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## How to Explain the "Implicit Exceptions" to Patent-Eligible Subject Matter

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# How to Explain the “Implicit Exceptions” to Patent-Eligible Subject Matter

Wesley D. Markham\*

## ABSTRACT

*The Supreme Court has as of late taken renewed interest in what inventions or discoveries are deserving of entry into the patent system. Section 101 of Title 35 opens the door to “[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” Certain things—now referenced by the Court as “laws of nature, natural phenomena, and abstract ideas”—necessarily fall outside the statute’s scope. The question is, why? Not why as a matter of policy, but why as a matter of law. The Court has not yet picked (or at least, articulated) any particular legal justification for discovering or creating these “implicit exceptions” to § 101. Upon close examination, the several rationales present in the Court’s opinions are not altogether satisfying. Collectively, though, they have swayed the entire Court. This Article explores the Court’s unanimous acceptance of the implicit exceptions as an aggressive use of the constitutional avoidance doctrine: broad patents on things too close to “abstract ideas” or “laws of nature” might impede progress, which might violate the preamble of the Intellectual Property Clause. Such interpretive methodology admits of no limiting principle.*

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## I. INTRODUCTION

The Supreme Court has as of late taken renewed interest in what inventions or discoveries are deserving of entry into the patent system. The Court's most recent foray into the subject will allow the Justices to decide whether, and to what extent, computer- and software-related inventions may be patented.<sup>1</sup> Section 101 of Title 35 states the criteria for patent eligibility:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.<sup>2</sup>

Certain things—now referenced by the Court as “laws of nature, natural phenomena, and abstract ideas”—necessarily fall outside the statute's scope.<sup>3</sup> The question is, why? Not why as a matter of policy; we can all understand the inclination to prevent or eliminate “bad” patents, patents so broad or vague that they should never have been granted.<sup>4</sup> Rather, why as a matter of law? What legal theories, what

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1. See *CLS Bank Int'l v. Alice Corp. Pty. Ltd.*, 717 F.3d 1269 (Fed. Cir. 2013) (en banc), cert. granted, 134 S. Ct. 734 (Dec. 6, 2013).

2. 35 U.S.C. § 101 (2012).

3. *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013) (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1292, 1300 (2012)).

4. See 35 U.S.C. §§ 101–103, 112 (2012), for the substantive criteria of patentability, the “conditions and requirements of this title” as referenced in 35 U.S.C. § 101 (2012); see also Jay P. Kesan & Andres A. Gallo, *Why “Bad” Patents Survive in the Market and How Should We Change?—The Private and Social Costs of Patents*, 55 EMORY L.J. 61, 64 (2006) (commenting that

canons of statutory construction, justify the “implicit exceptions” to § 101?<sup>5</sup>

On this question, the Court has been elusive. The Court’s opinions offer a glimpse of several justifications for the implicit exceptions, but only a glimpse. The Court has not yet engaged the issue in depth. This is an observation, not a criticism. Although all nine sitting Justices apparently agree that the implicit exceptions exist—*Association for Molecular Pathology v. Myriad Genetics, Inc.* in 2013 and *Mayo Collaborative Services v. Prometheus Laboratories, Inc.* in 2012 were unanimous on this point—it would be unsurprising if views diverged as to the proper legal underpinnings for such exceptions. Where there is consensus on the result, but not the reason, silence may prevail.

But there must be some justification, grounded in law, for the exceptions to § 101. The alternative would compel a conclusion that the Court, without dissent, has assumed the mantle of patent policymaker. That is difficult to believe, for such a maneuver would “defy[] all sound conception of the proper role of judges.”<sup>6</sup> This Article attempts to explain the Court’s rationale for recognizing (or creating, depending on one’s perspective) implicit exceptions to the statutory classes of patent eligible subject matter. Understanding the Court’s legal bases for the exceptions may help in understanding their scope and thus the scope of § 101 itself.<sup>7</sup> This might prove useful, even if articulation of a bright-line rule on patent eligibility is impossible. In the words of Judge Learned Hand, who lamented a similar difficulty in distinguishing between un-copyrightable ideas and copyrightable expression: “Nobody has ever been able to fix that boundary, and nobody ever can.”<sup>8</sup>

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the issuance of “bad” patents “has important economic consequences, including inefficient resource allocation and significant harm to economic growth”); Sean B. Seymore, *The Presumption of Patentability*, 97 MINN. L. REV. 990, 1038–40 (2013) (discussing policy implications of poor patent quality, including “uncertainty throughout the patent system,” increased rent-seeking behavior, and high litigation costs).

