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## LEGAL FORMS AND THE COMMON LAW OF PATENTS

CRAIG ALLEN NARD\*

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### INTRODUCTION

“Don’t talk to me of reform, things are bad enough as they are,” Edmund Burke purportedly said.<sup>1</sup> This point is particularly germane in today’s climate

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\* Tom J.E. and Bette Lou Walker Professor of Law, Case Western Reserve University. Email: craig.nard@case.edu. The following people made this paper better: Jonathan Adler, Christopher Cotropia, Tim Holbrook, Mark Lemley, Clarisa Long, Dale Nance, Josh Sarnoff, and Sean Seymore.

of legislatively-driven patent reform initiatives that have been mired in a public choice brew. Congress's venture into patent law over the past several years has borne little fruit,<sup>2</sup> largely because legislators have ventured into territory that has prompted competing reactions from interested parties where consensus was lacking.<sup>3</sup> From a greater remove, however, these congressional forays have addressed substantive issues that are best left to the courts – an important point that gets lost in the politicization of patent law, and one that raises the more significant issue of institutional choice in the development of patent law doctrine and policy.

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<sup>1</sup> This quotation may be apocryphal, but has been attributed to a number of scholars including Burke. See, e.g., Frank H. Easterbrook, *Cyberspace Versus Property Law?*, 4 TEX. REV. L. & POL. 103, 104 (1999). On the subject of reform, one is also reminded of Oscar Wilde's *The Duchess of Padua*:

First Citizen: What is that word reform? What does it mean?

Second Citizen: Marry, it means leaving things as they are; I like it not.

1 OSCAR WILDE, *The Duchess of Padua*, in THE FIRST COLLECTED EDITION OF THE WORKS OF OSCAR WILDE 1908-1922, at 1, 44-45 (Robert Ross ed., 1969).

<sup>2</sup> For the previous five years, Congress unsuccessfully sought to reform the patent statute. See Patent Reform Act of 2009, S. 515, 111th Cong.; Patent Reform Act of 2009, H.R. 1260, 111th Cong.; Patent Reform Act of 2008, S. 3600, 110th Cong.; Patent Reform Act of 2007, S. 1145, 110th Cong. (as amended by Senate, Jan. 24, 2008); Patent Reform Act of 2007, H.R. 1908, 110th Cong. (as amended by House, Sept. 4, 2007); Patent Reform Act of 2006, S. 3818, 109th Cong.; Patent Reform Act of 2005, H.R. 2795, 109th Cong. The failure to enact reform legislation has largely been blamed on the divergent views of the pharmaceutical industry, on the one hand, and the information technology and financial services industry on the other hand. See DAN L. BURK & MARK A. LEMLEY, THE PATENT CRISIS AND HOW THE COURTS CAN SOLVE IT 101 (2009) ("The pharmaceutical and biotechnology industries opposed virtually all elements of patent reform directed at abuse. . . . On the other side, the software, electronics, Internet, and telecommunications industries generally lined up behind reform, but expressed skepticism toward those few reforms the pharmaceutical industry supported . . ."). Pharma/Biotech and IT were represented respectively (although not exclusively) by the Coalition for 21st Century Patent Reform and The Coalition for Patent Fairness. See Coalition for Patent Fairness, [www.patentfairness.org](http://www.patentfairness.org) (last visited Oct. 27, 2009); The Coalition for 21st Century Patent Reform, [www.patentsmatter.com](http://www.patentsmatter.com) (last visited Oct. 27, 2009). Two other noteworthy coalitions include Innovation Alliance and Manufacturers Alliance on Patent Policy. See Innovation Alliance, <http://www.innovationalliance.net> (last visited Oct. 27, 2009); Manufacturing Alliance on Patent Policy, <http://www.mfgpatentpolicy.org> (last visited Oct. 27, 2009).

<sup>3</sup> See Rochelle Cooper Dreyfuss, *In Search of Institutional Identity: The Federal Circuit Comes of Age*, 23 BERKELEY TECH. L.J. 787, 801 (2008) ("[R]ecent attempts at reform show that rent seeking by particular technological interests thwarts the adoption of sound rules."); R. Polk Wagner, *The Supreme Court and the Future of Patent Reform*, 55 FED. LAW., Feb. 2008, at 35, 38-39 ("As the patent law becomes more politicized and the stakes rise, the opportunities for substantial reform of the system narrow.").

As Congress will undoubtedly continue to mull over reworking Title 35,<sup>4</sup> patent stakeholders should keep in mind that the patent code, much like the Sherman Act,<sup>5</sup> is a common law enabling statute,<sup>6</sup> leaving ample room for courts to fill in the interstices or to create doctrine emanating solely from Article III's province. Indeed, the common law has been the dominant legal force in the development of U.S. patent law for over two hundred years.<sup>7</sup> In contrast, congressional action – with the notable exceptions of late eighteenth century patent statutes and, to some extent, the 1952 Patent Act<sup>8</sup> – has been an exercise in codification of judicial pronouncements or a locking-in of innovations emanating from the patent bar and other interested stakeholders.<sup>9</sup>

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<sup>4</sup> See Patent Reform Act of 2009, S. 515, 111th Cong.; Patent Reform Act of 2009, H.R. 1260, 111th Cong.; Patrick Leahy & Orrin Hatch, Op-Ed., *Meaningful Patent Reform; Pass Legislation to Maintain America's Competitive Edge*, WASH. TIMES, Feb. 15, 2008, at A19 (advocating Congressional action on patent reform).

<sup>5</sup> Sherman Act of July 2, 1890, ch. 647, 26 Stat. 209 (codified as amended at 15 U.S.C. §§ 1-7 (2006)). Courts treat the Sherman Act as a common-law enabling statute. See *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 551 U.S. 877, 899 (2007); *Nw. Airlines, Inc. v. Transp. Workers Union of Am.*, 451 U.S. 77, 98 n.42 (1981); HERBERT HOVENKAMP, *ECONOMICS AND FEDERAL ANTITRUST LAW* 52 (student ed. 1985) (“[T]he Sherman Act can be regarded as ‘enabling’ legislation – an invitation to the federal courts to learn how businesses and markets work and formulate a set of rules that will make them work in socially efficient ways.”); Frank H. Easterbrook, *Correspondence: Workable Antitrust Policy*, 84 MICH. L. REV. 1696, 1705 (1986) (“The Sherman Act set up a common law system in antitrust.”).

<sup>6</sup> Dreyfuss, *supra* note 3, at 801 (“[T]he Patent Act bears some resemblance to the Sherman Act: it has always depended on common law elaboration.”).

<sup>7</sup> Although the term “common law” is often used indiscriminately to mean several things, I use the term in this article to mean non-statutory, judge-made law, which includes statutory interpretation and statutory gap filling. See *United States v. Kimbell Foods, Inc.*, 440 U.S. 715, 727 (1979) (stating that federal courts are required to “fill the interstices of federal legislation ‘according to their own standards’” when statutes “do not specify the appropriate rule of decision”); Curtis A. Bradley, Jack L. Goldsmith & David H. Moore, *Sosa, Customary International Law, and the Continuing Relevance of Erie*, 120 HARV. L. REV. 869, 880 (2007) (discussing the common law’s interstitial nature); Isaac Ehrlich & Richard A. Posner, *An Economic Analysis of Legal Rulemaking*, 3 J. LEGAL STUD. 257, 261 (1974) (“A general legislative standard creates a demand for specification. This demand is brought to bear on the courts through the litigation process . . . .”); Thomas W. Merrill, *The Common Law Powers of Federal Courts*, 52 U. CHI. L. REV. 1, 7 (1985) (“[F]ederal common law . . . refers to legal rules . . . propounded by courts . . . [that] are not found on the face of an authoritative federal text, . . . including rules “(such as ‘ordinary’ statutory construction . . .).”).

<sup>8</sup> Patent Act of July 19, 1952, Pub. L. No. 82-593, 66 Stat. 792 (codified at 35 U.S.C. §§ 100-376 (2006)).

<sup>9</sup> Since the First Congress, there have been only four significant statutory revisions to the patent code in 1790, 1793, 1836, and 1952. See Patent Act of Apr. 10, 1790, ch. 7, 1 Stat. 109 (establishing the United States Patent Act) (repealed 1793); Patent Act of Feb. 21, 1793, ch. 11, 1 Stat. 318 (removing some of the obstacles for issuing a patent under the Patent Act

The history of substantive legislative action in patent law is, therefore, largely one of obeisance.

The first Congress wasted little time enacting a patent statute in 1790,<sup>10</sup> but the wording of the statute was broad and replete with what today we would call standards or standard-like language. While there are more statutory sections today, the linguistic structure has changed little in 220 years.<sup>11</sup> It should therefore come as no surprise to learn that a significant portion of U.S. patent law, including some of the most important and controversial patent law doctrines, is either built upon judicial interpretation of elliptical statutory phrases, or is devoid of any statutory basis whatsoever.<sup>12</sup> Thus, while Congress and the courts each have a hand in constructing the latticework of patent law, judges – not the authors of *lex scripta*<sup>13</sup> – are the principal architects.<sup>14</sup>

of 1790) (repealed 1836); Patent Act of July 4, 1836, ch. 357, 5 Stat. 117 (establishing the Patent and Trademark Office) (repealed 1952); 66 Stat. at 792 (establishing the current Patent Act). Of course, there were tweaks along the way – some noteworthy such as the Acts of 1870, 1984, and 1999 – but not as significant as the “big four.” See Patent Act of July 8, 1870, ch. 230, 16 Stat. 198-217; Hatch-Waxman Act of Sept. 24, 1984, Pub. L. 98-417, 98 Stat. 1585 (codified at 21 U.S.C. § 301 (2006)); American Inventors Protection Act of 1999, Pub. L. No. 106-113, 113 Stat. 1501A-552. As will be discussed below, the 1952 Act was a combination of codification and corrective legislation that addressed the Supreme Court’s patent jurisprudence. The 1836 Act was also corrective legislation, but one that sought to remedy procedural problems associated with a registration system. The 1836 Act – like the 1952 Act – was also an exercise in codification, particularly of legal innovations emanating from the patent bar. See *infra* text accompanying notes 87-114. Ultimately, the structure of the patent code and corresponding delegation of judicial lawmaking power has remained a fixture since 1790.

<sup>10</sup> 1 Stat. at 109-10.

<sup>11</sup> See Timothy B. Dyk, *Does the Supreme Court Still Matter?*, 57 AM. U. L. REV. 763, 766 (2008) (“Since the very beginning of our nation, Congress has provided a system for the granting of patents. However, up to now, the implementing legislation has not been a great deal more specific than the Constitution itself . . .”).

<sup>12</sup> For example, the entire body of jurisprudence relating to non-literal infringement, claim interpretation, repair-construction, and patent exhaustion is judge-made law.

<sup>13</sup> Sir Matthew Hale, in his famous eighteenth century work, *The History of the Common Law of England*, wrote:

The Laws of England may aptly enough be divided into two Kinds, *viz. Lex Scripta*, the written Law; and *Lex non Scripta*, the unwritten Law: For although . . . all the Laws of this Kingdom have some Monuments or Memorials thereof in Writing, yet all of them have not their Original in Writing; for some of those Laws have obtain’d their Force by immemorial Usage or Custom, and such Laws are properly call’d *Leges non Scriptæ*, or unwritten Laws or Customs.

MATTHEW HALE, *THE HISTORY OF THE COMMON LAW OF ENGLAND* 3 (John Clive ed., Univ. of Chicago 1971) (3d ed. 1739).

<sup>14</sup> The United States Patent & Trademark Office (“PTO”) also has an important role to play in the administration of patent law, but, like other agencies, it receives its delegation from Congress. See *Cooper Techs. Co. v. Dudas*, 536 F.3d 1330, 1337 (Fed. Cir. 2008).

Such a pronounced common law role offers an opportunity to exercise significant discretion. How this discretion has been managed can be gleaned from the common law's willingness to construct legal forms, most notably the choice and balance between the creation of a rule-based (or rule-like) jurisprudence and a more standard-oriented approach.<sup>15</sup> The evolution of the common law of patents has been interstitial and nuanced, displaying an understanding that a body of law devoted to promoting technological innovation – a decentralized enterprise with attendant norms unique to each innovative community – more often than not requires the construction of standards. Frequently, however, the common law reveals a less dichotomous approach, constructing analytical frameworks that are situated somewhere between a spotless rule and a pure standard. The expanse of more than two hundred years reveals an adeptness at modulating along this continuum in a manner that balances judicial discretion, public notice, and flexibility.<sup>16</sup>

This article embraces the notion that patent law has and must continue to adapt to a changing world of technological innovation. The thrust of this article, therefore, is not anti-reform; rather, it asserts that the patent system is best served when the reform-minded engage patent law's traditional policy driver – the judiciary. Of course, this is not to suggest that the common law is

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The PTO, which forms part of the Department of Commerce, does not have substantive rulemaking authority, although it frequently promulgates interpretive rules relating to the prosecution of patents and trademarks. See *Merck & Co. v. Kessler*, 80 F.3d 1543, 1550 (Fed. Cir. 1996). And thus far the United States Court of Appeals for the Federal Circuit, which has sole jurisdiction over PTO appeals, has granted the agency *Chevron* deference only for procedural matters relating to “the conduct of proceedings in the” PTO. *Cooper Techs.*, 536 F.3d at 1335. For a discussion of the relationship between administrative law and patent law, see 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, 284 (2007) and Craig Allen Nard, *Deference, Defiance, and the Useful Arts*, 56 OHIO ST. L.J. 1415, 1416 (1995).

<sup>15</sup> An important point of clarification is in order. A distinction must be made between, on the one hand, the certainty that accompanies rules based upon the boundaries of one's property right, and on the other hand, the certainty that attaches to substantive doctrine. The former is plainly desirable and uncontroversial. See 35 U.S.C. §§ 2, 112 (2006). But the latter, which is the subject of this article, is more nuanced and must calibrate itself on the rules/standards continuum.

<sup>16</sup> Some commentators have examined recent trends in patent law or particular patent law doctrines in the context of rules and standards. See John F. Duffy, *Rules and Standards on the Forefront of Patentability*, 51 WM. & MARY L. REV. 609, 611 (2009); Timothy R. Holbrook, *The Supreme Court's Complicity in Federal Circuit Formalism*, 20 SANTA CLARA COMPUTER & HIGH TECH. L.J. 1, 2 (2003); John R. Thomas, *Formalism at the Federal Circuit*, 52 AM. U. L. REV. 771, 792 (2003); R. Polk Wagner, *Reconsidering Estoppel: Patent Administration and the Failure of Festo*, 151 U. PA. L. REV. 159, 234-37 (2002). For a discussion of rules and standards in the context of plant sciences and patent law, see Mark D Janis, *Rules v Standards for Patent Law in the Plant Sciences*, in *LAW IN CONTEXT: PATENT LAW & BIOLOGICAL INVENTIONS* 54, 54 (Matthew Rimmer ed., 2006).

a catholicon that has unerringly chosen the right path at any given time or struck the correct balance in every instance. Some commentators, for instance, have argued that recent Supreme Court forays into patent law reveal the limits of judicially-driven reform<sup>17</sup> and have diminished the ability of patent players to engage in private ordering.<sup>18</sup>

While these arguments are not without merit, the question of institutional choice is one of comparative advantage.<sup>19</sup> The common law compares favorably to punctuated and, potentially more distortive, congressional action. The judge, in the Hayekian sense, is closer to the “inside baseball” dynamic that is unique to each of the divergent industries that participate in the patent system. Each industry has its own norms and customs, each relies on the patent system to varying degrees,<sup>20</sup> and the common law is more likely to develop doctrine that reflects an industry’s legitimate expectations. As Lon Fuller wrote, the common law “projects its roots more deeply and intimately into human interaction than does statutory law.”<sup>21</sup> Relatedly, the common law demands that the judge look backward in the interest of individual fairness (namely, the parties before the court), but also requires a prospective mindset that is more inclusive in its deliberations.<sup>22</sup> Moreover, judicial primacy acts as

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<sup>17</sup> See Wagner, *supra* note 3, at 39 (“[I]t appears that there is little reason to be hopeful about the possibilities for real reform of the patent system via Supreme Court litigation.”); *infra* text accompanying notes 280-81.

<sup>18</sup> See, e.g., F. Scott Kieff, *Quanta v. LG Electronics: Frustrating Patent Deals by Taking Contracting Options Off the Table?* 315 (Stanford Law Sch. John M. Olin Program in Law & Econ., Working Paper No. 366, 2008), available at <http://ssrn.com/abstract=1274250>.

<sup>19</sup> See JAMES M. BUCHANAN, *EXPLORATIONS INTO CONSTITUTIONAL ECONOMICS* 59 (1989) (“Any positive analysis that purports to be of use in an ultimate normative judgment must reflect an informed comparison of the working properties of alternative sets of rules or constraints.”); *infra* text accompanying notes 258-306.

<sup>20</sup> See WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW* 312 (2003) (arguing that “research-intensive industries” such as computer software, “do not rely heavily on patents as a method of preventing free riding on inventive activity”); Richard C. Levin et al., *Appropriating the Returns from Industrial Research and Development*, 18 *BROOKINGS PAPERS ON ECON. ACTIVITY* 783, 816 (1987).

<sup>21</sup> Lon L. Fuller, *Human Interaction and the Law*, 14 *AM. J. JURIS.* 1, 26 (1969); see also Wesley M. Cohen, Richard R. Nelson & John P. Walsh, *Protecting Their Intellectual Assets: Appropriability Conditions and Why U.S. Manufacturing Firms Patent (or Not)* 5-9 (Nat’l Bureau of Econ. Research, Working Paper No. 7552, 2000), available at <http://www.nber.org/papers/w7552> (finding different industries rely on different appropriability mechanisms to varying degrees – for instance, a majority of the industries surveyed noted that they rely on more than one “appropriability mechanism” as part of their “appropriability strategy” (e.g., a combination of lead time and trade secrets or patents and lead time)).

<sup>22</sup> See Todd J. Zywicki, *A Unanimity-Reinforcing Model of Efficiency in the Common Law: An Institutional Comparison of Common Law and Legislative Solutions to Large-Number Externality Problems*, 46 *CASE W. RES. L. REV.* 961, 990 (1996) (“The personalized nature of the social scrutiny cast upon judges induces them to consider the needs of the

a bulwark against the more politicized legislative process or capture-prone administrative rulemaking.<sup>23</sup> In fact, an historical examination of the courts' prominence in the development of patent law reveals – over a significant period – a correspondence of interests among divergent interest groups.<sup>24</sup> And lastly, the common law is an accretive process and should not be viewed or judged in temporal isolation.<sup>25</sup> Indeed, more than two centuries of experience

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entire community, rather than just those in a given political jurisdiction.”). Standards or standard-like pronouncements play an important role in the forward-looking function of the common law. See RICHARD A. POSNER, *HOW JUDGES THINK* 177 (2008) (stating that unlike rules and precedents, which “illustrate the backward-looking nature of legalist decision making . . . [s]tandards enable information obtained after promulgation to be incorporated into the law without need for further rule making”).

<sup>23</sup> See Thomas W. Merrill, *Capture Theory and the Courts: 1967-1983*, 72 CHI.-KENT L. REV. 1039, 1050 (1997) (defining capture theory as emphasizing how “agencies were likely to become ‘captured’ by the business organizations that they are charged with regulating”); Francesco Parisi, *Public Choice Theory from the Perspective of Law*, in THE ENCYCLOPEDIA OF PUBLIC CHOICE 214, 222 (Charles K. Rowley & Friedrich Schneider eds., 2004) (arguing that because “judicial bodies are independent from political forces and shielded from interest group pressure, the process of judicial lawmaking can be considered immune from the collective decision making failures”); Richard Pierce, *Institutional Aspects of Tort Reform*, 73 CAL. L. REV. 917, 935 n.104 (1985) (“‘Capture’ refers to the tendency of some agencies to favor the industry they are required to regulate by protecting the industry from outside competition and stifling innovation that threatens the status quo in the industry.”). See generally DENNIS C. MUELLER, *PUBLIC CHOICE II*, 179-273 (1989).

<sup>24</sup> See Andrew P. Morriss & Craig Allen Nard, *Institutional Choice & Interest Groups in the Development of American Patent Law: 1790-1870*, 19 SUP. CT. ECON. REV. (forthcoming 2011) (manuscript at 2), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1262970](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1262970); Craig Allen Nard & Andrew P. Morriss, *Constitutionalizing Patents: From Venice to Philadelphia*, 2 REV. L. & ECON. 223, 232 (2006) [hereinafter Nard & Morriss, *Constitutionalizing Patents*]. This point is largely confined to the development of U.S. patent law. The political economy of TRIPS (the WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights) and international harmonization efforts reveal a more one-sided affair. See CAROLYN DEERE, *THE IMPLEMENTATION GAME: THE TRIPS AGREEMENT AND THE GLOBAL POLITICS OF INTELLECTUAL PROPERTY REFORM IN DEVELOPING COUNTRIES I* (2009); PETER DRAHOS WITH JOHN BRAITHWAITE, *INFORMATION FEUDALISM: WHO OWNS THE KNOWLEDGE ECONOMY?* 10 (2003); WTO & the TRIPS Agreement, [http://www.who.int/medicines/areas/policy/wto\\_trips/en/index.html](http://www.who.int/medicines/areas/policy/wto_trips/en/index.html) (last visited Oct. 18, 2009).

<sup>25</sup> See POSNER, *supra* note 22, at 277 (“[C]ommon law judges proceed incrementally, giving great weight to precedent, hesitating to lay down broad, flat rules.”); Anita Bernstein, *Restatement (Third) of Torts: General Principles and the Prescription of Masculine Order*, 54 VAND. L. REV. 1367, 1406 (2001) (“[T]he common law is an accretion of fact-specific rules . . . .”); Richard B. Cappalli, *At the Point of Decision: The Common Law's Advantage Over the Civil Law*, 12 TEMP. INT'L & COMP. L.J. 87, 99 (1998) (stating that in a common law regime, “[e]stimates of social gain and loss sit on the surface ready to be considered again and again in later cases”).

has taught us that the common law has handled its responsibility relatively well when engaging “the muddy metaphysics of the patent law.”<sup>26</sup>

Thus, the U.S. experience with patent law provides a strong case for an important but modest congressional role in its development, one limited to (1) bringing about procedural change relating to, for example, the examination process,<sup>27</sup> harmonization of priority determinations,<sup>28</sup> or patent law’s judicial architecture;<sup>29</sup> or (2) engaging in substantive corrective action by addressing a jurisprudence gone awry. For instance, the 1952 Patent Act<sup>30</sup> was Congress’s response to a Supreme Court that was viewed as overly hostile to patent rights and a common law approach that reflected this hostility.<sup>31</sup> As Friedrich Hayek wrote, corrective legislation is sometimes desirable because the “development of case-law is in some respects a sort of one-way street.”<sup>32</sup> The question remains of how to distinguish between a jurisprudence gone awry and one that

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<sup>26</sup> *Jamesbury Corp. v. United States*, 518 F.2d 1384, 1396 (Ct. Cl. 1975) (quoting *Mueller Brass Co. v. Reading Indus.*, 352 F. Supp. 1357, 1372 (E.D. Pa. 1972)).

