

Plowshares into Swords: How the Transformation of Patents from Rewards to Weapons Reveals the Limits of Antitrust

Introduction

Patents exist in fascinating opposition to antitrust law by virtue of conferring a *legal* monopoly upon their owners. Neither the Sherman Antitrust Act nor the Clayton Antitrust Act cover patents. Furthermore, there is no mention of patents in updates to either of these statutes, either. Antitrust has traditionally sought to prevent companies from acquiring too big a share of the market and aims to prevent corporations and market entities from engaging in behavior that otherwise harms consumers.¹ Antitrust authorities and enforcers see themselves as the heroic defenders of the consumer.² Patents and antitrust law have rarely collided outside of heavily-scrutinized pay-for-delay deals struck between big pharmaceutical corporations and their nemeses—generic drug manufacturers.³ These two legal spheres can collide, however, when entities in a given market space compete with each other through patent assertion litigation.

The litigation between Samsung and Apple has burned itself into the public consciousness as an example of utilizing patents as a method of attacking one's market rivals. Of

¹ Maurice Stucke, *Reconsidering Antitrust's Goals*, 53 B.C. L. REV. 551 (2012). The author notes that four traditional goals of antitrust are "ensuring effective competitive process, promoting consumer welfare, maximizing efficiency, and ensuring economic freedom."

² Bill Baer, *Remedies Matter: The Importance of Achieving Effective Antitrust Outcomes*, 30 No. 1 CORP. COUNS QUARTERLY, ART 4 (2014). The article is interesting for its earnestness and also significant because it gives the reader a glimpse into the minds of the government agents in charge of "policing" various aspects of corporate activities. Bill Baer, the Assistant Attorney General for Antitrust, explains that sometimes merely threatening litigation against corporations is enough to get them to stop, while in other cases criminal charges and damages are vital to breaking up cartelization, as in the Apple eBook case.

³ *F.T.C. v. Actavis*, 133 S. Ct. 2223 (2013). Justice Breyer's majority opinion rejects the proposition that a patent's existence shields a company from antitrust scrutiny as long as the settlement (the "pay for delay") does not go beyond the patent's scope. See also Peter Picht, *New Law On Reverse Payment Settlements--The Agenda For Courts And The Legislature After The Supreme Court's Actavis Ruling*, 16 TUL. J. TECH. & INTELL. PROP. 105 (2013). The author points out that in light of the fact that pay-for-delay settlements based on patents are no longer given a presumption of validity, antitrust may become a significant force in the pharmaceutical marketing world. Higher antitrust scrutiny of pay-for-delay deals may harm Big Pharma's ability to recoup its *massive* capital outlays, indirectly harming consumers—illustrating that though one of the goals of antitrust is consumer protection, it often *harms them indirectly*.

note is the fact that Samsung and Motorola—or Google, through Motorola—are the most successful of Apple’s competitors in the smartphone marketplace and they have seen the largest number of Apple’s patent assertion lawsuits (particularly compared to struggling RIM and Microsoft’s troubled phone division, Apple’s other competitors).⁴ Furthermore, upstarts in the smartphone and telecommunications marketplace, Huawei, for example, have not found themselves on the receiving end of patent litigation by Apple.⁵ When HTC was at the forefront of non-iOS smartphone development it frequently found itself a defendant in infringement notices by Apple (some might argue Apple filed its lawsuits and demanded high damages, even though it was flush with capital, in order to make HTC less competitive).⁶

This paper seeks to investigate the differences between non-practicing-entities (NPEs) and producing-entities and aims to point out that while patents have traditionally been thought of as rewards, producing-entities and NPEs have transformed patents into powerful weapons for anticompetitive behavior and revenue acquisition. Part I delves into the differences between a NPE and a producing-entity. Part II explains the differences in the ecosystems inhabited by NPEs and producing-entities. After drawing the distinction between trolling NPEs and market actors, Part III examines the rising frequency of patent grants and its effects on the current patent

⁴ *comScore Reports December 2013 Smartphone Subscriber Market Share* (Feb. 4, 2014), http://www.comscore.com/Insights/Press_Releases/2014/2/comScore_Reports_December_2013_US_Smartphone_Subscriber_Market_Share. Samsung and Apple account for nearly 68% of the US smartphone market. Samsung is by far the most popular Android manufacturer, accounting for 26.1% of the US cellphone market, and the next most popular manufacturer is Motorola. *Even combined*, Motorola, LG, and HTC do not equal Samsung’s market share.

⁵ This is probably because, though Huawei is a giant outside of the US in cell phones and network gear, it has been repeatedly blocked by security-conscious officials in the US. Shannon Tiezi, *Huawei Officially Gives Up On The US Market* (Dec. 05, 2013), <http://thediomat.com/2013/12/huawei-officially-gives-up-on-the-us-market/>. *See also* Matt Herring, *The Company That Spooked The World*, *THE ECONOMIST* (Aug. 4, 2012), <http://www.economist.com/node/21559929>. The author makes the pertinent observation that Huawei’s connections with the Chinese government and the PLA make it a sizable regulatory target by US agencies—though it has a significant market share in the world of telecom equipment, the US regulators have kept it out of the US market.

⁶ In March 2010 Apple sued HTC for infringing twenty patents it held. C.A. Nos. 10-166-GMS, 10-167-GMS, U.S. Dist. Ct., D. Del., January 14, 2011. The settlement terms are unknown, but resulted in HTC taking a doubtlessly costly 10 year licensing agreement of the Apple patents it allegedly infringed.

landscape. Part IV analyses antitrust cases involving patents as well as cases involving more general anticompetitive behavior. Part V draws on the previous sections and examines the effects of patent possession in various market spaces, and, by integrating the previous analysis of antitrust law as a method of deterring the use of patents for anticompetitive activities, concludes that antitrust regulators and corporate leaders ought to be more concerned with anticompetitive activities by patent-holding producing-entities than with NPEs; it further argues that antitrust law is a potentially good fit for curbing anticompetitive troll litigation by producing-entities, but a poor curb on NPE troll suits.

I. Differences Between Non-Practicing Entities and Producing-Entities

Google, Ford, and Rolex are all examples of companies that exist to produce goods and services. These companies live and die by their abilities to produce something that their competitors cannot, by producing competing items at lower cost, by selling at a lower cost, or by utilizing brand-recognition to their advantage.

Producing-entities are not the only actors in the patent “space,” however. The NPE is another kind of patent-holder. The term “NPE” is not as descriptive as it initially appears, and can be both over-inclusive and under-inclusive. NPE is often used as a synonym or by-word for “troll;” an entity engaging in patent-assertion as a means of revenue generation, without putting its patents into productive practice.⁷ Universities engaged in the development of new pharmaceuticals and chemical compounds are an example of an NPE. Universities, however, are

⁷ Though it is oftentimes used as a byword or euphemism for troll, NPEs oftentimes fulfill very valuable roles in the emerging patent space, and can aid startups and even large companies. Raymond Millien & Ron Laurie, *A Survey of Established & Emerging IP Business Models*, 9 SEDONA CONF. J. 77 (2008). This article details various roles that NPEs can take on in order to help spread patents around and also to reduce information and coordination costs in the patent market. The notion of an auction house for patents and other IP sounds strange but is brilliant because it helps bring buyers and sellers together in the same way that investment banks do for more conventional assets.

not often thought of as patent trolls.⁸ But the term “troll” seems ill-defined, because universities *do* seek royalties from their patents through licensing agreements or by selling them to other entities (which means universities are engaged in utilizing their patents for revenue generation, and in some cases the universities themselves assert these patents).⁹ By way of contrast, most commentators seem *loathe* to bestow the label of troll on an entity engaged in the production of goods or services, even if it is promulgating lawsuits against its competitors in an effort to drive up their costs and make them less competitive (which gets to the soul of the activities antitrust seeks to deter).

In lieu of the term NPE, the label “patent-assertion-entity” (PAE) is sometimes used to distinguish that sort of NPE from NPEs like Ocean Tomo; these NPEs run patent exchanges, auctions, and provide other services (for the sake of consistency and ease of use, however, this paper uses NPE to mean “a non-practicing-entity whose revenue generation model relies on patent assertion”).¹⁰ This label prevents universities from being lumped in with Lodsys, IPNav, Desmarais LLP, and other entities generally considered to be “trolls.” The typical conception of a PAE, or troll, is an entity suing startups (or even large companies like Apple or Microsoft), “mugging” them for cash settlements by playing on the vast disparity of discovery costs between

⁸ *But see* Mark A. Lemley, *Are Universities Patent Trolls?*, 18 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 611 (2008). At least part of Professor Lemley’s argument points out that the role of the university as a public-educator enables universities to escape the term “troll” or “NPE” even though they are oftentimes engaged in patent hold-up and sell their patents to patent-monetization groups.

⁹ *Eolas Technologies, Inc. v. Microsoft Corp.*, 399 F.3d 1325 (Fed. Cir. 2005). When universities license their patents to PAEs they increasingly look like opportunistic market actors and less like education institutions. *See also* Jacob Rooksby, *Sue U.*, AMERICAN ASSOCIATION OF UNIVERSITY PROFESSORS (Oct. 2012), <http://www.aaup.org/article/sue-u#.UzIFvldVqU>.

¹⁰ *See* OCEAN TOMO, <http://www.oceantomo.com/> (last visited Mar. 6, 2014). *See also* IPNAV, www.ipnav.com (last visited Mar. 6, 2014). Though IPNav bills itself on Google as a “Patent Monetization Firm,” it is generally considered the most notorious patent trolling entity in America. The problem with the exercise of finding a definition of “troll” is that it implies trolls are somehow “misusing” patents. But when complex debt-backed securities based on mortgages are created and traded, no one claims these are a misuse of property. There may be a definitional problem with the term “troll,” and some might say that a “troll” is simply a term given to a bully by the bullied (the kids who get bullied at recess are the ones who hate it the most).

the NPE and the company from whom it is extracting money.¹¹ The juxtaposition of NPEs and producing-entities breaks down, however, when producing-entities sue their competitors or abuse market-entrants in order to steal market share or keep potential competitors out of the market. Furthermore, the typical conception of a NPE is problematic because some activities that producing-entities engage in that are clearly in bad faith—lobbying government to make market entry harder or more costly, or setting expensive and hard to reach “operating standards” for products in a given market—are not factored into the definition of a “patent troll.”¹²

While Apple is by no means the only market actor engaged in patent assertion as a method of anticompetitive behavior, Apple’s litigious activities make for excellent examples of the kind of anticompetitive behavior that patents allow and (some might say) encourage. Anticompetitive patent assertion litigation—or legal action that can easily be interpreted as anticompetitive—is not only confined to the smartphone market space. Of particular note is the litigation saga launched by AMD against Intel over microprocessor market share.¹³ AMD and Intel have been locked in various legal battles for over twenty years as of 2011 and the most recent suit by AMD was related to allegedly anticompetitive activities engaged in by Intel when it purportedly offered various computer manufacturers rebates on processors for cutting

¹¹ This conception is problematic though, because universities do this with some frequency and smaller companies in certain market spaces sue their larger competitors (oftentimes claiming antitrust violations). Perhaps a better way of thinking of the “problem” that trolls present is to differentiate between lawsuits that have *troll characteristics* and those that do not. This “good faith versus bad faith” differentiation would keep IPNav and other “trolls” inside its definitional sphere but also not let universities off the hook entirely. Furthermore, it would cover the activities of producing-entities and not elide their rolls in various trolling activities.

