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# Legal Fictions and the Role of Information in Patent Law

Craig Allen Nard

Case Western University School of Law, [craig.nard@case.edu](mailto:craig.nard@case.edu)

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# Legal Fictions and the Role of Information in Patent Law

*Craig Allen Nard\**

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## INTRODUCTION

In his 1974 Nobel Prize Lecture, Freidrich Hayek admonished us, as he did throughout so much of his work, about the limitations of our knowledge and stressed what knowledge we do have should be used “not to shape the results as the craftsman shapes his handiwork, but rather to cultivate a growth by providing the appropriate environment.”<sup>1</sup> This analogy—what Hayek referred to as the “pretense

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\* Galen J. Roush Professor of Law and Director, Spangenberg Center of Law, Technology & the Arts, Case Western Reserve University School of Law. My thanks to Sean Seymore and the *Vanderbilt Law Review*.

1. Friedrich von Hayek, *Prize Lecture: The Pretence of Knowledge* (Dec. 11 1974), [www.nobelprize.org/nobel\\_prizes/economic-sciences/laureates/1974/hayek-lecture.html](http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/1974/hayek-lecture.html) [<https://perma.cc/9SXS-P9RH>]. The full quote is:

If man is not to do more harm than good in his efforts to improve the social order, he will have to learn that in this, as in all other fields where essential complexity of an organized kind prevails, he cannot acquire the full knowledge which would make

of knowledge”—is germane to legal systems where the common law plays a prominent role. Patent law is such a field.<sup>2</sup>

Judicial stewardship of the patent space can be seen as an institutional advantage, one that compares favorably to punctuated, and potentially more distortive or inartful, congressional action.<sup>3</sup> The judge is closer to the “inside baseball” dynamic that is unique to each of the divergent interests that participate in the patent system.<sup>4</sup> Each

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mastery of the events possible. He will therefore have to use what knowledge he can achieve, not to shape the results as the craftsman shapes his handiwork, but rather to cultivate a growth by providing the appropriate environment, in the manner in which the gardener does this for his plants.

*Id.* Of course, the limitations of knowledge of a centralized source was a theme in much of Hayek’s work. *See, e.g.,* Friedrich A. Hayek, *The Use of Knowledge in Society*, in *INDIVIDUALISM AND ECONOMIC ORDER* 77, 77–78 (1949) (stating “[t]he peculiar character of the problem of a rational economic order is determined precisely by the fact that the knowledge of the circumstances of which we must make use never exists in concentrated or integrated form but solely as the dispersed bits of incomplete and frequently contradictory knowledge which all the separate individuals possess”); Andrew P. Morriss & Susan E. Dudley, *Defining What to Regulate: Silica and the Problem of Regulatory Categorizations*, 58 *ADMIN. L. REV.* 269, 281 (2006) (“Hayek’s central point was that decentralized markets focus dispersed information—information that no one individual . . . can obtain—and convey it efficiently to market participants.”).

2. *See* Craig Allen Nard, *Legal Forms and the Common Law of Patents*, 90 *B.U. L. REV.* 51, 101 (2010) (discussing the dominance of the common law in the development of patent doctrine and policy); *see also* Donald S. Chisum, *Reforming Patent Law Reform*, 4 *J. MARSHALL REV. INTELL. PROP. L.* 336, 348 (2005) (“In the 215 year history of the United States patent system, Congress has rarely purported to ‘reform’ the system. Indeed, I am not sure that it has ever done so since the 1836 Act—or even since the 1793 Act.”); Arti K. Rai, *Engaging Facts and Policy: A Multi-Institutional Approach to Patent System Reform*, 103 *COLUM. L. REV.* 1035, 1041 (2003) (“[T]he history of the patent statute as well as its language strongly suggest that Congress has delegated policymaking responsibility in patent law to the judiciary.”); *cf.* *Kimble v. Marvel Entm’t, LLC*, 135 *S. Ct.* 2401, 2413 (2015) (“By contrast with the Sherman Act, the patent laws do not turn over exceptional law-shaping authority to the courts.”). *See generally* *INTELLECTUAL PROPERTY AND THE COMMON LAW* (Shyamkrishna Balganeshe ed., 2015) (examining what the common law can contribute to the field of intellectual property).

3. For example, reflecting on Congress’s inability to pass substantive patent legislation for several years, 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.” *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).

4. *See* William M. Landes & Richard A. Posner, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW* 312 (2003) (“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.”); Richard C. Levin, Alvin K. Klevorick, Richard R. Nelson & S.G. Winter, *Appropriating the Returns from Industrial Research and Development*, 3 *BROOKINGS PAPERS ON ECON. ACTIVITY* 783 (1987); Wesley M. Cohen, Richard R. Nelson & John P. Walsh, *Protecting Their Intellectual Assets: Appropriability Conditions and Why U.S. Manufacturing Firms Patent (or Not)* (Nat’l Bureau of Econ. Research, Working Paper No. 7552, 2004) (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)); *cf.* *ECON. & STAT. ADMIN.*

interest has its own norms and customs, each is impacted by the patent system in varying ways and to varying degrees, and the common law, although imperfect,<sup>5</sup> is more likely to develop doctrine that reflects the combined legitimate expectations of all interests. Indeed, the common law “projects its roots more deeply and intimately into human interaction than does statutory law.”<sup>6</sup>

In addition, the common law allows for a certain flexibility, or a “resistance to systematization,” as Eben Moglen noted.<sup>7</sup> Despite its deep allegiance to tradition, crust forms more readily on statutory law than the common law. And one of the tools that reflects this institutional liveness is the use of legal fictions, which have been employed by judges in various areas of the law seemingly since the beginning of the common law process—even back to Roman law.<sup>8</sup> A fiction serves a variety of purposes, but its principal use is to allow the judge to construct rules and to reach holdings that perhaps, without the veil of fiction, would not be as feasible within the existing confines of stare decisis or the formalism associated with well-worn doctrine.<sup>9</sup>

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& U.S. PAT. & TRADEMARK OFF., INTELLECTUAL PROPERTY IN THE U.S. ECONOMY: INDUSTRY IN FOCUS 7–8 (2012) (identifying several industries as “patent intensive” based on the ratio of number of patents to industry-specific jobs; industries included computer and communications equipment, semiconductor, navigational, measuring, and electromedical).

5. See, e.g., Roscoe Pound, *Common Law and Legislation*, 21 HARV. L. REV. 383 (1908). Judicial power in the patent system has not always been exercised in the most judicious manner. The 1940s witnessed an anti-patent bias on the Supreme Court, and today, the same drivers that motivated Congress to repeatedly visit the patent code have spilled over to the high court and Federal Circuit Court of Appeals, who over the past several years have used their common law powers to “correct” what is perceived to be an overly pro-patent environment.

6. Lon L. Fuller, *Human Interaction and the Law*, 14 AM. J. JURIS. 1, 26 (1969). A more lighthearted way to think about the common law is to view it in the context of the comparative approaches of English and French landscaping. As Andreas Kluth wrote, the French approach is “mastery of nature . . . is a top-down notion of order,” whereas “the English way is to integrate the human into nature, to adjust to the spontaneous or ‘bottom-up’ order of nature itself.” Andreas Kluth, *French & Anglo-Saxon Ways of Thinking*, HANNIBAL AND ME: LIFE LESSONS IN HISTORY (Apr. 25, 2010), <http://andreaskluth.org/2010/04/25/french-anglo-saxon-ways-of-thinking/> [<https://perma.cc/5K6L-HZ77>] (emphasis omitted).

7. Eben Moglen, *Legal Fictions and Common Law Legal Theory: Some Historical Reflections*, 10 TEL AVIV U. STUD. L. 33, 33 (1990).

8. See Nancy J. Knauer, *Legal Fictions and Juristic Truth*, 23 ST. THOMAS L. REV. 1, 2 (2010) (noting under Roman law the “*praetor* would endorse a false procedural statement, known as a *fictio*, in order to extend a right of action beyond its intended scope”). Common examples of legal fictions include treating as invitees trespassing children who were subsequently injured. Certainly the children were not invited, but courts needed a mechanism to create a higher standard of care for children. Another example is ignorance of the law is not a defense, thus presuming the public has complete and perfect knowledge of its legal obligations. But not having this fiction, as Justice Holmes notes, “would be to encourage ignorance where the lawmaker has determined to make men know and obey . . . .” OLIVER WENDELL HOLMES, JR., *THE COMMON LAW* 48 (Boston, Little, Brown, & Co. 1881).