<sup>27</sup> The Patent Act of 1790 required applications to be examined. Patent Act of Apr. 10, 1790, ch. 7, 1 Stat. 109, 110 (repealed 1793). Congress abandoned this requirement three years later, but reimplemented it in the 1836 Act. *See supra* note 9 and accompanying text. With respect to contemporary examination reform, Congress can create an opposition proceeding – and has sought to do so for the past four years – or require the publication of certain types of applications, as it did in 1999. American Inventors Protection Act of 1999, Pub. L. No. 106-113, 113 Stat. 1501A-552, 1501A-561.

<sup>28</sup> The most obvious change in this regard is for Congress to create a first-to-file system of priority, meaning that the inventor who is the first to file an application claiming a particular invention will be awarded the patent, as opposed to the present procedure, where an inventor who may have invented first, but filed second, is entitled to the patent. In 1995, Congress harmonized the term of protection in U.S. patent laws, changing the patent term from seventeen years from issuance to twenty years from filing and added “offer to sell” and “importing” as forms of infringement. Uruguay Round Agreements Act, Pub. L. No. 103-465, § 532, 108 Stat. 4809, 4983 (1994).

<sup>29</sup> Of course, Congress has the power to amend patent law’s judicial architecture, including the appellate structure (creating the Federal Circuit in 1982) and district court quasi-specialization initiatives. Federal Courts Improvement Act of Apr. 2, 1982, Pub. L. No. 97-164, 96 Stat. 25 (1982) (codified at 28 U.S.C. § 1295 (2006)). Regarding the latter, see Senate and House companion bills: To Establish a Pilot Program in Certain United States District Courts to Encourage Enhancement of Expertise in Patent Cases Among District Judges, H.R. 628, 111th Cong. (2009); S. 299, 111th Cong. (2009). As the title suggests, the bills would create a pilot program to enhance district court expertise relating to patent cases. *See* Craig Allen Nard & John F. Duffy, *Rethinking Patent Law’s Uniformity Principle*, 101 NW. U. L. REV. 1619, 1629-41 (2007) (arguing for more decentralization in patent law’s appellate architecture).

<sup>30</sup> Patent Act of July 19, 1952, Pub. L. No. 593, 66 Stat. 792 (1952) (codified at 35 U.S.C. §§ 100-376 (2006)).

<sup>31</sup> *See infra* text accompanying notes 99-109.

<sup>32</sup> 1 FRIEDRICH A. HAYEK, LAW, LEGISLATION AND LIBERTY: RULES AND ORDER 88 (1973) (describing the role of legislation as corrective action toward judicial pronouncements).

is merely enduring growing pains typically associated with, for example, a transitional period? Hayek's response is that legislative action is necessary when "the development of the law has lain in the hands of members of a particular class whose traditional views made them regard as just what could not meet the more general requirements of justice."<sup>33</sup> It is doubtful the courts have ventured so far in recent years as to require a statutory reaction rather than a more evolutionary, self-correcting response. What the courts cannot do, however, is construct a first-to-file system, an opposition proceeding, or bring about procedural innovations in the enforcement context.

This Article is divided into three parts. Part I explores patent law's common law enabling architecture beginning with the intellectual property ("IP") clause of the Constitution. This Part is designed to show that it is no accident the courts are the principal drivers of patent law, with Congress playing an important, yet secondary role. Part II examines the rules-standards literature in the context of patent law, revealing how courts have navigated the rules-standards continuum in the context of several patent law doctrines. And Part III captures the normative lessons learned and sets forth specific institutional roles in the light of the comparative advantages of the common law and congressional action.

#### I. A COMMON LAW ENABLING ARCHITECTURE

United States patent law is designed to invite, indeed require, a strong judicial voice. From its founding, the Constitutional and legislative structure of patent law has provided the common law process with a predominant place in the development and evolution of patent doctrine. Congress has played an important role, but the courts were meant to be the stewards. This can be seen in the intellectual property clause of the Constitution and in every congressional intervention thereafter. Indeed, patent law's broad constitutional objective – "to promote the progress of . . . useful Arts"<sup>34</sup> – demands broad statutory language that implicitly requires an engaged judiciary.

##### A. *Cabining Congressional Intervention*

###### 1. The Structure of the Constitutional IP Clause

The common law's ascendancy in the field of patent law can be traced to England's Statute of Monopolies.<sup>35</sup> This seventeenth century statute was a culmination of a long battle between Parliament and the Crown over the Crown's perceived abusive issuance of monopolies for subject matter that had no claim to novelty.<sup>36</sup> The statute provided in Section VI that all royal monopolies were void with an exception for "new Manufactures within this Realme, to the true

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<sup>33</sup> *Id.* at 89.

<sup>34</sup> U.S. CONST. art. I, § 8, cl. 8.

<sup>35</sup> See Statute of Monopolies, 1624, 21 Jac. 1, c. 3, § II.

<sup>36</sup> See Nard & Morriss, *Constitutionalizing Patents*, *supra* note 24, at 258.

and first Inventor” and that “they not be contrary to law.”<sup>37</sup> Most importantly, however, Section II “declared and enacted . . . [t]hat all Monopolies . . . shall be forever hereafter examined heard tried and determined by and according to the Common Lawes.”<sup>38</sup> The statute decisively settled the question of the monarch’s authority to issue patents of monopoly, sharply restricting permissible grants.<sup>39</sup> The common law’s limitation to grants that furthered the national interest would henceforth be enforced by the common law courts, not the Privy Council or the Star Chamber. By relocating the decision-making authority for the validity of particular patents, Parliament created a binding constraint on the issuance of monopoly patents, limiting them to cases of invention. In this regard, the Statute of Monopolies was more than simply a restatement of existing law<sup>40</sup>: it introduced a crucial change by granting jurisdiction to the common law courts in place of the monarch’s “act of grace.”<sup>41</sup>

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<sup>37</sup> 21 Jac. 1, c. 3, § VI.

<sup>38</sup> *Id.* § II.

<sup>39</sup> See CHRISTINE MACLEOD, *INVENTING THE INDUSTRIAL REVOLUTION: THE ENGLISH PATENT SYSTEM, 1660-1800*, at 17 (1988) (discussing that in addition to invention patents, the Statute of Monopolies allowed Acts of Parliament to grant “patents for printing, making ordnance, gunpowder and alum, and the manufacturing patents granted to four named individuals”).

<sup>40</sup> *But see* Chris R. Kyle, ‘*But a New Button to an Old Coat*’: *The Enactment of the Statute of Monopolies*, 21 *JAMES I cap.3*, 19 *J. LEGAL HIST.* 203, 216-17 (1998).

<sup>41</sup> 21 Jac. 1, c. 3, § II. Section II of the Statute of Monopolies was a bold and challenging provision, in addition to being the only new principle of law enacted by the statute. This is not to suggest that the common law enjoyed prominence immediately after enactment. See J.P. KENYON, *THE STUART CONSTITUTION 1603-1688: DOCUMENTS & COMMENTARY* 62 (1966); MACLEOD, *supra* note 39, at 15 (“[T]here were loopholes in the Act which the crown, desperate for new sources of patronage and revenue in the 1630s, was able to exploit.”); Kyle, *supra* note 40, at 206 (“[D]espite the [court] rulings . . . monopoly patents continued to be granted and executed.”). As Adam Mossoff observed, “[t]he Privy Council’s obstinate refusal to concede jurisdiction” allowed it to continue to quash common law actions against patents in some cases. Adam Mossoff, *Rethinking the Development of Patents: An Intellectual History, 1550-1800*, 52 *HASTINGS L.J.* 1255, 1277 (2001). In fact, it would take some time before patent determinations were firmly within the confines of the common law courts. See HAROLD G. FOX, *MONOPOLIES AND PATENTS* 124 (1947) (contending that the Star Chamber continued to hear monopoly cases into the 1640s “under the theory that defiance of a royal proclamation was a contempt of royal prerogative”); WILLIAM HYDE PRICE, *THE ENGLISH PATENTS OF MONOPOLY* 35 (1913) (asserting that the Privy Council continued to squash common law suits aimed at existing monopolies despite explicit language to the contrary in the statute). Patent law was only one of the many arenas in which the larger struggle for supremacy between Parliament and the monarchy was fought. Parliament’s victory in the Statute of Monopolies, as important as it was, was still only a single political win in a multi-century campaign. See Thomas B. Nachbar, *Monopoly, Mercantilism, and the Politics of Regulation*, 91 *VA. L. REV.* 1313, 1354 (2005). Nonetheless, James I’s reign produced a fundamental shift in patent law, introducing an

As the common law gradually gained influence in seventeenth century England, some of the American colonies began to issue patents.<sup>42</sup> Although colonial patent practice was limited, largely due to a predominantly agrarian society, it nonetheless influenced the subsequently-developed patent custom of the states and the future federal patent system. As domestic technology developed and national markets formed, the number of state-issued patents gradually increased, resulting in conflicting private legislative grants among states.<sup>43</sup> The Constitutional Convention drew near, and the problems with state patent custom became increasingly more apparent, thus giving rise to the desirability of a uniform system of patents.<sup>44</sup>

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institution capable of independently evaluating the legitimacy of particular patents: the common law courts.

<sup>42</sup> See BRUCE W. BUGBEE, *GENESIS OF AMERICAN PATENT AND COPYRIGHT LAW* 57 (1967); 1 VICTOR S. CLARK, *HISTORY OF MANUFACTURES IN THE UNITED STATES: 1607-1860*, at 47-53 (1929). America's first colonial patent was issued in Massachusetts in 1641 to Samuel Winslow pertaining to the production of salt for the colony's fishing industry. The most active colonies in issuing patents were Massachusetts, Connecticut, and South Carolina. See BUGBEE, *supra*, at 60, 69, 75. It appears that Delaware, New Hampshire, New Jersey, and North Carolina did not issue patents. It is questionable whether Pennsylvania issued any patents during the colonial period, whereas New York, Maryland, Rhode Island, and Virginia issued a combined total of ten. See Edward C. Walterscheid, *The Early Evolution of the United States Patent Law: Antecedents (5 Part I)*, 78 J. PAT. & TRADEMARK OFF. SOC'Y 615, 630-31 (1996). Colonial patents were issued through private bills or special enactments, not general or public statutory schemes. *Id.* at 624-25.

<sup>43</sup> Take the famed Rumsey-Fitch steamboat dispute during the 1780s-1790s as an example. Both James Rumsey and John Fitch lobbied several state legislatures for a monopoly for their respective steamboats. Each legislature had distinct patent customs, and then men had to vie for priority in each state according to those diverse rules. Interestingly, beyond the Rumsey-Fitch dispute, patents did not play a significant role in the development of the steamboat technology. As Louis Hunter wrote:

Though the men who developed the machinery of the western steamboat possessed much ingenuity and inventive skill, the record shows that they had little awareness of or use for the patent system. . . . [N]o significant part of the engine, propelling mechanism, or boilers during the period of the steamboat's development to maturity was claimed and patented as a distinctive and original development.

LOUIS C. HUNTER WITH BEATRICE JONES HUNTER, *STEAMBOATS ON THE WESTERN RIVERS* 175-76 (1949).

<sup>44</sup> See Nard & Morriss, *Constitutionalizing Patents*, *supra* note 24, at 290-304 (postulating that the principle reason for federalizing the patent system was desire for a nationally uniform patent policy). Prior to the ratification of the Constitution, there was no federal patent system. The states retained the power to issue patents because under Article II of the Articles of Confederation, each state retained "every power, jurisdiction and right, which is not by the confederation expressly delegated to the United States, in Congress assembled." Edward C. Walterscheid, *To Promote the Progress of Useful Arts: American Patent Law and Administration, 1787-1836 (Part I)*, 79 J. PAT. & TRADEMARK OFF. SOC'Y 61, 66 (1997) (quoting ARTICLES OF CONFEDERATION art. II). Furthermore, as Bugbee observed:

It was against this political and legal backdrop that James Madison and Charles Pinckney, in the closing days of the Constitutional Convention,<sup>45</sup> proposed that Congress shall have the power “[t]o promote the Progress of Science and useful Arts by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.”<sup>46</sup> This provision, embodied in Article I, Section 8, Clause 8 of the Constitution, passed

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In 1777, when the Articles of Confederation were drafted, patent granting was temporarily in abeyance, and the framers of the Articles made no attempt to transfer the protection of inventive property to the national scene. Had this colonial prerogative been actively exercised at the time by the newly independent states, the Articles would probably have left it to them nevertheless. By 1787, however, the granting of state patents was at a peak, and the need for a centralized system was strongly indicated by the multiple applications of competing inventors. With the emergence of a small but significant class of manufacturers and promoters stimulated by the war, the economic stakes were now considerably greater than had been the case in colonial times. The merits and shortcomings of the state patent practice were therefore clearly visible to those state legislators who were about to transmit this experience to the national scene.

BUGBEE, *supra* note 42, at 103.

<sup>45</sup> The delegates convened in Philadelphia on May 14, 1787. A draft Constitution was reported on August 6 without a patent and copyright clause. However, twelve days later, on August 18, Charles Pinckney of South Carolina, who was serving in the South Carolina legislature when it enacted America’s first general patent and copyright provision in 1784, proposed that Congress have the power to enact patent legislation. That same day, James Madison submitted a similar proposal. David Brearley of New Jersey, a member of the Committee of Eleven, reported to the Convention what is essentially the patent and copyright clause embodied in Article I, Section 8, Clause 8 of the Constitution. See BUGBEE, *supra* note 42, at 125-31; Karl Fenning, *The Origin of the Patent and Copyright Clause of the Constitution*, 17 GEO. L.J. 109, 112 (1929). Unfortunately, the historical record of the clause is sparse. Indeed, there is no recorded debate on this provision. As one judge, writing in the late nineteenth century, said when faced with interpreting the patent and copyright clause, “[w]hat immediate reasons operated upon the framers of the Constitution seem to be unknown.” *McKeever v. United States*, 14 Ct. Cl. 396, 420 (1878).

<sup>46</sup> U.S. CONST. art. I, § 8, cl. 8. The Framers, employing colonial syntax, were respectively referring to works of authors and inventors when they used the terms “Science” and “useful Arts.” In the eighteenth century, the term “Science,” from the Latin, *scire*, “to know,” meant learning or knowledge in general and had no particular connection to the physical or biological sciences. Thus, the operational relationships are between “authors,” “science,” and “writings” for copyright on the one hand and “inventors,” “useful Arts,” and “discoveries” for patents on the other. See John F. Kasson, *Republican Values as a Dynamic Factor*, in *THE INDUSTRIAL REVOLUTION IN AMERICA* 3, 6 (Gary J. Kornblith ed., 1998) (suggesting that the term *technology* “did not acquire its current meaning until the nineteenth century,” but in eighteenth century usage, “‘technology’ denoted a treatise on an art or the scientific study of the practical or industrial arts” or “useful knowledge”); Karl B. Lutz, *Patents and Science: A Clarification of the Patent Clause of the U. S. Constitution*, 18 GEO. WASH. L. REV. 50, 50 (1950); Giles S. Rich, *Principles of Patentability*, in *NONOBVIOUSNESS – THE ULTIMATE CONDITION OF PATENTABILITY* 2:1, 2:3-2:5 (John F. Witherspoon ed., 1980). See generally Kenneth J. Burchfiel, *Revising the “Original” Patent Clause: Pseudohistory in Constitutional Construction*, 2 HARV. J.L. & TECH. 155 (1989).

unanimously without debate and provides the foundation for American patent and copyright law.<sup>47</sup>

Of particular relevance is the structure of the clause, which reveals an intent to cabin congressional power. The clause sets forth the specific means of exercising the enumerated power by permitting Congress to promote the progress of the useful arts (i.e., the enumerated power) by granting *exclusive rights for limited times to inventors for their discoveries*. Ahkil Amar, citing the patent and copyright clause, asserts that one method to deter “pretextual use of congressional power . . . [was] to specify the purpose of a particular power.”<sup>48</sup> The proposals rejected by the delegates during the convention are also illustrative. Dotan Oliar observes that in addition to the language that eventually found its way into Article I, Section 8, Madison and Pinckney proposed that Congress have the power to encourage the arts, sciences, and useful knowledge by offering rewards, chartering corporations, and establishing seminaries, public institutions, and universities.<sup>49</sup> These rejected proposals would have allowed for a great deal more congressional intervention into market dynamics, rendering legislators more susceptible to interest-group pressures. In fact, Alexander Hamilton recalled that a principal argument for limiting government involvement and its ability to direct the path of industry was that state intervention would “sacrifice the interests of the community to those of particular classes.”<sup>50</sup> Moreover, the delegates were not operating in a vacuum; they most likely had knowledge of the Statute of Monopolies and therefore these structural limitations were arguably influenced by the antimonopoly tradition in England.<sup>51</sup> Thus, the decentralized nature of the IP

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<sup>47</sup> In fact, James Madison, in Federalist No. 43, wrote:

The utility of [Article I, Section 8, Clause 8] will scarcely be questioned. The copy right of authors has been solemnly adjudged in Great Britain to be a right at common law. The right to useful inventions, seems with equal reason to belong to the inventors. The public good fully coincides in both cases, with the claims of individuals.

THE FEDERALIST NO. 43, at 234, 234 (James Madison) (J.R. Pole ed., 2005).

<sup>48</sup> AKHIL REED AMAR, AMERICA’S CONSTITUTION 112 (2005); *see also* Graham v. John Deere Co., 383 U.S. 1, 5 (1965) (“The [intellectual property] clause is both a grant of power and a limitation. . . . It was written against the backdrop of the practices – eventually curtailed by the Statute of Monopolies – of the [English] Crown in granting monopolies to court favorites in goods or businesses which had long before been enjoyed by the public.”); Robert Patrick Merges & Glenn Harlan Reynolds, *The Proper Scope of the Copyright and Patent Power*, 37 HARV. J. ON LEGIS. 45, 52-53 (2000) (asserting that “the constitutional footing for intellectual property protection was constructed with inherent limitations” that “originated in British analogues that were expressly designed to eliminate rent-seeking abuses”).

<sup>49</sup> Dotan Oliar, *Making Sense of the Intellectual Property Clause: Promotion of Progress as a Limitation on Congress’s Intellectual Property Power*, 94 GEO. L.J. 1771, 1791-805 (2006).

<sup>50</sup> 3 ANNALS OF CONG. 972-73 (1793).

<sup>51</sup> This is not to suggest that the Founders were aware of the common law cases interpreting the Statute of Monopolies, as those cases were largely decided in the second

clause arguably reflects an aversion to special legislation and a desire to check congressional overreaching.

## 2. 1790-1836: Statutory Standards and Legal Innovation

The First Congress, whose work “amounted to a continuation of the labors of the Constitutional Convention,”<sup>52</sup> took up the issue of patent legislation in its second session, passing the Patent Act of 1790.<sup>53</sup> The 1790 Act – in seven statutory sections – established some of the “must haves” for any operable patent system.<sup>54</sup> These features included novelty, utility, disclosure requirements, and a patent examination process.<sup>55</sup>

The statutory text betrayed an understanding of the powerful role courts would play in the development of patent law. For example, in language that has changed remarkably little in over two hundred years, the Act required one seeking a patent to petition a reviewing board “setting forth, that he . . . invented or discovered any useful art, manufacture, engine, machine, or device . . . not before known or used.”<sup>56</sup> And before the patent was granted, the applicant was obliged to “deliver to the Secretary of State a specification . . . so particular . . . as not only to distinguish the invention or discovery from other things before known and used, but also to enable a workman . . . skilled in the art . . . to make, construct, or use the same.”<sup>57</sup> These requirements would eventually keep the courts busy, but not until the market for patented goods demanded the attention of the judiciary.

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half of the eighteenth century. Nor is there direct evidence of the influence of the English experience on the structure of Article I, Section 8, Clause 8. See Thomas B. Nachbar, *Intellectual Property and Constitutional Norms*, 104 COLUM. L. REV. 272, 330-31 (2004). Nonetheless, a plausible inference can be made that the Founders were aware of the Statute of Monopolies and were at least sensitive to the English tradition. For instance, Blackstone, whose “*Commentaries* was the most widely read English law treatise in late-eighteenth-century America,” John F. Manning, *Textualism and the Equity of the Statute*, 101 COLUM. L. REV. 1, 35 (2001), specifically mentioned the Statute of Monopolies in his *Commentaries*. See 4 WILLIAM BLACKSTONE, *COMMENTARIES* \*159 (asserting that royal abuse in granting monopolies was “in great measure remedied by” the Statute of Monopolies, “which declares such monopolies to be contrary to law and void (except as to patents, not exceeding the grant of fourteen years, to the authors of new inventions . . .).”). And there was arguably awareness of the English common law from the time of Justice Story’s 1822 opinion in *Evans v. Eaton*, 20 U.S. (7 Wheat.) 356, 399 (1822), but the extent of this awareness is difficult to discern.

<sup>52</sup> Forrest McDonald, *Economic Freedom and the Constitution: The Design of the Framers*, in 6 POLITICAL ECONOMY & PUBLIC POLICY: PUBLIC CHOICE & CONSTITUTIONAL ECONOMICS 335, 344 (James D. Gwartney & Richard E. Wagner eds., 1988).

<sup>53</sup> Patent Act of Apr. 10, 1790, ch. 7, 1 Stat. 109 (repealed 1793).

<sup>54</sup> *Id.*

<sup>55</sup> *Id.*

<sup>56</sup> *Id.* § 1.

<sup>57</sup> *Id.* § 2.

The 1790 Act was short-lived. The examination process required an inordinate amount of administrative time and soon came under heavy criticism by those responsible for its administration,<sup>58</sup> particularly then-Secretary of State Thomas Jefferson.<sup>59</sup> Inventors were also disenchanted with the 1790 Act, as they believed “patents were too difficult to obtain.”<sup>60</sup> Unpopular with both the consumers of patents and the government officials charged with administering the system, the 1790 Act had no constituency and the criticism of it spurred Congress to do away with the examination proceeding just three years later, leaving in its place what can be characterized as a registration system akin to modern day U.S. copyright law.<sup>61</sup> To receive a patent, an invention would no longer have to be “sufficiently useful and important.”<sup>62</sup>

The 1793 Act’s removal of the examination proceeding made it easier to obtain patents. The 1793 Act shifted patent protection analyses from an *ex ante* gatekeeper role performed by the examination to an *ex post* proceeding in the courts. This institutional change did not abandon the screening of enforceable patents, but merely shifted an important part of the determination of what was an enforceable patent from the point of issuance to a judicial enforcement proceeding. Doing so made patents easier to obtain, but paradoxically made the enforcement of patent rights less certain, as a registration system provided little confidence in the patent’s validity.