¹² This speaks to the privileged position that producing entities hold in the patent space—they produce consumer products and, as a result, are seen as providing the public with goods and services that outweigh their own misdeeds with patents and lobbying. *See* note 34, *infra*.

¹³ IT CANDOR, <http://www.itcandor.com/microprocessor-q312/> (last visited Mar. 2, 2014). Various charts on this page show the relative market share of the various entities in the microprocessor market. This has resulted in *massive* litigation costs for Intel. Intel has incurred at least \$66 million in litigation costs, exhausting its insurance coverage for litigation from two different insurers and possibly over \$100 million based on *one* lawsuit from AMD. Don Clark, THE WALL STREET JOURNAL, Feb. 2, 2009, at B7. This has undoubtedly led to an increase in the price of Intel processors (though AMD still lags significantly behind Intel’s market share).

purchases from AMD and other, smaller, manufacturers. AMD has used lawsuits to try to challenge Intel for market share in the microprocessor at least since 1991 (sometimes reasonably).¹⁴ Rather than simply out-competing rivals in the market space with superior products, AMD and others have turned to the courts in order to raise the costs of their competitors.

Qualcomm is another producing-entity whose productive activities shield it from being labeled a troll, in spite of its patent-accretion activities and *continual* litigation against various other market entities.¹⁵ While Qualcomm is an undisputedly vital member of the smartphone processor market—manufacturing one of the most powerful processors available—Qualcomm also aggressively litigates against its competitors and potential market entrants; it frequently asserts its patents related to the “3G” cellphone data protocol (indeed, it is likely that the Chinese TDSCDMA protocol was designed specifically to avoid paying licensing fees to Qualcomm).¹⁶ Though Qualcomm’s frequent litigation against competitors, both actual and potential, would doubtlessly earn it the title of “troll,” the company’s R&D efforts and productive activities shield it against that term.

While it seems obvious to utilize patents for anticompetitive purposes, much of the current discourse on patent abuse and infringement litigation elides, or at least forgets, that NPEs and producing-entities exist in different market ecosystems and are subject to different exigencies. As a result, much of the current patent discourse fails to see that the differences

¹⁴ PCR, <http://www.pcr-online.biz/news/read/intel-ends-amd-row-with-1-25bn-payout> (last visited Mar. 12, 2014). Regardless of whether some of AMD’s lawsuits against Intel have had merits, the continual use of the courts as a means to take market share from Intel, and the ultimate settlement of current AMD claims against Intel for \$1.25 billion, easily gives the impression of bad faith—particularly when Intel has spent tens or hundreds of millions of dollars in the first fourteen years of the new millennium on legal fees, instead of R&D (it currently lags far behind Qualcomm, a market leader, in smartphone processor market share).

¹⁵ See *Qualcomm Inc. v. Broadcom Corp.*, 548 F.3d 1004 (Fed. Cir. 2008); 2008 WL 66932; 2010 WL 1336937 (these cases show the scorched-earth tactics some trolling entities will go to in order to raise revenue).

¹⁶ See *id.* Aggressive IP litigation also helps Qualcomm maintain its *dominant* cellphone processor market share.

between NPEs and producing-entities begins with their environments and revenue generation models.

II. Non-Practicing Entities vs. Market Actors: Ecosystem Differences

While the stated purpose for patents is to reward and encourage innovation, certain non-practicing-entities like IPNav, Rembrandt IP, and Lodsys have turned patent portfolios into profit-making engines, not by producing products covered by their patents, but by suing producing-entities allegedly infringing the claims of one or more of the patents the group possesses, in order to acquire a settlement.¹⁷ These entities have been termed “trolls,” but, so far, lawmakers and the internet cognoscenti have not managed to precisely define “troll.”

Troll activity has come to dominate much of the current discourse on patent law, but the problem of market actors utilizing their patents for anticompetitive purposes is less frequently discussed, with the exception of articles by entities like the Electronic Frontier Foundation.¹⁸ Infringement suits filed by one producing entity against another are particularly common in industries like the smartphone space and other electronics-oriented fields where innovation is frequent and today’s state-of-the-art is tomorrow’s obsolescence.¹⁹ Apple, Microsoft, Google, Cisco, and others, have sued each other in infringement actions, and all have been sued for patent infringement.²⁰ While Apple and other major entities in the electronic market space are frequent

¹⁷ See *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141 (1989). “The Patent Clause itself reflects a balance between the need to encourage innovation and the avoidance of monopolies which stifle competition without any concomitant advance in the “Progress of Science and useful Arts.”

¹⁸ See Julie Samuels, *Apple v. Samsung: What Does a \$1 Billion Verdict Really Mean?*, ELECTRONIC FRONTIER FOUNDATION (Aug. 27, 2012), <https://www.eff.org/deeplinks/2012/08/apple-v-samsung-what-does-1-billion-verdict-really-mean>. Market-based solutions tend to serve consumers better than legal solutions because they let consumers choose for themselves which goods and services they would prefer. From the consumer perspective, the law is a blunt instrument. Furthermore, making a rival less competitive reduces the necessity of other firms developing new technologies in order to stay competitive, which harms consumers indirectly by offering them fewer consumption and substitution options in the relevant market space.

¹⁹ Consider the fact that, as of the time of this paper’s writing, a patent governing 3G connectivity is still in the first half of its legal lifespan, though 3G is nearly obsolete because of the proliferation of 4G LTE services and protocols.

²⁰ See *Microsoft v. Motorola*, 696 F.3d 872 (9th Cir. 2012) (alleging improper failure to license), *Apple v. Samsung*, 768 F. Supp. 2d 1040 (N.D. Ca. 2011) (alleging patent infringement of phones and tablets). There are, of course,

targets of trolls, they enjoy a relative immunity from the label “troll,” in spite of their own litigious activities. When Apple sues Samsung for billions of dollars of damages, Apple is still seen as a *producer*, not an opportunistic entity like IP Nav or Rembrandt IP.

The glossy sheen of being a *producing*-entity lends credibility to a market actor and, in the eyes of many, forgives suing one’s competitors in order to drive up their costs and make them less competitive through the imposition of massive damages, licensing fees and injunctions. Contrasted with the “troll,” a creature often seen as an opportunist and a malignant nuisance—to be stamped out through congressional legislation—a producing entity is seen as a victim when it asserts patents in an infringement action (*certainly* it must have been wronged to be asserting an infringement claim now!). The problem with giving producing entities a free pass—or viewing their infringement actions with a more generous spirit—is that *nowhere* in patent law is there a directive that patent holders must produce anything with their patents.²¹ The belief that the infringement lawsuits filed by producing entities like Apple, Microsoft, or GlaxoSmithKline are inherently different because they put their patents into practice has no basis in patent law—it is an exogenous belief often injected into the patent space.²²

In addition to inhabiting different market ecosystems, NPEs and producing entities possess different revenue generation models that help further explain why NPEs inhabit a market altogether different from producing entities. A troll’s revenue generation model is one where the entity seeks to utilize the patents in its possession to acquire licensing fees by threatening litigation and relying on the vast disparity in the discovery process and the asymmetrical nature

myriad other cases involving these parties and patents, and this litigation has only enriched lawyers—consumers have gained nothing from these conflicts.

²¹ See 35 U.S.C. 101 *et seq.*

²² *Id.*

of the legal conflict between a NPE and a producer to coerce payment.²³ An NPE has no competitors because of the unique method by which it extracts revenue from the marketplace; while other NPEs do exist, they possess different patents and there is theoretically no limit to the number of NPEs that can attack the same company or companies.²⁴ Thus, the NPE ecosystem resembles a group of reef sharks feeding on a limitless and immortal group of blue whales—unable to kill them, but more than capable of surviving on them. This ecosystem is not zero-sum and “market share” is essentially irrelevant.

By way of contrast, a patent holder making products protected by patents hopes to monetize the patents through the sale of the goods covered by the patent—the producing entity generates revenue through sales. This requires doing something better than the entity’s competitors, (e.g. better service, brand-identification, market perception, lower production costs, or through other methods). Competition in a marketplace tends toward an ultracompetitive ecosystem where one company’s loss is another’s gain—consumers typically only need one phone, one computer, one gaming console. Stealing market share not only increases revenue for the producing entity, it harms its competitors’ ability to “catch up” because they suffer a corresponding hit to revenue, reducing their ability to innovate and create superior products and services.

But this is not the only method of competing for a producing-entity. Just like an NPE possessing patents and utilizing them in infringement lawsuits, producing entities can put their patents to use extracting licensing fees and royalties. In a sinister turn, however, because the

²³ Prenda Law Group’s strategy of using subpoenas and imbalances in power mirrors the typical patent troll tactic, though Prenda was a copyright troll. *See* PIETZ LAW FIRM, <http://pietzlawfirm.com/copyright/light-speed-media-prenda-law> (last visited Mar. 19, 2014). The article located on the Pietz Law Firm’s website further explains Prenda’s strategy.

²⁴ The lack of competition in the NPE space is a facile observation. Each patent covers a different product or process or computer algorithm or design, and, as a result, a company can infringe many patents owned by many different NPEs at once.

producing entity also has products that relate to its allegedly infringed patents, the producing entity can claim additional damages based on the infringement taking away sales of its own patent-covered-product.²⁵ While this is doubtlessly sensible in the case of blatant infringement by an upstart company against an established market actor, the Apple-Samsung litigation shows the perverse purposes that patents can be put to by producing entities. Apple, concerned about its market share—essentially Apple’s profit driver—launched a suit against the competitor it saw as its most significant competition, Samsung, in order to drive up Samsung’s costs and make it a less competitive adversary in the market.²⁶ The transmogrification of patents from rewards for innovation into—more or less—tools of corporate warfare reveals that while the alleged NPEs have received extensive scrutiny, the dangers of market actor patent assertion actions pose potentially far greater, and little known, danger (particularly to increasingly price-conscious consumers).

