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***Antitrust Law Journal*, Vol. 79, No. 2, pp. 501-526, 2014**

George Mason University Law and Economics Research Paper Series

15-11

This paper is available on the Social Science Research Network at http://ssrn.com/abstract=2587191

PATENT ASSERTION ENTITIES AND ANTITRUST: A COMPETITION CURE FOR A LITIGATION DISEASE?

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Anyone perusing this symposium on patent assertion entities (PAEs) is no doubt familiar with the business model upon which they are based. In brief, a PAE acquires patents—sometimes a large portfolio of patents—from research companies, operating companies, or individual inventors and monetizes those patents by collecting royalties from anyone it finds practicing one of the patents without a license. The PAE compensates the patentee through the acquisition price, a share of the royalties, or some combination of the two. PAEs have been much in the news because of certain practices that imply their demand for royalties is nothing more than extortion based upon the nuisance value of a lawsuit the PAE might bring, or explicitly threatens to bring, if no agreement is reached with the party practicing the patent.

PAEs have attracted a good deal of attention from the antitrust bar and commentariat, who have had to become more knowledgeable about intellectual property in general over the last decade for reasons unrelated to the PAE phenomenon. Several such antitrust observers have been quick to decry

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PAEs' practices[1] and, in one instance, to propose their "exterminat[ion],"[2] on the ground that they either reduce the return on and thereby diminish investment in innovation, which is a major driver of competition, or facilitate anticompetitive behavior by agreeing to assert an operating company's patents against its rivals, a practice known as "privateering."

The adverse effect PAEs have upon innovation is perceived at two levels. The first concern is that PAEs will demand licensing fees from companies that do research and development (R&D) that arguably infringes a PAE's patent, as a result of which those companies will face increased costs because of the necessity either to pay a licensing fee or to litigate the validity of the PAE's patent; as costs rise, of course, output, here in the form of innovation, declines. Second, some PAEs have directed their demand letters not to companies whose R&D may be infringing a patent but to businesses and even consumers who use products in which the patent is embodied. Probably the most notorious example of this sort is the demand letter that MPHJ Technology Investments sent to hundreds of individuals and small businesses demanding a licensing fee for the use of the patented technology by which a scanned document can be attached to an email message, a technology MPHJ's lawyer claimed "99 percent of people are using."[3]

The antitrust critique of PAE practices typically begins with a recitation of the reasons a PAE is more likely to pursue royalties and to litigate than is the company or inventor from which it acquires its patents.[4] Because the PAE business model depends solely upon the receipt of royalties, the increased probability of efforts to enforce the patent is hardly surprising. Indeed, it has been pointed out that PAEs accounted for more than 60 percent of all patent infringement cases filed through December 1 of last year.[5]

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[1] *See generally* Michael A. Carrier, *Patent Assertion Entities: Six Actions the Antitrust Agencies Can Take*, CPI ANTITRUST CHRON., Winter 2013, Vol. 1, No. 2, at 1, 11–12; Ilene Knable Gotts & Scott Sher, *The Particular Antitrust Concerns with Patent Acquisitions*, COMPETITION L. INT'L, Aug. 2012, at 30, 36; Mark S. Popofsky & Michael D. Laufert, *Patent Assertion Entities and Antitrust: Operating Company Patent Transfers*, ANTITRUST SOURCE, Apr. 2013, at 1–2 [hereinafter Popofsky & Laufert, *PAEs & Antitrust*], www.americanbar.org/content/dam/aba/publishing/antitrust_source/apr13_full_source.authcheckdam.pdf; Mark S. Popofsky & Michael D. Laufert, *Antitrust Attacks on Patent Assertion Entities*, *supra* this issue, 79 ANTITRUST L.J. 445 (2014) [hereinafter Popofsky & Laufert, *Antitrust Attacks*].

[2] Tim Wu, *How to Make War on Patent Trolls*, NEW YORKER (June 3, 2013), www.newyorker.com/online/blogs/elements/2013/06/how-to-make-war-on-patent-trolls.html.

[3] Joe Mullin, *Meet the Nice-Guy Lawyers Who Want $1,000 per Worker for Using Scanners*, ARS TECHNICA (Apr. 7, 2013, 9:00 PM), arstechnica.com/tech-policy/2013/04/meet-the-nice-guy-lawyers-who-want-1000-per-worker-for-using-scanners/.

[4] *See, e.g.*, Carrier, *supra* note 1, at 7; Popofsky & Laufert, *PAEs & Antitrust*, *supra* note 1, at 5.

[5] Colleen Chien, Assistant Prof., Santa Clara Univ. Sch. of Law, Presentation at the FTC & DOJ Patent Assertion Entity Activities Workshop, Patent Assertion Entities 23 (Dec. 10, 2012),

The PAE phenomenon has prompted suggestions that the antitrust laws be applied to limit the effect that PAEs have upon innovation by the companies most affected, typically those in the high-tech sector. Because of the centrality of innovation to competition, and the understanding that the purpose of antitrust law is to deter and sanction anticompetitive activity, it apparently seems to some commentators that anything having an adverse effect upon competition should be deemed a violation of antitrust law. The intersection of PAE and antitrust problems can be expressed, for example, as a matter of raising rivals' costs. Conduct that has the purpose and effect of raising rivals' costs without otherwise materially serving the economic interest of the actor may be seen as exclusionary conduct in violation of Section 2 of the Sherman Act.[6] This is a particularly attractive theory of liability, we are told, insofar as the patent in question is essential to a standard set by an industry technical organization.[7]

Because a PAE acquires rather than creates patents and sometimes acquires a large portfolio of patents, the possibility of applying Section 7 of the Clayton Act also springs to the antitrust mind. Consider:

> Under [S]ection 7 of the Clayton Act, the antitrust agencies ask whether a transaction is likely to result in a substantial lessening of competition; the same is true under analogous European Commission law. The important element in that inquiry is whether the acquisition gives the acquiring firm the *ability* and *incentive* to exercise market power . . . . [T]he transfer of [essential patents] to non-practicing entities, for example, could confer both the *incentive* and *ability* to the non-practicing entity to exercise market power.[8]

The concern here is that a PAE is more likely to bring an infringement action than is a company that itself engages in R&D; such a company likely practices various patents and is therefore susceptible to potential counterclaims. A PAE cannot be deterred by the risk of a counterclaim because it does not practice any patents.

The widespread concern with the cost PAEs may impose upon R&D, and hence upon innovation and competition, recently culminated in a White House announcement of "five executive actions and seven legislative recommendations designed to protect innovators from frivolous litigation and ensure the highest-quality patents in our system."[9] This release was accompanied by

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available at www.ftc.gov/sites/default/files/documents/public_events/patent-assertion-entity-activities-workshop/cchien.pdf.

[6] Popofsky & Laufert, *PAEs & Antitrust*, *supra* note 1, at 10–11.

[7] *Id.* at 5–6, 10–11.

[8] Gotts & Sher, *supra* note 1, at 34.

[9] Press Release, White House Office of the Press Sec'y, Fact Sheet: White House Task Force on High-Tech Patent Issues (June 4, 2013), *available at* www.whitehouse.gov/the-press-office/2013/06/04/fact-sheet-white-house-task-force-high-tech-patent-issues.

a joint report of the President's Council of Economic Advisors, the National Economic Council, and the Office of Science and Technology Policy, titled *Patent Assertion and U.S. Innovation*.[10] Interestingly, none of the five executive actions, none of the seven legislative recommendations, and none of the commentary in the 15-page report so much as mentions antitrust. By contrast, the announcement of the President's executive actions and legislative recommendations refers four times, and the accompanying report refers 21 times, to "innovation."[11]

In the wake of the Administration's proposals, FTC Chairwoman Edith Ramirez gave a more measured account than have private antitrust commentators on the role antitrust enforcement might usefully play in preventing PAEs from harming competition.[12] In addition to suggesting that the FTC conduct a study of the PAE industry pursuant to its authority under Section 6(b) of the FTC Act,[13] which it has since undertaken,[14] she noted the specific possibility that "[p]ortfolio acquisitions that combine *substitute* patents . . . may raise the risk of harming competition."[15] She was similarly cautious about a PAE's assertion of patent rights being seen as an antitrust problem, but she did acknowledge the possibility of antitrust harm where "the PAE is effectively acting as a clandestine surrogate for competitors."[16] At about the same time, FTC Commissioner Maureen Ohlhausen suggested that because the great majority of defendants are sued by PAEs for allegedly infringing software patents, the underlying problem may be "how to adequately define strong patents in terms of their nonobviousness, novelty, or other characteristics, which may not necessarily be a competition law problem."[17]

So, what have we here? We all can agree the root cause of the PAE phenomenon is the uncertainty concerning the validity of many patents issued by

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[10] EXEC. OFFICE OF THE PRESIDENT, PATENT ASSERTION AND U.S. INNOVATION (2013), www.whitehouse.gov/sites/default/files/docs/patent_report.pdf.

[11] *Id.*; Press Release, White House Office of the Press Sec'y, *supra* note 9.

[12] Edith Ramirez, Chairman, Fed. Trade Comm'n, Opening Remarks Before the Computer & Communications Industry Association and American Antitrust Institute Program: Competition Law & Patent Assertion Entities: What Antitrust Enforcers Can Do (June 20, 2013), *available at* www.ftc.gov/speeches/ramirez/130620paespeech.pdf.

