily as a plaintiff it could be added involuntarily as a plaintiff.⁴⁷

B. Tensions Between Universities and Patents

As review of the above cases makes clear, the prudential standing requirement for owners of exclusively licensed patents constrains the ability of such owners to avoid assertive involvement in patent infringement lawsuits involving patents to which they still maintain substantial rights. The CAFC’s rationale, rooted in Supreme Court case law, is that if a licensor could decline participation in an infringement lawsuit brought by an exclusive licensee, defendants would be unfairly susceptible to multiple lawsuits concerning the same alleged act of

⁴⁵ *Id.* at 1321 (“indulge” in this context meaning “to permit”).

⁴⁶ *Id.* (emphasis added).

⁴⁷ *Id.* at 1322.

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infringement.⁴⁸ This rationale is readily justified from the standpoint of concern for the potential behavior of for-profit companies that own and license patents. Unscrupulous companies might find incentives not to coordinate their litigation efforts precisely for the reason the CAFC fears: the ability to stick the same defendant with multiple lawsuits and perhaps multiple judgments.

However, this rationale breaks down from the standpoint of universities that own and license patents. Universities are different than for-profit actors, or at least historically have held themselves out, and sought to be viewed in court, as such.⁴⁹ They are not in the business of commercializing their patents through direct manufacturing, distribution, and marketing of any ultimate

⁴⁸ *Accord* Greene, *supra* note 9, at 9-10 (identifying the general interests behind the prudential standing requirement as ones of efficiency, economy, justice, and uniformity).

⁴⁹ *See, e.g.*, DAVID L. KIRP, SHAKESPEARE, EINSTEIN, AND THE BOTTOM LINE: THE MARKETING OF HIGHER EDUCATION 7 (2003) (“[E]mbedded in the very idea of the university—not the storybook idea, but the university at its truest and best—are values that the market does not honor: the belief in a community of scholars and a not a confederacy of self-seekers; in the idea of openness and not ownership; in the professor as a pursuer of truth and not an entrepreneur; in the student as an acolyte whose preferences are to be formed, not a consumer whose preferences are to be satisfied.”); SHEILA SLAUGHTER & GARY RHOADES, ACADEMIC CAPITALISM AND THE NEW ECONOMY: MARKETS, STATE, AND HIGHER EDUCATION 28-30 (2004) (describing the university’s historic attachment to a Mertonian-influenced conception of science as a public good, with “strong separation between public and private sectors”). *But see* DEREK BOK, UNIVERSITIES IN THE MARKETPLACE: THE COMMERCIALIZATION OF HIGHER EDUCATION 200 (2003) (lamenting the excessive commercialization of higher education and noting that “making money in the world of commerce often comes with a Faustian bargain in which universities have to compromise their basic values—and thereby risk their very souls—in order to enjoy the rewards of the marketplace”); ROGER GEIGER, KNOWLEDGE AND MONEY: RESEARCH UNIVERSITIES AND THE PARADOX OF THE MARKETPLACE 181 (2004) (“Large amounts of money are at stake, and universities, whether they wish to or not, have become actors in the marketplace”); Duderstadt, *supra* note 5, at 61 (“There has been a shift in the priorities of the university: away from the pursuit of knowledge and the education of the next generation toward the commercial lure of the marketplace.”); Peter Lee, *Patents and the University*, 63 DUKE L.J. (forthcoming 2013), available at <http://ssrn.com/abstract=2217719>. Professor Lee notes that “[u]niversities have long played a rhetorically important role in society as vanguards of disinterested academic inquiry,” but that “modern courts view universities as much more akin to commercial entities.” *Id.* (manuscript at 38-39) (on file with author). Accordingly, he argues, modern courts are less likely to defer to unique academic norms, practices, and policies that run counter to patent law, preferring instead to rely on and reinforce “a conception of universities as integrated into the traditional commercial narrative of patents.” *Id.* at 40. I do not dispute these trends; rather, the proposal I advance in this Article is aimed at permitting universities to recapture some of the academic exceptionalism that they have lost, whether due to judicial decision or their own efforts to work more closely with the market.

products or services their patents cover. Universities are non-practicing entities (“NPEs”) whose main missions concern teaching, research, and service to society. Society expects universities to commercialize their patents through licensing deals with industry, not to focus their energies on assertive involvement in litigation.⁵⁰ Yet because the CAFC’s prudential standing requirement does not differentiate between university patent owners and other patent owners, a university with an exclusively licensed patent ultimately may face an untenable choice: either participate as a co-plaintiff in an enforcement action with an exclusive licensee—likely costing the university valuable time and money, if not image-related harms as well—or insist that the licensee bring the action on its own, risking the university’s ultimate forced involvement as a co-plaintiff, as well as potentially harming its relationship with the licensee.⁵¹ In short, what society should expect from universities—a preference for their non-involvement in assertive litigation—is at odds with what the law in most instances requires of them.

A seemingly simple solution to this conundrum would be to suggest that universities assign all substantial rights to their patents, as opposed to licensing them, so as to rid themselves of any obligation to litigate. But this suggestion falls short for several reasons. First, universities are understandably reluctant to assign their patent rights given the difficulty in determining the fair market value of an invention in its early stages of development. Better to license a patent of uncertain market potential (subject to sales quotas or benchmarks) rather than selling it outright for potentially less than its ultimate worth. Second, licenses allow universities more flexibility in controlling the use of their patents than do assignments. Commercial circumstances can change, and these changes are more easily accounted for in licenses wherein universities maintain ownership of their patents and more control over their commercialization. Third, and perhaps most importantly, legal and policy mandates imposed by the Bayh-Dole Act for inventions that are developed, in whole or in part, with federal funds strongly encourage universities to hold on to their patents

⁵⁰ Cf. GARY W. MATKIN, TECHNOLOGY TRANSFER AND THE UNIVERSITY 104 (1990) (“When universities go into court on patent issues they are particularly vulnerable to criticism, since they do not appear to be acting in accordance with the public view that they should remain aloof from commercial concerns. . . . [N]egative effects can be avoided if the university is not a primary party in a suit.”).

⁵¹ Cf. Greene, *supra* note 9, at 4, 40 (noting that “[f]or optics reasons or otherwise, patent owners—especially universities—may wish to keep their names and influence away from patent infringement litigation” and that “one of the goals patent owners have in licensing is extricating themselves from the possibility of costly litigation”).

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with a view toward furthering the long-term benefits to faculty inventors and universities as institutions. Indeed, the Bayh-Dole Act stipulates that universities may not assign their ownership of patents developed with federal funds without the approval of the federal agency that provided those funds, unless the “assignment is made to an organization which has as one of its primary functions the management of inventions.”⁵²

The legal and policy constraints discussed above inevitably create tensions for universities in their ownership of patents. From one perspective, litigating patents can advance a university’s research interests and result in revenues that can be used to help further those interests. These are public goods that contribute to strengthening a research enterprise that fuels innovation and can lead to economic development and job growth. Society unquestionably benefits when university research lives up to its promise to advance knowledge and improve lives. If litigation is required to protect research investments, leading to more investments and more research, then so be it.

But litigation is seldom without costs and consequences. In addition to the typically significant financial burden⁵³ that directly affects litigants, more indirectly, no one likes to be sued. Legitimate concerns therefore exist that university participation as plaintiffs in patent infringement lawsuits may negatively impact universities in a variety of ways, from injuring graduates’ job prospects at companies named as defendants, to diminishing the likelihood that faculty will receive sponsored research funding from those companies.⁵⁴ The ability of universities to successfully solicit donations from employees and executives at such companies may also be affected. Moreover, litigation activity—at least by state-supported institutions—also could have a negative impact on lawmakers already inclined to second-guess university requests for increased appropriations in the face of state budget deficits. For these reasons and more, universities might find that the prospect of enforcing their patents through litigation strains their commitment to innovation. American society, increasingly

⁵² 35 U.S.C. § 202(c)(7)(A) (2006). The Bayh-Dole Act fails to clarify what is meant by an organization that “has as one of its primary functions the management of inventions.” *Id.* While this provision arguably was intended to cover separately-incorporated research and patent foundations closely affiliated with universities, it would not seem to prevent universities from assigning patent rights to a special breed of NPE—patent assertion entities (“PAEs”)—created for the sole purpose of bringing litigation. Indeed, several TTO directors have acknowledged the existence of such a market. See Jacob H. Rooksby, *When Tigers Bare Teeth: A Qualitative Study of University Patent Enforcement*, 46 AKRON L. REV. 169, 196-97 (2013).

⁵³ See AIPLA, *supra* note 3.

⁵⁴ See Jacob H. Rooksby, *Sue U.*, ACADEME, Sept.-Oct. 2012, at 24, 27.

dependent on universities for new discoveries that result in commercialization, suffers as a result.⁵⁵

C. Data on Incidence of University Patent Enforcement

The above Sections describe the legal constraints that may compel university patent owners to litigate their patents and the tensions such compulsion creates for universities. This Section examines the frequency of the activity, what types of institutions engage in it, and the varying character of university participation as plaintiffs in patent infringement litigation.

1. Previous Studies and Comments

Very few previous studies have set out to provide empirical understanding of university participation in patent infringement litigation. In 2009, Professor Chris Holman conducted perhaps the first. He presented findings of a search to locate university involvement as plaintiffs in patent infringement lawsuits filed between January 1, 2000 and January 24, 2009.⁵⁶ He located 139 cases where a university joined with an exclusive licensee in bringing suit, and another 51 cases where a university brought a patent infringement lawsuit without the involvement of a co-plaintiff.⁵⁷ Following up on Professor Holman's work two years later, I reported findings from a search for patent infringement lawsuits filed by universities between January 1, 2009 and December 31, 2010.⁵⁸ I found that 33 universities had filed 57 different patent infringement lawsuits during the studied time period, often in conjunction with a licensee co-plaintiff.⁵⁹

⁵⁵ Cf. Dennis Crouch, *Although "Without Tact," Micron's Retaliatory Decision to Stop Hiring University of Illinois Graduates Is Not Illegal*, PATENTLY-O (Apr. 11, 2013, 5:01 PM), <http://www.patentlyo.com/patent/2013/04/although-without-tact-microns-retaliatory-decision-to-stop-hiring-university-of-illinois-graduates-is-not-illegal.html> (reporting that a company sued by University of Illinois for patent infringement wrote the university to state that it would no longer recruit the university's graduates for employment or fund faculty research because of the pending lawsuit); Robin Feldman, *Inappropriate Uses of Intellectual Property – Intellectual Property Wrongs* 68 (Aug. 10, 2012) (unpublished manuscript), available at <http://ssrn.com/abstract=2127558> (noting "a general sense that the intellectual property system has lost its bearings, developing into a multi-dimensional game of strategy in which litigation, rather than innovation, is leading the way").

⁵⁶ Christopher M. Holman, *Univ. Patent Litig.*, Presentation at Santa Clara and School of Law Symposium (Jan. 30, 2009).

⁵⁷ *Id.*

⁵⁸ Jacob H. Rooksby, *University Initiation of Patent Infringement Litigation*, 10 J. MARSHALL REV. INTELL. PROP. L. 623 (2011).

⁵⁹ *Id.* at 674-94.

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While empirical data on the incidence of university initiation of patent infringement litigation is limited, many have argued anecdotally in the past decade that the activity is not infrequent, or from a normative perspective, only should occur infrequently. For example, in 2005, Jennifer Washburn argued that significant litigation outcomes for some universities—she cited high-profile settlements in the hundreds of millions of dollars for the University of California and the University of Minnesota—had emboldened others to litigate.⁶⁰ A year later, Professor Margo Bagley noted “the growth in patent-related litigation involving universities” and criticized what she called the overzealous initiation of patent infringement litigation by some universities.⁶¹ Similarly, writing in 2004, Professor Arti Rai argued that universities and their licensees had asserted their basic research patents “in a manner that hinders rather than facilitates commercial development.”⁶² In 2008, Professor Mark Lemley questioned whether universities are patent trolls.⁶³ While he persuasively answered the question in the negative, others—such as Professor Jay Kesan—have advised universities to take great care in pursuing enforcement activity, lest they invite the perception that their litigation behavior is troll-like.⁶⁴

Perhaps with some of these arguments in mind, leading universities generally have cautioned against initiating patent infringement litigation for the purpose of extracting licensing revenues. Most notably, in 2006, Stanford University and ten other top-tier research universities released a white paper in which they urged that universities carefully consider any involvement as plaintiffs in patent infringement litigation.⁶⁵ The authors stressed that universities should be mindful of their primary mission to use patents to promote technology development for the benefit of society. To that end, the authors argued that litigation is “seldom the preferred option for resolving disputes” and should be initiated by the university only if there is a “mission-oriented rationale for

⁶⁰ JENNIFER WASHBURN, UNIVERSITY, INC.: THE CORPORATE CORRUPTION OF AMERICAN HIGHER EDUCATION 161 (2005).

⁶¹ Margo A. Bagley, *Academic Discourse and Proprietary Rights: Putting Patents in Their Proper Place*, 47 B.C. L. REV. 217, 218-19 (2006).

⁶² Arti K. Rai, *The Increasingly Proprietary Nature of Publicly Funded Biomedical Research: Benefits and Threats*, in BUYING IN OR SELLING OUT? THE COMMERCIALIZATION OF THE AMERICAN RESEARCH UNIVERSITY 117, 119 (Ronald G. Stein ed., 2004).

⁶³ See Lemley, *supra* note 5.

⁶⁴ Jay P. Kesan, *Transferring Innovation*, 77 FORDHAM L. REV. 2169, 2193 (2009).

⁶⁵ *In the Public Interest: Nine Points to Consider in Licensing University Technology*, STANFORD UNIVERSITY 6 (2007), www-leland.stanford.edu/group/OTL/documents/whitepaper-10.pdf.

doing so” that can be clearly articulated to the university and the public.⁶⁶ A committee of the National Academy of Sciences studying university technology transfer endorsed these recommendations in 2010, adding that “enforcement of IP rights against suspected infringers should be approached carefully to protect the institution’s resources and reputation.”⁶⁷ The committee concluded that while universities should be reluctant to resolve patent disputes through litigation, “it is an option important for universities to retain.”⁶⁸

Taking a different stance on the issue, a patent attorney argued in 2009 that universities seldom enforce their patents and should be more aggressive in doing so.⁶⁹ In a provocatively entitled article in *University Business* magazine, Alexander Poltorak urged universities not to overlook the value of using their patents as sticks to seek licenses from companies already using technology covered by their patents, recognizing that such activity often leads to infringement lawsuits. Believing that much of the value of any patent derives from the unspoken threat of litigation, Poltorak rejected the notion that aggressive enforcement of patents is “beneath” universities or undermines their missions “to serve the public and the greater good.”⁷⁰ Citing university bureaucracies and red tape that he views as slowing institutional decision-making, Poltorak concluded “It’s no wonder that relatively few [patent infringement lawsuits] are ever filed by higher ed institutions.”⁷¹ He suggested that universities should be more open to enforcing their patents through litigation, as doing so could generate revenue “with minimal effort, modest costs, very little risk, and some old-fashioned gumption.”⁷²

⁶⁶ *Id.*

⁶⁷ NAT’L RESEARCH COUNCIL OF THE NAT’L ACADS., MANAGING UNIVERSITY INTELLECTUAL PROPERTY IN THE PUBLIC INTEREST: COMMITTEE ON MANAGEMENT OF UNIVERSITY INTELLECTUAL PROPERTY: LESSONS FROM A GENERATION OF EXPERIENCE, RESEARCH, AND DIALOGUE 7 (Stephen A. Merrill & Anne-Marie Mazza eds., 2011) [hereinafter NRC].

⁶⁸ *Id.* at 73.

⁶⁹ Alexander Poltorak, *Thar’s Gold in Them Thar Patents: Why It Pays to Protect Patent Portfolios*, U. BUS., Oct. 2009, at 18, <http://www.universitybusiness.com/article/thars-gold-them-thar-patents>.

⁷⁰ *Id.* at 23.

⁷¹ *Id.*

⁷² *Id.* Poltorak’s potential interest in drawing these conclusions should not be overlooked. He is CEO of General Patent Corporation, a company that specializes in enforcing university patents through creating “special-purpose” legal entities that obtain assignments of university patents for the exclusive purpose of litigating them. See GEN. PATENT CORP., <http://university.generalpatent.com/> (last visited Apr. 14, 2013). This arrangement removes university ownership over the patent in exchange for a contractual right to a portion of any proceeds generated by the “special-purpose” entity that subsequently litigates the patent the university once owned. One

Recent research shows that some universities appear open to using their patents in new ways, aside from pursuing classical licensing relationships with companies in industry. Professor Robin Feldman and Tom Ewing found that nearly fifty universities have contractual arrangements with Intellectual Ventures (“IV”),⁷³ perhaps the most preeminent NPE and patent aggregator to emerge in the new complex patent ecosystem.⁷⁴ Ewing and Feldman found that some of these universities have sold or licensed their patents (or future patent rights) to IV, while others have invested outright in IV’s business model, which generally involves using shell companies to monetize acquired patents through asserting infringement claims against others. The authors noted that the University of California, San Diego has agreements with five such shell companies.⁷⁵

2. *University Experiences in Litigating Patents*

Some universities have scored decisive victories from their past involvements as plaintiffs in patent infringement lawsuits. For example, in 2008 a jury awarded Cornell University \$184 million in damages in a patent infringement lawsuit it brought against Hewlett-Packard.⁷⁶ The trial judge later reduced the damages award to \$71.3 million, and the parties subsequently settled the case on confidential terms while appeals were pending.⁷⁷ In 2007, the University of California received \$30.4 million as part of a settlement of a lawsuit it brought with its licensee, Eolas

attribute of this arrangement is that it removes the need for universities to participate as named plaintiffs in infringement actions. Another is that it requires no out-of-pocket costs to universities, as the entire enforcement activity is structured on a contingency fee basis. Some view these attributes as advantages to universities, while others see them as proof of the inappropriateness of the underlying activity.

⁷³ Tom Ewing & Robin Feldman, *The Giants Among Us*, 2012 STAN. TECH. L. REV. 1, 8.

⁷⁴ See Chien, *supra* note 2, at 312.

⁷⁵ Ewing & Feldman, *supra* note 73, at 6. Eight other universities located in their research (the University of Alabama, Brigham Young University, California Institute of Technology, Duke University, University of Florida, University of New Mexico, the University of Rochester, and the University of Texas system) also are universities that have litigated their patents. See discussion *infra* Subsection I.C.3.

⁷⁶ Bill Steele, *Cornell Wins \$184 Million Award from Hewlett-Packard for Patent Infringement*, CORNELL CHRON. (June 6, 2008), <http://www.news.cornell.edu/stories/June08/HPpatent.ws.html>.

⁷⁷ Susan Kelley, *Hewlett-Packard, Cornell Reach Settlement in Patent Case*, CORNELL CHRON. (June 9, 2010), <http://www.news.cornell.edu/stories/June10/HPCaseClosed.html>.

Technologies, in 1999 against Microsoft.⁷⁸ The plaintiffs had won a \$521 million jury verdict earlier in the case in 2003.⁷⁹ The case settled while on appeal.