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<sup>58</sup> Congress formed a committee to amend the 1790 Act a mere seven months after it was passed. See E.C. Walterscheid, *Thomas Jefferson and the Patent Act of 1793*, 40 *ESSAYS IN HIST.* (2000), available at <http://etext.virginia.edu/journals/EH/EH40/walter40.html> (last visited Oct. 17, 2009).

<sup>59</sup> See Letter from Thomas Jefferson to Hugh Williamson (Apr. 1, 1792), in 6 *THE WORKS OF THOMAS JEFFERSON* 458, 459 (Paul Leicester Ford ed., Fed. ed. 1904) (writing that the examination proceeding led Jefferson “to give undue & uninformed opinions” on the merits of patent applications that “require a great deal of time to understand”).

<sup>60</sup> Steven Lubar, *The Transformation of Antebellum Patent Law*, 32 *TECH. & CULTURE (SPECIAL ISSUE)* 932, 936 (1991); see also CARROLL PURSELL, *THE MACHINE IN AMERICA: A SOCIAL HISTORY OF TECHNOLOGY* 98 (2d ed. 2007) (“The members of the [patent] board were said to be philosophically opposed to the industrial classes and therefore overly parsimonious with patents.”). One notable critic of the board’s alleged parsimony was Joseph Barnes, attorney and brother-in-law of James Rumsey. See generally JOSEPH BARNES, *TREATISE ON THE JUSTICE, POLICY, AND UTILITY OF ESTABLISHING AN EFFECTUAL SYSTEM FOR PROMOTING THE PROGRESS OF USEFUL ARTS, BY ASSURING PROPERTY IN THE PRODUCTS OF GENIUS* (1792).

<sup>61</sup> Patent Act of Feb. 21, 1793, ch. 11, 1 Stat. 318 (repealed 1836).

<sup>62</sup> Patent Act of Apr. 10, 1790, ch. 7, 1 Stat. 109, 110 (repealed 1793). The 1793 Patent Act eliminated this language, but Congress reinstated it in the 1836 Act. See Patent Act of July 4, 1836, ch. 357, 4 Stat. 117, 120 (repealed 1952); 1 Stat. 318 (repealed 1836). It remained in the patent code until 1952, when it was deemed “unnecessary” in the light of the then-new § 103 relating to nonobviousness. See Patent Act of July 19, 1952, Pub. L. No. 593, 66 Stat. 792 (codified at 35 U.S.C. §§ 100-376 (2006)); Giles S. Rich, *The Principles of Patentability*, 42 *J. PAT. OFF. SOC’Y* 75, 80-81 (1960) (quoting 35 U.S.C.A. § 131 revision note (1954)).

Satisfying patent applicants' desire for reforms that would speed the grant of patents thus ironically had the effect of undermining patents' value. As experience with the 1793 Act revealed this impact, one would therefore expect patentees and their representatives to seek changes in patent law that would increase the value of patents.

Thus, it was left to inventors and the nascent patent bar to work within the 1793 Act and provide the courts with a way of distinguishing novel innovations "from all other things before known."<sup>63</sup> As one commentator remarked, "[w]hen the disclosure was required the bar went into labor and brought forth the patent lawyer."<sup>64</sup> In this context, perhaps the single most important innovation of the bar was the patent claim. The development of the claim grew not only from the desire to preserve patent validity but also with an eye toward proving infringement. Prior to 1836, the patent bar, responding in part to judicial pronouncements on the need for greater particularity,<sup>65</sup> introduced the patent claim into the application as a distinct component from the specification. This allowed applicants to separate their inventions from the

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<sup>63</sup> 1 Stat. at 321.

<sup>64</sup> Richard Spencer, *The Patent Lawyer and the General Practitioner*, 81 U. PA. L. REV. 924, 930 (1933); see also PURSELL, *supra* note 60, at 100; EDWARD C. WALTERSCHEID, TO PROMOTE THE PROGRESS OF USEFUL ARTS: AMERICAN PATENT LAW AND ADMINISTRATION, 1798-1836, at 307 (1998) ("As the commercial interest in patents increased, so too did the realization that good legal advice was required."). Judge Pauline Newman has acknowledged that the "development of claim style was guided by growing cadres of professional patent examiners and registered patent attorneys, along with the growth of prior art and competing technologies." *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1530 (Fed. Cir. 1995) (en banc) (Newman, J., concurring). For a historical discussion of the development of the patent practitioner in the late 19th century, see Kara W. Swanson, *The Emergence of the Professional Patent Practitioner*, 50 TECH. & CULTURE 519, 523 (2009).

<sup>65</sup> See *Evans v. Eaton*, 20 U.S. (7 Wheat.) 356, 440 (1822). This point was made more explicit in *Lowell v. Lewis*, wherein Justice Story wrote:

An objection of a more general cast . . . is, that the specification is expressed in such obscure and inaccurate terms, that it does not either definitely state, in what the invention consists . . . . [T]he patentee is bound to describe, in full and exact terms, in what his invention consists; and, if it be an improvement only upon an existing machine, he should distinguish, what is new and what is old in his specification, so that it may clearly appear, for what the patent is granted.

*Lowell v. Lewis*, 15 F. Cas. 1018, 1020 (Story, Circuit Justice, C.C.D. Mass. 1817); see also Joshua D. Sarnoff, *The Historic and Modern Doctrines of Equivalents and Claiming the Future, Part I (1790-1870)*, 87 J. PAT. & TRADEMARK OFF. SOC'Y 371, 384 (2005) ("In response to [*Eaton and Lowell*], patent applicants began to include summary language at the end of their specifications that more specifically identified what they regarded as and claimed to be their inventions and what distinguished them from the prior art."); William Redin Woodward, *Definiteness and Particularity in Patent Claims*, 46 MICH. L. REV. 755, 758-59 (1948).

prior art in a more efficient fashion<sup>66</sup> and provided guidance for jurors as to the patentee's invention in the context of infringement.<sup>67</sup> The formalization of this requirement in the 1836 Act "merely endorsed and positively required what inventors had been doing voluntarily for years."<sup>68</sup>

Another post-1793 innovation of the patent bar was the reissue proceeding. This proceeding, not mentioned in the 1793 Act, allowed patentees to return to the patent office if their original patents were inoperative or invalid due to a deficiency in the specification or if the patentee claimed more than what the prior art allowed. As noted above,<sup>69</sup> courts were acutely aware of the equivocal nature of patent validity under the 1793 Act, and therefore the risk of invalidation was real. The patent bar wanted to create an administrative mechanism to allow their clients – who they deemed as "true" inventors in danger of being wrongly swept up with the chaff – to remedy defects in their original patent. The patent office (more accurately, the Secretary of State) embraced this practice. The superintendent of the patent office at the time reissue practice took shape was William Thornton, who viewed the patent

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<sup>66</sup> See *Hilton Davis*, 62 F.3d at 1530; John F. Duffy, *The Festo Decision and the Return of the Supreme Court to the Bar of Patents*, 2002 SUP. CT. REV. 273, 308.

<sup>67</sup> Duffy, *supra* note 66, at 309 (explaining that the claim served to highlight what the inventor considered the notable features of his or her invention). In this regard, Duffy finds that the claim was created "to protect and to expand the rights of patentees." *Id.* at 308; see also 1 ANTHONY W. DELLER, *PATENT CLAIMS* 9 (2d ed. 1971). Central claiming was so common that when the Patent Act of 1836 was passed, "it was understood as merely codifying the existing law which had been developed by the courts." Karl B. Lutz, *Evolution of the Claims of U.S. Patents*, 20 J. PAT. OFF. SOC'Y 134, 143 (1938).

The word "claim" found its way into the 1836 Patent Act and, as a result, assumed greater importance. Nevertheless, the claim was still not regarded as the central feature of the patent document, even though applicants began to draft claims more specifically by expending "a great deal of effort . . . in formulating claims, and the practice grew of presenting a profusion of claims of varying form and scope." Woodward, *supra* note 65, at 764. In 1870, Congress, for the first time, specifically required the patent applicant to claim his invention distinctly and with particularity. Patent Act of 1870, ch. 230, § 26, 116 Stat. 198, 201 (1871). This new requirement, which came to be known as "peripheral claiming," highlighted the notice function of the claim and provided the applicant with more autonomy in setting forth the outer boundaries (periphery) of his invention. The public, it was thought, could now have more confidence on where the patentee's proprietary boundaries resided because peripheral claiming reduced the need for the Doctrine of Equivalents. Central claiming was officially dead, and the patent claim from 1870 to the present day has held center stage. See, e.g., *Merrill v. Yeomans*, 94 U.S. 568, 570 (1876) (asserting that the claim is of "primary importance" in ascertaining exactly what is patented).

<sup>68</sup> N.J. Brumbaugh, *History and Purpose of Claims in United States Patent Law*, 14 J. PAT. OFF. SOC'Y 273, 276 (1932). One commentator dates the earliest claim to an 1811 patent by Robert Fulton. See Lutz, *supra* note 67, at 136.

<sup>69</sup> See *supra* notes 62-68 and accompanying text (discussing the requirements for patentability under the Patent Act of 1793).

system as an institution designed to serve and reward inventors<sup>70</sup> (the first reissue was as early as 1813<sup>71</sup>). Several years later, *Morris v. Huntington*<sup>72</sup> recognized the power of the patent office to reissue patents; the Supreme Court did the same in 1832, referring to reissue as a “settled practice.”<sup>73</sup> Congress codified reissue that same year.<sup>74</sup>

B. *Courts as Creator and Congress as Codifier*

1. The 1836 and 1870 Patent Acts: Correction and Codification, Part I

The 1793 Act<sup>75</sup> remained intact for forty-three years, but during that time it came to be widely recognized that its provisions led to “unrestrained and promiscuous grants of patent privileges;”<sup>76</sup> or, more generously, patents were

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<sup>70</sup> See WALTERSCHEID, *supra* note 64, at 244 (“[Thornton], like many of his contemporaries, . . . viewed the patent system not so much as being imbued [sic] with a public interest, but rather as a mechanism for rewarding legitimate inventors and protecting their rights.”). For a discussion of William Thornton’s tenure as Superintendent of Patents, see KENNETH W. DOBYNS, *THE PATENT OFFICE PONY: A HISTORY OF THE EARLY PATENT OFFICE 42-57* (1994) and Daniel Preston, *The Administration and Reform of the U. S. Patent Office, 1790-1836*, 5 J. EARLY REPUBLIC 331, 334 (1985).

<sup>71</sup> See Kendall J. Dood, *Pursuing the Essence of Inventions: Reissuing Patents in the 19th Century*, 32 TECH. & CULTURE (SPECIAL ISSUE) 999, 1001 (1991).

<sup>72</sup> 17 F. Cas. 818, 820 (Thompson, Circuit Justice, C.C.N.Y. 1824).

<sup>73</sup> *Grant v. Raymond*, 31 U.S. 218, 244 (1832) (“We would not willingly disregard this settled practice [i.e., reissue] in a case where we are not satisfied it is contrary to law, and where we are satisfied that it is required by justice and good faith.”). Walterscheid and Dood credit Thornton with initiating the reissue procedure. Dood, *supra* note 71, at 1001 (“The practice [of reissue] was begun apparently on the initiative of William Thornton . . .”). But it seems more likely that the innovation originated with the patent bar, which found a receptive audience in Thornton, someone who firmly believed in rewarding inventors for their technical contributions. At the very least, reissue was a product of the bar and the patent office. William Thornton recounted an interesting example of counsel’s role in a letter to John Quincy Adams. According to Thornton, George Sullivan, counsel for John Bedford (a party to the well-known case of *Bedford v. Hunt*, 3 F. Cas. 37 (Story, Circuit Justice, C.C.D. Mass. 1817)), informed Thornton that Justice Story, in his role as circuit judge in the case, had recently “pronounce[d] that [Bedford’s patent] specification is ‘not’ sufficiently specific, and that there ought to be a new patent issued.” W.I.W., *More Thorntoniana*, 1 J. PAT. OFF. SOC’Y 325, 325 (1918). Yet, as Walterscheid notes, the reported case says nothing about Justice Story finding the specification “‘not sufficiently specific’” or mentioning that the patent should be reissued. WALTERSCHEID, *supra* note 64, at 267 n.78.

<sup>74</sup> See Patent Act of 1832, ch. 162, 4 Stat. 559 (repealed 1836). The reissue provision was retained in the 1836 Act. Patent Act of July 4, 1836, ch. 357, 4 Stat. 117, 122 (1836) (repealed 1952).

<sup>75</sup> Patent Act of Feb. 21, 1793, ch. 11, 1 Stat. 318.

<sup>76</sup> JOHN RUGGLES, SELECT COMMITTEE REPORT ON THE STATE AND CONDITION OF THE PATENT OFFICE, S. DOC. NO. 24-338, at 4 (1836).

issued that “would not be capable of sustaining a just claim for the exclusive privileges acquired.”<sup>77</sup> The result was a nineteenth century version of a patent thicket, with conflicting and overlapping rights. The shortcomings of the 1793 Act prompted regular calls for reform and eventually produced the 1836 Act, which laid the foundation for the modern patent system.

In the interim, these shortcomings, as noted above,<sup>78</sup> produced innovations such as the patent reissue proceeding and the patent claim, which were codified in the 1832<sup>79</sup> and 1836<sup>80</sup> Acts, respectively. In addition, the 1836 Act introduced (and in some cases reintroduced) important features to patent law, including the creation of a Patent Office,<sup>81</sup> the present day patent numbering system,<sup>82</sup> a revamped interference proceeding, and an appellate structure for

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<sup>77</sup> John Redman Coxe, *Of Patents*, 1 EMPORIUM ARTS & SCI. 76, 76 (1812); *see also* WALTERSCHEID, *supra* note 64, at 325; John Redmond Coxe & Thomas Cooper, *On Patents*, 2 EMPORIUM ARTS & SCI. 431, 435 (1813) (“[P]atents, frivolous, absurd, and fraudulent, threaten to become taxes on the community . . .”).

<sup>78</sup> *See supra* notes 62-74 and accompanying text.

<sup>79</sup> Patent Act of 1832, ch. 162, 4 Stat. 559 (repealed 1836).

<sup>80</sup> Patent Act of July 4, 1836, ch. 357, 4 Stat. 117 (repealed 1952).

<sup>81</sup> The 1836 Act, by law, made the Patent Office a distinct and separate bureau in the Department of State. Patent Act of 1836, ch. 357, 4 Stat. 117, 117 (repealed 1952). It is difficult to say when exactly the United States Patent Office was created. It was not a part of the Acts of 1790 and 1793. *See* Patent Act of Feb. 21, 1793, ch. 11, 1 Stat. 318 (repealed 1836); Patent Act of Apr. 10, 1790, ch. 7, 1 Stat. 109 (repealed 1793). In 1802, then-Secretary of State James Madison, who was instrumental in the development of patent and copyright law during the early years of the Republic, made the Patent Office a distinct division of the Department of State by appointing the highly regarded Dr. William Thornton, the designer of the U.S. Capitol, at a salary of \$1400 a year to the full-time position of supervising the issuance of patents. GLENN BROWN, HISTORY OF THE CAPITOL, H.R. DOC. NO. 108-240, at 259 (2004), available at <http://www.gpoaccess.gov/serialset/cdocuments/hd108-240/pdf/ch8.pdf>. Thus, one can argue that it was with this full time appointment of Dr. Thornton in 1802 that the Patent Office was created. It was the 1836 Act, however, that gave the Patent Office legitimacy in the eyes of the law. Patent Act of 1836, ch. 357, 4 Stat. 117 (repealed 1952). Furthermore, the 1836 Act provided for the construction of a new building to house the Patent Office. *Id.* § 1. That Patent Office was completely destroyed by fire on December 15, 1836. DOBYNS, *supra* note 70, at 107-08. The 1836 Act also created the position of Commissioner of Patents. § 1, 4 Stat. at 117. Henry Leavitt Ellsworth, one of the twin sons of Justice Oliver Ellsworth, was appointed as the first Commissioner of Patents in 1836. DOBYNS, *supra* note 70, at 105.

<sup>82</sup> Patent Number 1 was issued to Senator John Ruggles of Maine, who was primarily responsible for the passage of the 1836 Act. DOBYNS, *supra* note 70, at 101-02. Prior to 1836, patents were identified by the date they were issued. *Id.* at 101. The previous name and date of patents were subsequently numbered chronologically and an “X” suffix was added to distinguish them from the new numbered patents. United States Patent and Trademark Office Glossary, <http://www.uspto.gov/main/glossary> (last visited Oct. 23, 2009). Thus, the first U.S. patent ever issued is number X0000001. *Id.* These older patents are now collectively referred to as the “X-patents.” *Id.*

patent applicants seeking to appeal an examiner's refusal to issue a patent. Finally, the 1836 Act reinstated the patent examination proceeding that charged the Commissioner of the newly created Patent Office with performing "an examination of the alleged new invention or discovery."<sup>83</sup> Thus, the 1836 Act reflects in large part what this Article considers to be a proper role for Congress, namely procedural and institutional reform.

After 1836, the federal courts, particularly the Supreme Court, again were the forum of choice for patent law's evolution. But the Court did not assume a leadership role, preferring to embrace or refine innovations such as the reissue proceeding and the patent claim. As one commentator observed, "[r]ather than leading change in the field, the Court has allowed more specialized institutions – particularly the Patent Office and the patent bar – to develop the law."<sup>84</sup>

In 1870, Congress again entered the patent law field. Although the 1870 Act was largely a recodification of the 1836 Act, there was one significant exception: whereas under the 1836 Act, an inventor had to "particularly specify and point out" what he regards as his invention,<sup>85</sup> the 1870 Act required inventors to "particularly point out and *distinctly claim*" their inventions.<sup>86</sup> This change in language is subtle, but it marked an important recognition of the growing importance of the claim and how claiming practice had shifted toward greater particularity.<sup>87</sup> Prior to 1870, applicants expended a "great deal of effort . . . in formulating claims, and the practice grew of

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<sup>83</sup> § 7, 4 Stat. at 119; see also Frank D. Prager, *Examination of Inventions from the Middle Ages to 1836*, 46 J. PAT. OFF. SOC'Y 268, 289-91 (1964). Applicants, as under the 1790 and 1793 Acts, were required to submit a specification, drawings, and models with their application. See Patent Act of Apr. 10, 1790, ch. 7, 1 Stat. 109, 110 (repealed 1793); Patent Act of Feb. 21, 1793, ch. 11, 1 Stat. 318, 321 (repealed 1836) (stating certain requirements patentees must fulfill, such as the written description requirement and enablement, but not mentioning the word "specification"). The 1836 Act required the Commissioner of Patents to publicly display the models. § 20, 4 Stat. at 125. Patent models were a major tourist attraction in Washington until 1880, when models were no longer required to be submitted with a patent application. See Kendall J. Dood, *Patent Models and the Patent Law: 1790-1880 (Part II – Conclusion)*, 65 J. PAT. OFF. SOC'Y 234, 271 (1983). Several of these models are now housed and displayed in the Smithsonian Institution. The Smithsonian Institution, National Museum of American History, <http://americanhistory.si.edu/collections/object.cfm?key=35&objkey=19> (last visited Oct. 23, 2009). Also, Judge Giles S. Rich of the United States Court of Appeals for the Federal Circuit assembled a handsome collection of patent models, which are on display at the Federal Circuit courthouse.

<sup>84</sup> Duffy, *supra* note 66, at 307. The development of the doctrine of equivalents and what has become known as the nonobviousness doctrine are two notable exceptions. See *Winans v. Denmead*, 56 U.S. 330, 342 (1853) (describing the applicability of the doctrine of equivalents); *Hotchkiss v. Greenwood*, 52 U.S. 248, 267 (1850) (implying that there is a requirement of nonobviousness, or a "degree of skill and ingenuity which constitute[s] essential elements of every invention").

<sup>85</sup> § 6, 4 Stat. at 119.

<sup>86</sup> Patent Act of 1870, ch. 230, 16 Stat. 198, 201 (1871) (emphasis added).

<sup>87</sup> See DELLER, *supra* note 67, at 9.

presenting a profusion of claims of varying form and scope.”<sup>88</sup> But claim practice under the 1836 Act was characterized by what had been called central claim drafting (or central definition), which involved the “drafting of a narrow claim setting forth a typical embodiment coupled with broad interpretation by the courts to include all equivalent constructions.”<sup>89</sup> Central claiming did not emphasize claim scope or the delineation of proprietary boundaries. In fact, central claiming allowed the patentee to capture not only his disclosed invention, but “the entire advance bestowed upon the public.”<sup>90</sup>

With the language “particularly point out and distinctly claim,” the 1870 Act<sup>91</sup> increased the statutory emphasis on the patent claim and sought to promote the public notice function of patents.<sup>92</sup> But this language merely codified what practitioners and inventors had been practicing for several years: claiming with greater precision and using the claim to signal the outer boundaries of the property right. This practice had come to be known as peripheral claiming.<sup>93</sup> In this regard, peripheral claiming provided the applicant with more autonomy in setting forth the outer boundaries (periphery) of his invention, but also required more of the applicant. The well-known case of *Merrill v. Yeomans*<sup>94</sup> – an oft-cited authority for the primacy of the claim in the post-bellum era – captures the rationale for the growing importance of certainty and notice:

The growth of the patent system in the last quarter of a century in this country has reached a stage in its progress where the variety and magnitude of the interests involved require accuracy, precision, and care in the preparation of all the papers on which the patent is founded. It is no longer a scarcely recognized principle, struggling for a foothold, but it is an organized system, with well-settled rules, supporting itself at once by its utility, and by the wealth that it creates and commands.<sup>95</sup>

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<sup>88</sup> Woodward, *supra* note 65, at 764.

<sup>89</sup> DELLER, *supra* note 67, at 12.

<sup>90</sup> Joseph S. Cianfrani, *An Economic Analysis of the Doctrine of Equivalents*, 1 VA. J.L. & TECH. 1, 5 (1997). In this light, the origin and growth of the doctrine of equivalents during much of the nineteenth century becomes readily apparent.

<sup>91</sup> § 26, 16 Stat. at 201.

<sup>92</sup> See DELLER, *supra* note 67, at 9 (indicating that it was not until the 1870 Act that “the claims [were] regarded as of equal importance to the descriptive part of the specification and the drawings”).

<sup>93</sup> See *id.* at 12 (“Peripheral definition involves marking out the periphery or boundary of the area covered by the claim and holding as infringements only such constructions as lie within that area.”).

<sup>94</sup> 94 U.S. 568 (1876).

<sup>95</sup> *Id.* at 573.

