Harvard Journal of Law & Technology Volume 26, Number 2 Spring 2013

PATENT PRIVATEERS: PRIVATE ENFORCEMENT'S HISTORICAL SURVIVORS

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I. INTRODUCTION

Commentators have long debated the relative merits of private and public law enforcement.¹ Citizen suits, class actions, and *qui tam* litigation have been focal points for controversy about how to structure and police relations between government and the populace it purportedly serves.² In principle, privatizing law enforcement through such forms of litigation can produce social "goods": for example, empowerment of private citizens,³ more efficient, innovative, and vigorous enforcement of the law,⁴ and checks on the powers and discretion of government officials.⁵ At the same time, broad authorization of

^{1.} Compare, e.g., Gary S. Becker & George J. Stigler, Law Enforcement, Malfeasance, and Compensation of Enforcers, 3 J. LEGAL STUD. 1, 16 (1974) (suggesting that enforcement might be improved by "paying private enforcers for performance, or on a piece-rate basis"), with William M. Landes & Richard A. Posner, *The Private Enforcement of Law*, 4 J. LEGAL STUD. 1, 3 (1975) ("[T]he area in which private enforcement is in fact clearly preferable . . . is more restricted than Becker and Stigler believe").

^{2.} See, e.g., Richard A. Bales, A Constitutional Defense of Qui Tam, 2001 WIS. L. REV. 381, 390 (2001) (discussing how Congress deliberately strengthened qui tam enforcement of the False Claims Act through 1986 legislation); Frank B. Cross, Rethinking Environmental Citizen Suits, 8 TEMP. ENVTL. L. & TECH. J. 55, 55 (1989) ("[T]he 1980's have witnessed dramatic growth in use of the citizen suit."); Amanda M. Rose, Reforming Securities Litigation Reform: Restructuring the Relationship Between Public and Private Enforcement of Rule 10b-5, 108 COLUM. L. REV. 1301, 1314–17 (2008) (describing changes in attitudes toward "private Rule 10b-5 enforcement") in securities law).

^{3.} See Bales, supra note 2, at 437 (observing that the False Claims Act's qui tam provision "empowers citizens to enforce the [Act] directly").

^{4.} See Matthew C. Stephenson, Public Regulation of Private Enforcement: The Case for Expanding the Role of Administrative Agencies, 91 VA. L. REV. 93, 107–08 (2005) (noting various potential advantages of private enforcement); Danieli Evans, Note, Concrete Private Interest in Regulatory Enforcement: Tradable Environmental Resource Rights as a Basis for Standing, 29 YALE J. ON REG. 201, 209 (2012) ("Citizen suits have been recognized as effective means of supplementing agency enforcement.").

^{5.} See Stephenson, supra note 4, at 110 (observing that private enforcement "can correct for agency slack — that is, the tendency of government regulators to underenforce").

such litigation can generate various "bads": increased litigation costs, abuse of the legal system for purposes of harassment or "hold-up," overenforcement of overbroad laws,⁶ and (to some minds) interference with the President's constitutional charge to "take Care that the Laws be faithfully executed."⁷ Unsurprisingly, given this mix of "goods" and "bads," arguments over the desirability of private-enforcement rights have raged in relation to environmental laws,⁸ securities laws,⁹ civil rights laws,¹⁰ and the *qui tam* provision of the False Claims Act.¹¹ The potential stakes are enormous as each year private parties file tens of thousands of suits to enforce federal statutory law, a volume of filings that regularly dwarfs that of analogous filings by the government itself.¹²

Not generally counted among such private-enforcement filings are those concerned with the scope of federal patent rights. But U.S. patent law is federal statutory law designed to advance a constitutionally sanctioned public policy of "promot[ing] the Progress of Science and useful Arts."¹³ Thus, this omission might properly be considered

^{6.} See id. at 114–17 (noting possibilities of excessive private enforcement and abusive litigation).

^{7.} U.S. CONST. art. II, § 3; *see also* Bales, *supra* note 2, at 384 (observing that the False Claims Act's *qui tam* provision "raises separation of powers issues by effectively redistributing prosecution and enforcement powers from the executive branch to informers").

^{8.} Cross, *supra* note 2, at 56 ("[C]itizen suits create both practical and constitutional problems and should be discouraged."); Evans, *supra* note 4, at 208–13 (describing arguments for and against citizen suits).

^{9.} Rose, *supra* note 2, at 1303 (describing contrary positions on the effects of "Rule 10b-5 class actions"); *see also* Jill E. Fisch, *Class Action Reform*, Qui Tam, *and the Role of the Plaintiff*, 60 LAW & CONTEMP. PROBS. 167, 169 (1997) (noting that class actions have been criticized as "lawyer driven litigation" but also lauded as "entrepreneurial representative litigation" (internal quotation marks omitted)).

^{10.} Michael Selmi, *Public vs. Private Enforcement of Civil Rights: The Case of Housing and Employment*, 45 UCLA L. REV. 1401, 1405 (1998) ("[T]he government is inherently a weak enforcer of civil rights, and . . . it may be time for it to cede its role as a primary enforcement agency.").

^{11.} Bales, *supra* note 2, at 439 (concluding that current arguments "do not... warrant the conclusion that the *qui tam* provisions of the [False Claims Act] are unconstitutional").

^{12.} See SEAN FARHANG, THE LITIGATION STATE: PUBLIC REGULATION AND PRIVATE LAWSUITS IN THE U.S. 10 (2010) (reporting that, of "an average of about 165,000 lawsuits filed per year to enforce federal statutes in United States district courts," "[m]ore than 97 percent . . . were privately filed").

^{13.} U.S. CONST. art. I, § 8, cl. 8; see also Ted Sichelman, Purging Patent Law of 'Private Law' Remedies, TEX. L. REV. (forthcoming) (manuscript at 8) (reporting "nearly universal agreement that the patent system's primary goal is to promote innovation, rather than to vindicate individual, private rights"), available at http://ssrn.com/abstract=1932834; cf. David Freeman Engstrom, Agencies as Litigation Gatekeepers: An Empirical Analysis of DOJ Intervention Under the Qui Tam Provisions of the False Claims Act, 123 YALE L.J. (forthcoming 2013) (manuscript at 51), available at http://ssrn.com/abstract=1882181 (contending that scholars should more generally recognize "that private mechanisms of enforcement are a form of state capacity").

an oversight.¹⁴ In fact, in the last decade patent law has joined privateenforcement debates in at least three ways — two readily recognized and a third whose connection to private-enforcement debates is fundamental but more subtle.

Most obviously but also most trivially, the U.S. Patent Act's nowabrogated qui tam provision for false patent marking recently generated substantial, albeit meteoric, controversy. This provision authorized "[a]ny person," regardless of any plausible claim of personal injury, to sue to enforce the Act's prohibition of a false indication that a good is subject to U.S. patent protection.¹⁵ A successful false-marking plaintiff had a right to fifty percent of any fine imposed.¹⁶ In 2009, the U.S. Court of Appeals for the Federal Circuit, the circuit court created in the 1980s with national jurisdiction over patent appeals,¹⁷ held that such fines were to be imposed on a per-article basis - i.e., that each unit of a mass-produced good counted as a violation to be separately fined.¹⁸ Attracted by the prospect of massive fines for products generated by the thousand, plaintiffs promptly flooded U.S. district courts with false-marking claims, including one claim seeking a total fine of over \$10 trillion for billions of allegedly mismarked lids for disposable cups.¹⁹ Challenges to the *qui tam* provision's constitutionality fol-lowed,²⁰ and debates over the provision's wisdom²¹ culminated in

17. John M. Golden, *The Federal Circuit and the D.C. Circuit: Comparative Trials of Two Semi-Specialized Courts*, 78 GEO. WASH. L. REV. 553, 555 (2010) ("The Federal Circuit did not exist until 1982....").

18. Forest Grp., Inc. v. Bon Tool Co., 590 F.3d 1295, 1301 (Fed. Cir. 2009) ("[T]he statute's plain language requires the penalty to be imposed on a per article basis.").

19. See infra note 271 and accompanying text.

20. Although multiple district courts held the *qui tam* provision to be constitutional under the "Take Care" Clause, two district courts disagreed. *See* Rogers v. TriStar Prods., Inc., 793 F. Supp. 2d 711, 719, 722 (E.D. Pa. 2011) (joining the Northern District of Ohio in holding that the false-marking statute violated Article II despite the fact that "every other court that ha[d] considered . . . constitutionality under Article II ha[d] rejected the challenge"), *vacated*, 449 F. App'x 921 (Fed. Cir. 2011); Unique Prod. Solutions, Ltd. v. Hy-Grade Valve, Inc., 765 F. Supp. 2d 997, 1006 (N.D. Ohio 2011), *vacated as moot*, 462 F. App'x. 967 (Fed. Cir. 2012). *See generally* Vt. Agency of Natural Res. v. United States *ex rel*. Stevens, 529 U.S. 765, 778 & n.8 (2000) (concluding that "a *qui tam* relator under the [False Claims Act] has Article III standing" but expressing "no view on the question whether *qui tam* suits violate Article II").

21. Cf. Thomas F. Cotter, Optimal Fines for False Patent Marking, 17 MICH. TELECOMM. & TECH. L. REV. 181, 185–87 (2010) (discussing the positions of supporters and opponents of the qui tam provision); Nicholas W. Stephens, Note, From Forest Group to the America Invents Act: False Patent Marking Comes Full Circle, 97 IOWA L. REV. 1003, 1027 (2012) (arguing that "[r]ecent Federal Circuit decisions have moved in the right direction by encouraging greater enforcement," but that further action is necessary in light of "the recent statutory amendments enacted in the Leahy-Smith America Invents Act").

^{14.} Cf. Stuart Minor Benjamin & Arti K. Rai, Who's Afraid of the APA? What the Patent System Can Learn from Administrative Law, 95 GEO. L.J. 269, 270 (2007) ("[I]nattention to administrative law principles has long been a striking feature of the patent system.").

^{15. 35} U.S.C. § 292(b) (2006) ("Any person may sue for the penalty [for false patent marking], in which event one-half shall go to the person suing and the other to the use of the United States.").

^{16.} *Id*.

legislative repeal less than three years after the Federal Circuit's ruling. $^{\rm 22}$

The *qui tam* controversy was the Roman candle of patent-based private-enforcement debates, spectacular but limited in both duration and apparent significance. Nonetheless, the controversy has helped focus attention, including that of this Article's author, on more lasting and central concerns of private enforcement. These concerns relate to (1) private parties' capacity to challenge the scope or validity of existing patent rights and (2) the fundamental nature of patents themselves as grants of privately enforced rights to exclude.

Questions about private parties' access to administrative or judicial proceedings to challenge patent rights have already attracted significant academic and even congressional attention. Over the past several years, various commentators have argued for ways of enabling or encouraging such challenges.²³ Moreover, over the past few decades Congress has enacted multiple laws providing new opportunities for private parties to challenge patentability in administrative proceedings before the United States Patent and Trademark Office ("USPTO").²⁴

Nonetheless, much can still be done to facilitate patent challenges. Opportunities for administrative review are still significantly constrained. Further, even after a 2007 decision by the U.S. Supreme Court that loosened restrictions on standing to challenge patents in district court,²⁵ the rules on standing remain very restrictive. Under the currently controlling view of the Federal Circuit, to have standing to challenge a patent in district court a party must generally "allege both (1) an affirmative act by the patentee related to the enforcement of his patent rights [against the challenger] and (2) meaningful preparation [by the challenger] to conduct potentially infringing activity."²⁶

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^{22.} See infra text accompanying notes 275–77.

^{23.} See, e.g., Megan M. La Belle, Patent Law as Public Law, 20 GEO. MASON L. REV. 41, 52 (2012) ("Unlike patent infringement, patent validity disputes bear little resemblance to private law litigation."); Joseph Scott Miller, Building a Better Bounty: Litigation-Stage Rewards for Defeating Patents, 19 BERKELEY TECH. L.J. 667, 688 (2004) ("A court judg-ment that a patent claim is invalid is a public good."); John R. Thomas, Collusion and Collective Action in the Patent System: A Proposal for Patent Bounties, 2001 U. ILL. L. REV. 305, 341 (drawing inspiration from federal "[m]oiety statutes, qui tam actions, the False Claims Act and numerous administrative agency programs" (footnotes omitted)).

^{24.} See infra text accompanying note 263.

^{25.} MedImmune, Inc. v. Genentech, Inc., 549 U.S. 118, 137 (2007) ("[P]etitioner was not required, insofar as Article III is concerned, to break or terminate its 1997 license agreement before seeking a declaratory judgment in federal court that the underlying patent is invalid, unenforceable, or not infringed.").

^{26.} Ass'n for Molecular Pathology v. U.S. Patent & Trademark Office, 689 F.3d 1303, 1318 (Fed. Cir. 2012) (citation omitted), *cert. granted on other grounds*, 133 S. Ct. 694 (2012). The Court held that the district court erred in "fail[ing] to limit its jurisdictional holding to affirmative acts by the patentee directed at specific Plaintiffs." *Id.* at 1323.

who claim that invalid patent rights generate higher prices — must find a way to initiate an administrative challenge before obtaining judicial review.²⁷

In short, questions of when and how to permit patent challenges remain very much in patent law's foreground. But these questions should not obscure an even more essential intersection between patent rights and issues of private enforcement. At heart, patents themselves are devices to harness private law enforcement to advance a public policy of promoting scientific and technological progress.²⁸ Although patents putatively provide "right[s] to exclude,"²⁹ patentees commonly lack effective modes of self-help.³⁰ This means that, generally speaking, the power to sue is the central practical entitlement that a patent provides.³¹ In essence, the practical core of patent rights is not the somewhat theoretical "right to exclude" but instead a much more

29.35 U.S.C. § 154(a)(1) (2006 & Supp. V 2012) ("Every patent shall contain... a grant... of the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States...").

30. See John M. Golden, *Principles for Patent Remedies*, 88 TEX. L. REV. 505, 566 (2010) [hereinafter Golden, *Patent Remedies*] (observing that "it is difficult to build fences about a publicly disclosed idea").

^{27.} Such limits on third-party standing to challenge patent rights contrast with consumers' capacity to sue for antitrust violations. *See* Robert G. Bone, *Procedure, Participation, Rights*, 90 B.U. L. REV. 1011, 1021 (2010) (describing "an antitrust suit in which consumers sue for damages" as a "class action enlist[ing] private enforcement to protect market competition").

^{28.} See supra text accompanying note 13; see also Ted M. Sichelman, Purging Patent Law of 'Private Law' Remedies 8 (San Diego Legal Studies, Working Paper No. 11-077, 2011), available at http://ssrn.com/abstract=1932834 (reporting "nearly universal agreement that the patent system's primary goal is to promote innovation, rather than to vindicate individual, private rights"); cf. Engstrom, supra note 13 (contending that scholars should more generally recognize "that private mechanisms of enforcement are a form of state capacity").

^{31.} Shyamkrishna Balganesh has contemporaneously emphasized similar points about copyright's status as a private-enforcement regime. See Shyamkrishna Balganesh, The Uneasy Case Against Copyright Trolls, 86 S. CAL. L. REV. (forthcoming May 2013) (manuscript at 25), available at http://ssrn.com/abstract=2150716 ("[L]itigation is hardly a contingent part of the institution [of copyright law], but is indeed central to its very analytical structure."). This Article's focus on patents as providing a private right of action might also recall Carl Shapiro's earlier observation that "[w]hat the patent grant actually gives the patentholder is the right to sue to prevent others from infringing the patent." Carl Shapiro, Antitrust Limits to Patent Settlements, 34 RAND J. ECON. 391, 395 (2003); see also Mark A. Lemley & Carl Shapiro, Probabilistic Patents, 19 J. ECON. PERSP. 75, 75 (2005) ("[E]conomists have increasingly recognized that a patent does not confer upon its owner the right to exclude but rather a right to try to exclude by asserting the patent in court."). But Shapiro's emphasis was on the uncertainty of enforcement and the corollary that "a patent is best viewed as a probabilistic property right," Shapiro, supra, at 395, rather than on a patent as a private right of action akin to those under qui tam or citizen-suit regimes. Cf. Ian Ayres & Paul Klemperer, Limiting Patentees' Market Power Without Reducing Innovation Incentives: The Perverse Benefits of Uncertainty and Non-Injunctive Remedies, 97 MICH. L. REV. 985, 994 (1999) (describing "a stylized 'probabilistic patent' regime" featuring "uncertainty and delay" in enforcement); Lemley & Shapiro, supra, at 75 (speaking of a patent as a "property right," the assertion of which amounts to "rolling the dice").

directly useful "license to litigate,"³² the patent's provision of a private cause of action to sue for infringement.³³

Another key aspect of patents is their relatively free alienability.³⁴ Alienability — "assignability" in patent-speak — facilitates separation of patent ownership from direct involvement in either the process of invention itself or processes of later commercialization and exploitation of invention. More particularly, alienability enables the development of "patent aggregators" or patent-enforcement entities that do little, if anything, to develop technologies themselves but that instead have business models that center on enforcing patent rights through licenses and lawsuits.³⁵ In turn, such entities, which are commonly derided as at least figuratively subhuman "patent trolls," bring to the foreground patent law's central reliance on private suit. Their specialization in patent enforcement — i.e. in the threat or actuality of suit might not permit an observer to focus on anything else.

To some, the result is a notoriously unpretty picture. As the moniker "patent troll" suggests, the rise of patent-enforcement entities has caused self-styled "non-trolls" to express a mixture of fear, contempt, and outrage. Commentators such as James Bessen, Jennifer Ford, and Michael Meurer have contended that "patent trolls" cost more traditional operating companies tens of billions of dollars each year.³⁶ In an opinion concurring in a U.S. Supreme Court decision that limited the availability of injunctions against patent infringement, four justices all but openly lamented the emergence of an "industry . . . in which firms use patents not as a basis for producing and selling goods but, instead, primarily for obtaining licensing fees."³⁷ Others have suggested that patent-enforcement companies can play socially valuable

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^{32.} Edmund W. Kitch, Graham v. John Deere Co.: *New Standards for Patents*, 1966 SUP. CT. REV. 293, 342 (1966) (noting a view that an "invalid paten[t]" "is a 'license to litigate' which can be used as a 'threat' to 'coerce' weaker competitiors [sic] into submission").

^{33. 35} U.S.C. § 281 (2006) ("A patentee shall have remedy by civil action for infringement of his patent.").

^{34. 35} U.S.C. § 281 (2006) ("Applications for patent, patents, or any interest therein, shall be assignable in law by an instrument in writing."); see also Catherine L. Fisk, Removing the 'Fuel of Interest' from the 'Fire of Genius': Law and the Employee-Inventor, 1830-1930, 65 U. CHI. L. REV. 1127, 1186 (1998) ("By the late nineteenth century, ... the assignability of patents and the enforceability of pre-invention assignment agreements were well-established aspects of the law and business of patent.").

^{35.} See, e.g., John M. Golden, "Patent Trolls" and Patent Remedies, 85 TEX. L. REV. 2111, 2112 & n.7 (2007) [hereinafter Golden, Patent Trolls] (noting that a "patent troll" is commonly understood to be "one of a class of patent owners who do not provide end products or services themselves, but who do demand royalties as a price for authorizing the work of others," although "a widely accepted definition of a patent troll has yet to be devised").

^{36.} See James Bessen, Jennifer Ford & Michael J. Meurer, *The Private and Social Costs of Patent Trolls*, REGULATION, Winter 2011–2012, at 26, 26 (observing that "critics call [non-practicing entities ("NPEs")] 'patent trolls," and asserting that "[d]uring the last four years," NPE patent suits have been inflicting losses on defendants of "over \$80 billion per year").

^{37.} eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388, 396 (2006) (Kennedy, J., concurring).

roles as market intermediaries.³⁸ Whatever the truth of such charges or countercharges, the controversy over "trolls" invites serious consideration of the extent to which patent law, like historical privateering, has become an unruly system of authorized commercial plunder.

Focus on patent law's nature as a private-enforcement regime could have a profound impact on contemporary debates. Analysis of patent law's pros and cons is enriched by comparison to the pros and cons of private enforcement that policymakers, judges, and commentators have identified in other contexts. A historical account of the evolution of a variety of private-enforcement regimes, including patent law, can helpfully inform the adaptation of patent law to presentday concerns by providing examples of successful or failed adaptations of private-enforcement regimes in the past. Further, the privateenforcement perspective provides an alternative to both simplistic "troll"-based rhetoric and a now conventional property-based perspective --- the "property metaphor" --- for thinking about intellectual property rights.³⁹ In providing this alternative, the privateenforcement perspective can suggest some areas where currently entrenched opponents can find common ground. Specifically, viewing patent holders as "patent privateers"⁴⁰ can both legitimate patentenforcement activities and suggest reasons for their restriction. At the very least, accounts of the rise and fall of Francis-Drake-style privateering and of the variable careers of qui tam litigation and "citizen suits" should remind us that existing enforcement arrangements can

^{38.} See, e.g., James F. McDonough III, *The Myth of the Patent Troll: An Alternative View of the Function of Patent Dealers in an Idea Economy*, 56 EMORY L.J. 189, 227 (2006) (contending that "[t]he recent emergence of patent dealers," the author's proposed substitute for the term "patent trolls," "is no cause for concern; rather, it signals progression, efficiency, and market evolution").

^{39.} This is not meant to suggest that tangible property or interests associated with tangible property do not provide useful metaphors for legal rights in information. *See, e.g.,* ROBERT P. MERGES, JUSTIFYING INTELLECTUAL PROPERTY 4 (2011) (contending "that there is a basic logic to the law of property, and that it applies to intangibles as well as physical things"); Molly Shaffer Van Houweling, *The New Servitudes,* 96 GEO. L.J. 885, 949 (2008) (using "servitude jurisprudence . . . to assess contemporary licensing practices in the context of software and other intangible works"). The point is that such metaphors should not necessarily be exclusive.

^{40.} Tom Ewing has separately described as "IP privateering" a different phenomenon — namely, "the beneficial application of third-party [intellectual property rights on behalf of] a sponsoring entity against a competitor to achieve a corporate goal of the sponsor." Tom Ewing, *Indirect Exploitation of Intellectual Property Rights by Corporations and Investors: IP Privateering and Modern Letters of Marque and Reprisal*, 4 HASTINGS SCI. & TECH. L.J. 1, 5 (2012). This phenomenon lacks the aspect of public backing that is crucial to this Article's usage of the term "privateer." I would use different terminology for the phenomenon on which Ewing focuses — perhaps "IP proxies" or "IP procurators." *Cf.* Mike Swift, *Apple and Samsung Chiefs Ordered to Meet*, SAN JOSE MERCURY NEWS (Apr. 17, 2012, 4:23 PM), http://www.mercurynews.com/business/ci_20418233/apple-and-samsung-chiefs-ordered-meet ("Apple's action against [Samsung] is widely seen as a proxy war against Google's Android mobile operating system.").

undergo dramatic evolution and even collapse.⁴¹ Some degree of regulation and adaptation might typically be necessary for the long-term existence and health of any private-enforcement regime.

The Article proceeds as follows. Part II sets the stage for later discussion by locating the common roots of patents, privateering, and *qui tam* litigation in the weakness of pre-Westphalian states. Part III describes the historical evolution, rise, and fall of privateering, a "predatory business . . . conducted within the international law of the sea."⁴² Part IV provides a somewhat parallel, albeit bifurcated, account of the rise and general fall of *qui tam* litigation in England and the United States. Part V discusses modern hopes and controversies relating to citizen suits or "private attorneys general." Part VI returns to discussion of patent law as a private-enforcement regime and the potential implications of the private-enforcement perspective for modern debates over patent policy.

II. PATENTS AS CREATURES OF THE PRE-WESTPHALIAN STATE

John Duffy has aptly described the administrative apparatus of the U.S. patent system as Jacksonian.⁴³ This terminology reflects the year 1836, when Congress enacted a system of regular administrative examination to review an alleged invention's patentability before a patent issues.⁴⁴ More importantly, however, the terminology reflects the longstanding limitation of the USPTO to powers that are relatively innocuous by modern administrative-agency standards.⁴⁵ Unlike conventional post-New Deal agencies, the USPTO lacks general authority to issue binding substantive rules.⁴⁶ Moreover, with patent law lacking any provision making patent infringement a crime,⁴⁷ neither the

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^{41.} Cf. LAWRENCE M. FRIEDMAN, A HISTORY OF AMERICAN LAW 18 (2d ed. 1985) ("[W]hat is kept of old law is highly selective. Society in change may be slow, but it is ruthless.").

^{42.} DAVID J. STARKEY, BRITISH PRIVATEERING ENTERPRISE IN THE EIGHTEENTH CENTURY 13 (1990).

^{43.} John F. Duffy, *The FCC and the Patent System: Progressive Ideals, Jacksonian Realism, and the Technology of Regulation*, 71 U. COLO. L. REV. 1071, 1080 (2000) ("[T]he modern American patent bureaucracy was established during the Jacksonian era . . . ").

^{44.} ROBERT PATRICK MERGES & JOHN FITZGERALD DUFFY, PATENT LAW AND POLICY: CASES AND MATERIALS 8 (5th ed. 2011) (noting that, in 1836, "a formal system of examination, with professional examiners, was substituted for the pro forma registration system of the 1793 Act").

^{45.} *See* Duffy, *supra* note 43, at 1133 ("Unlike the sweeping delegations conferred in the Progressive and New Deal eras, the delegations of governmental power for the patent system were, and still are, extraordinarily narrow.").

^{46.} John M. Golden, *Patentable Subject Matter and Institutional Choice*, 89 TEX. L. REV. 1041, 1045 (2011) ("A key aspect of patent law's distinctiveness is the USPTO's lack of substantive rulemaking power.").

^{47.} Irina D. Manta, *The Puzzle of Criminal Sanctions for Intellectual Property Infringement*, 24 HARV. J.L. & TECH. 469, 469 (2011) ("[T]he law imposes criminal punishments only on copyright and trademark violators, not patent infringers.").

USPTO nor any other administrative agency regularly plays a significant role in the enforcement of patent rights after they issue. Consequently, U.S. courts have retained a now centuries-old role as prime developers of patent-law doctrine,⁴⁸ subject to the understood dictates, of course, of the Patent Act's increasingly voluminous provisions.⁴⁹

Nonetheless, to the extent scholars and policymakers look back to the Jacksonian Era or even the United States' founding as the font of the modern patent system, they might not look far enough. The ancestral roots of the U.S. patent system lie deeper, tracing back to England's early seventeenth-century Statute of Monopolies⁵⁰ and even to Venice's patent act of 1474.⁵¹ As described by Robert Merges and John Duffy, the fifteenth-century Venetian act had already "[laid] out most of the essential features of a modern patent statute," including a right for the inventor to have an accused infringer "summoned before [a city] Magistrate" for the purpose of obtaining remedies such as payment of money or an order to destroy an infringing device.⁵²

Thus, modern patent law's roots, like those of modern *qui tam* suits and privateering during the Age of Sail, lie in a period preceding modern administrative states, indeed preceding the 1648 Peace of Westphalia that is a conventional marker for the emergence of modern European nation-states.⁵³ During this pre-Westphalian period, even

^{48.} See Jerry L. Mashaw, Administration and "The Democracy": Administrative Law from Jackson to Lincoln, 1829–1861, 117 YALE L.J. 1568, 1580 (2008) (noting that, with the Commissioner of Patents lacking "rulemaking authority," "the development of the law of patentability [historically] remained largely in judicial hands, as it is today"). But see Melissa F. Wasserman, The Changing Guard of Patent Law: Chevron Deference for the PTO, 54 WM. & MARY L. REV. (forthcoming 2013) (arguing that the 2011 Leahy-Smith America Invents Act implicitly granted the USPTO power to give binding interpretations of substantive patent law through administrative adjudication).