More recently, in spring of 2012, a judge awarded the University of Pittsburgh \$73.6 million in a case against Varian Medical Systems, Inc.⁸⁰ Later that year, Pitt's cross-town competitor, Carnegie Mellon University, scored a \$1.17 billion damages award—one of the top three largest damages awards ever in a patent infringement case—in a lawsuit it brought against Marvell Technology Group Ltd.⁸¹ Both lawsuits are currently on appeal to the CAFC.

Another notable outcome for a university in a patent infringement lawsuit dates back to 1998, when the University of Minnesota filed suit against a predecessor to the pharmaceutical company GlaxoSmithKline. The university claimed it owned patents that covered a blockbuster HIV drug that GlaxoSmithKline eventually marketed as Ziagen®. The parties subsequently settled the dispute on financial terms quite favorable to the university after a year of intense litigation. As part of a license deal, the university eventually received more than \$350 million in running royalties from GlaxoSmithKline's sales of the drug. These royalties represented as much as 90% of the university's revenue from technology transfer.⁸²

Of course, not all patent infringement lawsuits end favorably for the universities that bring them. For example, in a patent infringement lawsuit brought by the University of Rochester in 2000, the CAFC upheld a district court decision that a patent, claimed by the university as covering a blockbuster arthritis drug,

⁷⁸ Todd Bishop, *Microsoft's Eolas Settlement: UC Gets \$30.4M*, SEATTLE POST-INTELLIGENCER: MICROSOFT BLOG (Oct. 10, 2007, 5:02 PM), <http://blog.seattlepi.com/microsoft/2007/10/10/microsofts-eolas-settlement-uc-gets-30-4m/>.

⁷⁹ Andy Patrizio, *Microsoft Settles Eolas Suit*, INTERNETNEWS.COM (Aug. 30, 2007), <http://www.internetnews.com/dev-news/article.php/3697341/Microsoft+Settles+Eolas+Suit.htm>.

⁸⁰ Tom Fontaine, *Pitt Awarded \$73.6 Million in Patent Case*, PITTSBURGH TRIBUNE-REVIEW, Apr. 25, 2012, <http://triblive.com/news/adminpage/1125208-74/patent-varian-pitt-million-universities-court-university-percent-sales-award>.

⁸¹ Rich Lord, *Carnegie Mellon Wins \$1.17 Billion in Patent Case*, PITTSBURGH POST-GAZETTE, Dec. 27, 2012, <http://www.post-gazette.com/stories/local/neighborhoods-city/carnegie-mellon-wins-117-billion-in-patent-case-668013/>; see also Ben Kersey, *Marvell Hit with \$1.17 Billion Damages Verdict in Patent Infringement Case*, VERGE (Dec. 27, 2012, 8:56 AM) (characterizing damages as “one of the largest patent verdicts in history,” exceeded only by *Microsoft v. Lucent Technologies* (\$1.52 billion) and *Abbott Laboratories v. Centocor Ortho Biotech* (\$1.67 billion)).

⁸² Katherine Lynn, *U Heads for 'Patent Cliff'*, MINNESOTA DAILY, Oct. 6, 2011, [http://http://www.mndaily.com/print/67409](http://www.mndaily.com/print/67409).

was invalid.⁸³ The university allegedly had established an eight-figure legal fund to support its lawsuit against the company it believed was infringing.⁸⁴ In a different case, the CAFC overturned a \$1.67 billion jury award in a patent infringement lawsuit brought by New York University and its licensee over patents co-owned by the university.⁸⁵ The significant damages award is still the largest ever achieved in a patent infringement case.⁸⁶

More recently, in February 2012, a jury in the Eastern District of Texas invalidated a patent owned by the University of California in a subsequent lawsuit with its licensee Eolas Technologies against twenty-three different companies, including Apple, Google, Amazon.com, and Sun Microsystems.⁸⁷ The university's patent was described as covering the interactive Web, particularly as it relates to plug-ins for Web browsers.⁸⁸ World Wide Web inventor Tim Berners-Lee, who testified at trial in favor of the defendants, tweeted that the verdict was a "good thing."⁸⁹

3. *Lawsuits Filed, 1973 – 2012*

Building on the two previous empirical studies described above, I set out to identify every patent infringement lawsuit in which a university had participated as a plaintiff, going back as far as historical records allowed.⁹⁰ Westlaw maintains records of patent infringement lawsuits in a database called Derwent LitAlert.

⁸³ See *Univ. of Rochester v. G.D. Searle & Co., Inc.*, 358 F.3d 916 (Fed. Cir. 2004).

⁸⁴ Goldie Blumenstyk, *Taking on Goliath: U. of Rochester Risks Millions in Patent Fight with Pharmaceutical Giants*, CHRON. OF HIGHER EDUC., Sept. 20, 2002, at A27.

⁸⁵ See *Centocor Ortho Biotech, Inc. v. Abbott Labs.*, 636 F.3d 1341 (Fed. Cir. 2011).

⁸⁶ See Kersey, *supra* note 81.

⁸⁷ Steven E.F. Brown, *Eolas Sues 23 Companies After Beating Microsoft in Patent Fight*, SAN FRANCISCO BUS. TIMES (Oct. 6, 2009, 2:57 PM), <http://www.bizjournals.com/sanfrancisco/stories/2009/10/05/daily33.html>; Marc Parry, *Jury Decides Against U. of California in Major Patent Fight Over the Interactive Web*, CHRON. OF HIGHER EDUC.: WIRED CAMPUS (Feb. 10, 2012, 12:56 PM), <http://chronicle.com/blogs/wiredcampus/jury-decides-against-u-of-california-in-major-patent-fight-over-the-interactive-web/35353>.

⁸⁸ John Ribeiro, *Eolas Loses in Web Patents Claim Against Google and Others*, PCWORLD (Feb. 9, 2012, 10:00 PM), http://www.pcworld.com/businesscenter/article/249695/eolas_loses_in_web_patents_claim_against_google_and_others.html.

⁸⁹ *Id.*

⁹⁰ I conducted the majority of this research of historical lawsuit filings in the fall of 2011 for my doctoral dissertation. See generally Rooksby, *supra* note 1 (describing study of universities that litigate patents). The resulting population was subsequently surveyed, as further described in *infra* Section II.A. Lawsuit filings for years 2011 and 2012 were compiled using the same methods described in this Section. See *infra* note 92.

The database relies on reports of patent infringement lawsuit filings with the Commissioner of the United States Patent and Trademark Office, as is required of federal district courts at the time such cases are filed. While coverage of cases dates back to January 1, 1973, significant gaps in reporting exist, particularly in early years.⁹¹

With this limitation in mind, I searched the Derwent LitAlert database for every patent infringement lawsuit containing a university as a plaintiff, using LexMachina and PACER to assist in verifying that returned cases met the inclusion criteria.⁹² My initial search, conducted in July of 2011, returned 6,091 records. I reviewed these records to determine which potentially corresponded to (1) patent infringement lawsuits that (2) had at least one university as a plaintiff.⁹³ Fewer than ten percent ($N = 516$) of the returned records appeared to meet the inclusion criteria.⁹⁴

Of the records that appeared to meet the inclusion criteria, I conducted detailed follow-up searches to confirm that the returned records corresponded to cases that actually met the criteria. By reviewing case information contained in LexMachina and PACER, I determined that many records appearing to meet the inclusion

⁹¹ Other resources exist for researching patent infringement filings, although these, too, have limitations. For example, the LexMachina database is very comprehensive, but only for cases filed in the year 2000 or later. The Public Access to Court Electronic Records (“PACER”) system maintained by the federal government also is a good resource, but searching in it is costly and tedious, as only court-specific searches in each of the 94 federal district courts are possible.

⁹² My exact search language was: plf(trustee* universit! college* institute* board* regent* research technolog! educat!) ow(trustee* universit! college* institute* board* regent* research technolog! educat!) pas(trustee* universit! college* institute* board* regent* research technolog! educat!) & da(aft 12/31/1972 & bef 01/01/2011). I defined *university* as, regardless of name, any non-profit, public or private, undergraduate- and graduate-degree granting institution located in the United States that engages in patenting and technology transfer. I included separately incorporated entities controlled by or closely affiliated with universities—such as research or patent foundations—within the meaning of the term *university*. I did not include institutions that grant only undergraduate or graduate degrees.

⁹³ December 31, 2010 was the effective end date for the initial search. I followed this same process in April of 2012 and January of 2013 to identify all cases meeting the inclusion criteria for the years 2011 and 2012, respectively.

⁹⁴ The majority of the returned records were false positives, consisting of information about patent infringement lawsuits brought by companies with the word *technology* or *research* in their corporate name. Additional false positives included records corresponding to patent infringement lawsuits brought by foreign universities or non-profit entities not meeting my definition of university; university actions to challenge patent ownership or inventorship; and trademark infringement lawsuits brought by universities. The incidence of false negatives is unknown but believed to be *de minimis*, if existent at all.

criteria in fact did not (e.g., the corresponding case did not have a university as a plaintiff, or even if it did, did not involve claims of patent infringement).⁹⁵ Of the records that appeared to meet the inclusion criteria, 284 corresponded to cases that were confirmed as meeting the criteria.⁹⁶ I made two categorical exclusions in deciding which cases met the inclusion criteria. First, I excluded any case where a university was added as a plaintiff after commencement of the action. Operating under the assumption that a party's decision to sue is a meaningful one,⁹⁷ I wanted to know how many lawsuits contained universities from the outset of the case.⁹⁸ Second, I excluded cases in which universities levied infringement allegations from a defensive posture (such as in response to a declaratory judgment action). These two exclusions were reasonable but arbitrary. I made them because my preference was to under-report, as opposed to over-report, the number of universities that have litigated patents and the number of patent infringement lawsuits with universities as plaintiffs.

Table 1 displays the number of confirmed patent infringement lawsuits involving universities as plaintiffs, as well as the number of universities participating in those lawsuits, during the studied time period. Graph 1 displays these data graphically; Table 2 provides descriptive statistics.

⁹⁵ Records for cases filed between 1973 and 1990 were the most difficult to confirm as meeting the inclusion criteria, as information about these cases could not be found in LexMachina or through PACER. Fortunately, search results obtained in the ALLFEDS database in Westlaw confirmed many of these cases. I considered a case confirmed if a judicial opinion provided enough information to verify the case style, court in which it was brought, case number, and that the dispute involved an allegation of patent infringement by the university plaintiff. Several judicial opinions also revealed that records believed to meet the inclusion criteria did not in fact correspond to a case involving an allegation of patent infringement by the university plaintiff. Internet searches were conducted for those records corresponding to cases filed between 1973 and 1990 for which no judicial opinion could be located. Several cases were confirmed in this manner. Sources of confirmation included the following: dated journal articles subsequently made available online that discussed the litigation; biographies of attorneys that listed their involvement in previous cases; and 10-K filings made electronic by the Securities and Exchange Commission in which a company discussed significant litigation involvements.

⁹⁶ Only sixteen records contained information about cases that could not be confirmed as meeting the inclusion criteria. All other cases identified in the returned records were confirmed as not meeting the inclusion criteria.

⁹⁷ Plaintiffs are commonly referred to as masters of the complaint. *See, e.g.,* Garbie v. DaimlerChrysler Corp., 211 F.3d 407, 410 (7th Cir. 2000) (“[P]laintiffs as masters of the complaint may include (or omit) claims or parties . . .”). This mastery entails a strategic advantage that permits them to decide not only whom to sue and where, but which parties to include as fellow plaintiffs at the outset of the litigation.

⁹⁸ Strict adherence to this rule led to my including in the dataset a case in which Drexel University was named as an involuntary plaintiff.

Table 1
**Number of University-Initiated Patent Infringement Lawsuits
 and Number of Universities Participating per Year**

Year	Number of Lawsuits Filed by Universities	Number of Universities Participating
1973	0	0
1974	0	0
1975	1	1
1976	1	1
1977	0	0
1978	0	0
1979	1	1
1980	0	0
1981	0	0
1982	1	1
1983	0	0
1984	0	0
1985	0	0
1986	2	2
1987	0	0
1988	0	0
1989	7	4
1990	7	5
1991	3	4
1992	2	2
1993	4	4
1994	8	8
1995	3	3
1996	6	6
1997	7	4
1998	7	6
1999	4	3
2000	11	8
2001	10	7
2002	15	13
2003	10	7
2004	14	7
2005	7	5
2006	15	10
2007	20	19
2008	25	18

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2009	32	22
2010	24	16
2011	37	18
2012	43	22

Graph 1
**Number of University-Initiated Patent Infringement Lawsuits
and Number of Universities Participating per Year**

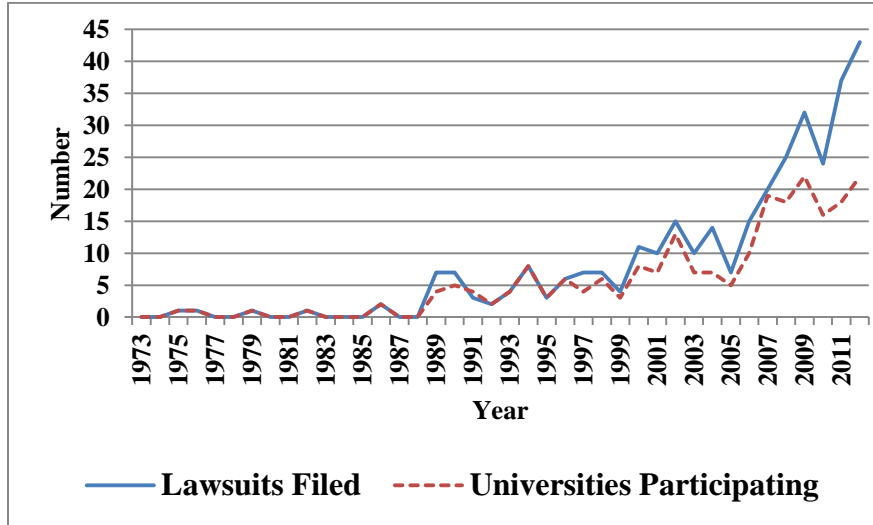


Table 2
Descriptive Statistics for Dataset of Confirmed Cases⁹⁹

	Minimum Filed per Year	Maximum Filed per Year	Sum of All Years	Mean No. of Cases Filed per Year	Standard Deviation
Confirmed cases	0	43	327	8.18	10.66

As noted in Graph 1, the number of patent infringement lawsuits with universities as plaintiffs has not increased each year over time, nor has the number of individual universities that have participated as plaintiffs in such lawsuits increased each year over time. However, both metrics are trending upward, with significant

⁹⁹ For a listing of the case styles for all cases in the dataset except those filed in 2011 and 2012, see Rooksby, *supra* note 1, at 224-50. Copies of the complaints of lawsuits filed in years 2009 through 2012 are on file with the author.

growth noted beginning in the year 2000.¹⁰⁰ Some of this increase may be attributable to increased accuracy of the database around this time, meaning that pre-2000 results are particularly under-inclusive. Regardless, university involvement as plaintiffs in patent infringement litigation was at least as prevalent as indicated in Table 1 and Graph 1 over the past forty years.¹⁰¹ Appendix B contains further description of the universities in the dataset across a variety of metrics.

II. A STUDY OF UNIVERSITIES THAT LITIGATE PATENTS

A. *Background and Methodology*

Targeting largely the population of universities identified in Table 4 in Appendix B, I set out to better understand university decision-making and structural frameworks concerning involvement as plaintiffs in patent infringement litigation. Three general research questions drove my inquiry:

¹⁰⁰ Some of this growth may be consistent with, or even explained in part by, a general increase in patent litigation in the past decade. See Terry Ludlow, *U.S. Patent Litigations Reach All Time High in 2011*, CHIPWORKS (Mar. 8, 2012), <http://www.chipworks.com/blog/technologyblog/2012/03/08/u-s-patent-litigations-reach-all-time-high-in-2011/> (noting growth in patent litigation); Gene Quinn, *The Rise of Patent Litigation in America: 1980-2012*, IPWATCHDOG (Apr. 9, 2013), <http://www.ipwatchdog.com/2013/04/09/the-rise-of-patent-litigation-in-america-1980-2012/id=38910/> (same). But regardless of general trends in patent litigation, or university involvement in patent litigation as a percentage of total infringement lawsuits brought each year, my argument is that university involvement in patent litigation is significant enough in real numbers (as indicated in Graph 1), and qualitatively different than patent litigation brought solely by for-profit actors, to merit its own individualized attention.

¹⁰¹ Again, limitations inherent in the searched database affected these results, unquestionably causing them to be underinclusive. For example, two patent infringement lawsuits brought by the University of Michigan before 2010 were not returned in my initial search, despite their meeting the search criteria. See Complaint, *Repligen Corp. v. Bristol-Myers Squibb Co.*, No. 2:06-CV-00004-TJW-CE (E.D. Tex. Jan. 5, 2006) (No. 1); Complaint, *Reagents [sic] of the University of Michigan v. GeneSearch, L.L.C.*, No. 5:00-CV-60250-MOB (E.D. Mich. May 10, 2000) (No. 1) (filed in conjunction with Michigan State University). Although University of Michigan appears in Table 4 (in Appendix B) due to its participation in a lawsuit brought in 2012, for whatever reason, records for the two earlier cases simply do not exist within the Derwent LitAlert database. Because this fact was not discovered until after data collection for the survey described in Section II.A was completed, the survey did not include the University of Michigan in the targeted population. Unknown is the number of other universities or lawsuits involving universities as plaintiffs that should have been captured by the search methodology but were not.

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AND PATENTS AND HOW TO FIX THEM

1. Do these universities report having institutional policies that address their potential involvement as plaintiffs in patent infringement litigation?
2. What do their chief research officers (“CROs”)¹⁰² indicate they believe concerning:
 - a. the considerations important to their universities in deciding whether to initiate patent infringement litigation,
 - b. the likelihood that their universities would initiate patent infringement litigation again in the future, and
 - c. the extent to which their universities’ research missions are furthered through initiation of patent infringement litigation?
3. Finally, do significant differences exist between public and private universities in the conclusions reached in answering the aforementioned questions?

I structured the study as an explanatory mixed-methods design, meaning I gathered survey data to analyze quantitatively, then used select qualitative follow-up interviews to help analyze and interpret that data.¹⁰³ As my study was the first to examine the opinions of university decision-makers on these topics in comprehensive fashion, no survey instrument existed that could be drawn upon or used. Accordingly, I created an instrument containing twenty closed-ended questions for online use via a

¹⁰² I selected CROs (typically called vice presidents for research, or vice provosts for research) for participation for several reasons. First, technology transfer activities generally fall under the purview of CROs at research universities. See MATKIN, *supra* note 50, at 108. Therefore, CROs are likely to be involved in university decisions to litigate patents and are likely to be familiar with, or have ready access to information about, past patent infringement lawsuits brought by their university. Second, CROs typically are tenured faculty members who have assumed a senior-level administrative position. Therefore, unlike directors of TTOs or university attorneys (both of whom usually do not have faculty appointments), CROs are uniquely situated to opine on institutional policies and practices concerning the university’s research operation. Finally, their opinions and beliefs about the studied activity also are particularly relevant, as they are charged with directing policy for their universities with respect to research-related activities.