[13] *Id.* at 8; *see* 15 U.S.C. § 46 (b).

[14] Press Release, Fed. Trade Comm'n, FTC Seeks to Examine Patent Assertion Entities and Their Impact on Innovation, Competition (Sept. 27, 2013), *available at* www.ftc.gov/news-events/press-releases/2013/09/ftc-seeks-examine-patent-assertion-entities-their-impact (reporting unanimous vote of the four Commissioners to authorize the study).

[15] Ramirez, *supra* note 12, at 9 (emphasis added).

[16] *Id.*

[17] Maureen K. Ohlhausen, Comm'r, Fed. Trade Comm'n, Remarks at George Washington University Law School: Recent Developments in Intellectual Property and Antitrust Laws in the United States 11 (June 17, 2013), *available at* www.ftc.gov/public-statements/2013/06/recent-developments-intellectual-property-and-antitrust-laws-united-states.

the Patent and Trademark Office (PTO). If the scope of intellectual property were defined as precisely as the metes and bounds of real property, then there would be few occasions for challenge, fewer still for litigation, and practically none for litigation as a business model. To be sure, there is an irreducible amount of uncertainty inherent in the patent process, but the degree of uncertainty surrounding the validity of many patents issued in recent years may be intolerable. The reforms suggested by the Administration will certainly reduce the level of uncertainty currently affecting patents, particularly in the high-tech arena.

All commentators seem to agree, as well, that something is seriously amiss in our system of litigation that makes it possible for a PAE to exploit not only its patents but also the very uncertainty of those patents and the high cost of a court contest. In other words, there is surely a litigation problem layered on top of the more fundamental problem emanating from the PTO. The remaining question is whether there is a problem that can be addressed by application of the antitrust laws. That is the question to which we now turn.

I. IS THERE A PAE *ANTITRUST* PROBLEM?

A smorgasbord of legislative, regulatory, and policy solutions has been proposed to address the problem(s) putatively created by patent aggregators. The variety of the proposals raises the question: Just what kind of problem do patent aggregators pose? Some critics appear to operate from the premise that the rise of the PAE is the result of a litigation problem and has little to do with the PAE business model.[18] Litigation abuse and the social costs it imposes are not new. And many of those who have diagnosed the potential problem as litigation abuse have offered solutions that are, in large part, no different in kind from how the civil justice system responds to litigation abuse by any other actor.

Others suggest that PAEs might raise a competition problem and should therefore be addressed by changing substantive antitrust standards. We focus here upon the latter suggestion and ask whether PAEs require special attention as an antitrust problem.

Antitrust commentators have proposed several departures—all in the direction of greater intervention—from what we would describe as standard antitrust analysis to address the perceived competition problems attributed to

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[18] *See* Mark A. Lemley & A. Douglas Melamed, *Missing the Forest for the Trolls*, 113 COLUM. L. REV. 2117, 2120–21 (2013) ("[P]atent assertions by practicing entities can create just as many problems as assertions by patent trolls. . . . In addition, practicing entities are increasingly engaging in 'patent privateering,' in which product-producing companies take on many of the attributes of trolls. Put differently, while trolls exploit problems with the patent system, they are not the only ones that do so.").

PAEs. These deviations include Professor Tim Wu's aforementioned proposal to exterminate PAEs;[19] Fiona Scott Morton and Carl Shapiro's proposal to incorporate in the standard analysis a rebuttable presumption that the PAE business model of asserting and licensing intellectual property rights is anticompetitive;[20] Mark Lemley and A. Douglas Melamed's proposal to redirect the Clayton Act 180 degrees from prohibiting the aggregation of patents that create market power toward instead preventing their disaggregation when it would exacerbate the double marginalization or "Cournot complements" problem;[21] and suggestions that the FTC's authority under Section 5 of the FTC Act to prohibit "unfair methods of competition" would be an especially useful tool to reach PAEs, their business model in general, and certain of their activities in particular, in light of the more limited reach of the other federal antitrust laws.[22]

We conclude there is no evidence at this point that PAEs create a new or unique antitrust problem, that their business model warrants more or less scrutiny than others as a matter of antitrust analysis, or that competition enforce-

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[19] *See* Wu, *supra* note 2.

[20] Scott Morton and Shapiro emphasize the implications for antitrust analysis of the "fundamental differences" between real property and intellectual property and suggest that these differences warrant greater antitrust scrutiny of PAE efforts to monetize intellectual property rights than they would deem appropriately applied to operating companies engaged in identical activities with respect to intellectual property rights or to any firm with respect to other forms of property. *See* Fiona Scott Morton & Carl Shapiro, *Strategic Patent Acquisitions*, *supra* this issue, 79 ANTITRUST L.J. 463, 464, 494 (2014). This approach departs from the standard approach of affording symmetrical treatment of intellectual property rights and other property rights. *See* U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION 21 (2007), *available at* www.ftc.gov/reports/antitrust-enforcement-intellectual-property-rights-promoting-innovation-competition-report ("In this panelist's view there is no economic reason to treat intellectual property differently from other forms of property.") (quoting from Transcript at 1 (Shapiro), U.S. Dep't of Justice & Fed. Trade Comm'n, Hearings on Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy (May 1, 2002)); U.S. Dep't of Justice & Fed. Trade Comm'n, Antitrust Guidelines for the Licensing of Intellectual Property § 2.1 (1995) [hereinafter 1995 IP Licensing Guidelines], *available at* www.justice.gov/atr/public/guidelines/0558.pdf ("The Agencies apply the same general antitrust principles to conduct involving intellectual property that they apply to conduct involving any other form of tangible or intangible property.").

[21] Lemley & Melamed, *supra* note 18, at 2157–61. Lemley and Melamed correctly recognize that "[d]isaggregation does not fit easily" into the standard Clayton Act framework, *id.* at 2179, and that their concerns with disaggregation resulting in market power should be invariant to whether the firms at issues are practicing entities or PAEs. *Id.* at 2161.

[22] *See, e.g.*, Popofsky & Laufert, *PAEs & Antitrust*, *supra* note 1, at 12. We do not address application of Section 5 on a standalone basis to PAEs and their activities. Commissioner Wright has proposed an FTC policy statement defining an unfair method of competition as an act or practice that both harms competition as that term is understood under the ordinary antitrust laws and does not generate cognizable efficiencies. *See* Joshua D. Wright, Comm'r, Fed. Trade Comm'n, Proposed Policy Statement Regarding Unfair Methods of Competition Under Section 5 of the Federal Trade Commission Act (June 19, 2013), *available at* www.ftc.gov/public-statements/2013/06/statement-commissioner-joshua-d-wright. That proposed definition would impose substantial limitations upon the application of Section 5 to PAEs.

ment agencies would be coming to the aid of consumers by devising creative extensions of or departures from the standard antitrust framework in order to address PAEs' conduct and business arrangements. If and when PAEs present legitimate antitrust problems by acquiring or otherwise creating market power to anticompetitive ends, which is certainly possible, the standard antitrust framework is fully capable of reaching that conduct and providing adequate remedies. Therefore, we suggest caution before changing substantive antitrust standards or enforcement policies to reach PAEs rather than operating under the reasonable presumption that inefficiencies associated with PAEs are the result of a litigation problem.

Many commentators, scholars, practitioners, and regulators have taken the opposite view, concluding there is sufficient evidence to declare PAEs a competition problem worthy of increased scrutiny.[23] While all appear to concede the mere acquisition of patents by a PAE from a practicing entity with the intent aggressively to monetize the patents would not violate the antitrust laws,[24] those who perceive a strong role for antitrust in regulating the activities of PAEs raise two types of concerns.

The first concern stems from the PAE business model itself and generally begins with the observation that PAEs have different incentives and constraints than producing entities.[25] The PAE business model creates asymmetrical risks and greater incentives for patent enforcement in court. Because PAEs do not manufacture or sell products, they have little to fear with respect to counterclaims for infringement, the attendant disruptions to other business, and customer relations during litigation. Where the threat of bilateral patent infringement suits—sometimes referred to as "mutually assured destruc-

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[23] *See* sources cited *supra* note 1.

[24] *See, e.g.*, Carl Shapiro, Transamerica Professor of Business Strategy, Walter A. Haas School of Business, Univ. of Cal., Berkeley, Presentation at FTC & DOJ PAE Activities Workshop, Patent Assertion Entities: Effective Monetizers, Tax on Innovation, or Both?, at 22 (Dec. 10, 2012), *available at* www.justice.gov/atr/public/workshops/pae/presentations/290074.pdf (noting it would be "[h]ard to make mere assertion of patents an antitrust violation"). No doubt the *Noerr-Pennington* doctrine would also provide a substantial hurdle for an antitrust claim predicated upon the mere assertion of IP rights. *See* E. R.R. Presidents' Conf. v. Noerr Motor Freight, Inc., 365 U.S. 127 (1961).