9. See *Jones v. Dir. of Pub. Prosecutions* [1962] AC 635, 711 (“The principle of [stare decisis] does not apply only to good decisions: if it did, it would have neither value nor

Legal fictions can be useful devices to bridge evidentiary gaps, further normative preferences, and fill in epistemic interstices that, despite the aforementioned advantages of the judge, pervade the common law. In this regard, fictions “are the product of the law’s struggles with *new* problems,”<sup>10</sup> and, while paying respect to the anchor of history, they reflect the dynamic, fluid nature of law, allowing for circumspect experimentation and a Burkean gradualism to change.<sup>11</sup> In a more colloquial sense, fictions buy time to allow for the proposed change in the law to play out in a purposeful way through the common law process. Whereas Roscoe Pound viewed fiction as “a clumsy device appropriate only [when] . . . legislation on any large scale is not possible,” it is for this very reason that the use of fiction is a desirable tool, one that can keep the encroaching legislator at bay, while allowing for testing of new waters.<sup>12</sup> (The multiyear effort leading up to the America Invents Act (“AIA”) is a good example of concerns associated with legislative responses.<sup>13</sup> But fiction is not a device that

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meaning.”); Maksymilian Del Mar, *Legal Fictions and Legal Change in the Common Law Tradition*, in LEGAL FICTIONS IN THEORY AND PRACTICE 244 (Maksymilian Del Mar & William Twining eds., 2015):

Legal change occurs through filling in gaps between rules in the way that seems most convenient or most just at the time; through twisting existing rules, or rediscovering old ones, to give the impression that a change in the law is no more than the application of the law that was already in place . . . .

For a general discussion of the history of the common law and its modern application, see Gerald J. Postema, *Classical Common Law Jurisprudence (Part I)*, 2 OXFORD U. COMMONWEALTH L.J. 155 (2002); and Gerald J. Postema, *Classical Common Law Jurisprudence (Part II)*, 3 OXFORD U. COMMONWEALTH L.J. 1 (2003).

10. LON L. FULLER, LEGAL FICTIONS 94 (1967); *see also id.* at 21–22 (“[F]ictions . . . [are] the growing pains of the language of the law.”). Knauer notes, “These patently false statements and deeming principles empower lawyers and decision-makers to resolve novel legal questions through arguments of equivalence and creative analogical reasoning.” Knauer, *supra* note 8, at 3.

11. This is something Sir Henry Maine explicitly recognized more than 150 years ago. SIR HENRY SUMNER MAINE, ANCIENT LAW 21–43 (1861) (asserting that fictions, equity, and legislation are the three means by which the law changes, although Maine was dubious about the desirability of legal fictions, particularly because of transparency concerns).

12. Del Mar, *supra* note 9, at 241 (quoting ROSCOE POUND, 3 JURISPRUDENCE 465 (1959)). As Del Mar notes, “That pragmatic incrementalism is the spirit of change in the common law is itself widely recognised in the theoretical as well as the historical literature.” *Id.* at 244.

13. For five years prior to the enactment of the America Invents Act of 2011 (“AIA”), Congress unsuccessfully sought to reform the patent statute. *See* Patent Reform Act of 2009, S. 515, 111th Cong. (2009); Patent Reform Act of 2009, H.R. 1260, 111th Cong. (2009); Patent Reform Act of 2008, S. 3600, 110th Cong. (2008); 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. 7, 2007); Patent Reform Act of 2006, S. 3818, 109th Cong. (2006); Patent Reform Act of 2005, H.R. 2795, 109th Cong. (2005); *see also* Nard, *supra* note 2, at 102–03 (discussing the role the courts played in modifying the patent law while Congress debated legislation). 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 AND MARK A. LEMLEY, THE

gives the jurist license to freelance; rather, in skilled hands, fictions can serve as powerful tools to effect change through incrementalism.<sup>14</sup>

At first blush, it may seem odd that legal fictions would find a comfortable home in patent law, given that patent jurisprudence is so closely related to technological fields steeped in empirical certainty. But this should come as no surprise; as Lon Fuller wrote, there is “scarcely a field of the law in which one does not encounter” legal fictions.<sup>15</sup> Beyond the doctrinal arcana and scientific principles, from a greater remove, patent law is like any other area of the law where the judge plays a prominent role. Yet what is interesting about patent law is its relationship with information, particularly how it seeks to regulate exclusivity of and access to technical information. Legal fictions in patent law express themselves in this context, taking the familiar forms of presumptions, deemings, and other “techniques”<sup>16</sup> to either express preferences relating to administrability of patentability requirements such as novelty and the public use doctrine, two of the public domain’s gatekeepers,<sup>17</sup> or mask normative choices pertaining to claim scope that play out along the ex ante/ex post incentive continuum. With respect to the former, patent law treats information in a manner that serves a *protective* function that shields the public domain by erecting presumptively omniscient sentries around the domain’s perimeter. Regarding the latter, information is employed to further a *disseminative* function, which not only enriches the global storehouse of technical knowledge but also limits claim scope through the doctrines of commensurability and prosecution history estoppel (“PHE”). This Article explores how legal fictions are constructed to bolster these functions.

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PATENT CRISIS AND HOW THE COURTS CAN SOLVE IT 101 (2009) (discussing this dynamic); *see also supra* note 3.

14. In this sense, the common law’s use of legal fictions seeks to avoid the pitfalls of a comparatively ill-informed legislative response, despite Bentham’s strident criticisms of the legal fictions as an invasive threat to the legislature’s domain. *See* JEREMY BENTHAM, A COMMENT ON THE COMMENTARIES AND A FRAGMENT ON GOVERNMENT 509 (J.H. Burns & H.L.A. Hart eds., 1977). As Samek writes, “The misuse of fictions is not a prerogative of the judiciary, but also taints legislation at its root. Is there a greater fiction than the pretense of the legislator that he can cure all mischiefs by an act of Parliament?” R.A. Samek, *Fictions and the Law*, 31 U. TORONTO L. J. 290, 298 (1981).

15. FULLER, *supra* note 10, at 1.

16. Moglen, *supra* note 7, at 36–38.

17. Non-obviousness can, well, obviously be added to this category, but that is a topic for another day.

## I. DEFINING LEGAL FICTION

Legal fictions were a common topic for legal scholars and philosophers from the mid-eighteenth century to the first third of the twentieth century. Scholars have long recognized the pervasiveness and functionality of legal fictions. Lon Fuller, perhaps the most well-known writer in this space, noted that “the influence of the fiction extends to every department of the jurist’s activities,”<sup>18</sup> and Blackstone appreciated them as “highly beneficial and useful.”<sup>19</sup> Pierre de Tourtoulon viewed fictions as integral to the progress of law, writing, “[I]f one would try to strip the Law of every fiction of the past as well as of the present, not much would be left.”<sup>20</sup> But early opinions on legal fictions in the law varied. While applauding their utility, Blackstone did not appreciate using the legal fiction as a method to get to the correct result,<sup>21</sup> and the founder of utilitarianism, Jeremy Bentham, famously disdained legal fictions,<sup>22</sup> writing that they

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18. Lon L. Fuller, *Legal Fictions*, 25 ILL. L. REV. 363, 363 (1930).

19. 3 WILLIAM BLACKSTONE, COMMENTARIES \*43. Blackstone discussed a number of legal fictions in his *Commentaries*. For example, common recovery was based on a legal fiction that was recognized as having the utility of allowing a landowner to transfer fee simple interest in his law. This was designed to get around England’s *de donis conditionalibus* statute, which vested only a fee tail in landowners in order to prevent a man from divesting his heirs of the right to inherit his land. The common recovery action operated a suit against a fictitious person in order to award land title. See 2 WILLIAM BLACKSTONE, COMMENTARIES \*357–60. Blackstone understood the utility of certain legal fictions. For example, he described a legal fiction used to support jurisdiction before the King’s Bench or Queen’s Bench as “startl[ing]” yet “highly beneficial and useful.” 3 WILLIAM BLACKSTONE, COMMENTARIES \*43 (“And these fictions of law, though at first they may startle the student, he will find upon further consideration to be highly beneficial and useful . . .”).

20. PIERRE DE TOURTOULON, PHILOSOPHY IN THE DEVELOPMENT OF THE LAW 388 (Martha McC. Read trans., 1922).

21. In discussing the legal fictions necessary in common recovery actions, Blackstone opined that “while we applaud the end, we cannot but admire the means” of such fictions. 2 WILLIAM BLACKSTONE, COMMENTARIES \*360.

22. 1 JEREMY BENTHAM, *A Fragment on Government; or a Comment on the Commentaries*, in THE WORKS OF JEREMY BENTHAM 221, 235 (John Bowring ed., 1962). In his critique of Blackstone’s *Commentaries*, Bentham condemns Blackstone’s disdain for legislative attempts to make the law accessible to citizens without legal training. Bentham’s principal argument is that the legislature did not do enough because legal fictions remain in the law. For more on Bentham’s as well as Vaihiger’s view of legal fiction, see Samek, *supra* note 14, at 292–304.