NPEs do not implicate antitrust law at all, because they are not “market entities” engaged in competition through the sale of various products (although they *can* drive up the cost of goods and services through their lawsuits, indirectly harming consumers). Producing-entities should be heavily scrutinized when they file infringement actions because of the potential that the infringement suit’s purpose is to threaten a market competitor and make the competitor less competitive in the market space through the imposition of permanent injunctions, licensing fees and damages. Antitrust enforcers and congressional legislators should concern themselves with

²⁵ 35 U.S.C. § 284 (2012). This section speaks of “damages adequate to compensate” the plaintiff for the infringement; for an entity that does not make any products, damages—or treble damages—are not appropriate because the real damage occurs from not licensing the patent from the entity.

²⁶ This may seem an outlandish claim, but given Apple’s behavior towards Android since the rise in Android’s popularity and Google’s success, it is not beyond the realm of consideration. Indeed, Steve Jobs has even said he wants to destroy Android. See Seth Weintraub, *Steve Jobs: “I’m going to destroy Android, because it’s a stolen product. I’m willing to go thermonuclear war on this,”* 9To5Mac (Oct. 20, 2011), <http://9to5mac.com/2011/10/20/steve-jobs-im-going-to-destroy-android-because-its-a-stolen-product-im-willing-to-go-thermonuclear-war-on-this/>.

the increasing willingness of producing-entities to resort to competing outside of the marketplace. When these market actors compete by improving products and decreasing costs, consumers benefit immensely and immediately, but when they compete outside the marketplace with strategic infringement lawsuits and lobbying, consumers are harmed (anticompetitive behavior of this sort speaks directly to the soul of America's century-long antitrust tradition). In addition to allowing producing-entities to compete outside of the marketplace, patents allow them to raise barriers to new firm entry and can deter potential market entrants; producing-entities can also use patents to punish new market entrants.

III. Patents Can Be Considered Capital Costs or Entry Barriers in Certain Markets, But They Are Harder to Surmount Than Normal Entry Barriers

Examining various markets and market actors will better elucidate the rising problem of producing entities utilizing patents as entry barriers and anti-competitive devices and draw out the problem of one-size-fits-all patent solutions (regardless of the legal regime providing the solution).

Patents can constitute a type of capital cost for entry into a market space. In the same way that the fixed costs of leasing a passenger jet or a fleet of taxis provide a sort of *natural* entry barrier for new firms attempting to compete with established entities in a market space, patents, particularly those considered standards-essential (SE), create a capital barrier to market entry (in addition to creating time-barriers based on the task of seeking out the possessors of the patents and negotiating licenses and putting them into practice). Because patents are clearly a capital cost of market entry *and* a time cost, comparing them with barriers to entry in other markets is reasonable and potentially illustrative of the problems posed by patent-assertion actions from producing entities.

While entities like Spirit Airlines have managed to carve out an ever-growing niche in the airline market space by using attractive pricing and correctly identifying that most consumers in the space choose based on price and not on service, Spirit exists in a relatively patent-free market space (and one that is essentially cartelized and relies on two suppliers nearly exclusively for its enabling products—Boeing and Airbus).²⁷ Similarly, Ubercab has succeeded in undermining and upending—the riots in France indicate that Ubercab has stolen *significant* market share from traditional cab services—the capital-intensive taxi cab market.²⁸ Though the capital costs for entry—particularly for an airliner—are staggeringly high, these entrants do not have to worry about patent infringement litigation because they do not rely on products and services protected by patents in order to succeed (though Uber is potentially vulnerable to a troll suit filed against the app it uses to allow its user to find each other).²⁹

Even in these capital-intensive market spaces, small, upstart entities like Spirit and Ubercab have managed to enter their respective market spaces and generate profits.³⁰ The fact that these two entities have proven successful and highly competitive against their more established competitors shows that even high capital costs are not an entirely effective deterrent to a well-motivated and savvy entity. As previously noted, however, these markets, though highly consolidated and expensive to enter, do not have mechanisms in place for competitors to

²⁷ While jet manufacturers certainly compete through the acquisition of patents, carriers like Spirit or Delta essentially compete by attempting to increase their profit margins, acquire better routes, and through acquiring better reputations for good service. Their capital costs are high, but it is difficult for one of the firms in the market to make another firm less competitive through legal action.

²⁸ Sarah Drake, *Uber car attacked by Paris cab drivers on strike*, SILICON VALLEY BUSINESS JOURNAL (Jan. 13, 2014), <http://www.bizjournals.com/sanjose/news/2014/01/13/uber-car-attacked-by-paris-cab-drivers.html>.

²⁹ Though Uber is vulnerable to legislation financed by its rivals curtailing its ability to operate, a patent troll cannot sue it for infringing a patent in the same manner that Lodsys or IPNav sue companies for infringing patents.

³⁰ According to Spirit Airlines' financial statements to its investors, profits have increased nearly every year since 2009 and the company's net income in 2013 on operating revenues of \$986,018 was \$176,918. In a capital-intensive market space like the one Spirit inhabits, this is an excellent profit margin. SPIRIT AIRLINES, <http://ir.spirit.com/secfiling.cfm?filingID=1498710-14-19> (last visited Mar. 18, 2014).

bludgeon incoming entities and drive up their operating costs or hamper their abilities to operate by restricting public access to their products via permanent injunctions on production or by securing a ban on the importation of the rival's products.³¹ Patents utilized by competing entities in certain markets provide *exactly* this sort of multi-use shillelagh.

Patents can create significant capital costs for new companies attempting to enter the market space and even deter them from entering a market because they will have to pay one or more companies with the “pioneer” or “enabling” patents; without these, the company entering the market cannot even begin to compete. This stands in stark contrast to traditional capital costs, where innovative companies can design or work around the problems, as Ubercab and Spirit did with their respective markets (though the former acts more as a *substitute* to taxis, but so far has successfully avoided paying cap-and-trade “medallion” licensing fees—another type of entry barrier).³²

The continuous nature of patent licensing fees constitutes another issue weighing on the mind of a prospective market entrant—and those funding that entity (e.g., venture capital, angel investment, friends, and family). While NPEs oftentimes exist for the sole purpose of extracting licensing fees, they do not steal market share from producing entities in the market space. New market entrants, however, *do*. As a result, established firms typically attempt to raise entry-barriers to thwart them, but have done little to stop NPEs, though several congressional bills have been proposed and heavily lobbied for by various industry groups. Established companies like Microsoft and Apple attempt to stifle market competition and entry through patent

³¹ This is evident from the fact that Spirit Airlines has not been able to harm its competitors by filing lawsuits against them or accusing them of anticompetitive activities—it has simply tried to outcompete them by applying a novel business model to the market space. While its competitors *could* lobby lawmakers to prevent Spirit Airlines from operating in certain markets, or to prevent Uber from operating without taxi medallions and permits for its drivers, these methods lack the speed of a cease-and-desist letter and threat of destructive litigation.

³² See Drake, *supra* note 28.

acquisition, while they lobby lawmakers to stymie NPE suits against them, indicating their awareness that the problem NPEs pose requires a solution different from the one they employ against Google and their other rivals.³³

Licensing fees for various SE-patents constitute only one of the problems facing market entrants and established companies who have not developed the patents themselves.³⁴ While commentators have pointed out the significance of patent-portfolios as a method of Mutually-Assured-Destruction (MAD)—a system of *deterrence* against market actors filing infringement lawsuits against each other—portfolio enlargement has not been as effective as the MAD schemes of the Cold War.³⁵ MAD aims to deter two or more entities from engaging in hostilities by making the costs of conflict unconscionably high.³⁶ Indeed, MAD as a strategy in the free market—or in warfare—provides security only while the parties do not actually use their weapons—in this case patents—against each other.³⁷ Apple’s suit against Samsung, and the patent acquisition efforts by Microsoft and other companies, in the hopes of “getting one up” on each other, are clear indications that patents in this ecosystem are not for a MAD defense; they

³³ Microsoft has a long history of anticompetitive activity; Apple has recently joined in, partnering with Microsoft to create the Rockstar Consortium, which has attempted to stifle competition. *Infra* note 38.

³⁴ Additionally, producing entities engaged in standards-setting work, or in control of patents that will become standards-essential oftentimes know exactly which entities will infringe the patent and the manner in which they will infringe, giving the standards-setter an advantage. See *Qualcomm v. Broadcom*, 548 F.3d 1004, 1008 (Fed. Cir. 2008).

³⁵ Steven J. Vaughn-Nichols, *Mutually Assured Destruction: Google/Motorola vs. Apple*, ZDNET (Aug. 20, 2012), <http://www.zdnet.com/mutually-assured-destruction-googlemotorola-vs-apple-7000002887/>. Until U.S. Trade Representative Michael Froman vetoed the import ban on iPhones and iPads, Samsung had arguably beaten Apple in its current patent war. But see Eli Dourado, *How Patent Privateers Have Eroded Mutually Assured Destruction in the Computer Industry*, THEUMLAUT (Oct. 2, 2013), <http://theumlaut.com/2013/10/02/patent-privateers/>. The author argues that NPE troll suits have damaged MAD as a viable strategy, but this article ignores the fact that NPEs exist in a totally different ecosystem than Apple and Google. MAD is only a deterrent in a peer-to-peer environment (e.g. Soviet Russia and the United States); IPNav and Apple are not peers.

³⁶ See *id.*

³⁷ The great irony of nuclear weapons, and also of large patent portfolios: they provide security only when they *are not* used against a rival.

are acquired so they can be used in infringement lawsuits in the future, with the goal of eventually securing a number of large enough victories to cripple a major competitor.³⁸

The significance of a producing-entity utilizing its patents to harm a competitor cannot be overstated. The initial billion-dollar verdict against Samsung in federal court was over three percent of Samsung's yearly net income.³⁹ A revised jury award was still nearly \$639 million, nearly two percent of Samsung's yearly net income.⁴⁰ While it remains easy to simply write off that kind of loss because of the market power that Samsung has, the fact that Apple is continuing to pursue litigation against Samsung—and vice versa—indicates that more and more of both firms' income will go to paying legal fees and damages, rather than being reinvested in the company or put towards more research and development to benefit consumers. Going back to the concept of MAD, neither Samsung nor Apple are able to destroy each other, but their massive litigation expenditures and increasingly litigious behavior have the potential to stymie product development and keep potential entrants out of the market; their activities also harm consumers by creating an unstable market where whichever firm finds itself rising in market share soon finds itself subjected to a bevy of lawsuits.