The “well-settled” rules to which the *Merrill* Court referred were established through Patent Office rulemaking,<sup>96</sup> but even prior to this agency action, it was the judiciary – beginning with *Evans v. Eaton*<sup>97</sup> and *Lowell v. Lewis*<sup>98</sup> – that pushed central claiming toward greater precision. The 1870 Act, like the 1836 Act, can therefore be seen as a statutory recognition of the increasing importance of the claim in practice.

## 2. The 1952 Patent Act: Correction and Codification, Part II

The 1952 Act<sup>99</sup> represents the second significant congressional correction and codification. The 1930s and 1940s witnessed the emergence of what was perceived to be an anti-patent bias on the Supreme Court. During this time, the Court approached patents with a great deal of suspicion, emphasizing their monopolistic and social-cost aspects. For example, the Court expanded the patent misuse doctrine,<sup>100</sup> did away with the common practice of drafting claims in functional terms,<sup>101</sup> and, most significantly, enhanced the so-called “requirement for invention” by invoking the “flash of genius” test.<sup>102</sup> The Court also cast doubt on the patentability of “combination” patents (i.e., combination of old elements) by requiring a display of synergism;<sup>103</sup> that is, the combination, to be patentable, had to equal more than the sum of its parts. Indeed, this anti-patent position, led by Justices Douglas and Black, prompted Justice Jackson in a dissenting opinion to write that “the only patent that is valid is one which this Court has not been able to get its hands on.”<sup>104</sup>

Members of the patent bar pushed Congress to respond to what was perceived to be a common law gone awry. The heart of the 1952 Act was a direct response to the Supreme Court’s patent jurisprudence over the previous several years.<sup>105</sup> The drafters of 1952 Act, however, were circumspect in their

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<sup>96</sup> As Duffy notes, “even before the Supreme Court’s decision in *Merrill*, the primacy of claims in defining patent rights was firmly established in the Patent Office’s day-to-day decisions, which focused immediately on the claims in determining what rights were being sought by the applicant.” Duffy, *supra* note 66, at 313 n.131.

<sup>97</sup> 20 U.S. (7 Wheat.) 356 (1822).

<sup>98</sup> 15 F. Cas. 1018 (Story, Circuit Justice, C.C.D. Mass. 1817); *see also supra* text accompanying notes 65-68.

<sup>99</sup> Patent Act of July 19, 1952, Pub. L. No. 593, 66 Stat. 792 (codified at 35 U.S.C. §§ 100-376 (2006)).

<sup>100</sup> *See* *Mercoid Corp. v. Mid-Continent Inv. Co.*, 320 U.S. 661, 668 (1944); *Carbice Corp. of Am. v. Am. Patents Dev. Corp.*, 283 U.S. 27, 33 (1931).

<sup>101</sup> *See* *Halliburton Oil Well Cementing Co. v. Walker*, 329 U.S. 1, 12 (1946).

<sup>102</sup> *See* *Cuno Eng’g Corp. v. Automatic Devices Corp.*, 314 U.S. 84, 91 (1941).

<sup>103</sup> *See* *Great Atl. & Pac. Tea Co. v. Supermarket Equip. Corp.*, 340 U.S. 147, 152 (1950).

<sup>104</sup> *Jungersen v. Ostby & Barton Co.*, 335 U.S. 560, 572 (1949) (Jackson, J., dissenting).

<sup>105</sup> The Act overturned *Halliburton*’s invalidation of functional claiming and *Mercoid*’s broad reading of the misuse doctrine with respect to contributory infringement. Patent Act of July 19, 1952, Pub. L. No. 593, 66 Stat. 792 (codified at 35 U.S.C. §§ 100-376 (2006)). In

attempt to strike a balance between reining in judicial discretion and inviting judicial intervention. In this regard, the Act mixed broad standards with *standard-like* language to restrain judicial authority. The doctrine of non-obviousness, which began as a common law principle but which Congress finally codified in Section 103 of the 1952 Act,<sup>106</sup> is patent law's quintessential standard-like directive. Congress intended Section 103 to remedy the shortcomings of the Supreme Court's "requirement for invention" test, which, according to Judge Learned Hand, was as "fugitive, impalpable, wayward, and vague a phantom as exist[ed] in the whole paraphernalia of legal concepts."<sup>107</sup>

A finding of non-obviousness requires several factual determinations, including whether the claimed invention is "obvious" to a person having ordinary skill in the art. As the Supreme Court recognized in the seminal case of *Graham v. John Deere Co. of Kansas City*,<sup>108</sup> however,

What is obvious is not a question upon which there is likely to be uniformity of thought in every given factual context. The difficulties, however, are comparable to those encountered daily by the courts in such frames of reference as negligence and scienter, and should be amenable to a case-by-case development.<sup>109</sup>

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addition, § 103 of the Act replaced the polysemous "invention" requirement with an objective standard of nonobviousness and reversed *Cuno's* "flash of genius" test. *Id.* § 103.

<sup>106</sup> But as Friedrich-Karl Beier reminds us, Thomas Jefferson unsuccessfully sought to insert language in the 1790 Act that would deny patents on inventions that were "so unimportant and obvious." See Friedrich-Karl Beier, *The Inventive Step in Its Historical Development*, 17 INT'L REV. INDUS. PROP. & COPYRIGHT L. 301, 305 (1986). John Duffy argues that the doctrine of non-obviousness can be traced to the language in Section 2 of the 1793 Act: "simply changing the form or the proportions of any machine, or composition of matter, in any degree, shall not be deemed a discovery." John F. Duffy, *Inventing Invention: A Case Study of Legal Innovation*, 86 TEX. L. REV. 1, 38 (2007) (quoting Patent Act of Feb. 21, 1793, ch. 11, 1 Stat. 318, 321 (repealed 1836)). The 1836 Act repealed this language, but "the concept continued to thrive." *Id.* at 37. A general doctrine grew out of the common law's embrace of Section 2, making utility, novelty, and a "change in principle" over the prior art requirements of patentability. *Id.* at 38-39. *Hotchkiss v. Greenwood*, 52 U.S. 248, 266 (1850), was the first significant opinion regarding nonobviousness. Although it departed from the "change in principle" language, Duffy asserts that it is properly viewed as a continuation of the common law's interpretation of Section 2. Duffy, *supra*, at 39-40. For example, in *Evans v. Eaton*, the Supreme Court endorsed the "change in principle" language as a patentability requirement. 20 U.S. (Wheat. 7) 356, 431 (1822). In a patent infringement suit over two "Hopperboy" flour devices, the Court held that if the two machines "were the same in principle, and merely different in form and proportion, the plaintiff was not entitled to recover." *Id.*

<sup>107</sup> *Harries v. Air King Prods. Co.*, 183 F.2d 158, 162 (2d Cir. 1950).

<sup>108</sup> 383 U.S. 1 (1966).

<sup>109</sup> *Id.* at 18.

The comparison to the law of negligence effectively analogizes the innumerable and complex scenarios encountered in patent cases.<sup>110</sup> The evolution and improvement of technology creates a rich diversity of inventions that highlights the institutional limitations of rules legislation. Indeed, Judge Learned Hand captured this sentiment when he wrote,

From 1793, when the second patent act was passed, until the Act of 1952, the only statutory standard for invention was that the discovery should be “new and useful” . . . Congress did not try to define [invention] but left it to the courts to develop by precedent.<sup>111</sup>

### 3. The Creation of the Federal Circuit: A Centralized Policy Driver

The creation of the United States Court of Appeals for the Federal Circuit was a significant expression of congressional deference. The Federal Circuit is “perhaps the single most significant institutional innovation in the field of intellectual property in the last quarter-century.”<sup>112</sup> Indeed, the court represents the first major congressionally mandated consolidation of a particular area of law in U.S. history.<sup>113</sup>

Created by Congress in 1982,<sup>114</sup> the nation’s thirteenth federal court of appeals has exclusive subject matter jurisdiction over patent appeals.<sup>115</sup>

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<sup>110</sup> See ROSCOE POUND, AN INTRODUCTION TO THE PHILOSOPHY OF LAW 142 (1922) (“No two cases of negligence have been alike or ever will be alike.”). *But see* OLIVER WENDELL HOLMES, JR., THE COMMON LAW 111-29 (Little Brown & Co. 1945) (1881) (discussing how the negligence standard in tort liability can transform into a rule after being applied repeatedly to a particular accident scenario).

<sup>111</sup> *Lyon v. Bausch & Lomb Optical Co.*, 224 F.2d 530, 535 (2d Cir. 1955).

<sup>112</sup> LANDES & POSNER, *supra* note 20, at 7.

<sup>113</sup> It should be noted that efforts to create a single national court for patent appeals began more than one hundred years before the creation of the Federal Circuit. See S. REP. NO. 86-97, at 22-23 (1959). For instance, in 1900 the American Bar Association’s Section of Patent, Trademark and Copyright Law recommended the creation of a “Court of Patent Appeals” with national jurisdiction. See R.S. Taylor, L.L. Bond & Edmund Wetmore, *Report of Committee of the Section of Patent, Trade-Mark and Copyright Law*, 23 A.B.A. SEC. PAT. TRADEMARK COPYRIGHT L. REP. 543, 543 (1900). For an excellent discussion of the history of the Federal Circuit’s creation and previous efforts to create a national court for patent appeals, see generally Paul M. Janicke, *To Be or Not to Be: The Long Gestation of the U.S. Court of Appeals for the Federal Circuit (1887-1982)*, 69 ANTITRUST L.J. 645 (2001).

<sup>114</sup> Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, § 101, 96 Stat. 25, 25 (1982). This Act merged the Court of Claims, which had seven judges, and the Court of Customs and Patent Appeals, which had five judges. § 122, 96 Stat. at 36. The Federal Circuit came into existence on October 1, 1982. THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT: A HISTORY (1982-1990) 1 (1991). For a discussion of some of the contested issues surrounding the creation of the new nationwide court, see Rochelle Cooper Dreyfuss, *The Federal Circuit: A Case Study in Specialized Courts*, 64 N.Y.U. L. REV. 1, 6-8 (1989), and sources cited therein.

<sup>115</sup> See 28 U.S.C. § 1295(a)(4) (2006).

Compelling reasons for establishing the court included rampant forum shopping by patent litigants<sup>116</sup> and the non-uniform treatment of patents and interpretation of patent law among the various circuit courts.<sup>117</sup> In the first decade of its existence, the court earned praise for achieving a desirable degree of uniformity, replacing otherwise disjointed and conflicting regional circuit precedents.<sup>118</sup> The Federal Circuit also had a significant impact on the patent landscape. Recent studies, for example, show that the Federal Circuit strengthened patent rights with respect to validity challenges.<sup>119</sup>

The Federal Circuit is not, however, without critics.<sup>120</sup> For example, the court has been accused of producing precedents that “increase the cost of

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<sup>116</sup> See H.R. REP. NO. 97-312, at 20 (1981) (“Patent litigation long has been identified as a problem area, characterized by undue forum-shopping and unsettling inconsistency in adjudications.”). Some commentators have questioned just how rampant a problem forum-shopping really was. See, e.g., *Court of Appeals for the Federal Circuit – 1981: Hearings Before the Subcomm. on Courts, Civil Liberties, and the Administration of Justice of the H. Comm. on the Judiciary*, 97th Cong. 79 (1981) (testimony of James W. Geriak, American Bar Association) [hereinafter Testimony of James W. Geriak] (stating that claims of forum shopping are “seriously exaggerated”); Cecil D. Quillen, Jr., *Innovation and the U.S. Patent System*, 1 VA. L. & BUS. REV. 207, 228 & n.62 (2006) (asserting forum shopping and outcome variability were not problematic during the 1970s); Scott Atkinson, Alan C. Marco & John L. Turner, *The Economics of a Centralized Judiciary: Uniformity, Forum Shopping, and the Federal Circuit I* (May 1, 2008) (unpublished manuscript), available at <http://ssrn.com/abstract=961035> (finding, in an econometric study, “strong evidence that forum shopping on the basis of validity rates ceased several years prior” to the Federal Circuit’s creation).

<sup>117</sup> See H.R. REP. NO. 97-312, *supra* note 116, at 20-22 (arguing that “some circuit courts are regarded as ‘pro-patent’ and other [sic] ‘anti-patent,’” and a “single court of appeals for patent cases will promote certainty where it is lacking to a significant degree” (citations omitted)); S. REP. NO. 97-275, at 5 (1981) (“The creation of the Court of Appeals for the Federal Circuit will produce desirable uniformity in this area of the law. Such uniformity will reduce the forum-shopping that is common to patent litigation.”).

<sup>118</sup> See, e.g., Dreyfuss, *supra* note 114, at 74 (“On the whole, the [Federal Circuit] experiment has worked well for patent law, which is now more uniform, easier to apply, and more responsive to national interests.”). Some have suggested the court “has had a significant positive effect on both the number of patent applications and the number of patent grants.” LANDES & POSNER, *supra* note 20, at 340. Indeed, patent applications have increased from 109,625 utility patent applications filed in 1982 (with 57,888 issuing) to 356,943 applications (with 164,293 issuing) in 2004. See Table of Annual U.S. Patent Activity Since 1790, [http://uspto.gov/web/offices/ac/ido/oeip/taf/h\\_counts.htm](http://uspto.gov/web/offices/ac/ido/oeip/taf/h_counts.htm) (May 5, 2009).

<sup>119</sup> See Matthew D. Henry & John L. Turner, *The Court of Appeals for the Federal Circuit’s Impact on Patent Litigation*, 35 J. LEG. STUD. 85, 112 (2006).

<sup>120</sup> Indeed, it is worth noting that uniform support did not exist for the creation of the Federal Circuit. For instance, an ABA Report and Recommendation, adopted by the ABA House of Delegates in 1980, disapproved of the creation of the Court. See *Court of Appeals for the Federal Circuit – 1981: Hearings Before the Subcomm. on Courts, Civil Liberties, and the Administration of Justice of the H. Comm. on the Judiciary*, 97th Cong. 423 (1981) (testimony of Benjamin L. Zelenko, Committee to Preserve the Patent Jurisdiction of the

patent acquisition, augment the burdens of patent administration, and encourage free riders – trends that make both the patent system, and the process of innovation, less attractive alternatives.”<sup>121</sup> Some think that the court and its doctrine bring “less certainty and predictability to patent enforcement.”<sup>122</sup> Even supporters of the Federal Circuit experiment have acknowledged the “continuing problems perceived in the court’s administration” of patent law.<sup>123</sup>

Whatever the merit of these criticisms, the patent system does have its own centralized appellate court, expressly created and designed to address perceived problems with patent enforcement. Contrast the Federal Circuit’s extraordinary powers with the relatively minor role played by the Patent and Trademark Office (“PTO”) in the context of substantive engagement. Congress – at least according to the Federal Circuit – has never seen fit to enact an organic statute to give the PTO the power to promulgate substantive rules entitled to *Chevron* deference.<sup>124</sup> By refusing to delegate more authority

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U.S. Courts of Appeals); Testimony of James W. Geriak, *supra* note 116, at 69 (“[I]t would be a very, very substantial error for the subcommittee to conclude that all patent lawyers are agreed upon the desirability of the Court of Appeals for the Federal Circuit legislation.”).

<sup>121</sup> John R. Thomas, *Formalism at the Federal Circuit*, 52 AM. U. L. REV. 771, 773 (2003).

<sup>122</sup> Glynn S. Lunney, Jr., *Patent Law, the Federal Circuit, and the Supreme Court: A Quiet Revolution*, 11 SUP. CT. ECON. REV. 1, 76 (2003); *see also* Gideon Parchomovsky & R. Polk Wagner, *Patent Portfolios*, 154 U. PA. L. REV. 1, 40-41 (2005) (discussing “key areas of expanding uncertainty” in Federal Circuit doctrine, including areas such as claim construction methodology, the doctrine of equivalents, and the written description requirement).

<sup>123</sup> Rochelle C. Dreyfuss, *The Law, Technology, and the Arts Symposium: The Past, Present, and Future of the Federal Circuit: A Continuing Experiment in Specialization*, 54 CASE W. RES. L. REV. 768, 772 (2004); Nard & Duffy, *supra* note 29, at 1649 (“[S]everal factors – the court’s institutional position, failure to adapt its common law to changing circumstances, reticence to consider empirical and economic literature, and expansive judicial authority – render the court more susceptible than other circuit courts to inconsistency, error, and insufficiently articulated rationales.”). These criticisms, some commentators argue, are largely due to the Federal Circuit’s structural constraints in that the court does not enjoy the benefit of sister-circuit competition and a diversity of viewpoints. *See* Nard & Duffy, *supra* note 29, at 1675. *But cf.* S. Jay Plager & Lynne E. Pettigrew, *Rethinking Patent Law’s Uniformity Principle: A Response to Nard and Duffy*, 101 NW. U. L. REV. 1735, 1738 (2007) (arguing there is no empirical evidence showing that “more decisionmakers will produce *better* decisions and *better* decisional rules, rather than just different ones”). Accordingly, it has been argued that “[p]atent law’s complex mixture of fact and law scenarios coupled with the fluid nature of innovation practices requires a competitive and diverse appellate enforcement model,” where diversity, competition, and incremental innovation are equally – if not more – important than uniformity. Nard & Duffy, *supra* note 29, at 1623.

<sup>124</sup> *See* Cooper Techs. Co. v. Dudas, 536 F.3d 1330, 1335-36 (Fed. Cir. 2008) (finding the PTO is entitled to *Chevron* deference of its *interpretive* rules relating to patent office

to the PTO, Congress removes a potentially key player from patent law development, feeding the dominance of the common law.

This Part of the article explained that patent law's history and structure purposely situated the courts as policy drivers, the principal vehicle to effect "reform." The following Part explores how courts have performed this role in the context of the rules-standards literature.

## II. RULES, STANDARDS, AND THE USEFUL ARTS

Few areas of the law are as well-mined as the relationship between rules and standards, and the relative virtues of each.<sup>125</sup> The rules-standards debate does not focus on *what* types of conduct should be regulated; rather, the focus is on the "specificity with which a legal command is expressed as a determinant of the efficiency of the legal process."<sup>126</sup> A common distinction between a rule and a standard is that rules provide content to the law *ex ante*, whereas a standard supplies content *ex post*.<sup>127</sup> An oft-cited example is a speed limit regulation. A legal directive such as a speed limit of 65 m.p.h. is regarded as a rule. The content of the law – 65 m.p.h. – is known beforehand, *i.e.* *ex ante*, and exceeding 65 m.p.h. is a "triggering fact," which typically leads to the imposition of a sanction (*e.g.*, a fine).<sup>128</sup> The decisionmaker – paying little regard to underlying policies – has very little discretion to find otherwise, which lends power to the predictive quality of rules. This same virtue means,

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practice, but the agency does not have substantive rulemaking authority); *Merck & Co. v. Kessler*, 80 F.3d 1543, 1549-50 (Fed. Cir. 1996) ("[T]he broadest of the PTO's rulemaking powers – 35 U.S.C. § 6(a) – authorizes the Commissioner to promulgate regulations directed only to 'the conduct of proceedings in the [PTO]'; it does NOT grant the Commissioner the authority to issue substantive rules." (quoting *Animal Legal Def. Fund v. Quigg*, 932 F.2d 920, 930 (Fed. Cir. 1991))).

<sup>125</sup> See Pierre Schlag, *Rules and Standards*, 33 UCLA L. REV. 379, 380 (1985) ("As members of the legal community, we are forever involved in making arguments for or against rules or standards.").

<sup>126</sup> Ehrlich & Posner, *supra* note 7, at 257.

<sup>127</sup> See HENRY M. HART, JR. & ALBERT M. SACKS, *THE LEGAL PROCESS: BASIC PROBLEMS IN THE MAKING AND APPLICATION OF LAW* 139 (1994) ("The most precise form of authoritative general direction may conveniently be called a rule . . ."); Louis Kaplow, *Rules Versus Standards: An Economic Analysis*, 42 DUKE L.J. 557, 559 (1992); Russell B. Korobkin, *Behavioral Analysis and Legal Form: Rules vs. Standards Revisited*, 79 OR. L. REV. 23, 23 (2000).

<sup>128</sup> Schlag states that the "formula for a legal directive is 'if this, then that.'" Schlag, *supra* note 125, at 381 ("A directive thus has two parts: a 'trigger' that identifies some phenomenon and a 'response' that requires or authorizes a legal consequence when that phenomenon is present."); see also Ehrlich & Posner, *supra* note 7, at 258 ("The simplest kind of rule, then, takes the form: if X, then Y, where X is a single, simple, determinate fact (*e.g.*, car's speed) and Y is a definite, unequivocal legal consequence . . ."); Korobkin, *supra* note 127, at 23 ("Rules state a determinate legal result that follows from one or more triggering facts.").

however, that rules are susceptible to being both under- and over-inclusive, since they may treat substantially like scenarios differently or substantially different scenarios similarly.<sup>129</sup> As Frederick Schauer writes, “[i]f ‘No Dogs Allowed’ is justified by the goal of minimizing annoying disturbances, entrenching the generalization ‘dogs’ suppresses a likely relevant distinction between seeing eye and other dogs.”<sup>130</sup> Additionally, knowledge and foresight deficits – needed to comprehensively enumerate every scenario that would invoke a rule – contribute to the inclusiveness problem.<sup>131</sup>

By way of comparison, a speed limit that reads “reasonable and prudent” is a standard, which provides much less *ex ante* content to the law than “65 m.p.h.” A driver typically will not know whether he violated the law until after the fact (*ex post*) – because there is no *ex ante* trigger. While standards can be more accommodating, a decisionmaker will have to examine and balance background principles and underlying policies, perhaps under the “totality of the circumstances” test.<sup>132</sup> In this regard, standards are more costly than rules; a standard’s attendant uncertainty<sup>133</sup> results in individuals –

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<sup>129</sup> See FREDERICK SCHAUER, *PLAYING BY THE RULES: A PHILOSOPHICAL EXAMINATION OF RULE-BASED DECISION-MAKING IN LAW AND IN LIFE* 32-33 (1991) (discussing the over-under inclusiveness problem with rules). Standards are not as susceptible to the inclusiveness problem because the judge possesses more discretion when applying a standard. As Kathleen Sullivan writes, “the application of a standard in one case ties the decisionmaker’s hand in the next case less than does a rule – the more facts one may take into account, the more likely that some of them will be different the next time.” Kathleen M. Sullivan, *The Supreme Court 1991 Term: Foreword: The Justices of Rules and Standards*, 106 HARV. L. REV. 22, 59 (1992).

<sup>130</sup> SCHAUER, *supra* note 129, at 136; see also POSNER, *supra* note 22, at 177 (stating that a rule’s certainty is purchased at “the price of forgoing an opportunity to obtain potentially relevant information from experience with new cases”).