Bentham was hardly alone in his dislike of fictions, the principal criticisms being grounded in lack of transparency and candor, as well as an intrusion on the legislative function. See PIERRE J.J. OLIVIER, LEGAL FICTIONS IN PRACTICE AND LEGAL SCIENCE 151 (1975):

Whenever a judge finds it necessary to create a new fiction, it indicates that the major premise he is applying is wrong . . . [and] [a]s far as the adoption by judges of historical fictions is concerned, the judge is obliged to adopt the rule forming part of the common law, but should reject its fictional form or fictional basis;

3 ROSCOE POUND, JURISPRUDENCE 465 (1959) (referring to fiction as “a clumsy device appropriate only to periods of growth in a partially developed political organization of society in which

“poison the sense of every instrument [they] come near” with their “pestilential breath.”<sup>23</sup>

Familiar legal doctrines grounded in legal fictions include the common criminal law maxim that ignorance of the law is no excuse. This maxim is based on the legal fiction that all persons know the law.<sup>24</sup> The attractive nuisance doctrine asserts the fiction that a property owner is considered to have invited a child onto his property, even if he is unaware of the child’s presence.<sup>25</sup> Corporate personhood is another well-worn fiction, which has actually been codified.<sup>26</sup> Yet another is the presumption that a man intends to cause the natural and probable consequences of his acts.<sup>27</sup> Modern legal fictions, or what Peter Smith identifies as “new” fictions,<sup>28</sup> include limiting instructions for jurors (e.g., disregard inadmissible evidence) and the reliability of eyewitness testimony.<sup>29</sup>

Traditionally, there were two reasons to employ legal fictions: (1) “[t]o cure deficiencies in the law of procedure”; and (2) “[t]o conceal the fact that judges, by their decisions, are making or changing the substantive law.”<sup>30</sup> Under the second reason, legal fictions allow judges to enlarge or to alter the law while maintaining the appearance that the law is left intact.<sup>31</sup> Such legal fictions are recognized as “either (1) a statement propounded with a complete or partial

legislation on any large scale is not possible”); Jeremiah Smith, *Surviving Fictions*, 27 YALE L.J. 147, 153 (1917) (stating fictions “retard the framing of a statement of the rule in strictly accurate terms”).

23. BENTHAM, *supra* note 22, at 235.

24. Jeremiah Smith, *Surviving Fictions II*, 27 YALE L.J. 317, 317 (1918).

25. Fuller, *supra* note 18, at 372.

26. *See, e.g.*, 1 U.S.C. § 1 (2012) (“In determining the meaning of any Act of Congress, unless the context indicates otherwise . . . the words ‘person’ and ‘whoever’ include corporations, companies, associations, firms, partnerships, societies, and joint stock companies, as well as individuals . . .”). Beyond 1 U.S.C. § 1, courts have found Congress’s use of the word “person” includes more than only natural people. For example, in interpreting who qualifies as a foreign state for immunities purposes, the Seventh Circuit stated:

[I]f it was a natural person Congress intended to refer to, it is hard to see why the phrase “separate legal person” would be used, having as it does the ring of the familiar legal concept that corporations are persons, which are subject to suit. Given that the phrase “corporate or otherwise” follows on the heels of “separate legal person,” we are convinced that the latter phrase refers to a legal fiction—a business entity which is a legal person.

Enahoro v. Abubakar, 408 F.3d 877, 881 (7th Cir. 2005). But at least one early scholar argued that corporate personhood is not a legal fiction as evidenced by the original definition of “person.” Fuller, *supra* note 18, at 377.

27. Smith, *supra* note 22, at 156.

28. Peter J. Smith, *New Legal Fictions*, 95 GEO. L.J. 1435, 1437 (2007).

29. *Id.* at 1452–55.

30. Smith, *supra* note 22, at 147.

31. *Id.* at 150.

consciousness of its falsity, or (2) a false statement recognized as having utility.”<sup>32</sup>

Another view is provided by Maksymilian Del Mar, who views legal fictions as vehicles to impose normative consequences by suspending an operative fact either “because (1) the absence of proof of some required fact; or (2) the presence of proof to the contrary.”<sup>33</sup> Del Mar distinguishes legal fictions from presumptions, asserting that the latter “take a stance on the likelihood of an operative fact being present.”<sup>34</sup> But Moglen identifies the use of *presumptions* as “techniques” of fiction<sup>35</sup> that serve as “device[s] by which the counterfactual is declared.”<sup>36</sup> In this regard, presumptions and other techniques such as “deeming”<sup>37</sup> are fiction-implementing tools that set the stage for common law experimentation and, ultimately, rulemaking. As Del Mar writes, fictions are “instrument[s] via which, incrementally, the law gropes its way towards a principle.”<sup>38</sup>

This incremental approach reveals why fictions are a useful tool in the common law process. Fictions provide a means of experimentation, a doctrinal trial balloon that may or may not lead to a more established principle of law. Thus, employing fiction and its techniques allows for a circumspect approach to change, one that is not too disruptive yet conspicuous enough to rattle the cages of formalism.<sup>39</sup> As Allan Hutchinson wrote, the key question for the common law process is, “How is it possible to balance stability and continuity against flexibility and change such that it results in a state

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32. Fuller, *supra* note 18, at 369.

33. Del Mar, *supra* note 9, at 226. Fuller notes that while fictions concede a falsehood, “a presumption assumes something that may possibly be true.” FULLER, *supra* note 10, at 40; *see also* Raymundo Gama, *Presumptions and Fictions: A Collingwoodian Approach*, in LEGAL FICTIONS IN THEORY AND PRACTICE 347, 348–58 (Maksymilian Del Mar & William Twining eds., 2015) (distinguishing between fiction and presumption).

34. Del Mar, *supra* note 9, at 226.

35. Moglen, *supra* note 7, at 37.

36. *Id.* at 36.

37. Moglen also cites “assertion” and “deeming” as additional techniques. *Id.* at 36, 38.

38. Del Mar, *supra* note 9, at 235; *see also* Peter Birks, *Fictions Ancient and Modern*, in THE LEGAL MIND: ESSAYS FOR TONY HONORÉ 83–101 (Neil MacCormick & Peter Birks eds., 1986) (describing an approach to “fictionalisation” which recognizes the ambiguous character of situations that have the same normative consequences).

39. As Pound wrote, legal fictions are “the solvent of formalism.” POUND, *supra* note 22, at 461. Several areas of the law have reportedly benefited from experimentation. *See, e.g.*, Mark C. Weber, *Complex Litigation and the State Courts: Constitutional and Practical Advantages of the State Forum Over the Federal Forum in Mass Tort Cases*, 21 HASTINGS CONST. L.Q. 215, 229 (1994) (“Tort law is a field in which the experimentation has been particularly fruitful.”). For a justification of legal fiction from the perspective of pragmatism, *see* Douglas Lind, *The Pragmatic Value of Legal Fictions*, in LEGAL FICTIONS IN THEORY AND PRACTICE 83 (Maksymilian Del Mar & William Twining eds., 2015).

of affairs that is neither only a case of stunted development nor a case of ‘anything goes?’<sup>40</sup>

## II. LEGAL FICTION AND PATENT LAW’S APPROACH TO INFORMATION

Patent law’s relationship with information is complex and nuanced. Operating underneath the well-known narrative that patent law is designed to incentivize inventors to cajole Mother Nature to reveal her secrets for the benefit of society is a modulated incentive-based dynamic that seeks to promote invention while also guarding the public domain. In this regard, patent law’s treatment of information, which is at the heart of this dynamic, serves two functions: (1) *protective* and (2) *disseminative*. The former function relates to protecting the public domain by demanding the claimed invention be both novel and not in public use for a prolonged period of time.<sup>41</sup> The latter function both enriches the global storehouse of technical knowledge and, by deploying the doctrines of commensurability and PHE, fuels improvement activity by limiting claim scope.

The policies driving and underlying these doctrines are supported, in large part, by the construction and use of legal fictions. Indeed, legal fiction is the scaffolding upon which these requirements are built, assuming the form of hypothetical artisans, legal presumptions,<sup>42</sup> and deemings as a means to address institutional ignorance, bridge evidentiary gaps, and further normative preferences. What follows is a discussion of these functions, beginning with the protective function.

### *A. The Protective Function: Guarding the Public Domain*

#### 1. Novelty

Prior to the AIA, § 102(a) of the patent code stated a “person is entitled to patent unless the invention was known or used by others in this country.”<sup>43</sup> This statutory section embodies patent law’s novelty

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40. ALLAN C. HUTCHINSON, *EVOLUTION AND THE COMMON LAW* 10 (2005).

41. Of course, other patentability requirements such as non-obviousness and eligibility are consistent with the protective function, but for reasons set forth below, novelty and public use strike me as particularly good examples of legal fiction at play in patent law.