[25] *See, e.g.*, Scott Morton & Shapiro, *supra* note 20, at 479–80 ("The PAE is immune from any retaliatory infringement action. . . . As a result, the downstream firm bears costs, including royalties, far in excess of any value it receives from the original patentee or the PAE."); Fiona M. Scott Morton, Deputy Assistant Att'y Gen. for Econ. Analysis, Antitrust Div., U.S. Dep't of Justice, Presentation at Searle Conference on Antitrust Economics and Competition Policy, Patent Portfolio Acquisitions: An Economic Analysis 7 (Sept. 21, 2012), *available at* www.justice.gov/atr/public/speeches/288072.pdf (explaining that incentives of the PAE business model include "exploitation of incomplete contracts, royalty stacking, and lack of cross-licensing").

tion"—often leads to cross-licensing instead of lawsuits,[26] some view the asymmetrical risks when PAEs are involved not just as posing a threat to settlement incentives, but also as the foundation for a particularized antitrust problem.[27]

For example, some contend that PAEs' asymmetrical litigation incentives alone imply a greater incentive to engage in potentially anticompetitive behavior.[28] Others assert that a PAE may be likely to take advantage of these asymmetries on its own or on behalf of a practicing entity to raise rivals' costs and harm competition.[29] Still others claim that the nature of the PAE business model leads to greater incentives to engage in "patent holdup"—typically in the form of reneging on RAND or FRAND commitments made during the standard-setting process.[30] As we demonstrate below, those in favor of this approach advocate applying to PAEs a type of antitrust scrutiny that departs from the standard analysis.[31]

The general rationale for the departure is that a PAE is less constrained than is an operating company in maximizing its royalty rates; PAEs, it is said, unlike operating companies, do not fear counterclaims for patent infringement and may evade FRAND commitments made by the patentee from which they acquired their rights.[32] This rationale entails a misguided departure from the conventional role of antitrust, which is to protect consumers from conduct or transactions that would evade one particular constraint upon firm behavior, viz., that of competition. The alternative view envisions an entirely novel and much broader role for antitrust, that is, to police transactions or conduct that

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[26] Popofsky & Laufert, *PAEs & Antitrust*, *supra* note 1, at 4 ("Because rivals each possess patents that implicate one another's products, they enter into cross licenses or (similarly) abstain from suing one another.").

[27] Scott Morton & Shapiro, *supra* note 20, at 494 ("PAEs are especially skilled at the tactics behind [outsized patent] assertion threats. Credible outsized threats act like a 'tax' on downstream firms, raising prices, distorting innovation markets, and harming competition, contrary to the goals of our antitrust laws.").

[28] *See, e.g.*, Gotts & Sher, *supra* note 1, at 32 ("[T]he troll may have a stronger incentive to extract monopoly rents from infringers because it is not susceptible to counterclaims for infringement."); Popofsky & Laufert, *PAEs & Antitrust*, *supra* note 1, at 4 ("Because a PAE—which makes nothing—does not need licenses from an Operating Company's rival, a PAE transferee lacks the same disincentive to launch a patent suit as the Operating Company transferor.").

[29] *See, e.g.*, Ramirez, *supra* note 12, at 9 ("The assertion of patent rights by a PAE may also raise antitrust concerns, especially if the PAE is effectively acting as a clandestine surrogate for competitors.").

[30] *See, e.g.*, Scott Morton, *supra* note 25, at 5 ("A troll may assert that it is not clear that FRAND commitments travel with the IP, and that in any case it has a different notion of FRAND than the original owner, and therefore it will negotiate new royalty agreements for the portfolio.").

[31] *See, e.g.*, Scott Morton & Shapiro, *supra* note 20, at 495 ("Fully addressing the harms to consumers and innovation caused by the PAE business model will require a variety of public policy responses, including patent reform and antitrust enforcement.").

[32] *See* Popofsky & Laufert, *PAEs & Antitrust*, *supra* note 1, at 4–6.

alter the incentives of marketplace participants by relaxing constraints unrelated to competition—which could equally well extend, for example, to the transfer of assets to a firm with less reputational capital, less able management, or different litigation incentives, any of which might be thought to foretell a decrease in consumer welfare.[33]

The view that contractual opportunism alone gives rise to an antitrust problem rather than a contract problem is in tension with substantial economic literature on the subject.[34] Consistent with this view, several courts have held that the failure to adhere to a RAND commitment made to a standard-setting body may constitute a breach of contract.[35] Further, holdup by a PAE does not necessarily have the same competitive implications as a holdup by a practicing entity because PAEs generally do not compete with practicing entities that do not have substitutable patents. The two federal courts of appeals that have touched upon the subject have also ruled that deception in the standard-setting

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[33] For an example of this broader view, see Popofsky & Laufert, *Antitrust Attacks*, *supra* note 1, at 456. Popofsky and Laufert take issue with our characterization of their view as a departure from standard antitrust analysis. They argue that "assessing how an acquisition affects the ability or incentive to deal with third parties, for example, is standard analysis in vertical mergers," and observe the DOJ has employed this logic in remedying concerns with a patent acquisition. *Id.* at 14 n.52. That an antitrust enforcement agency accepted a settlement in an uncontested matter is hardly evidence that it is "standard antitrust analysis." *See* Douglas H. Ginsburg & Joshua D. Wright, *Antitrust Settlements: The Culture of Consent*, *in* 1 WILLIAM E. KOVACIC: AN ANTITRUST TRIBUTE—LIBER AMICORUM 177, 179–80 (2012) (documenting instances of antitrust agencies entering into settlements that exceed the relief they could achieve "in a contested case in court"). As discussed above, there is a clear conceptual difference between an antitrust theory based upon how a likely change in the competitive constraints faced by a firm will affect welfare—as is standard in vertical merger analysis—and a theory based upon a welfare loss arising from changes in other constraints facing the firm, despite the fact that both require an analysis of the firm's incentives to deal with third parties.

[34] *See, e.g.*, Benjamin Klein, *Market Power in Antitrust: Economic Analysis After* Kodak, 3 SUP. CT. ECON. REV. 43, 62–63 (1993) ("Antitrust law should not be used to prevent transactors from voluntarily making specific investments and writing contracts by which they knowingly put themselves in a position where they may face a 'hold-up' in the future . . . . [C]ontract law inherently recognizes the pervasiveness of transactor-specific investments and generally deals with 'hold-up' problems in a subtle way, not by attempting to eliminate every perceived 'hold-up' that may arise.").

[35] *See, e.g.*, Microsoft Corp. v. Motorola, Inc., 696 F.3d 872, 884 (9th Cir. 2012) (upholding "district court's conclusions that Motorola's RAND declarations to the ITU created a contract enforceable by Microsoft as a third-party beneficiary (which Motorola concedes)"); Apple, Inc. v. Motorola Mobility, Inc., 886 F. Supp. 2d 1061, 1083–85 (W.D. Wis. 2012) (holding that Motorola was a party to binding contracts as a result of its FRAND licensing commitments to two standard-setting organizations and that Apple had the right to enforce those contracts as a third-party beneficiary); *see also* U.S. DEP'T OF JUSTICE & U.S. PATENT & TRADEMARK OFFICE, POLICY STATEMENT ON REMEDIES FOR STANDARDS-ESSENTIAL PATENTS SUBJECT TO VOLUNTARY F/RAND COMMITMENTS 7 n.14 (Jan. 8, 2013) ("As courts have found, when a holder of a standard-essential patent makes a commitment to an SDO to license such patents on F/RAND terms, it does so for the intended benefit of members of the SDO and third parties implementing the standard. These putative licensees are beneficiaries with rights to sue for breach of that commitment.").

process—not just a breach of a RAND commitment—is necessary to establish an antitrust violation.[36]

A second type of concern involves PAE acquisitions of patents from practicing entities. One concern is that PAEs can aggregate supplementary or substitute patents in a market and prevent entry by cutting off a necessary input.[37] Another theory of harm is that the acquisition will result in a greater incentive to engage in ex post holdup, which will result in higher royalties. To be sure, such a transfer could plausibly increase the incentives to engage in inefficient conduct related to the holdup and redistribution of economic rents. However, the transaction does not appear to fall within the scope of Section 7 of the Clayton Act, which prohibits only acquisitions that "substantially . . . lessen competition, or tend to create a monopoly."[38] Neither element of Section 7 is implicated by a mere transfer of a patent from a practicing entity to a PAE; the transfer would have no effect upon competition unless the PAE, prior to the acquisition, had a patent that was a substitute for the newly acquired patent. It is certainly possible that the transfer of a patent from a practicing entity to a PAE may facilitate the exercise of pre-existing market power, but the mere exercise of existing market power is not an antitrust violation.[39]

PAE activity is not immune from the antitrust laws. Nor should it be. Some of the transactions of concern to proponents of strict antitrust scrutiny of PAEs—including using PAEs to coordinate collusive agreements that violate Section 1 of the Sherman Act—are either clearly or likely unlawful under standard antitrust analysis.[40] Much of the proposed framing of PAEs as an

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[36] Rambus, Inc. v. FTC, 522 F.3d 456 (D.C. Cir. 2008); Broadcom Corp. v. Qualcomm, Inc., 501 F.3d 297 (3d Cir. 2007); *see also* Joshua D. Wright, *Why the Supreme Court Was Correct to Deny Certiorari in* FTC v. Rambus, GLOBAL COMPETITION POL'Y, Winter 2009, Vol. 3, No. 2. In contrast, the FTC has taken a contrary position in the *Google*, *Bosch*, *N-Data*, and *Rambus* cases, stating that a firm's evasion of a pricing constraint, including a contractual licensing commitment, is an unfair method of competition under Section 5 of the FTC Act or violates the Sherman Act. *See Rambus*, 522 F.3d at 461, 463–64; Robert Bosch GmbH, FTC No. C-4377, 2013 WL 1911293 (Apr. 24, 2013); Motorola Mobility LLC, FTC No. 121-0120, 2013 WL 124100 (Jan. 3, 2013); Negotiated Data Solutions LLC, FTC No. C-4234, 2008 WL 4407246 (Sept. 22, 2008).