5. See *Myriad*, 133 S. Ct. at 2116 (quoting *Prometheus*, 132 S. Ct. at 1293) (“We have ‘long held that this provision contains an important implicit exception[:] Laws of nature, natural phenomena, and abstract ideas are not patentable.’”).

6. *Brown v. Plata*, 131 S. Ct. 1910, 1959 (2011) (Scalia, J., dissenting).

7. I express no view on the wisdom of the implicit exceptions, or whether they should, as a matter of first principles, be construed broadly or narrowly. My objective is less ambitious. I hope to explain what is, not what should be. Given my past service at the Federal Circuit, this Article does not discuss any of that court’s many opinions concerning patent eligibility.

8. *Nichols v. Universal Pictures Corp.*, 45 F.2d 119, 121 (2d Cir. 1930). Thirty more years of judicial experience did nothing to change Judge Hand’s mind: “Obviously, no principle can be stated as to when an imitator has gone beyond copying the ‘idea,’ and has borrowed its ‘expression.’ Decisions must therefore inevitably be ad hoc.” *Peter Pan Fabrics, Inc. v. Martin Weiner Corp.*, 274 F.2d 487, 489 (2d Cir. 1960) (Hand, J.).

Although no single explanation for the implicit exceptions is entirely satisfying, the Court's unanimity on the exceptions' validity may flow from an aggressive use of the constitutional avoidance doctrine. The Court has not expressly invoked the doctrine in interpreting § 101, but the Court's patent eligibility jurisprudence reflects an effort to reconcile the statute's broad language with the Intellectual Property Clause's admonition "to promote . . . progress."<sup>9</sup>

## II. THE CURIOUS NATURE OF THE IMPLICIT EXCEPTIONS TO 35 U.S.C. §101

We have recently learned that isolated DNA is not eligible for patent protection.<sup>10</sup> The same goes for processes that fail to "do significantly more than simply describe . . . natural relations," such as the relationship between a particular drug and the concentrations of its metabolites in the blood.<sup>11</sup> So too, for processes which "explain the basic concept of hedging, or protecting against risk."<sup>12</sup> All of these are outside § 101's ambit, because they do not "add enough" to the "law of nature" or "abstract idea" on which they rest.<sup>13</sup>

As understood by the current Court, "laws of nature, natural phenomena, and abstract ideas" are "implicit exceptions" to § 101.<sup>14</sup> That was not always the Court's understanding. To say that an exception is implicit in a statute suggests that it was always there; the Court found it, but did not create it. Earlier opinions reflect a more active judicial role.

For example, the Court's 2010 opinion in *Bilski v. Kappos* states that "[t]he Court's precedents provide three specific exceptions to § 101's broad patent-eligibility principles: 'laws of nature, physical phenomena, and abstract ideas.'"<sup>15</sup> "Providing" the exceptions through "precedent" seems closer to creation than to discovery. *Diamond v. Chakrabarty* states that "[t]he laws of nature, physical phenomena, and abstract ideas have been held not patentable," similarly

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9. See U.S. CONST. art. I, § 8, cl. 8 (giving Congress 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").