42. For more on the use of presumptions in patent law, see Timothy R. Holbrook, *Patents, Presumptions, and Public Notice*, 86 *IND. L.J.* 779, 808–25 (2011).

43. 35 U.S.C. § 102(a) (2000) (current version at 35 U.S.C. § 102(a) (2012)). Section 102 was amended by the AIA, effective March 16, 2013. Therefore, the pre-AIA § 102 will remain relevant and applicable to all patent applications filed before this date. The AIA did away with the

requirement, one of the most basic, and arguably intuitive, requirements for patentability. The first Patent Statute, enacted in 1790,<sup>44</sup> required that the invention not be “known or used.”<sup>45</sup> These words have been interpreted—although not consistently—in a manner that can be characterized as an aggressive posture toward protecting the public domain. Patent law’s reverence for the public domain is pronounced, and the public domain is protected by a legal fiction—namely, a hypothetical person<sup>46</sup> having ordinary skill in the art (“PHOSITA”) who is presumed or deemed to possess near complete and perfect knowledge of the prior art.<sup>47</sup> As the United States Court of Appeals for the Federal Circuit notes, “The person of ordinary skill is a hypothetical person who is presumed to be aware of all the pertinent prior art.”<sup>48</sup>

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“known or used” language and replaced it with “a person shall be entitled to a patent unless the claimed invention was . . . otherwise known to the public.” There has been no case law on this statutory provision as of this writing.

44. Patent Act of 1790, ch. 7, § 1, 1 Stat. 109 stated, in relevant part:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That upon the petition of any person or persons to the Secretary of State, the Secretary for the department of war, and the Attorney General of the United States, setting forth, that he, she, or they, hath or have invented or discovered any useful art, manufacture, engine, machine, or device, or any improvement therein *not before known or used*, and praying that a patent may be granted therefor . . . .

(Emphasis added).

45. These words had statutory staying power for over 220 years. In 2011, Congress amended the novelty provision of the patent code to read: “A person shall be entitled to a patent unless—(1) the claimed invention was . . . otherwise available to the public . . . .” The words “known or used” no longer appear in § 102, but it remains unclear if the judicial interpretation of “known or used” will serve as precedent for the new statutory language.

46. See *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998) (referring to the PHOSITA as a “legal construct . . . akin to the ‘reasonable person’ used as a reference in negligence determinations. The legal construct also presumes that all prior art references in the field of the invention are available to this hypothetical skilled artisan.”).

47. See *Kimberly-Clark Corp. v. Johnson & Johnson*, 745 F.2d 1437, 1454 (Fed. Cir. 1984) (“It should be clear that that hypothetical person is not the inventor, but an imaginary being possessing ‘ordinary skill in the art’ created by Congress to provide a *standard of patentability* . . . .”); *Cont’l Can Co. v. Crown Cork & Seal Co.*, 415 F.2d 601, 603 (3d Cir. 1969) (stating a person of ordinary skill in the art is “chargeable with comprehensive knowledge of” the prior art). In the non-obviousness context, the presumption of knowledge is cabined to “analogous art.” The underlying policy is that once the universe of prior art moves beyond information that directly reads on the invention, it becomes more difficult for inventors searching to fully appreciate the full scope of the prior art. The analogous arts doctrine eases the burden and more accurately reflects reality. See *In re Wood*, 599 F.2d 1032, 1036 (C.C.P.A. 1979) (“[W]e attempt to more closely approximate the reality of the circumstances surrounding the making of an invention by only presuming knowledge by the inventor of prior art in the field of his endeavor and in analogous arts.”).

48. *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986); see Daralyn J. Durie & Mark A. Lemley, *A Realistic Approach to the Obviousness of Inventions*, 50 WM. & MARY L. REV. 989, 991–92, 1017 (2008) (arguing that the focus should be

While our fictitious artisan is omniscient,<sup>49</sup> the knowledge and use of which he is presumed to be aware must be “publicly accessible.” That is, the language “known or used” has a publicity requirement, because patent law purportedly does not permit private knowledge to defeat patent rights.<sup>50</sup> Herein resides our second fiction relating to the novelty requirement—namely, publicity really means an absence of secrecy. This fiction is best illustrated by the facts and holdings in *Rosaire v. Baroid Sales Division*<sup>51</sup> and *Gayler v. Wilder*.<sup>52</sup>

In *Rosaire*, Rosaire and Horvitz held patents on methods of prospecting for oil or other hydrocarbons. Horvitz assigned his patent rights to Rosaire, who in turn sued Baroid for patent infringement of the method patents. Baroid claimed that the Rosaire patents were invalid because the claimed methods were “carried on by one Teplitz for the Gulf Oil Corporation” before Rosaire’s 1936 date of invention.

Rosaire conceded that Teplitz’s work “was done before Rosaire and Horvitz conceived of the [patented] inventions” but asserted that neither Teplitz nor Gulf gave the “public the benefit of” their work. In other words, the public did not know of Teplitz’s prior invention because, after some experimentation, Gulf discontinued work on the project. Implicit in this argument is that it was Rosaire and Horvitz, not Teplitz and Gulf, who benefited the public in a manner consistent with the utilitarian policy objectives of patent law. Accordingly, argued Rosaire, Teplitz’s work, while prior in time, should not be considered invalidating prior art. The court was not persuaded:

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on what the PHOSITA actually knows instead of what he or she “might believe in a hypothetical, counterfactual world”); see also *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 454 (Fed. Cir. 1985) (noting the hypothetical artisan is “presumed to be aware of all the pertinent prior art”). For reasons why PHOSITA is created, see Jonathan J. Darrow, *The Neglected Dimension of Patent Law’s PHOSITA Standard*, 23 HARV. J.L. & TECH, 227, 235 (2009) (“Although unrealistic, this presumption helps to avoid difficult issues of proof related to the inventor’s actual knowledge and prevents obvious variations of publicly disclosed inventions from being captured through subsequent patent grants.”).

49. See *In re Nalbandian*, 661 F.2d 1214, 1216 (C.C.P.A. 1981) (identifying the PHOSITA as a “fictitious person”).

50. See *Minn. Min. & Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1300 (Fed. Cir. 2002) (“For prior art to anticipate under 35 U.S.C. § 102(a) because it is ‘known,’ the knowledge must be publicly accessible . . . For prior art to anticipate because it has been ‘used,’ the use must be accessible to the public.”); *Woodland Tr. v. Flowertree Nursery, Inc.*, 148 F.3d 1368, 1370 (Fed. Cir. 1998) (“[T]o invalidate a patent based on prior knowledge or use, that knowledge or use must have been available to the public.”). This interpretation preceded the 1952 Patent Act. 35 U.S.C. § 102(a) reviser’s note (1952) (noting that “ ‘known’ has been held to mean ‘publicly known’ ” and that “no change in the language is made at this time”); P.J. Federico, *Commentary on the New Patent Act*, 35 U.S.C.A. § 1 (1954), reprinted in 75 J. PAT. & TRADEMARK OFF. SOC’Y 161, 178 (1993) (“ [I]nterpretation [of § 102(a)] by the courts excludes various kinds of private knowledge not known to the public,’ and the narrowing interpretations are not changed.”).

51. 218 F.2d 72 (5th Cir. 1955).

52. 51 U.S. (10 How.) 477 (1851).

With respect to the argument advanced by [Rosaire] that the lack of publication of Teplitz's work deprived an alleged infringer of the defense of prior use, we find no case which constrains us to hold that where such work was done openly and in the ordinary course of the activities of the employer, a large producing company in the oil industry, the statute is to be so modified by construction as to require some affirmative act to bring the work to the attention of the public at large.<sup>53</sup>

The court acknowledged this position is seemingly inconsistent with patent law's policy of "enrich[ing] the art and the encourage[ment] of disclosure," but nonetheless pointed out there is no requirement to make knowledge public before such knowledge can be deemed prior art.

The patentee fared better in *Gayler v. Wilder*, but only because of a faulty memory. The inventor, Fitzgerald, developed and secured a patent on a fireproof safe. During litigation, it was asserted that Connor invented a similar safe several years before Fitzgerald's invention date. Nonetheless, the Court treated Fitzgerald as the "first and true" inventor because Connor's safe "had passed away from the memory of Connor . . . and those who had seen it."<sup>54</sup> The Court placed a great deal of emphasis on the public benefit resulting from Fitzgerald's disclosure; it is Fitzgerald "that brings it to [the public]" wrote the Court.<sup>55</sup> Contrary to the patented methods in *Rosaire*, the fireproof safe invention—prior to Fitzgerald's independent efforts—was "completely lost as if it had never been discovered."<sup>56</sup> Nonetheless, from a prior art knowledge and accessibility perspective, the Court explicitly noted if Connor's "safe and its mode of construction were still in the memory of Connor," Fitzgerald's patent would be invalidated.<sup>57</sup> This would be true even if Connor abandoned the safe and did not "try the value of his safe by proper tests" or "bring it to public use."<sup>58</sup>

The legal fiction of presumptive knowledge in both cases works to further two policy objectives: protecting the public domain and administrability. With respect to the former, the Court assumed a purist, arguably overly aggressive,<sup>59</sup> approach to novelty. But, one can ask, is serving this approach inconsistent with other policy

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53. *Rosaire*, 218 F.2d at 74–75.