<sup>131</sup> See Ehrlich & Posner, *supra* note 7, at 268; see also SCHAUER, *supra* note 129, at 136 (“Rules have bite when they ignore differences that are then relevant, consequently treating as alike some cases that are not alike at all. Moreover, rules at times draw distinctions that are in the circumstances irrelevant, so that rules also at times treat differently cases that are actually alike.”).

<sup>132</sup> See Sullivan, *supra* note 129, at 58 (stating that a standard “tends to collapse decisionmaking back into the direct application of the background principle or policy to a fact situation”); see also Duncan Kennedy, *Form and Substance in Private Law Adjudication*, 89 HARV. L. REV. 1685, 1688 (1976). To add greater resolution to the rule/standard distinction, rules not only have clear triggering events, but, as Schlag notes, a “hard determinative response.” Schlag, *supra* note 125, at 382. In contrast, standards possess a “soft evaluative trigger and a soft modulated response.” *Id.* at 383. Accordingly, a rule would be a directive that states “sounds above 70 decibels shall be punished by a ten dollar fine.” *Id.* at 382-83. In contrast, a standard would read “excessive loudness shall be enjoined upon a showing of irreparable harm.” *Id.* at 383.

<sup>133</sup> Cf. POSNER, *supra* note 22, at 177 (asserting that “[s]tandards are more likely to conform to lay understandings,” meaning that they may offer better compliance guidance, despite their vagueness).

including private actors seeking legal advice, judges, and administrators – investing resources to provide the relevant content.<sup>134</sup>

Importantly, while there are differences between a rule and a standard, they more often than not reside on a continuum, where legal directives can be characterized as either “rule-like” or “standard-like.”<sup>135</sup> For example, exceptions may be carved out of a rule, the application of a standard may demand consideration of certain pre-fixed factors, or presumptions may be used.<sup>136</sup> The bulk and heart of patent doctrine resides on this continuum, situated toward the standard-like end.

Deciding whether to adopt a rule (or rule-like mechanism) or standard (or standard-like mechanism) is dependent on several factors, including the nature of the legal regime in question – a rules-based approach may be good for tax law, but ill-suited for constitutional law. As Richard Posner writes, “[n]o sensible person supposes that rules are always superior to standards, or vice versa.”<sup>137</sup> Why would a legislator or judge opt for a rule or a standard? To appreciate this question fully in the context of patent law’s overall architecture, a better understanding of the benefits and shortcomings of rules and standards will be helpful.

#### A. *The Case for Rules*

##### 1. Predictability and Certainty

One of the principal benefits of rules is that they foster predictability and certainty in the application of the law.<sup>138</sup> When commentators speak of

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<sup>134</sup> See Kaplow, *supra* note 127, at 569 (“Because a standard requires a prediction of how an enforcement authority will decide questions that are already answered in the case of a rule, advice about a standard is more costly.”).

<sup>135</sup> See Sullivan, *supra* note 129, at 61 (“[D]istinctions between rules and standards . . . mark a continuum, not a divide. A rule may be corrupted by exceptions to the point where it resembles a standard; likewise, a standard may attach such fixed weights to the multiple factors it considers that it resembles a rule.”); Dan L. Burk & Mark A. Lemley, *Fence Posts or Sign Posts: Rethinking Patent Claim Construction* 46 (Stanford Public Law, Working Paper No. 1358460, 2009), available at <http://ssrn.com/abstract=1358460> (“[P]ure rules and pure standards are a rarity, and the classification itself identifies the polar ends of a continuum, with a range of hybrids arrayed between the poles.”).

<sup>136</sup> See Korobkin, *supra* note 127, at 26-28; Cass R. Sunstein, *Problems with Rules*, 83 CAL. L. REV. 953, 959-68 (1995) (discussing a number of legal “devices” operating as intermediaries between rules and standards, including presumptions, factors, and principles).

<sup>137</sup> *MindGames, Inc. v. W. Publ’g Co.*, 218 F.3d 652, 657 (7th Cir. 2000).

<sup>138</sup> Antonin Scalia, *The Rule of Law as a Law of Rules*, 56 U. CHI. L. REV. 1175, 1179 (1989) (stating that an “obvious advantage” of rules is “predictability”). Colin Diver indicates another positive attribute of rules: “transparency,” namely the adoption of words with “well-defined and universally accepted meanings within the relevant community.” Colin S. Diver, *The Optimal Precision of Administrative Rules*, 93 YALE L.J. 65, 67 (1983). As Judge Easterbrook wrote,

certainty and predictability in patent law – the highest desiderata in any property rights regime – they are typically referring to the public notice function of patent claims.<sup>139</sup> Clear proprietary boundaries are important, and the desirability of such has been a topic of a great deal of commentary.<sup>140</sup> For purposes of this article, however, a distinction must be made between the role of certainty in providing notice of one's property rights, and doctrines and tests relating to patentability and enforcement. This article is concerned with the latter.

The ex ante effect and predictive quality of rules allows actors to engage in private ordering or investment with greater confidence and efficiency than those provided by a standard.<sup>141</sup> Concomitantly, legal advice can be dispensed

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When judges take the positions of the parties as given . . . they forfeit any opportunity to create gains through the formulation of the legal rule. The principles laid down today will influence whether similar parties will be in similar situations tomorrow. Indeed, judges who look at cases merely as occasions for the fair apportionment of gains and losses almost invariably ensure that there will be fewer gains and more losses tomorrow.

Frank H. Easterbrook, *The Supreme Court 1983 Term: Foreword: The Court and the Economic System*, 98 HARV. L. REV. 4, 10-11 (1984).

<sup>139</sup> In fact, the statutory provision that demands clear claim language is itself standard-like. Section 112 requires patent applicants to “particularly point[] out and distinctly claim[] the subject matter which the applicant regards as his invention.” 35 U.S.C. § 112 (2006). In interpreting this provision, the Federal Circuit has held that a patentee does not have to “define his invention with mathematical precision” to comply with what has is known as the definiteness requirement; indeed, terms of degree such as “substantially” or “about” are frequently and properly used in claim drafting. *Oakley, Inc. v. Sunglass Hut Int'l*, 316 F.3d 1331, 1341 (Fed. Cir. 2003) (citing *In re Marosi*, 710 F.2d 799, 802-03 (Fed. Cir. 1983)). In short, “[o]nly claims ‘not amenable to construction’ or ‘insolubly ambiguous’ are indefinite.” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005) (quoting *Novo Indus., L.P. v. Micro Molds Corp.*, 350 F.3d 1348, 1353 (Fed. Cir. 2003)); see also *Bancorp Servs. LLC v. Hartford Life Ins. Co.*, 359 F.3d 1367, 1371 (Fed. Cir. 2004) (stating that a claim is not indefinite “if the meaning of the claim is discernible, ‘even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree’” (quoting *Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001))).

<sup>140</sup> See, e.g., JAMES BESSEN & MICHAEL J. MEURER, PATENT FAILURE: HOW JUDGES, BUREAUCRATS, AND LAWYERS PUT INNOVATORS AT RISK 54-62 (2008); John R. Thomas, *Claim Re-Construction: The Doctrine of Equivalents in the Post-Markman Era*, 9 LEWIS & CLARK L. REV. 153, 154-55 (2005).

<sup>141</sup> See SCHAUER, *supra* note 129, at 145-49 (discussing the efficiency of rules); Thomas W. Merrill, *The Mead Doctrine: Rules and Standards, Meta-Rules and Meta-Standards*, 54 ADMIN. L. REV. 807, 822 (2002) (“[T]he relevant justification for using rules rather than standards is they make the behavior of those who wield the coercive power of the state more predictable, and in doing so, facilitate planning and encourage investment.”); Carol M. Rose, *Crystals and Mud in Property Law*, 40 STAN. L. REV. 577, 591 (1988) (“Hard-edged rules define assets and their ownership in such a way that what is bought stays bought and can be safely traded to others, instead of repeatedly being put up for grabs.”).

with a greater sense of predictability.<sup>142</sup> In addition, undesirable behavior is more likely to occur without the ex ante certainty that rules provide. Returning to our speed limit example, ex ante ambiguity will lead some travelers to drive too slow and waste time, and others to drive too fast, endangering themselves and others.<sup>143</sup>

With precision, however, comes greater ease of circumvention. As Kathleen Sullivan writes, a clear rule permits the “‘bad man’ to engage in socially unproductive behavior right up to the line.”<sup>144</sup> For instance, patent rights are unavailable if the claimed invention was on-sale or in public use more than one year before the date of filing a patent application,<sup>145</sup> commonly referred to as the “critical date.” Early court decisions generally adopted the strict requirement that a device must actually be produced and “on hand” for delivery to a purchaser prior to the critical date in order to be considered on sale.<sup>146</sup> The rationale behind these decisions was that a device could not be sold or placed on sale until it was commercially available for delivery to a customer.<sup>147</sup> More importantly, the on-hand rule provided inventors with certainty as to when the one-year clock was triggered. This signal is crucial lest inventors discover – most likely during litigation – that they engaged in self-defeating activity.

Courts moved away from this rule and adopted a “reduction to practice” standard. Reduction to practice is a term of art in patent law that has a very specific meaning – namely, upon testing, the invention works for its intended purpose.<sup>148</sup> This doctrine, like the “on-hand” requirement, provided a degree of certainty to inventors regarding when the one-year clock was triggered, but did not require the invention to be commercially ready or “on-hand” for

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<sup>142</sup> See Korobkin, *supra* note 127, at 34-35 (discussing the relative “advice costs” of rules and standards); Merrill, *supra* note 141, at 825 (“Because rules are more predictable than standards, lawyers generally can provide better advice about the probable outcome under a rule than they can about the probable outcome under a standard.”); Scalia, *supra* note 138, at 1179 (“Rudimentary justice requires that those subject to the law must have the means of knowing what it prescribes.”).

<sup>143</sup> See Korobkin, *supra* note 127, at 38 (stating that even if the unaware fast drivers are sanctioned, “society suffers the undesirable behavior”).

<sup>144</sup> Sullivan, *supra* note 129, at 63. *But see* Dale A. Nance, *Rules, Standards, and the Internal Point of View*, 75 *FORDHAM L. REV.* 1287, 1310 (2006) (“[T]he use of standards presents the opportunity for bad people to push the envelope even further than they would under a rules regime, content in the knowledge that the ambiguity of the legal situation will continue to deter those adversely affected from seeking expensive and risky legal redress.”).

<sup>145</sup> 35 U.S.C. § 102(b) (2006).

<sup>146</sup> See *Burke Elec. Co. v. Indep. Pneumatic Tool Co.*, 232 F. 145, 146-47 (2d Cir. 1916); *McCreery Eng’g Co. v. Mass. Fan Co.*, 195 F. 498, 501-02 (1st Cir. 1912).

<sup>147</sup> See *McCreery*, 195 F. at 501.

<sup>148</sup> See *Kimberly-Clark Corp. v. Johnson & Johnson*, 745 F.2d 1437, 1445 (Fed. Cir. 1984) (“[R]eduction to practice requires that an invention be sufficiently tested to demonstrate that it will work for its intended purpose.”).

delivery before the clock began. Yet the triggering event (i.e., reduction to practice) was clear enough to allow inventors or their assignees to exploit the invention commercially for several years before filing a patent application. This is because the inventor would stop just short of reduction to practice (“right up to the line”), even though he knew the invention would most likely work for its intended purpose when tested.<sup>149</sup>

Eventually, the law continued to move away from a rule-based approach, this time embracing a “totality of the circumstances” test, the quintessential standard.<sup>150</sup> This too proved problematic and, not surprisingly, “unnecessarily vague.”<sup>151</sup> The Federal Circuit ultimately adopted the “substantially complete” test,<sup>152</sup> which, like its predecessor test, was recognized as too nebulous.<sup>153</sup> A move toward certainty was needed. This move came in *Pfaff v. Wells Electronics Inc.*,<sup>154</sup> where the Supreme Court rejected the “substantial embodiment” standard as inconsistent with the need for certainty, noting that a “rule that makes the timeliness of an application depend on the date when an invention is ‘substantially complete’ seriously undermines the interest in certainty.”<sup>155</sup> In its place, the Court adopted the “ready for patenting” test that is based on patent law’s enablement requirement, asking whether the inventor had enough information to file a patent application that would enable a person skilled in the art to make and use the invention.<sup>156</sup>

The *Pfaff* test is situated between the on-hand and reduction-to-practice rule-based formulations and the standard-based approaches embodied in the totality

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<sup>149</sup> See David W Carstens & Craig Allen Nard, *Conception and the “On Sale” Bar*, 34 WM. & MARY L. REV. 393, 421-25 (1993) (discussing developmental stage of invention in the light of underlying policies of the on-sale bar).

<sup>150</sup> See *UMC Elecs. Co. v. United States*, 816 F.2d 647, 653 (Fed. Cir. 1987). As Justice Scalia wrote somewhat sarcastically in another context, “th’ol’ ‘totality of the circumstances’ test” is the “most beloved by a court unwilling to be held to rules (and most feared by litigants who want to know what to expect).” *United States v. Mead Corp.*, 533 U.S. 218, 241 (2001) (Scalia, J., dissenting).

<sup>151</sup> *Seal-Flex, Inc. v. Athletic Track & Court Constr.*, 98 F.3d 1318, 1323 n.2 (Fed. Cir. 1996).

<sup>152</sup> See *UMC Elecs. Co.*, 816 F.2d at 656.

<sup>153</sup> The majority asserted that it did “not attempt here to formulate a standard for determining when something less than a complete embodiment of the invention will suffice under the on-sale bar.” *Id.* at 657. As noted by the dissent,

Those inventors who have sought financing, or who have contacted potential customers, or who have engaged in other normal business activities before they have made a workable device will not know how the time limit for filing a patent application will be measured or where the line will be drawn between raw idea and proved invention. . . . It is not clear why this change is being wrought on the community of inventors and on the public without providing some alternative measure of certainty.

*Id.* at 664 (Smith, J., dissenting).

<sup>154</sup> 525 U.S. 55 (1998).

<sup>155</sup> *Id.* at 65-66.

<sup>156</sup> *Id.* at 67-68.

of the circumstances and substantially complete tests.<sup>157</sup> The “ready for patenting” test does not require reduction to practice, but it is more demanding than substantial embodiment.<sup>158</sup> Thus, the evolution of the on-sale bar tracks the rule-standard continuum: beginning with strong rules, such as “on-hand” and “reduction to practice”; then on to ambiguous standards like the “totality of the circumstances” and “substantially complete” tests; and finally settling on a standard-like doctrine – the “ready for patenting” test that uses enablement as a recognizable trigger.<sup>159</sup> The resulting test reveals a sensitivity to the legitimate expectations of inventors while providing the public with sufficient protection against abuses.<sup>160</sup>

An area of patent law where a rule-like approach is preferable is the context of claim interpretation. Patent claims represent the property rights (or metes

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<sup>157</sup> One way to measure “ready for patenting” is to ask if the inventor is able to prepare a patent application that would comply with the enablement standard of 35 U.S.C. § 112 (2006). See *Space Sys./Loral, Inc. v. Lockheed Martin Corp.*, 271 F.3d 1076, 1079-80 (Fed. Cir. 2001); *Robotic Vision Sys., Inc. v. View Eng’g, Inc.*, 249 F.3d 1307, 1313 (Fed. Cir. 2001) (“[The] invention was ready for patenting . . . because the inventor’s internal disclosure proved a complete conception . . . [and was] an enabling disclosure . . . that was sufficiently specific to enable . . . a person skilled in the art, to practice the invention.”).

<sup>158</sup> *Pfaff*, 525 U.S. at 60-63.

<sup>159</sup> See 35 U.S.C. § 112, para. 1. The public-use bar – located in § 102(b) – reveals a rule-like mechanism. Under the public-use bar, an invention will be deemed invalid if it was in “public use” more than one year before an application was filed. *Id.* What constitutes public use? The Supreme Court addressed this question in *Egbert v. Lippmann*, 104 U.S. 333 (1882). In *Egbert*, Samuel Barnes invented an improvement for corset springs between January and May 1855. *Id.* at 335. There was testimony from Frances Barnes that Samuel presented her with a pair of corset steels sometime in 1855 and again in 1858. *Id.* Frances wore the corset steels for more than two years under no obligation of secrecy and not for the purpose of experimentation. *Id.* A patent was not applied for until 1866, eleven years after the date of invention and first use by Frances. *Id.* at 337. The Supreme Court held the claimed invention was in public use, and therefore, invalid. *Id.* at 337-38. The Court enunciated three important principles. First, “it is not necessary that more than one of the patented articles should be publicly used.” *Id.* at 336. Second, “whether the use of an invention is public or private does not necessarily depend upon the number of persons to whom its use is known;” indeed, “the use and knowledge of the use may be confined to one person.” *Id.* Finally, the fact that some inventions cannot be seen “by the public eye” is irrelevant to a finding of public use. *Id.*

The *Egbert* Court adopted a minimalist, rule-like approach to public use – one article, one person, used for its intended purpose. Recall that Frances was Samuel’s wife, and yet the Court found a public use. While this framework may seem harsh, the alternative would be to adopt a standard that would require a “reasonable” amount of articles or a “reasonable” number of people. The *Egbert* rule – expressly adopted by the Federal Circuit – makes it easier for inventors and their counsel to discern when a particular use is “public.” See *Motionless Keyboard Co. v. Microsoft Corp.*, 486 F.3d 1376, 1384 (Fed. Cir. 2007) (“[E]ven though not in public view, the [Egbert’s] invention was in public use.”).

<sup>160</sup> *Pfaff*, 525 U.S. at 65.

and bounds) of the inventor; unlike real property that has the benefit of fences and dirt, however, patent law must resort to words to describe boundaries that tend to be more difficult to descry *ex ante*. As such, judges must ascribe meaning to claim terms – a process called claim construction. This is an area where the common law has failed to position itself optimally on the rules-standards continuum.

Interpreting patent claim language is arguably the most important aspect of patent practice, whether in the context of procurement, counseling, litigation, or transactional work. This is largely because “to decide what the claims mean is nearly always to decide the case.”<sup>161</sup> In 1998, the Federal Circuit – as part of a cultural push within patent circles toward enhanced certainty and predictability – held that district court claim construction rulings were questions of law subject to *de novo* review.<sup>162</sup> Some commentators and extant Federal Circuit judges bemoaned this holding as undermining uniformity and lessening the inducement for settlement.<sup>163</sup> Despite such rumblings, *de novo* review presented the Federal Circuit with an opportunity to enhance certainty by establishing rules of interpretation that could be adopted and applied by district court judges and patent counsel with some sense of predictability. After some flirtation with a rule-oriented approach,<sup>164</sup> the court opted to embrace a more contextualized scheme for claim construction that left district court judges (and Federal Circuit jurists) ample room to discern meaning as they saw fit.<sup>165</sup> Counsel, unfortunately, was left with a plethora of tools – that did not necessarily ensure confidence when counseling clients. Such lack of certainty, might have, in turn, led to increased litigation and unintended consequences. But uncertainty was an inherent problem with claim interpretation, and it appeared that the Federal Circuit understood that a rule-like approach implicitly assumed an accessible plain meaning was unworkable.<sup>166</sup>

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<sup>161</sup> *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 989 (Fed. Cir. 1995) (Mayer, J., concurring).

<sup>162</sup> *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1456 (Fed. Cir. 1998) (en banc).

<sup>163</sup> *See, e.g.*, Craig Allen Nard, *A Theory of Claim Interpretation*, 14 HARV. J.L. & TECH. 1, 9 (2000) (arguing that *de novo* review is not needed to promote uniformity or certainty, as long as “the Federal Circuit exercises its exclusive appellate jurisdiction over patent issues”).

<sup>164</sup> *See Tex. Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1203 (Fed. Cir. 2002) (sanctioning the use of dictionaries and technical treatises to discern the ordinary meaning of claim terms).

<sup>165</sup> *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc) (emphasizing the claims are to be read within the context of the entire patent, including the prosecution history).

<sup>166</sup> *See Burk & Lemley, supra* note 135, at 3 (“[C]laim construction may be inherently indeterminate: it may simply be impossible to cleanly map words to things.”). The plain meaning rule, whether applied in interpreting statutes or claims, has been widely discredited, and its shortcomings extensively recounted. *See, e.g.*, RICHARD A. POSNER, THE

In contrast to claim construction case law, the Federal Circuit and Supreme Court have struck the right chord with the doctrine of non-literal infringement, commonly known as the doctrine of equivalents. This doctrine, based largely on equity considerations and “frictions” in the patent system,<sup>167</sup> permits patent owners to capture subject matter beyond the literal scope of the patent claims. The principal concern with non-literal infringement is that once the gates of literal scope are broken down, ex ante certainty and predictability are greatly diminished. Historically the test of non-literal infringement has been whether there are “insubstantial differences” between the accused product and claimed invention, or whether the accused product achieves substantially the same function, way, and result.<sup>168</sup> Like non-obviousness, the test for equivalents is a quintessential standard.<sup>169</sup>

In the mid- to late 1990s, there was a growing sense that the doctrine of equivalents was increasingly unwieldy. After unsuccessful attempts to eliminate it, the Federal Circuit and eventually the Supreme Court significantly cabined the doctrine’s reach through the use of presumptions, a common

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PROBLEMS OF JURISPRUDENCE 296 (1990) (“[T]he central objection to the plain-meaning rule [is that] meaning does not reside simply in the words of a text, for the words are always pointing to something outside.”); 2A NORMAN J. SINGER, SUTHERLAND STATUTORY CONSTRUCTION § 46.02 (5th ed. 1992) (“Even when a judge claims not to be construing a statute, he can not help using what he has learned about customary language usage and common understanding associated with the relevant text.”); Arthur L. Corbin, *The Interpretation of Words and the Parol Evidence Rule*, 50 CORNELL L.Q. 161, 164 (1965) (“[N]o man can determine the meaning of written words by merely glueing his eyes within the four corners of a square paper.”); William N. Eskridge, Jr. & Philip P. Frickey, *Statutory Interpretation as Practical Reasoning*, 42 STAN. L. REV. 321, 344-45 & n.92 (1990); Stanley Fish, *Almost Pragmatism: Richard Posner’s Jurisprudence*, 57 U. CHI. L. REV. 1447, 1456 (1990) (“No act of reading can stop at the plain meaning of a document, because that meaning itself will have emerged in the light of some stipulation of intentional circumstances, of purposes held by agents situated in real world situations.”); Dennis M. Patterson, *Good Faith, Lender Liability, and Discretionary Acceleration: Of Llewellyn, Wittgenstein, and the Uniform Commercial Code*, 68 TEX. L. REV. 169, 188 (1989) (“In the present era of preoccupation with language, it is perhaps difficult to conceive how anyone could ever have viewed language as enjoying plain meaning . . . .”); Cass R. Sunstein, *Interpreting Statutes in the Regulatory State*, 103 HARV. L. REV. 405, 416-23 (1989) (discussing generally the critiques of the plain-meaning rule).