¹⁰³ See JOHN W. CRESWELL, EDUCATIONAL RESEARCH: PLANNING, CONDUCTING, AND EVALUATING QUANTITATIVE AND QUALITATIVE RESEARCH 560 (3d ed. 2008) (describing an explanatory study design).

survey administration website.¹⁰⁴ I drew on pilot interviews of TTO directors at the 2011 annual meeting of the Association of University Technology Managers (“AUTM”) and existing literature to draft relevant questions.¹⁰⁵ These questions were then pre-tested for content appropriateness and relevancy and refined as a result of close consultation with an in-house counsel and TTO director at a university in the population, as well as a survey design expert.¹⁰⁶

On August 1, 2011, I sent a letter to the CRO¹⁰⁷ at 63 of the universities in the population, inviting their participation.¹⁰⁸ The letters expressly asked recipients to identify an alternate person within their university to complete the survey if they felt they had been misidentified or preferred that someone else complete it.¹⁰⁹

¹⁰⁴ Appendix A contains a complete copy of the survey instrument and also presents an executive summary of data for each question. The survey questions were divided into the following three categories: background information, institutional policies, and professional beliefs. The background information section contained a question asking whether the participant’s university is public or private. Responses to that question allowed for stratification by university funding source (public or private). Questions concerning institutional policies were yes/no questions, whereas questions concerning professional beliefs held by the participants had a mixture of Likert-scale, best-choice, and rank-order response choices. At their option, participants were permitted to enter comments in dialogue boxes after 17 of the 20 questions (the other three questions, such as “Is your university public or private?”, did not lend themselves to comments).

¹⁰⁵ See generally Rooksby, *supra* note 52 (describing qualitative study of TTO directors concerning patent infringement litigation).

¹⁰⁶ See generally RONALD CZAJA & JOHNNY BLAIR, *DESIGNING SURVEYS: A GUIDE TO DECISIONS AND PROCEDURES* (2d ed. 2005) (describing the appropriateness of these steps in creating a survey instrument).

¹⁰⁷ I identified these individuals and their addresses by visiting each university’s website. For those universities in the population that are university systems—for example, the University of California, which has ten campuses—I sent the introductory letter to the CRO or individual at the system level who appeared to be responsible for research and technology transfer activities within the system. Six university systems had an identifiable system-level CRO, whereas another six did not. Universities in the population that are part of university systems, but nevertheless litigated in their own name, received a letter directly (for example, I sent the CRO at the University of Wisconsin-Madison a letter, but did not send one to the system-level CRO or equivalent).

¹⁰⁸ Because I collected lawsuit data for the years 2011 and 2012 after I conducted the survey described in this section, invitations were not sent to the six universities that filed their first patent infringement lawsuit in 2011 (University of Arizona, Brandeis University, and Rensselaer Polytechnic Institute) or 2012 (Florida Atlantic University, University of South Alabama, and University of South Florida). In addition, as mentioned *supra*, no invitation was sent to the University of Michigan.

¹⁰⁹ Eleven CROs responded with such information, mostly asking that the survey be sent to their university’s TTO director. Two additional CROs responded to notify me that their university would not participate in the survey. One other participant dropped out after seeking and receiving a complete copy of the survey instrument to review with his university’s general counsel.

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On August 22, I sent emails to the amended list of participants that contained a link to the online survey.¹¹⁰ Given the perceived sensitivity of the topic, I decided to collect the survey data anonymously, without requiring participants to identify themselves or their institution.¹¹¹ The survey closed on September 19 (four weeks after it opened), after two reminder emails had been sent. Twenty-two of 63 universities initially targeted completed the survey for a response rate of 36.7%.¹¹²

Of the 22 universities that completed the survey, 13 were public and 9 were private. The array of university participants included universities new to the activity (such as Catholic University and Michigan Technological University) and others more experienced (such as Johns Hopkins University, Massachusetts Institute of Technology, and the University of California). Table 3 lists all the universities that completed the survey. The actual participants at these universities consisted mostly of TTO directors ($n = 10$, or 45.5%) and CROs ($n = 6$, or 27.3%), as indicated by anonymized data from the survey concerning job titles.

Table 3
Universities That Completed the Survey

Brigham Young University
Catholic University
Iowa State University
Johns Hopkins University
Massachusetts Institute of Technology
Michigan Technological University
North Carolina State University
Northwestern University
Rutgers, the State University of New Jersey
Saint Louis University
Temple University
Tufts University

¹¹⁰ The survey was administered online through QuestionPro, an online survey administration tool.

¹¹¹ Participants were notified at every solicitation contact that their responses to the survey would be anonymous. I also stressed that the survey did not concern the details of any specific past, pending, or contemplated litigation, and was instead only intended to solicit information concerning institutional policies and each participant's individual opinion concerning their institution's decision-making with respect to assertive patent enforcement.

¹¹² This percentage is drawn from 60 universities, not 63, given that three targeted participants never received links to the online survey in light of their responses to my introductory letter. *See supra* note 109.

Tulane University
University of Alabama at Birmingham
University of California
University of Maryland-College Park
University of Massachusetts
University of Rochester
University of Utah
University of Virginia
University of Washington
Virginia Commonwealth University

The survey questions were grouped into four categories for purposes of data analysis: those aimed at obtaining data to answer research question 1, research question 2(a), research question 2(b), and research question 2(c). Survey response data were segregated into these four categories, stratified by public and private universities so as to answer research question 3. Descriptive and non-parametric statistics were used to analyze results and answer the relevant research questions.¹¹³

The last item on the survey allowed participants to leave their email address if they were willing to participate in a follow-up phone interview with me.¹¹⁴ Ultimately three participant interviews were conducted in November of 2011, in tape-recorded sessions lasting 20 to 30 minutes.¹¹⁵ The purpose of these interviews was to gain deeper understanding into some of the patterns that emerged from the survey data and to aid in meaningfully interpreting and contextualizing the survey's key

¹¹³ Both Mann-Whitney's *U* test and the chi-square test for independence were used to test for statistically significant differences between the responses of public and private universities, depending on question design (i.e., whether the question permitted collection of ordinal or nominal data). The null hypothesis for each question stated that there was no statistical difference between responses to the question by respondents at public and private universities. The null hypothesis was retained for all but one answer choice on the survey. Cohen's conventions were followed for analyzing the strength of the effect size. See JACOB COHEN, *STATISTICAL POWER ANALYSIS FOR THE BEHAVIORAL SCIENCES* (2d ed. 1988). As recommended in the non-parametric statistics literature, Fisher's Exact Test was used to provide *p*-values for 2 x 2 contingency tables and when returned scores for 2 x 3 contingency tables effectively rendered them 2 x 2. For more information on these tests, see GREGORY W. CORDER & DALE I. FOREMAN, *NONPARAMETRIC STATISTICS FOR NON-STATISTICIANS: A STEP-BY-STEP APPROACH* 179-85 (2009); and JAMES J. HIGGINS, *AN INTRODUCTION TO MODERN NONPARAMETRIC STATISTICS* 172-75 (2004).

¹¹⁴ These e-mail addresses were reported to me apart from the survey data, therefore the solicitation of this information did not compromise the anonymity of the survey data.

¹¹⁵ Interviews were transcribed to aid analysis.

findings. Several comments from the interviewees are quoted in the sections below.

B. Summary of Results

This Section details the study's general findings as they relate to the four research questions.

1. Research Question 1 – Litigation Policies

Data from the study indicate that universities generally have not established formal institutional policies or frameworks intended to address their potential involvement as plaintiffs in patent infringement litigation. This finding challenged my assumption that universities that had litigated patents in the past would have established institutional policies or frameworks to facilitate their involvement in the activity again in the future. For example, I expected respondents to indicate that their universities had established affiliated patent or research foundations partly so that those entities could participate in litigation in place of the university proper.¹¹⁶ In fact, very few ($n = 3$, or 13.6%) indicated that their universities had done so.

I also expected respondents to indicate that their universities have a formal policy or set of guidelines to follow in determining whether to participate as a plaintiff in patent infringement litigation. Again, few ($n = 2$, or 9.1%) said that they do.¹¹⁷ Equally surprising to me were responses to a question asking whether respondents' universities set aside money each year in a budget for potential use as a plaintiff in patent infringement litigation. Given the high cost of participating in infringement litigation, particularly if pursued without a licensee, I expected many to indicate that they accounted for their occasional involvement in the activity in a budget. However, only one respondent indicated that his university does so. Interviewees were less surprised by this finding. While they uniformly agreed that universities should be more proactive in planning for the costs of patent infringement litigation, practical realities prevent it, they said.

¹¹⁶ Matkin makes this suggestion, calling such entities "buffer organizations." See MATKIN, *supra* note 50, at 171-72.

¹¹⁷ This finding, however, did not surprise interviewees. One told me that "The decision process of litigation is so dynamic and so organic that it does not lend itself to policy." Rooksby, *supra* note 1, at 140 (all interviews conducted for the study were confidential, and therefore names and positions of interviewees are not provided in this or subsequent citations to interviewees). Another described it "a complicated enough business" that it "defies policies that would be helpful." *Id.* at 141.

In short, few universities in the study reported having established institutional policies or frameworks to address their potential involvement as plaintiffs in patent infringement litigation, and some university decision-makers I spoke with indicated they saw no need for such policies or frameworks. While some university decision-makers perceive value in budgeting for patent infringement litigation, very few universities actually do so. Finally, even though university-affiliated patent or research foundations can preclude the need for direct university involvement as plaintiffs in patent infringement litigation, few universities in the study reported having established an affiliated patent or research foundation for that reason.

2. *Research Question 2(a) – Considerations*

I expected survey respondents to indicate that considerations with direct financial implications—such as who pays for litigation, the beliefs held by licensees, and a lawsuit’s potential impact on donations to the university or private-sector funding of faculty research—are important to university decisions whether to initiate patent infringement litigation. Considerations with attenuated financial implications—such as concerns for views held by the public, the potential ideological opposition of students and non-inventor faculty, and perceived ethical or professional obligations—seemed less likely to be cited as influencing decision-making, even though some commentators had suggested their importance.¹¹⁸

The data largely proved these hypotheses correct. Over 81% of respondents ($n = 18$) indicated that the potential monetary returns to their university from suing for patent infringement are typically highly relevant to their decision whether to bring suit. Fewer ($n = 14$, or 63.6%) indicated that indirect costs (in the form of diverted attention from faculty and professionals, emotional strain caused by the litigation, and public relations concerns) are highly relevant. At the same time, many respondents indicated that they are sensitive to the high costs of legal fees. Over 63% of respondents ($n = 14$) indicated that their university is more likely to favor bringing an infringement lawsuit if a licensee pays for some of the university’s legal fees.

One question on the survey concerned the identity of a prospective infringer. Respondents were sharply divided as to whether defendant identity influences their institution’s decision-making. Nearly 41% of respondents ($n = 9$) indicated a potential

¹¹⁸ See NRC, *supra* note 67, at 7 (citing “disregard by infringer of scientific or professional norms and standards” as potential reason for asserting patent rights).

defendant's identity is irrelevant to their university's decision-making. However, the same amount indicated that a defendant's political influence and its financial contributions to the university are considerations that their university weighs heavily in deciding whether to participate as a plaintiff in patent infringement litigation. Presumably concerned for potential financial retribution in state budgeting processes, respondents at public universities are more sensitive to a defendant's political influence than are respondents at private universities, to a statistically significant degree.¹¹⁹ Respondents also frequently cited a prospective defendant's financial and litigation resources ($n = 7$, or 31.8%), as well as its prominence in the community ($n = 6$, or 27.3%), as considerations heavily weighed at their universities.

Another question concerned whose opinions hold the most influence in university decisions to litigate patents. Responses indicated that the opinions of university in-house counsels are the most prioritized, but most respondents ($n = 14$, or 63.6%) also indicated that the actual or anticipated opinion of their university's licensee(s) weighs heavily. In fact, more respondents cited the licensee's opinion as weighing heavily than cited the opinion of their university's president ($n = 10$, or 45.5%) or governing board ($n = 8$, or 36.4%). No respondent indicated that the actual or anticipated views of the public, students, or faculty (other than those who invented the patents being infringed) weigh heavily in their university's decision-making.

Interviewees attributed many respondents' deference to the opinions of licensees as reflecting confidence in their greater understanding of the market and the nature of patent infringement litigation. As one interviewee explained, "Our governing board or our president, or whatever internal decision-making structures we have, are not likely to be knowledgeable about the specific dynamics of the licensee's industry, or knowledgeable enough to be the primary decision-maker about the litigation."¹²⁰ Another saw university deference to licensees in matters of infringement as "part and parcel [of] what we have empowered the licensee to do when we give them the commercial right to use our patent."¹²¹

This sentiment also was expressed in response to a survey question concerning motivating factors to litigate. The majority of respondents ($n = 15$, or 68.2%) cited the university's contractual obligation to protect the rights of existing licensees as weighing heavily in university decision-making. Fewer expressed that litigating could further the university's public-serving mission ($n =$

¹¹⁹ $\chi^2 = 5.594$, $p = 0.025$, $\phi = 0.504$.

¹²⁰ Rooksby, *supra* note 1, at 151.

¹²¹ *Id.*

7, or 31.8%) or generate revenue through a damages award ($n = 8$, or 36.4%) or out-of-court settlement ($n = 6$, or 27.3%).

Interviewees interpreted the strong concern for the university's contractual obligations to licensees as entirely appropriate given the important role licensees play in university technology transfer. All referred to licensees as university "partners" and expressed bewilderment at the notion that any university might place primacy on other interests with respect to decision-making about patent infringement litigation. As one interviewee stated:

We have to abide by the contract. So if we have a contract that obliges us to participate in litigation, even just in name, then we have to honor that contract. . . . [Universities] also have relationships with their licensees. It's not a naked transaction. And so the licensees are business partners with the institution. And so they are going to have influence on how the institution makes business decisions.¹²²

Another interviewee explained the importance of honoring contracts with licensees concerning infringement litigation in terms of what *disregarding* a contract with a licensee could do to the university's further licensing efforts. This interviewee noted, "If it got out that we exclusively licensed a technology to a company, and were not willing to stand behind that company in a patent enforcement proceeding, we would do very few licenses after that. And justifiably so."¹²³

3. *Research Question 2(b) – Likelihood to Litigate*

Several questions on the survey were designed to elicit data concerning the likelihood that respondents' universities would initiate patent infringement litigation again in the future. While specific predictions were not sought, the data allowed for a general conclusion that the studied universities are open to litigating their patents again in the future. In fact, decision-makers at most ($n = 14$, or 63.6%) of the surveyed universities feel that it is inevitable that their university will do so again, given the number of patents in their portfolio. Many ($n = 16$, or 72.7%) also indicated that they viewed participating as a plaintiff in patent infringement litigation

¹²² *Id.* at 155.

¹²³ *Id.* at 156.

to be an unavoidable consequence of engaging in patenting and technology transfer.

Whether to assert a patent by filing a lawsuit is not an infrequent topic of discussion at many of the studied universities. Fifteen respondents (68.2%) indicated that they had discussed with a colleague at their university one or more times in the past year whether their university should participate as a plaintiff in patent infringement litigation against an infringer of one of the university's patents. Two (9.1%) respondents reported having had these discussions more than 10 times in the preceding year.

A question on the survey concerning projected monetary returns from engaging in patent infringement litigation generated a variety of responses. The question asked respondents to indicate the lowest range of projected monetary returns to their university over which the institution would consider litigating. Five respondents (22.7%) indicated that projected monetary returns do not factor into their university's decision-making; presumably these universities are willing to defend their patents through litigation on principle. For the remaining respondents, \$250,000 to \$499,000 was the average range of projected monetary returns to their university that in their opinion would make the lawsuit worth pursuing. Several respondents ($n = 5$, or 22.7%) indicated that they would bring suit for less than that range, including one respondent who selected \$0 to \$999 as the lowest range. Six respondents (27.3%) selected \$1 million to \$9 million as the lowest projected range. No respondent selected a range above \$10 million to \$49 million (that range was selected by one respondent).

Interviewees saw the variety of responses to this question as emblematic of a larger tension within the industry between principled stances on enforcement and realistic approaches to enforcement in light of resource constraints. As one interviewee put it:

The philosophical dilemma is, do you litigate because you're protecting your asset, or do you litigate for the homerun? So [the results to this question reflect] a difference of opinions about why you litigate. Those that litigate because it's the responsible thing to do to protect the asset care less about the likelihood of award, and those that are doing it just for the money, you see it's just a philosophical divide is my sense.¹²⁴

¹²⁴ *Id.* at 162.

Another interviewee echoed these sentiments, noting that what universities view as ideal behavior can be tempered by business realities:

It's a question of being idealistic versus practical. I don't think universities want to feel like they make decisions on licensing or enforcing patents that are based on monetary return. What you want to do is get your technology used for the benefit of society and money shouldn't come into play. So that's the idealistic approach. As a practical matter, if you're spending a million to get half a million, that's not a very good business decision. And although we're not-for-profits, we're still businesses.¹²⁵

I also sought to understand to what extent a university's past involvement in patent infringement litigation might influence its future involvement. The majority of respondents ($n = 12$, or 54.6%) indicated that their university's past experience as a plaintiff was not likely to influence its future participation as a plaintiff. As one respondent in the majority on this question wrote in an open-ended textual submission, "Our past experience has added more wisdom to how we make such a decision but has not influenced what that decision might be." Fewer than half of the respondents ($n = 9$, or 40.9%) indicated that their university's past experience as a plaintiff in patent infringement litigation made their university's future participation as a plaintiff somewhat likely, likely, or extremely likely.¹²⁶

4. *Research Question 2(c) – Litigation As Mission Enhancing*

Two questions on the survey were designed to solicit data concerning the extent to which respondents believe their universities' research missions are furthered through enforcing patents in infringement litigation. One survey question addressed this issue directly while another approached it indirectly. When asked about the issue directly, respondents were sharply divided on

¹²⁵ *Id.*

¹²⁶ I also asked respondents about the potential impact of past patent infringement lawsuits where their university had been named as a defendant. Most either were unaware of any such lawsuit ($n = 16$, or 72.7%) or indicated any such lawsuit had no impact on future participation as a plaintiff ($n = 6$, or 27.3%).

whether their universities' research missions are furthered through participation as plaintiffs in patent infringement litigation. Slightly over half of respondents ($n = 12$, or 54.6%) disagreed with the proposition that participating as a plaintiff in patent infringement litigation furthers their university's mission as a research institution. However, when initiation of patent infringement litigation was framed as an extension of investment in research and obtaining patents, the overwhelming majority of respondents ($n = 20$, or 90.9%) had no difficulty reconciling the activity on those terms (i.e., they agreed with the statement "If we are willing to invest in research and incur costs to obtain patents, we must be willing to sue infringers of our patents").

This finding suggests that while most universities see infringement litigation as a logical continuation of investments in research and patenting, many are quite hesitant to announce that the activity furthers their research missions, believing the two unrelated or even at odds. Indeed, only one respondent (4.5%) felt strongly that the activity furthers his university's research mission, compared to four (18.2%) who felt strongly that it does not.