54. *Gayler*, 51 U.S. (10 How.) at 498.

55. *Id.* at 497.

56. *Id.*

57. *Id.* at 498.

58. *Id.*

59 See, e.g., ROBERT P. MERGES, JUSTIFYING INTELLECTUAL PROPERTY 143 (2011) (stating that novelty rules relating to protecting the public domain "are so solicitous of preserving access to the prior art that they can seem almost absurd. There is no inquiry into the practical accessibility of the prior art; once it is public, even marginally, and only in one obscure place or one obscure form, the game is over — no patent. Period.")

objectives—namely, a technical disclosure that inventors such as Rosaire, Horvitz, and Fitzgerald confer on the public? Comparatively, these three individuals have contributed more to the public storehouse of knowledge, which may lead to improvement activity. From a practical standpoint, the work of Teplitz and Connor (assuming Connor remembered his safe) was inaccessible to anyone other than Teplitz and Connor. In this regard, the public is defined very narrowly. The second policy consideration, the ease and efficiency of administration, is arguably more persuasive. If Teplitz and Connor are not the “public,” then who is? How many people need to have access to the claimed invention before novelty’s publicity requirement is triggered? A reasonable number of people?

## 2. Public Use

The public use doctrine precludes an inventor from obtaining a patent if his claimed invention was in public use more than one year prior to his filing a patent application.<sup>60</sup> This doctrine forms part of the statutory bar framework of patent law, which operates independently from the novelty provisions, and thus attaches and can defeat patent rights even if an inventor satisfies the novelty requirement.

The idea than an inventor (or third party) can engage in activity that defeats his patent rights dates back to the late eighteenth century.<sup>61</sup> In the historically significant case of *Pennock v. Dialogue*,<sup>62</sup> Justice Story provided a rationale for public use and other statutory bars. Justice Story expressed a consequentialist view of the patent system, one designed primarily to promote the public good. This goal could be furthered by disclosing to the public innovations “at as early

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60. 35 U.S.C. § 102(b) (2006). The AIA retained the “public use” doctrine in § 102(a)(1), which states: “A person shall be entitled to a patent unless the claimed invention was . . . in public use . . . before the effective filing date . . .” 35 U.S.C. § 102(a)(1) (2012). Section 102(b)(1) sets forth “exceptions” to this rule, the most important of which is the grace period of one year that existed in the pre-AIA § 102. 35 U.S.C. § 102(b)(1) (2012). For example, an inventor who publicly uses his invention before the effective filing date may still obtain a patent in the United States if the inventor files for a patent within one year from the public use event. *Id.* It is generally understood, although not certain, that the pre-AIA interpretation of “public use” will carry over to the new statute. *See Safeco Ins. Co. v. Burr*, 551 U.S. 47, 48 (2007) (“[A] common law term in a statute comes with a common law meaning, absent anything pointing another way.”); *see also Microsoft Corp. v. i4i Ltd. P’ship*, 564 U.S. 91, 101 (2011) (“[W]here Congress uses a common law term in a statute, we assume the ‘term . . . comes with a common law meaning, absent anything pointing another way.’”).

61. Under § 1 of the Patent Act of 1793, an inventor was entitled to a patent if, among other things, his invention was not in use before the date of application. Patent Act of 1793, ch. 11, § 1, 1 Stat. 318, 318–19.

62. 27 U.S. (2 Pet.) 1 (1829).

a period as possible; having a due regard to the rights of the inventor.”<sup>63</sup> With this premise, Justice Story stressed that an inventor should not be “permitted to hold back from the knowledge of the public the secrets of his invention” while also commercially exploiting his invention.<sup>64</sup> Promoting early disclosure, preventing the removal of inventions from the public that the public has justifiably come to expect are freely available, and preventing the inventor from commercially exploiting the exclusivity of his invention beyond the statutory term are policies underlying statutory bars.

The key interpretive question is what Congress meant by “public.” In the famous nineteenth-century case of *Egbert v. Lippmann*,<sup>65</sup> the Supreme Court assumed a minimalist approach to “public.” In this case, Barnes’s close friend (and future wife), Francis, complained that her corset-steels would frequently break. In 1855, Barnes took it upon himself to make a pair of steels that were more durable, and presented them to her to try. Francis wore the steels, and other pairs made by Barnes, for several years. Barnes applied for a patent in 1866, eleven years after Francis first wore the steels made by Barnes. The question before the Court was whether Francis’s wearing of the corset-steels (under a garment) for several years constituted a “public use,” and thereby barred Barnes from obtaining patent protection. The Court answered in the affirmative.

According to the Court, “to constitute the public use of an invention it is not necessary that more than one of the patented articles should be publicly used.”<sup>66</sup> Moreover, “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.”<sup>67</sup> Indeed, if an inventor gives or sells his invention to another for use, without the expectation of confidentiality, “and it is so used, such use is public, even though the use and knowledge of the use may be confined to one person.”<sup>68</sup> In

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63. *Id.* at 19.

64. *Id.* at 2. Justice Story continued:

[I]f he should for a long period of years retain the monopoly, and make, and sell his invention publicly, and thus gather the whole profits of it, relying upon his superior skill and knowledge of the structure; and then, and then only, when the danger of competition should force him to secure the exclusive right, he should be allowed to take out a patent, and thus exclude the public from any farther use than what should be derived under it during his fourteen years; it would materially retard the progress of science and the useful arts, and give a premium to those who should be least prompt to communicate their discoveries.

*Id.* at 19.

65. 104 U.S. 333 (1881).

66. *Id.* at 336.

67. *Id.*

68. *Id.*

other words, Francis is the “public.” But it is odd to think of one person as the “public”; the word public denotes the broader community or certainly several people. As the dissent in *Egbert* wrote,

If the little steel spring inserted in a single pair of corsets, and used by only one woman, covered by her outer-clothing, and in a position always withheld from public observation, is a public use of that piece of steel, I am at a loss to know the line between a private and a public use.<sup>69</sup>

The rule of *Egbert* that one person other than the inventor is the “public” can be characterized as a *deeming*. This principle has a stipulative quality and is perhaps somewhat arbitrary. One can argue, as the dissent did, that the public must include more than Francis, but this leads us into a more pronounced arbitrariness. How many people beyond one person before we move from private to public? Five people? Ten? A reasonable amount of people? Here we see that the technique of *deeming*, a form of legal fiction, resides in its ease of administrability and enhanced certainty.

### *B. Disseminative Function: Keeping Claim Scope on a Leash*

The disseminative function is traditionally viewed as serving to enrich the storehouse of technical knowledge to be used by competitors and others to improve upon the claimed invention. This function is the domain of the enablement requirement. But the disseminative function also has a complementary, yet restrictive, role to play, one that limits claim scope and provides running room for competitors. Enablement plays an important part here, too, through the *commensurability* principle and the doctrine of *prosecution history estoppel* (“PHE”). Legal fiction plays an integral role in both commensurability and PHE, supporting the cabining force these principles have on the patentee’s claim scope.

#### 1. Enablement as Ignition and Constraint

Lecturing to his economics class in 1948, almost twenty years after the publication of his monumental work *A History of Mechanical Inventions*, Abbott Payson Usher remarked that the “inventor lives in the company of a great company of men, both dead and living.”<sup>70</sup> Usher was referring to the debt current innovators owe to those who came prior in time, those who shared with their successors triumphs, failures, and mundanities. The cumulative and simultaneous nature

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69. *Id.* at 339.

70. See Arthur P. Molella, *The Longue Durée of Abbott Payson Usher*, 46 *TECH. & CULTURE* 779, 789 (2005) (quoting from lecture notes taken by one of Usher’s students in 1948).

of invention is well documented, and the patent doctrine that best exemplifies this collective enterprise is enablement.