<sup>167</sup> See Michael J. Meurer & Craig Allen Nard, *Invention, Refinement and Patent Claim Scope: A New Perspective on the Doctrine of Equivalents*, 93 GEO. L.J. 1947, 1950-51 (2005) (describing frictions such as inherent limitations of language as underlying rationales for the doctrine of equivalents).

<sup>168</sup> See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 39-40 (1997); *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 610 (1950).

<sup>169</sup> In fact, the non-obviousness test is actually situated more towards the rule end of the spectrum than non-literal infringement because of the former’s numerous factual considerations.

method “of canalizing judicial discretion.”<sup>170</sup> For instance, the Supreme Court and Federal Circuit have created a robust doctrine of prosecution history estoppel. This doctrine precludes a patent owner from invoking the doctrine of equivalents in an infringement proceeding and obtaining a broader claim scope of issued claims. In particular, the doctrine prevents a patentee who narrowed his claims during prosecution to obtain a patent, to recapture the surrendered subject matter during litigation so as to “read on” the allegedly infringing device. In 2000, the Federal Circuit ruled that any narrowing amendment bars application of the doctrine of equivalents – a clear rule. This “complete bar” approach was struck down by the Supreme Court, which admonished the appellate body that it must be “cautious before adopting changes that disrupt the settled expectations of the inventing community.”<sup>171</sup> As it is quite common to amend claim language while obtaining patent rights, the Supreme Court held that a flexible bar to equivalents is more appropriate because it reposes more power and control in the hands of the inventor and his attorney, a devolution of responsibility placed on those putatively most familiar with the technological landscape. Accordingly, a “patentee, as the author of the claim language, may be expected to draft claims encompassing readily known equivalents” that the patentee is seeking to capture in the context of litigation.<sup>172</sup> A narrowing amendment, it follows, creates not a complete bar, but a rebuttable presumption that the patentee surrendered the “territory between the original claim and the amended claim.”<sup>173</sup> The only practical means to rebut the presumption is to show that the equivalent embodied in the accused device was unforeseeable at the time the patentee amended his claim language.<sup>174</sup>

By situating the doctrine of prosecution history estoppel away from the Federal Circuit’s pure rule, the Supreme Court’s use of foreseeability reflected the common law’s preference for doctrinal durability and a gradualism that is sensitive to disrupting settled expectations formed by reliance on legal precedent. As Hayek wrote,

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<sup>170</sup> POSNER, *supra* note 22, at 176 n.2.

<sup>171</sup> *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 739 (2002) (citing *Warner-Jenkinson*, 520 U.S. at 28).

<sup>172</sup> *Id.* at 740.

<sup>173</sup> *Id.* (citing *Exhibit Supply Co. v. Ace Patents Corp.*, 315 U.S. 126, 136-37 (1942)). The Supreme Court created another presumption against prosecution history estoppel in *Warner-Jenkinson*. There, the Court held that where a patentee cannot discern a reason for narrowing his claim language during prosecution, a “court should presume that the patent applicant had a substantial reason related to patentability for including the limiting element added by amendment. . . . [P]rosecution history estoppel would bar the application of the doctrine of equivalents as to that element.” *Warner-Jenkinson*, 520 U.S. at 33.

<sup>174</sup> The result has been that although non-literal infringement remains available, it has been limited to unforeseeable technologies. See John R. Allison & Mark A. Lemley, *The (Unnoticed) Demise of the Doctrine of Equivalents*, 59 STAN. L. REV. 955, 962-63 (2007). In practice, not surprisingly, the doctrine has become increasingly difficult to invoke successfully. *Id.* at 966.

The distinctive attitude of the judge . . . arises from the circumstance that he is not concerned with what any authority wants done in a particular instance, but with what private persons have ‘legitimate’ reasons to expect, where ‘legitimate’ refers to the kind of expectations on which generally his actions in that society have been based.<sup>175</sup>

Thus, rules should “facilitate that matching or tallying of the expectations on which the plans of the individuals depend for their success.”<sup>176</sup>

## 2. Cabining Discretion

Rules constrain judicial discretion.<sup>177</sup> As Justice Scalia observed, “[o]nly by announcing rules do we hedge ourselves in.”<sup>178</sup> This check on discretionary impulse can be particularly welcome within the hierarchy of our judicial system, where discretion is often exercised by institutional players below the appellate level.<sup>179</sup> In patent law’s hierarchy, there are two institutional actors that reside below the Federal Circuit: the district courts and the Patent and Trademark Office, both of which form part of the Federal Circuit’s primary audience. The district courts play a principal role in the enforcement of patents and the PTO is the sole patent-granting authority.

Unlike so many other areas of the law, however, all patent appeals arising from the district courts are heard by the Federal Circuit.<sup>180</sup> As such, one can argue that if uniformity were the primary objective in erecting rules, cabining district court discretion via a rule-like approach is less important in patent law as it is in other areas of the law.<sup>181</sup> The Federal Circuit’s exclusive subject matter jurisdiction affords the court the luxury of developing the common law through its appellate power, and thus, at least theoretically, the court is well situated to develop doctrine and foster predictability through a case-by-case approach. Moreover, the Supreme Court may be more inclined to adopt a standard – as opposed to a rule – because rather than thirteen appellate courts, the Federal Circuit alone will be the arbiter on the contours of the standard.

Two options are available to define the PTO’s role in patent law. The first option is for Congress to grant the agency substantive rulemaking authority entitled to *Chevron* deference, thus providing the PTO with a more prominent role in substantive patent law development. The other option – which reflects

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<sup>175</sup> HAYEK, *supra* note 32, at 98.

<sup>176</sup> *Id.*

<sup>177</sup> See Kennedy, *supra* note 132, at 1688; Sullivan, *supra* note 129, at 57.

<sup>178</sup> Scalia, *supra* note 138, at 1180.

<sup>179</sup> *Id.* at 1179; see also Merrill, *supra* note 141, at 820 (asserting that rules are generally a “superior mechanism for controlling the behavior of subordinate actors”).

<sup>180</sup> See 28 U.S.C. § 1295 (2006).

<sup>181</sup> See Scalia, *supra* note 138, at 1179 (explaining that when the Supreme Court decides a case using a totality of the circumstances test, the courts of appeals will inevitably find themselves “closing in on the law,” thereby undermining the uniformity intended in adopting the standard in the first place).

the current model<sup>182</sup> – is to grant the agency only interpretive rulemaking authority, and thereby trust the common law to provide substantive engagement. Under this model, the PTO – charged with examining and issuing patents – is provided with substantive guidance as to when a patent application should (or should not) issue, but left with plenary authority to establish regulations that “govern the conduct of proceedings in the Office.”<sup>183</sup> The preference for the present model may reflect the common law’s historically dominant role, and the creation of the Federal Circuit reinforces this view.

Providing a check on discretion is warranted in some instances. For example, Congress’s enactment of § 103 sought to cabin discretion by pronouncing several underlying factual considerations that apply to an obviousness determination.<sup>184</sup> Judges can no longer find a lack of “invention” without a rationale that unpacks these factual considerations. In this regard, limiting discretion compels judges to treat like cases alike. This fairness concern, however, cuts both ways. While consistency in the treatment of similar cases is an attractive feature, excessive constraint can facilitate an artificial application of the rules. Blocking out the consideration of underlying policies and the characteristics of the parties can lead to unfair results. This is a tradeoff. By seeking to limit the exercise of judicial bias, a rule-focused jurisprudence can lead to a less than equitable outcome.

An example of such an inequitable outcome in patent law relates to third-party activity that results in the invalidation of an inventor’s patent rights, even though there is no fiduciary relationship between the third party and inventor.<sup>185</sup> Under U.S. patent law, an inventor will be barred from obtaining patent protection on an invention if a third-party offers for sale or publicly uses the invention more than one year before the inventor files for a patent application claiming the invention.<sup>186</sup> This rule applies even if the third-party

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<sup>182</sup> See *Cooper Techs. Co. v. Dudas*, 536 F.3d 1330, 1335-36 (Fed. Cir. 2008); *Merck & Co. v. Kessler*, 80 F.3d 1543, 1549-50 (Fed. Cir. 1996).

<sup>183</sup> 35 U.S.C. § 2(b)(2)(A) (2006).

<sup>184</sup> *Id.* § 103.

<sup>185</sup> Modern case law has cited public dedication as a reason for allowing third-party activity to invalidate patent rights. For example, in *General Electric Co. v. United States*, the court stated,

Congress should be held to have concluded, at the least, that the policy against removing inventions from the public domain and the policy favoring early patent filing are of sufficient importance in and of themselves to invalidate a patent where the invention is sold by one other than the inventor or one under his control.

654 F.2d 55, 62 (Ct. Cl. 1981). Likewise, in *Baxter International, Inc. v. COBE Laboratories, Inc.*, Judge Lourie wrote that “the most applicable policy underlying the public use bar here is discouraging removal from the public domain of inventions that the public reasonably has come to believe are freely available.” 88 F.3d 1054, 1058 (Fed. Cir. 1996).

<sup>186</sup> See *Zacharin v. United States*, 213 F.3d 1366, 1371 (Fed. Cir. 2000); *In re Epstein*, 32 F.3d 1559, 1564 (Fed. Cir. 1994) (citing *Andrews v. Hovey*, 124 U.S. 694, 719 (1888)).

stole the invention from the inventor or the inventor was unaware of the third-party activity.<sup>187</sup>

In addition, an inventor's activity can also lead to invalidation of the patent, regardless of the sophistication or intent of the inventor. For instance, in *Lough v. Brunswick Corp.*,<sup>188</sup> Lough was a repairman at a marina who designed a new upper seal assembly on a Brunswick indoor/outdoor motor.<sup>189</sup> Lough made six prototypes, installing one in his own boat and gave the rest away.<sup>190</sup> More than one year before filing a patent application, he gave one prototype to a friend who installed it in his own boat.<sup>191</sup> He also installed a prototype in the dealership owner's boat and one in the boat of a customer; he gave the remaining two prototypes to friends who were employees at another marina, who in turn installed one on the boat of someone unknown to Lough.<sup>192</sup> Lough received no compensation for the prototypes. Nonetheless, the court held Lough's activity invalidated his patent. According to the court:

The law does not waive statutory requirements for inventors of lesser sophistication. When one distributes his invention to members of the public under circumstances that evidence a near total disregard for supervision and control concerning its use, the absence of these minimal indicia of experimentation require a conclusion that the invention was in public use.<sup>193</sup>

Judge Plager, in dissent, focused on what he perceived to be an unfairness visited upon Lough by the majority, and somewhat sardonically remarked that Lough "failed to conduct his testing, his experiments, with the careful attention we lawyers, with our clean and dry hands, have come to prefer."<sup>194</sup>

### 3. Allocating Decision-Making Authority and Substantive Signaling

In addition to cabining judicial discretion, rules may also have the effect of limiting the judicial role in the jurisdictional context.<sup>195</sup> The principle of separation of powers seeks to carve out specific roles for the three branches of government. A rule-based jurisprudence provides a check – or a reminder – on judicial overreaching into policy pronouncements and political judgments, and thus helps preserve the respective roles of various government actors. In

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<sup>187</sup> See, e.g., *Evans Cooling Sys., Inc. v. Gen. Motors Corp.*, 125 F.3d 1448, 1449 (Fed. Cir. 1997); *Lorenz v. Colgate-Palmolive-Peet Co.*, 167 F.2d 423, 429-30 (3d Cir. 1948).

<sup>188</sup> 86 F.3d 1113 (Fed. Cir. 1996).

<sup>189</sup> *Id.* at 1115.

<sup>190</sup> *Id.* at 1116.

<sup>191</sup> *Id.* at 1121.

<sup>192</sup> *Id.*

<sup>193</sup> *Id.* at 1122; cf. *Comm'r of Patents v. President and Fellows of Harvard Coll.*, [2002] 4 R.C.S. 45, 48, 2002 SCC 76 (Can.) (demonstrating deference to Parliament regarding statutory subject matter).

<sup>194</sup> *Lough*, 86 F.3d at 1124 (Plager, J., dissenting).

<sup>195</sup> See SCHAUER, *supra* note 129, at 231-32; Sullivan, *supra* note 129, at 64-65.

addition, rules serve a communicative function among government actors. As Thomas Merrill writes, the predictability of rules allows for “[b]etter communication about legal options,” which “facilitates coordination among governmental institutions.”<sup>196</sup>

There can also be a type of implicit signaling – an implicit rule – that exists among governmental institutions, where one institution’s inaction acts as a signal for another to engage. This arrangement – common, for instance, in the area of administrative law<sup>197</sup> – can occur even though the signaler has within its power the right, although perhaps not the competency, to act by exercising its ascribed power. In the context of patent law, for example, Congress has historically been reticent to legislate in the area of statutory subject matter. The present eligibility section allows for a “process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.”<sup>198</sup> These terms, characterized as the “great and distinct classes of invention,”<sup>199</sup> have been part of the U.S. patent system for more than 200 years.<sup>200</sup> I am not suggesting that Congress should have intervened during this time; quite the opposite. The point is that Congress *could* have intervened, but chose not to. Faced with the non-linear path of technological innovation and diversity of inventions, it is understandable and desirable that Congress maintained § 101’s broad standard, which implicitly signaled to the courts to fill in the statutory interstices.

The case of *Diamond v. Chakrabarty*<sup>201</sup> illustrates this point.<sup>202</sup> There, the Supreme Court held that man-made bacteria – a life form – was eligible for patent protection under § 101 of the patent code. Framing the issue as one of statutory interpretation, the Court stated, “we must determine whether respondent’s micro-organism constitutes a ‘manufacture’ or ‘composition of matter’ within the meaning of the statute.”<sup>203</sup> Although the Court characterized its rationale as an interpretive issue for the Court to decide, given the statute’s laconic nature, it was clear that the Court engaged in a policy choice.<sup>204</sup> This is reflected in the Court’s rejection of Petitioner’s argument

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<sup>196</sup> Merrill, *supra* note 141, at 823.

<sup>197</sup> See *Chevron U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 844 (1984).

<sup>198</sup> 35 U.S.C. § 101 (2006). The 1790 Act used the word “art” instead of “process,” but the courts have commonly equated “process” and “art” or subsumed process within “art.” See Patent Act of Apr. 10, 1790, ch. 7, 1 Stat. 109, 110 (repealed 1793). It was not until the 1952 Patent Act, that Congress, for clarification, changed the word “art” to “process.” See Patent Act of July 19, 1952, Pub. L. No. 593-905, 66 Stat. 792, 797.

<sup>199</sup> *Ex parte Blythe*, 1884 Dec. Comm’r Pat. 82, 86 (1884).

<sup>200</sup> See § 1, 1 Stat. at 110.

<sup>201</sup> 447 U.S. 303 (1980).

<sup>202</sup> *Id.* at 315.

<sup>203</sup> *Id.* at 307.

<sup>204</sup> *Id.* at 307-08.

that “micro-organisms cannot qualify as patentable subject matter until Congress expressly authorizes such protection.”<sup>205</sup> In response, the Court wrote:

It is, of course, correct that Congress, not the courts, must define the limits of patentability; but it is equally true that once Congress has spoken it is “the province and duty of the judicial department to say what the law is.” *Marbury v. Madison*, 1 Cranch 137, 177 (1803). Congress has performed its constitutional role in defining patentable subject matter in § 101; we perform ours in construing the language Congress has employed.<sup>206</sup>

The Court perceived “no ambiguity” in § 101, and recognized that the statute’s broad language was necessary to fulfill the patent systems objectives.<sup>207</sup>

The Court, however, exercised restraint in rebuffing arguments that stressed a “parade of horrors” and “grave risks” to the human race that will ensue as a result of the Court’s holding.<sup>208</sup> While dubious of these claims, the Court deferred to Congress as the proper voice to address them:

[W]e are without competence to entertain these arguments – either to brush them aside as fantasies generated by fear of the unknown, or to act on them. The choice we are urged to make is a matter of high policy for resolution within the legislative process after the kind of investigation, examination, and study that legislative bodies can provide and courts cannot. That process involves the balancing of competing values and interests, which in our democratic system is the business of elected representatives. Whatever their validity, the contentions now pressed on us should be addressed to the political branches of the Government, the Congress and the Executive, and not to the courts.<sup>209</sup>

Nearly thirty years later and numerous biotechnology-related innovations at hand, Congress has yet to respond, leaving it to the courts to work their way through § 101’s standard.<sup>210</sup> *Chakrabarty* reveals Congress’s inherent institutional constraints, and the common law’s institutional ability to develop patent law.<sup>211</sup>

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<sup>205</sup> *Id.* at 314.

<sup>206</sup> *Id.* at 315.

<sup>207</sup> *Id.* at 303.

<sup>208</sup> *Id.* at 316.

<sup>209</sup> *Id.* at 317.

<sup>210</sup> Compare this approach to the European model, which expressly prohibits inventions that are “contrary to ‘ordre public’ or morality.” European Patent Convention, art. 53(a), Oct. 5, 1973, 1065 U.N.T.S. 199 (as amended Nov. 29, 2000).

<sup>211</sup> It is worth mentioning here yet again that Congress could have – but chose not to – empower the PTO to interpret § 101 through substantive rulemaking or the agency’s adjudicative powers.

## B. *The Case for Standards*

### 1. Flexibility

Standards are more accommodating to changing circumstances, and create space for judges to adjust to transient situations. This feature of standards is particularly relevant to the fluid nature of technological innovation. It is extremely difficult and costly to promulgate a rule that foresees and encompasses the heterogeneity inherent in technological innovation and extraordinary variety of patentable inventions.<sup>212</sup> Recall the discussion of the doctrine of nonobviousness.<sup>213</sup> In constructing § 103, Congress sought to rein in judicial discretion that accompanied the “invention” requirement, but also understood that a standard was needed to accommodate the diversity and complexity that accompanies innovation. An objective rule was, therefore, not only infeasible and costly, but also would have exacerbated the over- or under-inclusive problem typically associated with rules. In fact, as the principal architect of § 103 noted, the drafters “knew they were not making a definition but rather a statement of policy, a specific required approach to a difficult problem.”<sup>214</sup>

Although § 103 did not, and could not, create a scheme whereby a decisionmaker or inventor could ex ante discern obviousness *vel non* with confidence, the statute created important parameters within which the decisionmaker must reside.<sup>215</sup> In other words, the obviousness determination

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<sup>212</sup> See *Chakrabarty*, 447 U.S. at 315-16. Chief Justice Burger, writing for the majority in *Chakrabarty*, advocated a broad reading of the patent statute’s subject matter requirements, writing:

This Court frequently has observed that a statute is not to be confined to the ‘particular application[s] . . . contemplated by the legislators. This is especially true in the field of patent law. A rule that unanticipated inventions are without protection would conflict with the core concept of the patent law that anticipation undermines patentability.

*Id.* The problem associated with constructing a rule that captures future technologies applies to a number of patent doctrines. For instance, in the context of the common law repair-reconstruction doctrine, courts have struggled with defining the boundary between permissible repair and impermissible reconstruction. This difficulty arises, according to the Federal Circuit, because “[i]t is impracticable, as well as unwise, to attempt to lay down any rule on this subject, owing to the number and infinite variety of patented inventions.” *FMC Corp. v. Up-Right, Inc.*, 21 F.3d 1073, 1079 (Fed. Cir. 1994).

<sup>213</sup> See *supra* text accompanying notes 104-09.

<sup>214</sup> Giles S. Rich, Judge of the U.S. Court of Customs and Patent Appeals, Award Address at the Eighth Annual Public Conference of The Patent, Trademark, and Copyright Research Institute: The Vague Concept of “Invention” as Replaced by § 103 of the 1952 Patent Act (June 18, 1964), in 8 PAT. TRADEMARK & COPYRIGHT J. RES & EDUC. 136 (1964).

<sup>215</sup> This is not to suggest that the non-obviousness determination is without shortcomings. For instance, Gregory Mandel has argued that the courts have not defined the “quantum of innovation necessary to satisfy the standard,” nor has the “baseline” level of ordinary skill been established against which to judge obviousness. Gregory Mandel, *The*

is not a pure standard made acontextually. Rather, § 103 requires the decisionmaker to engage in factual findings of: (1) the scope and content of the prior art, (2) the level of ordinary skill in the art, and (3) the scope of the claim.<sup>216</sup> Thus, this patentability requirement – with its pre-fixed factors – is standard-like, which means that while the factual determinations are “sufficiently general . . . to allow unanticipated, additional considerations to apply,”<sup>217</sup> they nonetheless provide boundaries within which the decisionmaker must stay. Accordingly, the obviousness determination “is *as of a particular time and to a particular* legally fictitious, technical *person . . . .* But *that* is not all; *what* must have been obvious is ‘*the subject matter as a whole.*’ That, of course, is the invention as defined by each patent claim.”<sup>218</sup>

This form of decisionmaking framework is common throughout the legal system. For instance, in discussing constitutional interpretation and the generality of constitutional clauses, Frederick Schauer writes:

[L]inguistically articulated rules . . . exclude[] wrong answers rather than point[] to right ones. . . . Since no clause can generate a uniquely correct answer, at least in the abstract rather than in the context of a specific question, the best view of the specific clauses is that they are merely less vague than the general clauses. The language of a clause, whether seemingly general or seemingly specific, establishes a boundary, or a frame, albeit a frame with fuzzy edges. Even though the language itself does not tell us what goes within the frame, it does tell us when we have gone outside it.<sup>219</sup>

An area where Congress has been particularly deferential to the courts is subject matter eligibility. The *Chakrabarty* opinion is once again instructive. As discussed above, the Supreme Court assumed an expansive approach to subject matter, holding that life is patentable as long as there is sufficient human intervention.<sup>220</sup> In other words, the Court drew a distinction between

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*Non-Obvious Problem: How the Indeterminate Nonobviousness Standard Produces Excessive Patent Grants*, 42 U.C. DAVIS L. REV. 57, 57 (2008).

<sup>216</sup> See 35 U.S.C. § 103 (2006).

<sup>217</sup> Sunstein, *supra* note 136, at 964.

<sup>218</sup> Giles S. Rich, *Laying the Ghost of the “Invention” Requirement*, in NONOBVIOUSNESS: THE ULTIMATE CONDITION OF PATENTABILITY 1:501, 1:508 (John F. Witherspoon ed., 1980); see also P.J. Federico, *Commentary on the New Patent Act*, 75 J. PAT. TRADEMARK OFF. SOC’Y 160, 181 (1993) (stating § 103 “is added to the statute for uniformity and definiteness. . . . [A]nd with the view that an explicit statement in the statute may have some stabilizing effect”).

<sup>219</sup> Frederick Schauer, *Easy Cases*, 58 S. CAL. L. REV. 399, 430 (1985).