Interviewees expounded further on these tensions and differences of viewpoint. All believed that no university views patent infringement litigation as an activity in which it actively hopes to engage. At the same time, they recognized that the activity can further goals that are intimately tied to a university's research agenda. As an interviewee put it:

Is the act of litigation itself furthering a mission? No, I mean litigation never furthers a mission in terms of it being something you ever aspire to do, or a real objective of the university Litigation is not one of them. But if you think about it in terms of whether it is a necessary part of protecting and advancing our research, then you come up with a different answer. . . . To me it's a necessary evil—I'll go ahead and use that word. If you're going to go forward and protect patents, the necessary follow-on to that is that you have to be willing to enforce them.¹²⁷

Another interviewee further parsed the tricky relationship between research mission and patent enforcement in terms of universities' mandates to disseminate technology:

¹²⁷ Rooksby, *supra* note 1, at 166.

I believe litigation is not inconsistent with our research mission, because our research mission is to disseminate, and dissemination requires investment, which requires return, which requires protection. And if you're not willing to protect technology, that inhibits its dissemination more broadly and more generally. . . . I can't imagine how you could be in the business of licensing and not view litigation as critical to your strategy. Why have this asset if you're not willing to defend it?¹²⁸

5. *Research Question 3 – Public/Private Differences*

No statistically significant differences existed in the answers that decision-makers at public and private universities provided in this study's survey, with one exception: decision-makers at public universities are more sensitive than decision-makers at private ones to the perceived political influence of a potential defendant.

C. University Approaches to Patent Infringement Litigation

The data from the study reported above show a division in approaches to patent infringement litigation among universities that have litigated their patents before. While some universities that have litigated their patents in the past appear to be willing pursuers of infringers and prepared participants in assertive patent infringement litigation, many are not so committed. By empirically identifying these varying approaches to the activity, this study contributes to growing understanding of complex decision-making about university efforts to protect and enforce institution-owned intellectual property.

1. The Minority Approach: Willing Pursuers and Prepared Participants

A minority of universities that litigate patents are comfortable with the concept of enforcing patent rights. At these universities, decision-makers have accepted that ownership and enforcement of patents are intimately tied. Pursuing infringement litigation helps protect institutional investments into research and

¹²⁸ *Id.* at 167.

patenting. These universities are committed to litigating their patents if the facts warrant, regardless of the infringer's identity and, while cost conscious, without undue concern for the activity's revenue-generating potential. These universities fairly might be regarded as willing to enforce their patent rights on principle. While most such universities are unlikely to have policies to guide their involvement in patent infringement litigation, they have given the issue substantial thought and thus feel prepared to pursue infringers when warranted.

2. The Majority Approach: Reluctant Pursuers and Contingent Participants

Most universities that litigate patents are conflicted about the activity. For these universities, a potential defendant's identity, low projected monetary returns, and high legal costs may dampen their enthusiasm for pursuing an infringement action. These universities are likely to see the activity as ancillary to, or even in direct conflict with, their mission as a research university, which causes them to be exceedingly cautious and reluctant actors when issues of infringement arise. Concerns for how others will view their involvement as plaintiffs in patent infringement litigation may hamper these universities' ability to effectively pursue the activity when the facts otherwise support their participation. Unwilling to take a uniformly strong stance against all infringers, the majority of universities that litigate patents are erratic in their decisions concerning patent enforcement, often hinging their approaches to patent infringement litigation on any number of idiosyncratic contingencies.¹²⁹

III. CHANGING POLICY: TOWARD A COHERENT POSITION ON
UNIVERSITY PATENT OWNERSHIP AND ENFORCEMENT

The findings from the study reported in this Article provide empirical support for several policy recommendations that could help further university enforcement of patents in the public interest. One way to reconcile the legal/policy tensions identified in Parts I and II is to adapt university cultures, dispositions, and decisional infrastructures concerning patent enforcement to better

¹²⁹ The majority approach contrasts with prevalent patent litigation strategy for patent licensors more generally. Best practices dictate suing in clear instances of infringement, "even if the cost of the specific litigation outweighs the likely recovery from the infringer," as "[a] company that develops a reputation for vigorously protecting its rights [. . .] may reap long-term intangible benefits." ABA SECTION OF INTELLECTUAL PROP. LAW, PATENT LITIGATION STRATEGIES HANDBOOK 5-6 (Barry L. Grossman & Gary M. Hoffman eds., 3d ed. 2010).

align with restrictive requirements imposed by patent law. This Part describes how.

A. *Reframing University Understanding of Patents*

Today's universities face a financing crisis. Increasingly the victims of diminishing and highly volatile state support, institutions of higher education must seek additional sources of funding to support their operations. Many see this paradigm as the "new normal" of higher education finance.¹³⁰ As the influential and well-known president of Ohio State University, E. Gordon Gee, recently argued, universities "must seek fundamentally new ways to fund our core purposes"¹³¹ —not as a strategy for weathering a temporary recession, but rather out of necessity for sustaining activities and furthering excellence into the future. As a starting point, he suggests "finding innovative ways to leverage the market" and "commercializing technological innovations."¹³²

The study described in this Article reveals why Gee and other university leaders who share his financial prognosis might view increasing patent licensing revenue as an essential way to diversify revenue streams. In turn, they also might see the initiation of subsequent patent infringement litigation as an acceptable method of simultaneously protecting patents and licensees, supporting research, leveraging the market, and commercializing technological innovations.

However, as this study's findings show, many universities that litigate patents do not yet know how to fit patent infringement litigation within their stated missions, perhaps because they view the activity as too infrequent or too ancillary to core pursuits to warrant much critical analysis. University technology transfer efforts historically have been directed to the confined and easily quantified concepts of patenting and licensing.¹³³

¹³⁰ See Paul J. Yakoboski, *Introduction to SMART LEADERSHIP FOR HIGHER EDUCATION IN DIFFICULT TIMES 1*, 1-12 (David W. Breneman & Paul J. Yakoboski eds., 2011); William R. Doyle & Jennifer A. Delaney, *Higher Education Funding: The New Normal*, CHANGE: THE MAGAZINE OF HIGHER LEARNING, July-Aug. 2009, at 60-62.

¹³¹ E. Gordon Gee, *Colleges Must Find Innovative Ways to Finance Their Missions*, CHRON. OF HIGHER EDUC. (Oct. 30, 2011), <http://chronicle.com/article/Colleges-Must-Find-Innovative/129568/>.

¹³² *Id.*

¹³³ See DAVID C. MOWERY ET AL., *IVORY TOWER AND INDUSTRIAL INNOVATION: UNIVERSITY-INDUSTRY TECHNOLOGY TRANSFER BEFORE AND AFTER THE BAYH-DOLE ACT IN THE UNITED STATES 84* (2004) (describing the historical primacy of these metrics in evaluating the success of technology transfer). Indeed, the metrics on which technology transfer has been built and judged by AUTM and others focus predominantly on matters pertaining to patenting (e.g., the number of new patent applications filed, the number of patents issued, etc.)

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But as institutional goals such as cultivating innovation ecosystems, commercialization, and entrepreneurship replace first-generation constructions of technology transfer as predominantly focused on patenting and licensing,¹³⁴ so might institutional attitudes and cultures evolve to better accommodate patent enforcement activity. Instead of viewing patent infringement litigation as a source of conflict, embarrassment, or even shame (i.e., a breakdown of a TTO's core patenting and licensing activities), the activity stands ripe for reconstruction as an integral part of the university's expanding commitment to fostering innovation, spurring commercialization, and reflecting institutional entrepreneurship. These three loosely defined concepts—very much in vogue among university administrators and technology transfer professionals—each have room to embrace an activity that many within and outside the university traditionally have viewed in a puzzled, if not negative, light.

Increasingly seen as significant agents of economic development and instruments of national wealth creation,¹³⁵ universities of the future are unlikely to be halting in their approaches to patent enforcement, as many of them are today. Policymakers and entrepreneurial faculty will not permit them such indecision. What some currently may view as an uncomfortable truth about universities that litigate patents—that relationships with industry and concerns related to revenue drive the majority of university decisions involving patent enforcement—stands to become an accepted and even celebrated reality, evidence of an entrepreneurial university's commitment to develop state and regional economies through fierce protection of intellectual property. While never likely to turn into the preferred mode of

and licensing (e.g., the number of exclusive licenses executed, the number of options executed, etc.). See, e.g., Gary Rhoades, *Housing the Measurement of University Innovations' Social Value: Organizational Site, Professional Perspective, Institutional Outlook*, in *ADVANCES IN THE STUDY OF ENTREPRENEURSHIP, INNOVATION & ECONOMIC GROWTH* 237, 237-67 (2009). Of course, other metrics are given some consideration. In particular, the number of new companies formed and jobs created through technology transfer are being discussed. This emphasis likely only will grow in importance as policymakers place more attention on the capacity of university research to drive economic development.

¹³⁴ See Letter from Mary Sue Coleman, Co-Chair, Nat'l Advisory Council on Innovation & Entrepreneurship, to Hon. Gary Locke, Sec'y of Commerce (Apr. 19, 2011), available at www.aau.edu/WorkArea/DownloadAsset.aspx?id=120841-2; see also HOLDEN THORP & BUCK GOLDSTEIN, *ENGINES OF INNOVATION: THE ENTREPRENEURIAL UNIVERSITY IN THE TWENTY-FIRST CENTURY* (2010) (describing universities' shift in focus in TTO activity from patenting and licensing to spurring entrepreneurial behavior).

¹³⁵ SHEILA SLAUGHTER & LARRY L. LESLIE, *ACADEMIC CAPITALISM: POLITICS, POLICIES, AND THE ENTREPRENEURIAL UNIVERSITY* 39-40 (1997).

TTO operation, unabashed and unapologetic patent enforcement could soon be championed as an important tool among others for universities seeking to commercialize technologies as they strive to accommodate new financing and economic development imperatives. In short, what I describe as the minority approach to patent enforcement (i.e., universities as “willing pursuers and prepared participants”) could become the majority approach as universities continue their reorientation of priorities and allegiances.

Mounting economic pressures cast doubt on any optimism for a decrease in university participation as plaintiffs in patent infringement litigation in years to come. Most likely the traditional—and some have argued elitist¹³⁶—conception of universities as socially detached and disinterested bastions of general and specialized knowledge increasingly will be supplemented or even wholly supplanted with a conception of the American research university as firmly market-situated by design. Many signs indicate that such reconstruction of the modern research university is well underway. No longer indifferent to the concerns of society’s markets, the socially embedded modern university is very much a part of them.¹³⁷ With respect to state-funded universities, gone are the days of automatic earmarks with wide deference given by the state to university spending priorities. Public financial support of higher education as a percentage of total operating budgets is unlikely to return to pre-2000 levels.¹³⁸ Indeed, such support is shifting and will continue to flow only in exchange for specific commitments and undertakings, most of them market-driven. Progressively more private donors as well are no longer content to make substantial unrestricted donations to university endowments, which many view as “lazy money.”¹³⁹

¹³⁶ See, e.g., Michael M. Crow, *Beyond the “New Normal” in American Higher Education: Toward Perpetual Innovation*, in SMART LEADERSHIP FOR HIGHER EDUCATION IN DIFFICULT TIMES 50-69 (David W. Breneman & Paul J. Yakoboski eds., 2011); Michael M. Crow, *The Research University As Comprehensive Knowledge Enterprise: A Prototype for a New American University*, in UNIVERSITY RESEARCH FOR INNOVATION 211-26 (Luc E. Weber & James J. Duderstadt eds., 2010).

¹³⁷ See generally BOK, *supra* note 49 (describing the rising influence of markets in higher education); DUDERSTADT, *supra* note 5 (noting the market-driven restructuring of higher education); KIRP, *supra* note 49 (lamenting the ascendance of entrepreneurialism in higher education); SLAUGHTER & RHOADES, *supra* note 49 (describing the ascendance of the academic capitalist knowledge/learning regime in higher education).

¹³⁸ See BURTON ALLEN WEISBROD, JEFFREY P. BALLOU & EVELYN DIANE ASCH, MISSION AND MONEY: UNDERSTANDING THE UNIVERSITY 298-99 (2008) (data showing nearly 50% decline in state and local appropriations for higher education as a percentage of total revenue from 1985 through 2006).

¹³⁹ THORP & GOLDSTEIN, *supra* note 134, at 145.

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Instead, many of the wealthiest of donors demand active use of their largesse through the creation of interdisciplinary ventures and private sector collaborations that marshal resources and expertise toward confronting any number of difficult problems facing society.

While widespread knowledge dissemination is still a university mission, and will be into the future, universities can no longer pursue that mission without fastidious regard for cost and the increasingly proprietary nature of knowledge.¹⁴⁰ These concerns simultaneously are changing the guiding philosophy of technology transfer from one of university-centered technology push to industry-driven market pull, a natural outgrowth of research universities seeking to “increase the presence of industries on campus.”¹⁴¹ Enticing industry with more favorable licensing terms while reducing encumbrances to their ownership of patents,¹⁴² launching new degree programs to provide “the kind of education industry is seeking,”¹⁴³ and constructing and updating buildings in which companies can set up research wings on campus¹⁴⁴ are just a few of the many ways in which universities are realigning their priorities in response to new financial realities.¹⁴⁵

¹⁴⁰ SLAUGHTER & LESLIE, *supra* note 135, at 215-16; SLAUGHTER & RHOADES, *supra* note 49, at 29.

¹⁴¹ See Letter from Mary Sue Coleman to Hon. Gary Locke, *supra* note 134, at 4; see also Paul Basken, *With Federal Support Uncertain, University Researchers Look to Industry*, CHRON. OF HIGHER EDUC. (July 24, 2011), <http://chronicle.com/article/With-Federal-Support/128378/> (describing efforts by universities to attract more sponsored research funding). A product of the National Advisory Council on Innovation and Entrepreneurship, the April 2011 letter to the U.S. Secretary of Commerce penned by University of Michigan president Mary Sue Coleman provides various suggestions and commitments for improving university commercialization. The AAU, the Association of Public and Land-grant Universities, and over 130 presidents of universities and university systems—including the majority of universities in my study’s population—endorsed the letter.

¹⁴² Jenna Ross, *U of M Announces Simplified Contract Approach for Industry Research Partnerships*, GRAND FORKS HERALD (North Dakota), Dec. 10, 2011, <http://www.grandforksherald.com/event/article/id/223598/>; Paul Basken, *Penn State Ends Licensing Fees on Industry-Sponsored Research*, CHRON. OF HIGHER EDUC. (Dec. 19, 2011), <http://chronicle.com/article/Penn-State-Ends-Licensing-Fees/130126/>.

¹⁴³ Jennifer Donovan, *Michigan Tech Board of Control Approves New Degree Programs*, MICH. TECH NEWS (Dec. 9, 2011), <http://www.mtu.edu/news/stories/2011/december/story58568.html>.

¹⁴⁴ Casey Ross, *MIT Begins Building Pfizer Facility; Research at Kendall Square Site Will Focus on Drugs for Diabetes, Alzheimer’s*, BOSTON GLOBE, Nov. 19, 2011, at B5.

¹⁴⁵ In addition to furthering university research missions, these activities also may be emblematic of universities’ expanding conceptions of their service missions.

Even the phrase *technology transfer*—which to some harkens an outdated image of tripartite, arms-length relations between government, academia, and industry—is gradually becoming passé as universities seek to brand their TTOs and research activities as firmly situated in the market.¹⁴⁶ Entrepreneurialism, job creation, revenue generation, interwoven industry collaborations, market consciousness, and market-facing, self-sustaining university endeavors are the selling points of the reconstructed research university. These attributes and pressures may soon make university hesitancy to litigate patents seem not only unreasonable from the standpoint of protecting the patent premium, but quaint and outmoded from the perspective of the university's changing priorities. The new model requires universities to innovate and differentiate in order to survive in their developing role as comprehensive knowledge enterprises.¹⁴⁷ In light of these prevailing forces, increased incidence of university initiation of patent infringement litigation may come to be described as an accepted externality of society's new expectations from higher education—a “necessary evil,” as one of my study's interviewees put it.

In view of these forces and pending realities, universities must begin to reframe their understanding of patents should they wish to fully engage as market-facing enterprises in the changing paradigm of higher education finance. Universities' Cold War approach of stockpiling patents in the hopes that licensees will come calling (while would-be infringers retreat) is rightfully on the decline. In the reconstructed university, meaningful accolades are unlikely to flow to institutions based substantially on how successful they are in obtaining and accumulating patents. While patents always will serve as useful proxies for research achievement and bring commendation to universities successful in obtaining them, the more significant industry attention and desired research investment will go to those universities savvy enough to know how best to use their patents to further the commercial goals of their industry partners. Furthering those goals necessarily requires universities to acknowledge unequivocally what a patent is: authorization to sue for infringement.

¹⁴⁶ The recently reformulated names of Columbia University's, Arizona State University's, University of New Mexico's, University of Nebraska's, and University of Arkansas-Fayetteville's TTOs are emblematic of this shift: Columbia Technology Ventures, AzTE, STC.UNM, NUtech Ventures, and Technology Ventures, respectively. See <http://www.techventures.columbia.edu/>, <http://www.azte.com/>, <https://stc.unm.edu/>, <http://www.nutechventures.org/>, & <http://techventures.uark.edu/> for more information.

¹⁴⁷ See Crow, *supra* note 136, at 65.

At first glance, university hesitancy to litigate patents is understandable, given the costs and reputational risks associated with the activity. Indeed, universities are not alone in exhibiting this tendency.¹⁴⁸ But universities must confront this hesitancy if they wish to become rational owners and enforcers of patents—in short, attractive partners to the companies whose favor and research support they increasingly curry.

Rational patent owners understand that patents are limited monopolies to exclude and government-granted rights to sue.¹⁴⁹ Limited monopolies have no value unless owners of them seek to enforce the monopolies. For university patent owners, historical focus has been on exploiting their patent monopolies through licensing.¹⁵⁰ This approach is preferable for university patent owners and should continue. However, rational patent owners understand that a patent license is built on the implicit promise *not* to sue for infringement.¹⁵¹ If the owner of a patent declines to project that the failure to take a license to its patent will result in an infringement lawsuit, the owner's patent is nothing more than a valueless piece of paper, despite all the financial and institutional investments into research that it represents.

Universities must come to embrace these understandings of patents and their place in the changing marketplace of higher education finance. Anything less may result in deepening tension for universities between their mandate to innovate and their compulsion to litigate.

B. Inconsiderate Positions on Enforcement: What Universities Don't Do Can Hurt Them

While some universities are rational patent owners and enforcers, findings from the study reported in this article show that many are not. Unfortunately, universities' disinclinations to enforce their patents through infringement litigation only serve to undermine their research missions in several important ways.

¹⁴⁸ See PATENT LITIGATION STRATEGIES HANDBOOK, *supra* note 129, at 6 (noting that “many businesses are averse to litigation, except in the most compelling of circumstances”).

¹⁴⁹ See ADAM B. JAFFE & JOSH LERNER, INNOVATION AND ITS DISCONTENTS: HOW OUR BROKEN PATENT SYSTEM IS ENDANGERING INNOVATION AND PROGRESS, AND WHAT TO DO ABOUT IT (2004).