^{49.} See, e.g., John F. Duffy, *The Big Government Patent Bill*, PATENTLY-O (June 23, 2011), http://www.patentlyo.com/files/the-big-government-patent-bill.pdf (observing that a House bill that was a precursor to the Leahy-Smith America Invents Act was "over 140 pages long — more than twice the length of the entire Federal patent statute at the time of its last codification").

^{50.} See MARTIN J. ADELMAN, RANDALL R. RADER & JOHN R. THOMAS, CASES AND MATERIALS ON PATENT LAW 9 (3d ed. 2009) ("This exception in section 6 of the Statute of Monopolies is the foundation of patent law in the common law world."); Edward C. Walterscheid, *The Early Evolution of the United States Patent Law: Antecedents (Part 2)*, 76 J. PAT. & TRADEMARK OFF. SOC'Y 849, 880 (1994) (describing the Statute of Monopolies as "provid[ing] a firm foundation for the development of patent law in England and later in Great Britain").

^{51.} See Patent Law, in 13 ENCYCLOPAEDIA BRITANNICA: MACROPAEDIA 1071, 1071 (1974) [hereinafter Patent Law] ("Patents for inventions were first introduced in the 15th century in certain Italian states... an ordinance relating to patents having been enacted in Venice in 1474."); CHRISTINE MACLEOD, INVENTING THE INDUSTRIAL REVOLUTION: THE ENGLISH PATENT SYSTEM, 1660–1800, at 10 (1988) ("Venice was the first to regularize in law the award of monopoly patents."); MERGES & DUFFY, *supra* note 44, at 3 ("The first regular administrative apparatus for granting patents — the first real patent 'system' — arose in Venice in the late fifteenth century.").

^{52.} MERGES & DUFFY, *supra* note 44, at 4 (quoting the Venetian Act).

^{53.} See CARLTON J.H. HAYES, MODERN EUROPE TO 1870, at 239 (1953) ("From the Thirty Years' War finally emerged the modern state-system of Europe"); DAVID HELD,

the atypically strong English state⁵⁴ was, from a present-day perspective, remarkably weak — a far cry from England's post-Glorious Revolution "fiscal-military state," which featured unprecedented levels of bureaucracy, taxation, and government debt.⁵⁵ In Elizabethan England, local government was still "in the hands of unpaid nobility and gentry" who, even if not directly violating laws themselves, could readily undermine the implementation of purportedly national laws.⁵⁶ Generally speaking, law enforcement through a combination of public prosecutors and "professional police force[s]" was unknown.⁵⁷ Even the enforcement of criminal law was largely left to private initiative.⁵⁸ "Until the nineteenth century, the [English] state prosecuted only offenses such as treason or coining."⁵⁹ Other "[p]rosecutions were private and the responsibility of the victim,"⁶⁰ potentially with support from private groups "called associations for the prosecution of felons, which subsidized prosecutions, provided legal expertise, and sometimes maintained local watches and patrols."⁶¹

With the bureaucratic apparatus of national government lagging its ambitions, pre-Westphalian sovereigns relied to a remarkable extent on grants to private parties of rights, charters, or commissions as means to achieve even basic governmental ends such as "public order,

56. JON LATIMER, BUCCANEERS OF THE CARIBBEAN: HOW PIRACY FORGED AN EMPIRE 13 (2009) ("[I]t was extremely difficult for the crown to prevent a breach of the law should these notables choose to effect one"); see also G.R. Elton, *Informing for Profit: A Sidelight on Tudor Methods of Law-Enforcement*, 11 CAMBRIDGE HIST. J. 149, 166 (1954) (observing how enforcement of customs regulations was made difficult by "the complicity of local customs officials" and "the stubborn local loyalties of assize juries").

57. See Mark Koyama, Prosecution Associations in Industrial Revolution England: Private Providers of Public Goods?, 41 J. LEGAL STUD. 95, 96 (2012) (describing how "professional police force[s]" arose in the nineteenth century with "[t]he police gradually [taking] on the role of prosecuting criminal cases, while high-profile cases became the responsibility of a public prosecutor").

58. See ALAN HARDING, A SOCIAL HISTORY OF ENGLISH LAW 76 (1966) ("In societies where policing was primitive, governments necessarily relied on the efforts of private persons in the detection of crime"); Elton, *supra* note 56, at 149–50 ("Until the nineteenth century, the absence of a proper police force made it necessary for the State to rely on the private citizen to bring breaches of the law to its notice.").

59. Koyama, supra note 57, at 98 n.5 (citation omitted).

60. Id. at 98.

61. *Id.* at 96; *see also id.* at 103 ("Estimates suggest that there were perhaps as many as four thousand [prosecution associations] between 1750 and 1850.").

DEMOCRACY AND THE GLOBAL ORDER: FROM THE MODERN STATE TO COSMOPOLITAN GOVERNANCE 77 (1995) (describing an "inter-state system" according to a "Westphalian' model... which entrenched, for the first time, the principle of territorial sovereignty in inter-state affairs").

^{54.} See, e.g., JOHN BREWER, THE SINEWS OF POWER: WAR, MONEY AND THE ENGLISH STATE, 1688–1783, at 3 (1989) ("[M]edieval historians have long regarded the English case as exemplifying a state well equipped with strong, uniform and centralized institutions.").

^{55.} *Id.* at xvii ("The late seventeenth and eighteenth centuries saw an astonishing transformation in British government thanks to a radical increase in taxation, the development of public deficit finance (a national debt) on an unprecedented scale, and the growth of a sizable public admingstration [sic] devoted to organizing the fiscal and military activities of the state.").

taxation, and the administration of justice."⁶² At this time, the term "'letter *patents*,' or '*litterae patentes*,'" encompassed a wide variety of royal grants that were memorialized in "an open letter addressed to the public."⁶³ As Blackstone recorded, such grants could be "of lands, honours, liberties, franchises, or ought besides."⁶⁴ Patents for inventions were just one of a number of crown "instruments for subcontracting its business."⁶⁵

Indeed, government reliance on private initiative extended far beyond matters of domestic policy. Commercial ventures frequently performed functions that today would seem central to a state's foreign policy or oft-supposed monopoly over the legitimate use of force.⁶⁶ In 1800, the East India Company "rul[ed] 90 [million] Indians," collected taxes, issued coins, and "support[ed] an army of 200,000 men."⁶⁷

The tradition of delegating public functions to private parties carried over to the United States. Indeed, Britain's American colonies were largely creatures of public-private compacts that created regulated private entities like the Massachusetts Bay Company.⁶⁸ American traditions of using private enterprise to advance public ends continued after independence: "grants of banking franchises, toll rights, and eminent domain power were part of a broad pattern of mid-nineteenthcentury public policy by which legislators delegated public functions to private groups."⁶⁹ As Myriam Gilles and Gary Friedman have not-

63. Oren Bracha, The Commodification of Patents 1600–1836: How Patents Became Rights and Why We Should Care, 38 LOY. L.A. L. REV. 177, 184 (2004).

64. WILLIAM BLACKSTONE, 2 COMMENTARIES ON THE LAWS OF ENGLAND 346 (2d ed. 1766).

65. MACLEOD, *supra* note 51, at 20.

67. The East India Company: The Company That Ruled the Waves, ECONOMIST, Dec. 17, 2011, at 109, 111.

^{62.} William J. Novak, *Public-Private Governance: A Historical Introduction, in* GOVERNMENT BY CONTRACT: OUTSOURCING AND AMERICAN DEMOCRACY 23, 28 (Jody Freeman & Martha Minow eds., 2009); *see also* Edward Rubin, *The Possibilities and Limitations of Privatization*, 123 HARV. L. REV. 890, 895 (2010) (reviewing GOVERNMENT BY CONTRACT: OUTSOURCING AND AMERICAN DEMOCRACY, *supra*) (observing that privatization, with "[m]ajor government offices . . . either initially created or gradually reconceived as private property," was early nation-states' solution to a variety of governance problems); *cf.* Ronald A. Cass, *Privatization: Politics, Law, and Theory*, 71 MARQ. L. REV. 449, 499 (1988) ("There is virtually no discrete function that one can identify as historically committed to government, rather than to private parties.").

^{66.} See HARDING, supra note 58, at 311 (describing incorporated "overseas trading companies" as "outlying parts of [the King's] government, elements in his foreign policy"); Rubin, supra note 62, at 912 ("Private companies can fight wars (and have throughout the course of Western history) ").

^{68.} *See* Novak, *supra* note 62, at 28 (observing that a "series of twenty-eight major colonial territorial grants, patents, and charters from 1606 (Virginia) to 1681 (Pennsylvania)" marked the beginnings of English rule in North America).

^{69.} JAMES WILLARD HURST, LAW AND THE CONDITIONS OF FREEDOM IN THE NINETEENTH-CENTURY UNITED STATES 65 (1956); cf. Jody Freeman, *The Private Role in Public Governance*, 75 N.Y.U. L. REV. 543, 595 (2000) ("In the United States, many social services long have been funded by government but provided by nongovernmental entities."); Martha Minow, *Public and Private Partnerships: Accounting for the New Religion*,

ed, from the "sheriff's posse" forward, the United States has featured "a deep tradition of private involvement in the enforcement of public laws."⁷⁰

In sum, letters patent — and, more particularly, letters patent for inventions — have long been one among many mechanisms for harnessing private enterprise to public purpose. The histories of other such devices provide insight into how patent law has developed; why it, unlike many of its pre-Westphalian peers, has continued to thrive; and how it might further evolve. To this end, Part III discusses a form of public "letter" that, like patents,⁷¹ has enjoyed explicit authorization in the U.S. Constitution for over two centuries — letters of marque and reprisal.⁷²

III. PRIVATEERING IN THE AGE OF SAIL

A. Privateering Basics

Letters of marque and reprisal provided official authorization for private parties to seize other ships and their contents for profit.⁷³ As long as the bearer of such a commission complied with its terms, the commission qualified the bearer as a "privateer," whose seizures occurred with state backing and who enjoyed rights under both national law and the law of nations.⁷⁴ Privateers were thus distinguished from "pirates," who raided commerce outside the scope of valid government authorization.⁷⁵

73. LATIMER, *supra* note 56, at 13–14 (describing the nature and purposes of letters of marque and reprisal); *see also* DONALD A. PETRIE, THE PRIZE GAME: LAWFUL LOOTING ON THE HIGH SEAS IN THE DAYS OF FIGHTING SAIL 2 (1999) (describing a letter of marque and reprisal as "a written license authorizing attack on enemy vessels on behalf of the nation").

74. See PETRIE, supra note 73, at 145 ("The doctrine and practice of maritime prize was widely adhered to for four centuries, among a multitude of sovereign nations, because adhering to it was in the material interest of their navies, their privateersmen, their merchants and bankers, and their sovereigns."); cf. Robert C. Ritchie, Government Measures Against Piracy and Privateering in the Atlantic Area, 1750–1850, in PIRATES AND PRIVATEERS: NEW PERSPECTIVES ON THE WAR ON TRADE IN THE EIGHTEENTH AND NINETEENTH CENTURIES 10, 10 (David J. Starkey et al. eds., 1997) (stating that privateering activities "were brought to a high degree of organization as a matter of state policy and were recognized internationally as an appropriate state activity").

75. 11 J.H.W. VERZIJL, W.P. HEERE & J.P.S. OFFERHAUS, INTERNATIONAL LAW IN HISTORICAL PERSPECTIVE 152 (1992) ("[T]here has existed for centuries a clear notional distinction between privateering and piracy in that pirates are acting for their own profit

¹¹⁶ HARV. L. REV. 1229, 1255 (2003) (noting "the long tradition of intertwining public and private action to meet basic social needs").

^{70.} Myriam Gilles & Gary Friedman, *After Class: Aggregate Litigation in the Wake of* AT&T Mobility v. Concepcion, 79 U. CHI. L. REV. 623, 624 (2012).

^{71.} U.S. CONST. art. I, § 8, cl. 8 (empowering Congress "[t]o promote the Progress of Science and useful Arts, by securing ... to ... Inventors the exclusive Right to their ... Discoveries").

^{72.} *Id.* at cl. 11 (authorizing Congress "[t]o declare War, grant Letters of Marque and Reprisal, and make Rules concerning Captures on Land and Water").

Just as patents for inventions ultimately evolved from case-bycase grants of privilege into "rights" regularly issued in accordance with generalized criteria,⁷⁶ privateering evolved from an occasional "smash and grab" activity of personal reprisal into a regularized and substantially regulated instrument of state policy.⁷⁷ Early on, privateering commissions frequently served fundamentally compensatory ends:

> [A] merchant, traveller or shipowner who had been robbed in the territory of or by subjects of a foreign prince in peacetime, but was unable to obtain redress through the courts of that country, could be authorized by a court (the court of admiralty in the case of a shipowner) to recoup his losses up to a specified sum by seizing the property of subjects of that country.⁷⁸

From the seventeenth century on, however, privateering commissions typically only issued to serve a strong public-policy interest such as disrupting enemy shipping during wartime.⁷⁹

With privateering accepted as part of "the framework of international relations,"⁸⁰ in 1708 Parliament enacted Britain's first "comprehensive statute... to control private men-of-war."⁸¹ The act substantially regularized at least the administration, if not the practice, of British privateering. Among other things, this act "created a uniform system of prize adjudication by spelling out admiralty court procedure" and at the same time took discretion away from the Crown and colonial governors by putting in place a sort of registration system

against private shipping without any official authorization by their government."); *see also* CARL E. SWANSON, PREDATORS AND PRIZES: AMERICAN PRIVATEERING AND IMPERIAL WARFARE, 1739–1748, at 30 (1991) ("The possession of a letter of marque (sometimes called a privateering commission) separated the privateer from a pirate.").

^{76.} See Bracha, supra note 63, at 181 ("Patents changed from case-specific discretionary policy or political grants of special privileges designed to achieve individually defined public purposes, to general standardized legal rights conferring a uniform set of entitlements whenever predefined criteria are fulfilled.").

^{77.} PETRIE, *supra* note 73, at 5 (describing early privateering as a "smash and grab" activity, "like breaking a jeweler's window").

^{78.} LATIMER, *supra* note 56, at 13–14; *see also* 11 VERZIJL ET AL., *supra* note 75, at 153 ("Privateering as a means of warfare has a strong conceptual affinity with another historical institution, . . . namely, the taking of (private) reprisals."). As late as 1778, Louis XVI of France granted letters of private reprisal to "merchants of Bordeaux against the English," 11 VERZIJL ET AL., *supra* note 75, at 154, but by that time such practice was not the norm.

^{79.} See VIRGINIA WEST LUNSFORD, PIRACY AND PRIVATEERING IN THE GOLDEN AGE NETHERLANDS 10 (2005) ("Dutch (and theoretically all) privateering was allowed only in time of war [or acknowledged hostility] with another country and at no other time." (emphasis omitted)).

^{80.} STARKEY, supra note 42, at 19.

^{81.} SWANSON, supra note 75, at 34.

for privateers: henceforth, "[t]he owners of any British vessel could . . . acquire a commission simply by filing a request and posting security."⁸²

As suggested by the evolution from activities of personal reprisal, a further aspect of privateering's development was the development of dedicated private men-of-war.⁸³ Such privateering vessels neither sought to wreak "reprisal" for any specific private harm nor, like an armed merchantman bearing a letter of marque, possessed any commercial "day job."⁸⁴ Like at least the caricatures of modern patent-enforcement entities, these private men-of-war were pure predators — with the significant distinction that predatory privateering was, unlike oft-bemoaned specialization in patent enforcement, both officially sanctioned and positively encouraged.⁸⁵

Significantly for comparisons to patent law, privateers' rights included a right of access to the courts. From the standpoint of financial incentives, one of the most important rights of a privateer was the right to bring an action for condemnation of captured property.⁸⁶ Once such property was condemned, it could be sold to a buyer with good title.⁸⁷ A privateering commission thereby enabled its holder to sell distinct and relatively easily identifiable goods — such as a ship captured at sea — at essentially full price, rather than the steeply discounted price likely to be expected for such a prize without good title.⁸⁸

Thus, privateers' commissions, like patents, were government grants of rights designed to harness private initiative to public purpose. Admiralty courts, like courts hearing patent cases today, played

^{82.} Id. at 34-35.

^{83.} David J. Starkey, *A Restless Spirit: British Privateering Enterprise, 1739–1815, in* PIRATES AND PRIVATEERS: NEW PERSPECTIVES ON THE WAR ON TRADE IN THE EIGHTEENTH AND NINETEENTH CENTURIES 130 (David J. Starkey et al. eds., 1997) ("[T]he spirit of privateering really prevailed in the main branch of the business, in the private menof-war set out specifically to appropriate the enemy's sea-borne property.").

^{84.} *Id.* at 130 (noting that many British vessels with privateering commissions "were set forth to engage in trade, so that to these so-called 'letters of marque' commerce-raiding represented an incidental, opportunist facet of the venture").

^{85.} *See* STARKEY, *supra* note 42, at 253 (observing that, in the eighteenth century, the British state "did more than just sanction [privateering] throughout the century — it positively advocated it," among other things through "the abolition of the Crown's share in prizes and the provision of bounties for captors of enemy vessels-of-war").

^{86.} LATIMER, *supra* note 56, at 14 (discussing "the 'letter of marque' issued from the seventeenth century onwards by an admiralty court in time of war" as enabling privateers "to sell the prizes once they had been condemned as enemy property by the court"); *see also* PETRIE, *supra* note 73, at 9 ("The initiation of a prize case, called a 'libel,' sought the legal seizure, called a 'condemnation,' of the vessel and her cargo.").

^{87.} See PETRIE, supra note 73, at 145 ("[A] captor who wanted full value for his prize had to deliver a title 'good against the world' and for that a prize court proceeding was indispensable.").

^{88.} *Id.* at 144 ("Merchant ships traveled to foreign ports, and the buyer of a prize vessel would not pay full price unless he received title papers that would protect his investment against seizure abroad by prior owners.").

a key role in the securing of intended private incentives. Unsurprisingly, the legal regime of privateering had both advantages and disadvantages typical for regimes of private law enforcement. Like many private-enforcement regimes, privateering had the great advantage of requiring relatively little in the way of up-front, out-of-pocket payments by the government:⁸⁹ to a great extent, the provision of privateers' commissions leveraged an existing government's capacity to conjure legal legitimacy — in this case, legal legitimacy for plunder — seemingly out of the air. Meanwhile, privateering also leveraged private parties' expertise and energy for a variety of activities that could strain the capacities of early modern European states ---activities such as raising money, assembling technically talented personnel, and overseeing such personnel's behavior.⁹⁰ To a great extent delegation of such activities through privateering worked: during privateering's heyday, the practice regularly generated hundreds of commissioned vessels, even hundreds of ships that qualified as menof-war, and privateers intercepted and disrupted significant amounts of targeted commerce.⁹¹ Indeed, at least into the early seventeenth century, the comparative desirability and effectiveness of a privateering approach to implementing state policy, as opposed to a centralized bureaucratic approach, were such that England's Royal Navy, whose officers and crews retained rights to profits from prize taking until 1948,⁹² was itself not sharply distinguishable from a band of privateers.⁹³

So privateering was apparently cheap and in many ways successful. Why, after being practiced for centuries, did it largely disappear? A definitive account is beyond the scope of this article, but, as subsequent sections of Part III suggest, part of the reason undoubtedly lies in privateering's disadvantages. Fundamentally, like many privateenforcement regimes, privateering was not so cheap as its most immediate and visible impacts on the public fisc might suggest. The practice attracted, if not required, a variety of direct and indirect sub-

^{89.} See SWANSON, supra note 75, at 27 (observing that privateers "assisted the war effort, but did not add to the government's financial burdens").

^{90.} See supra text accompanying notes 53–64; see also SWANSON, supra note 75, at 19–20 (noting that, although the European states grew dramatically in power during the seventeenth and eighteenth centuries, "there were limits to what an eighteenth-century state could achieve, and this is why privateering played an important role during wartime").

^{91.} See infra notes 113–15 and accompanying text.

^{92.} PETRIE, *supra* note 73, at 142 (noting that the British Parliament "discontinue[d] prize sharing among its naval officers and crews in 1948").

^{93.} See KENNETH R. ANDREWS, TRADE, PLUNDER AND SETTLEMENT: MARITIME ENTERPRISE AND THE GENESIS OF THE BRITISH EMPIRE, 1480–1630, at 244 (1984) ("Far from being a professional navy, distinct from the mass of private shipping, the royal navy was dominated by private interests deeply entrenched in every department of its organization and activity, from the building of the ships to the settling of accounts at the end of a cruise. Those interests were concerned above all with privateering").

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sidies.⁹⁴ It regularly affected the operation of markets for labor and the actions of political and judicial actors in wavs that complicated the work of regular navies.⁹⁵ Privateering complicated the work of diplomats as well: governments necessarily had difficulty controlling how force and threats of force were exercised by a dispersed group of private actors legally authorized to bear state-of-the-art arms against shipping that could straddle the globe. Both bad behavior, potentially tipping into piracy that targeted the commissioning state's own commerce, and unruly behavior, potentially disrupting either a constant or an evolving foreign policy, were all but inevitable concomitants of privateering.⁹⁶ States long recognized this and sought to limit privateering's negative effects through a substantial, multi-layered system of regulation.⁹⁷ But such regulation was fundamentally leaky — it failed to eliminate many of the costs of privateering that it targeted.⁹⁸ The result was a privateering regime that was sufficiently robust to flourish for centuries but flawed enough to collapse quite abruptly as the Industrial Revolution, Metternich's "Concert of Europe,"⁹⁹ and more modern administrative states took hold.¹⁰⁰

B. Privateering's Golden Age

Lawful privateering could be a lucrative endeavor, one that could and did attract significant investments of labor and capital. Indeed, during privateering's heyday, it was a combination of big business and popular blood sport.¹⁰¹ Before the English and Dutch established themselves as great naval powers, they substantially cut their maritime teeth as privateers and sometimes as outright pirates.¹⁰² Dutch privateers were generally backed by commercial "partnerships or firms" whose principals held profit shares "directly correspond[ing] to

^{94.} See infra text accompanying notes 123-27.

^{95.} See infra text accompanying notes 128-41.

^{96.} See infra text accompanying notes 144-47.

^{97.} See infra text accompanying notes 148-64.

^{98.} See infra text accompanying notes 164-73.

^{99.} HAYES, *supra* note 53, at 595 (describing formation of the early nineteenth-century Concert of Europe, in accordance with which major European powers "mutually pledged themselves to consult together . . . periodically or whenever peace seemed threatened, and to take common action against any attempted aggression").

^{100.} See infra text accompanying notes 174-89.

^{101.} PETRIE, *supra* note 73, at 4 ("For privateers, the prize game partook more of the nature of a blood sport than of warfare. The very language of the game, in both French and English, reflects this affinity.").

^{102.} See LATIMER, supra note 56, at 16 (stating that, in the mid-1500s, it became the task of "a fleet of maritime vagabonds, the so-called Sea Beggars, to lead the [Dutch] liberation"); *id.* at 22 (describing privateering as "transform[ing] the English merchant fleet and the merchant class that owned it"); *see also* LUNSFORD, *supra* note 79, at 4 (describing privateers as "an important part of the Netherlands' military arsenal during a period of evolving naval warfare").

[their] share[s] of the financing."¹⁰³ Such enterprises could be specialized and relatively long-lasting: Victoria Lunsford reports that "[s]o continuously was the Dutch Republic involved in wars during [the Dutch Golden Age] that certain shipowners and firms were able to dedicate themselves exclusively to the practice of privateering."¹⁰⁴

Even for established naval powers, privateering remained an important mechanism of national policy through the eighteenth century.¹⁰⁵ The practice apparently "reached its apogee in the late seventeenth and early eighteenth centuries."¹⁰⁶ According to Lunsford, early in the eighteenth century "perhaps some 14,000 Dutch seamen from Amsterdam, Rotterdam, and Zeeland crewed aboard privateering vessels."¹⁰⁷ This was a sizable fraction of "the general Dutch seafaring population, estimated at 64,500 in 1670 and 52,500 in 1725."¹⁰⁸ Britain and its colonies were similarly familiar with privateering. David Starkey cites numbers indicating that the number of crew sought or required for British privateering vessels amounted to more than ten percent of British seafarers in each of the years 1744, 1757, and 1781.¹⁰⁹ Starkey has further calculated that about "2,051 private men-of-war set forth from British ports between 1739 and 1815."110 Because British privateering fleets included additional vessels less fully dedicated to privateering,¹¹¹ the total number of vessels bearing privateering commissions was substantially larger. According to Starkey, Britain licensed 1,191 privateering vessels from 1739 to 1748; 1,679 from 1756 to 1762; 2,676 from 1777 to 1783; 1,795 from 1793 to 1801; and 1,810 from 1803 to 1815.¹¹²

Britain's American colonies were active in the practice of privateering,¹¹³ and American privateering continued after the split from Britain. During the Revolutionary War and the War of 1812, privateers accounted for the overwhelming bulk of the United States' maritime successes.¹¹⁴ The volume of prize taking regularly dwarfed that

108. Id.

112. Id. at 130-31 tbl.7.1.

^{103.} LUNSFORD, supra note 79, at 11.

^{104.} Id.

^{105.} Cf. SWANSON, supra note 75, at 20 ("[T]here were limits to what an eighteenthcentury state could achieve, and this is why privateering played an important role during wartime.").

^{106.} Ritchie, supra note 74, at 18.

^{107.} LUNSFORD, supra note 79, at 25.

^{109.} STARKEY, supra note 42, at 262 (reporting on demand figures for privateers).

^{110.} Starkey, *supra* note 83, at 131.

^{111.} See supra text accompanying note 84.

^{113.} During conflicts with Spain and France from 1739 to 1748, American colonial privateers captured at least 829 vessels and inflicted direct damage on commerce "roughly equivalent [in value] to 30 percent of the total trade . . . of France and its American colonies." SWANSON, *supra* note 75, at 183.

^{114.} See SEA POWER: A NAVAL HISTORY 37 (E.B. Potter ed., 2d ed. 1981) [hereinafter SEA POWER] ("Privateers made by far the most effective contribution to the American seagoing effort [during the Revolutionary War]."); *id.* at 105 ("[During the War of 1812,]

of decisive engagements with regular naval vessels. In the War of 1812, the U.S. navy and U.S.-backed privateers captured or destroyed a total of eighteen British warships, "[b]ut of the British merchant fleet, approximately twenty-five hundred vessels were taken, principally by privateers."¹¹⁵

As the above numbers suggest, for centuries privateering had anything but a low public profile. During privateering's heyday, decisions of prize courts "were avidly followed by the press and public," much as sporting events - or, in certain circles, billion-dollar patentinfringement suits - are followed today.¹¹⁶ "[P]rivateering associations were established to mobilize the capital of the small investor,"¹¹⁷ Moreover, the most successful raiders won fame as well as fortune. Seventeenth-century Dutch Republican "freebooters" were "subjects of widespread adulation," oft seen as heroes of the Dutch Revolt against Spain.¹¹⁸ For the Anglo-American world, Sir Francis Drake was the Babe Ruth of prize taking. In the late 1570s, with financial backing from Queen Elizabeth I and her secretary of state, Drake successfully raided Spanish settlements and shipping along South America's western coast and returned to England after (stunningly) circumnavigating the globe¹¹⁹ to deliver booty that amounted to "a 4,700 per cent return" for his investors.¹²⁰ As Jon Latimer observes, the Queen's "share enabled her to pay off her entire foreign debt," and it "was therefore hardly surprising that Elizabeth knighted the 'master thief of the unknown world' on his own deck."¹²¹ With Drake, Walter Raleigh, and Drake's cousin John Hawkins enjoying something like celebrity status, Elizabethan England might well have merited its international reputation as "a pirate nation."¹²²

America's most popular, as well as most effective, means of maritime reprisal continued to be privateering.").

^{115.} PETRIE, supra note 73, at 1.

^{116.} *Id.* at 1-2 ("The laws controlling prize taking were as familiar to the American populace as the rules of baseball are today."); *cf.* SWANSON, *supra* note 75, at 140 (noting "[t]he widespread coverage of private men-of-war in the American press, the attention predators and prizes received in travelers' accounts like Hamilton's *Itinerarium*, and the numerous references to the maritime conflict in the correspondence of colonial merchants and officials").