Pursuing a strategy reliant upon MAD as a deterrent, and strong patents in the event the strategy fails and litigation occurs, invariably leads to an atmosphere at the top levels of

³⁸ Apple and Microsoft, along with RIM, lead "The Rockstar Group," that beat Google for the sale of roughly 6000 patents possessed by the bankrupt telecom giant Nortel, with essentially the sole purpose of keeping patent-deficient Google from acquiring patents that it could use in lawsuits against Apple and Microsoft. Alastair Sharp, *Apple/RIM group top Google in \$4.5 billion Nortel Sale*, REUTERS (Jul. 1, 2011), <http://www.reuters.com/article/2011/07/01/us-nortel-idUSTRE7600PF20110701>.

³⁹ SAMSUNG, <http://www.samsung.co.kr/upload/profile/SamsungProfile2013.pdf> (last visited Mar. 9, 2014). Page 77 claims Samsung's adjusted year-end 2012 net income was \$26.2 billion dollars.

⁴⁰ See Charles Arthur, *Samsung says \$52m, not \$380m, is owed for Apple patent infringement*, THE GUARDIAN (Nov. 14, 2013), <http://www.theguardian.com/technology/2013/nov/14/samsung-patent-infringement-apple-owes?CMP=EMCNEWEML6619I2>. Even though Judge Lucy Koh believes that the jury improperly calculated damages from the \$1 billion verdict, this is still a significant amount of money and shows how damaging patents can be even to powerful multinationals like Samsung. It further highlights that, rather than engaging in a MAD strategy, large companies execute their patent acquisition strategies in the hopes that they can slowly cripple their competitors through a number of large-scale patent victories.

corporate leadership where inventors are encouraged to “patent everything,” resulting in a significant increase in patent applications seen by the USPTO, which only contributes to more lawsuits.⁴¹

IV. The Increase in Patent Applications Enables and Encourages More Infringement Lawsuits

First mentioned in the Constitution,⁴² to acquire a patent, an applicant must fulfill a number of requirements; the invention claimed by the applicant must be a new, useful and nonobvious process, machine, manufacture, or composition of matter, or a new and useful improvement.⁴³

In the final decade of the twentieth century, and the first two decades of the twenty-first, patent law has seen the rise of NPEs making use of patents as tools for generating licensing fees and other forms of capital acquisition.⁴⁴ While patents are not the only the form of intellectual property that has changed significantly in the last twenty years, the assertion of patents in litigation for the purpose of generating revenue is perhaps the most significant alteration of the

⁴¹ In the Cold War, MAD essentially kept the world safe from nuclear war because of the sheer destructiveness of the nuclear weapons in the arsenals of the US and USSR. Patents may not provide a good “nuclear weapon” analogue because they do not create the same kind of senseless, indiscriminate destruction that nuclear weapons do when employed.

⁴² U.S. CONST. art. 1, § 8, cl. 8

⁴³ 35 U.S.C. §§ 101, 112 (2012). *See also Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141 (1989).

⁴⁴ Even as far back as 1999, there were NPEs suing semiconductor companies like Intel. In 1999, according to one account, the claimed damages against Intel by NPEs were \$15 billion. Brenda Sandburg, *Inventor’s Lawyer Makes a Pile from Patents*, THE RECORDER (Jul. 30, 2001), <http://www.wordspy.com/words/patentroll.asp>. This also does not include the lawsuits against Intel in the 1990s from its market competitors. A search of Westlaw-Next narrowed to cases that went to trial where Intel was the defendant in patent assertion cases returned at least fifteen instances between 1989 and 1999 where Intel was sued by its rivals in the microprocessor market. These two sets of facts, however, leave out the fact that Intel has settled (for unknown compensation) many of the cases its competitors and NPEs have brought against it.

intellectual property landscape, even more so than the usage of IP as a securitization method.⁴⁵ Like copyrights, patents have undergone expansion as securities as well.⁴⁶

NPEs exploit a patent's transferability to acquire them through licensing agreements with universities, through auctions, and by buying them⁴⁷ in order to assert patents they have not developed in infringement suits.⁴⁸ Some NPEs work directly with universities.⁴⁹ Alongside, though separate from the rise of NPEs in the Nineties, the United States Patent and Trademark Office (USPTO) has become increasingly swamped by the number of patent applications it reviews.⁵⁰ As a result, the USPTO cannot spend significant amounts of time on each patent application.⁵¹ A relationship doubtlessly exists between the decreasing time spent reviewing

⁴⁵ See Nicole Chu, Note, *Bowie Bonds: A Key to Unlocking, The Wealth of Intellectual Property*, 21 HASTINGS COMM/ENT L.J. 469 (1999). See also Xuan-Thao Nguyen, *Collateralizing Intellectual Property*, 42 GA. L. REV. 1 (2007). These articles discuss the increasing importance of intellectual property for companies both large and small and propose that securitizing intellectual property is an emerging method of acquiring additional capital for firms that are debt-averse or firms incapable of taking on more debt. These papers argue that by securitizing the revenue streams offered by intellectual property, new capital acquisition methods can be made available. In-house counsel should also note that IP-based asset-backed securities *are not* debt-based, which means there is no risk of default once issued. *But see* Jeff Leung, *Patent Securitizations, Patently Bad Idea? Risk/Benefit Approach Reveals Possible Reasons for Lack of Patent Securitizations*, 25 No. 1 INTELL. PROP. L. NEWSL. 4 (2006) for a consideration of the benefits that securitized patents provide, and some instances where patents are less useful.

⁴⁶ Some want to treat patents *as* securities in certain contexts, rather than IP. See Michael Risch, *Patent Portfolios as Securities*, 63 DUKE L.J. 89 (2013). Professor Risch argues that, by treating patents as securities when they are bought and sold, the market for patents can be made more liquid, with better coordination of buyers and sellers and superior regulation (though this relies on the assumption that the current regulations on securities are effective, which is a *highly contentious* assertion).

⁴⁷ Carlyn Kolker, *Billion-Dollar Lawyer Desmarais Quits Firm to Troll for Patents*, BLOOMBERG (Jun. 1, 2010), <http://www.bloomberg.com/news/2010-06-01/billion-dollar-lawyer-quits-firm-buys-patents-to-troll-for-license-fees.html>. John Desmarais, formerly of Kirkland & Ellis, bought up over 4000 patents from Micron Technology Inc. His firm uses those patents extensively in litigation. See also DESMARAIS LLP, <http://www.desmaraisllp.com/lawyers/john-m-desmarais> (last visited Mar. 26, 2014). John Desmarais' firm profile page explains that in less than four years with his new firm he has already trolled for billions of dollars in damages.

⁴⁸ Millien & Laurie, *supra* note 7. Not all NPEs focus on revenue generation through patent litigation, however. Some function as broker-dealers, others market the patents they hold to firms that desire to use them, and some even act as lending-libraries for startup companies finding themselves sued by larger rivals, giving them patents to assert against the larger rival, making the startup a harder target.

⁴⁹ REMBRANDT IP, <http://www.rembbrandtip.com/working-with-us.php> (last visited Mar. 7, 2014). Rembrandt is interesting because it cooperates with universities, other law firms, utilizes private equity, and taps other groups to identify targets and finance its extensive litigation activities, giving it the mark of a sophisticated patent enterprise (though some might characterize these methods as signs of an entity desperately trying to raise revenue).

⁵⁰ USPTO, http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm (last visited Mar. 6, 2014). Both the number of patents *and* the number of patent grants has dramatically increased in the 21st Century (and year over year in the 1990s as companies discovered they needed patents both as swords and as shields).

⁵¹ *Id.*

patent applications and the rapid year-over-year rise in patents handed out to applicants—sometimes covering the same invention or technique. The rise in patent activity is such that even investment banks have seen themselves the subject of infringement lawsuits for various trading and speculation techniques.⁵²

Producing entities like IBM, Microsoft, and Apple, used to brag about how few patents they owned.⁵³ Now they are some of the leading patent applicants, pouring capital into the acquisition of more patents every year.⁵⁴ While in one sense this is a benign activity that can lead to a firm acquiring large amounts of money in licensing fees and royalties—as in IBM’s case—oftentimes these patents are on trivialities or are design patents related to the form-factor of a product or its operations.⁵⁵ Increases in patent acquisition by major market entities, particularly in the software and high-tech fields, can prove problematic, particularly when the patented technologies are quickly rendered obsolete by continual improvements in the market space. To illustrate, consider that if Microsoft could have patented Windows 95 in 1995, the patent would expire *two years from now* (though Windows 95 was *almost certainly obsolete* entirely by the

⁵² *State Street Bank & Trust v. Signature Financial Group*, 149 F.3d 1368 (Fed Cir. 1998). See also Elizabeth Kaplan, *Multidisciplinary Horizon . . . State Street Case Signals New Vistas in IP, Banking Litigation*, 18 NO. 8 OF COUNSEL 9. See also *Digitech Information Systems, Inc. v. Ally Financial Inc.*, 2011 WL 3875407. This case shows the increasing importance of patents for algorithmic trading and other financial services matters. As banking becomes increasingly intertwined with software design and algorithmic development, patents will become more important for banks to hold, lest they be the target of NPE hit-and-run tactics, too.

⁵³ Charles Duhig, *The Patent, Used as a Sword*, The New York Times (Oct. 7, 2012), http://www.nytimes.com/2012/10/08/technology/patent-wars-among-tech-giants-can-stifle-competition.html?partner=rss&emc=rss&_r=1&. The article points out that in 2011 and 2012 the funds Apple and Google spent on litigation and patent acquisition were greater than the funds they spent on research and development. Additionally, according to one patent examiner quoted in the article, the patent examiners have as little as two days to look at any given patent and then write a ten to twenty page paper explaining why to grant a patent or reject the application.

⁵⁴ Steve LeVine, *IBM May Not Be The Patent King After All*, BLOOMBERG BUSINESSWEEK (Jan. 13, 2010), http://www.businessweek.com/magazine/content/10_04/b4164051608050.htm. The author points out that Qualcomm’s principle revenue generator is its licensing revenues, which totaled over \$10 billion in 2010.