¹⁵⁰ See MOWERY ET AL., *supra* note 133, at 35-57 (providing historical overview of university patent practices in the United States prior to 1980).

¹⁵¹ James Bessen & Michael J. Meurer, *Lessons for Patent Policy from Empirical Research on Patent Litigation*, in INTELLECTUAL PROPERTY AND INFORMATION WEALTH: ISSUES AND PRACTICES IN THE DIGITAL AGE 199 (Peter K. Yu ed., 2007); Poltorak, *supra* note 69, at 18, 23; Ted Sichelman & Stuart J.H. Graham, *Patenting by Entrepreneurs: An Empirical Study*, 17 MICH. TELECOMM. & TECH. L. REV. 111, 118-19 (2010).

First, universities that are ambivalent about enforcing their patents waste valuable resources that have been invested into research and patenting. A patent issued to a university represents years of costly research investment by taxpayers and faculty, and thousands of dollars of human capital by the university's TTO and patent counsel. Failure to enforce the patent in court when warranted undermines the commercialization system in which universities have decided to play. If universities are uncomfortable defending their patent rights through assertive litigation then they should stop seeking patents. As a respondent interviewed in the study reported in this Article noted, "If a university's research mission is to disseminate technological advances, dissemination requires investment, which requires return, which requires protection. If you're not willing to protect technology, that stance inhibits its dissemination more broadly and more generally."

Second, universities that are ambivalent about enforcing their patents only undermine their own attempts to establish productive commercial relationships and license other patents in ways that generate revenue for the university. A university's failure to enforce one patent when warranted sends a signal to industry that it may not be willing to enforce other patents it owns. Many - if not most - companies will feel no obligation to take a license to a university's patent when they perceive no consequence for declining to take a license. As Howard Bremer, one of the architects of the Bayh-Dole Act, has remarked, "Universities are generally not inclined to litigate. . . . A lot of private sector companies, the big ones, look at universities as toothless tigers, because they are not going to assert their patent rights."¹⁵² If universities expect to generate revenues through their patents (i.e., behave like tigers), they must be willing to bare their teeth. A respondent interviewed in the study reported in this Article voiced this concern quite succinctly with the comment, "If it got out that we exclusively licensed a technology to a company, and were not willing to stand behind that technology in a patent enforcement proceeding, we would do very few licenses after that. And justifiably so."¹⁵³

Third, universities that are ambivalent about enforcing their patents jeopardize their relationships with faculty inventors, on whom they depend for invention disclosures that can lead to patents. Faculty inventors understand the technology transfer system and the recognition and riches it can bring them.¹⁵⁴ Universities owe it to these faculty members to enforce the patents whose ownership they enjoy through institutional policies that

¹⁵² Rooksby, *supra* note 52, at 172.

¹⁵³ Rooksby, *supra* note 1, at 156.

¹⁵⁴ See SLAUGHTER & RHOADES, *supra* note 49, at 113-29.

require faculty inventors to assign their inventions to the university.¹⁵⁵ A university's consistent timorousness with respect to patent enforcement could cause faculty inventors to lose faith in their employer's ability to monetize their inventions, ultimately leading to a decrease in invention disclosures and the departure of entrepreneurial faculty to universities more protective of their patents.¹⁵⁶

In short, findings from the study reported in this Article allow for a convincing argument that institutions waste time, money, and other resources amassing expensive patent portfolios that they are not willing to defend categorically. Just as universities do not tolerate flagrant defacement or disregard of their real property without recompense, and in fact take steps to deter such activity, they also must be willing to pursue those that infringe their intangible property. Their relationships with industry, including any hopes they have of being seen as heeding innovation and commercialization mandates, will suffer if they do not.

C. Develop Decisional Infrastructures Concerning Patent Enforcement

Universities famously have policies or guidelines that cover almost every activity in which they engage. However, as findings from the study reported in this Article reveal, few universities that litigate patents have policies or guidelines concerning their participation as plaintiffs in patent infringement litigation, and only one indicated that it budgets for the activity. At the same time, decision-makers at most of the surveyed universities believe that it

¹⁵⁵ Margaret T. Stopp & G. Harry Stopp, Jr., *The Enforcement of University Patent Policies: A Legal Perspective*, 24 J. RES. ADMIN. 5 (1992) (describing how institutional intellectual property policies often require faculty to assign ownership of any patentable discovery made during the course of their employment to their university employer).

¹⁵⁶ Incidentally, these potential consequences provide support for the open source or faculty free agency model of technology transfer advocated for by the Kauffman Foundation and others, whereby inventor faculty dissatisfied with how their university chooses to commercialize and enforce the patents it owns could elect to use a different university's TTO to commercialize their inventions. See Robert E. Litan & Robert Cook-Deegan, *Universities and Economic Growth: The Importance of Academic Entrepreneurship*, in RULES FOR GROWTH: PROMOTING INNOVATION AND GROWTH THROUGH LEGAL REFORM 55, 55-82 (2011); see also PRESIDENT'S COUNCIL ON JOBS AND COMPETITIVENESS, TAKING ACTION, BUILDING CONFIDENCE: FIVE COMMON-SENSE INITIATIVES TO BOOST JOBS AND COMPETITIVENESS (2011) (endorsing faculty free agency); Press Release, Sen. Jerry Moran, Sens. Moran and Warner Offer Bipartisan Job Creation Plan (Dec. 8, 2011), available at <http://moran.senate.gov/public/index.cfm/2011/12/sens-moran-and-warner-offer> (proposing funding for universities that allow faculty free agency). I take no position here on the merits of the free agency proposal.

is inevitable that their university will serve as a plaintiff in a patent infringement lawsuit again in the future. These findings, coupled with most universities' ambivalent stance on patent enforcement, suggest an opportunity for universities to develop appropriate decisional infrastructures that could encourage their thinking about potential involvement as plaintiffs in patent infringement litigation.

1. Benefits

In order to be better prepared for pursuing patent infringers when warranted, and to facilitate more thoughtful institutional planning and decision-making about the activity, universities should develop decisional infrastructures concerning assertive involvement in patent infringement litigation.¹⁵⁷ The precise form and formality of such infrastructures would vary depending on the needs and culture of a particular university, but a respected membership group like AUTM could help influence this discussion by providing guidelines that would lead to the development of industry norms. At a minimum, such infrastructures should entail careful elaboration and stakeholder consensus concerning why enforcement litigation is occasionally necessary, identification of the appropriate chain-of-command structure and key decision-makers to be involved in any decision to sue for patent infringement, and articulation of the non-exhaustive factors the university should consider and actions it should consider taking before embarking on any enforcement action.

As part of this undertaking, universities should establish plans for budgeting for patent infringement litigation—for example, by setting aside X% of university patent royalties each year into a reserve fund only to be used for funding patent infringement litigation. Budgeting for patent infringement litigation necessarily would require that universities proactively consider a range of issues affecting litigation finances, many of which could be considered in the development of a decisional infrastructure. As one interviewee from the study reported in this Article pointed out, a policy decision to set aside a portion of licensing revenue for use in potential pursuit of patent infringement litigation necessarily entails having less money to allocate toward other routine budgetary line items, such as filing patent applications. While true, this fact is insufficient reason not to allocate the money. Universities and other complex organizations commonly view certain expenditures as essential, regardless of their impact on cash flow. Just as a university is unlikely to regard the yearly purchase of liability insurance as

¹⁵⁷ Cf. LEE G. BOLMAN & TERRENCE E. DEAL, REFRAMING ORGANIZATIONS: ARTISTRY, CHOICE, AND LEADERSHIP (4th ed. 2008).

optional, the yearly set-aside of X% of university patent royalties for use in potential pursuit of patent infringement litigation could come to be viewed as obligatory, and should.

Decisional infrastructures concerning patent infringement litigation could also help improve universities' relationships with current and prospective licensees, as well as serving to strengthen their image with any would-be infringers in industry. Current and prospective licensees might regard a university's proactive thoughtfulness concerning patent infringement litigation as additional indication that the university is adequately prepared to join in litigation with a licensee if necessary. A university's cultural understanding that patent ownership occasionally may involve patent enforcement through litigation could convey an important signal to companies interested not just in licensing a given technology, but in teaming with an adroit university partner. Given a choice between partnering with a university perceived as prepared to engage in patent infringement litigation if appropriate and one whose level of thoughtfulness concerning the activity can only be speculated, a conscientious company might prefer the former. For universities, developing decisional infrastructures concerning patent infringement litigation might also send an important message to companies considering using technologies covered by university patents without licensing them—i.e., that the university is strategically and internally prepared to pursue infringers if necessary.

Of course, decisional infrastructures of the sort envisioned should not be seen as a threat, nor would attempting to wield them as such be effective or advisable. Private universities in particular may have other ways of instilling fear in would-be infringers, to the extent they wish to do so. As one of the interviewees from the study reported in this Article commented:

We do use subtle threats. If I get a really recalcitrant guy, I say to him, "Hey pal, do you really want the full wrath of [our university] to come down on you? Do you want to be the guy to be sued by [our university] because you stole stuff from us? Do you know how many resources we have? Do you know how big we are? Do you know who our general counsel is?" You use things like that when you try to convince people that it would not be in their best interest to [force us to litigate].¹⁵⁸

¹⁵⁸ Rooksby, *supra* note 1, at 195.

In addition to these threats, this same interviewee mentioned that the interviewee's university has a "hard and fast rule": "[I]f you screw [our university], you never, ever again can do any business with [us]. You go on a list, and you can never, ever again do business with [our university], ever. That is the biggest threat we offer to people."¹⁵⁹

Finally, cultivating decisional infrastructures concerning patent infringement litigation also would provide the opportunity for universities to consider proactively the litigation-related language contained in their licensing agreements. While the content of such agreements varies widely, some have suggested that licensing terms often are silent on key issues concerning infringement litigation, or even contain provisions that are inconsistent with requirements imposed by patent law.¹⁶⁰ It would seem prudent for universities to implement standard language about patent infringement litigation to use in their licensing agreements as part of their institutional development of appropriate frameworks and modalities concerning the activity. Such language could include the process by which agreements will be reached concerning whether to litigate; the process by which outside counsel will be selected and supervised; details concerning responsibilities for payment of litigation fees and costs, as well as how proceeds from settlements or damages awards will be distributed; and what assistance or other resources the university will provide to its licensee in any patent infringement lawsuit brought in conjunction with the licensee. While some universities already may have adopted standardized language to address these issues, many undoubtedly have not.

2. *Arguments Against Developing Decisional Infrastructures Concerning Patent Infringement Litigation Are Inapposite*

Some may argue that establishing institutional policies on patent infringement litigation would not be a helpful undertaking, on the belief that universities' lack of policies, guidelines, and budgetary set-asides for patent infringement litigation do not indicate that universities are insufficiently prepared to engage in the activity when warranted. Indeed, interviewees cited the idiosyncratic, fact-specific nature of litigation, as well as their belief that university general counsel offices typically do not have policies on when to engage in any other variety of litigation, as reasons for maintaining the status quo.

¹⁵⁹ *Id.*

¹⁶⁰ *See* Newton, *supra* note 16, at 235-54.

These arguments overlook several important considerations. For one, many universities may not have developed mature decisional infrastructures concerning their assertive engagement in garden-variety litigation (e.g., breach of contract actions) because the instances of such litigation, as well as the institution's reputational and financial stakes in such litigation when it does occur, typically are *de minimis*. By comparison, future assertive involvement in patent infringement litigation is a near certainty for most of the universities in my study's population, and any such involvement brings with it significant reputational and financial risks. Development of the decisional infrastructures advocated here could help universities prepare for these risks and approach all decisions whether to litigate patents in an informed and systematic fashion.

Also misplaced is the assumption that any organized thinking on patent infringement litigation necessarily would result in a stifling policy that would risk committing universities to predetermined courses of action without accounting for the particular facts at hand. To the contrary, to be useful and effective, decisional infrastructures concerning patent enforcement should not lead to the creation of guidelines aimed at predicting behavior or committing the university to future action (e.g., "We always will sue for patent infringement in the following situations: . . ."). Instead, decisional infrastructures would advance institutional thinking concerning patent infringement litigation by establishing frameworks and modalities that could increase the chances that university decisions to litigate or not litigate are fully informed by all appropriate factors and relevant viewpoints.

3. Summary

When events are rare or perceived as rare, decision-makers may feel less urgency to plan for them.¹⁶¹ For many universities, patent enforcement may be perceived from the standpoint of rarity and the inability to plan, despite what data from the study reported in this Article indicate concerning universities' likely future involvement in the activity, and despite the same set of broad factors and considerations potentially relevant to any university plaintiff in any patent infringement lawsuit. Just as universities seldom resist developing decisional infrastructures to help frame institutional responses to unanticipated but likely occurrences affecting their human capital and real property (e.g., student suicides, natural disasters, and other threats to campus safety), so, too, should they consider preparing themselves for crises involving

¹⁶¹ See James G. March, Lee S. Sproull & Michal Tamuz, *Learning from Samples of One or Fewer*, 2 *ORG. SCI.* 1 (1991).

their intangible property. Developing decisional infrastructures concerning patent infringement litigation would not end university involvement in the activity; rather, such infrastructures would facilitate thoughtful and prepared decision-making by universities when faced with an infringer.

IV. CHANGING LAW: LET UNIVERSITIES INNOVATE WHILE LICENSEES LITIGATE

Findings from the study reported in this Article, when viewed in light of the CAFC's prudential standing requirement for owners of exclusively licensed patents, illuminate the legal and policy tensions universities face when confronted with infringers of their patents. An additional method of reconciling these tensions—instead of or in conjunction with the policy changes proposed in Part III above, and likely of more appeal to universities whose TTO operations are less established—involves amending the Patent Act so as to permit universities more freedom to innovate instead of forcing them to litigate. This Part describes how.

A. *Why Legislative Action Is Needed*

The CAFC's rationale for its prudential standing requirement in cases involving exclusively licensed patents lacks justification when applied to university patent owners. Universities are unlikely entities to seek out enforcement opportunities, and indeed, findings from the study reported in this Article show that most are reluctant participants in infringement lawsuits. Universities primarily are in the business of innovating, not litigating, and most would like to keep it that way.

But under prevailing CAFC interpretation of patent law, universities often have no choice but to litigate.¹⁶² As discussed

¹⁶² It is important to note that, for a variety of reasons, university patent owners are not always made co-plaintiffs in enforcement actions, either at the outset of the case, or ever. Some university TTO personnel, university licensees, and their counsel may be unaware of the prudential standing requirement. Also, because it does not lead to automatic dismissal of the case and because most cases settle early in the life cycle of a lawsuit, conceivably a university and its licensee reasonably could decide to leave the university out of the lawsuit until the court orders its inclusion (or hope that the case settles before anyone raises the issue). See PATENT LITIGATION STRATEGIES HANDBOOK, *supra* note 129, at 168. Of course, some opposing parties fail to raise the issue in a timely manner, so a case may proceed after filing without the university patent owner as plaintiff. Even for those cases that do proceed, some federal district court judges may fail to raise the issue on their own if one of the parties does not. Indeed, many of these scenarios appear to have played out in the *AsymmetRx* case (discussed *supra*

earlier in this Article, this unfortunate necessity is problematic for many universities. Whenever a university joins a lawsuit with a licensee co-plaintiff (either at the outset of the case, or later, whether by decision or compulsion), issues surrounding the university's involvement may strain the university-licensee relationship, as each party's goals and ideas about how best to pursue the lawsuit may differ as the case develops.¹⁶³ The university's involvement in such litigation may impact the university in other noticeable ways as well. Patent infringement litigation is a costly undertaking for any party,¹⁶⁴ even for universities that are paying only a portion of the total cost, whether out-of-pocket or set-off against future royalties. The activity also has a tendency to drain TTO productivity¹⁶⁵ and, as findings from the study reported in this Article indicate, often brings with it delicate political issues that can impact university relationships with important funders or supporters (whether public or private), not to mention damage the public's image of universities as purveyors of undifferentiated knowledge.¹⁶⁶

For at least these reasons, serious consideration should be given to the potential for Congressional action that would allow universities to continue to enjoy the upsides of patent ownership (i.e., licensing revenues) without the pronounced downside of occasionally having to assertively pursue infringers in court.¹⁶⁷

Part I), where the CAFC raised the prudential standing requirement *sua sponte* on appeal.

¹⁶³ Universities typically are highly risk-averse entities, so a licensee in a given lawsuit with a university co-plaintiff may have more tolerance than the university for pursuing a lawsuit past the initial stages of pleadings and discovery. Also, licensees have more to gain financially through lawsuits than do university patent-owners, and for that reason alone their orientation to any litigated dispute is likely to differ from that of universities.

¹⁶⁴ See *supra* note 3 (discussing AIPLA data on litigation costs).

¹⁶⁵ See Shane & Somaya, *supra* note 4.

¹⁶⁶ While respondents in the study summarized in Part II did not report being driven by concern for the public's reaction to their university's potential involvement in assertive patent litigation, these data do not mean that others within or outside universities are not concerned by the activity. Indeed, the commentators cited in Subsection I.C.1 suggest that such concern abounds.

¹⁶⁷ My proposal in many ways picks up where the CAFC leaves off. Unwilling to loosen the strictures of patent law as they apply to universities, the CAFC, as early as 1987, noted efforts by at least one prominent university (Cornell) "to have its cake and eat it too, i.e., to act in a noncommercial manner and yet preserve the pecuniary rewards of commercial exploitation for itself." *Griffith v. Kanamaru*, 816 F.2d 624, 628 (Fed. Cir. 1987) (declining Cornell's invitation to relax CAFC requirements for diligence in reducing to practice due to peculiarities of the university research environment). Professor Lee views this tension as part of a mounting rejection by patent courts of academic exceptionalism. See Lee, *supra* note 49, at 39 ("Whereas uniquely 'academic' norms, practices, and policies justified exceptional treatment of universities in earlier generations, modern courts view universities as much more akin to

That most universities defer substantially to the opinions of their licensees concerning litigation—often expecting them to pay some or all of the university’s legal costs in pursuing such actions, as found in the study reported in this Article—only further supports this proposal. Even more importantly for society, the proposal is consistent with a growing conception of patent law as public law and a concern for the collective hazards of the rising incidence of patent litigation, particularly when it involves universities.¹⁶⁸

B. Proposal for Amending the Patent Act

Legislative change to the Patent Act could offer universities a way out of assertive infringement litigation without upsetting other important balances struck in the technology transfer system. Under my proposal, in exchange for ceding enforcement authority to their exclusive patent licensees, universities would not be required to join as plaintiffs in infringement actions involving those patents. If a university declined to join its exclusive licensee in a given lawsuit against a given defendant, the university would be prohibited from suing the same defendant for the same alleged act of patent infringement at a later time. Universities would retain the option to join infringement lawsuits brought by their exclusive licensees, but avoid the obligation.

Section 281 of the Patent Act, which concerns “remedy for infringement of patent,” would be the logical section of the Patent Act in which to codify my proposal. The language of the proposal could follow the existing text, with the additions indicated below in italics:

A patentee shall have remedy by civil action for infringement of his patent, *provided*:

(1) No university shall be made to assert a patent it owns, in whole or in part, if that university files with the court on the day any infringement allegation is brought by a licensee or co-owner concerning the patent an affidavit that states for each such patent:

commercial entities.”); *id.* at 40 (“[C]ontemporary courts have routinely rejected academic exceptionalism. In so doing, courts have relied on (and reinforced) a conception of universities as integrated into the traditional commercial narrative of patents.”).