<sup>220</sup> See *Diamond v. Chakrabarty*, 447 U.S. 303, 308 (1980) (“[C]omposition of matter’ has been construed consistent with its common usage to include ‘all compositions of two or more substances and . . . all composite articles, whether they be gases, fluids, powders or solids.’ In choosing such expansive terms as ‘manufacture’ and ‘composition of matter,’ modified by the comprehensive ‘any,’ Congress plainly contemplated that the patent laws

naturally occurring subject matter, which is not patentable, and non-naturally occurring subject matter, which is eligible for patent protection. Absent statutory constraints, the Court constructed additional subject matter filters, holding that “laws of nature, physical phenomena, and abstract ideas” are not patentable.<sup>221</sup> Accordingly, unless an invention fell into one of these three categories, it was eligible for patent protection.

Process-oriented inventions, particularly software and business methods, have posed a greater challenge to the courts. Over the years, the courts have constructed various tests, including the *Freeman-Walter-Abele* test,<sup>222</sup> *State Street Bank*'s “useful, concrete, and tangible test,”<sup>223</sup> and the “technological arts” test.<sup>224</sup> These tests had proven to be too unpredictable and unruly – the standards therein offered very little guidance to the bar and inventors. Painfully aware of the shortcomings of these tests, the Federal Circuit recently sat en banc in *In re Bilski* to decide “what test or set of criteria governs the determination by the [PTO] or courts as to whether a claim to a process is patentable under § 101 or, conversely, is drawn to unpatentable subject matter because it claims only a fundamental principle.”<sup>225</sup>

*Bilski* represents a tug toward to the rule side of the spectrum, although its ultimate orientation is standard-like. In answering the aforementioned question, the court – tracking Supreme Court precedent very closely – adopted the machine-transformation test.<sup>226</sup> This “definitive test” states that subject matter is eligible for patent protection if “(1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing.”<sup>227</sup> The court added two additional filters, namely that the claimed machine or transformation of an article “must impose meaningful limits on the claim’s scope” to satisfy § 101’s eligibility requirements, and the specific machine or transformation “must not merely be insignificant extra-solution activity.”<sup>228</sup>

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would be given wide scope.” (citations omitted)); see also *In re Comiskey*, 499 F.3d 1365, 1375 (Fed. Cir. 2007) (“Patentable subject matter under the 1952 Act is extremely broad. Given the breadth of the categories listed in § 101, it is not surprising that the legislative history of the 1952 Act noted that ‘Congress intended statutory subject matter to include anything under the sun that is made by man.’” (quoting *Chakrabarty*, 477 U.S. at 309)).

<sup>221</sup> *Chakrabarty*, 447 U.S. at 309.

<sup>222</sup> See *In re Abele*, 684 F.2d 902, 907 (C.C.P.A. 1982); *In re Walter*, 618 F.2d 758, 767 (C.C.P.A. 1980); *In re Freeman*, 573 F.2d 1237, 1245 (C.C.P.A. 1978).

<sup>223</sup> See *State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1373 (Fed. Cir. 1998).

<sup>224</sup> See John V. Biernacki, *Bilski and the Discernment of Patent Eligibility for Business Method Patents*, ASPATORE, Aug., 2009, at \*12, available at 2009 WL 2510890.

<sup>225</sup> *In re Bilski*, 545 F.3d 943, 952 (Fed. Cir. 2008) (en banc), cert. granted sub nom. *Bilski v. Doll*, 129 S. Ct. 2735 (June 1, 2009) (No. 08-964).

<sup>226</sup> *Id.* at 952-55.

<sup>227</sup> *Id.* at 954.

<sup>228</sup> *Id.* at 961-62.

In adopting the machine-transformation test, the court expressly rejected several of its prior § 101 frameworks, including the “technological arts” test.<sup>229</sup> This rejection was particularly telling because in doing so the court signaled that § 101 eligibility is a big tent that does not make distinctions based on technological category.<sup>230</sup> Related to this point, the court rejected calls to enunciate categorical exclusions beyond those already firmly entrenched in Supreme Court case law, namely “laws of nature,” “natural phenomena,” and “abstract ideas”<sup>231</sup> or what, during the *Bilski* oral argument, Chief Judge Michel referred to as “the three No No’s.”<sup>232</sup> In this regard, the Court, while rejecting *State Street Bank*’s “useful, concrete, and tangible” test as “insufficient to determine whether a claim is patent-eligible under § 101,”<sup>233</sup> nonetheless affirmed that decision’s fundamental premise. A core principle of *State Street Bank* is that, given the unpredictable nature and extraordinary diversity of technological innovation, § 101’s eligibility requirement should be inclusive.<sup>234</sup> Indeed, the *Bilski* court eschewed explicit subject matter exclusions other than “the three No No’s,” writing “we decline to adopt a broad exclusion over software or any other such category of subject matter beyond the exclusion of claims drawn to fundamental principles set forth by the Supreme Court.”<sup>235</sup> Thus, the machine-transformation test can be viewed as a standard-like framework – broad and inclusive, but not without underlying considerations or filters that can inform the subject matter analysis.

The U.S. patent eligibility jurisprudence reflects recognition of the unpredictable nature of technological innovation and the predominance of the common law in the development of U.S. patent law. As the *Bilski* court wrote, “future developments in technology and the sciences may present difficult challenges to the machine-or-transformation test . . . . And we certainly do not rule out the possibility that this court may in the future refine or augment the test or how it is applied.”<sup>236</sup> Thus, while the *Bilski* opinion itself may be a bit

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<sup>229</sup> *Id.* at 960.

<sup>230</sup> *See id.* (“We perceive that the contours of such a test . . . would be unclear because the meanings of the terms ‘technological arts’ and ‘technology’ are both ambiguous and ever-changing.”).

<sup>231</sup> *See supra* note 221 and accompanying text.

<sup>232</sup> Audio Recording of Oral Argument, *In re Bilski*, 545 F.3d 952 (Fed. Cir. 2008) (No. 2007-1130).

<sup>233</sup> *Bilski*, 545 F.3d at 959.

<sup>234</sup> *State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998).

<sup>235</sup> *Bilski*, 545 F.3d at 960 n.23.

<sup>236</sup> *Id.* at 956. There are numerous other examples that do not lend themselves to bright-line rules or exclusionary pronouncements. For example, the line between permissible repair and impermissible reconstruction has vexed courts for years, yet the Federal Circuit knows that any attempt to draw such a bright line would be folly. As the court said in this context:

clumsy, it highlights the larger point that a standard-like framework is both inevitable and desirable with respect to statutory subject eligibility.

Finally, *Bilski* is also illustrative of the role of precedent in formulating legal frameworks.<sup>237</sup> Precedent is a fundamental principle of the common law process, having both a cabining effect on judicial discretion,<sup>238</sup> and an enabling influence to develop and construct new doctrine. The extent Supreme Court precedent demanded that *Bilski* adopt the machine-transformation test is debatable. But the point is, as Lon Fuller wrote, that precedent offers judges “not simply a place of common anchorage but also a shared point of embarkment toward new law.”<sup>239</sup>

## 2. Fairness

Standards provide a greater allowance for realizing substantive ends by permitting the decisionmaker to take into consideration underlying policies and party characteristics. In other words, standards are preferable to constraining rules if the goal is to treat like cases alike and dissimilar cases dissimilarly.<sup>240</sup>

Recall in *Lough*,<sup>241</sup> Mr. Lough’s activities did not realize commercial gain, and he did not seek to frustrate the goals of the patent system purposely by waiting more than one year to file a patent application after public use. He was simply a clever mechanic, who identified a technical problem and wanted to share his solution with friends. Yet Lough was “sacrificed on the altar of rules.”<sup>242</sup> If there were greater flexibility in the application of the statutory bar provision, one that peered deeper in context, then Lough may have fared

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It is impracticable, as well as unwise, to attempt to lay down any rule on this subject, owing to the number and infinite variety of patented inventions. Each case, as it arises, must be decided in the light of all the facts and circumstances presented, and with an intelligent comprehension of the scope, nature, and purpose of the patented invention, and the fair and reasonable intention of the parties.

FMC Corp. v. Up-Right, Inc., 21 F.3d 1073, 1079 (Fed. Cir. 1994).

<sup>237</sup> See Thomas F. Cotter, *A Burkean Perspective on Patent Eligibility*, 22 BERKELEY TECH. L.J. 855, 858 (2007).

<sup>238</sup> See Maxwell L. Stearns, *Standing Back from the Forest: Justiciability and Social Choice*, 83 CAL. L. REV. 1309, 1359 (1995) (“[S]tare decisis ensures that the order in which legal questions are presented for decision will have an arbitrary, and largely unintended, effect upon the substantive evolution of legal doctrine . . .”).

<sup>239</sup> LON L. FULLER, ANATOMY OF THE LAW 96 (1968).

<sup>240</sup> See BRIAN BIX, JURISPRUDENCE: THEORY AND CONTEXT 81 (2d ed. 1999) (asserting that contrary to rules, standards “do not act in an all-or-nothing fashion: that is, they can apply to a case without being dispositive”); Sullivan, *supra* note 129, at 62 (stating “bright-line rules are arbitrary at the border” because “[t]hey force the decisionmaker to treat differently cases that are actually substantively alike in terms of the underlying principle or policy, and to treat similarly cases that are different”).

<sup>241</sup> *Lough v. Brunswick Corp.*, 86 F.3d 1113, 1116 (Fed. Cir. 1996); see also *supra* text accompanying notes 188-94.

<sup>242</sup> Sullivan, *supra* note 129, at 66; see also SCHAUER, *supra* note 129, at 135-66.

better.<sup>243</sup> At the same time, a standard would involve costs. How would a court distinguish between the Loughs of the world and those who seek to frustrate patent law's statutory bars? What about the desirability of providing guidance to counsel regarding inventor behavior?

### 3. Judicial Candor and Accountability

Because rules tend to cabin judicial discretion, leaving policy-oriented directives to the other branches of government, advocates of a greater standard-oriented approach tend to view this feature of rules as a refuge for judges, shielding them from the difficulties associated with deciding and articulating rationales on controversial issues.<sup>244</sup> According to this view, balancing tests, typically associated with standards, require the "judge to take full responsibility for his decisions, and promises a particularized, rational account of how he arrives at them."<sup>245</sup>

Additionally, standards facilitate greater judicial candor and legitimacy; and foster an ethos of openness and recognition. The law places significant value on candor,<sup>246</sup> and when candor is lacking, legitimacy is called into question

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<sup>243</sup> In this context, Judge Plager noted (again sardonically):

Of course it would have been better for all concerned . . . if Mr. Lough had read our prior opinions before he became an inventor. Then he might have kept detailed lab notes setting out the problem and the possible solutions, and he wisely would have obtained written confidentiality agreements from those allowed to see or use his prototypes. Had he studied our cases first, he no doubt would have developed a detailed questionnaire for the persons to whom he provided the seals, and he would have insisted on periodic written reports. In other words, he would have put in the set of tight controls the majority would have wanted. Instead, he did what seemed appropriate in the setting in which he worked: he waited to hear from his test cases what problems might emerge, and, hearing none, at least none that convinced him he was on the wrong track, he accepted some friendly advice and proceeded to patent his invention.

*Lough*, 86 F.3d at 1124 (Plager, J., dissenting).

<sup>244</sup> See Sullivan, *supra* note 129, at 67 ("[R]ules favor the judicial abdication of responsibility, while standards make the judge face up to his choices – he cannot absolve himself by saying 'sorry, my hands are tied.'").

<sup>245</sup> Wallace Mendelson, *On the Meaning of the First Amendment: Absolutes in the Balance*, 50 CAL. L. REV. 821, 825 (1962).

<sup>246</sup> See GUIDO CALABRESI, *A COMMON LAW FOR THE AGE OF STATUTES* 178-81 (1982) (discussing the benefits of judicial candor); Susan Estrich, *The Justice of Candor*, 74 TEX. L. REV. 1227, 1228 (1996) ("It is precisely [sic] because of its underlying political nature that the task of judging . . . demands both rigor and candor."); Scott C. Idleman, *A Prudential Theory of Judicial Candor*, 73 TEX. L. REV. 1307, 1309 (1995); Nicholas S. Zeppos, *Judicial Candor and Statutory Interpretation*, 78 GEO. L.J. 353, 401-02 (1989) (discussing values associated with judicial candor). See generally David L. Shapiro, *In Defense of Judicial Candor*, 100 HARV. L. REV. 731 (1987).

and cynicism is engendered.<sup>247</sup> Judges, who have “neither force nor will, but merely judgment,”<sup>248</sup> must present the basis and rationale for their decisions. One reason for this policy is that explication imposes constraints on the judiciary by allowing outsiders to debate the merits and persuasiveness of these unelected officials’ work product.<sup>249</sup> And, as David Shapiro writes, “[i]n the absence of an obligation of candor, this constraint would be greatly diluted.”<sup>250</sup>

The goal of candid dialogue is arguably best realized in an appellate institutional architecture that allows peer-appellate courts to engage in a robust competition of rationales. This is particularly true when we consider that standards are policy statements, “a goal of social action.”<sup>251</sup> But the current appellate framework is monopolistic and not well-suited to patent law’s complex mixture of fact and law scenarios, and accompanying fluidity of innovation. Such a world requires a competitive and diverse appellate enforcement model – something the current appellate structure lacks – that emphasizes diversity, competition, and incremental innovation.<sup>252</sup>

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<sup>247</sup> See Shapiro, *supra* note 246, at 737 (“[L]ack of candor seldom goes undetected for long, and its detection only serves to increase the level of cynicism about the nature of judging and of judges.”).

<sup>248</sup> THE FEDERALIST NO. 78, at 99 (Alexander Hamilton) (J.R. Pole ed., 2005).

<sup>249</sup> See Sullivan, *supra* note 129, at 68-69 (“[J]udicial legitimacy depends on using standards rather than rules, as standards ‘affirm rather than deny . . . responsibility.’” (quoting Frank I. Michelman, *The Supreme Court, 1985 Term – Forward: Traces of Self Government*, 100 HARV. L. REV. 4, 35 (1986))).

<sup>250</sup> Shapiro, *supra* note 246, at 737; see also Estrich, *supra* note 246, at 1228 (“If the cases are in conflict, acknowledge it, and be clear about the principle that guides you in one direction or another. It is precisely [sic] because of its underlying political nature that the task of judging, of interpreting the Constitution in particular, demands both rigor and candor.”); Robert A. Leflar, *Honest Judicial Opinions*, 74 NW. U. L. REV. 721, 723 (1979) (discussing the importance of honesty in judicial opinions).

<sup>251</sup> Ehrlich & Posner, *supra* note 7, at 270; see also Sullivan, *supra* note 129, at 58 (“A legal directive is ‘standard’-like when it tends to collapse decisionmaking back into the direct application of the background principle or policy to a fact situation.”).

<sup>252</sup> See Nard & Duffy, *supra* note 29, at 1655. Even the Federal Circuit judges themselves have, on occasion, hinted that the court’s jurisdictional structure has problems. For example, Chief Judge Michel of the Federal Circuit has suggested that the insularity of the court is related to a closed cycle between the court and the attorneys who practice before it, with the attorneys simply parroting back to the court what the court itself has said in prior cases:

We just keep replicating the old results based on the old precedents, whether they have kept pace with changes in business, changes in technology, or changes of a different sort . . . . [W]e just get the Federal Circuit talking to itself, with the brief writer just being the echo of what we wrote in all those prior cases. And then we write some more cases, and the cycle just goes on and on and on.

Paul R. Michel, Keynote Presentation at the Berkeley Center for Law & Technology Conference on Patent System Reform (Mar. 1, 2002) (transcript on file at the Boston University Law Review). Similarly, Judge Randall Rader of the Federal Circuit has spoken

### III. NORMATIVE LESSONS AND COMPARATIVE ADVANTAGES

As the preceding Parts posited, congressional intervention over the past two hundred years was episodic and marked by codification and deference to the judiciary. The nuances and fluidity of innovation – whether the technology relates to the nineteenth century steam engine or a contemporary biotechnology innovation – renders substantive statutory responses increasingly ineffectual and impractical. When Congress has acted, the resulting legislation was characterized by broad, standard-like language, which implicitly recognizes the comparative advantages of the judiciary as policy driver.

#### A. *Common Law Attributes*

Congressional forays into patent law reveal a legislative process that lacks the necessary nimbleness and institutional capacity to engage substantive patent law adequately. Each technological community has its own norms and rules, which produce distinct cultural settings. Dissimilar industries and stakeholders hold divergent views of the patent system and the extent to which they rely on patents.<sup>253</sup> Thus, while the variables that inform patent law's ex ante/ex post trade-off calculus may remain constant, each industry is unique with respect to how the attendant variables should be balanced and the inputs associated with such balancing. The legislative process is simply ill-equipped to address this institutional diversity and convolution. As Rochelle Dreyfuss states, the “complexity, frequency, and pace” of change within the scientific community “far outstrip Congress’s capacity to legislate.”<sup>254</sup>

In contrast, the judge, in the Hayekian sense, is more closely tethered to industry customs and norms, and is thus more likely to develop doctrine that reflects the parties’ and the relevant industry’s legitimate expectations.<sup>255</sup>

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of how the Federal Circuit has “retarded the pace of common law development in some important ways,” because the court’s exclusive subject matter jurisdiction leads to “less percolation, less chance for experimentation” of patent law issues. Randall R. Rader, *The United States Court of Appeals for the Federal Circuit: The Promise and Perils of a Court of Limited Jurisdiction*, 5 MARQ. INTEL. PROP. L. REV. 1, 4 (2001).

<sup>253</sup> See LANDES & POSNER, *supra* note 20, at 312 (“Many highly progressive, research-intensive industries, notably including the computer software industry, do not rely heavily on patents as a method of preventing free riding on inventive activity.”); Cohen et al., *supra* note 21, at 1. See generally Levin et al., *supra* note 20, at 783-831.

<sup>254</sup> Dreyfuss, *supra* note 3, at 800-01; see also BURK & LEMLEY, *supra* note 2, at 95-100.

<sup>255</sup> See HAYEK, *supra* note 32, at 78; Brian Simpson, *The Common Law and Legal Theory*, in LEGAL THEORY AND COMMON LAW 8, 20 (William Twining ed., 1986) (“[T]he common law system . . . consists of a body of practices observed and ideas received over time by a caste of lawyers, these ideas being used by them as providing guidance in what is conceived to be the rational determination of disputes litigated before them, or by them on behalf of clients, and in other contexts.”); Zywicki, *supra* note 22, at 992 (“[The] appropriate decision in a given case will derive from the constraints of local norms and circumstances that lead the judge to ‘draw his conclusions not exclusively from articulated

Characterized another way, players within any given industry can be understood as what Fuller called “friendly strangers” acting within a particular “social context,” one where reciprocity plays an important role not only among the “strangers,” but also the law’s relationship to the relevant social context.<sup>256</sup> Accordingly,

[L]aw and its social environment stand in a relation of reciprocal influence; any given form of law will not only act upon, but be influenced and shaped by, the established forms of interaction that constitute its social milieu. This means that for a given social context one form of law may be more appropriate than another, and that the attempt to force a form of law upon a social environment uncongenial to it may miscarry with damaging results.<sup>257</sup>

Moreover, patent doctrine is not designed to guide inventors as to where they should channel their inventive energies. Rather, the marketplace signals to inventors where the financial rewards reside, and indicates the costs and benefits of a given research initiative.<sup>258</sup> The patent system embodies a self-selection process that works hand-in-hand with the marketplace to foster innovation in a decentralized setting.<sup>259</sup> But patent law’s “reward structure cannot be modified

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[rules] but from a sort of situational logic, based on the requirements of an existing order of actions which is at the same time the undersigned result and the rationale of all those rules which he must take for granted.” (quoting HAYEK, *supra* note 32, at 78)).

<sup>256</sup> Fuller, *supra* note 21, at 27.

<sup>257</sup> *Id.* at 27. Fuller elaborates on this notion of “reciprocity” in other well-known works. See, e.g., LON L. FULLER, *THE MORALITY OF LAW* 19-27 (2d ed. 1969).

<sup>258</sup> See B. ZORINA KHAN, *THE DEMOCRATIZATION OF INVENTION: PATENTS AND COPYRIGHTS IN AMERICAN ECONOMIC DEVELOPMENT, 1790-1920*, at 66 (2005) (describing “a complementary relationship between law and the market in the form of a patent system”); JOEL MOKYR, *THE GIFTS OF ATHENA: HISTORICAL ORIGINS OF THE KNOWLEDGE ECONOMY* 76 (2002) (indicating that innovators will apply their efforts based upon “the signals that the market or another device sends . . . about the private and social benefits”); NUNO PIRES DE CARVALHO, *THE TRIPS REGIME OF PATENT RIGHTS* 7-9 (2d ed. 2005) (discussing relationship between patent system and marketplace by examining “the reward” and “the prospect theories”); STEVEN W. USSELMAN, *REGULATING RAILROAD INNOVATION: BUSINESS, TECHNOLOGY, AND POLITICS IN AMERICA, 1840-1920*, at 97-98 (2002) (“[A] patent in and of itself conveyed no rewards or special privileges. . . . Rather, a patent merely extended to creative individuals a legal claim upon those who wished to use their novelties. The market would determine the number of takers and the amount they were willing to pay.”). Reflecting this sentiment, Henry Ellsworth, the superintendent of the patent office from 1835-1845, in his report to the Secretary of State about the need for patent reform, wrote “for no sooner are the wants of the public known than men of ingenuity attempt to supply them.” REPORT FROM THE HON. HENRY L. ELLSWORTH TO THE SECRETARY OF STATE AND TRANSMITTED TO THE SELECT COMMITTEE ON THE PATENT LAWS 4 (1836).

<sup>259</sup> See MOKYR, *supra* note 258, at 239 (observing that overall welfare is enhanced in decentralized systems because they tend “to be more efficient than centralized ones in engendering technological progress because they [do] not depend on the personal judgment

according to the market structure in which the innovator operates.”<sup>260</sup> As Dan Burk and Mark Lemley have argued, a unitary patent system “simply cannot offer the range of proper incentives for the variety of technologies and industrial sectors it would need to serve.”<sup>261</sup>

The question thus becomes: which institution is better situated to apply and develop seemingly neutral principles to divergent industries in a manner that reflects distinct industry norms and legitimate expectations at any given time. Viewing this question through the lens of comparative advantage,<sup>262</sup> the common law is seemingly well positioned. In a decentralized setting, the Hayekian judge

serves, or tries to maintain and improve, a going order which nobody has designed, an order that has formed itself without the knowledge and often against the will of authority, that extends beyond the range of deliberate organization on the part of anybody, and that is not based on the individuals doing anybody’s will, but on their expectations becoming mutually adjusted.<sup>263</sup>

Judicial intervention becomes necessary only when “the rules which secure such a matching of expectations are not always observed, or clear enough, or adequate

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and survival of single-minded and strong-willed individuals”); Peter S. Menell & Suzanne Scotchmer, *Intellectual Property Law*, in 2 HANDBOOK OF LAW & ECONOMICS 1473, 1477 (A. Mitchell Polinsky & Steven Shavell eds., 2007) (referring to decentralization in intellectual property systems as a “virtue” and stating “[p]robably the most important obstacle to effective public procurement is in finding the ideas for invention that are widely distributed among firms and inventors. The lure of intellectual property protection does that automatically”). Indeed, the decentralized nature of the U.S. patent system is evident in the design of the patent and copyright clause of the Constitution.