The enablement doctrine facilitates information dissemination. Technical information disclosed in the patent has potential immediate value to follow-on researchers interested in improving the patented invention or to the public by contributing to the general storehouse of technical knowledge.<sup>71</sup> In the realm of intangible assets, the written word is the predominant disseminative device. This view of enablement was embraced by the House of Lords in *Kirin-Amgen, Inc. v. Hoechst Marion Roussel Ltd.*, wherein Lord Hoffmann wrote:

[D]isclosure is not only to enable other people to perform the invention after the patent has expired. If that were all, the inventor might as well be allowed to keep it secret during the life of the patent. It is also to enable anyone to make immediate use of the information for any purpose which does not infringe the claims. The specifications of valid and subsisting patents are an important source of information for further research, as is abundantly shown by a reading of the sources cited in the specification for the patent in suit.<sup>72</sup>

Enablement also has a restrictive role that functions to keep claim scope on a leash by requiring the inventor's disclosure to enable subject matter commensurate with the scope of the claims. In other words, to satisfy the principle of commensurability, claim scope must be less than or equal to the scope of the enablement, which means that the disclosure must enable a person having ordinary skill in the art to make and use the claimed invention without "undue experimentation."<sup>73</sup> A patentee cannot claim more than he discloses.

On the one hand, commensurability is a straightforward application of patent law's *quid pro quo*. It simply asks whether the inventor has taught (disclosed) what he seeks to claim, but by focusing solely on the relationship between the disclosure and the claim, commensurability purposely assumes a parochial approach to teaching. It ignores the spurring aspects of the disclosure vis-à-vis competitors. It may be that while commensurability tethers the claims to the patent's disclosure, the written description of the invention may

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71. For more on the teaching and disseminative function of patent law's disclosure requirements, including noteworthy critiques, see Sean B. Seymore, *Making Patents Useful*, 98 MINN. L. REV. 1046 (2014); Sean B. Seymore, *The Teaching Function of Patents*, 85 NOTRE DAME L. REV. 621 (2010).

72. *Kirin-Amgen, Inc. v. Hoechst Marion Roussel Ltd.* [2004] UKHL 46, [2005] 1 All ER 667 (HL) (appeal taken from Eng.). On the importance of access to and dissemination of information for technological innovation, see WILLIAM J. BAUMOL, *THE FREE-MARKET INNOVATION MACHINE: ANALYZING THE GROWTH MIRACLE OF CAPITALISM* 73–92 (2002); and JOEL MOKYR, *THE GIFTS OF ATHENA: HISTORICAL ORIGINS OF THE KNOWLEDGE ECONOMY* 28–77 (2002). For a discussion on the gradual nature of innovation, see GEORGE BASALLA, *THE EVOLUTION OF TECHNOLOGY* (1988).

73. *See In re Wands*, 858 F.2d 731, 733 (Fed. Cir. 1988).

also trigger an improvement or modification in a competitor's mind, one that commensurability seeks to keep out of the reach of the inventor.

This is not to suggest that commensurability is a misguided principle, but only to note that implicit in the doctrine is a presumption that the inventor has not enriched the art to the point where a property right should obtain, even though the inventor may have engaged in self-induced competition thereby empowering competitors.<sup>74</sup> Why make this implicit presumption? The legal fiction serves three goals. First, similar to our discussion of novelty and public use, it furthers an ease of administration. It is less difficult to discern claim scope by matching the text of the disclosure with that of the claims without having to engage in a thought experiment relating to other doors the inventor may have opened for improvers and competitors. Second, the implicit presumption (the fiction) paves the way for a moral determination: an inventor should not be given a property right on that which he did not invent. Period. From this perspective, it is of little moment that the inventor unlocked a technical feature or insight that heretofore has eluded the improver. And third, commensurability allows for enough space for follow-on improvers to build upon the claimed invention without fear of infringement.

All three of these considerations were on display in the well-known case of *O'Reilly v. Morse*.<sup>75</sup> Samuel Morse's patent related to telegraphy. The patent had eight claims, the first seven of which were uncontroversial, describing the instruments of operation of the telegraph as well as the famous Code. But claim eight was of a different character:

I do not propose to limit myself to the specific machinery, or parts of machinery, described in the foregoing specification and [previous seven] claims; the essence of my invention being the use of the motive power of the electric or galvanic current, which I call electromagnetism, however developed, for making or printing intelligible characters, letters, or signs, at any distances, being a new application of that power, of which I claim to be the first inventor or discoverer.<sup>76</sup>

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74. This may help explain the common practice in licensing transactions for the licensee to request (demand) an "enabling package," which includes access to the inventor, know-how, and other forms of tacit knowledge not included in the specification. This practice is consistent with what Jeanne Fromer found regarding the sufficiency of patent disclosures generally. According to Fromer, "Notwithstanding the primacy of the patent document as a publicly available repository of information about a patented invention, a good deal of evidence suggests that technologists do not find that it contains pertinent information for their research." Jeanne C. Fromer, *Patent Disclosure*, 94 IOWA L. REV. 539, 560 (2009).

75. 56 U.S. (1 How.) 62 (1854).

76. *Id.* at 62.

The majority, in an opinion written by Chief Justice Roger Taney, invalidated Morse's claim eight as overbroad, based on Morse's failure to comply with the commensurability requirement.<sup>77</sup> For the majority, Morse sought to claim "an exclusive right to use a manner and process which he has not described and indeed had not invented."<sup>78</sup> This short statement reflects both the administrability and moral points. This doctrinal application of commensurability also promoted the policy of providing follow-on improvers with room to maneuver or freedom to operate. As Justice Taney wrote,

If this claim [claim 8] can be maintained, it matters not by what process or machinery the result is accomplished. For aught that we now know some future inventor, in the onward march of science, may discover a mode of writing or printing at a distance by means of the electric or galvanic current, without using any part of the process or combination set forth in the [Morse's] specification [claims 1-7]. His invention may be less complicated—less expensive in construction, and in its operation. But yet if it is covered by this patent the inventor could not use it, nor the public have the benefit of it without permission from this patentee.<sup>79</sup>

Claims one through seven and the description of the subject matter of these claims did satisfy the commensurability requirement but were of narrower scope. Claim eight reflected Morse's ambition and his self-awareness that claims one through seven merely scratched the surface of telegraphy. Morse wanted broader protection against the inevitable competition. And he found a supporter in Justice Grier, who wrote the dissent. Justice Grier did not directly address Justice Taney's reliance on commensurability, as that would be unavailing. Rather, Justice Grier focused on Morse's "most wonderful and astonishing invention," one that required "tenfold more ingenuity and patient experience to perfect it, than the art of printing with types and press."<sup>80</sup> For Justice Grier, Morse had delivered something significant to the public, while others such as Steinheil, Cook, Wheatstone, and Davy did not. It is this contribution on which the Court should have based its decision, in addition to the words of the patent. Focusing exclusively on the text of the patent would be an invitation for imitators and others less worthy than Morse. According to Justice Grier,

If it be the use of the words "however developed" that the claims is to be adjudged too broad, then it follows that a person using any other process for the purpose of developing

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77. Regarding claims 1 through 7, Chief Justice Taney wrote, "We perceive no well-founded objection to the description which is given of the whole invention and its separate parts, nor to his right to a patent for the first seven inventions set forth in the specification of the claims. The difficulty arises on the eighth." *Id.* at 112.

78. *Id.* at 113.

79. *Id.*

80. *Id.* at 134 (Grier, J., concurring).

the agent or element of electro-magnetism, than the common one now in use, and described in the patent, may pirate the whole art patented.<sup>81</sup>

Justice Grier saw an artificiality—a fiction—in the commensurability requirement, one that neglects the facts on the ground: the contribution that Morse made to society. Rather than battle Justice Taney on doctrine, Justice Grier adduced his own moral argument of just deserts. The problem for Justice Grier was that Justice Taney would argue Morse did indeed get what he deserved.

The *Morse* case also highlights a broader policy issue in patent law: the determination of optimal claim scope—a very difficult endeavor. An important part of this determination—namely, where the patentee’s claim scope resides on the narrow–broad continuum—relates to how much improvement activity patentees such as Morse should be able to capture vis-à-vis follow-on improvers. Justice Taney and Justice Grier provide competing perspectives on optimal claim scope. Justice Taney’s approach provides follow-on improvers with more freedom to operate (emphasis on ex post incentives), whereas Justice Grier places more emphasis on ex ante incentives. The economist Suzanne Scotchmer captures this balancing act:

When innovation is cumulative, the most important benefit of the innovation may be the boost it gives to later innovators. The boost can take at least three forms. If the next innovation could not be invented without the first, then the social value of the first innovation includes at least part of the incremental social value provided by the second. If the first innovation merely reduces the cost of achieving the second, then the cost reduction is part of the social value provided by the first. And if the first innovation accelerates development of the second, then the social value includes the value of getting the second innovation sooner. *The problem introduced for incentive mechanisms is how to make sure that earlier innovators are compensated for their contributions, while ensuring that later innovators also have an incentive to invest.*<sup>82</sup>

These considerations are not exclusive to patent law. As Judge Easterbrook wrote in a copyright case, during the creative enterprise every author is simultaneously both a “creator in part and a borrower in part.” In this context, “[b]efore the first work is published, broad protection of intellectual property seems best; after it is published, narrow protection seems best.”<sup>83</sup> Nonetheless, “only one rule can be in force” and “[t]his single rule must achieve as much as possible of these inconsistent demands.”<sup>84</sup> Easterbrook candidly acknowledged how

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81. *Id.* at 135 (Grier, J., concurring).