^{117.} Starkey, supra note 83, at 128.

^{118.} LUNSFORD, supra note 79, at 4.

^{119.} LATIMER, *supra* note 56, at 17–18 (discussing "the truly astonishing nature of this feat" of circumnavigation given that "only Magellan's ship had ever achieved it before" and that Drake was English, rather than Portuguese, Spanish, or French, "the recognized masters of oceanic navigation").

^{120.} Id. at 17.

^{121.} *Id.* A colleague has suggested that Elizabeth I might have been eager to greet Drake on his ship's deck to help ensure that she indeed received her share.

^{122.} *Id.* at 23; *see also* HAYES, *supra* note 53, at 331 (describing how Elizabeth I "tolerated and encouraged the fitting out of expeditions by Englishmen to prey upon Spanish commerce").

C. Privateering's Costs and Substantial but Imperfect Regulation

Of course, public love affairs with successful privateers did not mean that privateering was all to the good. Although authorization of privateering was often seen as a means to engage in maritime conflict on the cheap,¹²³ in practice privateering entailed substantial public costs. In addition to providing commissions and court services to support otherwise piratical activity, governments supplied substantial direct and indirect subsidies. At various times, direct subsidies included loans of arms¹²⁴ and monetary bounties on top of rights to captured booty.¹²⁵ Further subsidization could come through exemptions that freed privateers from taxes¹²⁶ and service in the regular navy.¹²⁷

For all this investment, governments obtained a tool of public policy that was unruly at best. Privateering could complicate the work of diplomats by stoking conflict with foreign powers.¹²⁸ It could also divert resources from more regular naval or commercial efforts.¹²⁹

126. SWANSON, *supra* note 75, at 15–16 (reporting how colonial courts and legislatures exempted privateers' prizes from taxes).

^{123.} SWANSON, *supra* note 75, at 16 ("With its emphasis on destroying a rival's commerce but not adding to the government's financial burdens, privateering was perfectly attuned to the mercantilists' world view.").

^{124. 4} RECORDS OF THE COLONY OF RHODE ISLAND AND PROVIDENCE PLANTATIONS IN NEW ENGLAND 560 (John R. Bartlett ed., 1859) (reproducing a resolution of the Rhode Island colony's General Assembly providing for lending to "Messrs. Godfrey Malbone, John Brown and George Wanton, so many of the colony's small arms, pistols, cutlasses and great shot, as they have occasion of, for fitting out their private men of war").

^{125.} LUNSFORD, *supra* note 79, at 22 ("Periodically, the [Dutch] States-General also used the lure of special 'premiums,' bonus awards to encourage Dutch privateers to pursue the ships of certain parties with particular zeal and/or to do their work with exceptional efficiency."); PETRIE, *supra* note 73, at 3 (noting that some statutes offered "extra bounties, called 'head money' proportionate to the number of men on board an enemy ship at the commencement of a successful engagement"); SWANSON, *supra* note 75, at 16 (reporting on the Dutch government's "offering bounty money" to Dutch privateers for "engag[ing] French predators"); *id.* at 37 (noting that a 1740 act of the British Parliament offered payment of "five pounds sterling for each seaman on board an enemy warship at the beginning of an engagement").

^{127.} *Id.* at 16 (reporting on the Dutch exemption of privateers "from naval impressment"); *id.* at 36 (noting that a British act of 1708 "exempted [privateers] from naval impressment").

^{128.} See HAYES, supra note 53, at 218–19 (describing the raids of Spanish commerce by "English sailors and freebooters" as a significant cause of "the conflict between England and Spain"); LUNSFORD, supra note 79, at 37 (noting that, early in the seventeenth century, "other nations — primarily France — had lodged formal complaints against [Dutch] privateers, demanding punishment, and the Dutch government had to respond in some fashion if it desired to keep such an important neighbor from taking punitive action against Dutch shipping").

^{129.} See Starkey, *supra* note 83, at 137 ("[T]here is evidence to support the contention that [British] privateering detracted from the war effort by diverting valuable resources, notably labour, away from the Navy, and by consuming the time of naval personnel charged with policing the activity, as well as wasting the time of those obliged to compete with privateersmen for prizes, both on the seas and in the courts."); *id.* ("Utilitarians... might argue that [privateering] consumed capital and labour which would have been employed more productively in the mercantile marine."). *But see id.* at 138 (contending that some

Although privateering sometimes had beneficial countercyclical impacts, such as counterbalancing "the depressions which wartime entailed for many ports" as a result of wartime suppression of trade,¹³⁰ conversion of merchant vessels to privateering could, at times, leave at least portions of a nation without an adequate commercial fleet.¹³¹ Britain apparently experienced a widespread shortfall of this nature in early 1781, when a massive upsurge in privateering "exerted immense pressure on the shipping market," "inhibited the flow of trade," and ultimately led the government to offer "bounties... to encourage neutral shippers to carry British corn."¹³²

Hostility between privateering interests and those of regular navies appears to have been more consistent. In addition to having some responsibility for policing their own domestic privateers,¹³³ regular navies regularly competed with them for both prizes and labor.¹³⁴ Competition for labor appears to have been the strongest source of friction.¹³⁵ Lunsford reports that, because of "the lure of big prize money," Dutch "captains of naval men-of-war were at a distinct disadvantage in trying to muster a crew, and there were cases in which an individual or even large groups of navy seamen deserted their warships in order to join a privateering venture."¹³⁶ Likewise, Esek Hopkins, the Commander-in-Chief of the Continental Navy during the American Revolution, found that he "could not adequately man his vessels, owing to competition from the privateers," who could "offe[r] greater rewards, lighter discipline, and less danger."¹³⁷ Ritchie observes that British privateering typically "face[d] the opposition of the Royal Navy, which was always short of men and hated to see priva-teersmen take away prime sailors."¹³⁸ "Navy captains," he adds,

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evidence "suggests that privateering had counter-cyclical attributes, mobilizing idle resources rather than seducing them away from trading activities").

^{130.} STARKEY, supra note 42, at 272.

^{131.} *Id.* (noting that privateering "could add to the pressure on resources in local economies boosted by the onset of hostilities").

^{132.} Id. at 270.

^{133.} *Id.* at 261 (discussing "the time and effort expended by the Navy in policing the disorderly elements of the commissioned fleet").

^{134.} Id. at 260 (noting that sources of antagonism between privateers and naval officers were "the issues of prize, time and labour").

^{135.} Id. at 261 (characterizing "labour recruitment" as "the most serious area of conflict between the two services").

^{136.} LUNSFORD, *supra* note 79, at 23–24; *cf.* STARKEY, *supra* note 42, at 280 (observing that "service in a private man-of-war presented seamen and landmen with a rare, perhaps once in a lifetime, chance to earn a substantial capital sum"). To try to contain privateering's diversion of manpower from the regular navy, "[i]n 1665, the States-General prohibited all further privateering sailings until the Dutch Navy was completely manned." LUNSFORD, *supra* note 79, at 24.

^{137.} SEA POWER, *supra* note 114, at 37; *cf.* LUNSFORD, *supra* note 79, at 15 ("[P]rivateer captains and sailors put up with no more real aggravation and regulation than their merchant shipping and naval service brethren, and they stood to profit handsomely").

^{138.} Ritchie, supra note 74, at 17.

"themselves hungry for prize money, also disliked the competition."¹³⁹

Additional costs of privateering involved rent-seeking activities and distortions of governmental process itself. Interests vested in privateering could affect political and judicial decisions in ways that deviated from justice and the public interest. When Commander Hopkins expressed hostility to privateering during the Revolution, he encountered opposition from New England political leaders, many of whom were "heavy investors" in privateers.¹⁴⁰ Admiralty judges who ruled on whether to condemn prizes derived fees from their rulings and were sometimes also direct investors in privateers.¹⁴¹ They were almost inescapably aware that "[v]essels and cargoes condemned as prizes brought money into the [local] community."¹⁴² Perhaps unsurprisingly therefore, "courts in the major mainland ports [of the American colonies] seldom did anything but issue condemnations when they heard prize cases."¹⁴³ Such condemnations could predictably help both to support the privateering industry and to attract forumshopping privateers to the judges' home ports.

A final concern with privateering was its capacity to promote outright piracy. "[T]hose accused of piracy frequently pleaded the profession of privateer,"¹⁴⁴ and piracy could be the outcome of an originally legitimate expedition undertaken by adventurous spirits.¹⁴⁵ During the seventeenth century, the Dutch Republic made constant efforts to police the line between privateering and piracy.¹⁴⁶ But the very regularity of proclamations against "faithless citizens' who were using their [privateering commissions] as 'cloaks' to perpetrate an 'injurious trade'"¹⁴⁷ suggests a lack of overwhelming success.

Pressure to limit privateering's undesired or accidental consequences likely explains its subjection to substantial public and private regulation.¹⁴⁸ "[B]y the fifteenth century a body of guiding rules, the

^{139.} Id.

^{140.} SEA POWER, supra note 114, at 37-38.

^{141.} SWANSON, *supra* note 75, at 48 ("Legal fees [for admiralty-court adjudication] were high, and some judges even owned shares in the private men-of-war that came before their courts. Like privateer owners, admiralty judges sought to earn as much as possible from privateering."); *see also id.* at 45 (discussing "the entrepreneurial spirit of vice-admiralty justice" in British North America).

^{142.} Id. at 38.

^{143.} Id.

^{144.} LUNSFORD, *supra* note 79, at 3.

^{145.} *Cf.* LATIMER, *supra* note 56, at 34–35 (describing how an authorized expedition "with fourteen ships and 2,000 men" under the direction of Sir Walter Raleigh devolved into relatively unsuccessful and unauthorized raiding and led to Raleigh's hanging in 1618).

^{146.} LUNSFORD, *supra* note 79, at 35–41 (discussing problems and prohibitions relating to wayward privateers and pirates).

^{147.} Id. at 41 (quoting a 1690 proclamation of the Dutch States-General).

^{148.} See LUNSFORD, supra note 79, at 12 ("Throughout the Golden Age, the Dutch Republic maintained very rigorous and specific regulations regarding privateering"); PETRIE, supra note 73, at 147–58 (describing extensive regulation of prize taking from the

maritime law of nations, had begun to evolve and achieve international recognition."¹⁴⁹ This body of law provided some of the rules for privateering, while national governments and mechanisms of private ordering such as contracts provided others. Robert Ritchie writes that unprecedented levels of privateering during the Nine Years War of 1688–1697 and the War of the Spanish Succession of 1702–1713 "forced the warring states, especially England and France, to define privateering and to bring it under control."¹⁵⁰ Substantial regulation and standardization of the legal processes surrounding privateering came through government actions such as adoption of the British Prize Act of 1708.¹⁵¹ By the mid-eighteenth century, British privateers, including those from Britain's overseas colonies, labored under at least three different forms of restrictions: (1) the specific bounds of their commissions, (2) executive (i.e., Crown-based) "instructions to privateers," and (3) detailed acts of Parliament.¹⁵² Privateers in the Netherlands faced similar layers of substantive regulation.¹⁵³

A privateer's commission commonly included substantial information regarding the privateering vessel itself and its mission. The commission generally identified the ship, its tonage, arms, owners, and captain, as well as the size of the ship's crew.¹⁵⁴ The commission also "designat[ed] the nationality of vessels and goods liable to condemnation as prize."¹⁵⁵ The commission or accompanying instructions typically supplemented this basic charge with a variety of additional details. Instructions in the colony of Rhode Island included, for example, (1) a command on where captured ships and cargo were to be sent for prize adjudication, (2) prohibition of torture or other cruelty toward prisoners, (3) a requirement that the captain maintain a journal of prize-taking activities, (4) bans of "[s]wearing [d]runkenness and [p]rophaness," and (5) "a catchall clause requiring the observance of all the king's laws."¹⁵⁶ Dutch *Article Brieven* (instructions for priva-

middle of the eighteenth century onwards); STARKEY, *supra* note 42, at 259 ("[G]overnments invariably prescribed a series of instructions, prohibitions and penalties for the good conduct of the [privateering] business, implying that reprisals, to be effective as a tool of maritime war, needed to be restrained and channelled against legitimate targets.").

^{149.} PETRIE, supra note 73, at 5.

^{150.} Ritchie, supra note 74, at 18.

^{151.} See supra text accompanying notes 80-82.

^{152.} Starkey, supra note 83, at 127.

^{153.} LUNSFORD, *supra* note 79, at 11–12 (noting that "the States-General and the Prince of Orange were formally in charge of the Republic's privateers," that "the Dutch Republic maintained very rigorous and specific regulations regarding privateering," and that "Dutch privateer seamen were also obligated to accept the micro-management of their shipboard lives" through "the so-called *Article Brieven* (article letters)" "closely regulated and supervised" by the Admiralties).

^{154.} PETRIE, supra note 73, at 10 (describing contents of commissions).

^{155.} Starkey, supra note 83, at 127.

^{156.} SWANSON, *supra* note 75, at 31 (internal quotation marks omitted) (describing provisions in privateering commissions issued by Rhode Island in the mid-eighteenth century).

teers) displayed perhaps even greater micromanagerial tendencies. A 1665 article brief from the Admiralty of Zeeland forbade crew members from bringing a knife on board or taking the Lord's name in vain, mandated that they "be satisfied with their wages and rations," and required that the captain lead "twice-daily public prayers."¹⁵⁷ To help ensure compliance with such rules, a privateer or its backers generally had to post a substantial bond.¹⁵⁸

Statutes and executive "instructions to privateers" provided further detailed rules on prize adjudication, the distribution of prize proceeds, and the process of capture itself.¹⁵⁹ Laws commonly called for a substantial cut of prize proceeds to go to the government, individual officials, and the payment of fees.¹⁶⁰ Private contractual agreements generally determined how the remainder was divided among investors, officers, and crew.¹⁶¹ If no private agreements governed, legal default rules could kick in. At the height of the Age of Sail, British default rules provided for "half the proceeds [to go] to the vessel's owners and the other half [to be] divided among the officers and crew in accordance with [a] statutory naval formula."¹⁶²

Governments were not entirely reliant on prize courts to enforce the various laws regulating privateers. For example, Britain's 1708 Prize Act "created an elaborate system [for] maintaining and monitoring lists of privateer crews" in order to facilitate enforcement of a provision forbidding privateers "from harboring or aiding deserters from the king's ships."¹⁶³ The Dutch Admiralties maintained "a loose surveillance system" for their nation's privateers, using inspections by Dutch naval vessels and reports from officials and merchants abroad to monitor privateering activity.¹⁶⁴

Despite such regulatory investments, however, actual practice likely deviated substantially from the law on the books. Although

^{157.} LUNSFORD, *supra* note 79, at 12–13.

^{158.} PETRIE, *supra* note 73, at 10 ("Privateers were required to post bonds to ensure compliance with the instructions to privateers and the relevant laws of their countries.").

^{159.} See *id.* at 147–52 (describing rules for inspection and capture of a vessel after a successful chase); *id.* at 158 (discussing rules for "[t]he conduct of a prize crew"); *id.* at 159–61 (discussing procedural requirements for prize adjudication).

^{160.} See, e.g., LUNSFORD, supra note 79, at 16–18 (discussing portions of Dutch prize proceeds absorbed by storage and auction fees, payments "to the state and the sponsoring Admiralty," and payment "to the Admiral-General (a.k.a. the Stadholder)"); SWANSON, supra note 75, at 34–36 (discussing Parliament's 1708 act establishing caps for admiralty-adjudication fees and eliminating a previous requirement that ten percent of prize proceeds go to the Lord Admiral).

^{161.} PETRIE, *supra* note 73, at 5 ("The division of prize proceeds among privateering crews was controlled by contracts drawn up and signed before the voyage."); *see also* Peter T. Leeson, *An*-arrgh-*chy: The Law and Economics of Pirate Organization*, 115 J. POL. ECON. 1049, 1080 (2007) (describing an agreement among members of the crew of an early eighteenth-century privateer).

^{162.} PETRIE, supra note 73, at 5-6.

^{163.} SWANSON, supra note 75, at 36.

^{164.} LUNSFORD, supra note 79, at 15.

Starkey suggests that the relative scarcity of legal actions against British privateers suggests "that the great majority of British privateersmen exerted their belligerent energies against legitimate targets,"¹⁶⁵ one might reasonably doubt whether many regulations of privateers were ever effectively enforced. As Starkey himself acknowledges, governments were not always interested in the regulations' being followed either completely or to the letter.¹⁶⁶ Some regulations might have served much of their purpose simply by giving documentary evidence of efforts to comply with international obligations and norms.¹⁶⁷ Regulations forbidding swearing or requiring regular prayer might have reassured a nation's citizens of the propriety of a risky, often bloody, and sometimes brutal practice of state-sponsored plunder.

Dutch court records reveal many cases of privateers who strayed from the rules — whether through a relatively technical violation such as sailing under an invalid commission or through more substantive offenses such as violating rules on the delivery and division of booty; attacking neutral or domestic shipping; engaging in "indiscriminate abduction and ransoming"; and killing, torturing, or raping prisoners.¹⁶⁸ Violators could be sentenced to severe punishments such as death, keelhauling, "be[ing] thrown three times from [a ship's] great yardarm," whipping, and banishment.¹⁶⁹

For many would-be violators, the threat of such severe punishment was likely mitigated by the fact that prosecution in many less severe cases appears to have been relatively unlikely, particularly for more technical violations. Admiralty judges themselves were known to habitually flout applicable rules. Carl Swanson reports that, "in more than half of all cases" of British colonial adjudication that he studied, admiralty judges failed to wait the required twenty days before condemning a captured vessel.¹⁷⁰ Perhaps unsurprisingly, Anglo-American responses to violations of prize-taking rules by officers of regular navies could be notably lenient: Petrie reports that "[t]wo of the greatest of naval heroes [of Britain and the United States] flagrantly and openly violated the law" by appropriating booty without judi-

^{165.} STARKEY, *supra* note 42, at 264.

^{166.} See id. at 267 n.57 ("[I]n the Seven Years' War, it suited the [British] government to allow privateering venturers a free hand in their dealings with neutral shipping, proscribing the activity only when war with the Dutch threatened.").

^{167.} *Cf. id.* at 35 (noting that, in mid-seventeenth-century treaties with Spain, Portugal, France, and England, the Dutch Republic condemned piracy "and vowed to punish the crime strenuously").

^{168.} Id. at 41-49.

^{169.} *Id.* at 44–49 (describing punishments mandated in various cases); *see also* STARKEY, *supra* note 42, at 28 ("In cases of serious misconduct, offenders were prosecuted according to the criminal law, with death or imprisonment awaiting those found guilty of murder, mutiny, rape or other crimes of violence.").

^{170.} SWANSON, *supra* note 75, at 41 ("Rhode Island Judge Leonard Lockman condemned three vessels on the same day they were libeled.").

cial process.¹⁷¹ Instead of being punished, the eighteenth-century British Commander George Anson "was soon promoted to admiral and subsequently appointed first lord of the Admiralty."¹⁷² His American counterpart, early nineteenth-century Captain David Porter, "was offered the command of a new squadron of commerce raiders."¹⁷³

D. Privateering's Lessons and Demise

Even in the face of frequent transgressions, privateering remained accepted and even popular through most of the eighteenth century. Increased regulation, however imperfect, appears to have contributed significantly to privateering's longstanding success and toleration. Thus, one lesson from privateering's history is that increased state regulation can be compatible with — indeed can promote — a private-enforcement regime's flourishing.

On the other hand, a further lesson is that a private-enforcement regime's longstanding success and popularity can be merely a prelude to rapid obsolescence and dramatic collapse. Private enforcement's almost inherent limitations and imperfections — most prominently, its decentralization and centrifugal tendencies toward misalignment with state policy — leave it naturally vulnerable to dissolution once a more centralized and more finely tuned means for implementing government policy emerges.

With respect to privateering, the increased capacities of nationstates and their publicly funded navies¹⁷⁴ — aided by greater professionalism¹⁷⁵ and ever-improving technologies of transport, communication, and targeted destruction — helped limit the need for what was increasingly viewed as an irregular practice.¹⁷⁶ The consistent warfare that helped support industries of privateers during the seventeenth and eighteenth centuries also fed substantial increases in the sizes of regular navies: according to one account, from 1650 to 1790, the British Royal Navy's number of serviceable ships of the line increased about

^{171.} PETRIE, supra note 73, at 143-44.

^{172.} Id. at 144.

^{173.} Id.

^{174.} See SEA POWER, supra note 114, at 109 (noting that from 1815 to 1860 "[t]he major navies of the world began to shift from sail to steam, from wood to iron, and from solid shot to shell").

^{175.} *See id.* at 112–13 (describing the development of land-based schools for training naval officers in the early nineteenth century, including the 1845 creation of the naval school that became the U.S. Naval Academy).

^{176.} Cf. Rubin, supra note 62, at 895 (noting that nation-states' reliance on privatization of government functions waned at "the end of the eighteenth century, when the administrative capacity of central governments finally caught up with their centralizing aspirations"); Oliver E. Williamson, Public and Private Bureaucracies: A Transaction Cost Economics Perspective, 15 J.L. ECON. & ORG. 306, 336 (1999) (ascribing prior delegation of foreign-affairs functions to private entities such as the East India Company partly to "costly transportation and communication").

threefold and its number of cruisers of at least 300 tons increased more than six-fold.¹⁷⁷ Such growth demanded the development of supporting industrial complexes that had vested interests in the regular navy's maintenance or further expansion.¹⁷⁸ Once developed, these interests could provide powerful counterweights to private interests that had traditionally favored privateers.¹⁷⁹ Meanwhile, the military successes of the Royal Navy during the eighteenth century weakened privateering interests by effectively denying them previously available opportunities for profit.¹⁸⁰ Not so coincidentally, by the end of the eighteenth century, British privateering was already past its peak: the total British privateering fleet during the French Revolutionary Wars was significantly smaller than that from 1777 to 1783, and the fraction of the privateering fleet consisting of private men-of-war was down by nearly a factor of four.¹⁸¹ During the Napoleonic Wars, the corresponding total and man-of-war fraction were smaller still.¹⁸²

Post-Napoleonic European governments were well suited to deliver privateering's coup de grâce. Their conservatism — their focus on maintaining an interstate balance of power and their interests in controlling their own populations — likely made them leery of a policy mechanism that relied on coordinated groups of private citizens bearing military-grade arms.¹⁸³ Meanwhile, their success in ushering in a period of relative interstate (if not necessarily intrastate) tranquility, a period of several decades during which Europe hosted no war "last[ing] longer than a few months,"¹⁸⁴ likely promoted the dissolu-

^{177.} See N.A.M. RODGER, THE COMMAND OF THE OCEAN: A NAVAL HISTORY OF BRITAIN 1649–1815, at 607–08 (2004) (providing figures for British ships of the line and cruisers "notionally available [for service] on the last day of each five-year period" from 1650 through 1815, not including "[s]hips on the Great Lakes" and omitting "cruisers below 100 tons displacement (to 1680), 300 tons (to 1790) and thereafter 500 tons"). Another account has the number of ships in the British Royal Navy growing by approximately an order of magnitude between 1603 and 1748. See SWANSON, supra note 75, at 19 ("Britain's Royal Navy increased from 42 ships in 1603 to 334 in 1748, while the number of ships of the line (the large, specialized warships) grew from zero to 126.").

^{178.} See SWANSON, supra note 75, at 19 ("Whole new cities and towns such as Plymouth, England, and Brest and Rochefort, France, emerged to service the expanded military forces.").

^{179.} See supra text accompanying notes 137–43.

^{180.} See Starkey, *supra* note 83, at 129 (discussing how British privateering activity waxed and waned in inverse relation to the Royal Navy's successes, with the general tendency being toward privateering business contraction).

^{181.} Id. at 130 tbl.7.1.

^{182.} Id.

^{183.} See HAYES, supra note 53, at 579 (noting the conservatism of the 1815 peace settlement); *id.* at 584 (noting that "[t]he era from 1815 to 1830 was an era of conservative reaction," with an interest in maintaining a continental balance of power).

^{184.} R.R. PALMER & JOEL COLTON, A HISTORY OF THE MODERN WORLD SINCE 1815, at xxxix (6th ed. 1984) ("Some details of the [1815 Peace of Vienna] broke down in 1830, and others in 1848, but not until 1914 was there a war in Europe that lasted longer than a few months, or in which all the great powers were involved."); *see* SEA POWER, *supra* note 114, at 109 (observing that "the period 1815–60" encompassed "a few minor wars").

tion of previously entrenched interests in favor of privateers.¹⁸⁵ In the Concert of Europe, the unruly privateer ultimately had no place.

It might come as little surprise that, after centuries of flourishing, privateering rather abruptly vanished.¹⁸⁶ In 1856, dozens of countries agreed to abolish the practice.¹⁸⁷ Although the United States did not explicitly enter into this agreement,¹⁸⁸ it declined to issue any letters of marque and reprisal during the Civil War and has not issued any since.¹⁸⁹ Within decades of the U.S. Constitution's original drafting, the constitutional provision authorizing letters of marque and reprisal had become a dead letter.

IV. QUI TAM LITIGATION

A. Qui Tam Basics

A similar fate has befallen most forms of *qui tam* litigation. *Qui tam* was another pre-Westphalian mechanism for harnessing private enterprise for public ends. A *qui tam* suit is a suit in which "a private person maintains a . . . proceeding on behalf of both herself and the [sovereign] to recover damages and/or to enforce penalties available under a statute prohibiting specified conduct."¹⁹⁰ Generally speaking, the private person bringing the action "need not be aggrieved and may initiate the action in the absence of any distinct, personal injury arising from the challenged conduct."¹⁹¹ Thus, the *qui tam* plaintiff, often

189. *Id.* On the other hand, the Confederate States of America did commission some privateers during the Civil War. SEA POWER, *supra* note 114, at 130 ("[T]he Confederacy itself, and also certain of its member states as individual sovereignties, did commission a number of privateers early in the war..."); *see also* PETRIE, *supra* note 73, at 81 (noting the United States' position that the Confederacy's putative privateers were mere pirates because "the Confederate States of America were not a sovereign nation capable of issuing valid privateers' commissions").

190. Evan Caminker, *The Constitutionality of* Qui Tam Actions, 99 YALE L.J. 341, 341 (1989); accord Note, *The History and Development of* Qui Tam, 1972 WASH. U. L.Q. 81, 87 (1972) [hereinafter Note, Qui Tam *History*] ("All *qui tam* statutes . . . included two elements: (1) private prosecutors shared in the penalty; (2) private persons could initiate a suit to recover the penalty.").

^{185.} Cf. Ritchie, supra note 74, at 23 ("Privateering faded into memory as amity grew between the major powers.").

^{186.} See Starkey, *supra* note 83, at 138–39 (describing diminishing private interest in privateering during the late eighteenth and early nineteenth centuries).

^{187.} PETRIE, *supra* note 73, at 141 (describing how, through the Paris Convention of 1856, nearly fifty nations agreed to end privateering).

^{188.} *Id.* (indicating that the United States refused to join the agreement because the relevant treaty failed to similarly restrain prize taking by regular navies); *see also* Ritchie, *supra* note 74, at 23 (contending, to the contrary, that nations such as Spain, Mexico, and the United States declined to join the agreement "as all of them had long coast lines and weak navies and believed they had to allow privateering to protect themselves").