⁵⁵ Jeff Wild, *Big Blue Billion Dollar Licensing Revenues “An Urban Legend,”* IAM MAGAZINE (Mar. 24, 2008), <http://www.iam-magazine.com/blog/Detail.aspx?g=3ad6b235-1a58-42a8-bb07-62bd4984f712>. Though this article is old, even if the author is correct, and it is necessary to revise *down* the revenues generated by IBM’s licensing fees on its patents from \$1 billion to \$100-200 million, this figure still indicates a significant amount of revenue.

year 2000, if not before then). The rise of design patents and their accumulation in the hands of software entities has been a boon for corporate leaders interested in patent assertion against their competitors.⁵⁶

The accretion and usage of patents for capital acquisition by NPEs pushes at the boundaries of patent law and what uses of patents we, as a society, find acceptable. Producing-entities attacking their rivals, or harassing startups and competitors, require us to solve their abuses of patents in a different manner because the producing-entity market reacts to different incentives.

V. Understanding the Limits of Antitrust Law and Its Relationship With Non-Practicing-Entities and Productive-Entities

In spite of the fact that producing entities have repurposed patents into swords with which to assail their competitors, antitrust remains only dimly aware of patent law, and does not contemplate patents at all in its original nineteenth century incarnations.⁵⁷ Indeed, there is an argument to be made that as a grant of a legal monopoly by the government, a patent exists outside of, and supersedes, antitrust law.

When initially conceived, antitrust only sought to prevent monopolistic behavior and attempts to create and promulgate monopolies and cartel-like behavior.⁵⁸ The Sherman Antitrust

⁵⁶ 35 U.S.C. § 171 (2013). The smartphone market place is one of the best examples of the problems that design patents can pose for limited form factors because all touchscreen smartphones need a large conductive glass screen in order to make them as usable as possible. Additionally, GUIs for touch-screen phones create more opportunities to sue one's competitors for infringing a design patent, even though "look and feel" is inherently fluid and ill-defined.

⁵⁷ See 15 U.S.C. 101 *et seq.* Antitrust's relative silence on patent law and potential anticompetitive abuses of patents may be due to an awareness that certain patents almost inherently make their holders better at competing in the market than their competitors. Antitrust tends not to penalize those who are simply better at competition, which may be one explanation for why antitrust and patent law rarely intersect. *But see* MICHAEL A. CARRIER, INNOVATION FOR THE 21ST CENTURY: HARNESSING THE POWER OF INTELLECTUAL PROPERTY AND ANTITRUST LAW 2 (2009). Professor Carrier points out that antitrust law "has not paid sufficient attention" to innovation and intellectual property, leaving the way open for anticompetitive behavior through the patent process and other inventive means.

⁵⁸ Congressional Record, 51st Congress, 1st session, House, June 20, 1890, p. 4100. Antitrust's aims are laid out by Congressman William Mason of Illinois, who said that "[even] if the price of oil [was reduced by trusts] one cent a barrel, it would not right the wrong done to people this country by the trust which have destroyed legitimate

Act, and our other antitrust laws, are more stringent than those in other nations—particularly when combined with our unique Foreign Corrupt Practices Act—and probably arise out of the distinctly American belief that everyone should be able to compete in a given market, even if this itself leads to higher costs or market inefficiencies.⁵⁹

Eventually, however, antitrust’s targets multiplied beyond simply preventing attempts to acquire monopolies and the stifling of mom-and-pop shops, and it expanded to cover corporate behavior.⁶⁰ Even from its beginnings, however, antitrust law has never sought to prohibit acquiring a monopoly through producing better products or through competitive skill and other market-based modes of competition.⁶¹

Anticompetitive behavior can take a number of forms. It can take the form of “tying” one product or service with another (including tying the licensing of one patent to the licensing of others).⁶² A concern as far back as the Sherman Antitrust Act, the purchase of companies that provide enabling services can also fall under the aegis of antitrust law.⁶³ Collusion and

competition.” See also WYATT WELLS, *ANTITRUST & THE FORMATION OF THE POSTWAR WORLD* (2002). As Supreme Court Justice Abe Fortas noted, antitrust is a “social religion” in the US and inefficiencies brought about by aggressive antitrust litigation and laws are tolerated much more than efficient monopolization.

⁵⁹ WELLS, *id.* at 1-3. Foreign countries continue, even to this day, to have a more benign view of monopolization and cartelization. Until the United States imposed its “social religion” on Japan, that island nation’s private sector was largely controlled by no more than ten or twelve companies, all with interlocking directorships. Germany and Britain and other European nations tolerated, and continue to tolerate, cartels operating. Wyatt Wells points out that these nations would set minimum prices to ensure the survival of small and large firms.

⁶⁰ Robert Bork had much to do with the change in antitrust enforcement during the latter half of the Twentieth Century. See William Kovacic, *Antitrust Paradox Revisited: Robert Bork and the Transformation of Modern Antitrust Policy*, 36 WAYNE L. REV. 1413, 1438-1442 (1990). Where initially anticompetitive behavior was seen as any sort of reduction of market actors, Robert Bork and his peers argued only activities that harm consumers and make trade more difficult and expensive should be punished by antitrust enforcers.

⁶¹ 15 U.S.C. §§ 1-3 (2004). Note that there is no mention of patents or simply out-competing one’s rivals in the market. It is significant that though the Sherman Antitrust Act and its companions stringently deter and punish monopolistic and anticompetitive agreements and behaviors, simply *being better* in the marketplace holds a privileged position of relative immunity from punishment under these statutes.

⁶² *In re Ebay Seller Antitrust Litigation*, 545 F.Supp.2d 1027 (N.D. Ca. 2008).

⁶³ *Id.* Though this is only a federal district court case, it is excellent because it illustrates a number of different concerns in modern antitrust law and is also a rare example of an antitrust defendant successfully achieving a dismissal of a case. eBay got itself into trouble because it bought up Verisign and several other companies and then acquired PayPal—effectively barring its competitors from competing in an even remotely similar manner without

cartelization in an industry represents the classical conception of anticompetitive behavior contemplated from the very beginning of antitrust in the United States, as in *Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp.*⁶⁴ The rapidly rising rate at which patents are approved by the USPTO and increases in patent accretion by producing entities also indicates that patents offer another means to engage in behavior that offends the spirit of antitrust law.⁶⁵

The Department of Justice (DOJ) has a specific division tasked with enforcement of Antitrust laws.⁶⁶ The DOJ's Antitrust Division has an excellent record of winning the cases it brings, though it experiences markedly less success when attempting civil enforcement of antitrust laws than when it enforces criminal antitrust laws, and its record varies when broken down into monopoly cases, exclusionary practices cases, and vertical restriction cases.⁶⁷ According to one study, the DOJ, in its worst year of the new millennium, *still won* ninety percent of the cases that it took to trial.⁶⁸ The utilization of patents to perpetrate anticompetitive behavior through litigation constitutes a fairly new abuse of the patent system. It is, however, perhaps a worse affront to the “social religion” claimed by Justice Fortas, because utilizing patents against one's competitors is the act of taking a government-given—and hopefully well-earned—monopoly and turning this reward into a weapon. Patents used for anticompetitive

incurring significant licensing and development costs. This makes eBay's success in this case even more intriguing and illustrative.

⁶⁴ 475 U.S. 574 (1986). Anticompetitive activity is perhaps the easiest to detect when it is simply collusion between firms or between a supplier and certain buyers. Intent there is *obvious*. It is, of course, far harder to divine intent when companies go to war with each other with patents or other litigation.

⁶⁵ USPTO, http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm (last visited Mar. 3, 2014). Note that patent applications and grants only trend upwards. *See* Duhig, *supra* note 53.

⁶⁶ DEPARTMENT OF JUSTICE, <http://www.justice.gov/atr/index.html> (last visited Mar. 8, 2014). *See also* 15 U.S.C. 101 *et seq.*

⁶⁷ *See* Joseph Gallo, Kenneth Dau-Schmidt, Joseph Craycraft & Charles Parker, *Department of Justice Antitrust Enforcement, 1955-1997: An Empirical Study*, 17 REVIEW OF INDUSTRIAL ORGANIZATION 75, 89-117 (2000). The authors do a fantastic job of laying out the DOJ's success with antitrust proceedings. *See also* UNIVERSITY OF CALIFORNIA, BERKELEY, <http://faculty.haas.berkeley.edu/shapiro/atcharts.pdf>. This document provides graphs of Twenty First Century antitrust enforcement.

⁶⁸ Robert H. Lande & Joshua P. Davis, *Comparative Deterrence from Private Enforcement and Criminal Enforcement of the U.S. Antitrust Laws*, 2011 BYU L. REV. 315, 349 (2011).

purposes constitute a far different type of anticompetitive behavior than that at suit in recent antitrust cases.⁶⁹ Furthermore, the DOJ *can* prevent or punish a large amount of anticompetitive activity involving patent assertion by producing-entities.

Modern antitrust law has grown up with the post-World War II fear of colossal corporations cartelizing and restricting the flow of goods and services to consumers (though whether this has ever happened or not is debatable).⁷⁰ While antitrust has grown from solely concerning itself with the trust method of cartelization and competition elimination and has expanded to a broader conception of anticompetitive behavior—like scrutinizing pharmaceutical pay-for-delay agreements or payments to customers to stop patronizing a rival—antitrust has yet to engage with patent abuse by producing-entities in a serious manner, though this may be for lack of cases before the courts rather than an actual lack of concern.

Producing-entities possessing patents face a number of market pressures that NPEs do not face. Whereas NPEs possess patents in order to utilize them in threats and litigation in order to extract revenue, for many producing entities, the possession of patents is necessary, in a wide variety of industries in order to compete effectively. Possessing patents that cover cutting-edge processes and products is by no means a guarantee of success in any market space—even when those patents cover potentially superior implementations of a given technology.⁷¹ Patents and

⁶⁹ See *Bell Atl. Corp. v. Twombly*, 550 U.S. 544 (2007); *In re Hydrogen Peroxide Antitrust Litig.*, 552 F.3d 305 (3d Cir. 2008), *Wal-Mart Stores, Inc. v. Dukes*, 131 S. Ct. 2541 (2011). These cases are important because they are a mixture of public and private antitrust lawsuits. For this paper, however, they are more important because none of them deals with patent abuse at all—they are all classic examples of anticompetitive behavior and deal variously with heightened pleading standards in order to get to discovery, district court misapplication of the *Twombly* standard and class-certification problems.

⁷⁰ WELLS, *supra* note 58.