82. SUZANNE SCOTCHMER, INNOVATION AND INCENTIVES 127 (2004) (emphasis added). *See also* Kendall v. Winsor, 62 U.S. (1 How.) 322, 329 (1858) (“Whilst the remuneration of genius and useful ingenuity is a duty incumbent upon the public, the rights and welfare of the community must be fairly dealt with and effectually guarded.”).

83. Nash v. CBS, Inc., 899 F.2d 1537, 1541 (7th Cir. 1990).

84. *Id.*

difficult it is to address this challenge from an institutional perspective, as “[n]either Congress nor the courts has the information that would allow it to determine which is best. Both institutions must muddle through, using not a fixed rule but a sense of the consequences of moving dramatically in either direction.”<sup>85</sup>

Patent law employs the legal fictions embodied in the commensurability requirement to wrap some certainty around the ex ante/ex post claim scope determination. Commensurability does not give credit to a patentee whose disclosure may have spurred improvement activity. Rather, by focusing on the claim-specification correspondence, commensurability introduces a more administrable test for claim scope, embraces a moral dimension of just deserts, and furthers the policy choice of providing improvers with room to operate.

## 2. Prosecution History Estoppel and Cabining Claim Scope

The doctrine of equivalents (“DOE”) dates to the mid-nineteenth century.<sup>86</sup> The doctrine holds that an accused infringer, while not literally infringing the claimed invention, may nonetheless be liable for infringement if the accused product performs substantially the same function in substantially the same way to achieve substantially the same result; in other words, if there are insubstantial differences between the invention as claimed and the accused product.

The driving force behind the DOE is the inherent limitation of language.<sup>87</sup> For example, in *Graver Tank v. Linde Air Products*,<sup>88</sup> Justice Jackson evoked powerful imagery, noting that a world without the DOE would give rise to the “unscrupulous copyist”<sup>89</sup> and turn the

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85. *Id.* Consistent with this theme, William Robinson, the prominent nineteenth-century patent law treatise author, wrote in 1890 that “[w]ith very few exceptions, every invention is the result of the inventive genius of the age, working under the demand of its immediate wants, rather than the product of the individual mind.” WILLIAM C. ROBINSON, *THE LAW OF PATENTS FOR USEFUL INVENTIONS* § 29 (1890). See generally Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 TEX. L. REV. 989 (1997).

86. See *Winans v. Denmead*, 56 U.S. (15 How.) 330, 336 (1853) (holding that a patent may be infringed by a product that operates upon the same principle first suggested by the patentee even if it differs in form from the patentee’s invention). This doctrine finds expression in other jurisdictions. For example, the Protocol on the Interpretation of Article 69 of the European Patent Convention states, “For the purpose of determining the extent of protection conferred by a European patent, due account shall be taken of any element which is equivalent to an element specified in the claims.” European Patent Convention, Protocol on the Interpretation of Article 69, art. 2, Oct. 5, 1973, 13 I.L.M. 348.

87. See *infra* notes 102–103.

88. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605 (1950).

89. *Id.* at 607.

patent into a “hollow and useless thing.”<sup>90</sup> While the doctrine was firmly embedded in the patent law landscape, it remained susceptible to criticism. Perhaps the most conspicuous weakness of the DOE is its tolerance of uncertainty. Once you move beyond the literal scope of the patent claim, certainty gives way to equity, making it more difficult for a competitor to discern whether he infringes. As the dissent in *Graver Tank* wrote, the patent claim is not “a nose of wax.”<sup>91</sup>

By the mid-1990s the Federal Circuit began to rethink its DOE jurisprudence, trending away from Justice Jackson’s florid language in *Graver Tank*. The “unscrupulous copyist” was less of a concern than the importance of certainty and notice in a property rights regime, and the incentives associated with claim drafting and litigation practices created by uncertainty. The courts turned to the doctrine of PHE as a tool to limit application of the DOE.

Beginning with *Warner-Jenkinson*,<sup>92</sup> the Federal Circuit, in a fractured manner, began to rein in the DOE, taking it head on. The Supreme Court picked up on the Federal Circuit’s view of the DOE and cast the doctrine as one that needed to be checked lest uncertainty run amok. The Court created a rebuttable presumption, a common legal fiction, to address the following situation: What happens when a patent applicant amends his claim during prosecution but fails to give a reason for the amendment? Is the DOE still available in this situation? The Court created a rebuttable presumption that PHE applies, thus barring application of the DOE. According to the Court, “When the patentee is unable to explain the reason for amendment, estoppel not only applies but also ‘bar[s] the application of the doctrine of equivalents as to that element.’”<sup>93</sup> Yet in the eyes of some Federal Circuit judges, the Court did not go far enough.

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90. *Id.*; see also *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 731 (2002):

The language in the patent claims may not capture every nuance of the invention or describe with complete precision the range of its novelty. If patents were always interpreted by their literal terms, their value would be greatly diminished. The scope of a patent is not limited to its literal terms but instead embraces all equivalents to the claims described.

91. 339 U.S. at 614 (Black, J., dissenting).

92. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17 (1997).

93. *Id.* at 33. The Court went on to explain,

The presumption we have described, one subject to rebuttal if an appropriate reason for a required amendment is established, gives proper deference to the role of claims in defining an invention and providing public notice, and to the primacy of the PTO in ensuring that the claims allowed cover only subject matter that is properly patentable in a proffered patent application.

*Id.* at 33–34.

On the horizon was *Festo*,<sup>94</sup> which offered the Federal Circuit another crack at the DOE's expansiveness. Armed with the technique of presumption, the Federal Circuit enunciated its infamous (and short-lived) complete bar. That is, when a patent applicant narrows his claim during prosecution, he is completely barred from invoking the DOE during litigation. As the frontal assault to the DOE failed in *Warner-Jenkinson*, this rule was seen as a backdoor attempt to rid patent law of the DOE. But it soon became apparent that this aggressive use of fiction was too disruptive, particularly viewed through the lens of the conservative common law. Once again the Supreme Court intervened, no doubt sensing the Federal Circuit had gone too far. In a nuanced and candid opinion, the Court replaced the complete bar with yet another rebuttable presumption.

The *Festo* presumption holds that when an applicant, by amendment, narrows his patent claims for reasons related to patentability, it "may be presumed to be a general disclaimer of the territory between the original claim and the amended claim."<sup>95</sup> This presumption may be rebutted by showing that the equivalent the patentee seeks to capture was unforeseeable at the time of the

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94. *Festo*, 535 U.S. 722.

95. *Id.* at 740. The *Festo* presumption is invoked once it is determined there was a narrowing amendment made for reasons related to patentability. The presumption limits application of the DOE to technologies that were unforeseeable at the time of the amendment, so-called after-arising technologies. But can the DOE apply to foreseeable technologies in the absence of a narrowing amendment? This was the issue in *Ring & Pinion Service, Inc. v. ARB Corp.*, 743 F.3d 831 (Fed. Cir. 2014). The accused infringer, Ring & Pinion ("R&P"), agreed that its accused product literally met all but one of the limitations of the claimed invention. *Id.* at 833. And R&P further agreed that the remaining element of its product was an equivalent. *Id.* But R&P asserted the DOE does not apply because the equivalent element was foreseeable at the time the patent application was filed. *Id.* at 834. Thus, the single legal issue for the court was "whether an equivalent is barred under the doctrine of equivalents because it was foreseeable at the time of the patent application." *Id.* at 833. The court held that foreseeability was not a limitation to applying the DOE:

There is not, nor has there ever been, a foreseeability limitation on the application of the doctrine of equivalents. It has long been clear that known interchangeability weighs in favor of finding infringement under the doctrine of equivalents. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 36, 117 S.Ct. 1040, 137 L.Ed.2d 146 (1997) ("The known interchangeability of substitutes for an element of a patent is one of the express objective factors . . . bearing upon whether the accused device is substantially the same as the patented invention."); *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 609, 70 S.Ct. 854, 94 L.Ed. 1097 (1950) (holding that "whether persons reasonably skilled in the art would have known of the interchangeability of an ingredient not contained in the patent with one that was" is an "important factor" weighing in favor of equivalence) . . . Excluding equivalents that were foreseeable at the time of patenting would directly conflict with these holdings that "known interchangeability" supports infringement under the doctrine of equivalents. We conclude that the foreseeability of an equivalent at the time of patenting is not a bar to a finding of infringement under the doctrine of equivalents.