[37] *See* Gotts & Sher, *supra* note 1, at 32 ("Thus, even the determination that the acquisition results in the accumulation of too many patents in a particular technology field may lead the agencies to conclude third parties would be deterred from entering the market or competing, and thus confers market power to the acquiring party.").

[38] 15 U.S.C. § 18.

[39] Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398 (2004).

[40] *See* Tom Ewing & Robin Feldman, *The Giants Among Us*, 2012 STAN. TECH. L. REV. 1, 26, stlr.stanford.edu/2012/01/the-giants-among-us/ ("[T]he extensive ties among the various mass aggregators should raise questions and concerns about horizontal collusion."); Scott Morton, *supra* note 25, at 8 ("The last business model I will address is a joint venture between the troll and more than one [producing firm] . . . . Such a joint venture may be helping product market competitors effectively coordinate or collude to disadvantage a rival."); Joshua D. Wright, Comm'r, Fed. Trade Comm'n, Remarks at the Dechert Client Annual Antitrust Spring Seminar: What Role Should Antitrust Play in Regulating the Activities of Patent Assertion Entities? 21

antitrust problem, however, stretches the standard analysis beyond its limits in an attempt to discourage use of a particular business model.[41]

A. THE EVIDENCE DOES NOT SUGGEST AN ANTITRUST PROBLEM

The emerging consensus is that there is something both novel and sinister about intermediaries that profit from intellectual property by marketing rather than using it to manufacture a product.[42] From a historical perspective, however, "there is actually nothing new about the practice of extracting economic value from patents by selling off or licensing the rights."[43] No doubt opportunism in the market for technology can cause serious economic damage. This sort of opportunism also has a long history in the U.S. market for technology.[44] For our purpose of determining whether PAEs pose any competition

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n.38 (Apr. 17, 2013), *available at* www.ftc.gov/public-statements/2013/04/what-role-should-antitrust-play-regulating-activities-patent-assertion ("Critics have complained, for example, that some practicing entities transfer their patents to PAEs with instructions or incentives to litigate against their rivals while hiding the origins of the patents, and that some PAEs demand payments from alleged infringers' downstream customers rather than from the infringing manufacturers.").

[41] *See* Scott Morton & Shapiro, *supra* note 20, at 484 ("[T]he likely economic effects of the sale of a patent portfolio depend on the differences between the business model and the other assets owned by Firm A, which is selling the portfolio, and Firm B, which is buying the portfolio."). The authors proceed to analyze a number of transactions involving patent portfolios, using the business model of the seller as a proxy for incentives to engage in anticompetitive behavior. *Id*. Similarly, Scott Morton, when she was the Antitrust Division's chief economist, suggested that a relevant consideration in Section 7 analysis is the "business model of the buyer." Scott Morton, *supra* note 25, at 8.

To be clear, we have no objection to considering a transacting firm's business model in order to improve our understanding of the specific transaction and its likely competitive effects. Scott Morton and Shapiro's shorthand approach is particularly problematic, however, with respect to PAEs because specialization is the fundamental feature of the PAE business model drawing intense scrutiny and our understanding of that business model and of its competitive effects are still nascent. Indeed, as Lemley and Melamed have correctly observed, many of the concerns commentators have raised about PAEs' assertion and licensing activities apply with equal or greater force to operating entities. Lemley & Melamed, *supra* note 18, at 2139 ("While patent assertions by trolls are often said to be more costly than assertions by practicing entities, there are actually a number of factors that have precisely the opposite effect.").

[42] *See* James Bessen, Jennifer Ford & Michael J. Meurer, *The Private and Social Costs of Patent Trolls*, REGULATION, Winter 2011–2012, at 26; Robert P. Merges, *The Trouble with Trolls: Innovation, Rent-Seeking, and Patent Law Reform*, 24 BERKELEY TECH. L.J. 1583, 1587–88 (2009), *available at* scholarship.law.berkeley.edu/facpubs/537; Daniel P. McCurdy, *Patent Trolls Erode the Foundation of the U.S. Patent System*, SCI. PROGRESS, Fall–Winter 2008/2009, at 78, *available at* www.scienceprogress.org/wp-content/uploads/2009/01/issue2/mccurdy.pdf.

[43] Naomi R. Lamoreaux, Kenneth L. Sokoloff & Dhanoos Sutthiphisal, *Patent Alchemy: The Market For Technology in US History*, 87 BUS. HIST. REV. 3, 4 (2013). Regarding the use of intermediaries to license patent rights, the authors observe that "during most periods of US history, it was as common for inventors to profit from their creativity in this way as by starting their own firms or working as salaried employees in R&D labs" and that "the ability to find buyers quickly for patents was an important driver of inventive activity during the late nineteenth and early twentieth centuries, when patenting rates in the United States were at historic highs." *Id.*

[44] *Id.* at 36 ("[I]t is not clear that the 'troll' problem is commensurately more serious than it was in the earlier period.").

issues requiring a particularized response from antitrust law or are better characterized as symptoms of litigation problems, it is important to begin by assessing the available empirical evidence.

As discussed, suggestions of how PAEs might pose antitrust problems are common.[45] Empirical evidence supporting the view that PAEs reduce competition in the sense understood by antitrust practitioners and economists is more difficult to come by. Some characterize this evidence as at least tilting in favor of an antitrust response to PAEs.[46] Proponents of the view that PAEs pose a competition problem generally point to three types of evidence: direct evidence of harm to competitors; PAE litigation win rates that are low relative to win rates of producing entities; and attempts to estimate the fraction of PAE revenues that are returned to inventors. The evidence in each category is scant and provides no significant support for the view that PAEs pose a competition problem as understood by the antitrust laws.

With respect to evidence of harm to competitors, it may well be the case that PAEs impose significant costs upon practicing entities. Reviewing a license demand or an infringement claim for a single patent can cost several hundred thousand dollars, while litigating an infringement case to final judgment can cost millions of dollars. Firms may also incur costs to acquire patents for the purely defensive reason of preventing them from falling into the hands of a PAE. But the familiar distinction between competitors and competition for antitrust lawyers and economists cautions us to tread carefully before inferring harm to competition and consumers from evidence of a distribution of costs within an economic system. After all, there are many reasons for which a research firm's costs may increase, and its rate of innovation commensurately decrease, but that does not make every increase in the cost of inputs "anticompetitive" in any sense known to antitrust law or economics.

In any event, there is as yet precious little reliable empirical data on the costs PAEs impose upon practicing entities and even less supporting an inference of harm to competition. For example, representatives of practicing entities offer anecdotal accounts of expenditures on PAE litigation and the impact

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[45] *See* discussion *supra* Part I.

[46] Ramirez, *supra* note 12, at 7 ("[T]he limited evidence we have today tends to support the Commission's concern that PAEs may do more to distort than improve incentives to invent."); *see also* FED. TRADE COMM'N, THE EVOLVING IP MARKETPLACE 9 (2011), *available at* www.ftc.gov/reports/evolving-ip-marketplace-aligning-patent-notice-remedies-competition-report-federal-trade ("[PAEs] can deter innovation by raising costs and risks without making a technological contribution."); Ewing & Feldman, *supra* note 40, at 41 ("Rather than contributing technological innovations, mass aggregators operate as a tax on current production, burdening existing products and potentially reducing future innovation and productivity."); Scott Morton, *supra* note 25, at 4 ("Inefficient royalty stacking [by PAEs] can therefore raise costs for widget makers; these higher costs will raise prices to final consumers, or in the longer run reduce entry into widgets or drive widget firms out of the market.").

of those expenditures upon the firm's operations.[47] In an effort to move beyond anecdotal data, Professors James Bessen and Michael Meurer estimated the total accrued direct costs incurred by defendants in response to patent assertions by PAEs at $29 billion as of 2011.[48] Others have pointed out conceptual and methodological flaws in this particular study including, perhaps most important, that the authors account for license fees and litigation as direct costs and thus welfare losses without regard to whether the license fees (or litigation costs incurred in order to obtain those fees) represent the patent holders' lawful returns for their innovation.[49] It is worth noting, however, that regardless of how one interprets and weighs the results of this particular study, these estimates do not purport to demonstrate harm to competition or a flaw in the competitive process rather than consequences of the patent litigation system.

A second study receiving a significant amount of attention in the policy debate is that of Bessen, Ford, and Meurer, who developed a stock price event study model to estimate the effect a PAE's filing of a lawsuit has upon the defendant's stock prices, taking account of general market trends.[50] The authors conclude, most implausibly, that PAE lawsuits are "associated with half a trillion dollars of lost wealth to defendants from 1990 through 2010" and a loss of more than $80 billion per year over the most recent four year period.[51] Even accepting these figures at face value,[52] however, they purport to show

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[47] *See, e.g.*, Transcript at 49, FTC & DOJ Patent Assertion Entity Activities Workshop (Dec. 10, 2012) (Remarks by Neal Rubin, Vice President Litig., Cisco Sys. Inc.), *available at* www.ftc.gov/sites/default/files/documents/public_events/Patent%20Assertion%20Entity%20Activities%20Workshop%20/pae_transcript.pdf ("[W]e are now spending twice as much money defending those cases as we are prosecuting and filing the 1,000 plus patents we have all over the globe. Indeed, we've had to reduce our patent filings to in some sense compensate and pay for the defense costs of PAE litigation.").