10. See *Myriad*, 133 S. Ct. at 2117.

11. See *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1296–97 (2012).

12. See *Bilski v. Kappos*, 130 S. Ct. 3218, 3231 (2010).

13. See *Prometheus*, 132 S. Ct. at 1297.

14. See *Myriad*, 133 S. Ct. at 2116; *Prometheus*, 132 S. Ct. at 1293.

15. *Bilski*, 130 S. Ct. at 3225 (quoting *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980)).

acknowledging the Court's part in crafting the exceptions.<sup>16</sup> *Gottschalk v. Benson* refers to the exclusion of abstract ideas from § 101 as a "longstanding rule," not an "implicit exception" to the statute.<sup>17</sup>

The Court first used the "implicit exception" label to describe the limits of § 101 in *Prometheus*.<sup>18</sup> Justice Breyer spoke for a unanimous Court, and his authorship likely explains the emergence of the "implicit exception" concept. The phrase "implicit exception" is something of a Breyer-ism. It shows up only a handful of times in the U.S. Reports,<sup>19</sup> and is usually attributable to Justice Breyer.<sup>20</sup> Thus, the new nomenclature may not reveal a substantive change in the Court's thinking about § 101—a new belief that the exceptions are Congress-created and Court-located, instead of Court-imposed. It may instead be a function of the draftsman. Nonetheless, the "implicit exception" language has stuck; Justice Thomas quoted it for the again-unanimous Court in *Myriad*.<sup>21</sup>

The exceptions themselves have changed over time. The presently preferred terminology is "laws of nature, natural phenomena, and abstract ideas."<sup>22</sup> The Court first used this particular formulation in *Diamond v. Diehr*.<sup>23</sup> *Chakrabarty* states a small variation, with "physical phenomena" taking the place of "natural

16. *Chakrabarty*, 447 U.S. at 309 (citing *Parker v. Flook*, 437 U.S. 584 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 67, 93 (1972); *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 130 (1948); *O'Reilly v. Morse*, 56 U.S. (15 How.) 62, 112–21 (1854); *Le Roy v. Tatham*, 55 U.S. (14 How.) 156, 175 (1853)).

17. *Benson*, 409 U.S. 63, 67 (1972) ("[a]n idea of itself is not patentable" (quoting *Rubber-Tip Pencil Co. v. Howard*, 87 U.S. (20 Wall.) 498, 507 (1874))).

18. *See Prometheus*, 132 S. Ct. at 1289.

19. Seventeen, according to both Westlaw and Lexis.

20. *See, e.g., Powerex Corp. v. Reliant Energy Servs., Inc.*, 551 U.S. 224, 240 (2007) (Breyer, J., dissenting) (stating that statutory conflicts may be resolved "by reading a later more specific statute as creating an implicit exception to" an earlier statute (citing *Osborn v. Haley*, 549 U.S. 225, 243–44 (2007))); *Wilkinson v. Dotson*, 544 U.S. 74, 79 (2005) (Breyer, J.) ("These considerations of linguistic specificity, history, and comity led the Court to find an implicit exception from § 1983's otherwise broad scope for actions that lie 'within the core of habeas corpus.'" (quoting *Preiser v. Rodriguez*, 411 U.S. 475, 487 (1973))); *FCC v. NextWave Personal Commc'ns Inc.*, 537 U.S. 293, 317 (2003) (Breyer, J., dissenting) ("Well over a century ago, the Court interpreted a statute that forbade knowing and willful obstruction of the mail as containing an implicit exception permitting a local sheriff to arrest a mail carrier." (citing *United States v. Kirby*, 74 U.S. (7 Wall.) 482, 485–87 (1868))); *Alabama v. Bozeman*, 533 U.S. 146, 153 (2001) (Breyer, J.) ("First, the language of the Agreement militates against an implicit exception, for it is absolute."); *United States v. Brockamp*, 519 U.S. 347, 350 (1997) (Breyer, J.) (stating that statute that "sets forth its limitations in a highly detailed technical manner . . . cannot easily be read as containing implicit exceptions").

21. *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013).

22. *See id.*; *Prometheus*, 132 S. Ct. at 1293.