^{191.} J. Randy Beck, *The False Claims Act and the English Eradication of* Qui Tam *Leg-islation*, 78 N.C. L. REV. 539, 552–53 (2000). *But see* Note, Qui Tam *History, supra* note 190, at 86 (observing that some *qui tam* statutes required "the plaintiff . . . to have suffered

called an "informer" or "relator,"¹⁹² acts as a sort of "private attorney general"¹⁹³ — albeit one that has a personal stake in the litigation as a result of a direct monetary interest in the suit's outcome.¹⁹⁴

Qui tam provisions were an important means to supplement the limited enforcement capacities of pre-nineteenth-century governments. But they generated possibilities for outright abuse, overenforcement, and collusive underenforcement that are common characteristics of private-enforcement regimes and that repeatedly triggered demands for reform. Ultimately, those demands led to qui tam suits' general abolition in Britain and their limitation to only a few forms in the United States. Serial recalibration of one of those surviving forms, qui tam suits under the False Claims Act, illustrates both the possibility and the likely necessity of reforming such a private-enforcement regime over time. Recent abolition of qui tam suits to enforce the U.S. Patent Act's prohibition of false marking shows how failure to reasonably calibrate such a regime's operation can conclude with its abrupt demise.

B. Qui Tam Litigation in England

The use of *qui tam* provisions to enforce statutory law is a domestic analog of the commissioning of privateers to project power beyond a state's borders. As Randy Beck reports, "[p]rior to the advent of modern law enforcement and the development of the regulatory state, England relied heavily upon *qui tam* informers to perform many tasks that today are the work of police officers, prosecutors, and administrative officials."¹⁹⁵ Unable to rely on local officials and juries to ensure fidelity to national laws and policy, fourteenth-and-fifteenth-century English Parliaments increasingly provided for *qui tam* enforcement,

some particular injury over and above the public wrong"). In contrast, a common-law *qui* tam action appears generally to have involved an "aggrieved party" for whom *qui tam* was a procedural device for gaining access to England's royal courts on grounds that the case involved a royal interest as well as a private interest. *Id.* at 85; see also id. at 87 ("Qui tam was not a form of action. It was, rather, a means of bringing an action.").

^{192.} Beck, *supra* note 191, at 541 (noting that a *qui tam* plaintiff is commonly called an "informer" or 'relator'").

^{193.} See generally Carl W. Hittinger & Jarod M. Bona, *The Diminishing Role of the Private Attorney General in Antitrust and Securities Class Action Cases Aided by the Supreme Court*, 4 J. BUS. & TECH. L. 167, 170 (2009) ("The phrase 'private attorney general' was first coined by Second Circuit Judge Jerome Frank in 1943.... The term remained somewhat dormant... until the 1970s, when its use started to skyrocket.").

^{194.} But cf. Rose, supra note 2, at 1315 n.58 ("[P]rivate attorney general' in this context simply means a private party who sues primarily to vindicate a public interest, rather than to redress a personal loss.").

^{195.} Beck, *supra* note 191, at 565–66; *see also* Note, Qui Tam *History*, *supra* note 190, at 86 ("In the early stages of English criminal law, enforcement of penal statutes was limited by the lack of an effective public police force."); *id.* at 89 (observing that "a wholesale abolition of the informer provisions" was "unworkable since informers were still needed to enforce the penal laws of England").

particularly of economic regulations controlling, *inter alia*, the prices of consumer goods and labor, the lengths of fairs, and the materials to be used in making "wooden-soled shoes."¹⁹⁶ Highlighting the state's difficulties in controlling its own putative agents, other statutes invited private individuals to police the activities of public actors such as mayors, sheriffs, and jurors.¹⁹⁷

Nonetheless, *qui tam* provisions, like privateering commissions, were far from costless panaceas. Governments' relationships with *qui tam* relators could be almost as troubled as their relations with privateers. Abuses of *qui tam* provisions were sometimes impossible to ignore. Under Henry VII, two members of the Court of Exchequer generated a scandal by working with *qui tam* informants to extort fines.¹⁹⁸ The officials were ultimately beheaded; their helpers died in prison.¹⁹⁹

A more systematic response was necessary to address problems resulting from a more systematic development — the rise of "a class of professional informers . . . making their living by pursuing *qui tam* litigation throughout the country."²⁰⁰ By the historically litigious late Tudor period,²⁰¹ professional informers — forerunners of modern patent-enforcement entities — had become crucial players in English law enforcement. Alan Harding reports that "[i]n early Stuart times an average county might have as many as twelve professional informers working in cooperation with the clerk of the peace, each bringing twenty or so prosecutions to quarter-session, and some directing rudimentary detective agencies."²⁰² Such manpower produced results. A study of 675 Elizabethan suits alleging violations of apprenticeship laws revealed that about seventy-five percent were brought by professional plaintiffs.²⁰³

^{196.} Beck, *supra* note 191, at 567–71 & nn.154, 156 (describing early *qui tam* statutes, and noting that "[t]he bulk of these enactments regulated economic activities in a wide array of industries"); *see also* HARDING, *supra* note 58, at 158–59 ("Because of embracery (the corruption of juries)... effective law enforcement had to rely on private bills."); Bales, *supra* note 2, at 386 ("By the early 1400s, *qui tam* provisions were appearing in a wide variety of statutes," many "regulat[ing] labor and commercial activity.").

^{197.} Beck, *supra* note 191, at 572–73 ("The use of *qui tam* provisions to regulate the performance of public functions became increasingly common in the fourteenth and fifteenth centuries."); *see also* Bales, *supra* note 2, at 386 (noting the use of *qui tam* provisions to help police the "performance of public functions"); *cf.* Beck, *supra* note 191, at 576 (observing that, under Henry VIII, "*qui tam* statutes were also used to regulate the clergy and the Church").

^{198.} Beck, supra note 191, at 574-75.

^{199.} Id. at 575.

^{200.} Id. at 576.

^{201.} CHRISTOPHER W. BROOKS, LAWYERS, LITIGATION AND ENGLISH SOCIETY SINCE 1450, at 68 (1998) (observing that in late sixteenth-century England "there was a massive increase in central court litigation which dated from just before the accession of Elizabeth in 1588, reaching a peak in the years around 1600").

^{202.} HARDING, supra note 58, at 77.

^{203.} Beck, supra note 191, at 577.

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But perhaps even more so than the activities of outward-venturing privateers, the efforts of professional informers failed to enjoy uniform domestic appreciation. In early modern England, lawyers themselves were frequently reviled as "fomentors of suits,"²⁰⁴ particularly by members of the establishment whose interests were threatened by a more accessible and arguably useful legal system.²⁰⁵ Informers could not expect to escape even graver recrimination. Oui tam plaintiffs were accused of a host of social sins, many of which resonate with the alleged sins of present-day patentees: (1) "fraudulent or malicious prosecutions",²⁰⁶ (2) the filing of suits, such as those "enforcing outdated statutes or targeting technical violations," "that disinterested prosecutors would consider contrary to the public good";²⁰⁷ (3) use of suit or the threat of suit to extort oppressive settlements;²⁰⁸ (4) deliberate selection of venues for suit that were prohibitively in-convenient for defendants;²⁰⁹ and (5) collusive settlements that deprived the government of its share of a court award.²¹⁰ Sir Edward Coke himself grouped "the Vexatious Informer" with "the Monopolist" as "viperous Vermin" that plagued "the Church and Commonwealth."211 Less famous individuals made informers the "targets of mob violence."212

206. Beck, supra note 191, at 581.

^{204.} C.W. BROOKS, PETTYFOGGERS AND VIPERS OF THE COMMONWEALTH: THE 'LOWER BRANCH' OF THE LEGAL PROFESSION IN EARLY MODERN ENGLAND 133 (1986); *see also id.* at 132 (observing that, to "most articulate men of the period," "the increase in litigation was a disaster, and the lawyers who brought the cases into the courts a group of dishonest trick-sters who were a cancer in the body of the commonwealth").

^{205.} See *id.* at 134 ("Attitudes towards litigation and . . . attorneys may also have contained political and class elements. . . . [U]se of [the king's courts] implied recognition of royal rule, often at the expense of the powerful magnate or lord of the manor."); *cf. id.* at 132 ("[T]he increase in central court litigation, and the increase in the number of lawyers who helped to make it possible, can be seen as a positive social good, as the spread of a valuable service to greater numbers of people.").

^{207.} *Id.* at 583–84; *see also* EDWARD COKE, THE THIRD PART OF THE INSTITUTES OF THE LAWS OF ENGLAND 192 (4th ed. 1669) (recording that "many penal laws obsolete, and in time grown apparently impossible, or inconvenient to be performed, remained as snares, whereupon the Relator, Informer or Promooter did vex and intangle the Subject").

^{208.} Beck, *supra* note 191, at 581 ("[C]ollection of payments in return for a promise not to prosecute was, in essence, a form of blackmail or extortion.").

^{209.} Id. at 583; see also COKE, supra note 207, at 192 (observing "that common Informers, and many times the Kings Attorney, drew all Informations for any offence in any place within the Realm of England against any penall [sic] law, to some of the Kings Courts at Westminster, to the intolerable charge, vexation and trouble of the Subject"); id. (noting that, even when not suing in Westminster, a *qui tam* plaintiff could institute suit "in any County where he would, where neither party nor witness was known").

^{210.} Beck, *supra* note 191, at 580–81 ("[A]n unlicensed composition permitted the informer to keep the entire recovery without giving the government a share.").

^{211.} Coke, supra note 207, at 194.

^{212.} Beck, *supra* note 191, at 578 ("In 1566, informers triggered riots in the vicinity of the Westminster courts.").

Tudor and Stuart governments implemented a bevy of legal responses.²¹³ These included: (1) repeal of outdated provisions for *qui tam* enforcement;²¹⁴ (2) restriction of the extent to which a potentially collusive settlement would protect the defendant from future suits;²¹⁵ (3) provision for the corporal punishment and fining of informers who engaged in unlicensed settlements;²¹⁶ (4) introduction of competition for *qui tam* informers through the issuance of revocable "patents or commissions for enforcement of penal statutes";²¹⁷ (5) tightening of statutes of limitations;²¹⁸ (6) a fee-shifting provision "requiring the informer to pay costs and damages if [a] case [was] discontinued by the informer or resulted in a verdict for the defense";²¹⁹ and (7) a venue limitation requiring that actions to enforce penal statutes be filed "only in the county where the [alleged] offence was committed."²²⁰

As with regulation of privateers, such reforms likely helped preserve the ultimate viability of *qui tam* actions as instruments of state policy. Resurgence of *qui tam* litigation occurred in the eighteenth and early nineteenth centuries²²¹ when *qui tam* provisions appeared in "laws designed to promote public safety and to protect the environment."²²² Britain's 1710 Statute of Anne extended *qui tam* litigation to another growing legal arena, today referred to as intellectual property law. The Statute of Anne gave non-copyright-holders the ability to

^{213.} See Beck, supra note 191, at 587–89 (discussing reform legislation enacted from 1576 to 1623). Reforms tended to specifically target suits by informers while sparing suits brought by the king or "an aggrieved party." Note, Qui Tam *History, supra* note 190, at 90.

^{214.} See Note, Qui Tam *History*, *supra* note 190, at 90 (noting that a 1623 act repealed "obsolete informer provisions").

^{215.} See Beck, *supra* note 191, at 574 (describing "reform legislation" of 1487); *see also* Note, Qui Tam *History*, *supra* note 190, at 89 (discussing a "procedural restriction [that] eliminated the preclusive effect of collusive suits").

^{216.} Beck, *supra* note 191, at 587 ("The 1576 statute dealt with the mounting problem of unlicensed compositions by subjecting offenders to corporal punishment."); *cf.* Note, Qui Tam *History*, *supra* note 190, at 90 (noting that the 1576 act "provided for the imposition of penalties on vexatious informers").

^{217.} Beck, *supra* note 191, at 585–86. Note how, at least in the circumstances leading to this reform, a form of "patent[]... for enforcement" was apparently viewed as a more manageable or precise instrument of government policy than a general *qui tam* provision. *Id.* at 585.

^{218.} *Id.* at 575 (observing that, under Henry VIII, "[t]he statute of limitations for a *qui tam* action was reduced temporarily to one year"); *see id.* at 588 (noting the later enactment of a more permanent limitations period of one year for *qui tam* actions).

^{219.} Id. at 587 (describing the cost-shifting provision as designed "to discourage meritless qui tam cases"); see also Note, Qui Tam History, supra note 190, at 90 ("Another part of the [1576] statute permitted defendants to recover their court costs from harassing informers.").

^{220.} Beck, *supra* note 191, at 588; *see also* COKE, *supra* note 207, at 193 (discussing an act requiring "that in all Informations . . . the offence shall be layed and alledged [sic] . . . in the said County where such offence was in truth committed, and not elsewhere"); Note, Qui Tam *History*, *supra* note 190, at 90 (discussing venue restrictions under the acts of 1587 and 1623).

^{221.} Bales, *supra* note 2, at 386–87 ("*Qui tam* legislation experienced a resurgence in the 1700s and early 1800s").

^{222.} Beck, supra note 191, at 591.

bring a *qui tam* suit for an alleged violation of copyright law, with half of any statutory fine promised as a reward.²²³

But the eighteenth-century resurgence of *qui tam* suits was, like the eighteenth-century flourishing of privateering, more of a peak than a prelude to greater things. Like regular navies in relation to privateers, the rise of public police forces and prosecutors in the nineteenth and twentieth centuries²²⁴ spelled doom for British *qui tam* statutes.²²⁵ Their demise was slower than that of privateering, but ultimately just as conclusive. "In 1951, Parliament abolished the *qui tam* action entirely."²²⁶

C. Qui Tam Litigation in the United States

1. General History

The historical trajectory of *qui tam* litigation in the United States has broad similarities to that for Britain but a somewhat different endpoint. Early Congresses and state legislatures enacted a multiplicity of *qui tam* statutes.²²⁷ As in England, abuses arose, and legislatures enacted reforms reminiscent of those adopted for similar reasons in England.²²⁸ The United States added at least one distinctive reform: legislative restriction of *qui tam* actions to civil proceedings and complementary judicial characterization of some "informer suits" as legal-

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^{223.} See Oren Bracha, The Adventures of the Statute of Anne in the Land of Unlimited Possibilities: The Life of a Legal Transplant, 25 BERKELEY TECH. L.J. 1427, 1454 (2010).

^{224.} David Philips, Good Men to Associate and Bad Men to Conspire: Associations for the Prosecution of Felons in England 1760–1860, in POLICING AND PROSECUTION IN BRITAIN 1750–1850, at 113, 114 (Douglas Hay & Francis Snyder eds., 1989) (discussing development of "bureaucratic, uniformed, paid police forces" in nineteenth-century England); Adrian Shubert, Private Initiative in Law Enforcement: Associations for the Prosecution of Felons, 1744–1856, in POLICING AND PUNISHMENT IN NINETEENTH CENTURY BRITAIN 25, 25 (Victor Bailey ed., 1981) ("Between 1829 and 1856 the official agents of law enforcement were changed from part-time, amateur officials, such as the constable, to full-time, professional, bureaucratic police forces.").

^{225.} See Beck, supra note 191, at 601 ("Reliance on qui tam legislation declined dramatically with the development of alternate means of law enforcement.").

^{226.} Bales, *supra* note 2, at 387; *see also* Beck, *supra* note 191, at 605 (observing that "the Common Informers Act of 1951[] became the primary legislative vehicle for abolition of England's remaining *qui tam* statutes").

^{227.} See Note, Qui Tam History, supra note 190, at 95 ("Statutes providing for qui tam suits were common in eighteenth century America"); see also JOHN T. BOESE, CIVIL FALSE CLAIMS AND QUI TAM ACTIONS § 1.01[A], 1-11 (4th ed. 2011) ("At least 10 of the first 14 statutes enacted by the first United States Congress relied on some form of qui tam action to supplement the enforcement role of government agents."); Note, Qui Tam History, supra, at 99 ("The federal experience with qui tam was quite similar to that of the states'.").

^{228.} Note, Qui Tam *History, supra* note 190, at 97 (describing how American *qui tam* legislation led to "problems with vexatious and collusive informers" to which legislatures responded with "the same remedies as Parliament").

ly impermissible because they involved criminal charges.²²⁹ As in England, however, the American cocktails of reforms did not suffice to maintain *qui tam*'s early vibrancy.²³⁰ By the year 2001, less than a handful of federal *qui tam* provisions remained in force.²³¹

2. *Qui Tam*'s Survival and Repeated Recalibration Under the False Claims Act

Distinctly, however, the United States never took the route of general abolition.²³² Indeed, in 1986, Congress substantially revived one of federal law's surviving *qui tam* provisions, one embedded in the False Claims Act, an act intended to prevent and penalize various forms of fraud against the federal government.²³³ Consistent with this Article's contention that a private-enforcement regime will likely need to adapt continually to changing social contexts, Congress has in fact repeatedly recalibrated the false-claims *qui tam* provision. This willingness and capacity to engage in recalibration helps explain false-claims *qui tam*'s rather remarkable combination of both pure survival and continuing social importance.

Congress enacted the False Claims Act's *qui tam* provision in 1863 in response to concerns about defense-contractor fraud during the Civil War.²³⁴ The original act provided that, even absent a criminal conviction, "any person not in the military or naval forces" who was held to have violated the act would have to pay a \$2000 civil penalty, "double the amount of damages which the United States may have sustained," and "the costs of suit."²³⁵ A successful *qui tam* plain-

^{229.} *Id.* at 97 ("Statutes were passed giving the state the exclusive control of penal actions."); *id.* at 99 ("A judicial means of precluding informer suits was to label them criminal....").

^{230.} See *id.* at 99 (describing *qui tam* suits under state law as becoming less frequent in the late nineteenth century); *id.* at 100 ("During the latter part of the nineteenth century the federal informer provisions were gradually reduced.").

^{231.} *See* Bales, *supra* note 2, at 387 ("Today, four *qui tam* statutes, all enacted more than a hundred years ago, remain on the books.").

^{232.} See Note, Qui Tam *History, supra* note 190, at 99 ("There is no evidence of a concerted effort to abolish *qui tam*; rather, there appears to have been a steady erosion of the informer actions.").

^{233.} Beck, *supra* note 191, at 541 ("In [1986], Congress amended the federal government's principal anti-fraud statute . . . to encourage an archaic form of litigation known as a *'qui tam'* suit.").

^{234.} Bales, *supra* note 2, at 388 (describing the history of the False Claims Act); *see also* BOESE, *supra* note 227, § 1.01[A], 1-8 ("As frequently happens during wartime, the vast spending that arose from the Union government's military effort led to widely publicized abuses by unscrupulous private contractors.").

^{235.} Act to Prevent and Punish Frauds upon the Government of the United States ("False Claims Act of 1863"), ch. 67, § 3, 12 Stat. 696, 698 (1863) (current version at 31 U.S.C. §§ 3729–33 (2006)); *see also* BOESE, *supra* note 227, § 1.01[B], 1-12 (noting "the relative harshness of [the False Claims Act of 1863's] sanctions").

tiff would "receive one half the amount of . . . forfeiture" and damages, as well as any costs. 236

Despite these monetary incentives, there were relatively few *qui* tam actions under the False Claims Act before 1930.²³⁷ In the 1930s, expanded government spending led to expanded opportunities for fraud.²³⁸ Criminal indictments followed, and enterprising plaintiffs used public information from these indictments to file "parasitical" *qui tam* suits.²³⁹ In January of 1943, the U.S. Supreme Court upheld a *qui tam* plaintiff's right to act as a "parasite" by suing on the basis of information derived from a prior indictment²⁴⁰ even though, as Justice Jackson pointed out in dissent, such a parasitical suit might reasonably have been viewed as breaching the bargain that Congress had intended to strike.²⁴¹ In Jackson's view, such a suit did no more than "enrich a mere busybody" who revealed "no frauds not already disclosed and no injury to the Treasury not already in process of vindication."²⁴²

Within the same year as the Court's decision, Congress and the President recalibrated false-claims *qui tam* in accordance with Jackson's vision — and then some. "On December 21, 1943, President Roosevelt signed amendments . . . provid[ing] that prior knowledge by the government of the allegations in [a] complaint was an absolute bar to jurisdiction over *qui tam* suits, even if the relator was the original source of the government's information."²⁴³ The 1943 amendments further required that any *qui tam* plaintiff provide notice of suit to both the local United States Attorney and the Attorney General.²⁴⁴ The United States would then have sixty days to decide whether to take over the litigation.²⁴⁵

^{236.} False Claims Act of 1863, § 6.

^{237.} BOESE, *supra* note 227, § 1.01[B], 1-12 ("There are few reported civil False Claims Act decisions prior to 1943.").

^{238.} *Id.* at 1-13 ("[I]n the 1930s and early 1940s[,]... the government's economic role in national life expanded, and with it the opportunities... to profit through fraud.").

^{239.} Bales, *supra* note 2, at 389 ("[W]henever a criminal indictment was issued, informers who had heard of the indictment through the news media would rush to file suits and claim *qui tam* awards."); BOESE, *supra* note 227, § 1.01[B], 1-14 (noting that various "fraud indictments against federal contractors... prompted so-called 'parasitical' (or parasitic) actions").

^{240.} United States *ex rel*. Marcus v. Hess, 317 U.S. 537, 545–46 (1943) (rejecting the government's contention that, because the petitioner had allegedly "received his information . . . from the previous indictment," his *qui tam* suit should be barred).

^{241.} Id. at 558 (Jackson, J., dissenting).

^{242.} Id.

^{243.} BOESE, *supra* note 227, § 1.02, 1-15; *see also* Act to Limit Private Suits for Penalties and Damages Arising out of Frauds Against the United States ("1943 Act"), ch. 377, 57 Stat. 608, 609 (1943) ("The court shall have no jurisdiction to proceed . . . whenever it shall be made to appear that such suit was based upon evidence or information in the possession of the United States . . . at the time such suit was brought").

^{244. 1943} Act, § 3491 (providing for notice to the United States).

^{245.} Id. (giving the United States sixty days "to enter appearance").

In addition to restricting the circumstances under which *qui tam* suits could proceed, the 1943 amendments slashed *qui tam* plaintiffs' shares of any awards to much less than fifty percent. If the United States took over the suit, the *qui tam* plaintiff would receive no more than "one-tenth of the proceeds."²⁴⁶ If the United States declined to take over the suit, the *qui tam* plaintiff would receive no more than "one-fourth of the proceeds" plus "such reasonable expenses" and costs as the court might award.²⁴⁷

Four decades after the 1943 amendments, Congress reversed course. Worried about fraud during a Cold War period of increased military spending, Congress revised the False Claims Act's *qui tam* provision in 1986.²⁴⁸ While generally retaining significant regulation of *qui tam* suits, Congress backtracked from the 1943 amendments by restricting the preclusive effect of government actions. Henceforth, even if the government already possessed the information that formed the basis for a *qui tam* filing, the *qui tam* suit could proceed if two conditions were met: (1) the government was not yet pursuing the matter in a civil case or administrative proceeding²⁴⁹ and (2) the information in question had not yet been publicly disclosed or the *qui tam* plaintiff was "an original source of the information."²⁵⁰

Congress also increased rewards for successful *qui tam* plaintiffs in two ways. First, Congress raised the penalties for violations: "[t]he mandatory penalty was raised to between \$5000 and \$10,000 per claim,"²⁵¹ and "damages were increased from double to triple the ac-

^{246.} Id.; see also BOESE, supra note 227, § 1.02, 1-15 (noting that the 1943 amendments decreased the maximum bounty to ten percent if the government took over the suit).

^{247. 1943} Act, § 3491; BOESE, *supra* note 227, § 1.02, 1-15 (noting that the 1943 amendments decreased the maximum bounty to twenty-five percent if the government did not take over the suit).

^{248.} See BOESE, supra note 227, § 1.04[A] & n.67, 1-20 ("The lengthy statements and debates show congressional alarm and impatience over what was perceived as rampant fraud and governmental acquiescence."); Bales, supra note 2, at 390 ("In the mid-1980s[,]... the defense budget was rising, and the public was outraged by reports of \$400 hammers and \$600 toilet seats.").

^{249.} False Claims Amendments Act of 1986 ("1986 Act"), Pub. L. No. 99-562, § 3, 100 Stat. 3153, 3157 (1986) ("In no event may a person bring an action under subsection (b) which is based upon allegations or transactions which are the subject of a civil suit or an administrative civil money penalty proceeding in which the Government is already a party.").

^{250.} Id. § 4(A) ("No court shall have jurisdiction over an action under this section based upon the public disclosure of allegations or transactions in a criminal, civil, or administrative hearing, [through various other governmental channels], or from the news media, unless the action is brought by the Attorney General or the person bringing the action is an original source of the information."); see also Bales, supra note 2, at 390–91 (noting that Congress "removed the bar against *qui tam* actions based on information already known by the government," substituted "prohibition of actions based on 'publicly disclosed' information[,]" and "created an exception . . . if the *qui tam* informer was the 'original source' of the information").

^{251.} Bales, *supra* note 2, at 390; *see also* 1986 Act, § 2 (mandating "a civil penalty of not less than \$5,000 and not more than \$10,000").

tual losses"²⁵² except in certain circumstances where an accused party had promptly "furnished officials . . . with all information known . . . about the violation"²⁵³ Second, Congress increased *qui tam* informers' shares. When the government took over the suit and the suit was not "based primarily on" already public information, a *qui tam* plaintiff would now receive between fifteen and twenty-five percent of the proceeds,²⁵⁴ rather than a maximum of ten percent.²⁵⁵ For cases in which the government did not take over the suit, Congress replaced the 1943 amendments' twenty-five percent cap²⁵⁶ with a provision mandating that plaintiffs would receive between twenty-five and thirty percent of the proceeds, as well as "reasonable expenses[,] . . . reasonable attorneys' fees[,] and costs."²⁵⁷

As intended, the 1986 amendments spurred growth in *qui tam* litigation.²⁵⁸ In a fourteen-year period from October 1, 1987, to September 30, 2011, *qui tam* filings under the False Claims Act grew twentyfold, from thirty in fiscal year 1987 to 638 in fiscal year 2011.²⁵⁹ During that same period, *qui tam* filings led to over \$20 billion in settlements and judgments, with relators receiving about \$3.4 billion or an average of approximately \$436,000 per individual filing.²⁶⁰

Given these stakes, it is unsurprising that private lawyers specializing in False Claims Act cases have emerged.²⁶¹ But in some contrast

258. See BOESE, supra note 227, § 1.04[H], 1-26 ("The effect of the 1986 Amendments has been to transform the False Claims Act into an effective and widely used weapon against government-related fraud.").

^{252.} Bales, *supra* note 2, at 390; *see also* 1986 Act, § 2 (providing for liability equaling "[three] times the amount of damages which the Government sustains").

^{253. 1986} Act, § 2 (permitting a court to "assess not less than [two] times the amount of damages" in a situation involving a qualifying cooperative defendant).

^{254.} *Id.* § 3; *see also* BOESE, *supra* note 227, § 1.04[G], 1-25 (noting the increase in the *qui tam* informer's share).

^{255.} See supra text accompanying note 246.

^{256.} See supra text accompanying note 247.

^{257. 1986} Act, § 2; *see also* Bales, *supra* note 2, at 390 (noting the increase in an informer's share). The 1986 Act also provided a cause of action for employees who suffered discrimination at work "because of lawful acts... in furtherance of an action under [the] section" 1986 Act, § 4; *see also* Bales, *supra* note 2, at 391 (noting the addition of "a whistleblower protection provision").

^{259.} See U.S. Dep't of Justice, FRAUD STATISTICS — OVERVIEW: OCTOBER 1, 1987– SEPTEMBER 30, 2012, 1–2 (Oct. 24, 2012), available at http://www.justice.gov/civil/ docs_forms/C-FRAUDS_FCA_Statistics.pdf.

^{260.} See id.