[48] James Bessen & Michael J. Meurer, *The Direct Costs from NPE Disputes*, 99 CORNELL L. REV. 387, 408 (2014).

[49] *See* David L. Schwartz & Jay P. Kesan, *Analyzing the Role of Non-Practicing Entities in the Patent System*, 99 CORNELL L. REV. 425, 429–31, 440–55 (2014). Schwartz & Kesan also point out the Bessen & Meurer's sample is likely to overestimate these direct costs. *Id.* at 434–38.

[50] Bessen et al., *The Private and Social Costs of Patent Trolls*, *supra* note 42, at 26.

[51] *Id.* at 36.

[52] There are some reasons to be skeptical about the estimates presented in Bessen, Ford, and Meurer. For example, the study relies upon a methodology that is mathematically equivalent to the ordinary least squares market model described in Brown and Warner's seminal article. *See* Stephen J. Brown & Jerold B. Warner, *Using Daily Stock Returns: The Case of Event Studies*, 14 J. FIN. ECON. 3, 6–8 (1985). Brown and Warner's estimates, however, are based upon simulated event studies of random drawings from a large population of actual security returns data, whereas the sample of defendant firms in Bessen, Ford, and Meurer "are, on average, large firms" and "[a]lmost two-thirds of the firms are technology companies." Bessen et al., *The Private and Social Costs of Patent Trolls*, *supra* note 42, at 29. The non-random nature of the Bessen et al. sample of firms suggests the study's estimates may be biased and unreliable. *See* Kenneth R. Ahern, *Sample Selection and Event Study Estimation*, 16 J. EMPIRICAL FIN. 466 (2009) (demonstrating Brown and Warner's approach may result in biased estimates when based upon samples

only costs imposed upon individual firms, some of which may compete with the PAE plaintiff while others do not. Such costs can certainly reduce the incentive to innovate and act as a tax upon economic growth; as such, they may well call for a policy response. But our interest here is in isolating whether the evidence suggests these social costs arise from an antitrust problem. This study also does not offer any support one way or another on the effect of PAEs upon competition or the competitive process.[53]

There is also some evidence that most infringement claims made by PAEs are weak. One frequently cited study found that PAE claims litigated to judgment are successful only 8 percent of the time, as compared to 40 percent for claims made by other types of plaintiffs.[54] Other studies suggest the share of all infringement lawsuits filed by PAEs has increased over time.[55] These stud-

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that are not randomly selected). The event windows in Bessen, Ford, and Meurer's study—5 and 25 days—are also potentially problematic. *See* Bessen et al., *The Private and Social Costs of Patent Trolls*, *supra* note 42, at 29–30. Although longer event windows may capture any lingering effects after the initial event, they also introduce the risk of including confounding factors. Accordingly, robust event studies typically search and control for any other concurrent news or events that may also affect a stock's return, especially if the study has windows longer than a day or two. The effect Bessen, Ford, and Meurer estimate, about 50 basis points, is fairly small and may well be insignificant when examined properly or even reversed when litigation is resolved.

[53] We therefore disagree with Scott Morton and Shapiro's statement that "[t]he empirical evidence on PAEs, taken as a whole, supports the conclusion that enhanced monetization by PAEs is discouraging innovation and harming consumers." Scott Morton & Shapiro, *supra* note 20, at 482. They rely primarily upon the two problematic studies discussed above—and in particular upon their finding that PAEs return only a small fraction of their revenues to the original patentees. For the conceptual and mechanical reasons discussed above and brought out in the prior footnote, these studies cannot support the view that PAEs harm innovation and consumers. Further, Scott Morton and Shapiro's model appears to assume the only relevant tradeoff for the purposes of understanding the effect of PAEs in the market for patents is between monetization and the incentive to innovate. Both the patent system and the antitrust laws, however, also contemplate an important role for the commercialization of innovation, often through licensing, which PAEs facilitate. *See, e.g.*, F. Scott Kieff, *Property Rights and Property Rules for Commercializing Inventions*, 85 MINN. L. REV. 697 (2001).

[54] John R. Allison, Mark A. Lemley & Joshua Walker, *Patent Quality and Settlement Among Repeat Patent Litigants*, 99 GEO. L.J. 677, 693–94 (2011) ("[N]o matter how the data are sliced, product-producing entities are far more likely to win their cases than [are PAE]s."). A study by PricewaterhouseCoopers, however, found a much higher success rate for PAEs generally. *See* PRICEWATERHOUSECOOPERS, 2012 PATENT LITIGATION STUDY 12 chart 5b (2012), *available at* www.pwc.com/en_US/us/forensic-services/publications/assets/2012-patent-litigation-study.pdf (finding the overall litigation success rate for PAEs was 24%, versus 38% for practicing entities, during the period 2006–2011).

[55] Chien, *supra* note 5, at 23; *see also* 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, 388 (2012) ("[L]awsuits filed by patent monetizers have increased [in five years] from 22 percent of the cases filed to almost 40 percent of the cases filed . . . ."). We note that attempts to estimate changes in patent litigation activity before and after September 16, 2011, when the America Invents Act (AIA), Pub. L. No. 112-29, 125 Stat. 284 (codified as amended in scattered sections of 35 U.S.C.), went into effect are complicated by the change in joinder rules made by that legislation. Specifically, the AIA raises the possibility of measurement error because the number of lawsuits filed may increase without increasing the number of patent assertions. Jeruss, Feldman, and Walker show that the number of defendants sued by patent

ies may suggest PAE litigation is becoming a problem worthy of a policy response. A recent report from the Government Accountability Office, on the other hand, concludes that PAEs and likely PAEs brought only 19 percent of patent infringement lawsuits from 2007 to 2011, compared to 68 percent brought by operating companies, and that the increase in PAEs' share of those suits from 17 percent to 24 percent over the same time period was not statistically significant.[56] While the empirical evidence on PAEs and their role in patent litigation remains inconclusive, even the most aggressive estimates of PAEs' share of patent litigation activity do not, without more, suggest an antitrust problem rather than a litigation problem. Indeed, the fact that PAEs succeed in patent litigation far less frequently than do producing entities may suggest the current state of affairs is not an equilibrium because defendants and other specialists have begun and will continue to adapt to deal with the litigation threat from PAEs.[57]

A final category of evidence offered by PAE skeptics is the percentage of PAE revenues returned to inventors. There is relatively broad recognition that PAEs have facilitated or conducted a sizeable percentage of patent licensing transactions.[58] One study estimates that PAEs return to inventors approximately 20 percent of the costs they impose upon defendants.[59] No study, however, purports to show that PAEs reduce the return to inventors relative to an appropriate counterfactual, i.e., relative to what inventors would receive if there were no PAE's to monetize their intellectual property rights. Such a showing could at least imply a reduction in incentives to innovate which might, in turn, give rise to potential antitrust implications in some cases. Absent such a counterfactual, however, it is impossible to discern whether PAEs increase, decrease, or have no effect upon the rate of return for innovative activity.

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monetization entities decreased from 145 in 2010 to 109 in 2011, but their data do not distinguish between suits filed before and after the effective date of the AIA. Jeruss et al., *supra* at 380–81. *See* U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-13-465, INTELLECTUAL PROPERTY: ASSESSING FACTORS THAT AFFECT PATENT INFRINGEMENT LITIGATION COULD HELP IMPROVE PATENT QUALITY 15 (2013), *available at* www.gao.gov/assets/660/657103.pdf ("[T]he increase [in patent litigation] in 2011 was due to the fact that plaintiffs had to file more lawsuits at the end of 2011 after AIA's enactment in order to sue the same number of defendants or anticipated this change and rushed to file lawsuits against multiple defendants before it was enacted.").

[56] U.S GOV'T ACCOUNTABILITY OFFICE, *supra* note 55, at 17.

[57] Lamoreaux et al., *supra* note 43, at 37 ("As in the late nineteenth century, one might expect defendants to revise their assessments of the probability of winning and start fighting more of these cases in court . . . [and to see] the emergence of a myriad of new entities that aim to profit from bolstering the bargaining position of defendants.").

[58] *See, e.g.*, Anne Kelley, *Practicing in the Patent Marketplace*, 78 U. CHI. L. REV. 115, 117 (2011).

[59] Bessen & Meurer, *The Direct Costs from NPE Disputes*, *supra* note 48, at 410 tbl.5.

What is the import of these stylized facts for antitrust analysis? With respect to the first two categories of evidence, the role of PAEs seems to be no more than to redistribute economic rents along the production chain. There is no evidence suggesting PAEs reduce the return to innovation relative to the appropriate counterfactual. This is not to say that any PAE behavior that increases the costs of practicing entities is or should be immune from antitrust scrutiny; it is not, and it should not be so. Conduct that raises rivals' costs and harms competition can certainly violate the antitrust laws, and PAE conduct fitting this description should be subject to appropriate scrutiny. The evidence, however, does not suggest any need to depart from the established antitrust framework in order appropriately to address the activities of PAEs.

B. A Litigation Problem Calls for a Litigation Solution

This is not to say the activities of PAEs are not problematic or do not call for law reform insofar as PAEs are exploiting aspects of the litigation system to extract settlements based not upon the merits of their claims but rather upon the cost of defending against them. The rise of PAEs, however, does not mark the first time lawyers have found a way to profit from bringing or threatening to bring cases purely for their settlement value. Indeed, this has been a recurring problem, though it has arisen in a variety of otherwise unrelated types of litigation. In each such instance lawmakers have responded by adjusting the procedural framework in order to take the profit out of the new form of abusive litigation. More precisely, the reforms have altered the incentives that had made the threat of litigation profitable.