23. *See Diamond v. Diehr*, 450 U.S. 175, 185 (1981).

phenomena.”<sup>24</sup> Other variations are numerous; some are collected in the US Patent and Trademark Office’s (USPTO) Manual of Patent Examination Procedure (MPEP):

[A] claimed invention must not be directed to one of the judicially recognized exceptions, which have been specifically excluded from patent eligibility by the courts. These judicially recognized exceptions include scientific truths, abstract principles, abstract intellectual concepts, laws of nature, natural phenomena, abstract ideas, mental processes, processes of human thinking, and systems that depend for their operation on human intelligence alone.<sup>25</sup>

It is difficult, in the abstract, to state a meaningful distinction among, say, an “abstract principle,” an “abstract intellectual concept,” an “abstract idea,” and a “mental process.” As applied, certain of the Court’s earlier formulations of the implicit exceptions do not square particularly well with the Court’s current § 101 jurisprudence. For example, although “the concept of hedging risk and the application of that concept to energy markets” may fairly be characterized as an “abstract idea,”<sup>26</sup> risk hedging is neither a “fundamental truth” nor “an original cause.”<sup>27</sup>

These malleable statutory exceptions are an oddity, as the Court usually emphasizes the primacy of statutory text and “ordinary meaning” in statutory construction. The following statement of the law is typical of the current Court: “As in any statutory construction case, we start, of course, with the statutory text, and proceed from the understanding that unless otherwise defined, statutory terms are generally interpreted in accordance with their ordinary meaning.”<sup>28</sup> This methodology of statutory interpretation is pervasive; it is not limited to any specific context, or associated with any individual Justice.<sup>29</sup> And it is used to interpret the patent laws, no less than any other:

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24. *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980).
  25. Manual of Patent Examining Procedure (MPEP) § 706.03(a) (8th ed. rev. 9, Aug. 2012).
  26. *See Bilski v. Kappos*, 130 S. Ct. 3218, 3229 (2010).
  27. *See Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) (quoting *Le Roy v. Tatham*, 55 U.S. (14 How.) 156, 175 (1852)).
  28. *See Sebelius v. Cloer*, 133 S. Ct. 1886, 1893 (2013) (Sotomayor, J.) (quoting *BP Am. Prod. Co. v. Burton*, 549 U.S. 84, 91 (2006)) (internal quotation marks and alterations omitted).
  29. *See, e.g., Levin v. United States*, 133 S. Ct. 1224, 1231 (2013) (Ginsburg, J.) (“In determining the meaning of a statute, we look first to its language, giving the words used their ordinary meaning.” (quoting *Moskal v. United States*, 498 U.S. 103, 108 (1990))); *Caraco Pharm. Labs., Ltd. v. Novo Nordisk A/S*, 132 S. Ct. 1670, 1680 (2012) (Kagan, J.) (“We begin ‘where all such inquiries must begin: with the language of the statute itself’ . . . . And we consider each question in the context of the entire statute.” (quoting *United States v. Ron Pair Enterprises, Inc.*, 489 U.S. 235, 241 (1989)) (citing *Robinson v. Shell Oil Co.*, 519 U.S. 337, 341 (1997))); *Federal Aviation Administration v. Cooper*, 132 S. Ct. 1441, 1457 (2012) (Sotomayor, J., joined by Ginsburg & Breyer, JJ., dissenting) (“In a statutory construction case, the beginning point must be the language of the statute, and when a statute speaks with clarity to an issue judicial inquiry

This Court has more than once cautioned that courts should not read into the patent laws limitations and conditions which the legislature has not expressed. In patent law, as in all statutory construction, unless otherwise defined, words will be interpreted as taking their ordinary, contemporary, common meaning.<sup>30</sup>

The Court's recent patent-eligibility opinions "start" with the statute itself, in that the Court's recitation of § 101 precedes the substantive analysis in each case.<sup>31</sup> However, the Court's discussion on the merits is directed almost entirely towards whether a certain invention or discovery does or does not fall within an implicit exception to the statute. Statutory language and "ordinary meaning" take a backseat. How the implicit exceptions fit within § 101's "expansive" language is little discussed.<sup>32</sup>

### III. THE COURT'S JUSTIFICATIONS FOR THE IMPLICIT EXCEPTIONS

The Court's opinions hint at several justifications for the implicit exceptions to § 101, but it cannot be said that the Court has adopted any particular one to the exclusion of the others. Each given rationale for curbing patent eligibility has its strengths and weaknesses.