¹⁶⁸ See Feldman, *supra* note 55, at 2, 88 (noting “the locus of creative thought, all too often, has shifted from the R&D department to the legal department” and that society’s creative resources are moving “from building a better mousetrap and towards building better legal traps”); La Belle, *supra* note 8, at 50 (noting that the purpose of the patent system is public-serving in nature).

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(A) that the university has ceded all past, present, and future enforcement control over the patent to the licensee or co-owner, and

(B) that the university releases from liability any party that the licensee or co-owner has accused or may accuse of infringement in the present action, and will not seek civil remedy for infringement from any such party or parties in any action for any past, present, or future acts of infringement of the patent asserted in the pending lawsuit.

(2) Nothing in this provision shall be deemed to provide standing to sue for infringement of a patent to a bare or non-exclusive licensee.

(3) For purposes of this provision, “university” shall mean an institution of higher education as defined in section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)), or a technology transfer organization whose primary purpose is to facilitate the commercialization of technologies developed by one or more such institutions of higher education.

Various portions of the proposed statutory language merit elaboration. First, the language is flexible enough to recognize the complex realities of patent litigation—for example, that universities often co-own patents (with the federal government, other universities, or for-profit companies), that multiple patents often are asserted in litigation (often at different times in the litigation), that additional defendants can be added later on in litigation, and that allegations of infringement can be levied as counterclaims by defendants. Second, the proposed language breaks no new ground in its definition of a university. Indeed, paragraph 3 of the proposed amendment to Section 281 mimics the language in the Patent Act (as amended in 2011 by the Leahy-Smith America Invents Act) that provides an exception to universities to the prior user rights defense.¹⁶⁹ Third, the proposed

¹⁶⁹ See 35 U.S.C. § 273(e)(5)(A) (2006). In this sense, the proposed law would not be the first to offer universities a privileged position in patent litigation. See Arti K. Rai & Bhaven N. Sampat, *Accountability in Patenting of Federally Funded Research*, 30 NATURE BIOTECH. 953, 953 (2012) (noting that the

language does nothing to unsettle the CAFC's or the Supreme Court's longstanding recognition that non-exclusive licensees lack standing to sue for patent infringement. Thus, the proposed statutory amendment in paragraph 2 would not absolve universities of the obligation to participate as plaintiffs in lawsuits against parties they believe to have infringed a patent they have licensed non-exclusively (or not licensed at all).

Fairness considerations also are not upset by the statutory proposal. Importantly, the proposed amendment neither promotes nor disrupts a university's ownership interest in its patents. Under the proposed amendment, a determination in a lawsuit that one or more claims of a litigated patent are invalid would have the same effect on the university as owner of the patent as it does now under prevailing law.¹⁷⁰ Should the university ever attempt to assert the invalidated claims against the same or a different defendant in a new lawsuit, collateral estoppel would apply.¹⁷¹

Further to the concern for fairness, by requiring that universities file an affidavit with the court on the day any infringement allegation is waged by a licensee or co-owner, adverse parties (be they defendants or plaintiffs) effectively would be put on notice at the outset of the case of a university's decision not to participate in the enforcement proceeding. Thus, in order to take advantage of the provisions of the proposed amendment, universities would have to act quickly. Those that do not would be prevented from taking advantage of the amended statute and could be compelled to join the case if they are otherwise not already a party to it.¹⁷²

exception to prior user rights affords universities and their assignees and/or licensees a privileged position in patent infringement litigation).

¹⁷⁰ However, Section IV.D, *infra*, discusses the potential limitations to having a university not participate—at least as a named party—in a lawsuit concerning the validity of one or more of its patents.

¹⁷¹ While law on the matter varies by appellate circuit, collateral estoppel typically applies when there is a showing that:

- (1) the issue at stake was identical to the one involved in the prior litigation;
- (2) the issue had been actually litigated in the prior suit;
- (3) the determination of the issue in the prior litigation was a critical and necessary part of the judgment in that action; and
- (4) the party against whom the earlier decision is asserted had a full and fair opportunity to litigate the issue in the earlier proceeding.

Bayer AG v. Biovail Corp., 279 F.3d 1340, 1345 (Fed. Cir. 2002) (quoting *In re McWhorter*, 887 F.2d 1564, 1566 (11th Cir. 1989)) (applying Eleventh Circuit law). The application of these factors would prevent a university from asserting claims of a patent previously held invalid in federal court litigation.

¹⁷² Occasionally, a licensee may allege infringement of a university-owned patent without the university's knowledge. In such situations, the university taken by surprise by its licensee's action might be unable to timely file the affidavit, and therefore be unable to take advantage of the proposed statutory

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The statutory proposal also would help conserve judicial resources. By offering universities an early exit from patent litigation, parties would be relieved of the discovery burdens and motions disputes associated with determining whether a university owns substantial rights to an asserted patent, such that its involvement in the case is legally required. Freed from these evidentiary and legal inquiries, courts and litigants would be able to more quickly and efficiently address the core issue of any patent infringement case: whether the asserted patent or patents are valid and have been infringed.

Finally, it bears noting that the language of the proposal does not address the “all substantial rights” inquiry that is central to the underlying question of whether a given university must participate in asserting infringement of its patent. Importantly, it need not do so. As written, the proposed statutory amendment would accommodate the scenario where a university owns substantial rights to its exclusively licensed patent, as well as the scenario where an exclusive licensee owns all substantial rights to the patent (in which case the university effectively has assigned the patent). In either scenario, the concerns that given rise to the CAFC’s prudential standing requirement would be muted by a university’s filing of the affidavit—i.e., whether the CAFC would view the university as the patent owner becomes irrelevant once the university takes advantage of the statute’s provision.¹⁷³

C. Benefits to the Proposed Statutory Amendment

The legislative proposal presented above recognizes several important premises. First, many universities—which, unlike for-

amendment. This possibility is no reason to discredit the proposed amendment, as it would leave the university in no worse of a legal position than it would otherwise confront under prevailing law. This hypothetical scenario also highlights one of the statutory proposal’s likely consequences: it may encourage improved communications between universities and licensees concerning issues of infringement litigation.

¹⁷³ This feature of the proposal is also one of its strengths. Before a lawsuit is even filed, universities and their exclusive licensees could forego painstaking legal inquiry into whether their licensing agreements conveyed all, or less than all, substantial rights to the patent. Should the university decide it does not want to participate, and will take advantage of the proposed statutory amendment, it will not matter how the court would actually rule in determining who owns substantial rights to the patent. This is no trifling attribute, for as the cases reviewed *supra* in Subsection I.A.2 make clear, determining through litigation who enjoys substantial rights to the patent can consume significant litigant and judicial resources. *Cf.* Greene, *supra* note 9, at 29-30 (“The Federal Circuit’s decisions in this [‘all substantial rights’] line of cases tend toward semantic mush rather than functional or pragmatic analysis, which tends only to muddy the standard, confusing courts and litigants and injecting uncertainty into the litigation process.”).

profit companies, primarily owe allegiance to taxpayers when it comes to their research activities—do not want to litigate their patents, yet the CAFC's imposition of a prudential standing requirement on owners of exclusively licensed patents effectively mandates their eventual involvement in patent infringement lawsuits, no different than it would any for-profit enterprise. Second, as a matter of policy, most universities are poorly suited to litigate their patents, no matter their motivation for doing so, and both universities (as owners and licensors of patents) and society (as funders of universities and university research activities) suffer as a result of this inefficiency. Third, shifting the legal burden of patent enforcement to exclusive licensees in most instances would do little to disrupt the current relationship between exclusive licensees and university patent owners with respect to patent infringement litigation.

As the entities (other than universities) most affected by this proposal, exclusive licensees would have no legitimate grounds for rejecting it. Companies that license patents typically are more accustomed to assertive litigation than universities. Regardless of any actual past experience in court, commercial licensees as a sector are better situated—financially and strategically—to pursue litigation. The deference they currently receive from universities with respect to matters of patent infringement would in a sense be codified. University-owned patents still would be litigated, but without the mandated involvement of universities, which would be freed to pursue more classically defined activities that further their research missions. Those who might argue that the proposed statutory amendment would expose universities to risks with exclusive licensees running enforcement litigation would have difficulty establishing that such a future would differ substantially from the current reality, as revealed by the findings from the study reported in this Article.

At its core, the legislative proposal would allow universities to enjoy the upside of patent ownership while limiting their involvement in one of the major downsides. Relieved of the expense and distraction of having to pursue infringers in court, universities could redouble their traditional research and commercialization efforts and focus more energy on their mandates to innovate. The proposal thus better aligns university activities with traditional societal expectations for university research. It also does so without compromising universities' increasing focus on market partnerships or undermining their innovation mandates. In short, the proposal recognizes that letting exclusive licensees litigate while universities innovate better serves the public good.

D. Limitations to the Proposed Statutory Amendment

Admittedly, the proposed statutory amendment only addresses those instances when a university is faced with joining an exclusive licensee (or co-owner) as co-plaintiff in bringing an enforcement action. It would not benefit a university in instances of infringement of patents the university either has not licensed or has licensed non-exclusively. However, as the research in Subsection I.C.3 of this Article reveals, instances of universities bringing suit as co-plaintiffs with their exclusive licensees represent the majority ($n = 221$, or 67.6%) of all patent infringement lawsuits brought by universities from 1973 through 2012.

The limitation with respect to the proposal's scope of application is also one of its strengths. If universities faced more freedom of choice as to whether to join an enforcement action brought in conjunction with an exclusive licensee, the nature of any university patent infringement action that gets brought after passage of the proposed amendment would be painted in high relief. Three scenarios seem possible: (1) the university, for whatever reason, deemed it preferable to participate as a plaintiff in an enforcement action with its exclusive licensee; (2) the university felt compelled to sue on its own—for example, because the alleged infringer refused to take a license to the university's patent, or because the university licensed the patent non-exclusively;¹⁷⁴ or (3) the university decided to engage in assertion licensing, i.e., patent hold-up. Whatever the scenario, the rarity of the occasion likely would ensure that the university is prepared to defend its action in the court of public opinion. At the very least, any of these envisioned scenarios necessarily would result from a thoughtful and intentional university decision to litigate, not a capitulation to an exclusive licensee bullishly cognizant of the legal regime that compels university involvement in patent infringement lawsuits without regard for underlying motivations or aptitudes.

While not the intended effect of the proposal, universities could use the provisions of the proposed statutory amendment to mask speculative or troll-like enforcement by PAEs created specifically for the litigation, which obviously is an important and additional limitation. In a sense, the proposal could be seen as

¹⁷⁴ Non-exclusive licensees do not have standing to sue for patent infringement, whether by themselves or in conjunction with the patent owner. *See* *Sicom Sys. Ltd., v. Agilent Techs., Inc.*, 427 F.3d 971, 976 (Fed. Cir. 2005) (“A nonexclusive license confers no constitutional standing on the licensee to bring suit or even to join a suit with the patentee because a nonexclusive licensee suffers no legal injury from infringement.”).

permissively encouraging an activity in which some universities already engage through assigning all substantial rights to a patent they own to a PAE created to enforce the patent.¹⁷⁵ As with any PAE litigation, however, examining the nature of the entity alleging infringement would be revealing. Moreover, by filing a publicly viewable affidavit with a court, universities that use the proposed statutory amendment to effectively confirm their involvement with a PAE (their licensee) would not escape public scrutiny, and might even invite it. The same is not true for universities that currently traffic with PAEs by assigning all substantial patent rights to them. These deals typically escape detection in that the university undeniably no longer owns the patent the PAE asserts, so the nature of its beneficial interest in the outcome of the lawsuit is obscured.¹⁷⁶

Another of the proposal's limitations is that it could lead to a marginal decrease in the licensing fees companies would be willing to accept from universities. From the perspective of exclusive licensees, the proposed statutory amendment would introduce a new element of uncertainty in their relationship with universities, as it would allow universities the freedom to decline to participate as a co-plaintiff in any enforcement action, both at the point of contracting and at the point an infringer is identified and the exclusive licensee prepares to sue. Exclusive licensees would be likely to view a university's refusal to commit to a contract term requiring the university to participate as a plaintiff with the licensee in any enforcement action as tantamount to a decision at a future date, when a specific infringer is identified, not to participate. This reasonable assumption presumably would lead universities to receive a lower licensing fee than they would if their exclusive licensees enjoyed contractual assurances of university participation in any enforcement lawsuit. However, in exchange for these arguably lower returns, universities would gain a freedom of choice they do not currently enjoy under prevailing law.¹⁷⁷

¹⁷⁵ See Jacob H. Rooksby, *University Involvement in Patent Infringement Litigation*, 47 LES NOUVELLES 8, 15 (2012), for a description of these arrangements and their usage. See also Ewing & Feldman, *supra* note 73, at 12-15 (describing the practice of patent privateering by Intellectual Ventures); Steven Seidenberg, *Private Profits*, INSIDE COUNSEL, Mar. 2013, at 20-22 (describing the practice of patent privateering).

¹⁷⁶ Of course, the proposed statutory amendment would not forbid these arrangements from continuing, and universities intent on pursuing yet masking their involvement in speculative enforcement activity likely would continue to prefer these arrangements.

¹⁷⁷ To this point, universities that primarily view patent licensing as a means of generating revenue could bargain for a higher licensing fee in exchange for contracting to participate as a plaintiff in any enforcement action. Thus, all universities with licensed patents potentially could face a choice: receive more licensing revenue but bear some of the risk of an enforcement lawsuit, or receive

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Perhaps the best argument against the proposed statutory amendment is that it does nothing to diminish universities' involvement in litigation to the extent an opposing party alleges that the university's patent is invalid. After all, alleged infringers routinely challenge the validity of patents they are accused of infringing.¹⁷⁸ However, arguably any university involvement in the litigation as a result of an invalidity contention is more likely to entail university inventors and perhaps university patent counsel than it is CROs or directors of TTOs. Contested matters of inventorship, prior art, and claim interpretation—the typical points of contention in validity inquiries—are more within their purview than they are that of university administrators, whose time is better spent promoting innovation rather than managing litigation. More to the point, to the extent that any of these individuals would be subjected to depositions or live testimony at trial, their posture would be more analogous to that of a defendant or expert witness than it would a plaintiff. For universities understandably concerned about the reputational risks unique to their involvement as plaintiffs in patent infringement lawsuits, the likelihood of involvement in a defensive-seeming posture would appear less onerous and more in line with most universities' hesitancy to litigate in the first instance.¹⁷⁹

Lastly, proposing any type of legislative action often runs the risk of becoming an exercise in wishful thinking, whatever the political climate. With respect to this Article's proposal, detractors could argue that Congress never would give serious consideration to a proposal that might at most benefit 160 institutions in higher education (i.e., all those that engage in patenting), and even then only in a narrowly defined and relatively infrequent situation.¹⁸⁰

less licensing revenue but maintain complete freedom over whether to participate in any enforcement activity. A university's decision in this realm would speak to its balance of mission and money through patents.

¹⁷⁸ Cf. PATENT LITIGATION HANDBOOK, *supra* note 129, at 154 (noting that alleged infringers are “well advised to file counterclaims seeking declaratory judgment of patent noninfringement, invalidity, and/or unenforceability [. . .] where they apply”).

¹⁷⁹ To be sure, hesitancy to litigate is not limited to universities. However, financial rather than reputational concerns likely account for most hesitancy exhibited by for-profit actors. The reputation of small- to mid-sized companies is unlikely to be blemished through asserting non-frivolous patent infringement lawsuits. In fact, such activity can enhance their reputation within industries as strong protectors of intellectual and financial investments. The same benefits also may flow to large companies, except if such companies routinely bring suits against smaller companies in an attempt to squelch lawful competition.

¹⁸⁰ While the number of patent infringement lawsuits brought by universities, as well as the number of universities participating in such lawsuits, both have increased over time, these phenomena are negligible when viewed from the perspective of the total number of patent infringement lawsuits filed each year

However, the recent passage of the Leahy-Smith America Invents Act, which was driven in part by concerns over the impact on innovation caused by patent infringement lawsuits, as well as subsequent amendments to the law, gives hope that a proposal aimed at limiting university involvement in patent infringement lawsuits could find support in Congress. At the very least, influential groups within higher education would seem to be natural supporters of the proposal. The AAU—more than half of whose members were in the population of the study reported in this Article—vigorously backed the Leahy-Smith America Invents Act, as did other interested organizations such as AUTM, the Association of Public and Land-grant Universities, the American Council on Education, the Council on Governmental Relations, and the Association of American Medical Colleges.¹⁸¹ All of the aforementioned organizations, in addition to the federal government and important advisory groups such as the National Advisory Council on Innovation and Entrepreneurship and the National Academy of Sciences, would seem like logical supporters of the proposal and its aim.¹⁸²

E. Summary

Data from the study reported in this Article suggest that many universities are hesitant to assert their patents through infringement litigation, even though CAFC interpretation of patent law requires their participation. Their hesitancy to sue is understandable, although it may only hurt their research missions in the long term, as suggested in Part III. Regardless of a particular university's disposition toward litigating its patents, all universities—and particularly ones less adept at, or with fewer resources to devote to, technology transfer—likely would welcome more degrees of freedom in deciding whether to participate as plaintiffs in patent enforcement actions with their exclusive licensees. The legislative proposal introduced here could enable

by NPEs. See Sara Jeruss, Robin Feldman & Joshua Walker, *The America Invents Act 500: Effects of Patent Monetization Entities on US Litigation*, 11 DUKE L. & TECH. REV. 357, 361 (2012) (noting that universities participated as plaintiffs in fewer than 1% of a sample of patent infringement lawsuits brought by NPEs from 2007 through 2011).

¹⁸¹ See Letter from Hunter R. Rawlings III, President, Ass'n of Am. Univs. et al. (June 15, 2011), *available at* www.aau.edu/WorkArea/DownloadAsset.aspx?id=12258 (indicating support for the Leahy-Smith America Invents Act).

¹⁸² President Obama's National Advisory Council on Innovation and Entrepreneurship has indicated its support for a host of proposals aimed at improving universities' freedom to innovate, as has the National Academy of Sciences in its 2011 committee report on management of university intellectual property. See Letter from Mary Sue Coleman, *supra* note 134, at 59-82.

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this autonomy without diminishing the mutually beneficial relationship between universities and exclusive licensees.

Freed from legal coercion to participate in the most common type of enforcement action, universities instead could focus their energies and resources on doing what they do best: innovate. Policymakers' recent and significant attention to the effects of patent law, as well as their interest in improving university responses to innovation and commercialization mandates, combine to make enacting this proposal both timely and feasible. At the very least, the proposed statutory amendment could invite an overdue dialogue on the appropriate balance between innovation and litigation in universities' expanding pursuit of patents and commercial collaborations.

CONCLUSION

University enforcement of patents involves complex institutional decision-making in the face of increased pressures on universities to closely control the knowledge they are charged with creating and disseminating. Prior to this Article's empirical report, little was known about universities that litigate patents, both in terms of data on enforcement actions involving universities as plaintiffs, as well as the policies, factors, considerations, and motivations that drive university decision-makers to pursue the activity.