Consider, to take one recent example, the Class Action Fairness Act of 2005 (CAFA), which the Congress passed to address both forum shopping for "state courts whose judges have reputations for readily certifying classes and approving settlements without regard to class member interests" and "inadequate [judicial] supervision over litigation procedures and proposed settlements."[60] To address these problems, the Congress extended federal diversity jurisdiction to reach most class actions with more than $5 million in controversy;[61] mandated greater judicial scrutiny of certain federal class action settlements, such as those involving discount coupons;[62] and specifically limited contingent fee awards based upon the distribution of coupons to a percentage of "the value to class members of the coupons that are redeemed."[63] In 2008 the Federal Judicial Center reported a near tripling from pre-CAFA levels of

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[60] S. REP. NO. 109-14, at 4 (2005).

[61] 28 U.S.C. § 1332(d)(2).

[62] *Id.* § 1712(e).

[63] *Id.* § 1712(a).

diversity class action filings in the federal courts.[64] Diversity class action removals also increased in the immediate post-CAFA period, though they later declined.[65]

In a similar vein, the Congress enacted the Private Securities Litigation Reform Act of 1995 (PSLRA) to address "abusive and manipulative securities litigation," including "the routine filing of lawsuits against issuers of securities and others whenever there is a significant change in an issuer's stock price, without regard to any underlying culpability of the issuer, and with only faint hope that the discovery process might lead eventually to some plausible cause of action."[66] In the PSLRA the Congress raised pleading requirements by requiring, for example, that a plaintiff bringing a securities fraud action allege misleading statements with particularity.[67] The Congress also made the plaintiff with the largest economic stake the presumptive lead plaintiff.[68] Notably, the Congress did not amend the underlying securities laws or otherwise disturb the rights of the respective parties to securities litigation. Instead, it addressed the problem of abusive litigation at its source, viz., in features of the litigation system itself.[69]

Another type of litigation abuse was addressed by the California Medical Injury Compensation Reform Act of 1975 (MICRA), passed in response to "skyrocketing malpractice premium costs . . . resulting in a potential breakdown of the health delivery system, severe hardship for the medically indigent, a denial of access for the economically marginal, and depletion of physicians."[70] Those skyrocketing premiums were not attributable to an epidemic of medical malpractice but rather to cases in which juries awarded ever larger verdicts for pain and suffering. MICRA capped attorneys' fees,[71] lim-

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[64] EMERY G. LEE III & THOMAS E. WILLGING, FED. JUDICIAL CTR., THE IMPACT OF THE CLASS ACTION FAIRNESS ACT OF 2005 ON THE FEDERAL COURTS 1–2 (2008), *available at* www.fjc.gov/public/pdf.nsf/lookup/cafa0408.pdf/$file/cafa0408.pdf.

[65] *Id.* at 2.

[66] H.R. REP. NO. 104-369, at 31–32 (1995) (Conf. Rep.).

[67] 15 U.S.C. § 78u-4(b)(1).

[68] *Id.* § 78u-4(a)(3)(B)(iii)(I)(bb).

[69] For an empirical study suggesting the PSLRA did not succeed in curtailing securities litigation, see RICHARD PAINTER, MEGAN FARRELL & SCOTT ADKINS, THE FEDERALIST SOC'Y FOR LAW AND PUB. POLICY STUDIES, PRIVATE SECURITIES LITIGATION REFORM ACT: A POST-ENRON ANALYSIS 6 (2002), www.fed-soc.org/publications/detail/private-securities-litigation-reform-act-a-post-enron-analysis; *see also* Stephen J. Choi, Karen K. Nelson & A.C. Pritchard, *The Screening Effect of the Private Securities Litigation Reform Act*, 6 J. EMPIRICAL LEGAL STUD. 35, 65 (2009) ("The evidence thus suggests the PSLRA has a much stronger effect on the likelihood of filing suit than it does on the outcomes of suits that are filed."); Michael A. Perino, *Did the Private Securities Litigation Reform Act Work?*, 2003 U. ILL. L. REV. 913 ("There has been no net reduction in the number of issuers sued in securities class actions.").

[70] Preamble, ch. 2, § 12.5, 1975 Cal. Stat. 4007.

[71] CAL. BUS. & PROF. CODE § 6146(a) (West 2013).

ited non-economic damages to $250,000,[72] and imposed a statute of limitations,[73] among other reforms. From 1975 to 1994, California's share of total U.S. malpractice loss payments declined from about 30 percent to 10 percent, well below the state's share of physicians, which had held steady at about 15 percent.[74] A 2004 study of 257 plaintiff verdicts showed that MICRA reduced defendant liabilities by 30 percent and reduced attorney fees by 60 percent but reduced net recoveries to plaintiffs by only 15 percent.[75] Again, the legislature addressed a problem of abusive litigation by changing the incentives to litigate, not by modifying the rights of the respective parties.

Finally, consider California Proposition 64, which in 2004 amended that state's Unfair Competition Law and False Advertising Law. The amendment was designed to reduce the number of nuisance suits by providing that a private plaintiff would have standing to sue only if he had "suffered injury in fact and has lost money or property."[76] Proposition 64 also required a private plaintiff suing on behalf of another to meet the same standing requirement and, furthermore, to comply with the procedural requirements applicable in a class action.[77] Previously, a plaintiff could sue on behalf of the general public in a representative capacity, which was a virtual invitation to sue, or threaten to sue, solely in order to extract a settlement related to the cost of litigation rather than the merits of the case.[78]

If the business model of a PAE is in fact to bring (or threaten to bring) suit for the infringement of patents that are of doubtful validity in order to extract a settlement that is less than the cost the defendant would incur to defend the suit, then it is appropriate to ask: What makes this possible? As mentioned above, there is an irreducible degree of uncertainty about the validity of a patent that has not been tested and upheld by a court. But if that is true, then it has always been true. What has changed is not the irreducible minimum un-

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[72] CAL. CIV. CODE § 3333.2(b) (West 2013).

[73] CAL. CIV. PROC. CODE § 340.5 (West 2013).

[74] Am. Acad. of Actuaries, Issue Brief, *Medical Malpractice Tort Reform: Lessons from the States* 2 (1996), www.actuary.org/files/publications/medmalp%20tort%20reform%20Fall%201996.pdf.

[75] RAND, Research Brief, *Changing the Medical Malpractice Dispute Process: What Have We Learned from California's MICRA?* 1 (2004), www.rand.org/content/dam/rand/pubs/research_briefs/2005/RB9071.pdf.

[76] CAL. BUS. & PROF. CODE §§ 17204 (Unfair Competition Law), 17535 (False Advertising Law) (West).

[77] *Id.* §§ 17203 (Unfair Competition Law), 17535 (False Advertising Law).

[78] For an analysis of the impact of Proposition 64, see Henry N. Butler & Jason S. Johnston, *Reforming State Consumer Protection Liability: An Economic Approach*, 2010 COLUM. BUS. L. REV. 1, 22–23 ("[E]ven if Proposition 64 has made it harder for plaintiffs to succeed—because now they must prove that they have been injured by the allegedly false or deceptive practice—[Consumer Protection Act] actions will still be relatively attractive to plaintiffs' attorneys.").

certainty but the degree of actual uncertainty attending the patents upon which PAEs base their claims.

Since 2005, over 80 percent of infringement claims asserted by PAEs have involved a patent issued for computer software.[79] Either the standards by which patent examiners issue software patents have become less rigorous or the nature of the software for which patents are claimed has evolved in a way that makes it more difficult to determine whether a patent is valid.[80] In either event, it seems the ultimate source of most of the litigation attributable to PAEs traces to the PTO's issuance of questionable patents for software.[81] In their dissenting opinion in *CLS Bank International v. Alice Corp.*,[82] a Federal Circuit case that invalidated particular software patents but left the standard for patenting software unsettled, Judges Richard Linn and Kathleen O'Malley called the attention of the Congress to this problem: "Congress can, and perhaps should, develop special rules for software patents."[83]

II. THE ANTITRUST TRADITION OF INHOSPITALITY TO NEW BUSINESS MODELS

The rise of intermediaries in the technology market is not new and is not entirely unexpected given the resurgence of small firms and inventors in that market over the past several decades.[84] Neither is the rise of intermediaries that threaten legal action if a license fee cannot be agreed upon a new development in the U.S. market for technology.[85] PAE skeptics argue that the novel dimension that requires additional antitrust scrutiny is the rise of the particular

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[79] Colleen Chien & Aashish Karkhanis, Presentation at the Patent and Trademark Office Software Partnership Roundtable at Stanford University: Software Patents & Functional Claiming 6 (Feb. 12, 2013), *available at* www.uspto.gov/patents/init_events/software_ak_cc_sw.pdf.

[80] *See, e.g.*, Stephen McJohn, *Scary Patents*, 7 Nw. J. TECH. & INTELL. PROP. 343, 366 (2009) ("[S]oftware . . . patent claims often use vague terms with meanings that change over time and in different applications."); Gideon Parchomovsky & Michael Mattioli, *Partial Patents*, 111 COLUM. L. REV. 207, 221 (2011) ("Citing software patents as uncertain in scope, often vague, obvious, sometimes profoundly difficult to analyze for infringement, and yet frequently litigated, critics have called on the Federal Circuit to dictate tighter standards for software patentability, or to abolish software patents altogether.").