⁷¹ At certain points in the past twenty years AMD, ARM, and other semiconductor manufacturers have had significantly better microprocessors than Intel, but have been unable to steal much market share from Intel, even as industry leaders tout the vastly superior patented chips made by Intel's rivals. Duncan Stewart, *Buy Intel shares, short its rival*, FINANCIAL POST (Mar. 19, 2010) <http://www.financialpost.com/scripts/story.html?id=6b06aff3-12f7-4711-8ea8-9467e501ad8d&k=46788>. <http://www.economist.com/blogs/schumpeter/2013/05/intel-v-arm> (last visited Mar. 2, 2014). This page reveals the overwhelming market share that Intel possesses against its rivals. See also IT CANDOR, <http://www.itcandor.com/microprocessor-q312/> (last visited Mar. 2, 2014). This page has a fascinating pie

producing better products provide no guarantee of market success for a producing entity, particularly one attempting to steal market share from its competitors.⁷²

Additionally, unlike NPEs, which do not have reputational or branding concerns, producing-entities are burdened with the necessity of maintaining goodwill and positive perception behind their brands.⁷³ Apple's continued support for stricter regulations on chemicals and compounds supposedly involved with climate change has won it a number of adherents who see its activities as responsible; its actions probably also cost it customers who refuse to use products put out by a company supporting stricter climate change regulations.⁷⁴ Producing-entities must also constantly invest money in developing new, better products sensitive to the demands of consumers, in order to keep up with their competitors, lest they lose market share.⁷⁵ The original iPhone was perhaps the most advanced phone of its time, but it was obsolete within two years of its first production. Constantly sinking corporate capital into development hampers

chart of relative market share and also explains the total worth of the semiconductor/microprocessor market. It also points out that even with arsenals of patents, companies with poor brand management and foresight will be ejected from the market, or will at least see their market share erode, as miniature consumer electronics (e.g. cell phones and tablets) become dominant over computers. Interestingly, this is *already* happening to a degree with Intel.

⁷² See Carrier, *supra* note 57, at 373-376. Even when pharmaceuticals have blockbuster drug patents, generics can undercut their profitability; this leads to anticompetitive pay-for-delay schemes to maintain a drug's profitability at the expense of consumers. Carrier proposes that antitrust enforcers should heavily scrutinize these deals.

⁷³ Perhaps the best recent example of brand image damage lies in the effects that Apple's "I'm a Mac" commercials had on the perception of Windows products—casting them as stodgy and ineffective virus-magnets. "Hip" people use Apple products, boring squares in offices use PCs. <http://www.youtube.com/watch?v=DZSBWbnmGrE>. (last visited Mar. 4, 2014). The ads have been estimated to be quite effective at damaging Microsoft. See WORKING PSYCHOLOGY, http://www.workingpsychology.com/download_folder/GAM_Campaign_Analysis.pdf (last visited Mar. 4, 2014). It is important to view this in the context of patents and antitrust—Apple possessed many patents at the time of this advertising campaign but the patents *did not* help it steal market share from Microsoft—the advertisements did. As a result, the contention that patents are no guarantee of success in the market is a very valid assertion.

⁷⁴ Nick Statt, *Tim Cook advises climate change deniers to get out of Apple stock*, CNET (Feb. 28, 2014), http://news.cnet.com/8301-13579_3-57619770-37/tim-cook-advises-climate-change-deniers-to-get-out-of-apple-stock/.

⁷⁵ The death of the once market-saturating Blackberry is almost unassailable evidence of this. Brad Reed, *Blackberry U.S. Market Share Now 0%*, BOYGENIUSREPORTS (Jan. 30, 2014), <http://bgr.com/2014/01/30/blackberry-us-market-share/>.

corporate profitability, and, by increasing the price consumers encounter at the point of purchase, can damage demand for the product.

No producing-entity can simply rest on its laurels and continuously put out the same product and hope to compete in the long term. This even holds true of oil and gas companies like Exxon and Chevron, which, by virtue of the importance of the products they provide, possess nearly hydraulic monopolies.⁷⁶ Even these companies cannot afford to simply extract crude oil and ship it to where there is demand—exploration, and investments in technology to make more crude deposits accessible and worthwhile, are among the constant costs these companies incur.⁷⁷ Compare NPEs, which are only subject to the costs of paying what few employees they may have, the nominal fees required to maintain an unstaffed office or two in a small East Texas town, and possibly the maintenance fees for the patents in their portfolios.

Because all producing-entities are subject to research and development costs, they can gain advantages over each other by reducing the costs of producing their products or raising their competitors' costs, engaging in loss-leading activities, or through other means.⁷⁸ Entities unwilling to operate with lower margins may engage in anticompetitive cartelization, as in the

⁷⁶ Companies engaged in the extraction and sale of commodities like oil are an important market space to examine because their continued market dominance is due to a combination of brutally high entry costs and essentially perpetual demand for the same product (petroleum) year after year, rather than any real anticompetitive behavior on the parts of the Seven Sisters. Indeed, many of their costs are imposed by governments in the form of taxes and fees and are passed on to consumers.

⁷⁷ See EXXON, http://corporate.exxonmobil.com/~//media/Reports/Summary%20Annual%20Report/2012/news_pub_sar-2012.pdf (last visited Mar. 9, 2014). Exxon's "Upstream Capital" and "Exploration Expenditures" totaled over \$36 billion at year-end 2012. These expenditures are indicative of the constant race between commodity-producing entities—commodity herein meaning crude oil, natural gas, iridium, etc.—to secure the next revenue stream lest a competitor acquire it first, or at a lower cost down the road. NPEs do not face these exigencies.

⁷⁸ Loss-leading does not always draw the ire of antitrust enforcers, but when used to damage startups attempting to steal market share, it is almost a *per se* violation of antitrust laws because the sole purpose of the loss-leading activity is to destroy competitors in order to return prices later on to their undisturbed or monopolistic levels. See *Parish Oil Co, Inc. v. Dillon Companies, Inc.*, 523 F.3d 1244, 1256-1258 (10th Cir. 2008).

notable Apple e-books price-fixing case.⁷⁹ Interestingly, cartelization, once achieved, creates incentives for the cartel members to secretly cheat on the cartel agreement and sell below the higher cartel price to steal market share from the other cartel members. The incentive to sell below the floor explains the inherent instability that characterizes cartels; they tend to have short lives when not discovered or interdicted by authorities. Furthermore, antitrust authorities tend to easily discover cartelization, because when a large number of entities in a given market are all selling their goods and services at a specific price, antitrust enforcers tend to infer, rightly or wrongly, that an anticompetitive cartel is operating.⁸⁰

But patents provide another means for anticompetitive activities, and unlike cartelization, loss-leader programs, or anticompetitive acquisitions, authorities may have a difficult time uncovering and punishing the anticompetitive use of patents because the accused market actor can simply cite its infringed patent as the reason it is suing (“why would we sue if our patent wasn’t infringed?”). Rather than cross-licensing patents like multi-touch capability for smartphones, which, while not *essential* per se, make for a better user experience, a market actor can simply sit on its market advantage, raise its prices to reflect its superior technology and lie in wait for its competitors to develop similar technologies and then utilize the doctrine of equivalents to sue for—presumably massive per-product—damages and injunctive relief. Lying

⁷⁹ Baer, *supra* note 2. “Apple colluded with five of the nation’s largest publishers to stifle retail price competition for e-books.” According to Baer, “Almost overnight, the prices of the defendant publishers’ best sellers sold on Amazon increased by more than 40 percent.”

⁸⁰ Lande & Davis, *supra* note 68. Correctly identifying anticompetitive behavior has dogged antitrust enforcement for over a century. It is problematic because of the potential for Type I error (wrongly identifying an innocent firm and pursuing antitrust sanctions against it) and Type II error (failing to identify a firm guilty of violating antitrust laws). Various markets also seem to have different tolerances for pricing collusion, like the cellphone market space where phones on different carriers all seem priced around the same and all the cell phone plans offer the same talk-time and data allowances, or the computer market, where differing features merit divergent pricing; a computer market where all computers had highly similar or identical features and services and prices would scream “antitrust violation.”

in wait for a competitor to infringe would not earn the market actor any scrutiny from antitrust enforcers because it is *technically* utilizing its patents in a reasonable manner.

This sort of behavior is not beyond the realm of conception, and may be the motivating factor in a number of recent lawsuits in the high tech sector of the economy.⁸¹ Furthermore, this sort of activity is anticompetitive at its heart because the whole goal of ambushing competitors with patents—something many companies claim NPEs do—is to drive up their costs and make them less competitive by making them pay out large damage awards and also by curtailing their ability to sell their allegedly-infringing products.⁸² The differentiating factor between producing-entities ambushing competitors with patents, and NPEs engaging in the same behavior, is that for NPEs it is a byproduct or strategic outgrowth of their business model, whereas for producing entities it is a market strategy based on harming competitors directly, rather than harming them by stealing customers with better products and services.⁸³

NPEs oftentimes find themselves cast as the antagonists, the constant peril in the dark, when congressmen and legal authorities speak of patent law.⁸⁴ NPEs pose significant problems for startup companies when they sue them to extract royalties; they can even destroy startups and

⁸¹ See Ashby Jones, *Patent Wars Erupt Again in Tech Sector*, THE WALL STREET JOURNAL (Nov. 3, 2013), <http://online.wsj.com/news/articles/SB10001424052702303661404579176151080446542>. Much of the recent litigation in the tech sector relates to the much-publicized “Smartphone Patent Wars.” The new round of the patent wars was set off by Apple and Microsoft-backed Rockstar’s Nortel patent acquisition and subsequent suit against various Android affiliated companies. Even the DOJ was concerned that the acquisition of Nortel’s patents was in order to “quash competition.”