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into the statute's meaning, in all but the most extraordinary circumstance, is finished." (quoting *Estate of Cowart v. Nicklos Drilling Co.*, 505 U.S. 469, 475 (1992)); *Schindler Elevator Corp. v. United States ex rel. Kirk*, 131 S. Ct. 1885, 1891 (2011) (Thomas, J.) ("Statutory construction must begin with the language employed by Congress and the assumption that the ordinary meaning of that language accurately expresses the legislative purpose." (quoting *Gross v. FBL Fin. Servs., Inc.*, 557 U.S. 167, 175 (2009))); *Wall v. Kholi*, 131 S. Ct. 1278, 1284 (2011) (Alito, J.) ("We give the words of a statute their ordinary, contemporary, common meaning, absent an indication Congress intended them to bear some different import." (quoting *Williams v. Taylor*, 529 U.S. 420, 431 (2000))); *Carr v. United States*, 560 U.S. 438, 458–59 (2010) (Scalia, J., concurring) ("We have stated time and again that courts must presume that a legislature says in a statute what it means and means in a statute what it says there. When the words of a statute are unambiguous, then, this first canon is also the last: judicial inquiry is complete." (quoting *Conn. Nat'l Bank v. Germain*, 503 U.S. 249, 253–54 (1992))); *Ali v. Federal Bureau of Prisons*, 552 U.S. 214, 228 (2008) (Kennedy, J., joined by Stevens, Souter & Breyer, JJ., dissenting) ("Statutory interpretation, from beginning to end, requires respect for the text.").

30. *Bilski*, 130 S. Ct. at 3226 (quoting *Diamond v. Diehr*, 450 U.S. 175, 182 (1981)) (internal alterations, citations, and quotation marks omitted); *see, e.g., Caraco*, 132 S. Ct. at 1670 (interpreting Hatch-Waxman statute); *cf. eBay Inc. v. MercExchange, LLC*, 547 U.S. 388 (2006) (noting that patent law is not special when it comes to injunctions); *Holmes Grp., Inc. v. Vornado Air Circulation Sys., Inc.*, 535 U.S. 826 (2002) (noting that well-pleaded complaint rule applies in patent cases, too).

31. *See Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013); *Mayo Collaborative Servs. v. Prometheus Labs, Inc.*, 132 S. Ct. 1289, 1293 (2012); *Bilski*, 130 S. Ct. at 3225.

32. *Bilski*, 130 S. Ct. at 3225 ("In choosing such expansive terms . . . modified by the comprehensive 'any,' Congress plainly contemplated that the patent laws would be given wide scope." (quoting *Diamond v. Chakrabarty*, 447 U.S. 303, 308 (1980))).



*A. Stare Decisis*

In *Bilski*, the Court stated that the exceptions “have defined the reach of the statute as a matter of statutory stare decisis going back 150 years,” citing the Court’s 1853 *Le Roy v. Tatham* opinion.<sup>33</sup> Other opinions note that the exceptions are “longstanding,”<sup>34</sup> “well-established,”<sup>35</sup> “long held,”<sup>36</sup> and “long-established,”<sup>37</sup> invoking legitimacy through history. However, stare decisis has the most force when the law is well-settled.<sup>38</sup> It has always been the case that certain things—*Le Roy* called them “fundamental truth[s],” “original cause[s],” and “motive[s]”—are not patentable.<sup>39</sup> However, the content of these categories, these “principle[s] in the abstract,” has not been fixed over time; *Le Roy* presciently warned that “[t]he word principle is used by elementary writers on patent subjects, and sometimes in adjudications of courts, with such a want of precision in its application, as to mislead.”<sup>40</sup> The uncertain and inconsistent scope of the implicit exceptions weakens the stare decisis claim.