[81] *See* Carl Shapiro, *Patent System Reform: Economic Analysis and Critique*, 19 BERKELEY TECH. L.J. 1017, 1018 (2004) ("Complaints regarding the patent system typically allege that the U.S. Patent and Trademark Office (USPTO) issues many questionable patents . . . . In particular, critics have berated the quality of patents in the areas of computer software and Internet business methods.").

[82] 717 F.3d 1269 (Fed. Cir. 2013) (en banc).

[83] *Id.* at 1333 (Linn and O'Malley, JJ., dissenting).

[84] *See, e.g.*, Ashish Arora & Alfonso Gambardella, *The Market for Technology*, *in* 1 HANDBOOK OF THE ECONOMICS OF INNOVATION 641, 667 (Bronwyn H. Hall & Nathan Rosenberg eds., 2010) (estimating the share of non-federal research and development expenditures by firms with more than 25,000 employees has fallen from about two-thirds in 1980 to one-third in 2005).

[85] Lamoreaux et al., *supra* note 43, at 21–22 (discussing late-19th century examples of threats aimed at railroads and western farmers and the responses to those threats).

form of economic organization PAEs represent, namely, an entity that owns, licenses, and litigates over patents at scale but does not manufacture products.[86]

Calls for greater antitrust scrutiny of new forms of economic organization are not particularly new. Indeed, such calls to arms have a long history in the United States, and it is a history that signals caution when faced with an invitation to intensify antitrust scrutiny before there is a proper theoretical and empirical diagnosis of the problem to be solved by such scrutiny.

Students of antitrust will be familiar with the long list of business practices, forms of organization, and contractual arrangements that were the target of antitrust's inhospitality tradition[87] until economic learning and judicial experience taught that the underlying conduct was a product of the normal competitive process rather than a form of anticompetitive conduct. The evolution of antitrust thinking—about tying, territorial and customer restrictions, price discrimination, maximum and minimum resale price maintenance, exclusive dealing, and horizontal and vertical mergers—in each case has followed this pattern. The inhospitality tradition has even been applied before to the technology market, as evidenced by the rise and fall of the infamous "Nine No-Nos," which effectively banned several patent licensing practices now understood to be part of the normal competitive process and contributors to economic growth.[88] The Nine No-Nos were ultimately repudiated and replaced with a presumption that patent licensing is procompetitive.[89]

At least two causes are common to the mistaken application of the inhospitality tradition in each of these examples: (1) insufficient understanding of the economics underlying the business practice and its competitive consequences;

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[86] *See, e.g.*, Ewing & Feldman, *supra* note 40, at 1, 42 ("These entities, which we call mass aggregators, do not engage in the manufacturing of products nor do they conduct much research. Rather, they pursue other goals of interest to their founders and investors . . . . Most important, the basic business model of mass aggregation is troubling."); Scott Morton, *supra* note 25, at 1 ("I will show that the antitrust analysis, undertaken from an economist's perspective, depends on the business model of the buyer.").

[87] The phrase "inhospitality tradition" seems to have originated with Donald F. Turner, *Some Reflections on Antitrust*, 1966 N.Y. ST. BAR ASS'N ANTITRUST L. SYMP. 1, 1–2 ("I approach territorial and customer restrictions not hospitably in the common law tradition, but inhospitably in the tradition of antitrust law."). On the inhospitality tradition today, see Alan J. Meese, *Reframing Antitrust in Light of Scientific Revolution: Accounting for Transaction Costs in Rule of Reason Analysis*, 62 HASTINGS L.J. 457, 466 (2010).

[88] *See* Bruce B. Wilson, Special Assistant to the Assistant Att'y Gen., Antitrust Div., Dep't of Justice, Remarks at the Fourth New England Antitrust Conference: Patent and Know-How License Agreements: Field of Use, Territorial, Price and Quantity Restrictions (Nov. 6, 1970) ("[W]hat licensing practices does the Department of Justice consider to be clearly unlawful? I believe that I can identify at least nine.").

[89] *See* Abbott B. Lipsky, Jr., *Current Antitrust Division Views on Patent Licensing Practices*, 50 ANTITRUST L.J. 515, 517–24 (1981). Mr. Lipsky was then a Deputy Assistant Attorney General in the Antitrust Division of the DOJ. *See also* 1995 IP Licensing Guidelines, *supra* note 20.

and (2) a reflexive tendency to enforce the antitrust laws against any new practice that is not well understood. Nobel laureate Ronald Coase's admonition to economists to avoid this tendency[90] has not been made any less relevant by the technology available to today's economic modelers and econometricians.

The inhospitality tradition has been applied to pricing practices, contractual arrangements such as exclusive dealing and tying arrangements, and more broadly to modes of organizing economic activity, such as mergers and franchising relationships. The evolution of antitrust thinking about franchising provides a particularly useful example of the dangers of inhospitality toward new forms of business organization. The hostility to franchising arose precisely because franchising created value by reorganizing economic activities previously conducted within a single firm and spreading them across multiple firms with different, specialized, economic functions. Similarly, calls for antitrust scrutiny of PAEs focus upon the threat posed by a new form of business organization, an intermediary specialized to aggregate and enforce patents, as much as or more than upon any practice in which PAEs commonly engage.

Franchising is a "form of business organization in which an upstream firm, the franchisor, enters into contractual relationships with downstream firms, the franchisees, who operate under the franchisor's trade name and usually with the franchisor's guidance."[91] This definition focuses upon so-called business-format franchising.[92] While business-format franchising originated in the United States in the early 1890s, "it was not until the 1950s, with the advent of chains such as Burger King and McDonald's, and the economic boom of the post-war era that business-format franchising fully came into its own."[93] Franchising as a business model now extends across many industries in the

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[90] R.H. Coase, *Industrial Organization: A Proposal for Research*, *in* 3 ECONOMIC RESEARCH: RETROSPECT AND PROSPECT 59, 67 (Victor R. Fuchs ed., 1972) ("One important result of this preoccupation with the monopoly problem is that if an economist finds something—a business practice of one sort or other—that he does not understand, he looks for a monopoly explanation. And as we are very ignorant in this field, the number of ununderstandable practices tends to be rather large, and the reliance on a monopoly explanation, frequent.").

[91] Francine Lafontaine & Margaret E. Slade, *Franchising and Exclusive Distribution: Adaptation and Antitrust*, *in* OXFORD HANDBOOK OF INTERNATIONAL ANTITRUST ECONOMICS (Roger D. Blair & D. Daniel Sokol eds., forthcoming) (manuscript available at www.economics.ubc.ca/faculty-and-staff/margaret-slade/).

[92] The second, "traditional," form of franchising is characterized by franchised dealers who "concentrate on one company's product line and to some extent identify their business with that company." *See* ANDREW KOSTECKA, U.S. DEP'T OF COMMERCE, FRANCHISING IN THE ECONOMY: 1986–1988 at 1 (1988).

[93] Francine Lafontaine & Roger D. Blair, *The Evolution of Franchising and Franchise Contracts: Evidence from the United States*, 3 ENTREPRENEURIAL BUS. L.J. 381, 386 (2009).

United States and, as of 2005, accounted for approximately 14.4 percent of nominal Gross Domestic Product.[94]

It would not be long after the emergence of business-format franchising as a significant presence in the U.S. retail economy that it was subjected to significant and hostile antitrust scrutiny. In 1971, the Ninth Circuit held in *Siegel v. Chicken Delight, Inc.*[95] that requiring fast-food franchisees to purchase paper products and other inputs from their franchisor constituted an illegal tying arrangement. The court reasoned that a franchisor could control product and input quality through contractual specification of an approved list of suppliers rather than requiring that the franchisee purchase the input from the franchisor.[96] This decision struck at the core of the business-format franchising model itself.

Other cases extended the inhospitality tradition further by opening the door to claims alleging that a variety of specific franchise contract terms—minimum resale price maintenance, exclusive territories, and tying arrangements, among others—violated the antitrust laws. In 1992 the Supreme Court, in *Eastman Kodak v. Image Technical Services*,[97] held that because owners of a Kodak copier were "locked in" to Kodak services after they purchased the copier, an aftermarket limited to Kodak's repair parts might be a relevant market for the purpose of antitrust analysis.[98] Franchisees then made frequent allegations of aftermarket lock-in as illegal tying, asserting that the tying product market consisted solely of the defendant's franchise and the tied product market was limited to supplies for that particular franchise system.[99] The strict antitrust scrutiny applied both to business-format franchising generally and to specific contract terms had a significant impact on franchising activity and the form of franchise contracts.[100]

Kodak represented the zenith of the inhospitality tradition for business-format franchising. As others have documented, aftermarket tying claims of all sorts, including the flurry of franchise tying claims in the mid-1990s, quickly came to an end in the lower courts.[101] *Queen City Pizza, Inc. v. Domino's*

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[94] *Id.* at 393.

[95] 448 F.2d 43 (9th Cir. 1971).

[96] *Id.* at 51–52 ("Moreover, defendants have admitted that any competent manufacturer of like products could consistently and satisfactorily manufacture the packaging products if defendants furnished specifications.").

[97] 504 U.S. 451 (1992).

[98] *Id.* at 476–78.

[99] Lafontaine & Slade, *supra* note 91.