⁸² *Id.*

⁸³ *Id.*

⁸⁴ Diane Birtz, *Obama urges Congress to pass anti-patent troll bill*, REUTERS (Jan. 28, 2014), <http://www.reuters.com/article/2014/01/29/us-usa-obama-patent-idUSBREA0S07V20140129>. President Obama has opined that the nation needs a “patent reform bill that allows our businesses to stay focused on innovation, not costly, needless litigation.” See also Jessica Karmasek, *McCaskill introduces own legislation aimed at ‘bottom feeder’ patent trolls*, SOUTHEAST TEXAS RECORD (Mar. 4, 2014), <http://setexasrecord.com/news/294666-mccaskill-introduces-own-legislation-aimed-at-bottom-feeder-patent-trolls>. It’s not clear where McCaskill’s quote “patent trolls are costing American businesses tens of billions of dollars a year” is getting its facts from. In fact, contrary to the Senator’s view, patent trolls may not even be behind the rise in patent lawsuits. See Dave Kappos, *Facts Show Patent Trolls Not Behind Rise In Suits*, LAW 360 (Jan. 15, 2014), <http://www.law360.com/articles/501142/facts-show-patent-trolls-not-behind-rise-in-suits>.

small companies.⁸⁵ NPE patent assertion lawsuits also significantly threaten larger companies, though oftentimes the NPE lawsuits, capable only of acquiring reasonable royalties and licensing fees, simply seek smaller settlements rather than big jury awards.⁸⁶ The holdup costs and the damage to producing entities from NPE litigation are significant.⁸⁷ Not only can NPEs significantly damage or destroy producing entities when they aggressively assert their patents, they also can dampen the desire of prospective entrepreneurs to enter markets and innovate—particularly in markets where patents are vital.

NPEs often attack large companies in order to acquire the largest amounts of royalties and licensing fees—particularly because the discovery costs incurred in potentially defending the lawsuit provide a significant incentive to settle.⁸⁸ Large companies with significant corporate insurance and large legal-service budgets are, however, the entities most capable of “solving” the problems that troll-suits impose on producing entities. These same companies harm themselves when they publicize their settlements and their willingness to settle more cases rather than

⁸⁵ Erich Spangenberg once owned a startup telecom company that was nearly put out of business through licensing fees in 1996. David Segal, *Has Patent, Will Sue, An Alert to Corporate America*, THE NEW YORK TIMES, BU1 (Jul. 13, 2013), <http://www.nytimes.com/2013/07/14/business/has-patent-will-sue-an-alert-to-corporate-america.html?pagewanted=2&r=0>. The startup company behind the app Jump Rope was essentially destroyed by litigation fees by an NPE, even though it won the first part of the court battle. Daniel Nazer, *The Times Profiles a Patent Troll* (Jul. 15, 2013), <https://www.eff.org/deeplinks/2013/07/times-profiles-patent-troll>. For the other side of the story, IPNav’s blog reveals the dark side of producing entities like Google and its patent acquisition and assertion efforts. <http://www.ipnav.com/blog/more-hypocrisy-from-googleevil-is-what-others-do/?printerFriendly> (last visited Mar. 9, 2014).

⁸⁶ Segal, *id.*

⁸⁷ Karmasek, *supra* note 84. See also Dennis Crouch, *Patent Trolls by Numbers*, PATENTLYO (Mar. 14, 2013), <http://patentlyo.com/patent/2013/03/chien-patent-trolls.html>. The author points out, interestingly, that NPEs are successful in fewer suits than producing entities are. The author also points out that as many as 55% of the companies sued by NPEs generate \$10 million or less in revenue and 66% generate \$100 million or less. The author’s observation that producing entities have the most success with their suits and achieve the highest damage returns should profoundly disturb the reader.

⁸⁸ See Ben Lovejoy, *Apple Speaks Out on Patent Trolls*, 9TO5MAC (Feb. 10, 2014), <http://9to5mac.com/2014/02/10/apple-speaks-out-against-patent-trolls-after-facing-a-record-92-lawsuits-in-three-years/>. Apple asserts that though it has rarely lost on the merits of the cases, its victories are pyrrhic at best because of the massive costs it incurs in discovery. Apple’s statement also reveals a frequent tactic of trolling NPEs—set the settlement demand lower than the discovery fees to incentivize settling. There may be nothing sinister about this tactic, however, it may just be smart plaintiff lawyering.

litigate them.⁸⁹ NPEs may strategically rely on the fear that arises from the threat of litigation to substitute for actually possessing litigation-worthy patents, and this behavior is only encouraged by large companies settling case after case—particularly because the NPE ecosystem is non-rivalrous and the victories of one NPE may simply embolden other NPEs to seek out companies notorious for settling cases in order to secure more “easy” revenue.⁹⁰

Another stratagem trolling NPEs rely on relates to the awareness possessed by companies in the crosshairs regarding what is known in economics as the “free-rider-problem.” A company like Microsoft, finding itself on the receiving end of a lawsuit from a licensing-fee-seeking NPE may desire to litigate the case against the NPE and incur the costs of the court case in order to make a point to other NPEs that it is not an easy target and that *any* victory will be hard won. But at the same time, Microsoft *may also realize* that if it takes the NPE to court, litigates the case, and wins, it has made all of its market competitors better off at the same time—and they have not had to incur *any* of Microsoft’s massive legal fees; they have been made better off *without incurring any costs*. This is a powerful disincentive to producing entities, influencing them to not take trolling NPEs through the litigation process.⁹¹

The free rider problem, paradoxically, constitutes the exact behavior that allows for the NPE ecosystem’s existence. NPEs have an incentive to assail those companies that lack the means to take them through the litigation process, like startups, or companies that have sunk their capital into costly manufacturing facilities. When a NPE becomes aware of potential targets

⁸⁹ *Id.* If you were an NPE with patents you thought you could assert against Apple, and you saw Apple’s statement that it was tired of incurring such high legal fees fighting NPE lawsuits, it would make you much more confident about your chances of a quick settlement and fee acquisition.

⁹⁰ *Id.* A company that makes itself known as a “settlement factory” is only incentivizing more suits.

⁹¹ *See* Kolker, *supra* note 47. If Microsoft *loses* the case it is taking to trial against an NPE, it may be made *even worse off* than if it had just settled and let another major corporation handle the litigation. Consider the billion-dollar-plus verdict that John Desmarais secured for Alcatel-Lucent against Microsoft (after *years* of costly litigation).

that possess the means to stand up to it and take it through the litigation process, potentially invalidating the asserted patents, but the NPE also discovers the entity is willing to settle cases to avoid litigation expenses, it also experiences a strong incentive to threaten legal action against entities it would normally avoid.⁹² These litigious activities drive up the costs of consumer goods and create disincentives for market entry, but they do not pose any real *anticompetitive* threat in the sense contemplated by antitrust law.⁹³

The ecosystem for NPEs, where there are no products, only revenue generation based on litigation, both threatened and actual, does not have internal competition. The NPE ecosystem has no *Apple v. Samsung*, so it provides correspondingly different incentives to its inhabitants. NPEs are strongly reactive to incentives—their goal is to generate revenue through their patents, and generating *some* revenue is better than generating none.⁹⁴ As a result, when confronted by companies willing to go through with the threatened litigation, NPEs often back down and accept smaller settlements, or dismiss the suit themselves for fear of having their patents invalidated.⁹⁵

Understanding the incentives that impel NPEs is important for producing entities, because they must simultaneously contend with NPEs and their competitors. Some producing entities are actually already engaged in developing countermeasures against NPEs by forming

⁹² NPEs aware that big, powerful companies will settle cases experience an incentive to attack them to secure low-cost settlement acquisition, even though a powerful company like Microsoft may initially deter an NPE because of its massive coffers. Power, in the patent space, at least against NPEs, is a function of the willingness of a defendant to go to court.

⁹³ See Carrier, *supra* note 57, at 345, 370-374. He points to pharmaceutical “pay-for-delay” agreements as a perversion of the Hatch-Waxman Act, but says that merely because a law is not doing its job because of clever lawyering, does not mean that we ought to bring in antitrust—it may be more problematic than helpful.

⁹⁴ This may be the same incentive structure that encourages bold lawsuits by generic manufacturers against Big Pharma. See C. Scott Hemphill, *Paying For Delay: Pharmaceutical Patent Settlement as a Regulatory Design Problem*, 81 N.Y.U. L. REV. 1553, 1579-1581 (2006). He points out a number of incentives that drive generic manufacturers and asserts that even a one-in-five chance of success is often enough to justify a lawsuit against a large company or competitor because of the potential rewards and the disproportionate risk on the larger party.

⁹⁵ Segal, *supra* note 85.

cooperative groups that attempt to buy up patents to keep them out of the hands of trolls.⁹⁶ Additionally, some NPEs specialize in selling—at low cost—patent licenses to embattled startups in order to help them fend off their litigious assailants, whether opportunistic NPEs or established market actors who wish to keep entrants out of the market.⁹⁷ By banding together, producing-entities can make themselves harder targets for NPEs, or they can at least change the decision calculus for trolling NPEs.

Producing-entities may be able to make trolling a less enticing proposition by banding together and financing defense funds and by actively licensing patents amongst themselves. Even keeping trolling NPEs in abeyance by cooperating groups of producing entities, however, does not diminish the dangers of anticompetitive patent assertion by producing-entities.

Though NPE lawsuits and threats against producing entities can damage and even destroy them, raising costs to consumers, antitrust—the typical remedy for corporate activities driving up consumer costs and reducing competition—does not map on well onto NPE behavior. The problem with antitrust as a remedy for NPE behavior lies in the differences between a traditional market and the market space inhabited by NPEs. By virtue of not creating competing products, and the fact that trolls cannot practically possess duplicate patents because of the nature of patent

⁹⁶ ROCKSTAR CONSORTIUM, <http://www.ip-rockstar.com/> (last visited Mar. 9, 2014). Microsoft and Apple co-lead the Rockstar Consortium, and the group's patent acquisitions certainly keep them out of the hands of NPEs seeking to generate revenue by suing them and other companies, but Microsoft and Apple may have another motive for setting up the Rockstar group—keeping patents out of the hands of Google and other competitors. Rockstar filed its first lawsuits in November 2013, making it important to remember that patents can be attractive as shields that quickly turn into swords.