*Id.* at 834.

amendment.<sup>96</sup> A failure to rebut the presumption precludes availability of the DOE.

Foreseeability is a concept lawyers are comfortable with, and it gives patentees an opportunity to access the DOE. Thus, the rebuttable presumption employed by the Court is a more nuanced approach than the Federal Circuit's complete bar. As such, "This presumption is not, then, just the complete bar by another name."<sup>97</sup> Rather, it reflects the informational asymmetry of patent prosecution and a devolution of responsibility to the party who has the most information. Accordingly, "When the patentee has chosen to narrow a claim, courts may presume the amended text was composed with awareness of this rule and that the territory surrendered is not an equivalent of the territory claimed."<sup>98</sup> Essentially, the presumption asks why the patentee did not literally claim what he is now asserting is an equivalent. As the Court wrote, "The patentee must show that at the time of the amendment one skilled in the art could not reasonably be expected to have drafted a claim that would have literally encompassed the alleged equivalent."<sup>99</sup>

One can ask, therefore, why the Supreme Court has adopted the fiction of presumption that has resulted in a significant constraint on patent scope. What normative values are served? Enhanced certainty is perhaps the most obvious value at play, and, concomitantly, a reduction in litigation and judicial resources as predictability takes hold. By imposing certainty, the presumption mitigates some of the more challenging aspects presented by the bluntness of language,<sup>100</sup> in particular, in discerning claim scope. An aggressive application of the DOE, as was present in *Graver Tank*, leads to migratory boundaries. The *Festo* presumption attempts to temporally freeze claim boundaries by making the DOE inapplicable

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96. The Court identified two other ways to rebut the presumption: (1) the rationale underlying the amendment was tangentially related to the equivalent; and (2) some other reason suggesting that the patentee could not reasonably be expected to have described the insubstantial substitute in question. *Festo*, 535 U.S. at 740–41.

97. *Id.* at 741.

98. *Id.*

99. *Id.* Rebuttal has proven to be quite difficult since *Festo* was decided; perhaps the *Festo* presumption is a complete bar by another name. See John R. Allison & Mark A. Lemley, *The (Unnoticed) Demise of the Doctrine of Equivalents*, 59 STAN. L. REV. 955, 966 (2007) ("[P]atentees won only 24% of the doctrine of equivalents cases decided in the last eight years. Compared to the overall patentee win rates on other issues—54% on validity alone in cases at various stages of litigation, and 58% overall in cases that make it to trial . . .").

100. This use of fiction is consistent with how fictions were used historically. As Nancy Knauer writes, "Some of the boldest legal fictions were adopted centuries ago by the English courts to mitigate the relentless formalism of the ancient writs . . ." Nancy J. Knauer, *Legal Fictions and Juristic Truth*, 23 ST. THOMAS L. REV. 1, 2 (2010).

to foreseeable equivalents, based on a devolution of responsibility theory that holds the inventor should have originally claimed them.

A closer look at foreseeability sheds light on the normative values underlying the fiction. The principal policy underlying the DOE's application to after-arising technologies is grounded in unforeseeability. As Judge Rader wrote, "A primary justification for the [DOE] is to accommodate after-arising technology. Without the [DOE], any claim drafted in current technological terms could be easily circumvented after the advent of an advance in technology."<sup>101</sup>

But why isn't foreseeability a limitation on the DOE in the absence of a narrowing amendment?<sup>102</sup> Why make a narrowing amendment a condition precedent for application of the *Festo* presumption? Claim drafting, or the capturing of extant and foreseeable technology, does not become easier in the wake of a narrowing amendment. Here too then resides another fiction, an artificial yet easily discernable event that acts as a dividing line between ex ante and ex post considerations. In other words, the bluntness of language cuts both ways; it is not only challenging for a competitor to glean claim scope, but also for an inventor seeking to fully secure his innovation armed only with written words. Justice Jackson reflected this consideration in *Graver*, noting the DOE is designed to protect the inventor from being "at the mercy of verbalism,"<sup>103</sup> and Justice Kennedy wrote in *Festo*, "[L]anguage in the patent claims may not capture every nuance of the invention or

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101. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 619 (Fed. Cir. 2000) (Rader, J., concurring in part and dissenting in part); see also *SmithKline Beecham Corp. v. Excel Pharm., Inc.*, 356 F.3d 1357, 1363–64 (Fed. Cir. 2004) (stating that after-arising technology is the "quintessential example of an enforceable equivalent," and noting further, "[u]sually, if the alleged equivalent represents later-developed technology (e.g., transistors in relation to vacuum tubes, or Velcro® in relation to fasteners) or technology that was not known in the relevant art, then it would not have been foreseeable. In contrast, old technology, while not always foreseeable, would more likely have been foreseeable"). This helps explain why equivalents is measured at the time of infringement (not filing), which reflects the cumulative and unforeseeable nature of complex and ramified technologies. Timothy Holbrook offers two justifications as to "why the patentee is entitled to protection under the doctrine of equivalents for a device that she never invented." First, he asserts it is fair to permit a patentee to capture after-arising technology "when a change outside of the patentee's field affects that field and her invention in a way that allows others to capture the essence of the invention by making trivial changes." Second, Holbrook argues that an after-arising alleged equivalent may be captured under the DOE if the patentee's "disclosure enables the asserted equivalent at the time of infringement." This theory, notes Holbrook, "ties the availability of equivalents to the disclosure of the patent document, but allows those teachings to grow over time." Timothy R. Holbrook, *Equivalency and Patent Law's Possession Paradox*, 23 HARV. J.L. & TECH. 1, 36-37 (2009).

102 See discussion of *Ring & Pinion*, *supra* note 95, on the availability of the DOE in the absence of a narrowing amendment.

103. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607 (1950).

describe with complete precision the range of its novelty.”<sup>104</sup> Both Justices recognized that language is a blunt instrument, and excessive literalism would devalue the patent.<sup>105</sup> How then to rein in the DOE, yet be sufficiently attentive to linguistic shortcomings? The *Festo* presumption triggered by a narrowing amendment is a response to this difficult question.

The *Festo* Court candidly acknowledged this ex ante/ex post balance and the role of language:

The [patent] . . . is a property right; and like any property right, its boundaries should be clear. This clarity is essential to promote progress, because it enables efficient investment in innovation. A patent holder should know what he owns, and the public should know what he does not. [There is a] delicate balance the law attempts to maintain between inventors, who rely on the promise of the law to bring the invention forth, and the public, which should be encouraged to pursue innovations, creations, and new ideas beyond the inventor’s exclusive rights.

It is true that the doctrine of equivalents renders the scope of patents less certain. If competitors cannot be certain about a patent’s extent, they may be deterred from engaging in legitimate manufactures outside its limits, or they may invest by mistake in competing products that the patent secures. These concerns with the doctrine of equivalents, however, are not new. Each time the Court has considered the doctrine, it has acknowledged this uncertainty as the price of ensuring the appropriate incentives for innovation, and it has affirmed the doctrine over dissents that urged a more certain rule.<sup>106</sup>

## CONCLUSION

In numerous areas of law, judges have historically employed legal fictions to engage in cautious experimentation. Patent law is no

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104. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 731 (2002).

105. Recall Justice Jackson’s admonition that without the DOE a patent would be “hollow and useless thing,” *Graver*, 339 U.S. at 607, and Justice Kennedy’s opinion, “If patents were always interpreted by their literal terms, their value would be greatly diminished. Unimportant and insubstantial substitutes for certain elements could defeat the patent, and its value to inventors could be destroyed by simple acts of copying,” *Festo*, 535 U.S. at 731. In short, it is exceedingly difficult to know of and linguistically capture extant technologies, let alone those that are foreseeable.

106. *Festo*, 535 U.S. at 730–32. Although in the context of the definiteness requirement, the Supreme Court in *Nautilus* struck the same theme:

On the one hand, the definiteness requirement must take into account the inherent limitations of language. Some modicum of uncertainty, the Court has recognized, is the “price of ensuring the appropriate incentives for innovation.” . . . At the same time, a patent must be precise enough to afford clear notice of what is claimed, thereby “‘appris[ing] the public of what is still open to them.’” Otherwise there would be “[a] zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims.” And absent a meaningful definiteness check, we are told, patent applicants face powerful incentives to inject ambiguity into their claims. Eliminating that temptation is in order, and “the patent drafter is in the best position to resolve the ambiguity in . . . patent claims.”

*Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2128–29 (2014) (alterations in original) (footnotes omitted) (citations omitted).

exception; fictions are used to further normative preferences relating to administrability, certainty, claim scope, and other important policy aims. Properly cabined, the legal fiction allows for judicial flexibility to address a problem in the law that is preferable in large part to a legislative response that can have disruptive effects or result in legislation that reflects a distortive interestgroup dynamic.