[100] *Id.*

[101] *Kodak* aftermarket tying claims were overwhelmingly rejected by the lower courts in the decade following the decision. *See* David A.J. Goldfine & Kenneth M. Vorrasi, *The Fall of the* Kodak *Aftermarket Doctrine: Dying a Slow Death in the Lower Courts*, 72 ANTITRUST L.J. 209 (2004) (surveying lower court opinions in which the plaintiff alleged a *Kodak* aftermarket lock-in

Pizza, Inc.[102] and other cases were representative of the relaxation of the inhospitality tradition applied to franchising and the beginning of the move toward incorporating franchising into the standard antitrust model. There, the Third Circuit rejected the otherwise anomalous notion of post-contractual market power found in *Kodak* and concluded that disputes between franchisors and franchisees under their agreements were appropriately analyzed under contract law, not under the antitrust laws.[103]

It would not be long until franchising was completely incorporated into the standard antitrust model as a result of greater economic and judicial learning about this form of economic organization and the competitive consequences of many of the contract terms commonly found in franchise agreements, particularly vertical restraints. Rupert Barkoff observes that while the average franchise lawyer was previously required to be "educated in matters of antitrust law . . . today one would not be wrong to describe antitrust law as being almost irrelevant with respect to the franchise community."[104] Similarly, Francine Lafontaine and Margaret Slade conclude that "the effect of *Chicken Delight* seems to have dissipated in the past decade or two."[105]

The evolution of the antitrust analysis of franchising from inhospitality to straightforward and principled application of the standard framework through the 1980s and 1990s was not merely fortuitous. Landmark antitrust decisions involving vertical restraints, including *Sylvania*,[106] *Khan*,[107] *Monsanto*,[108] and *Business Electronics*,[109] shifted the antitrust landscape from per se to rule of reason analysis focused on the competitive effects of the contracts at issue.

Simultaneously, the economics of franchising generally, and of the vertical restraints often observed in franchising arrangements, was coming of age. Paul Rubin provided the first explanation of franchising based upon transaction cost economics: The form of organization arose to capture the gains from

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claim between 1992 and 2003). That trend continued at least through 2008. *See* Bruce H. Kobayashi & Joshua D. Wright, *Federalism, Substantive Preemption, and Limits on Antitrust: An Application to Patent Holdup*, 5 J. COMPETITION L. & ECON. 469, 485–86 (2009) (showing that between 2001 and 2008 defendants won 91.3% of cases where *Kodak* was cited as an authority for an aftermarket lock-in claim).

[102] 124 F.3d 430 (3d Cir. 1997).

[103] *Id.* at 443 ("[W]here the defendant's 'power' to 'force' plaintiffs to purchase the alleged tying product stems not from the market, but from plaintiffs' contractual agreement to purchase the tying product, no [antitrust] claim will lie.").

[104] Rupert M. Barkoff, *Antitrust Law Becoming Irrelevant to Franchise Lawyers?*, N.Y. L.J., July 28, 2008, at 1.

[105] Lafontaine & Slade, *supra* note 91.

[106] Continental TV, Inc. v. GTE Sylvania Inc., 433 U.S. 36 (1977).

[107] State Oil Co. v. Khan, 522 U.S. 3 (1997).

[108] Monsanto Co. v. Spray-Rite Serv. Corp., 465 U.S. 752 (1984).

[109] Bus. Elecs. Corp. v. Sharp Elecs. Corp., 485 U.S. 717 (1988).

the lower costs of monitoring franchised as opposed to employee-operated outlets.[110] Subsequent literature addressed the variety of incentive conflicts that might arise in franchisor-franchisee relationships and how contractual terms operate to minimize those conflicts and align the parties' incentives.[111] Economists also made significant gains in establishing a negative relationship between franchising and the costs of contracting, including the costs imposed by state law restrictions on the ability of franchisors to terminate franchisees,[112] and a more general negative relationship between those regulations and franchising activity.[113]

Perhaps the most important example of economic learning influencing the evolution of antitrust treatment of franchising is Benjamin Klein and Lester Saft's economic analysis of franchise tying contracts.[114] They were the first to contribute the key economic insight that franchisor market power should be measured, contrary to the legal presumption articulated in *Chicken Delight*, at the pre-contract time when franchisees choose their franchisor and when competition among franchisors is reflected in the array of contract terms available to franchisees. Klein and Saft's conceptual distinction between contract power and antitrust-relevant market power, and its corollary that market power is properly analyzed at the time a franchisor contracts with its franchisee and not after the franchisee makes investments in the franchise relationship, are now well accepted by economists and incorporated into the law.

Few, if any, defenders of the inhospitality tradition remain in antitrust. Even those who argue for stricter scrutiny of particular contractual arrangements cannot muster a defense of the proposition that a form of business or-

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[110] Paul H. Rubin, *The Theory of the Firm and the Structure of the Franchise Contract*, 21 J.L. & ECON. 223, 226–30 (1978); *see also* Benjamin Klein, *Transaction Cost Determinants of "Unfair" Contractual Arrangements*, 70 AM. ECON. REV. 356, 358–60 (1980).

[111] *See, e.g.*, Benjamin Klein, *The Economics of Franchise Contracts*, 2 J. CORP. FIN. 9 (1995); Benjamin Klein & Kevin M. Murphy, *Vertical Restraints as Contract Enforcement Mechanisms*, 31 J.L. & ECON. 265 (1988); G. Frank Mathewson & Ralph A. Winter, *The Economics of Franchise Contracts*, 28 J.L. & ECON. 503 (1985).

[112] *See* James A. Brickley, Frederick H. Dark & Michael S. Weisbach, *An Agency Perspective on Franchising*, 20 FIN. MGMT. 27 (1991); Jonathan Klick, Bruce H. Kobayashi & Larry E. Ribstein, *The Effect of Contract Regulation: The Case of Franchising*, 168 J. INSTITUTIONAL & THEORETICAL ECON. 38 (2012); Jonathan Klick, Bruce Kobayashi & Larry Ribstein, *Federalism, Variation, and State Regulation of Franchise Termination*, 3 ENTREPRENEURIAL BUS. L.J. 355 (2009); Francine Lafontaine, *Agency Theory and Franchising: Some Empirical Results*, 23 RAND J. ECON. 263 (1992); Francine Lafontaine & Kathryn L. Shaw, *The Dynamics of Franchise Contracting: Evidence from Panel Data*, 107 J. POL. ECON. 1041 (1999).

[113] J. Howard Beales III & Timothy J. Muris, *The Foundations of Franchise Regulation: Issues and Evidence*, 2 J. CORP. FIN. 157 (1995); Brickley et al., *supra* note 112; Klick et al., *The Effect of Contract Regulation*, *supra* note 112; Klick et al., *Federalism, Variation, and State Regulation of Franchise Termination*, *supra* note 112; Richard L. Smith II, *Franchise Regulation: An Economic Analysis of State Restrictions on Automobile Distribution*, 25 J.L. & ECON. 125 (1982).

[114] Benjamin Klein & Lester F. Saft, *The Law and Economics of Franchise Tying Contracts*, 28 J.L. & ECON. 345 (1985).

ganization such as franchising—an efficient response to market conditions—is an appropriate subject of heightened scrutiny. Indeed, the hostility with which business-format franchising was treated by antitrust analysts soon, albeit not soon enough to prevent significant welfare losses to consumers, receded as an economic understanding of franchising and franchise contracts showed it was a generally efficient form of business organization and that the particular form did not require a novel approach to antitrust analysis.

Much of the inhospitality tradition in antitrust is now gone if not forgotten. An explosion of theoretical and empirical understanding of business practices and industrial organization over the past 50 years, together with a Supreme Court interested in updating antitrust law where an economic consensus has emerged, is largely responsible for its departure. The evolution in the antitrust analysis of franchising is a reminder that this tradition of suspicion and hostility was applied not only to specific contractual restraints, but also—and perhaps most perniciously—to an entire form of business organization. It is also one of the all too many examples one can find in the history of antitrust to show that Coase's admonition against economists' reflexive belief that "ununderstandable" and new practices are anticompetitive applies equally to lawyers—in the private bar, at the antitrust enforcement agencies, on the bench, and in legislatures. It is perhaps nowhere more prudent than in antitrust, where cautionary tales of this reflexive hostility are so numerous and readily available, to await an economic understanding of a business organization or behavior before condemning or even discouraging it.

III. CONCLUSION

Our preliminary assessment is that the evidence currently available does not give any reason to view the inefficiencies associated with PAE litigation as a competition problem rather than a litigation problem, and one arising ultimately from the grant of dubious patents by the PTO. A litigation problem calls for a litigation solution—an adjustment to the procedural framework to reduce the return to abusive litigation—and a patent quality problem calls for reforms at the PTO.

While continued study of PAEs and of the incentives to pursue patent litigation may provide further clues as to which particular reforms offer the highest rate of return, we view PAEs as symptoms of the litigation and PTO problems, and not themselves the disease. The history of antitrust law is replete with examples of its misapplication to new business models and methods of organizing economic activity. The extension of the inhospitality tradition to franchising and intellectual property licensing in the era of the Nine No-No's serve as important reminders that antitrust law is at its best when using economic tools and evidence to evaluate specific business practices and at its worst when adopting broad presumptions about business mod-

els and entire forms of economic organization. The now-standard antitrust approach is more than adequate to handle any conduct by PAEs that might violate the antitrust laws.