With empirical data now in hand, this Article describes the many legal and policy tensions that confront universities attempting to reconcile their admirable devotion to innovation with an inflexible legal regime that often compels them to litigate. The data provide footing for two proposals. First, from a policy perspective, universities must move toward a coherent position on patent ownership and enforcement, otherwise they are wasting their valuable resources seeking patents they are unwilling to defend categorically. Part of this transformation will require developing the necessary decisional infrastructures to approach the activity of patent enforcement in a comprehensive and prepared fashion. Second, from a legal perspective, university owners of exclusively licensed patents are hampered by a restrictive prudential standing doctrine that could be alleviated through legislative action, allowing universities the freedom to devote more resources to innovation and less to litigation. While the legal proposal has its limitations, its strengths lie in recognizing and plausibly alleviating the complexities and conflicts that often befall universities as they increasingly seek commercialization successes.

The research and commercialization activities of universities nationwide have received immense academic,

governmental, and popular attention in recent years. Perhaps not since the passage of the Bayh-Dole Act over 30 years ago have as many segments of society influenced by technology been so engaged in debating policy issues concerning patents, innovation, and commercialization. Universities—as significant generators of intellectual property and drivers of economic development—inevitably are at the center of this dialogue, which cannot be separated from a larger conversation concerning the evolving missions, cultures, and funding models of universities amidst arguably the most unstable economic climate since the Great Depression.

For these reasons, the time has arrived for concerted attention and sustained dialogue around the often-overlooked underbelly of university patent commercialization. If we as a society are serious about universities being in the business of innovating, we must rethink the business of their litigating.

APPENDIX A – SURVEY INSTRUMENT AND EXECUTIVE SUMMARY

The survey on university patent litigation was fielded from August through September 2011. The survey opened on August 22, 2011 and closed four weeks later, on September 19, 2011. Twenty-two completed responses were received, representing a 36.7% completion rate.

Chief research officers at 63 institutions (universities and university systems) were targeted for participation based on their oversight of technology transfer operations. The 63 institutions constitute those universities and university systems identified as having participated as a plaintiff in one or more patent infringement lawsuits filed between January 1, 1973 (the date for which searchable legal records are first available) and December 31, 2010.

The chief research officers at these 63 institutions were sent introductory letters on August 1, 2011, inviting their participation in the study. Several responded by indicating that a different person within their institution was better positioned to complete the survey, given their job duties. An email invitation to take the survey was sent out on August 22, 2011 to the amended list of participants, which totaled 60 (for unstated reasons, two members of the population declined to participate after receiving the introductory letter; an additional member was removed due to professed lack of knowledge about the survey's subject matter). To appropriately limit responses, the email invitations contained a unique password-protected link to the survey, which was administered online using QuestionPro survey software. Responses were collected anonymously. Reminder emails were sent to participants on September 1 and September 15, 2011.

Listed below are the aggregate survey response data. Four questions on the survey received more than 22 responses, as respondents either were permitted to select more than one response to the question (for questions 1 and 14) or were required to select three answer choices (for questions 19 and 20). Descriptive statistics are provided for questions with Likert-style response choices, which were treated as interval data. The most frequently selected response to each question is **bolded**.

1. What is your job title? Select all that apply.

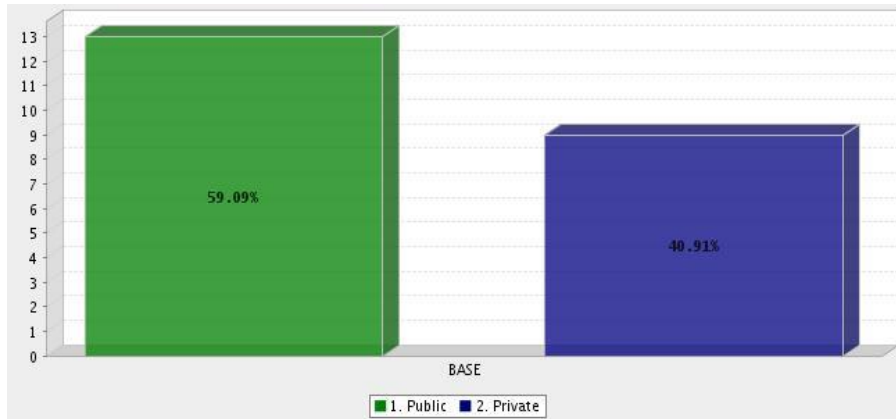
[NB: The percentages listed in the accompanying table represent the percentage of total respondents who selected any given answer choice. Because multiple selections were possible, percentages do not sum to 100%.]

Answer	Count	Percent
1. Vice President	6	27.27%
2. Assistant or Associate Vice President	2	9.09%
3. Director of Technology Transfer	10	45.45%
4. Director of Affiliated Patent or Research Entity	0	0.00%
5. Other*	5	22.73%

* Answers included Attorney, Associate Director, Chief Executive Officer, General Counsel, and Counsel.

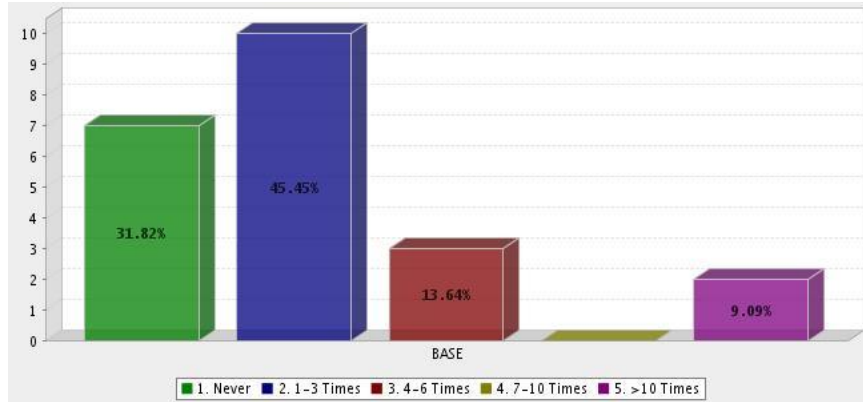
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2. Is your university public or private?



Answer	Count	Percent
1. Public	13	59.09%
2. Private	9	40.91%
Total	22	100%

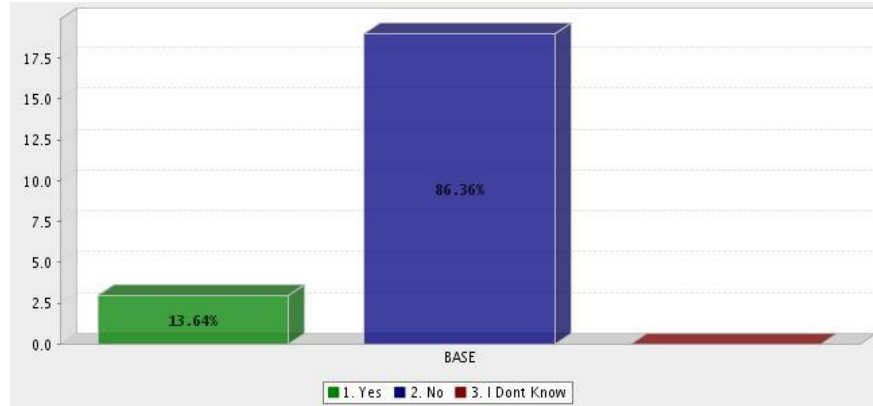
3. How many times in the past year did you discuss with others at your university whether the university should participate as a plaintiff in patent infringement litigation against an infringer of one of your university’s patents?



Answer	Count	Percent
1. Never	7	31.82%
2. 1-3 Times	10	45.45%
3. 4-6 Times	3	13.64%
4. 7-10 Times	0	0.00%
5. >10 Times	2	9.09%
Total	22	100%
Mean: 2.09	Std. Deviation:	
	1.15	

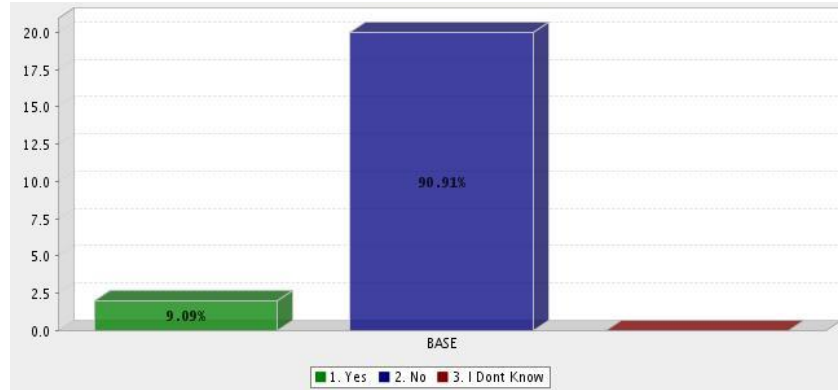
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4. Our university has established an affiliated patent or research foundation partly so that entity can participate as a plaintiff in patent infringement litigation in place of the university.



Answer	Count	Percent
1. Yes	3	13.64%
2. No	19	83.36%
3. I Don't Know	0	0.00%
Total	22	100%

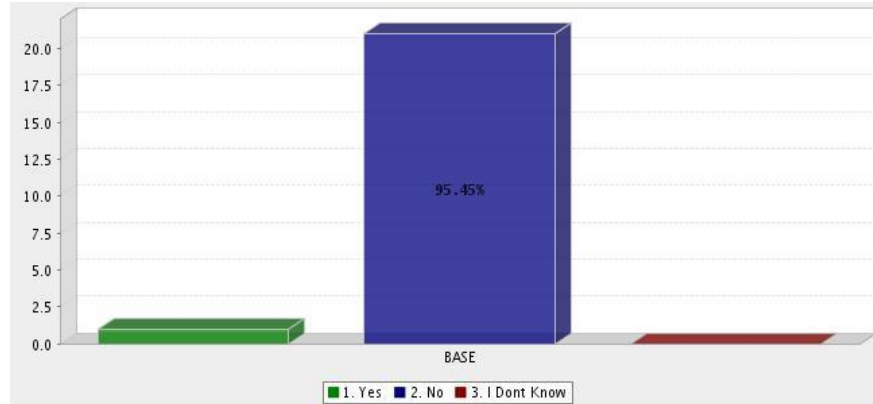
5. Our university has a formal policy or set of guidelines to follow in determining whether to participate as a plaintiff in patent infringement litigation.



Answer	Count	Percent
1. Yes	2	9.09%
2. No	20	90.91%
3. I Don't Know	0	0.00%
Total	22	100%

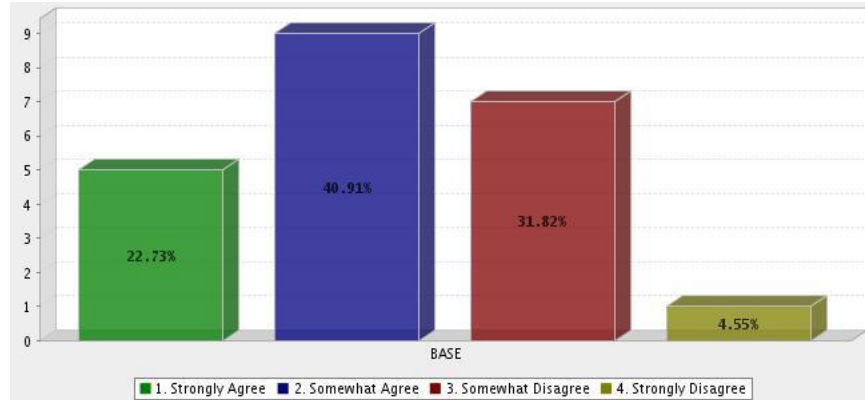
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6. Our university sets aside money in a budget each year for our potential use if we decide to participate as a plaintiff in patent infringement litigation.



Answer	Count	Percent
1. Yes	1	4.55%
2. No	21	95.45%
3. I Don't Know	0	0.00%
Total	22	100%

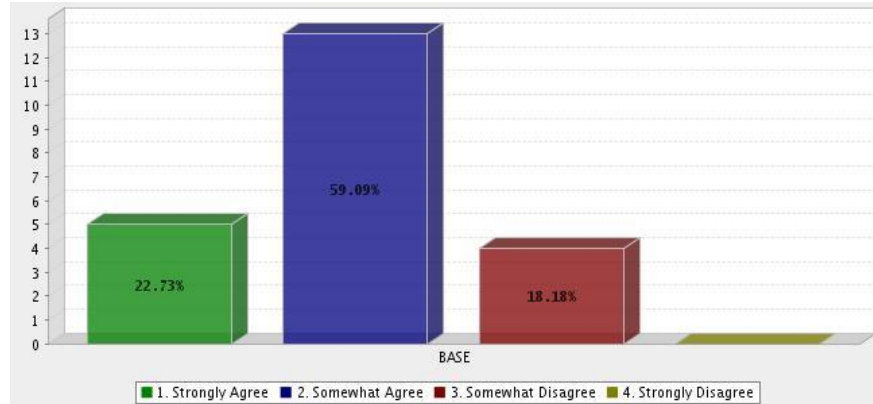
7. Participating as a plaintiff in patent infringement litigation is an inevitable occurrence for our university because we own a number of patents.



Answer	Count	Percent
1. Strongly Agree	5	22.73%
2. Somewhat Agree	9	40.91%
3. Somewhat Disagree	7	31.82%
4. Strongly Disagree	1	4.55%
Total	22	100%
Mean: 2.18	Std. Deviation: 0.85	

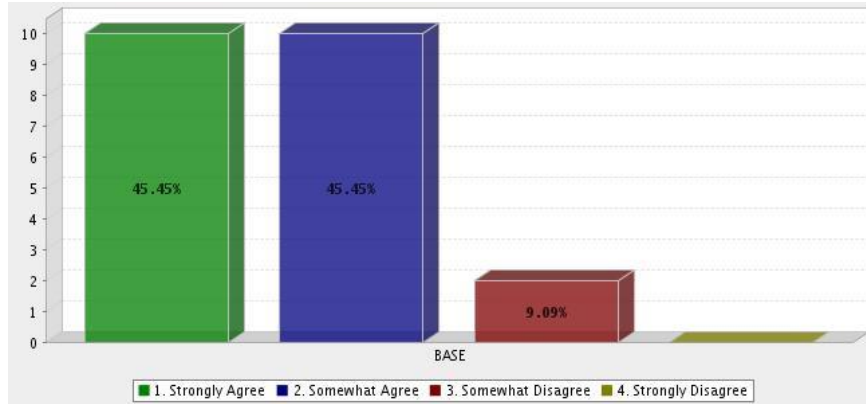
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8. If appropriately conducted, participating as a plaintiff in patent infringement litigation is one way for our university to further the public interest under the Bayh-Dole Act.



Answer	Count	Percent
1. Strongly Agree	5	22.73%
2. Somewhat Agree	13	59.09%
3. Somewhat Disagree	4	18.18%
4. Strongly Disagree	0	0.00%
Total	22	100%
Mean: 1.95	Std. Deviation:	
	0.65	

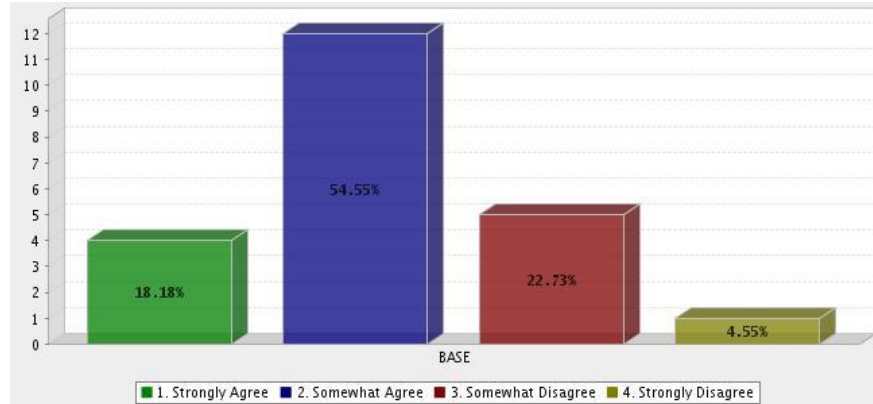
9. Our university takes the position that if we are willing to invest in research and incur costs to obtain patents, we must be willing to sue infringers of our patents.



Answer	Count	Percent
1. Strongly Agree	10	45.45%
2. Somewhat Agree	10	45.45%
3. Somewhat Disagree	2	9.09%
4. Strongly Disagree	0	0.00%
Total	22	100%
Mean: 1.64	Std. Deviation: 0.66	

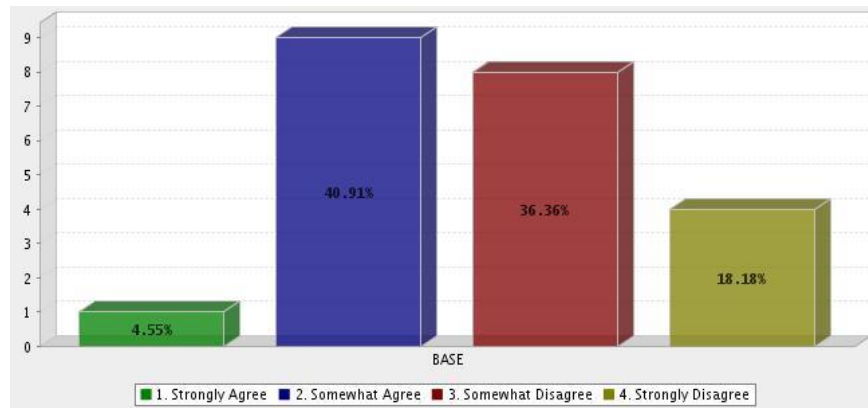
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10. Our university takes the position that participating as a plaintiff in patent infringement litigation is an unavoidable consequence of engaging in patenting and technology transfer.



Answer	Count	Percent
1. Strongly Agree	4	18.18%
2. Somewhat Agree	12	54.55%
3. Somewhat Disagree	5	22.73%
4. Strongly Disagree	1	4.55%
Total	22	100%
Mean: 2.14	Std. Deviation:	
	0.77	

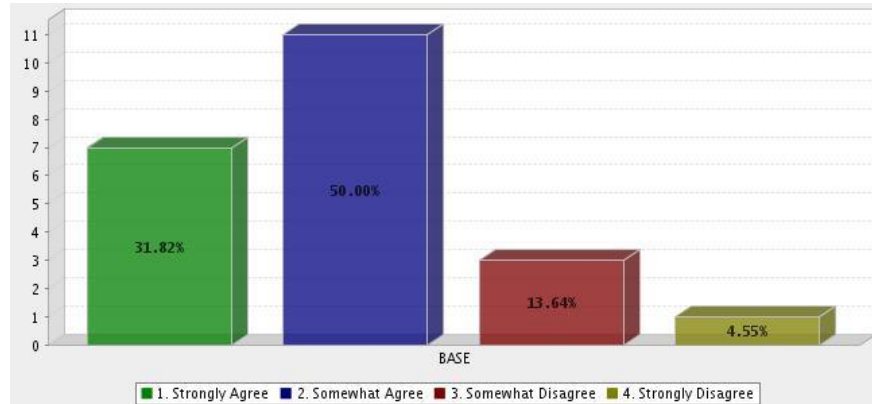
11. Participating as a plaintiff in patent infringement litigation furthers our university’s mission as a research institution.