^{261.} See, e.g., Ashcraft & Gerel, LLP, Qui Tam and the False Claims Act, QUI TAM AND THE FALSE CLAIMS ACT, http://www.qui-tam-false-claims-act.com (last visited May 9, 2013) ("The Qui Tam Litigation Division at Ashcraft and Gerel is devoted exclusively to the representation of whistle blowers who choose to file lawsuits on behalf of the US government..."); What We Do — Qui Tam Cases, PHILIPS & COHEN LLP, http://www.phillipsandcohen.com/Qui-Tam-Cases.shtml (last visited May 9, 2013) ("Phillips & Cohen LLP is the nation's most successful law firm representing whistleblowers in false Claims Act Cases, VOGEL, SLADE & GOLDSTEIN, http://vsg-law.com

with widespread dismay over the rise of professional patentinfringement plaintiffs commonly condemned as "trolls,"²⁶² Congress appears not to have viewed the rise of such professional *qui tam* "privateers" as overthrowing the False Claims Act's policy balance — Congress has not reversed course despite opportunities presented by later amendments to the False Claims Act.²⁶³ Indeed, the apparent success of the 1986 False Claims Act amendments has apparently inspired over a dozen state legislatures to enact their own false-claims *qui tam* provisions.²⁶⁴

3. Boom and Bust for Qui Tam Suits Alleging False Patent Marking

In contrast to the recent history of false-claims *qui tam* activity, a boom-and-bust trajectory has characterized litigation under the U.S. Patent Act's false-marking statute, which Congress recently abolished. This trajectory highlights the potential importance of regulation and careful calibration for a private-enforcement regime's survival.

Until late 2011, the Patent Act's false-marking statute authorized *qui tam* suits for false indications that a product was patented. The false-marking statute called for a fine of "not more than \$500 for every . . . offense"²⁶⁵ and further provided that "[a]ny person may sue for the penalty, in which event one-half shall go to the person suing."²⁶⁶ This *qui tam* provision originated in 1842 and predated the False Claims Act.²⁶⁷

Prior to December 2009, however, the false-marking statute existed in near-complete obscurity. The conventional wisdom was that the statute's \$500 cap on fines meant that the *qui tam* provision provided little effective incentive for private plaintiffs.²⁶⁸ As matters turned out, this conventional wisdom rested on a contestable understanding of the scope of what constituted a single "offense" for purposes of the \$500 cap. In 1910, the U.S. Court of Appeals for the First Circuit had stated what for decades was the conventional understanding — namely that, even if a defendant had falsely marked a large

⁽last visited May 9, 2013) ("Vogel, Slade & Goldstein, LLP is one of the nation's longeststanding qui tam law firms representing whistleblowers in lawsuits under the False Claims Act.").

^{262.} See supra text accompanying notes 34-38.

^{263.} See BOESE, supra note 227, § 1.04[H], 1-27 to 1-28 (noting that Congress has further revised the False Claims Act on multiple occasions).

^{264.} See James F. Barger, Jr. et al., States, Statutes, and Fraud: An Empirical Study of Emerging State False Claims Acts, 80 TUL. L. REV. 465, 478–79 (2005) (observing that since 1986, thirteen states have enacted false-claims qui tam provisions).

^{265. 35} U.S.C. § 292(a) (2006).

^{266.} Id. § 292(b) (repealed 2011).

^{267.} Stephens, *supra* note 21, at 1007 ("The current false-marking statute traces back to 1842....").

^{268.} See Cotter, supra note 21, at 181 ("Recent months have witnessed a flurry of lawsuits under 35 U.S.C. 292, the once-obscure false patent marking statute.").

number of individual articles, such repeated instances of false marking could constitute one "single, continuous" offense.²⁶⁹

In December 2009, the Federal Circuit rejected the First Circuit's understanding. Emphasizing "[t]he plain language of the statute," the Federal Circuit held that offenses under the statute necessarily accrued on a per-article basis.²⁷⁰ Consequently, if a manufacturer such as Solo Cup Co. falsely marked over twenty billion cup lids with improper patent numbers, it could be subject to a fine of over \$10 trillion²⁷¹ — a sum equaling about two-thirds of the United States' entire Gross Domestic Product for 2010.²⁷²

Predictably, the prospect of winning fifty percent of such astoundingly large penalties generated a massive upward spike in false-marking claims. By early 2011, *qui tam* plaintiffs had filed well over 1000 new false-marking cases, including a case seeking to impose a fine of over \$10 trillion on Solo Cup.²⁷³ Outcry about *qui tam* abuse and "false-marking trolls" followed.²⁷⁴ Taking an abolitionist approach previously eschewed in the false-claims context, Congress promptly responded by abrogating the false-marking statute's *qui tam* provision.²⁷⁵ A new law that Congress enacted in 2011 empowers only the United States or "[a] person who has suffered a competitive injury" to sue for false marking.²⁷⁶ Moreover, a competitively injured private party cannot share in any large government fine but is instead

^{269.} London v. Everett H. Dunbar Corp., 179 F. 506, 507 (1st Cir. 1910) (agreeing with a contention that, "where the marking is all done on the same day and at the same time, so that it is practically a single, continuous act, but one offense is committed"); *see* Stephens, *supra* note 21, at 1017 ("Between 1952 and 2009, courts generally followed the rule from *London v. Everett H. Dunbar Corp.*, which assessed a fine for each single-and-continuous act of false marking.").

^{270.} Forest Grp., Inc. v. Bon Tool Co., 590 F.3d 1295, 1301 (Fed. Cir. 2009) ("[T]he statute's plain language requires the penalty to be imposed on a per article basis.").

^{271.} See Pequignot v. Solo Cup Co., 608 F.3d 1356, 1359 (Fed. Cir. 2010) ("Pequignot accused Solo of falsely marking at least 21,757,893,672 articles . . . and sought an award of \$500 per article, one half of which would be shared with the United States."); Caroline Ayres Teichner, Note, *Markedly Low: An Argument to Raise the Burden of Proof for Patent False Marking*, 86 CHI.-KENT L. REV. 1389, 1389 (2011) (noting that a plaintiff claimed that Solo Cup had "falsely marked at least 21,757,893,672 cup lids with expired patent numbers" and "sought to recover \$250 per lid, or \$5.4 trillion" (emphasis omitted)).

^{272.} See U.S. DEPARTMENT OF COMMERCE, http://www.bea.gov/national/index.htm#gdp (follow "Interactive Table: GDP and National Income" hyperlink; then follow "Begin using the data" hyperlink; then follow "Section 1" hyperlink; then follow "Table 1.1.5." hyperlink) (reporting a GDP of just over \$14 trillion for 2010) (last visited on May 9, 2013).

^{273.} Kirsten R. Rydstrom, Maria N. Bernier & Joseph D. Filloy, *Burning Down the Courthouse:* Qui Tam Actions Under Section 292 of the False Marking Statute, U. PITT. J. TECH. L. & POL'Y, Spring 2011, at 1, 3.

^{274.} *See* Cotter, *supra* note 21, at 181 (noting that "Congress and the courts [were] consider[ing] various measures intended to rein in perceived abuses on the part of plaintiffs pejoratively referred to as 'marking trolls'").

^{275.} Stephens, *supra* note 21, at 1013 (noting that the America Invents Act became law on September 16, 2011, and "eliminat[ed] . . . the qui tam enforcement mechanism").

^{276.} Leahy-Smith America Invents Act of 2011 ("America Invents Act"), 35 U.S.C. § 292 (2006 & Supp. V 2012).

limited to seeking "damages adequate to compensate for the injury."²⁷⁷

Thus, the 2010–2011 spike in false-marking claims was just that — a spike. The striking contrast between false-marking *qui tam*'s demise and false-claims *qui tam*'s survival is instructive. Just as privateering's eighteenth-century regulation helped support a flourishing private practice, regulated forms of *qui tam* might be best suited to thrive today. The False Claims Act's substantial regulation of *qui tam* suits appears to contribute significantly to their continued vigor. The "Wild West" character of the upward spike in *qui tam* suits under the false-marking statute quite clearly contributed to their abrupt demise.

V. MODERN CITIZEN SUITS

Private-enforcement analogs for patent law are not limited to pre-Westphalian cousins such as privateering and *qui tam*. The modern administrative state has given rise to its own distinctive forms of private enforcement — most notably through provisions for citizens, consumers, and individual investors to enforce regulatory statutes,²⁷⁸ often with the device of a class action as a procedural aid.²⁷⁹ Antitrust suits brought by private plaintiffs took off in the wake of World War II.²⁸⁰ Private Rule 10b-5 suits to enforce the securities laws have flourished more recently, particularly after the Supreme Court's recognition in 1988 of a "'fraud-on-the-market' theory" that significantly eased satisfaction of plaintiffs' burdens of proof.²⁸¹ In large part because of congressional enactment of various statutes authorizing citizen suits to enforce environmental laws,²⁸² such suits also proliferated during the 1980s,²⁸³ a decade that perhaps not so

^{277.} Id.

^{278.} Cf. Trevor W. Morrison, Private Attorneys General and the First Amendment, 103 MICH. L. REV. 589, 602 (2005) ("[T]he 'citizen suit' is probably the most familiar contemporary form of private attorney general litigation.").

^{279.} See Gilles & Friedman, supra note 70, at 626 ("In modern times, the principal means whereby private actors seek to redress public harms is the class action — a device that has become steeped in controversy."); William B. Rubenstein, On What a "Private Attorney General" Is — And Why It Matters, 57 VAND. L. REV. 2129, 2146–48 (2004) (describing "the class action attorney" as "the core case" of "the supplemental private attorney general"); cf. Rose, supra note 2, at 1312 ("Not surprisingly, the prototypical Rule 10b-5 case became a class action brought on behalf of thousands of investors").

^{280.} Everette MacIntyre, *The Role of the Private Litigant in Antitrust Enforcement*, 7 ANTITRUST BULL. 113, 116 (1962) (chronicling the rise in antitrust suits brought by private parties from 1942 through 1961).

^{281.} See Hittinger and Bona, *supra* note 193, at 172 (noting that "the fraud-on-the-market theory transforms reliance from an individual issue . . . into a common issue," thereby removing "a major barrier to class certification").

^{282.} Cross, *supra* note 2, at 56 ("Congress must have recognized the benefits of citizen suits, for such actions have been authorized in virtually every major piece of environmental legislation passed in recent years.").

^{283.} Id. at 55 ("[T]he 1980's have witnessed dramatic growth in use of the citizen suit.").

coincidentally witnessed congressional actions to revive false-claims *qui tam*²⁸⁴ and to reinvigorate U.S. patent law.²⁸⁵ Moreover, growth in some forms of private enforcement has continued in the twenty-first century: in the wake of a financial crisis that triggered concerns that public regulators had been too lax,²⁸⁶ Congress enacted whistleblower provisions that not only protected individuals who report securities-law violations but also provided positive incentives for such reporting in the form of ten to thirty percent of monetary penalties over \$1 million.²⁸⁷ Over a longer span of decades, state tort law, as applied through private citizens' suits, has emerged as a significant way to regulate product safety.²⁸⁸

As we have already seen to be a recurrent historical pattern,²⁸⁹ much of this government-backed growth in private enforcement has ultimately led to later government-embraced backlash. Some of the backlash has come in the form of successful, generally legislative, efforts at state-based tort reform.²⁹⁰ At the national level, the courts, not Congress, have commonly been the primary reform agents. Courts have played this role in part by invoking federal standing requirements as a constitutional trump to congressional efforts to authorize citizen suits.²⁹¹ The effective tightening of access to the courts through requirements such as standing has also proceeded on non-constitutional and even substantive grounds. In antitrust and securities

^{284.} See supra text accompanying notes 247-58.

^{285.} See MERGES & DUFFY, supra note 44, at 11 ("[T]he creation of the Federal Circuit was a watershed event in the history of the U.S. patent system."); John M. Golden, The Supreme Court as 'Prime Percolator': A Prescription for Appellate Review of Questions in Patent Law, 56 UCLA L. REV. 657, 678 (2009) [hereinafter Golden, Appellate Review] ("The Federal Circuit's creation in 1982 followed closely on the heels of the Bayh-Dole Act, which, by promoting the patenting of government-funded technologies, embodied a spirit of renewed commitment to using patents as a lever for commercializing invention.").

^{286.} See Jeff Merkley & Carl Levin, Essay, *The Dodd-Frank Act Restrictions on Proprietary Trading and Conflicts of Interest: New Tools to Address Evolving Threats*, 48 HARV. J. LEGIS. 515, 553 (2011) ("[P]oor policy choices and lax regulation led to unbridled proprietary trading and unchecked conflicts of interest that helped create the conditions that resulted in the [2008 financial] crisis.").

^{287.} Heidi L. Hansberry, Comment, In Spite of Its Good Intentions, the Dodd-Frank Act Has Created an FCPA Monster, 102 J. CRIM. L. & CRIMINOLOGY 195, 205 & n.69 (2012).

^{288.} See A. Mitchell Polinsky & Steven Shavell, *The Uneasy Case for Product Liability*, 123 HARV. L. REV. 1437, 1438–39 (2010) ("The liability of manufacturers of products for harms caused to their customers — product liability — has great prominence in the United States.").

^{289.} See supra text accompanying notes 105-64, 194-229, 234-47 & 269-77.

^{290.} See F. Patrick Hubbard, *The Nature and Impact of the "Tort Reform" Movement*, 35 HOFSTRA L. REV. 437, 470–71 (2006) (suggesting that various tort-reform efforts were at least partly motivated by concern about products-liability suits).

^{291.} Lujan v. Defenders of Wildlife, 504 U.S. 555, 573 (1992) (rejecting a lower court's conclusion "that the injury-in-fact requirement had been satisfied by congressional conferral upon all persons of an abstract, self-contained, noninstrumental 'right' to have the Executive observe the procedures required by law" (emphasis omitted)).

contexts, the Supreme Court has interpreted various laws in ways that generate procedural and substantive hurdles to private enforcement.²⁹²

Efforts to promote or resist modern private-enforcement pendulum swings have stoked a rich literature chronicling citizen suits' pros and cons. After the discussions of privateering and *qui tam* litigation in Parts III and IV, many of these should sound familiar. According to academic commentators, private enforcement can improve on public enforcement in the following ways: (1) enabling private victims to seek compensation for harm;²⁹³ (2) increasing deterrence of misbehavior and encouraging cooperation with public authorities;²⁹⁴ (3) correcting for public underenforcement resulting from error, ineffectiveness, budget constraints, "capture," distraction by other priorities, inertia, apathy, or lethargy;²⁹⁵ (4) promoting greater efficiency by harnessing private parties' better information or better enforcement capacities;²⁹⁶ (5) exploiting private parties' capacity for innovation by providing incentives for them to develop new approaches to information gathering and enforcement;²⁹⁷ (6) promoting individual auton-

^{292.} Hittinger & Bona, *supra* note 193, at 167–68 (describing a 2008 decision by the U.S. Supreme Court as "illustrat[ing] a recent reformulation of the private attorney general model for enforcing federal laws"); *see also* CHRISTINA BOHANNAN & HERBERT HOVENKAMP, CREATION WITHOUT RESTRAINT: PROMOTING LIBERTY AND RIVALRY IN INNOVATION 48 (2012) ("Much of the revolution that has gone on in antitrust over the past thirty years has pertained to private actions and the types of harm needed to support them.").

^{293.} See Stephenson, *supra* note 4, at 103 ("[M]any of the decisions implying private rights of action emphasize compensation").

^{294.} See Evans, supra note 4, at 209 ("Because citizen enforcement and APA review proceedings are publicly visible, they call attention to and delegitimize non-compliance in a way that is much more severe than internal discipline or private negotiations and bargains."); Stephenson, supra note 4, at 103–04 ("Many scholars have concluded that deterrence, rather than the need for private redress, has been the [U.S. Supreme] Court's primary rationale for recognizing private causes of action under the securities and investor protection laws.").

^{295.} See Evans, supra note 4, at 209 ("Citizen suits have been recognized as effective means of supplementing agency enforcement.... Citizen enforcement has been shown to increase when agency enforcement decreases...." (footnote omitted)); see also Rose, supra note 2, at 1305 (noting agencies' potential "bureaucratic inefficiency and regulatory capture" and "actual or potential budgetary constraints"); Stephenson, supra note 4, at 107 (noting agencies' frequently limited enforcement resources); id. at 110 (discussing "the tendency of government regulators to underenforce certain statutory requirements because of political pressure, lobbying by regulated entities, or the laziness or self-interest of the regulators themselves" (footnotes omitted)).

^{296.} See Rose, *supra* note 2, at 1343 ("[P]rivate enforcement might be justified if private parties naturally possess information about violations, information that is difficult for a public enforcer to obtain."); Stephenson, *supra* note 4, at 108 (observing that, relative to often lumbering "public enforcement bureaucracies," private parties might have advantages in detecting violations); *id.* at 109 (noting that private enforcement might further efficiency by "enabl[ing] those citizens who value the public good more highly to subsidize enforcement by bearing some of the monitoring and prosecution functions," thereby achieving "the functional equivalent of a more efficient tax system").

^{297.} See Stephenson, *supra* note 4, at 112 (observing that private-enforcement regimes can "encourage legal innovation — whether in the form of novel legal theories, creative approaches to dispute settlement, or new techniques of investigation and proof").

omy by delegating enforcement responsibility to citizens;²⁹⁸ and (7) checking government power, particularly that of self-interested or "captured" public enforcement officials.²⁹⁹ Commentators have also noted the following potential drawbacks: (1) a tendency toward overenforcement of "overbroad liability rule[s]" that a public official acting in the public interest would enforce more selectively;³⁰⁰ (2) inflexibility of enforcement style;³⁰¹ (3) inefficient disruption of more cooperative approaches to regulation;³⁰² (4) collusive settlements that undercut the public interest;³⁰³ (5) greater judicial error or inconsistency if a centralized, expert agency is not involved in enforcement;³⁰⁴ (6) lack of democratic accountability for decisions to enforce the law;³⁰⁵ and (7) underenforcement where private incentives and capacities to enforce are inadequate.³⁰⁶

^{298.} See Michael S. Greve, *The Private Enforcement of Environmental Law*, 65 TUL. L. REV. 339, 340 (1990) ("Congress views [citizen-suit] provisions as an efficient policy instrument and as a participatory, democratic mechanism that allows 'concerned citizens' to redress environmental pollution."). See generally Arthur R. Miller, *From Conley to Twombly to Iqbal: A Double Play on the Federal Rules of Civil Procedure*, 60 DUKE L.J. 1, 74 (2010) (discussing advantages of private enforcement of public policies).

^{299.} Morrison, *supra* note 278, at 609 ("[A] legislature might enlist private parties to enforce a statute out of a concern that if a government agency were granted exclusive enforcement authority, the agency might become unduly influenced by the entities it regulates.").

^{300.} See Rose, supra note 2, at 1304 ("A monopolistic public enforcer can deal with the overdeterrent potential of an overbroad liability rule through use of discretionary nonenforcement, or by pursuing a cooperative approach"); Stephenson, supra note 4, at 116 ("[G]overnment regulatory agencies (it is often claimed) are better at screening out enforcement actions that are either nonmeritorious or not worth the costs of prosecution."); cf. Landes & Posner, supra note 1, at 5, 15 (finding that, under a model for fine-based enforcement by "a competitive enforcement industry" in which companies "acquire property rights to offenses," optimal private enforcement entails "a greater probability of apprehension and conviction . . . and a greater social loss . . . than optimal public enforcement").

^{301.} See Rose, supra note 2, at 1330 ("[A] public enforcer can adjust the deterrence calculus by adjusting its *style* of enforcement, taking less of a coercive approach and more of a cooperative approach").

^{302.} See Stephenson, *supra* note 4, at 117 ("[C]itizen suits may disrupt the cooperative relationship between regulators and regulated entities that many argue is essential for long-term compliance with statutory mandates.").

^{303.} See Rose, supra note 2, at 1327–28 (noting that "[d]ecoupling the sanction imposed against the wrongdoer from the bounty paid to the private enforcer" would generate "opportunities for collusion").

^{304.} See Morrison, supra note 278, at 616 (noting that one objection to citizen suits "emphasizes the need for coordinated and consistent enforcement"); Stephenson, supra note 4, at 116 ("[W]ithout the involvement of an expert government agency[,]... the risk of erroneous decisions in private actions may increase"); *id.* at 119 ("[J]udicial decisions rendered in citizen suits, brought piecemeal before nonexpert courts by citizen groups with particularized interests, may establish adverse or inconsistent precedents").

^{305.} See Stephenson, *supra* note 4, at 119 ("As neither the citizens bringing private enforcement suits nor the judges who decide them are subject to electoral discipline, private enforcement may undermine a valuable democratic feature of American governance.").

^{306.} Eloise Pasachoff, *Special Education, Poverty, and the Limits of Private Enforcement*, 86 NOTRE DAME L. REV. 1413, 1416 (2011) (indicating that, at least in certain contexts, "evidence that many violations go unreported . . . suggests that overreliance on private enforcement may result in underenforcement of the law").

The bookend listings of overenforcement and underenforcement as potential drawbacks of private enforcement might seem somewhat paradoxical. Nonetheless, it follows straightforwardly from the fact that all-but inevitable misalignments of public and private interests can point in any number of context-dependent directions. As Steven Shavell noted decades ago, even if private plaintiffs generally have the wherewithal to bring suit, a private plaintiff generally does not internalize either all of a suit's costs (e.g., defendant's litigation costs) or all of its benefits (e.g., general deterrence value).³⁰⁷ Likewise, a private defendant generally does not internalize all the costs or benefits of litigating a suit to the finish. As a result, a private-enforcement regime might generate "too little litigation" or "too much litigation."³⁰⁸ Without further context, one cannot know which.³⁰⁹

On the other hand, our historical forays might suggest that overenforcement is likely to be the predominant concern when, as with patent-infringement litigation and various other forms of privateenforcement suits, litigation costs are typically high but mechanisms such as contingency-fee representation or professional enforcement entities enable plaintiffs to file suit despite these costs.³¹⁰ Commentators have long observed that private parties might abuse an expensive litigation process to extort lucrative settlements of meritless or only marginally meritorious claims.³¹¹ Supreme Court justices have recently shown acute sensitivity to this possibility in a variety of legal contexts.³¹² More historically, traditional rules against "maintenance"³¹³

^{307.} Steven Shavell, *The Social Versus the Private Incentive to Bring Suit in a Costly Legal System*, 11 J. LEGAL STUD. 333, 333–34 (1982) (describing lawsuits as involving positive and negative externalities relative to a plaintiff's private interest).

^{308.} Id. at 334.

^{309.} See Louis Kaplow, Private Versus Social Costs in Bringing Suit, 15 J. LEGAL STUD. 371, 371 (1986) (noting Steven Shavell's conclusion "that, in general, there is no systematic relationship between the social and the private benefits of bringing suit"); cf. Steven Shavell, The Fundamental Divergence Between the Private and the Social Motive to Use the Legal System, 26 J. LEGAL STUD. 575, 579 (1977) (observing that "social intervention may be justified" either to restrain or to encourage litigation).

^{310.} *Cf.* Shavell, *supra* note 309, at 589–91 (suggesting that relatively high litigation costs, at least when compared to likely gains in deterrence, might mean that there are excessive suits for automobile accidents and products liability). *See generally* Sivaramjani Thambisetty, *Patent Litigation in the UK: Solutions in Search of a Problem?*, 32 EUR. INTELL. PROP. REV. 238, 243 (2010) ("The expensive nature of US patent litigation is often held up as an example of the abject failure of litigation as a post-grant enforcement mechanism.").

^{311.} Hittinger & Bona, supra note 193, at 170-71.

^{312.} *Id.* at 167–68 (noting "a recent perceived pattern to scale back . . . (and decline to expand) the powers of private attorneys general to enforce federal law through class action lawsuits."); *see also* eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388, 396 (2006) (Kennedy, J., concurring) (describing the emergence of a new "industry" of patent holders that "use patents not as a basis for producing and selling goods but, instead, primarily for obtaining licensing fees").

^{313.} BLACK'S LAW DICTIONARY 954 (6th ed. 1990) (defining "maintenance" as "[a]n officious intermeddling in a lawsuit by a non-party by maintaining, supporting or assisting either party, with money or otherwise, to prosecute or defend the litigation").

or "champerty"³¹⁴ apparently reflected concern that third parties who invested in lawsuits "would foment excessive litigation for the purpose of harassment or personal gain."³¹⁵ Thus, both modern analysis and historical experience provide at least some basis for believing that calls for restraints on citizen suits are not without justification, although there is always the danger that an anti-private-enforcement backlash will overreach.³¹⁶

VI. PATENT PRIVATEERING'S EVOLUTIONARY PAST AND POSSIBLE FUTURE

What does all the above mean for "patent privateers"? A primary contention of this Article is that similarities between backlash against "private attorneys general" and demonization of "patent trolls" are not accidental. This part highlights such similarities and considers their implications.

A. Patent Law as a Private-Enforcement Regime

As indicated in Part I, a patent provides its holder with a private cause of action that, optimistically, is intended to advance a public end — the promotion of technological progress.³¹⁷ A successful enforcer of patent rights may obtain a monetary reward³¹⁸ or an injunction,³¹⁹ with the latter potentially acting as a lever to extract a fee for patent licensing or acquisition.³²⁰ In short, as Macauley noted long ago with respect to copyright, patents effectively act as a private-taxation regime in which patentees use litigation or its threat to effect transfers of wealth.³²¹

^{314.} *Id.* at 231 (defining "champerty" as "[a] bargain between a stranger and a party to a lawsuit by which the stranger pursues the party's claim in consideration of receiving part of any judgment proceeds").

^{315.} Fisch, *supra* note 9, at 181.

^{316.} See supra text accompanying notes 242-64.

^{317.} See Golden, Patent Remedies, supra note 30, at 509 (noting "a utilitarian goal that is standard in modern accounts: the patent system should act to promote the development, disclosure, and use of new technologies, ideally in a way that maximizes social welfare.").

^{318. 35} U.S.C. § 284 (2006 & Supp. V 2012) ("Upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement").

^{319.} *Id.* § 283 (authorizing courts to "grant injunctions . . . to prevent the violation of any right secured by patent").

^{320.} Cf. Brulotte v. Thys Co., 379 U.S. 29, 33 (1964) ("A patent empowers the owner to exact royalties as high as he can negotiate with the leverage of that monopoly.").

^{321.} *Cf.* 56 Parl. Deb. § 350 (1841) (remarks of Lord Macauley) ("The principle of copyright is this. It is a tax on readers for the purpose of giving a bounty to writers.").

The rise of so-called "patent trolls"³²² has highlighted this everpresent aspect of patent rights. In the hands of professional enforcement entities that play no direct role in technological innovation, patents' role as commissions for private enforcement naturally disentandisentangles itself from their role as rewards for innovation *per se*. Further, the rise and perceived aggressiveness of professional enforcers help make clear that patent law is vulnerable to many of the pathologies that have long been thought to plague private-enforcement cousins such as historical privateering, *qui tam*, and citizen suits — in particular, excessive enforcement and the strategic abuse of enforcement or its threat to generate inflated monetary rewards.³²³

One might argue, however, that "patent trolls" are merely an anomaly or, more tendentiously, that they are an abomination, a mutant distortion of the patent system that governments should selectively stamp out. I am skeptical of this view as, to me, patent-enforcement entities appear to play out the logic of various evolutionary aspects of the patent system — particularly the relatively free alienability of patent rights³²⁴ and the replacement of traditional requirements that a patentee "use" or "work" the invention with more modern requirements of public disclosure of the nature of the invention.³²⁵ Further, the nonrival and relatively nonexcludable nature of already publicly disclosed information about an invention has almost necessarily caused patent rights to have an aggressive, outward-looking aspect, relying not so much on defensive self-help but instead on threats of suit that others might naturally tend to view as aggressive and predatory — even when asserted by the patent's named inventor and even in situations in which a patentee is making active use of actual em-

^{322.} Cf. Tom Ewing & Robin Feldman, The Giants Among Us, 2012 STAN. TECH. L. REV. 1, 1 (describing "a handful of entities [that] have amassed vast treasuries of patents on an unprecedented scale").

^{323.} Of course, one has to be wary of assuming that such "observations" are always accurate. *Cf.* Theodore Eisenberg, *The Empirical Effects of Tort Reform, in* RESEARCH HANDBOOK ON THE ECONOMICS OF TORTS (Jennifer Arlen ed., forthcoming) (warning that "the absence of robust evidence of effects" from tort reform and "the national scope of plaintiffs' declining success" suggest that the posited case for tort reform might reflect "the social construction of knowledge by well-funded industry groups"), *available at* http://ssrn.com/abstract=2032740.