<sup>260</sup> SUZANNE SCOTCHMER, INNOVATION AND INCENTIVES 117 (2004). As such, patent law’s one-size fits all regime means that some innovations will be overrewarded while others underrewarded. *Id.*; see also LANDES & POSNER, *supra* note 20, at 300 (stating the “patent system makes no effort . . . to match the degree of patent protection” to variables relevant to determining whether a “given degree of patent protection is socially desirable”).

<sup>261</sup> BURK & LEMLEY, *supra* note 2, at 95; see also Dan L. Burk & Mark A. Lemley, *Is Patent Law Technology-Specific?*, 17 BERKELEY TECH. L.J. 1155, 1156 (2002) (“[W]hile patent law is technology-neutral in theory, it is technology-specific in application.”).

<sup>262</sup> James Buchanan highlighted the importance classical political economists placed upon comparing institutions. According to Buchanan, “[c]lassical political economy was . . . largely concerned with the comparison of alternative social or institutional orders. . . . [I]ts main purpose was . . . that of developing appropriate models of the working of alternative institutions in order that the choice between those institutions might be better informed.” BUCHANAN, *supra* note 19, at 4.

<sup>263</sup> HAYEK, *supra* note 32, at 118-19; see also Todd J. Zywicki & Anthony B. Sanders, *Posner, Hayek, and the Economic Analysis of the Law*, 93 IOWA L. REV. 559, 567 (2008) (asserting that Hayek viewed the law as “designed to serve as an input to individual expectations in order to enable individuals to effectuate their *own individual* plans by coordinating their affairs with others who are necessary to effectuating those plans”).

to prevent conflicts even if observed.”<sup>264</sup> This persistent intervention requires “not only the application of already established rules but also the formulation of new rules necessary for the preservation of the order of actions.”<sup>265</sup> Thus, through the “process of piecemeal tinkering, or ‘immanent criticism,’” the entire patent system is made “more consistent both internally as well as with the facts to which the rules are applied.”<sup>266</sup>

In contrast, the inherent institutional limitations of Congress and, until recently, its minimal interest in patent law may lead to a punctuated and distorted evolution of patent doctrine, which may have a disruptive effect on technological development.<sup>267</sup> As the past several years have revealed,<sup>268</sup> congressional primacy in patent reform initiatives leads to a more politicized legislative process,<sup>269</sup> from which federal courts enjoy greater immunity.<sup>270</sup> For example, the controversial issue of reforming the “entire market value” (“EMV”) rule – which would have required courts to discern the incremental value of an invention’s contribution over preexisting inventions are calculated

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<sup>264</sup> HAYEK, *supra* note 32, at 119.

<sup>265</sup> *Id.*

<sup>266</sup> *Id.* at 118.

<sup>267</sup> See BRUNO LEONI, FREEDOM AND THE LAW 18 (3d ed. 1991) (“Legislation may have . . . a negative effect on the very efficacy of the rules and on the homogeneity of the feelings and convictions *already prevailing* in a given society.”).

<sup>268</sup> See, e.g., Patent Reform Act of 2009, S. 515, 111th Cong. § 4; Patent Reform Act of 2008, S. 3600, 110th Cong. § 4; Patent Reform Act of 2007, S. 1145, 110th Cong. § 4 (2008).

<sup>269</sup> See BURK & LEMLEY, *supra* note 2, at 100 (“Congress has spent the last four years, from 2005 to 2008, in an ultimately futile effort to reform the patent system. Reform proposals have come and gone; advanced and retreated; merged and coalesced; multiplied, divided, and vanished at every conceivable stage of the legislative process.”).

Another example of patent legislation with significant political intervention relates to medical procedures. See 35 U.S.C. § 287(c) (2006) (providing an infringement exemption for practicing a medical procedure). This legislation was strongly supported by the medical community. See 140 CONG. REC. E1754 (daily ed. Aug. 17, 1994) (indicating the fervent desire of the American Medical Association to outlaw the practice of patenting medical procedures). It was quickly drafted and signed, despite notable opposition from the biotechnology and pharmaceutical industries. See 142 CONG. REC. S11838, S11843-45 (daily ed. Sept. 30, 1996); 142 CONG. REC. S11845, S11845-47 (daily ed. Sept. 30, 1996). Several senators also expressed dissatisfaction with the legislation. As Senator Orrin Hatch stated:

This measure was added notwithstanding the fact that there were no Senate hearings, and over the objections of myself, the chairman of the Finance Committee and the U.S. Trade Representative. It is an unprecedented change to our patent code and it is my intention to closely scrutinize the implementation of this new law.

142 CONG. REC. S26, 639 (1996) (Statement of Sen. Hatch). Other examples include the addition of § 103(b), which relaxed the obviousness standard for biotech process inventions and the sui generis Semiconductor Chip Protection Act, 17 U.S.C. §§ 2321-2583 (2006).

<sup>270</sup> See MUELLER, *supra* note 23, at 109; Parisi, *supra* note 23, at 222.

– invited competing views from the IT industry and pharmaceutical industry. Reflecting not only this political dynamic, but also the problems associated with substantive patent legislation, Senator Arlen Specter stated that some members of the Judiciary Committee in 2008 “spent a lot of time [on the damages language] trying to find the magic words and [] didn’t find them.”<sup>271</sup> The battle over the damages provision sheds light on the shortcomings of the legislative process, and explains why Congress eventually modified the provision’s language in 2009, considerably streamlining the language and giving the courts much more discretion than initially envisioned. The bill’s language changed from a detailed articulation of damages methodology to one in which the court was given broad power to “identify the methodologies and factors that are relevant to the determination of damages.”<sup>272</sup> In the meantime, the Federal Circuit threw its weight behind the viability of the EMV in a high profile case, stating “[t]here is nothing inherently wrong with using the market value of the entire product, especially when there is no established market value for the infringing component or feature, so long as the multiplier accounts for the proportion of the base represented by the infringing component or feature.”<sup>273</sup> The court’s treatment of the EMV was more detailed and thorough than one would expect, leading to the inference that the court was motivated in part by imminent congressional action.

Indeed, the Federal Circuit’s intervention reflects the court’s fear that Congress would be unable to legislate in a judicious manner in this substantive space.<sup>274</sup> Moreover, the change in the reform bill’s language can be seen as a recognition that “the magic words” will remain elusive and an endorsement of the common law’s ability, to “adapt[] to modern understanding and greater experience.”<sup>275</sup> As Hayek observed, “it is likely that few endeavors by judges to improve the law have come to be accepted by others unless they found expressed in them what in a sense they ‘knew’ already.”<sup>276</sup> In this regard, the common law, working within the interstices of the code is more responsive to the technological communities that form part of patent law’s fabric. Whether

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<sup>271</sup> *Patent Reform in the 111th Congress: Legislation and Recent Court Decisions: Hearing Before the S. Comm. on the Judiciary*, 111th Cong. 3 (2009) (statement of Sen. Specter).

<sup>272</sup> Patent Reform Act of 2009, S. 515, 111th Cong. § 4 (creating 35 U.S.C. § 284(b)(1)).

<sup>273</sup> *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1339 (Fed. Cir. 2009).

<sup>274</sup> For instance, Chief Judge Paul Michel of the Federal Circuit remarked in his State of Court Address that the provision that “dictates that courts in every case must apportion reasonable royalty damages, and do so by one particular methodology that requires valuation of all prior art . . . could impose enormous burdens on the court.” Chief Judge Paul Michel, *State of the Court of Appeals for the Federal Circuit 2* (June 28, 2007), available at [http://www.ca9.uscourts.gov/pdf/State\\_of\\_the\\_Court.pdf](http://www.ca9.uscourts.gov/pdf/State_of_the_Court.pdf).

<sup>275</sup> *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 551 U.S. 877, 899 (2007) (observing that the legislative process lacks the necessary legerity that is the common law possesses).

<sup>276</sup> HAYEK, *supra* note 32, at 118.

the issue is one of damages or statutory subject matter, judges are more optimally suited to engage the trade-off calculus and develop patent doctrine and policy through the use of legal forms that modulate the rule-standard continuum.<sup>277</sup> As Fuller noted, “[o]ne may often accord respect to a precedent not by embracing it with a frozen logic but by drawing from its thought the elements of a new pattern of decision.”<sup>278</sup>

To this end, one would expect, for example, courts to develop damages methodologies based on consensus within a given technological community and its likely effect on the community. Congressional action cannot construct this type of tailoring. The more detailed the legislation, the more politicized the atmosphere, and less inclusive the outcome. The common law process, in this regard, is more representative and “can fit and refit its prescriptions to the configurations of life as they reveal themselves in litigation.”<sup>279</sup>

The common law, however, is not without shortcomings. For instance, Polk Wagner has argued that recent Supreme Court intervention reveals the limits of Article III’s ability to affect significant reform.<sup>280</sup> Additionally, Gregory Mandel has asserted the Supreme Court’s *KSR* decision regarding § 103 missed another opportunity to define “what the standard actually requires.”<sup>281</sup> Moreover, the Federal Circuit – patent law’s principal policy driver – has not consistently inspired confidence.<sup>282</sup>

But again, the question is one of comparative advantage.<sup>283</sup> While the common law is imperfect – particularly in temporal isolation – it retains a comparative advantage over Congress in the context of reforming and

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<sup>277</sup> See Zywicki, *supra* note 22, at 991 (contrasting the judges’ role with the legislature’s by remarking, “the judge is little more than an expert trained in articulating the tacit beliefs and expectations that undergird the ongoing order of the community”).

<sup>278</sup> FULLER, *supra* note 239, at 96.

<sup>279</sup> *Id.* at 26.

<sup>280</sup> See Wagner, *supra* note 3, at 39 (“[I]t appears that there is little reason to be hopeful about the possibilities for real reform of the patent system via Supreme Court litigation.”).

<sup>281</sup> Gregory N. Mandel, *Another Missed Opportunity: The Supreme Court’s Failure to Define Nonobviousness or Combat Hindsight Bias in KSR v. Teleflex*, 12 LEWIS & CLARK L. REV. 323, 324 (2008).

<sup>282</sup> See *supra* notes 120-23 and accompanying text; see also *Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 548 U.S. 124, 138 (2006) (Breyer, J., dissenting) (“[A] decision from this generalist Court could contribute to the important ongoing debate, among both specialists and generalists, as to whether the patent system, as currently administered and enforced, adequately reflects the ‘careful balance’ that ‘the federal patent laws . . . embod[y].” (quoting *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 146 (1989))); *Holmes Group, Inc. v. Vornado Air Circulation Sys., Inc.*, 535 U.S. 826, 839 (2002) (Stevens, J., concurring) (“[O]ccasional decisions by courts with broader jurisdiction will provide an antidote to the risk that the specialized court may develop an institutional bias.”); BESSEN & MEURER, *supra* note 140, at 25 (arguing for structural reform, including specialized district courts and multiple appellate courts).

<sup>283</sup> See BUCHANAN, *supra* note 19, at 4.

developing patent law.<sup>284</sup> It should therefore come as no surprise that Congress's recent substantive incursions have been unsuccessful in amending the patent code,<sup>285</sup> not only because of competing interest-group dynamics, but also because substantive reform has historically been the domain of courts. Congress – like the FTC or National Academies<sup>286</sup> – may be very good at reconnaissance, but translating knowledge into substantive action is a different animal.<sup>287</sup> While Congress can act with specificity and ex ante clarity, patent law demands more. As Fuller wrote:

[a] statute that reveals itself as a patent misfit for situations of fact that later come to court – situations plainly covered by the language of the statute, but obviously misunderstood or not foreseen by the draftsman – such a law certainly has no special claim to praise simply because it is clear in meaning and announced in advance.<sup>288</sup>

While reform legislation struggles to make its way through Congress, the common law has engaged in “patent reform” of its own,<sup>289</sup> rendering decisions

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<sup>284</sup> As early as 2003, Burk and Lemley wrote:

We are aware that legislatures are traditionally considered to have an institutional advantage in detailed fact-finding, that litigation is not cost free, and that appellate courts in particular are not entirely immune from problems of public choice. However, all advantages are comparative, and the question is not whether courts are the perfect policy tailors, but whether, given the evils of industry-specific statutes we have described, courts are better situated to engage in tailoring than the legislature. Courts have substantial ability to profile an industry and adapt innovation policy according to the profile, within a reasonable time frame and at reasonable cost.

Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575, 1668 (2003).

<sup>285</sup> See sources cited *supra* note 2.

<sup>286</sup> See generally FED. TRADE COMM'N, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY (2003) [hereinafter FTC, TO PROMOTE INNOVATION]; NAT'L ACADEMIES PRESS, A PATENT SYSTEM FOR THE 21ST CENTURY (2004).

<sup>287</sup> This is particularly the case as technology assumes greater complexity and more is at stake. As Ehrlich and Posner write, when “the amount and complexity of social activity increase over time, we can expect to find that legislatures, rather than expanding, will delegate more and more of the legislative function to bodies that do not produce rules through negotiation among a large number of people” such as courts and agencies. Ehrlich & Posner, *supra* note 7, at 267-68.

<sup>288</sup> Fuller, *supra* note 21, at 26.

<sup>289</sup> See Edward Lee, *Introduction: The Future of Patent Reform*, 4 I/S: J. L. & POL'Y INFO. SOC'Y 1, 4 (2008) (“[R]egardless of whether Congress enacts major reforms to the Patent Code, patent reform is already upon us.”); Paul R. Michel, Remarks at the Fed. Trade Comm'n Hearing on the Evolving IP Marketplace: Where Are We Now on Patent System Improvements and How Can We Best Make Further Progress? 6 (Dec. 5, 2008), available at <http://www.cafc.uscourts.gov/FTCspeech.pdf> (remarking that many stated problems with the patent system “have largely been solved by courts: higher standards on obviousness, less routine injunctions, higher standards for finding willfulness, more restricted eligibility for patenting under §101”).

relating to willful infringement,<sup>290</sup> declaratory judgment actions,<sup>291</sup> patents and market power,<sup>292</sup> infringement with respect to export activity,<sup>293</sup> and statutory subject matter.<sup>294</sup> In fact, the Supreme Court recently granted certiorari in *Bilski*, and is poised to weigh in on subject matter eligibility.<sup>295</sup> Moreover, the courts have asserted themselves in areas once positioned for legislative action, such as injunctive relief<sup>296</sup> and the non-obviousness doctrine.<sup>297</sup>

#### B. *The Role of Congress*

This Article asserts that from a structural, historical, and institutional perspective, the common law is better positioned to engage substantive patent reform and develop patent doctrine. This is not to suggest that Congress is without salutary influences or an important role in the patent system. The experience of the past two centuries yields important lessons. The most obvious lesson is that given the large-scale positive externality problem associated with technical dissemination, the creation of a statutory property right is necessary to enable to the internalization of the externality.<sup>298</sup> And although Congress should exercise restraint in engaging in substantive patent reform, this does not mean that its role in ongoing reform efforts is insignificant. Rather, Congress should assume a modest, yet important, role

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<sup>290</sup> See *In re Seagate Techs., LLC*, 497 F.3d 1360, 1371 (Fed. Cir. 2007) (en banc).

<sup>291</sup> See *MedImmune, Inc. v. Genentech, Inc.*, 549 U.S. 118, 121 (2007).

<sup>292</sup> See *Ill. Tool Works, Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 46 (2006).

<sup>293</sup> See *Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437, 441 (2007).

<sup>294</sup> See *In re Bilski*, 545 F.3d 943, 950 (Fed. Cir. 2008) (en banc), *cert. granted sub nom. Bilski v. Doll*, 129 S. Ct. 2735 (June 1, 2009) (No. 08-964).

<sup>295</sup> *Bilski v. Doll*, 129 S. Ct. 2735 (June 1, 2009) (No. 08-964).

<sup>296</sup> See *eBay, Inc. v. MercExchange LLC*, 547 U.S. 388, 391 (2006).

<sup>297</sup> See *KSR, Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007); FTC, TO PROMOTE INNOVATION, *supra* note 286, at 10 (recommending Congress tighten non-obviousness standard).

<sup>298</sup> See WILLIAM J. BAUMOL & WALLACE E. OATES, *THE THEORY OF ENVIRONMENTAL POLICY* 10-11 (2d ed. 1988) (discussing the positive role legislation plays when a large number of people are involved in a given situation, which gives rise to high transaction costs and barrier to voluntary contracting); Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. 347, 348, 359 (1967) (asserting the “primary function of property rights is that of guiding incentives to achieve a greater internationalization of externalities,” and further stating “[i]f a new idea is freely appropriable by all, if there exist a communal rights to new ideas, incentives for developing such ideas will be lacking”). In this light, a push toward greater substantive harmonization worldwide becomes more understandable, although there are costs associated with international uniformity. See Graeme B. Dinwoodie & Rochelle Cooper Dreyfuss, *Patenting Science: Protecting the Domain of Accessible Knowledge*, in *THE FUTURE OF THE PUBLIC DOMAIN: IDENTIFYING THE COMMONS IN INFORMATION LAW* 191, 209-18 (Lucie Guibault & P. Bernt Hugenholtz eds., 2006); Graeme B. Dinwoodie & Rochelle C. Dreyfuss, *TRIPS and the Dynamics of Intellectual Property Lawmaking*, 36 CASE W. RES. J. INT'L L. 95, 122 (2004).

confined to: (1) bringing about procedural change, whether relating to the examination process,<sup>299</sup> the harmonization of priority determinations and patent term,<sup>300</sup> term extensions pertaining to the Hatch-Waxman Act<sup>301</sup> and statutory bars,<sup>302</sup> or patent law's judicial architecture;<sup>303</sup> or (2) engaging in substantive corrective action by addressing a jurisprudence gone awry. As Hayek wrote, corrective legislation is sometimes desirable because the "development of case-law is in some respects a sort of one-way street."<sup>304</sup> The relevant inquiry, however, is how to draw the line between a jurisprudence gone awry and one that is merely enduring growing pains typically associated with, for example, a transitional period. Hayek's response is that legislative action is necessary when "the development of the law has lain in the hands of members of a particular class whose traditional views made them regard as just what could not meet the more general requirements of justice."<sup>305</sup>

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<sup>299</sup> The Patent Act of 1790 required applications to be examined. This requirement was abandoned three years later, but reimplemented in the 1836 Act. With respect to contemporary examination reform, Congress can create an opposition proceeding (and has sought to do so for the past four years) or, as it did in 1999, require the publication of certain types of applications. *See* American Inventors Protection Act of 1999, Pub. L. No. 106-113, 113 Stat. 1501A-552.

<sup>300</sup> For example, the most obvious change in this regard is for Congress to create a first-to-file system of priority, meaning that the inventor who is the first to file an application claiming a particular invention will be awarded the patent, as opposed to what is now the present procedure, where an inventor who may have invented first, but filed second, is entitled to the patent. In 1995, Congress harmonized U.S. patent laws with respect to term of protection, changing the patent term from seventeen years from issuance to twenty years from filing and added "offer to sell" and "importing" as forms of infringement. *See* 35 U.S.C. § 154 (2006).

<sup>301</sup> *See* 35 U.S.C. § 156. The Hatch-Waxman Act, formally known as the Drug Price Competition and Patent Term Restoration Act, focuses on the relationship between incentives of pioneer pharmaceutical companies and the desire for prompt market access to bio-equivalent generic alternatives. Under § 156, a patentee is entitled to obtain term extension for time lost due to regulatory approval obligations relating, for example, to FDA clinical trials.

<sup>302</sup> *See* 35 U.S.C. § 102(b); Patent Act of 1839, ch. 87, 5 Stat. 353-55 (creating a two-year grace period); Patent Act of 1939, ch. 450, 53 Stat. 1212 (reducing the grace period to one year, where it currently stands).

<sup>303</sup> Of course, Congress has the power to amend patent law's judicial architecture, including the appellate structure (i.e., creating the Federal Circuit in 1982) and district court quasi-specialization initiatives. *See* H.R. 628, 111th Cong. (2009); S. 299, 111th Cong. (2009). These bills, entitled "[Bills] to Establish a Pilot Program in Certain United States District Courts to Encourage Enhancement of Expertise in Patent Cases among District Judges," would create a pilot program to enhance district court expertise relating to patent cases.

<sup>304</sup> HAYEK, *supra* note 32, at 88 (describing role of legislation as corrective action toward judicial pronouncements).

<sup>305</sup> *Id.* at 89.

For example, the 1952 Act was a response to a Supreme Court jurisprudence perceived to embrace an anti-patent bias.<sup>306</sup> Justice Jackson, in dissent, captured this perception in the 1949 case of *Jungersen v. Ostby & Barton Co.*, when he candidly wrote, “the only patent that is valid is one which this Court has not been able to get its hands on.”<sup>307</sup> And sometimes the mere threat of congressional action will spur the Federal Circuit to address an issue that it heretofore neglected. For instance, the issue of damages calculation – in particular the EMV – was taken up by the Federal Circuit in *Microsoft v. Lucent*<sup>308</sup> in a more elaborate and reasoned manner than would have been likely absent the threat of Congressional action.<sup>309</sup>

These examples illustrate the proper place for congressional intervention. Over the past several years, the courts have altered the patent law landscape. What the courts cannot do is construct a first-to-file system, an opposition proceeding, or bring about procedural innovations in the enforcement context.

#### CONCLUSION

The common law has enjoyed a prominent role in the history and development of U.S. patent law. For more than two hundred years, the courts have navigated the contours of the patent system, adeptly constructing doctrine and interpreting elliptical statutory phrases. This adept navigation is reflected in the courts’ ability to situate a doctrine on the rule-standards continuum in a manner that balances judicial discretion, public notice, and flexibility. This accretive process is imperfect, but possesses comparative advantages to congressional intervention, which should be limited to procedural reform and corrective legislative action.

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<sup>306</sup> See *supra* notes 100-11 and accompanying text. A contemporary example may be seen in Congress’s creation of a First Inventor defense (or prior user right) for business method patents, which was a response to the Federal Circuit’s *State Street Bank* decision. See 35 U.S.C. § 273 (2006). But even here, the Federal Circuit corrected itself in *Bilski*. See *supra* notes 225-39 and accompanying text.

<sup>307</sup> *Jungersen v. Ostby & Barton Co.*, 335 U.S. 560, 572 (1949) (Jackson, J., dissenting).

<sup>308</sup> See *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1339 (Fed. Cir. 2009).

<sup>309</sup> See *supra* note 29.