Answer	Count	Percent
1. Strongly Agree	1	4.55%
2. Somewhat Agree	9	40.91%
3. Somewhat Disagree	8	36.36%
4. Strongly Disagree	4	18.18%
Total	22	100%
Mean: 2.68	Std. Deviation: 0.84	

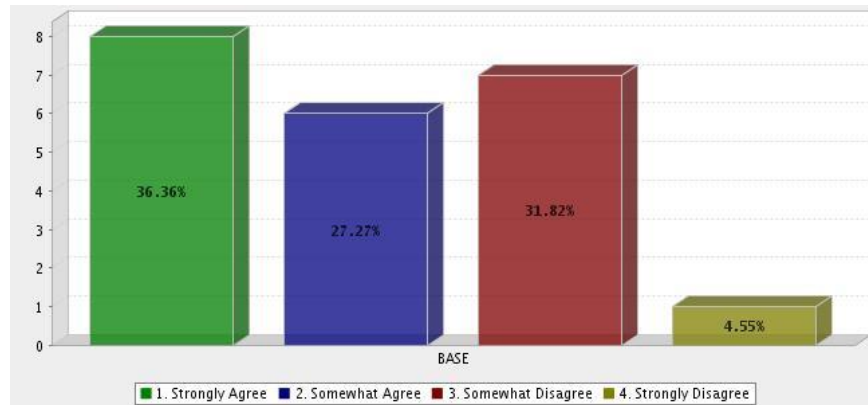
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12. In considering whether the university should participate as a plaintiff in patent infringement litigation, the potential monetary returns to our university—in the form of a favorable verdict or out-of-court settlement—are typically highly relevant to our decision-making.



Answer	Count	Percent
1. Strongly Agree	7	31.82%
2. Somewhat Agree	11	50.00%
3. Somewhat Disagree	3	13.64%
4. Strongly Disagree	1	4.55%
Total	22	100%
Mean: 1.91	Std. Deviation:	
	0.81	

13. In considering whether the university should participate as a plaintiff in patent infringement litigation, the potential indirect costs to our university—in the form of diverted attention of faculty and professionals, emotional strain caused by the litigation, and public relations concerns—are typically highly relevant to our decision-making.



Answer	Count	Percent
1. Strongly Agree	8	36.36%
2. Somewhat Agree	6	27.27%
3. Somewhat Disagree	7	31.82%
4. Strongly Disagree	1	4.55%
Total	22	100%
Mean: 2.05	Std. Deviation: 0.95	

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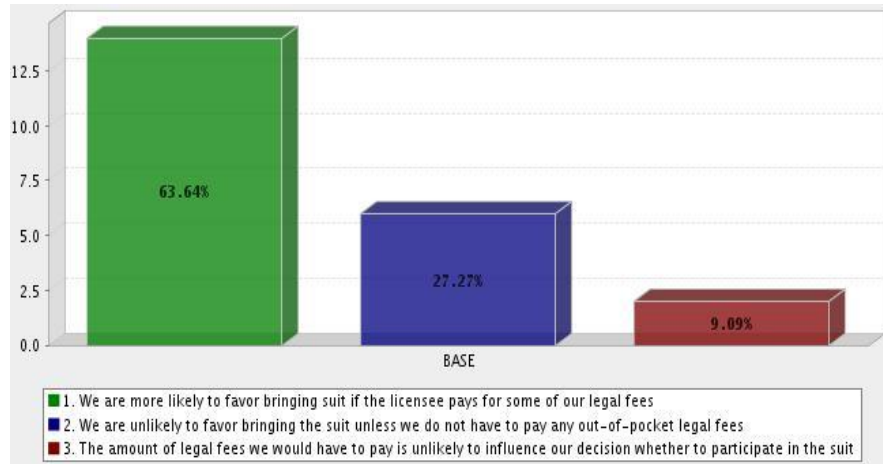
14. In considering whether your university should participate as a plaintiff in patent infringement litigation, which aspects, if any, of a potential defendant's identity are most likely to weigh heavily in your university's decision-making? Select all that apply.

[NB: The percentages listed in the accompanying table represent the percentage of total respondents who selected any given answer choice. Because multiple selections were possible, percentages do not sum to 100%. Respondents selecting answer choice 8 or 9 were not permitted to select any other answer choice.]

Answer	Count	Percent
1. Defendant's financial and litigation resources	7	31.82%
2. Defendant's political influence	9	40.91%
3. Defendant's geographic proximity to our university	3	13.64%
4. Defendant's prominence in the community	6	27.27%
5. Defendant's financial contributions to our university	9	40.91%
6. Defendant's substantial employment of workers in our state	5	22.73%
7. Defendant's good reputation in our community	3	13.64%
8. None of the above	3	13.64%
9. Defendant's identity is irrelevant to our decision to bring suit	9	40.91%

15. Which of the following statements best describes how your university considers legal fees in cases it contemplates bringing with one or more licensee(s)?

[NB: Respondents were asked to assume that the likelihood of success in obtaining a favorable verdict or out-of-court settlement was 70% or greater.]



Answer	Count	Percent
1. We are <u>more likely</u> to favor bringing suit if the licensee pays for <u>some</u> of our legal fees	14	63.64%
2. We are <u>unlikely</u> to favor bringing the suit unless we do not have to pay <u>any</u> out-of-pocket legal fees	6	27.27%
3. The amount of legal fees we would have to pay is unlikely to influence our decision whether to participate in the suit	2	9.09%
Total	22	100%

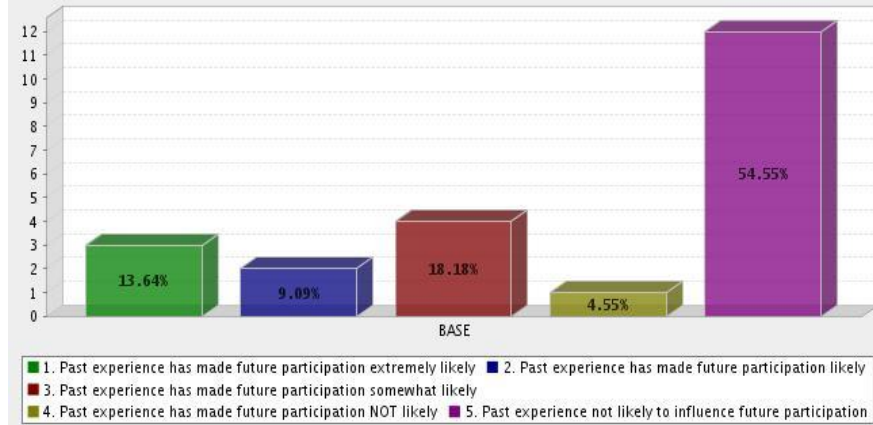
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16. What is the lowest range of projected monetary returns to your university (after accounting for legal fees and costs) over which your university would consider litigating?

[NB: Respondents were asked to assume that the likelihood of success in obtaining a favorable verdict or out-of-court settlement was 70% or greater.]

Answer	Count	Percent
1. \$0 - \$999	1	4.55%
2. \$1k - \$9k	0	0.00%
3. \$10k - \$49k	1	4.55%
4. \$50k - \$99k	1	4.55%
5. \$100k - \$249k	2	9.09%
6. \$250k - \$499k	4	18.18%
7. \$500k - \$999k	1	4.55%
8. \$1M - \$9M	6	27.27%
9. \$10M - \$49M	1	4.55%
10. \$50M - \$99M	0	0.00%
11. \$100M - \$249M	0	0.00%
12. \$250M - \$499M	0	0.00%
13. \$500M+	0	0.00%
14. Monetary returns are not something our university considers when deciding whether to litigate	5	22.73%
Total	22	100%

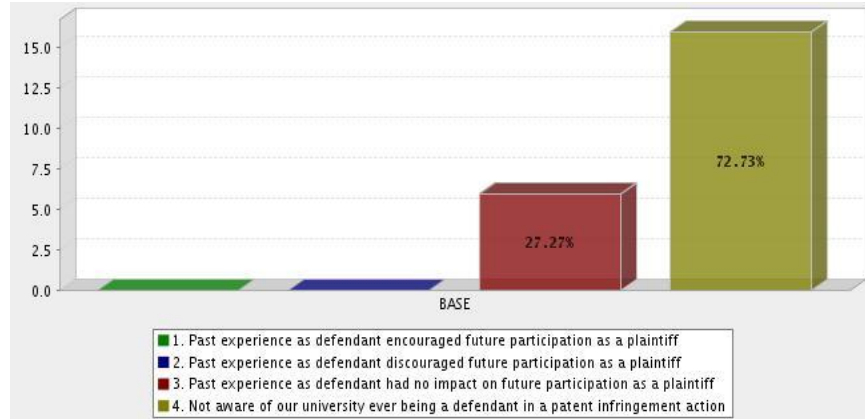
17. What impact, if any, has your university’s past experience as a plaintiff in patent infringement litigation generally had on your university’s likelihood to participate as a plaintiff in such litigation again?



Answer	Count	Percent
1. Past experience has made future participation extremely likely	3	13.64%
2. Past experience has made future participation likely	2	9.09%
3. Past experience has made future participation somewhat likely	4	18.18%
4. Past experience has made future participation NOT likely	1	4.55%
5. Past experience not likely to influence future participation	12	54.55%
Total	22	100%

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18. What impact, if any, has your university’s past experience as a defendant in patent infringement litigation generally had on your university’s likelihood to participate as a plaintiff in patent infringement litigation?



Answer	Count	Percent
1. Past experience as defendant encouraged future participation as a plaintiff	0	0.00%
2. Past experience as defendant discouraged future participation as a plaintiff	0	0.00%
3. Past experience as defendant had no impact on future participation as a plaintiff	6	27.27%
4. Not aware of our university ever being a defendant in a patent infringement action	16	72.73%
Total	22	100%

19. Of the following individuals and groups, whose actual or anticipated opinions are most likely to weigh heavily in your university's decision whether to participate as a plaintiff in a patent infringement lawsuit?

[NB: Respondents were asked to pick the top three relevant choices and rank them in order of priority (1 = highest priority). The first table shows the count, average rank, and percentage of respondents selecting the various answer choices. The second table shows the number and percentage of respondents who indicated any given answer choice was their institution's highest-priority concern.]

Answer	Count	Percent	Avg. Rank
1. The public	0	0.00%	0.00
2. Members of our university's governing board	8	36.36%	2.25
3. Our university's president	10	45.45%	1.50
4. Our university's in-house attorneys	13	59.09%	1.77
5. Outside attorneys retained by our university	12	54.55%	2.08
6. Faculty who invented the patents being infringed	9	40.91%	2.56
7. Faculty other than those who invented the patents being infringed	0	0.00%	0.00
8. Licensee(s) of the patents being infringed	14	63.64%	2.00
9. Students at our university	0	0.00%	0.00

Answer	Number Indicating Highest-Priority Concern	Percent
1. The public	0	0.00%
2. Members of our university's governing board	2	9.09%
3. Our university's president	5	22.73%
4. Our university's in-house attorneys	6	27.27%
5. Outside attorneys retained by our university	4	18.18%
6. Faculty who invented the patents	2	9.09%

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being infringed		
7. Faculty other than those who invented the patents being infringed	0	0.00%
8. Licensee(s) of the patents being infringed	3	13.64%
9. Students at our university	0	0.00%

20. In deciding whether to participate as a plaintiff in a patent infringement lawsuit, which of the following factors are most likely to weigh heavily in your university's decision-making?

[NB: Respondents were asked to pick the top three relevant choices and rank them in order of priority (1 = highest priority). The first table shows the count, average rank, and percentage of respondents selecting the various answer choices. The second table shows the number and percentage of respondents who indicated any given answer choice was their institution's most important consideration.]

Answer	Count	Percent	Avg. Rank
1. Belief that initiating the lawsuit would further the university's public-serving mission	7	31.82%	2.14
2. Belief that initiating the lawsuit would be essential or important for other than revenue-generating purposes	5	22.73%	1.60
3. University's contractual obligation to protect the rights of existing licensee(s)	15	68.18%	1.40
4. University's ethical obligation to protect the rights of existing licensee(s)	6	27.27%	2.17
5. Potential revenue generation through damages award	8	36.36%	2.25
6. Potential revenue generation through out-of-court settlement	6	27.27%	3.00
7. Likelihood that infringer will not pay fair license price without litigation threat	5	22.73%	2.20
8. Infringer's disregard for scientific norms and standards	0	0.00%	0.00
9. Infringer's disregard for professional norms and standards	2	9.09%	2.50
10. Likelihood that university will be viewed as a sympathetic litigant	1	4.55%	3.00
11. Groundbreaking nature of the infringed patent	1	4.55%	1.00
12. Infringer's disregard for the	10	45.45%	1.90

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university's legitimate rights			
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Answer	Number Indicating Most Important Consideration	Percent
1. Belief that initiating the lawsuit would further the university's public-serving mission	2	9.09%
2. Belief that initiating the lawsuit would be essential or important for other than revenue-generating purposes	2	9.09%
3. University's contractual obligation to protect the rights of existing licensee(s)	10	45.45%
4. University's ethical obligation to protect the rights of existing licensee(s)	1	27.27%
5. Potential revenue generation through damages award	1	4.55%
6. Potential revenue generation through out-of-court settlement	0	0.00%
7. Likelihood that infringer will not pay fair license price without litigation threat	1	4.55%
8. Infringer's disregard for scientific norms and standards	0	0.00%
9. Infringer's disregard for professional norms and standards	0	0.00%
10. Likelihood that university will be viewed as a sympathetic litigant	0	0.00%
11. Groundbreaking nature of the infringed patent	1	4.55%
12. Infringer's disregard for the university's legitimate rights	4	18.18%

APPENDIX B – ADDITIONAL INFORMATION ON UNIVERSITIES IN DATASET

Performing the research described in Subsection I.C.3. naturally allowed for the identification of the various universities that participated as plaintiffs in the located cases. Slightly more public universities than private ones have participated as plaintiffs in patent infringement litigation. Table 4 lists by funding source the 70 universities that were identified in my research.

Table 4
Universities That Litigate Patents,
Listed by Institutional Funding Source

Public Universities (n = 41)	Private Universities (n = 29)
Auburn University	Boston University
Florida Atlantic University	Brandeis University
Iowa State University	Brigham Young University
Kansas State University	California Institute of Technology
Michigan State University	Carnegie Mellon
Michigan Technological University	Catholic University
North Carolina State University	Columbia University
North Dakota State University	Cornell University
Temple University	Dartmouth College
Texas A&M University	Drexel University
Rutgers, the State University of New Jersey	Duke University
SUNY	Emory University
University of Alabama at Birmingham	Harvard University
University of Arizona	Johns Hopkins University
University of Arkansas	Massachusetts Institute of Technology
University of California	New York University
University of Central Florida	Northwestern University
University of Colorado	Princeton University
University of Delaware	Rensselaer Polytechnic Institute
University of Florida	Saint Louis University
University of Illinois	Stanford University
University of Iowa	Tufts University

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University of Kansas	Tulane University
University of Kentucky	University of Miami
University of Maryland-College Park	University of Rochester
University of Massachusetts	Vanderbilt University
University of Michigan	Wake Forest University
University of Minnesota	Washington University in St. Louis
University of Missouri	Yale University
University of Nebraska	
University of New Mexico	
University of Pittsburgh	
University of South Alabama	
University of South Florida	
University of Tennessee	
University of Texas	
University of Utah	
University of Virginia	
University of Washington	
University of Wisconsin-Madison	
Virginia Commonwealth University	

Of the 70 institutions represented in Table 4, over half ($n = 38$, or 54.3%) have participated as a plaintiff in more than one patent infringement lawsuit.¹⁸³ Over 84% ($n = 59$) are classified (or, in the case of university systems, have at least one campus within the system classified) as doctorate-granting research universities with very high research activity by the Carnegie Foundation for the Advancement of Teaching.¹⁸⁴ Also, many of the universities are elite, at least as judged by their membership in the

¹⁸³ Few were the universities that participated as a plaintiff in a patent infringement lawsuit decades ago, never to do so since then. Two such examples include Kansas State University and Tufts University, both of which were plaintiffs in lawsuits filed over 20 years ago.

¹⁸⁴ The remaining 11 institutions—Auburn University, Brigham Young University, Catholic University, Drexel University, Florida Atlantic University, Kansas State University, Michigan Technological University, Saint Louis University, Temple University, University of South Alabama, and Wake Forest University—are classified as doctorate-granting research universities with high research activity. More information about the Carnegie system of classifications can be located at <http://classifications.carnegiefoundation.org>.

prestigious Association of American Universities (“AAU”).¹⁸⁵ Indeed, over half ($n = 40$, or 57.1%) are AAU members.

As for relative wealth, half ($n = 35$, or 50.0%) of the universities had an approximate endowment size in 2012 of over \$1 billion, placing them among the top 75 richest institutions in the United States based on this metric.¹⁸⁶ Of course, the investment returns from these funds are unlikely to be used to fund patent infringement litigation. A university’s licensing revenue is a more probable proxy for institutional freedom to engage in patent infringement litigation. In that regard, and perhaps unsurprisingly, most universities in Table 4 generated at least \$1 million in licensing revenue in 2011, with 26 universities (37.1%) generating tens of millions of dollars in licensing revenue.¹⁸⁷

¹⁸⁵ The AAU is a nonprofit association of 59 U.S. and two Canadian universities. Founded in 1900, the AAU is widely considered as including some of the most preeminent public and private research universities in its membership. Membership is by invitation only. The organization frequently opines on policy issues in higher education, including issues involving intellectual property law and university commercialization.

¹⁸⁶ See *College and University Endowments, 2011-2012*, CHRON. OF HIGHER EDUC. (Feb. 1, 2013), <http://chronicle.com/article/CollegeUniversity/136933/>. The remaining institutions in Table 4 are by no means without their own impressive endowments. Only one had an approximate endowment size of less than \$100 million, and even that institution (Michigan Technological University) is among approximately the top half of all institutions whose endowment sizes were ranked in 2012.

¹⁸⁷ See *Sortable Table: Universities With the Most Licensing Revenue, FY 2011*, CHRON. OF HIGHER EDUC. (Aug. 27, 2012), <http://chronicle.com/article/Sortable-Table-Universities/133964/>. Only two institutions in the top 25 based on licensing revenue are not accounted for in Table 4. Of those two, one (Mount Sinai School of Medicine) is not a university as defined in this Article. See *supra* note 92. Four institutions in Table 4 did not report 2011 licensing data. They are Brandeis University, Catholic University, Florida Atlantic University, and Saint Louis University. While Catholic University never has reported data to AUTM, Brandeis, Florida Atlantic, and Saint Louis University have. Saint Louis University reported \$2.0 million in licensing revenue in its last reporting year (2004); Florida Atlantic reported \$87,950 in 2002, while Brandeis reported \$631,100 in 2005.