^{324.} See supra text accompanying notes 34-35.

^{325.} John M. Golden, *Construing Patent Claims According to Their "Interpretive Community": A Call for an Attorney-Plus-Artisan Perspective*, 21 HARV. J.L. & TECH. 321, 349 (2008) [hereinafter Golden, *Construing Patent Claims*] ("[T]he patent's more general written description or 'specification' largely developed in the eighteenth century, when the United Kingdom and the United States discarded traditional requirements that a patentee 'work' the invention and replaced them with a requirement of disclosure that enables others to make and use the invention."); *cf.* Golden, *Patent Trolls, supra* note 35, at 2122 (noting courts' historical rejection of arguments "that court-ordered injunctions should not be available to patent holders who were 'nonusers' of their patented inventions — patent holders who did not produce or practice the invention themselves").

bodiments of the patented invention.³²⁶ Owners of tangible property who build a sturdy fence about this property or otherwise remove it from ready public access seem, at least in many typical situations, naturally more able to avoid having to actively seek out specifically identified parties against whom to enforce their rights.

In any event, whether or not the recent rise to prominence of patent-enforcement entities itself represents a qualitative sea change in how patent law operates, such entities' activities undoubtedly raise questions about how patent law should operate in the future. How should patent law adapt to the age of "patent trolls"? Before trying to answer this question, we should first try to understand how patents have continued to thrive even as their historical peers, privateering commissions and *qui tam* provisions, have largely foundered.

B. Patents' Distinctive Flourishing in the Administrative State

While privateering and *qui tam* litigation sputtered, the latter parts of the nineteenth century constituted a heroic era for U.S. patent law, one featuring what Zorina Khan has dubbed a "democratization of invention," in which a significant "rise in patenting was associated with a democratic broadening of the ranks of patentees."³²⁷ True, in Europe, the nineteenth-century experience was more mixed: the middle of the century witnessed a great "patent controversy" in which advocates of free trade sought to abolish patents and nations such as Switzerland and the Netherlands operated for a substantial time without them.³²⁸ But by the turn of the century, pro-patent perspectives had triumphed.³²⁹ Patents did not end up in the same historical dustbin as privateering and most forms of *qui tam* litigation.

Even more recently, U.S. patent law until the last several years seemed largely immune to the sting of a broader anti-privateenforcement backlash that began to shape law on federal citizen suits

^{326.} See supra text accompanying notes 29-33.

^{327.} B. ZORINA KHAN, THE DEMOCRATIZATION OF INVENTION: PATENTS AND COPYRIGHTS IN AMERICAN ECONOMIC DEVELOPMENT, 1790–1920, at 9 (2005); *cf.* John M. Golden, *Innovation Dynamics, Patents, and Dynamic-Elasticity Tests for the Promotion of Progress*, 24 HARV. J.L. & TECH. 47, 93 (2010) [hereinafter Golden, *Innovation Dynamics*] (showing how, from 1856 to 1894, the cumulative number of U.S. patents grew "approximately [] a multiple of *t*7.3," where *t* represents the time since 1790, the year in which the first U.S. Patent Act became law). In a 1901 opinion for the Court of Appeals for the Fourth Circuit, Judge Brawley compared the prospects afforded by patents to "the consciousness that in the knapsack of every private solider there might be the baton of a marshal of France that inspired her soldiers to unparalleled achievements." Crown Cork & Seal Co. v. Aluminum Stopper Co., 108 F. 845, 870 (4th Cir. 1901).

^{328.} Fritz Machlup & Edith Penrose, *The Patent Controversy in the Nineteenth Century*, 10 J. ECON. HIST. 1, 1, 4–5 (1950).

^{329.} See id. at 5-6 (describing how "[a]t the end of the 1860's the cause of patent protection seemed completely lost" but "the antipatent movement" essentially evaporated after 1873).

and state tort suits decades ago.³³⁰ Even as courts in the 1990s were clamping down on litigation by the "private attorneys general," the number of patent suits filed each year was rising dramatically.³³¹ Only with the perceived emergence of purely predatory "patent trolls" — patent law's version of dedicated private men-of-war — has patent law appeared to join the more general swing against private enforcement. Perhaps this follows from the fact that, for many, only the rise of "trolls" has brought to the foreground patent law's nature as a regulatory regime operating through delegated private enforcement, with all the potential pathologies that generalized private enforcement can bring.

An alternative hypothesis might be that Congress and others thought they could substantially control such potential pathologies through a number of incremental reforms, including limited provisions for new mechanisms of private counter-enforcement in the shape of administrative challenges to patent rights. From 1980 through 2011, Congress took repeated steps to expand private capacities to institute administrative proceedings to enforce requirements for patentability. By enabling the sidestepping of general requirements for standing in Article III courts, such administrative proceedings can provide substantial means for public-interest and consumer groups to bring private challenges to patent rights.³³²

How have patents survived and, indeed, flourished? There seem to be a number of potential explanations. First, one might posit their survival has been at least partly a product of chance. Patents' triumph doubtlessly had significant roots in general efforts to emulate the technological and economic success of comparatively pro-patent Great Britain and the United States.³³³ If one doubts that patents contributed much to this success, then one might think they simply rode essentially undeservedly on its coattails. Nonetheless, whatever the merits of this "coattails hypothesis," it seems unlikely to be the whole story. Patent law has done much to make its own historical bed, in both positive and negative ways.

^{330.} See supra text accompanying notes 289-92.

^{331.} Jean O. Lanjouw & Mark Schankerman, *Enforcement of Patent Rights in the United States, in* PATENTS IN THE KNOWLEDGE-BASED ECONOMY 145, 146 (Wesley M. Cohen & Stephen A. Merrill eds., 2003) (observing that, from 1978 to 1999, "[t]he number of patent suits rose by almost tenfold, with much of this increase occurring during the 1990s").

^{332.} See John M. Golden, *WARF's Stem Cell Patents and Tensions Between Public and Private Sector Approaches to Research*, 38 J.L. MED. & ETHICS 314, 320 (2010) ("Consumer Watchdog, a California-based consumer rights organization, ... combine[d] with the Public Patent Foundation, a nonprofit based in New York, to file requests for reexamination of WARF's three basic stem cell patents").

^{333.} *Id.* at 21 ("Continental writers were prone to take the rapid industrialization of England and the United States plus the fact that these nations had patent systems as sufficient grounds from which to infer a causal relation between patents and progress.").

No. 2]

Let's start with the positive story. Patents' survival seems at least partly attributable to their substantial evolution over time. By the end of the nineteenth century, patent law had developed in a number of ways that made fin de siècle patents much more refined instruments of social policy than their pre-Westphalian ancestors. As Oren Bracha and Adam Mossoff have chronicled, part of this evolution involved patents' development from case-by-case grants of privilege to generally available and substantially standardized rights.³³⁴ Likewise, we have seen that, by the early eighteenth century, British privateering commissions had undergone a similar evolution: nearly a century before the United States adopted a registration system for obtaining patent rights, Parliament created a type of registration system for wouldbe privateers.³³⁵

But patent law policymakers were not content with such regularization, and they ultimately developed more effective means for regulating the availability and use of patent-based private-enforcement rights. Perhaps most importantly, they equipped the patent system with new patentability requirements and administrative processes that helped tame tendencies toward counterproductive acquisition and enforcement. As a result of developments in place by the end of the nineteenth century, modern patents must do the following: (1) include a written description enabling others to make and practice the invention;³³⁶ (2) include separate claim language that indicates what the patent covers;³³⁷ (3) claim an invention that is not only novel but also nonobvious;³³⁸ (4) succeed in passing through a regular process of substantive, albeit limited, administrative review that not only raises the monetary "cost of entry" into the patent system³³⁹ but also provides an initial check that requirements for patentability are at least arguably satisfied.³⁴⁰ These requirements limited the availability of

^{334.} Bracha, *supra* note 63, at 181 ("Patents changed from case-specific discretionary policy or political grants of special privileges designed to achieve individually defined public purposes, to general standardized legal rights conferring a uniform set of entitlements whenever predefined criteria are fulfilled."); *see also* Adam Mossoff, *Rethinking the Development of Patents: An Intellectual History*, *1550–1800*, 52 HASTINGS L.J. 1255, 1255 (2001) (discussing patents' "radical shift from a grant of royal prerogative to common-law property right").

^{335.} See supra text accompanying note 75.

^{336.} See Golden, Construing Patent Claims, supra note 325, at 349 ("[T]he patent's ... written description or 'specification' largely developed in the eighteenth century").

^{337.} See *id.* at 350–52 (discussing the development of patent claiming practice and law in the nineteenth century).

^{338.} See John F. Duffy, *Inventing Invention: A Case Study of Legal Innovation*, 86 TEX. L. REV. 1, 33–40 (2007) (describing the origins and early evolution of patent law's requirement of nonobviousness).

^{339.} Jonathan S. Masur, *Costly Screens and Patent Examination*, 2 J. LEGAL ANALYSIS 687, 688 (2010) ("The high costs of prosecuting a patent force inventors to determine ex ante whether the property rights they might acquire are genuinely worth the expense.").

^{340.} See ADELMAN, RADER & THOMAS, supra note 50, at 12 ("The [U.S. Patent Act of 1836] created a Patent Office within the Department of State and provided for the filing and

rights, clarified their scope, and helped ensure that the public received more than merely trivial and transitory benefits in exchange for suffering the patent regime's inevitable costs. Like various earlier regulations of *qui tam* litigation or privateering, such as requirements that a privateer post a bond and provide a "written description" of the privateering vessel, its armament, and its crew, these evolutionary developments helped rein in this private-enforcement regime's potential for excess and abuse.

Patent law's evolution did not conclude at the end of the nineteenth century. Instead, patents and laws relating to patents have continued to have to evolve to overcome challenges to their social justification and very survival. In the twentieth century, a new challenge came from a combination of robust public programs for funding innovation and corporate, university, and national laboratories that did not rely primarily on patents to support their work.³⁴¹ These new institutions and their associated research-and-development bureaucracies might have augured the patent system's decline, just as regular navies, police forces, and associated bureaucracies heralded the declines of both privateering and *qui tam*.³⁴² But patents have continued to issue in unprecedented numbers.³⁴³ Why?³⁴⁴

Inevitable bounds on the fiscal and intellectual capacities of public and private Leviathans³⁴⁵ likely provide a substantial part of the

formal examination of patent applications."); B. Zorina Khan, *Innovations in Law and Technology*, *1790–1920*, *in* 2 CAMBRIDGE HISTORY OF LAW IN AMERICA 483, 489–90 (Michael Grossberg & Christopher Tomlins eds., 2008) (describing how, in providing for examination by "a Patent Office that was staffed by trained and technically qualified employee examiners," "the United States created the world's first modern patent institution" in 1836).

^{341.} See Golden, Patent Remedies, supra note 30, at 545 ("For firms that provide end products or services, patent rights might be relatively insignificant, one of many potential mechanisms for appropriating returns from innovation."); Robert P. Merges, One Hundred Years of Solicitude: Intellectual Property Law, 1900–2000, 88 CALIF. L. REV. 2187, 2216 (2000) ("As the twentieth century progressed, inventions were more and more likely to be the product of large-scale corporate R&D rather than of the lone workshop tinkerer.").

^{342.} Edward Rubin has noted the U.S. government's success in generating a "market for new ideas and empirical investigations" through a network of research grants that harness "people's desire to improve their material position, either directly through grant-funded compensation or indirectly by developing an enhanced and ultimately marketable reputation." Rubin, *supra* note 62, at 929.

^{343.} See U.S. PATENT AND TRADEMARK OFFICE, U.S. PATENT ACTIVITY: CALENDAR YEARS 1790 TO THE PRESENT (2012) (showing that in 2011 USPTO issued a record number of utility patents, over 224,000), available at http://www.uspto.gov/web/offices/ac/ido/oeip/taf/h_counts.pdf. But cf. Golden, Patent Trolls, supra note 35, at 2111–12 n.3 (noting that "[t]he average number of issued patents per billion dollars of real gross domestic product" was lower from 2000 through 2005 than in the middle part of the twentieth century).

^{344.} Cf. FRIEDMAN, supra note 41, at 18 ("[M]ore light can be shed on legal history if one asks: why does this survive? than if one assumes that law, unlike the rest of social life, is a museum of accidents and the mummified past.").

^{345.} Cf. THOMAS HOBBES, LEVIATHAN 81 (C.B. Macpherson ed., Penguin Books 1968) (1651) ("For by Art is created that great LEVIATHAN called a COMMON-WEALTH, or STATE,

answer. Leviathans definitely have limits, and patents might help make up for these shortcomings. Bureaucrats' limitations in dealing with new technologies are widely recognized: outsourcing of public functions by contract has become a common way "to expand the gov-ernment's capacity in rapidly growing high-tech fields."³⁴⁶

Governments do, of course, provide significant funding for scientific and technological research through a number of channels.³⁴⁷ But just as providing seed money for entrepreneurs can be easier than ensuring availability of the more substantial second-round financing and know-how "to work an idea up into a real business model,"³⁴⁸ seeding scientific advances through a centralized entity like the National Science Foundation might be an easier task for Leviathan than the more "downstream" job of realizing the potential of such advances in everyday products. In this way, even if public funding's effectiveness in advancing scientific frontiers is conceded,³⁴⁹ patent law's capacity to appeal on a basic level to profit-minded individuals — its tying of the "fire of genius" to a market-oriented "fuel of interest"³⁵⁰ — might enable it to provide a distinct and positive spur to forms of innovation that resist regularized public or corporate control.³⁵¹ Indeed, if, as is oft hypothesized, a fundamental purpose of patents is to provide a foothold for "disruptive technologies"³⁵² and upstart entrepreneurs,³⁵³

349. *Cf.* Letter from Vannevar Bush, Dir., Office of Research and Development, to President Harry S. Truman (July 5, 1945), *available at* http://www.nsf.gov/od/lpa/nsf50/ vbush1945.htm#ch1 (last visited May 9, 2013) ("The pioneer spirit is still vigorous within this nation. Science offers a largely unexplored hinterland for the pioneer who has the tools for his task.").

350. Abraham Lincoln, Second Lecture on Discoveries and Inventions (Feb. 11, 1859), *in* 3 THE COLLECTED WORKS OF ABRAHAM LINCOLN 356, 363 (Roy P. Basler ed. 1953) (emphasis omitted).

351. *Cf. supra* note 347, at 38 (2004) ("Probably the most important obstacle to effective public sponsorship is in tapping ideas for invention that are widely distributed among firms and inventors.").

352. CLAYTON M. CHRISTENSEN, THE INNOVATOR'S DILEMMA: WHEN NEW TECHNOLOGIES CAUSE GREAT FIRMS TO FAIL 24 (1997) (noting that "the firms that led the [computer disk-drive] industry in every instance of developing and adopting disruptive technologies were entrants to the industry, not its incumbent leaders").

353. See TIM WU, THE MASTER SWITCH: THE RISE AND FALL OF INFORMATION EMPIRES 30 (2010) (describing how, "in the hands of an outside inventor, a patent serves . . . as [a] sort of corporate shield that can prevent a large industrial power from killing you off"); John M. Golden, *Biotechnology, Technology Policy, and Patentability: Natural Products and Invention in the American System*, 50 EMORY L.J. 101, 168–69 (2001) (describing a "small company" theory" for patent rights under which patents serve "as a sort of intermediate

⁽in latine Civitas) which is but an Artificiall Man; though of greater stature and strength than the Naturall ").

^{346.} Rubin, supra note 62, at 904.

^{347.} SUZANNE SCOTCHMER, INNOVATION AND INCENTIVES 1 (2004) (chapter written with Stephen M. Maurer) (noting the existence of "a bewildering array of funding schemes and incentives" to support research and development).

^{348.} European Entrepreneurs: Les Misérables, ECONOMIST, July 28, 2012, at 19, 20 (observing that "[g]etting seed capital... from 'friends, fools and family' is pretty easy" but that, "[f]or the $\notin 1.5m$ -4m that firms need to work an idea up into a real business model, ... money is in desperately short supply.").

full regularization or bureaucratization of the frontier regions currently occupied by patent law might not be desirable.³⁵⁴ Processes of disruptive change are almost necessarily difficult for private or public bureaucracies to bring to heel.³⁵⁵ Moreover, to the extent such bringing to heel occurs, one might worry that disruptive change will come to a halt.³⁵⁶

So there is a positive, relatively optimistic story for patents' survival. More cynically, however, one can hypothesize that patents have survived primarily because the moneyed interests behind large corporate laboratories have learned how to make the patent regime work to their advantage.³⁵⁷ Under such a hypothesis, such moneyed interests might be understood not only to have failed to lobby successfully for patents' elimination but also to have lobbied for their continuation and development, at least as long as patents continue and develop in forms that those interests tend to find congenial.³⁵⁸ In accordance with this "entrenchment story" for patent law's apparent success, patents, like other forms of intellectual property, tend to gather in the hands of powerful industry incumbents, who, particularly after molding that regime to their benefit, then have an interest in the patent regime's perpetuation.

The entrenchment story might gather some support from how the distribution of patent ownership has developed over time. At least on a percentage basis, increasing concentration of patent holding seems a fact of modern life. According to Robert Merges, "[i]n 1885, only 12 percent of patents were issued to corporations. Slightly more than one hundred years later, the proportions had completely reversed: by 1998, only 12.5 percent of patents were issued to independent inven-

356. Cf. Cass, supra note 62, at 523 ("[P]ositive analysis suggests that government often will behave in ways that increase private returns at public expense.").

357. Key points in this process were employers' progressive historical victories in first obtaining shop rights with respect to employee inventions and later obtaining full ownership of "most employee inventions." Catherine L. Fisk, "*Removing the Fuel of Interest from the Fire of Genius*": Law and the Employee Inventor, 1830–1930, 65 U. CHI. L. REV. 1129, 1130 (1998).

marketable product ... that gives cash-poor individuals or small firms an opportunity to compete in a cash-intensive business").

^{354.} See Golden, *Patent Remedies, supra* note 30, at 525 (noting "serious concern ... that the government-grant system for cancer research is biased toward less risky, incremental work that is unlikely to produce a major breakthrough").

^{355.} Cf. CHRISTENSEN, *supra* note 352, at 227 ("[I]n many instances, the information required to make large and decisive investments in the face of disruptive technology simply does not exist. It needs to be created through fast, inexpensive, and flexible forays into the market and the product."); Golden, *Patent Remedies, supra* note 30, at 523–25 (noting potential problems with replacing patents with government-provided monetary awards).

^{358.} Cf. Jonathan M. Barnett, *Property as Process: How Innovation Markets Select Innovation Regimes*, 119 YALE L.J. 384, 412 (2009) (suggesting that, while "large entitlement holders" will often favor strong or stronger intellectual property rights, they might also "have individually rational incentives to scale back overextended intellectual property rights").

tors.³⁵⁹ In recent years, nearly half of U.S. utility patents have issued to a select group of about 200 companies.³⁶⁰ In short, like other forms of intellectual property, patents have exhibited a tendency to become effective tools for industry incumbents to pursue self-aggrandizement and self-perpetuation, potentially at the public's expense.³⁶¹

Meanwhile, patents have likely benefited from lacking equally motivated and concentrated opponents.³⁶² Although various modern movements, groups, and even corporations have recently begun to challenge patent law on quite fundamental levels,³⁶³ forces opposed to patents have frequently been weaker, less zealous, or less unified than the forces of opposition that privateering and *qui tam* typically came to face.³⁶⁴ Privateering came to have a major competitor in the form of a state-funded "military-industrial complex."³⁶⁵ that naturally resented the diversion of resources to privateers.³⁶⁶ *Qui tam* provisions have tended naturally to irritate powerful industrial incumbents and government officials that those provisions were intended to help control.³⁶⁷

^{359.} Merges, *supra* note 341, at 2215–16.

^{360.} Justin Gray & Harold Wegner, *Top 150 "Customers": Increasing Domination of the Patent System* (Nov. 23, 2009) http://www.grayonclaims.com/storage/GrayWegnerTop300 Nov23REV.pdf (recounting the increasing concentration of patent rights).

^{361.} See Robert P. Merges & Richard R. Nelson, On the Complex Economics of Patent Scope, 90 COLUM. L. REV. 839, 885–86 (1990) (describing how broad patents relating to incandescent electric lights helped generate both slower innovation and General Electric's early domination of the industry).

^{362.} See BOHANNAN & HOVENKAMP, supra note 292, at 47 ("The classic public choice paradigm clearly favors [intellectual property] rights holders: they are fewer in number, have individually greater stakes, and typically have interests that are much more homogeneous.").

^{363.} See, e.g., YOCHAI BENKLER, THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION TRANSFORMS MARKETS AND FREEDOM 66 (2006) ("Open source and its wide adoption in the business and bureaucratic mainstream allowed free software to ... move to the center of the public debate about practical alternatives to the current way of doing things."); Golden, *Patent Remedies, supra* note 30, at 507 (noting how debates over patent reform involved clashes between "Orwellian-named entities grouped along industry lines, such as the Coalition for Patent Fairness and the Coalition for 21st Century Patent Reform").

^{364.} Andrew P. Morriss & Craig Allen Nard, *Institutional Choice & Interest Groups in the Development of American Patent Law: 1790–1865*, 19 SUP. CT. ECON. REV. 143, 168 (2011) (suggesting that, through "much of the nineteenth century," industries were not as divided over patent law as they are today).

^{365.} Walter Adams, *The Military-Industrial Complex and the New Industrial State*, 58 AM. ECON. REV. 652, 654 (1968) (describing "the military-industrial complex" fed by the government's "creat[ing] and institutionaliz[ing] power concentrations which tend to breed on themselves and to defy public control").

^{366.} See supra text accompanying notes 129–40; see also Starkey, supra note 83, at 128 ("[P]rivateering promoters were obliged to compete in the markets for funds, vessels and seafarers, rivalry being particularly intense at times when trade presented a profitable investment opportunity, and the Impress Service proved efficient in securing manpower for the Navy.").

^{367.} See BROOKS, supra note 204, at 136 (noting that, in early modern England, "the most vociferous attacks on the multiplicity of suits came from the legal and social establishment."); cf. Miller, supra note 298, at 10 (describing recent Supreme Court decisions as

The cynical view of patents' historical success thus has a substantial amount of force. But there is at least one additional story that might be told. Another reason for patents' historical success might be a past tradition of relative restraint in patent rights' enforcement and acquisition. Such restraint - derived largely from norms, inertia, and other contingent circumstances distinct from formal patent lawmight have masked patent law's latent tendencies toward overenforcement and abuse. Relative restraint in enforcing patent rights might have resulted — and might still result — from any of a number of self-regarding causes: business norms, mutual interest in crosslicensing, threats of counter-enforcement from competitors' patent stockpiles, and high litigation costs.³⁶⁸ Indeed, high and perhaps practically unaffordable litigation costs might have traditionally played a particularly important role by discouraging infringement suits by patent-holding "outsiders," such as independent inventors or start-ups, who lacked the reputational concerns or susceptibility to patentinfringement countersuit that could generate patent-enforcement restraint on the part of industry incumbents.³⁶⁹ The happenstance of a combination of relatively high "entry barriers" to litigation by industry outsiders and other context-based discouragements to litigation by industry insiders might have yielded an overall situation in which patents provided substantial but limited value for both industry incumbents and at least a select group of industry outsiders - enough value to help secure some of patent law's promised dynamic benefits without overwhelming such benefits with socially undesirable costs.

If the above picture is accepted, a partial solution to litigationfinancing problems through the rise of contingency-fee patent litigation and well-funded patent-enforcement entities might be viewed as having upset an at least tolerable social balance.³⁷⁰ Such developments in financing have opened patent-infringement litigation — long dubbed the "sport of kings"³⁷¹ — to a greater number of patentees and

[&]quot;mark[ing] a continued retreat from the principles of citizen access, private enforcement of public policies, and equality of litigant treatment in favor of corporate interests and concentrated wealth.").

^{368.} Cf. Colleen V. Chien, From Arms Race to Marketplace: The Complex Patent Ecosystem and Its Implications for the Patent System, 62 HASTINGS L.J. 297, 302 (2010) ("In the late 1980s and early 1990s, many innovative high-tech companies did not file for patents.").

^{369.} Cf. Golden, *Patent Trolls, supra* note 35, at 2154 ("Private markets may be better equipped to mitigate potential holdout problems when the patent holder competes in the relevant market for end products or services.").

^{370.} Cf. Balganesh, *supra* note 31, at 46 (describing how a "copyright troll" might upset an "enforcement equilibrium [otherwise] built into copyright law").

^{371.} James Bessen & Michael J. Meurer, *Lessons for Patent Policy from Empirical Research on Patent Litigation*, 9 LEWIS & CLARK L. REV. 1, 2 (2005) ("Patent litigation has been called the sport of kings; it is complex, uncertain, and expensive.").

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patents.³⁷² Along with a general movement to more effectively "monetize" intellectual-property assets, this "democratization" of patent enforcement — no matter how desirable (arguably) in the abstract might have tipped the patent system away from a prior metastable state of relatively restrained enforcement. In the presence of dedicated patent-enforcement entities that do not engage in manufacturing, distribution, or service activities vulnerable to patent countersuit and that thus have little inherent reason for concern with the costs that patent enforcement imposes on its targets, even the sorts of patent owners who have traditionally exercised restraint might conclude that such restraint is now more foolish than wise. Aggressive suits and countersuits by previously comparatively quiescent "insiders" — exemplified by the current global conflagration of "smartphone patent wars"³⁷³ might be a dramatic turning point that makes a long latent dysfunctionality of the patent system obvious.³⁷⁴

In any event, whatever the health of patent law's current privateenforcement regime, we seem justified in worrying that the system is currently on a course toward worsening rather than improving performance. The administrative pressures on patent law are titanic and seemingly ever increasing. Over time, these pressures could ultimately tip the patent regime toward overenforcement even if it is not already so imbalanced. The USPTO issues hundreds of thousands of new patents each year, and each year the USPTO receives hundreds of thousands of new applications.³⁷⁵ The numbers of applications and issued patents continually trend upward.³⁷⁶ With the planned opening of four new regional patent offices to support the USPTO's central office in Alexandria, Virginia, patent law's administrative bureaucracy seems poised for sustained growth. But can the USPTO's growth

^{372.} See generally Chien, supra note 368, at 310–12 (describing the rise of a "patent marketplace" featuring large patent-enforcement entities and more frequent contingent-fee litigation); David L. Schwartz, *The Rise of Contingent Fee Representation in Patent Litigation* 3 (2012), available at http://ssrn.com/abstract=1990651 ("In the last decade, a substantial market has begun to develop for contingent fee representation in patent litigation.").

^{373.} Steve Lohr, *Microsoft's AOL Deal Intensifies Patent Wars*, N.Y. TIMES (Apr. 9, 2012), http://www.nytimes.com/2012/04/10/technology/microsoft-to-buy-aol-patents-for-more-than-1-billion.html?pagewanted=all ("Companies are battling in the [smartphone and tablet-computer] marketplace and in courtrooms around the world, where patent claims and counterclaims are filed almost daily.").

^{374.} See generally Chien, supra note 368, at 334–35 ("[D]efensive patenting has failed to bring about systemic 'patent peace' between large companies. Suits between large companies over high-tech inventions represent 28% of all high-tech patent litigations.").

^{375.} U.S. PATENT & TRADEMARK OFFICE, U.S. Patent Statistics, Calendar Years 1963– 2011 (2012) (showing that in each of 2010 and 2011, over 490,000 U.S. utility patent applications were filed and that in each of those years, over 200,000 U.S. utility patents were issued), available at http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.pdf.