⁹⁷ RPX, <http://www.rpxcorp.com/index.cfm?pageid=9> (last visited Mar. 9, 2014). The company known as RPX aggregates patents and utilizes various fee and interest structures in order to make a “lending library” of patents available to its patrons, providing just-in-time access to patents that allow a defendant to assert RPX-held patents against the plaintiff when sued. This theoretically prevents two RPX patron companies from going to war with each other, because it would return them to the classic MAD scenario discussed previously. This encourages market cooperation. The main problem with a set-up like this is the massive portfolios that Google, Apple, Microsoft and other large corporations already hold, which creates a disincentive to become a member of the RPX network because it is simply not necessary. RPX, <http://www.rpxcorp.com/index.cfm?pageid=9> (last visited Mar. 9, 2014).

grant requirements, NPEs cannot compete with each other.⁹⁸ Furthermore, and again by virtue of not producing products other than litigation, NPEs do not compete with entities actually engaged in productive activities, which makes it hard to cast their activities as anticompetitive in a manner recognized by antitrust law. The power to destroy companies with nothing more than a patent portfolio and several attorneys certainly seems abusive, but to attempt to proscribe this behavior through the usage of antitrust—which has *always* suffered from the difficulty of correctly identifying what behavior is or is not anticompetitive—seems ill-advised.⁹⁹

NPEs thus raise interesting questions about our conception of anticompetitive behavior and how forcefully we intend to prevent and punish activities that raise consumer costs. The decision on *where* to draw the line with antitrust law—the US government *could* use antitrust to prevent NPE lawsuits, but only with drastic revisions and expansions—is a matter of opinion and forces us to confront what kind of anticompetitive behavior we are willing to tolerate. This is further complicated by the fact that some NPE lawsuits may actually have meritorious claims; it is overly simplistic to see any lawsuit filed by an NPE as the work of a troll.¹⁰⁰

NPEs force us to confront the limitations of antitrust law and our conceptions of the outermost limits of behavior we see as anticompetitive in nature. Unlike lawsuits filed against their competitors by producing-entities where there is an element of intent to be divined from the action of filing suit, NPEs file suit for the sole purpose of making money—there is no malice or

⁹⁸ It is highly likely that some patents encompass essentially the same claims and products.

⁹⁹ Lande & Davis, *supra* note 68, at 13-14. Antitrust foists significant burdens on corporations and so it is extremely important that its enforcement falls on those who are actually guilty of violating antitrust laws and not on innocent parties. The problem lies in what a violation is or is not and our conception of anticompetitive activity is will have a profound effect on the outcome- what anticompetitive activity we find.

¹⁰⁰ *Id.* at 29-33. Private antitrust enforcement may actually provide a good remedy for anticompetitive activities involving patents owned by large corporations intent on suing their competitors instead of outcompeting them. The massive disparity in discovery costs between the individuals suing the large corporations mirrors the disparity between NPEs and corporations now and would create a disincentive to engage in the anticompetitive activity because of the potentially massive damages an Apple or Microsoft could incur at the hands of the private plaintiffs. Davis and Lande point out that private plaintiffs may have a lower rate of court victories.

ill intent behind their activities. NPEs file lawsuits against their targets in order to generate revenue, by way of contrast with producing-entities.¹⁰¹ The variability of intent behind the lawsuits filed by competing producing-entities raises the specter of anticompetitive activity in a way that NPE lawsuits do not.

While NPEs exist at the margins of antitrust law, utilizing patents not for production, but for revenue generation through what securities law might term “greenmail,” producing-entities certainly fall within the ambit of antitrust.¹⁰² While ill-fitting for NPEs because they produce nothing, antitrust offers a better means of preventing producing-entities from utilizing their patents as alternative methods of competing with market rivals.

While antitrust law is probably not the right remedy for NPE troll lawsuits, it maps on well to the anticompetitive activities engaged in by producing entities utilizing their patents to damage competitors. Producing-entities are more able to directly harm consumers through their anticompetitive patent lawsuits because they can seek a wider array of remedies and damages than NPEs engaged in trolling can.¹⁰³ Furthermore, it is unlikely that companies like HTC or Apple could be destroyed by an NPE’s troll suit—or a number of trolling NPEs—but they could

¹⁰¹ Matt Lynley, *Steve Jobs Called Android ‘Stolen Product’ Vowed to Fight to his ‘Dying Breath,’* BUSINESS INSIDER (Oct. 20, 2011), <http://www.businessinsider.com/steve-jobs-called-android-grand-theft-of-iphone-2011-10>. It is hard to claim that there is no ill will or anticompetitive intent behind Apple’s repeated lawsuits against Android, and vice-versa, when Steve Jobs has loudly claimed, among other things, that Android is a “grand theft” of Apple’s software and hardware.

¹⁰² Risch, *supra* note 46. *See also* 26 U.S.C § 5881 (1987). Securities law has been proposed as means of regulating patent use, and while patents could be termed a security, Securities law does not map onto patents well because of their long life and lack of the volatility that characterizes collateralized-debt-obligations and other speculative investment vehicles. While NPEs do not buy stakes in companies hoping to be bought out at a higher price, thus turning a profit, the tactic of threatening suit, as in the threat of a takeover for revenue generation, makes this analogy quite apt. Carl Icahn and other activist shareholders as far back as the 1980s have used similar tactics to great effect.

¹⁰³ This is not necessarily “new” behavior. Thomas Edison utilized his patents on light bulbs and other associated technologies to keep the price of light bulbs higher than it was when a large number of firms were competing in the market place, and, in so doing, drove a number of his competitors out of the market. <http://americanhistory.si.edu/lighting/19thcent/comp19.htm> (last visited Mar. 27, 2014). Westinghouse was lucky that it had patents that allowed it to sidestep the patent that Edison eventually secured on the light bulb—many of his lesser known competitors were forced out of business and the price of the light bulb increased as a result.

suffer grievous harm or wind up forced out of a market by a competitor using its patents to raise their costs or prevent their products from being sold in the United States (or elsewhere).

Being aware that patents pose problems when turned to uses other than protecting innovation and rewarding development does not signal an end to the issue, even if we choose to see antitrust enforcement as a solution to producing-entity troll lawsuits. One of the reasons antitrust continues to be a legal remedy despised and feared by corporations is because of the information and coordination problems inherent in identifying correctly *what behavior is actually anticompetitive* and what behavior is not.¹⁰⁴ Indeed, there are even debates about how to approach defining anticompetitive behavior. Our definitions of anticompetitive behavior will, of necessity, have a significant effect on which antitrust cases are actually taken up and what behavior we deter. As a result, certain definitions of anticompetitive behavior will cover certain activities but not others, and the more stringently anticompetitive behavior is defined, the less likely corporations are to engage in activities like mergers and acquisitions, which could itself lead to inefficiencies in the market and additional costs to consumers.¹⁰⁵

Comparing the ecosystems in which NPEs and producing-entities exist yields several important points relevant to preventing patent abuse in the future. More stringent patent application scrutiny can effectively foil NPEs without involving top-down legal regimes like antitrust or congressional legislation.¹⁰⁶ From the beginning, antitrust enforcement has been haphazard and politically motivated, in addition to being foiled by ever more ingenious and hard-

¹⁰⁴ Lande & Davis, *supra* note 68.

¹⁰⁵ Baer, *supra* note 2. It is unclear if the DOJ's prohibition of the merger between AT&T and T-Mobile actually helped customers at all. In fact, the greater economies of scale that AT&T would achieve by taking over T-Mobile might actually help it supply lower-cost, greater-coverage service to customers in the United States.

¹⁰⁶ CARRIER, *supra* note 57, at 209-218. He argues that more resources allocated to the USPTO may help prevent bad, broad patents from being granted, and that a rigorous post-grant opposition system, similar to the European Union's, may help prevent NPE activity. Balanced against his arguments is the need to protect innovators and, by making the patent granting process more stringent, some good inventions may not receive patents.

to-detect anticompetitive agreements and behaviors.¹⁰⁷ Furthermore, the information problems encountered by antitrust enforcers likely result from the fact that the enforcers do not experience the effects of their actions; they are feedback immune and they do not suffer any personal consequences when they stop market activity they deem to be anticompetitive but that actually makes a market more efficient, (and it is hard to empirically prove that DOJ antitrust activities harm consumers).¹⁰⁸

NPEs prey on producing-entities both large and small, but by virtue of their reliance on the producing-entity ecosystem, the members of that ecosystem can deter them by making themselves harder targets—by setting up defense funds and litigation finance groups and displaying a greater readiness to litigate against an NPE; threatening the NPE’s revenue generating assets may scare it away from litigation. These countermeasures require no congressional intervention and, by virtue of coming from *within* the ecosystem, are more sensitive to market exigencies than external (government) enforcement.

While external enforcement methods based on antitrust law or other regimes may not work as well for preventing abusive lawsuits by NPEs, antitrust law’s modern focus on anticompetitive behavior, beyond mere monopolization efforts, offers another means of combating abusive lawsuits by producing-entities. Though issues remain regarding what patent-based lawsuits we find abusive and anticompetitive in a manner recognizable by antitrust law, the ability to stop lawsuits launched simply to punish and harm competitors—where consumers

¹⁰⁷ Whether through interlocking-directorships, tying agreements, or other methods, entities interested in anticompetitive activities will develop new methods for getting around antitrust enforcers, necessitating vigilance and diligent action after new anticompetitive methods are detected.

¹⁰⁸ The fact that government agents face information problems is a truism. Government employees are not subject to feedback from the actions they take regarding markets. While Microsoft must live with the choices it makes and products it invests its capital in, a government regulator does not experience any negative feedback from regulating a product out of existence or damaging a company’s profitability – in fact these are often seen as signs that the government is *doing its job* (perversely enough). Regulators suffer no adverse capital consequences from their regulatory decisions.

inevitably wind up as collateral damage—makes antitrust an attractive means of preventing this behavior. Furthermore, the DOJ has a good record in the twenty-first century of winning the antitrust cases it brings, which speaks to an adeptness at locating those actually abusing antitrust laws (because of the heightened pleading standards required to survive the inevitable motions to dismiss and for summary judgment).¹⁰⁹ If a producing-entity is contemplating a troll lawsuit against its competitors, but is faced with the possibility that it will be on the receiving of an antitrust suit by the DOJ, it may think twice before attempting to ambush its competitors and may simply seek to license its patents to its competitors.

Conclusion

The activities of NPEs reveal the limits of antitrust law's ability to discourage anticompetitive behavior but their activities on the frontiers of patent law shed light on the potential effectiveness that antitrust can have when put to use discouraging abusive lawsuits by producing-entities. Antitrust offers government enforcers an effective means of preventing consumers from being victims of inter-corporation litigation. While trolling NPEs have the potential to harm consumers by raising the prices of the products they buy, the targets they usually put out of business are small startups with limited consumer bases. By way of contrast, patents are more dangerous when utilized in litigation between producing-entities, which, whatever its result, raises consumer prices and damages a producing-entity. Producing-entities tend to have their trolling activities glossed over or otherwise explained away by commentators and market analysts. Before we can reduce trolling litigation, we must change our perception of patent trolling as something only NPEs engage in only by NPEs. Accepting that NPEs do not account for all abusive lawsuits involving patents, and that we must utilize different means of

¹⁰⁹ Lande & Davis *supra* note 68.

stopping the abuses of patents by NPEs and producing-entities, constitutes the first step to preventing producing-entities from abusing patents by transmuting them into tools of corporate warfare.