^{376.} *Id.* (showing that from 1983 through 2011, the number of U.S. utility patent applications filed in a calendar year grew mostly monotonically from 103,703 to 503,582 and that during the same period, the number of U.S. utility patents issued in a calendar year grew mostly but somewhat less monotonically from 56,860 to 224,505).

keep up with seemingly ever growing demand for patent rights? At some point, would we even want to USPTO to try to keep up, given the administrative costs and diversion of resources involved? Continued difficulties with policing patent rights' scope and validity all but guarantee that a significant fraction of newly issued patents will provide ample breeding grounds for overzealous and even unscrupulous enforcement activity. Merely to prevent the patent system's performance from deteriorating, perhaps we need to think about ways to limit either the inflow or the outflow at the USPTO, as well as the deleterious effects of patent enforcement *per se*. Because many of the concerns with modern patent law resonate with concerns about other contemporary or historical private-enforcement regimes, we can draw on past experiences with those other regimes in seeking to address present-day patent-law problems.

C. The Private-Enforcement Perspective Applied to Questions of Patent Reform

Significantly, however, patent law's nature as a privateenforcement regime does not necessarily point to any single, immediately obvious resolution for modern questions of patent policy. As we have seen, private-enforcement has pros and cons, and the balance of pros and cons can change with time. Although this conclusion might seem trite, recent developments in patent law suggest that it merits emphasis, for the conclusion cautions against efforts, like those embodied in the international TRIPs agreement, to lock nations into a relatively rigid framework for intellectual property protection.³⁷⁷

Experience with alternative private-enforcement regimes highlights potential excesses of patent law's private enforcers, whether in the form of privateers mistakenly or deliberately preying on neutral shipping³⁷⁸ or in the form of *qui tam* plaintiffs overzealously enforcing rules against patent false marking³⁷⁹ or working on Sundays.³⁸⁰ But of course, as the history of the False Claims Act's *qui tam* provisions suggests, private underenforcement is also a possibility,³⁸¹ and

^{377.} Cf. Amy Kapczynski, Harmonization and its Discontents: A Case Study of TRIPS Implementation in India's Pharmaceutical Sector, 97 CALIF. L. REV. 1571, 1571 (2009) (noting that "[t]he most important" of "a surge of new intellectual property (IP) treaties ... is the Trade-Related Aspects of Intellectual Property (TRIPS) Agreement, which requires all members of the World Trade Organization (WTO) to adopt and enforce relatively high minimum standards of IP protection").

^{378.} See supra text accompanying note 168.

^{379.} See supra text accompanying notes 272-75.

^{380.} HARDING, *supra* note 58, at 77 (indicating that before *qui tam* provisions' general abolition in Britain, the professional informer "found his happiest hunting ground amongst infringements of Sunday observance laws").

^{381.} See supra text accompanying notes 300–09; cf. Eisenberg, supra note 323 ("The least disputable crisis in the medical malpractice field is under-claiming by victim patients.").

zealous enforcement might generate substantial benefits.³⁸² Under appropriate circumstances, even the specialized patent-enforcement entities most vigorously denounced as "trolls" could help produce a more socially optimal system, perhaps because of capacities to litigate or license more efficiently and even somewhat "democratically" to enable some fruits of enforcement to run to patentees lacking independent capacity to overcome patent enforcement's costly barriers.³⁸³ Some have suggested that fragmentation of intellectual property rights is a potential plague of innovation systems.³⁸⁴ Could ever more massive "patent aggregators" be an answer to this concern, rather than a deepening bane?

In this vein, Gary Becker and George Stigler long ago suggested the desirability of "let[ting] *anyone* enforce statutes" on grounds that, under such a policy, "[s]pecialist enforcement firms would develop" and, through competition, generate relatively efficient enforcement.³⁸⁵ Although Becker and Stigler themselves recognized the existence of "innumerable complications" that could justify a different conclusion, their suggestion highlights that, like tax collectors or parking-meter officers, so-called "patent trolls" might perform generally unpopular functions that nonetheless have social value.

Indeed, the somewhat ambiguous impact of the privateenforcement perspective on patent-policy debates might suggest one of its more important potential contributions — the fostering of a more measured tone and with it, one might hope, more carefully reasoned thinking about the current state of patent law and possibilities for fruitful reform. In a deliberative environment which has come, by choice rather than chance, to be commonly framed through use of the dehumanizing term "patent troll,"³⁸⁶ some tempering of distracting rhetoric and sharpening of productive analysis might come from reference to a broader context of private-enforcement debates, debates

^{382.} See supra text accompanying notes 293-99.

^{383.} Cf. supra text accompanying notes 370-73.

^{384.} See Michael A. Heller & Rebecca S. Eisenberg, Can Patents Deter Innovation? The Anticommons in Biomedical Research, 280 SCIENCE 698, 701 (1998) (warning of a risk of "a tragedy of the anticommons through a proliferation of fragmented and overlapping intellectual property rights"); Molly Shaffer Van Houweling, Author Autonomy and Atomism in Copyright Law, 96 VA. L. REV. 549, 555 (2010) (noting that an "atomistic copyright system" can be marked by increased "information and transaction costs for participants in the creative marketplace, hampering future generations of creativity and ultimately undermining the purpose of copyright").

^{385.} Becker & Stigler, *supra* note 1, at 14 (emphasis in original); *cf.* John D. Donahue, *The Transformation of Government Work: Causes, Consequences, and Distortions, in* GOVERNMENT BY CONTRACT: OUTSOURCING AND AMERICAN DEMOCRACY, *supra* note 62, at 43 ("Disaggregating the value chain — parceling out each separable function to whoever can perform it best — promises even more of a payoff to government than to business.").

^{386.} See McDonough, supra note 38, at 192 (reporting that "Peter Detkin, assistant general counsel for Intel, created the term").

that stretch back centuries and continue today in multiple areas of the law.

Chastened by this prologue about the prescriptive and diagnostic ambiguity of the private-enforcement perspective, let us nonetheless march warily forward, assuming for illustrative purposes that much of the current outcry about excessive or abusive patent enforcement is justified. What should be done?

Experiences with other private-enforcement regimes suggest a variety of ways in which patent law might be reformed. Some of these reforms resonate at least partially with steps that various actors in the patent system have already taken. Subsequent subsections give brief accounts of potential reforms and their prospects.

1. Abolition

Abolition was, of course, the ultimate fate of privateering, all forms of British *qui tam* litigation, and most forms of U.S. *qui tam* litigation. As we have seen, however, likely reasons for patent law's historical survival still have substantial force and might make abolition either undesirable or simply impractical.³⁸⁷ In particular, the nature of innovation as a continuing frontier featuring disruptive and otherwise unpredictable development suggests the likelihood of continuing difficulty in achieving the kind of bureaucratic regularization that has supplanted private enforcement in areas previously patrolled by *qui tam* informers or privateers.³⁸⁸ More cynically, a subscriber to the "entrenchment story" for patents' survival might simply view efforts at patent abolition as essentially futile and therefore wasteful: in this view, the concentrated, well-funded interests that patent law benefits should be acknowledged as too strong to challenge head-on.³⁸⁹

Under either the optimistic or the cynical view, the best immediate course for a patent abolitionist might be to focus on fostering coexistent, alternative ways to promote innovation, such as *post hoc* prizes,³⁹⁰ *ex ante* grants or contracts,³⁹¹ or a more fully fledged "networked information economy" that fosters and exploits motivations for "nonmarket, nonproprietary production."³⁹² Over time, such alter-

^{387.} See supra text accompanying notes 333-67.

^{388.} See supra text accompanying notes 175-89, 223-31.

^{389.} See supra text accompanying notes 356-67.

^{390.} John Travis, *Prizes Eyed to Spur Innovation*, SCIENCE, Feb. 8, 2008, at 713, 713 ("Prize contests have long been used to steer efforts toward particular discoveries or technological accomplishments, and they're becoming popular again.").

^{391.} Jérôme Doutriaux, *High-Tech Start-Ups, Better Off with Government Contracts than with Subsidies: New Evidence in Canada*, 38 IEEE TRANSACTIONS ON ENGINEERING MGMT. 127, 128 (1991) (describing various forms of government support for technology-oriented entrepreneurs including "grants, subsidies, tax credits, R&D contracts," and "procurement contracts").

^{392.} BENKLER, supra note 363, at 464.

natives might emerge — like the late-eighteenth century British Royal Navy for privateering³⁹³ or post-1800 municipal police for *qui* tam^{394} — as legitimate competitors to the patent regime: competitors with their own strong champions. Until such a competitor or combination of competitors can plausibly claim to have the operative capacity and social muscle to fill the functional space that patent law now occupies, direct assaults on patent law's private-enforcement regime might, like the increased regulation of privateering in the late seventeenth and early eighteenth centuries, more realistically seek to achieve finer restrictions on patentability and "truncation" of patents' effective scope,³⁹⁵ as opposed to outright abolition. Such more limited reforms are the subject matter of the next subsection.

2. Reforms Affecting Patent Rights' Availability or Value

In seeking to reform, rather than to abolish, patent law, policymakers can draw on a wealth of experience with efforts to regulate other regimes of private enforcement. A classic way to respond to concerns about a private-enforcement regime's tendencies toward abuse or excess is to make the rights that support private enforcement less available or less valuable. For example, privateering regulations restricted entry to the business by requiring posting of a substantial bond, thereby both restricting the numbers of investors or groups of investors who could support privateering ventures³⁹⁶ and providing incentives for those investors to act prudently in their selection and private regulation of actual privateers.³⁹⁷ Sharply increased fees or, at least, altered fee schedules for patent prosecution and maintenance might be one way of helping to stem a perceived flood of poor-quality patents.³⁹⁸

^{393.} See supra text accompanying notes 179-82.

^{394.} See supra text accompanying notes 223-26.

^{395.} Cf. Jonathan M. Barnett, *Property as Process: How Innovation Markets Select Innovation Regimes*, 119 YALE L.J. 384, 422 (2009) (observing that "[a]dversely affected innovators" can sometimes help bring about "direct truncation" that "weaken[s] the relevant legal entitlement" or "indirect truncation, in the form of voluntarily formed cooperative arrangements and other transactional structures").

^{396.} See Ritchie, supra note 74, at 18 (noting that various privateering regulations operated "to allow only wealthy investors to enter the business").

^{397.} See STARKEY, supra note 42, at 18 (noting that an admiralty court "could proceed against the bail provided to guarantee the privateersman's good conduct, thereby adding significantly to the costs of promoting the unsuccessful venture"); see also id. at 19 (observing that "[i]ndiscretions committed aboard [investors' or owners'] vessels clearly threatened the profits of these privateering entrepreneurs").

^{398.} See, e.g., Brian J. Love, Let's Use Patent Fees to Stop the Trolls, WIRED.COM (Dec. 20, 2012, 3:30 PM), http://www.wired.com/opinion/2012/12/how-to-stop-patent-trolls-lets-use-fees (suggesting "a new fee schedule requiring annual renewal payments in the latter half of the [patent] term" and preferably increasing the required payments "yearly so they become more expensive as the patent ages").

Other reforms have restricted the availability of legal claims by effectively raising the requirements for a claim's success. Courts have restricted private parties' capacity to assert antitrust violations by requiring that private antitrust plaintiffs "show not just any injury, but antitrust injury — that is, injury that results from decreased competition."³⁹⁹ Christina Bohannan and Herbert Hovenkamp have argued that, in analogy with the "antitrust injury" requirement, courts should impose on plaintiffs claiming patent infringement a requirement of showing "IP injury" — i.e., "demonstrable injury" that is "likely to interfere with IP holders' decisions to create or distribute their works."⁴⁰⁰

On the value-reduction side of reforms, a common component of modern tort reform efforts has been the imposition of caps on certain forms of damages, thereby lessening the effective value of various tort claims.⁴⁰¹ Likewise, as recounted in Part IV, in 1943 Congress responded to "parasitic" *qui tam* litigation under the False Claims Act by slashing percentage awards for successful plaintiffs. The weakening of remedies for patent infringement can similarly decrease incentives to obtain or enforce such rights, and can also dilute negative effects of their enforcement.

Building on but arguably going beyond these types of reform characteristic of other private-enforcement regimes, other forms of patent reform could act simultaneously to decrease both the value and the availability of patent rights. Tightening of substantive requirements for patentability such as subject-matter eligibility, utility, novelty, nonobviousness, and adequate disclosure could make patent rights both generally narrower and also more difficult to obtain, thereby presumably reducing incentives to obtain and enforce patents and also limiting the "damage" done when patents are enforced. An analog in the context of historical privateering might have been something like the tailoring of the scope of a privateer's commission to the privateer's apparent level of competence at the time of the commission, although I do not know that a reform of this nature was ever tried.⁴⁰²

In any event, U.S. courts, including the Supreme Court, have recently retreaded a number of already worn paths for responding to perceived private–enforcement excess by restricting private-

^{399.} BOHANNAN & HOVENKAMP, supra note 292, at 49 (emphasis omitted).

^{400.} *Id.* at 51; *see also id.* at 68 ("An innovation-incentivizing patent system that depends mainly on private enforcement requires the appropriate kind of harm to support an infringement action.").

^{401.} See Allen Kachalia & Michelle M. Mello, New Directions in Medical Liability Reform, 364 NEW ENG. J. MED. 1564, 1567 tbl.2 (2011) (listing as a traditional form of medical-liability reform "[1]imitations . . . on the monetary compensation that can be awarded in a malpractice trial for noneconomic losses ('pain and suffering'), economic losses, or both").

^{402.} Cf. supra text accompanying notes 153-57.

enforcement rights' availability or value. The Supreme Court tightened the requirement of patentable subject matter in *Mayo Collaborative Servs. v. Prometheus Labs., Inc.,*⁴⁰³ and the requirement of nonnonobviousness in *KSR Int'l Co. v. Teleflex Inc.*⁴⁰⁴ The Supreme Court and Federal Circuit have together limited the availability or value of patent-infringement remedies in a series of cases stretching from the Supreme Court's 2006 decision in *eBay Inc. v. MercExchange, L.L.C.*⁴⁰⁵ to the Federal Circuit's 2011 decision in *Uniloc USA, Inc. v. Microsoft Corp.*⁴⁰⁶

Of course, reforms targeting patent rights' availability and value can go much further. On the other hand, as might have occurred with Congress' 1943 reform of false-claims *qui tam*,⁴⁰⁷ reform to curtail perceived private-enforcement excess can go too far. Indeed, in light of the contextual sensitivity of the balances to be struck, one might question the wisdom of having substantive patent-law reforms flow so regularly from "episodic judicial decisionmaking"⁴⁰⁸ — the precise route taken to implement a number of the reforms described above.⁴⁰⁹ On the other hand, if Congress is unwilling either to enact reform itself or to empower an administrative agency to do so, there might be

407. See supra text accompanying notes 242-50.

408. Miller, *supra* note 298, at 74–75 ("[T]he propriety of leaving the formation of public policy to private litigants and episodic judicial decisionmaking, rather than to public regulatory agencies, may be questionable."). We might only hope for a "fourth best" as the courts might be a suboptimal institution to effectively engage in "[t]hird-best-allocative-efficiency analyses [that] take into account only those theoretical relationships and collect only that data that it is *ex ante* allocatively efficient to consider and collect." Richard S. Markovits, *On the Economic Efficiency of Using Law to Increase Research and Development: A Critique of Various Tax, Antitrust, Intellectual Property, and Tort Law Rules and Policy Proposals, 39 HARV. J. ON LEGIS. 63, 76 (2002).*

^{403. 132} S. Ct. 1289, 1297 (2012) ("If a law of nature is not patentable, then neither is a process reciting a law of nature, unless the process has additional features that provide practical assurance that the process is more than a drafting effort designed to monopolize the law of nature itself.").

^{404. 550} U.S. 398, 427 (2007) (declaring that "the results of ordinary innovation are not the subject of exclusive rights under the patent laws").

^{405. 547} U.S. 388, 391 (2006) (stating that "a plaintiff seeking a permanent injunction must satisfy a four-factor test before a court may grant such relief").

^{406. 632} F.3d 1292, 1315, 1320 (Fed. Cir. 2011) (tightening requirements for proof of reasonable-royalty damages); *see also, e.g.*, ResQNet.com, Inc. v. Lansa, Inc., 594 F.3d 860, 873 (Fed. Cir. 2010) (per curiam) (vacating an award of damages based on comparison to pre-existing licenses where the trial court failed to make "factual findings that accounted for . . . technological and economic differences [relating to] those licenses"); Lucent Techs., Inc. v. Gateway, Inc., 580 F.3d 1301, 1335 (Fed. Cir. 2009) (announcing "the unmistakable conclusion that the jury's damages award [was] not supported by substantial evidence, but [was] based mainly on speculation or guesswork"); *In re* Seagate Tech., LLC, 497 F.3d 1360, 1371 (Fed. Cir. 2007) (en banc) (restricting the availability of enhanced damages for willful infringement by "requir[ing] at least a showing of objective recklessness"); *cf*. Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc., 682 F.3d 1003, 1006–07 (Fed. Cir. 2012) (bringing determinations of willful infringement under greater judicial control by "hold[ing] that the objective determination of recklessness . . . is best decided by the judge as a question of law subject to *de novo* review").

^{409.} See supra text accompanying notes 403-06.

no practical alternative.⁴¹⁰ A private-enforcement perspective might at least help courts or other effective policymakers to make better decisions by not only transcending established rhetoric of patent-law debates but also grounding present controversies in a broader context with which judges and legislators might be generally familiar.

3. Litigation or Other Institutional Reform

Reform need not stop at the borders of so-called "substantive patent law." There are many ways in which a given regime of rights and remedies might be made to work better. Reforms to help make litigation cheaper, faster, more accurate, and more predictable have been a common response to concerns about private enforcement. Admiralty courts that heard prize cases were famous for their (sometimes excessively⁴¹¹) speedy dispatch: "[j]udicial process under the law of nations was carefully designed to permit mariners to play their role and leave early in [a prize] proceeding."⁴¹² In modern times, Congress and the courts have sought to use heightened pleading requirements to more quickly quash weak suits by putative "private attorneys general."⁴¹³ In a like vein, many commentators and policymakers have called for reforms to improve and streamline processes for resolving patent disputes.⁴¹⁴ Proposed mechanisms have included various procedural tweaks,⁴¹⁵ specialized trial courts,⁴¹⁶ and broader provisions for ad-

^{410.} Cf. BOHANNAN & HOVENKAMP, supra note 292, at 34 (suggesting "that courts are more likely than Congress to be the engines of significant reform").

^{411.} See supra text accompanying note 170.

^{412.} PETRIE, supra note 73, at 159.

^{413.} See Hittinger & Bona, supra note 193, at 172 (reporting that "Congress reacted to the flood of securities litigation in 1995" by raising pleading requirements); *id.* at 182 (describing a Supreme Court decision on pleading requirements in antitrust cases as "provid[ing] courts in antitrust cases (and other complex federal actions) with a tool to filter out unmeritorious cases"); *cf.* Miller, *supra* note 298, at 75 (criticizing recent developments).

^{414.} See, e.g., Ewing & Feldman, *supra* note 322, at 41 ("Troll behavior, whether small or aggregated, is fueled by a patent system that lacks a cost-effective method of quickly resolving validity and infringement questions.").

^{415.} See Paul R. Michel & Michelle Rhyu, *Improving Patent Jury Trials*, 6 FED. CIR. B.J. 89, 95 (1996) (suggesting improvements to jury instructions and "more common use of special verdicts or interrogatories"); Gregory R. Baden, Note, *Third-Party Assistance in Determining Obviousness*, 89 TEX. L. REV. 1203, 1213 (2011) ("I propose the creation of a third-party obviousness specialist or 'master' in invalidity litigation to assist in developing an obviousness determination").

^{416.} See Jay P. Kesan & Gwendolyn G. Ball, Judicial Experience and the Efficiency and Accuracy of Patent Adjudication: An Empirical Analysis of the Case for a Specialized Patent Trial Court, 24 HARV. J.L. & TECH. 393, 444 (2011) (finding that the apparent impact of judicial experience on case durations and reversal rates "provides a real but modest case for . . . the establishment of a specialized patent trial court"); Arti K. Rai, Specialized Trial Courts: Concentrating Expertise on Fact, 17 BERKELEY TECH. L.J. 877, 877 (2002) ("For a number of years, commentators have advocated the creation of a specialized patent trial court.").

ministrative adjudication.⁴¹⁷ In December 2012, the USPTO fanned interest in some of these proposals by requesting comments on the previously entertained idea of "a patent small claims court."⁴¹⁸

In general, exploration of ways to make patent dispute resolution more efficient and socially satisfactory is well-advised. But experience with other private-enforcement regimes suggests that, even at its best, such efficiency-promoting reform is far from a panacea. Like highway improvements that attract too many drivers and make traffic congestion worse, litigation reforms can aggravate, rather than alleviate, tendencies toward excessive litigation.⁴¹⁹ As suggested earlier, plaintiffs' litigation costs might sometimes serve as a check on their failures to internalize costs that suits inflict on others.⁴²⁰ Hence, under various circumstances, litigation reforms that make lawsuits cheaper and speedier can aggravate distortions in plaintiffs' incentives and increase, rather than decrease, overall costs to defendants and society. The conventional wisdom that "[s]peed kills defendants"⁴²¹ suggests that reforms that expedite court proceedings will often result in complaints that overenforcement has only become worse.⁴²² Thus, for example, local rules that helped speed patent litigation in the Eastern District of Texas have been cited as a significant factor in the rapid growth of patent filings in that jurisdiction:⁴²³ a factor that critics have often lambasted as a haven for abusive litigation.⁴²⁴ In complaints about the allegedly patentee-favorable practices of some modern district courts, one can hear echoes of concerns about the fairness and

420. See supra text accompanying notes 306–09.

^{417.} See Bronwyn H. Hall & Dietmar Harhoff, *Post-Grant Reviews in the U.S. Patent System* — *Design Choices and Expected Impact*, 19 BERKELEY TECH. L.J. 989, 1000–01 (2004) (describing proposals for new forms of post-grant review of patents by the USPTO).

^{418.} Request for Comments on a Patent Small Claims Proceeding in the United States, 77 Fed. Reg. 74,830, 74,831 (Dec. 18, 2012).

^{419.} *Cf.* Golden, *Patent Remedies, supra* note 30, at 518 ("[D]ifficulties in enforcing patent rights might . . . cause rational parties either not to obtain patent rights at all or, alternatively, to leave such rights unenforced or licensed for only pennies on the dollar.").

^{421.} Mark Liang, The Aftermath of TS Tech: The End of Forum Shopping in Patent Litigation and Implications for Non-Practicing Entities, 19 TEX. INTELL. PROP. L.J. 29, 44 (2010).

^{422.} See Sam Williams, A Haven for Patent Pirates, MIT TECH. REV. (Feb. 3, 2006), http://www.technologyreview.com/news/405259/a-haven-for-patent-pirates ("In the rough calculus of intellectual property litigation, tough judges equate with speedy cases — and that's exactly what you want if you're a plaintiff with limited cash").

^{423.} Liang, *supra* note 421, at 43–44 (observing that local rules involving "accelerated timelines, broader discovery requirements, and severe sanctions for non-compliance" "turned the Eastern District into one of the nation's fastest rocket dockets").

^{424.} See Xuan-Thao Nguyen, Justice Scalia's "Renegade Jurisdiction": Lessons for Patent Law Reform, 83 TUL. L. REV. 111, 112 (2008) ("It has become a fashionable practice lately for lawyers of major corporations and national newspapers to ... criticiz[e] the ... Eastern District of Texas ... for its patent rocket-docket"; Yan Leychkis, Of Fire Ants and Claim Construction: An Empirical Study of the Meteoric Rese of the Eastern District of Texas as a Preeminent Forum for Patent Litigation, 9 YALE J.L. & TECH. 193, 195 (2007) (noting that Marshall, Texas, in the Eastern District of Texas has been called "a 'haven for patent pirates,' a 'hotbed for patent trolls,' and even a 'renegade jurisdiction'").

sometimes excessive speed of colonial America's admiralty courts for privateers.⁴²⁵

Alternative types of litigation reform might more reliably discourage socially undesirable enforcement. More systematic restraint might come through a regime of fee shifting, reminiscent of Tudor and Stuart *qui tam* reforms,⁴²⁶ under which plaintiffs who have asserted patent infringement would more commonly pay for the litigation expenses of successful defendants.⁴²⁷ In this vein, a bill introduced in Congress in 2012 proposed fee-shifting reform for patent infringement suits involving "computer hardware or software"⁴²⁸ where "the party alleging infringement of the patent did not have a reasonable likelihood of succeeding."⁴²⁹ A 2013 version of the bill had a more explicit anti-patent-enforcement-entity orientation: it dropped the subject-matter restriction to computer-related technology but excepted from the provision's force (1) patent holders who are the original inventors or their assignees at the time of patent issuance, (2) patent holders who "can provide documentation to the court of substantial investment made by such party in the exploitation of the patent through production or sale of an item covered by the patent," and (3) patent holders who are "institution[s] of higher education" or affiliated "technology transfer organization[s]."430

Independent of the specific context of patent law, greater allowance for fee shifting has long been proposed and debated as a potential way to reform U.S. litigation.⁴³¹ On the plus side of such reform,

^{425.} See supra text accompanying notes 141-43 & 170.

^{426.} See supra text accompanying note 219.

^{427.} See, e.g., Becker & Stigler, *supra* note 1, at 15 ("Capricious or arbitrary enforcement is always possible, and is much encouraged under our present system by the policy of not compensating acquitted persons for the costs (of all sorts) that they had borne."); Colleen V. Chien, *Reforming Software Patents*, 50 HOUS. L. REV. 325, 369–83 (2012) (discussing arguments about the potential benefits of fee shifting for patent suits).

^{428.} Saving High-Tech Innovators from Egregious Legal Disputes Act of 2012, H.R. 6245, 112th Cong. § 2 (2012).

^{429.} Id.

^{430.} Saving High-Tech Innovators from Egregious Legal Disputes Act of 2013, H.R. 845, 113th Cong. § 2 (2013). An alternative proposal might simply increase the frequency of fee shifting in favor of both successful patentees and accused infringers, possibly on grounds that "increas[ing] the stakes in patent challenges" can improve the system's operation overall. Anup Malani & Jonathan S. Masur, *Raising the Stakes in Patent Cases* 45 (Coase-Sandor Inst. for Law and Econ., Working Paper No. 633, 2013), *available at* http://ssrn.com/abstract=2216948.

^{431.} See, e.g., Gregory E. Maggs & Michael D. Weiss, Progress on Attorney's Fees: Expanding the "Loser Pays" Rule in Texas, 30 HOUS. L. REV. 1915, 1936–37 (1994) (contending that the Texas legislature's past adoption of "the loser pays rule in a limited number of areas without producing any apparent calamities" "should give the legislature the confidence to broaden the reach of fee shifting statutes"); Mark S. Stein, The English Rule with Client-to-Lawyer Risk Shifting: A Speculative Appraisal, 71 CHI.-KENT L. REV. 603, 603 (1995) ("In America, parties to civil litigation generally bear their own attorney fees. This system, known as the American rule, has come under periodic criticism from supporters of

requiring unsuccessful plaintiffs to pay defendants' litigation expenses would force rational plaintiffs to take account of at least some of the otherwise external costs that suits inflict.⁴³² On the minus side, where the outcome of suit is uncertain, the risk of having to assume high and ex ante undetermined defense-litigation costs might overdeter riskaverse plaintiffs.⁴³³ The costs from fee shifting's generation of "false negatives" - nonsuits where suit would have been socially desirable — could outweigh the benefits from fee shifting's reduction of "false positives" — suits that society would like not to occur. An approach to fee shifting that was sensitive to litigants' wealth might help correct for some of these concerns⁴³⁴ but seems likely to be controversial. Given continuing uncertainty about the effects of more regular fee shifting, there might be logic to the Patent Act's existing restriction of fee shifting to "exceptional cases,"435 although a relatively moderate reform might reasonably expand the understanding of what counts as "exceptional."

State-based tort-reform efforts, one aspect of the anti-"citizen suit" backlash described in Part V, suggest additional ways to reform patent litigation. Like Tudor and Stuart responses to perceived *qui tam* abuses,⁴³⁶ state-based tort reforms have proceeded on multiple fronts. They have imposed limitations on attorney's contingency fees,⁴³⁷ on venue,⁴³⁸ and on the use of expert witnesses.⁴³⁹ They have required pretrial screening by expert panels,⁴⁴⁰ non-binding mediation,⁴⁴¹ and

435. 35 U.S.C. § 285 (2006).

436. See supra text accompanying notes 213-20.

437. Kachalia & Mello, *supra* note 401, at 1567 tbl.2 (listing "Traditional Medical Liability Reforms").

439. *Id.* at 327 (observing that a legislative reform in Michigan "required that an expert witness meet certain (not very stringent) qualifications").

440. Kachalia & Mello, supra note 401, at 1567 tbl.2.

the competing English rule, a system under which the loser pays the winner's attorney fees.").

^{432.} *Cf.* Shavell, *supra* note 309, at 588 ("[I]n situations where some individuals would bring unmeritorious suits to extract settlements, fee-shifting might be desirable because it would discourage suits that are unlikely to succeed.").

^{433.} *Cf. id.* (concluding that there is no "systematic advantage of fee-shifting in regard to controlling the volume of litigation").

^{434.} Theodore Eisenberg, Talia Fisher & Issi Rosen-Zvi, *When Courts Determine Fees in a System with a Loser Pays Norm: Fee Award Denials to Winning Plaintiffs and Defendants* 27 (Cornell Legal Studies, Research Paper No. 13-08, 2013), *available at* http://ssrn.com/abstract=2205765 (noting a contention "that a fair and efficient fee system requires asymmetry with express consideration given to the relative wealth of the litigants").

^{438.} Stephen J. Spurr & Walter O. Simmons, *Medical Malpractice in Michigan: An Economic Analysis*, 21 J. HEALTH POL., POL'Y & L. 315, 325 (1996) (observing that legislative reforms in Michigan amended "the definition of venue... to give less leeway to the plain-tiff's lawyer" and to enable the dismissal of defendants who might have been sued "solely to obtain a favorable venue").

^{441.} Spurr & Simmons, *supra* note 438, at 322 ("A new form of mediation became mandatory in all medical malpractice cases filed after 1986.... If either party rejects the evaluation of the mediation panel, the case moves toward trial.").

either the filing of an expert affidavit indicating "that there is reasonable and meritorious cause for [a] suit"⁴⁴² or the posting of a bond.⁴⁴³

One can imagine a variety of ways in which patent infringement suits or patent ownership itself could be similarly regulated: for example, (1) a binding or non-binding clearance-review process in which a government agency reviews patent suits before they proceed in court;⁴⁴⁴ (2) provision of specialized trial courts or administrative tribunals for patent-infringement cases;⁴⁴⁵ and (3) agency rulemaking authority that encompasses rights to sue as well as remedies for infringement⁴⁴⁶ and that thereby empowers an administrative agency to iteratively tune private-enforcement rights and remedies to better achieve public goals.⁴⁴⁷ Depending on how such reforms are designed and implemented, some of them, such as pretrial screening, might be thought to be prohibitively expensive for the government, either overly time-consuming or overly summary, or violative of federal jury rights or Article III powers. Others, such as better provisions for recordation of patent ownership, seem likely to be less costly to administer and less controversial.

4. Regulation of Patent Ownership

A further set of potential reforms that might help check privateenforcement problems would involve regulating patent ownership and patent owners' conduct without so directly affecting either the nature of the litigation process itself or patent rights' availability, scope, or available remedies. The Federal Trade Commission and Department of Justice have recently been considering ways to use antitrust law to combat at least some relatively extreme examples of socially harmful activity by patent-enforcement entities.⁴⁴⁸ Restrictions on mergers and

^{442.} Kachalia & Mello, supra note 401, at 1567 tbl.2.

^{443.} Spurr & Simmons, *supra* note 438, at 327 (discussing a legislative reform in Michigan that "required [medical-malpractice] plaintiffs to file an affidavit of merit, based on the opinion of a health care provider, or to post a \$2,000 bond").

^{444.} *Cf.* Rose, *supra* note 2, at 1306 (suggesting the potential desirability of giving the Securities and Exchange Commission power to "prescreen all Rule 10b-5 class action complaints... and decide which may be filed").

^{445.} *See* Kesan & Ball, *supra* note 416, at 444 (concluding that empirical evidence at least weakly suggests that a specialized trial court would be advantageous); Rai, *supra* note 416, at 877–78 (noting support for "the creation of a specialized patent trial court").

^{446.} *Cf.* Stephenson, *supra* note 4, at 123 (arguing that Congress should "delegate to agencies the authority to decide for themselves whether and under what conditions a particular enforcement mechanism — the private suit — would be available").

^{447.} Cf. Golden, Appellate Review, supra note 285, at 702 (noting how administrative agencies commonly have flexibility "to explore a 'phase space' of permissible legal approaches over time").

^{448.} See Press Release, U.S. Dep't of Justice, Federal Trade Commission to Hold Workshop on Patent Assertion Entity Activities (Nov. 19, 2013), http://www.justice.gov/opa/pr/2012/November/12-at-1388.html (listing a planned workshop session on how antitrust law might apply to patent assertion entities); *cf.* Ewing & Feldman,

acquisitions, collusion, and unfair competition might provide some means to limit potential harms generated by patent-enforcement entities.⁴⁴⁹ Courts might manage to accomplish even more by developing a more robust conception of patent misuse that could render a patent partially or fully enforceable based on more than relatively narrowly defined antitrust or antitrust-like wrongs.⁴⁵⁰ Likewise, more demanding administrative processes of patent approval and maintenance could operate more like forms of patent-holder licensing - somewhat like the bonds, descriptions of privateers, and specific instructions that helped regulate historical privateers.⁴⁵¹ Restraints on the alienability of patent rights, for example forbidding or limiting their sale to past "abusers" or to entities who otherwise fail to defuse well-grounded concerns that they might use patent rights for ill, could also help ensure a more benign private-enforcement marketplace.⁴⁵² Even if alienability is not restricted, the operation of the patent system might be improved from the greater transparency that would result from requirement of thorough and transparent recordation of patent-rights transfers 453

451. See supra text accompanying notes 153-58.

supra note 322, at 35 ("Competition authorities, such as the Federal Trade Commission and the Department of Justice, are in the best position to address the activities of mass aggregators and the market for patent monetization.").

^{449.} Michael A. Carrier, *Patent Assertion Entities: Six Actions the Antitrust Agencies Can Take*, CPI ANTITRUST CHRONICLE, Jan. 2013, *available at* http://ssrn.com/abstract=220 9521, at 5–11 (discussing potential ways to use antitrust and unfair-competition laws to regulate patent-enforcement entities).

^{450.} See BOHANNAN & HOVENKAMP, supra note 292, at 288 ("We argue for an approach that finds misuse when an IP holder's practice threatens unreasonable foreclosure of competition, innovation, or access to the public domain."); Marshall Leaffer, Patent Misuse and Innovation, 10 J. HIGH TECH. L. 142, 167 (2010) (viewing the doctrine of patent misuse as potentially filling "a need for a broad equitable doctrine . . . to curtail [socially detrimental] forms of patentee behavior"); Daryl Lim, Misconduct in Standard Setting: The Case for Patent Misuse, 51 IDEA 559, 560 (2011) ("Properly applied, the equitable doctrine of patent misuse can complement current policy levers found in patent law and the antitrust laws in deterring opportunistic behavior."); Janice M. Mueller, Patent Misuse Through the Capture of Industry Standards, 17 BERKELEY TECH. L.J. 623, 684 (2002) (arguing that, if a patentee intentionally failed to disclose relevant IP rights to a standard-setting body, "courts should refuse to enforce the patent altogether under the patent misuse doctrine"). But see Vincent Chiappetta, Living with Patents: Insights from Patent Misuse, 15 MARQ. INTELL. PROP. L. REV. 1, 70 (2011) ("The patent misuse doctrine should be eliminated."); Thomas F. Cotter, Four Questionable Rationales for the Patent Misuse Doctrine, 12 MINN. J.L. SCI. & TECH. 457, 488 (2011) ("Uncertain in its application, potentially far-reaching in its consequences, and unnecessary to the extent it duplicates antitrust, patent misuse is a doctrine the rationale for which remains largely elusive.").

^{452.} See Carrier, *supra* note 449, at 5 (contending that the antitrust agencies "should make crystal clear that they will not allow any acquisition by a [patent assertion entity] (or an operating company) that does not agree to honor [promises to license on reasonable and nondiscriminatory terms] made by its predecessor").

^{453.} *See* Request for Comments on Eliciting More Complete Patent Assignment Information, 76 Fed. Reg. 72,372 (Nov. 23, 2011) (indicating possible changes to USPTO rules to improve patent-ownership records and contending that improved records "would produce a number of benefits").

5. Private Counter-Enforcement or Competitive Enforcement

Instead of trying to impose greater central control on a decentralized regime of private enforcement, one could try fighting fire with fire. Sometimes private enforcement can be usefully checked by private counter-enforcement or competing public or private enforcement. After capturing a target vessel, privateers in the age of sail needed to be on the lookout for hostile privateers seeking to take the target back.⁴⁵⁴ Moreover, privateers contemplating a violation of the law needed to consider the possibility that a profit-motivated informant might tattle in pursuit of a *qui-tam*-like reward.⁴⁵⁵

Competing mechanisms for enforcement can act as more indirect checks on potential private-enforcement excess by effectively replacing or displacing private-enforcement activity. Some "letters patent" were used to create competitors for *qui tam* plaintiffs, thereby limiting to a degree the opportunities for *qui tam* abuses by generally reducing opportunities for profitable *qui tam* enforcement.⁴⁵⁶ Practically speaking, investment of greater resources in regular navies similarly operated to limit opportunities for historical privateers: when the Royal Navy had bottled up the French fleet, there was simply relatively little for privateers to do.⁴⁵⁷ I currently find myself little moved to advocate notions of, say, unleashing well-regulated *qui tam* plaintiffs or public prosecutors to help enforce patent rights, thereby possibly increasing deterrence of patent infringement and limiting enforcement opportunities for "patent privateers." Nonetheless, history does suggest the possibility of such a course of action.

More hopefully, I can imagine unleashing "private attorneys general" to challenge existing patents or even pending patent applications with the aim that these private watchdogs will help weed out overly broad, questionably valid, ill-defined, or otherwise socially undesirable patent rights. Private watchdogs might also help police behavior that falls within a more expansive definition of patent misuse.

In line with this reasoning, various commentators have suggested mechanisms to enable or encourage challenges to patents' validity, enforceability, or scope. Jay Thomas and Joseph Scott Miller have proposed monetary awards to encourage private parties' participation

^{454.} See PETRIE, supra note 73, at 155–56 ("A great many of the prizes that were taken... were recaptured ... by an enemy vessel."); cf. LUNSFORD, supra note 79, at 22 ("In February 1678, ... the [Dutch] States-General promised special rewards ... to those privateers who recaptured Dutch ships seized by the enemy." (emphasis omitted)).

^{455.} STARKEY, *supra* note 42, at 28 ("[1]f collusion, for example, between prize and captor was revealed, the source of such information stood to gain half of the value of the property at stake").

^{456.} See supra text accompanying note 217.

^{457.} See Starkey, *supra* note 83, at 128–29 (noting the significance for privateering activity of "the balance of power in the naval war, for control of the seas might curtail the enemy's shipping operations").

in administrative and court-based challenges, respectively.⁴⁵⁸ Megan La Belle has argued for a more expansive, public-law-oriented view of standing for challenges in courts.⁴⁵⁹ Jay Kesan and Mark Lemley have proposed more frequent shifting of successful patent challengers' attorneys' fees.⁴⁶⁰

Ongoing litigation over patents relating to genes associated with breast cancer⁴⁶¹ suggests that, even without a new monetary spur to patent challenges, broader declaratory-judgment jurisdiction or a greater capacity for administrative challenges could result in significantly more counter-enforcement. Riding on the coattails of an individual person's Article III standing, organizations such as the American Civil Liberties Union and Public Patent Foundation have managed to take to the Supreme Court a challenge to patents that they regard "as harmful to public health and fundamental liberties."⁴⁶² New opportunities for administrative challenges under the America Invents Act⁴⁶³ should provide a window onto what such organizations or other interested parties might do with expanded possibilities.

It bears emphasizing that current U.S. patent law already makes available a variety of administrative proceedings that at least facilitate patent challenges. The graduated development of the current system of administrative proceedings to challenge patent rights is worth at least a brief summary. In 1980, Congress empowered private parties to initiate an ex parte reexamination, a proceeding between the USPTO and a patentee that might be initiated at the request of a third

^{458.} See Miller, supra note 23, at 705 ("I propose a litigation-stage bounty in an amount equal to the net profits the patentee has earned up to the date of judgment by practicing the technology that the patent purports to cover."); Thomas, supra note 23, at 342 ("The Patent Office should establish a system of cash prizes, or bounties, to encourage private citizens to provide it with information pertinent to patentability.").

^{459.} La Belle, *supra* note 23, at 46 (contending that the Federal Circuit's "private law approach to standing and personal jurisdiction has created significant procedural obstacles" to declaratory-judgment challenges to patent rights).

^{460.} Jay P. Kesan, *Carrots and Sticks to Create a Better Patent System*, 17 BERKELEY TECH. L.J. 763, 787 (2002) (proposing "a one-way, pro-defendant, fee-shifting system if patent claims are invalidated or revoked in a litigation or opposition proceeding based on certain categories of prior art that are reasonably likely to be discovered by a diligent patentee"); Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 Nw. U. L. REV. 1495, 1530–31 (2001) (suggesting the potential desirability of more fee shifting in favor of defendants in patent-infringement suits).

^{461.} See Ass'n for Molecular Pathology v. U.S. Patent & Trademark Office, 689 F.3d 1303, 1309 (Fed. Cir. 2012) ("The challenged composition claims cover two 'isolated' human genes, *BRCA1* and *BRCA2*[,]... and certain alterations, or mutations, in these genes associated with a predisposition to breast and ovarian cancers." (emphasis in original)), *cert. granted on other grounds*, 133 S. Ct. 694 (2012).

^{462.} Dennis Crouch, *The Case or Controversy in AMP v. PTO*, http://www.patentlyo. com/patent/2012/08/the-case-or-controversy-in-amp-v-pto.html (Aug. 17, 2012) ("An important element of the Myriad case is that it has been driven largely by public interest groups operating with an agenda of denuding patents that they see as harmful to public health and fundamental liberties.").

^{463.} See infra text accompanying notes 466-67.

party, but from which the third party would later be generally excluded.⁴⁶⁴ In 1999, Congress added opportunities for private parties to trigger an alternative process of inter partes reexamination in which third parties could more fully participate.⁴⁶⁵ Finally, in 2011, Congress enacted legislation replacing inter partes reexamination with a similar but somewhat modified process of inter partes review⁴⁶⁶ and, likely more significantly, made available a new form of post-grant review in which third parties can challenge patentability on broader grounds than reexamination had made available.⁴⁶⁷

Nonetheless, Congress's embrace of private challenges has remained measured rather than wholehearted. All of the abovedescribed forms of administrative challenge can occur only after a patent issues.⁴⁶⁸ Congress has not authorized pre-issuance opposition proceedings and has strictly required that requests for the new form of post-grant review be filed within nine months of a patent's issue.⁴⁶⁹ Congress has also declined to enact a citizen-suit provision that directly facilitates court-based challenges by parties not substantially threatened with a suit for infringement.⁴⁷⁰ Consequently, harm to con-

^{464.} See 35 U.S.C. §§ 301–03 (2006 & Supp V. 2012) (enabling the initiation of an *ex parte* reexamination based on "patents or printed publications" cited by "[a]ny person"); MERGES & DUFFY, *supra* note 44, at 1099 (discussing enactment of "the original 'ex parte' reexamination system").

^{465.} See 35 U.S.C. §§ 301, 311–12 (2006 & Supp. V 2012) (enabling the initiation of an inter partes reexamination based on "patents or printed publications" cited by "[a]ny third-party requester"); MERGES & DUFFY, *supra* note 44, at 1099 (discussing provision for inter partes reexamination).

^{466.} The standard for triggering inter partes review is differently worded from the prior standard triggering inter partes examination. *Compare* America Invents Act, 35 U.S.C. \S 314(a) (2006 & Supp. V 2012) ("The Director may not authorize an inter partes review ... unless the Director determines that the information presented ... shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged"), with 35 U.S.C. \S 313 (2006) ("If ... the Director finds that a substantial new question of patentability affecting a claim of a patent is raised, the determination shall include an order for inter partes reexamination"). At least initially, the significance of this change appears to have been disputable. *See* JANICE M. MUELLER, PATENT LAW 433 (4th ed. 2013).

^{467.} See, e.g., 35 U.S.C. § 321(b) (providing for post-grant review under which a petitioner "may request to cancel as unpatentable [one] or more claims of a patent on any ground that could be raised" as a defense to a charge of patent infringement). Congress also provided for a new form of "transitional post-grant review" for certain business method patents, id. at § 321, and formally invited private parties to provide the USPTO with information relevant to patent applications prior to their issuance, see id. at § 122(e)(1) (providing that, within specified time limits, "[a]ny third party may submit for consideration and inclusion in the record of a patent application, any patent, published patent application, or other printed publication of potential relevance to the examination of the application").

^{468.} See MUELLER, supra note 466, at 401 (describing reexamination, inter partes review, and post-grant review as applying to "issued patents").

^{469. 35} U.S.C. § 321(c).

^{470.} Compare 35 U.S.C. § 282 (providing that noninfringement, invalidity, and unenforceability are "defenses in any action involving the validity or infringement of a patent"), *with* Ass'n for Molecular Pathology v. U.S. Patent & Trademark Office, 689 F.3d 1303, 1323 (Fed. Cir. 2012) (holding that "various organizational plaintiffs" lacked declaratory-

sumers, such as through higher prices or reduced availability of invalidly patented products, generally fails to provide statutorily recognized standing for suit.⁴⁷¹ One might speculate that legislative and judicial reluctance to embrace broader rights to challenge patents might reflect less than fully satisfactory experiences with citizen suits in other legal areas. Thus, even before the recent "troll"-fueled backlash against private enforcement of patent rights, concerns about citizen suits in other legal areas might have limited the extent to which Congress embraced their arguably closest analogs in patent law private challenges to government-issued patent rights.

Such caution does not lack justification. The proper level of counter-enforcement is commonly an open question. Because a counterenforcement regime is a form of private-enforcement regime, the case for expanded private counter-enforcement will be context-dependent. Just as there can be cause for concern that private parties will abuse patents to "overtax" innovation, there can be cause for concern that private parties will abuse counter-enforcement to harass existing or potential competitors who have obtained patents.⁴⁷² A more robust counter-enforcement regime of patent challenges might discourage some legitimate innovators from seeking patent protection. The result might be more reliance on trade secrets, which are associated with significant economic costs⁴⁷³ and whose proliferation would presumably occur at some expense to cumulative public knowledge and innovation-promoting spillovers.⁴⁷⁴ Even if a stronger regime of private patent challenges did not drive innovators to secrecy, it would, at the very least, likely reduce the average value of patent rights and applications to secure those rights. Such value-reducing effects might cause too many would-be innovators to simply abandon innovative efforts because they no longer perceive a viable path to profit from their innovation.

judgment standing because they "were not the target of any enforcement action or offered license agreements . . . and had made no preparation to undertake potentially infringing activities"), *cert. granted on other grounds*, 133 S. Ct. 694 (2012).

^{471.} See supra text accompanying notes 25-27.

^{472.} Cf. Mark D. Janis, Rethinking Reexamination: Toward a Viable Administrative Revocation System for U.S. Patent Law, 11 HARV. J.L. & TECH. 1, 17–18 (1997) (recounting how amendments to U.S. patent reissue proceedings in the late 1970s enabled "[s]ignificantly more protestor participation than originally anticipated[,]... giving rise to concerns about delay and harassment").

^{473.} See Robert G. Bone, Secondary-Liability for Trade Secret Misappropriation: A Comment, 22 SANTA CLARA COMPUTER & HIGH TECH. L.J. 529, 535 (2006) (noting that social costs of trade secrecy "include expensive litigation, wasteful arms races over detection, and impediments to innovation"); Robert G. Bone, A New Look at Trade Secret Law: Doctrine in Search of Justification, 86 CALIF. L. REV. 241, 273 (1998) (contending that "enforcement costs" and "the transaction costs of licensing" "are likely to be especially high" for secrets).

^{474.} *See* Miller, *supra* note 23, at 731 ("One likely variant of the 'too anti-patent' objection [to a patent-challenge bounty] is that the proposed bounty will discourage too many people from obtaining patents at all.").

Thus, proposals to expand private counter-enforcement are far from unassailable. Nonetheless, because current opportunities for patent challenges are severely limited and because the USPTO's capacity to check for satisfaction of patentability requirements is severely constrained,⁴⁷⁵ my strong suspicion is that significant steps to facilitate patent challenges by consumers or organizations such as the Public Patent Foundation or ACLU will do more good than harm.

Indeed, fostering, or at least facilitating, private counterenforcement might be crucial to check a tendency for patent challenges to be undersupplied due to their public-goods nature. Once patent claims are held invalid by Article III courts or canceled through administrative reexamination, those claims are without force with respect to all parties, not just those who have invested the time and effort to mount a successful challenge.⁴⁷⁶ Consequently, a patent challenge can generate significant positive externalities that are not positively reflected in a challenger's incentives.⁴⁷⁷ Indeed, a would-be challenger might view successfully invalidating patent rights as a negative proposition when compared to a licensing agreement on relatively favorable terms that does little to help unlicensed competitors or consumers.⁴⁷⁸ Moreover, there appear to be other factors, such as the possibility of passing through licensing costs to consumers or the expected negative impacts of a failed challenge to patent rights that can plausibly tend to depress patent challenges below the socially optimal

^{475.} See ADAM B. JAFFE & JOSH LERNER, INNOVATION AND ITS DISCONTENTS: HOW OUR BROKEN PATENT SYSTEM IS ENDANGERING INNOVATION AND PROGRESS, AND WHAT TO DO ABOUT IT 34–35 (2004) (contending that the USPTO "has become so overtaxed, and its incentives have become so skewed towards granting patents, that the tests for novelty and non-obviousness... have become largely non-operative"); *cf.* DAN L. BURK & MARK A. LEMLEY, THE PATENT CRISIS AND HOW THE COURTS CAN SOLVE IT 23 (2009) (noting that a U.S. patent examiner "spends surprisingly little time actually assessing whether a patent should issue").

^{476.} Miller, *supra* note 23, at 678 (describing a decision of the U.S. Supreme Court that "g[ave] the whole world the benefit of a patent invalidity judgment in favor of one alleged infringer").

⁴⁷⁷. See Lemley & Shapiro, supra note 31, at 88 (noting "that invalidating a patent generates significant positive externalities"); Miller, supra note 23, at 688 (observing that, because of "the expensive, up-front cost of patent litigation," "[a] court judgment that a patent claim is invalid is a public good" that is likely to be undersupplied); Thomas, supra note 23, at 333 (stating "that patent validity challenges exhibit the characteristics of public goods"); see also Richard J. Gilbert, Antitrust for Patent Pools: A Century of Policy Evolution, 2004 STAN. TECH. L. REV. 3, ¶ 110 ("[T]he incentive for a private party to challenge a patent is typically less than the societal gain from defeating an invalid patent because, if the party is not a consumer, it does not benefit from the reduction in price.").

^{478.} See Thomas, supra note 23, at 335 (noting that a "competitor can privately disclose [a] prior art reference to [a] patentee" and then enter into "a favorable license" that enables both sides to "extract information rents from the consuming public by maintaining artificially high prices due to an invalid patent"); cf. Martin J. Adelman, Property Rights Theory and Patent-Antitrust: The Role of Compulsory Licensing, 52 N.Y.U. L. REV. 977, 991 (1977) (observing that patentees can "inhibit challenges by making it more attractive to license than to challenge" and "through restrictive licensing practices aimed at bribing the most likely challengers").

level and thus make taking at least some further steps to facilitate such challenges worth the risks.⁴⁷⁹

VII. CONCLUSION

Patent law is one of history's great survivors. With the USPTO currently issuing over two hundred thousand patents per year and foreign patent offices annually issuing hundreds of thousands more, the domestic and international business of patent law continues to thrive. Meanwhile, historical peers such as privateering and *qui tam* have generally withered.

Regardless of the causes of patent law's success, however, patent law's own vibrancy is an undeniable source of strain. For centuries, patents — and therefore the legal restrictions that they embody have issued at accelerating rates.⁴⁸⁰ A legal system that continually and ever more rapidly increases the number of restrictions it imposes naturally tends to strain the capacities of government bureaucracies, courts, and even private parties for administration, compliance, and enforcement. Add to this the relentless advance and diversification of the technologies with which patent law interacts, and one necessarily comes to appreciate that those who interact with this expanding and diversifying system must continually adapt. Such adaptation will not always be quick and pain-free and will predictably cause howls of anguish from some.

In short, there will almost always be both reason and motivation to question whether patent law, as currently imperfectly adapted, is properly up to the constitutional task of promoting progress. How can we help ensure that patent law's dynamic tensions do not cause it to become more of a burden than a boon? Two of law's traditional reference points — history⁴⁸¹ and analogy⁴⁸² — provide instruction.

As Parts II through IV have emphasized, patents for invention have historical roots that substantially coincide with those of other, largely outdated mechanisms for harnessing private enterprise to public ends. Because modern governments, modes of private organization, and technologies commonly differ greatly from those of pre-

^{479.} See Joseph Farrell & Robert P. Merges, Incentives to Challenge and Defend Patents: Why Litigation Won't Reliably Fix Patent Office Errors and Why Administrative Patent Review Might Help, 19 BERKELEY TECH. L.J. 953–55 (2004) (discussing the "passthrough problem" and lost-challenge concern).

^{480.} See Golden, Innovation Dynamics, supra note 327, at 92–95 (noting historical power-law growth of the cumulative number of U.S. patents).

^{481.} See OLIVER WENDELL HOLMES, THE COMMON LAW 5 (Mark DeWolfe Howe ed., 1963) (1881) ("In order to know what [the law] is, we must know what it has been, and what it tends to become.").

^{482.} See Lloyd Weinreb, Legal Reason Redux, 4 J. LEGAL EDUC. 600, 603 (2007) (observing that "analogical reasoning in the law . . . is ubiquitous, so much so that it is regarded as a hallmark of legal reasoning").

Westphalian times, patents' lineage naturally raises questions about the extent to which patent law suits present-day realities. This lineage further suggests that, rather than settling fully on property-based metaphors for patent rights, we might consider that, for certain purposes, patentees could be better analogized to historical privateers. Like patentees today, privateers were bearers of government-granted letters that authorized them to raid commerce for the supposed greater good. The history of privateering shows that even a long flourishing and substantially regulated private-enforcement regime is vulnerable to obsolescence. Through the examples of regulated privateering,⁴⁸³ serially recalibrated *qui tam* provisions,⁴⁸⁴ and the to-and-fro of debates over citizen suits by "private attorneys general,"⁴⁸⁵ history teaches that reform and regulation of a private-enforcement regime need not be viewed as fundamentally hostile to that regime's long-term health. Indeed, it might be necessary for the regime's continued existence.

More specifically, comparative experience with historical and contemporary private-enforcement regimes indicates a variety of potentially productive ways in which the activities of "patent privateers" can be regulated. Recent efforts to reform patent law have already drawn from a deep well of traditional responses to privateenforcement pathologies. But much more can be done, whether to shore up a heavily criticized private-enforcement regime or to pave the way for its marginalization or eventual abolition. Most likely, much more needs to be done — at least tomorrow, if not today. That is, at the very least, what the evolutionary past of patent law and its private-enforcement peers suggests.

^{483.} See supra text accompanying notes 148-76.

^{484.} See supra text accompanying notes 234-58.

^{485.} See supra text accompanying notes 278–92.