The usual justification for stare decisis is that “in most matters it is more important that the applicable rule of law be settled than that it be settled right.”<sup>41</sup> Of course, the corollary is that in some matters, correctness is more important than stability. It has also been said that “stare decisis in respect to statutory interpretation has special force, for Congress remains free to alter what [the courts] have

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33. *Bilski*, 130 S. Ct. at 3225 (citing *Le Roy v. Tatham*, 55 U.S. (14 How.) 156, 174–75 (1852)).

34. *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) (citing *Rubber-Tip Pencil Co. v. Howard*, 87 U.S. (20 Wall.) 498, 507 (1874)).

35. *Myriad*, 133 S. Ct. at 2116.

36. *Prometheus*, 132 S. Ct. at 1293.

37. *Diamond v. Diehr*, 450 U.S. 175, 185 (1981).

38. See, e.g., *NASA v. Nelson*, 131 S. Ct. 746, 766 (2011) (Scalia, J., concurring) (rejecting application of stare decisis when “there is no applicable rule of law that is settled”); *State Oil Co. v. Khan*, 522 U.S. 3, 20 (1997) (“We approach the reconsideration of decisions of this Court with the utmost caution. Stare decisis reflects a policy judgment that ‘in most matters it is more important that the applicable rule of law be settled than that it be settled right.’” (citations omitted)) (quoting *Agostini v. Felton*, 521 U.S. 203, 235 (1997)).

39. *Le Roy v. Tatham*, 55 U.S. (14 How.) 156, 174–75 (1852).

40. *Id.* at 174.

41. *Burnet v. Coronado Oil & Gas Co.*, 285 U.S. 393, 408 (1932) (Brandeis, J., dissenting) (citing *Nat’l Bank v. Whitney*, 103 U.S. 99, 102 (1880)), *overruled in part by Helvering v. Mountain Producers Corp.*, 303 U.S. 376 (1938).

done.”<sup>42</sup> Even so, application of statutory *stare decisis* reflects a policy judgment, not an “inexorable” command.<sup>43</sup>

The shifting scope of the statutory exceptions can be seen in several ways. Consider the “preemption” concern so prominent in the Court’s recent § 101 opinions.<sup>44</sup> Over 100 years ago, in the *Telephone Cases*, the Court refused to allow the possibility of preemption to define the scope of patent eligibility:

It may be that electricity cannot be used at all for the transmission of speech, except in the way Bell has discovered, and that therefore, practically, his patent gives him its exclusive use for that purpose; but that does not make his claim one for the use of electricity distinct from the particular process with which it is connected in his patent. It will, if true, show more clearly the great importance of his discovery, but it will not invalidate his patent.<sup>45</sup>

In *O’Reilly v. Morse*, the Court recognized the problem of “too broad” patents,<sup>46</sup> but solved that problem by relying on the enablement requirement, now codified in § 112, not by creating general exceptions to patent eligibility:

Indeed, if the eighth claim of the patentee can be maintained, there was no necessity for any specification, further than to say that he had discovered that, by using the motive power of electro-magnetism, he could print intelligible characters at any distance. We presume it will be admitted on all hands, that no patent could have issued on such a specification. Yet this claim can derive no aid from the specification filed. It is outside of it, and the patentee claims beyond it. And if it stands, it must stand simply on the ground that the broad terms abovementioned were a sufficient description, and entitled

42. John R. Sand & Gravel Co. v. United States, 552 U.S. 130, 139 (2008) (citation and internal quotation marks omitted) (quoting *Patterson v. McLean Credit Union*, 491 U.S. 164, 172–73 (1989)). Query whether such a rule still makes sense, in light of the oft-lamented state of disharmony and gridlock in the legislative branch.

43. *James v. United States*, 366 U.S. 213, 233–34 (1961) (plurality opinion). The “prudential and pragmatic considerations” that may inform the policy judgment include “whether the rule has proven to be intolerable simply in defying practical workability”; “whether the rule is subject to a kind of reliance that would lend a special hardship to the consequences of overruling and add inequity to the cost of repudiation”; “whether related principles of law have so far developed as to have left the old rule no more than a remnant of abandoned doctrine”; and “whether facts have so changed, or come to be seen so differently, as to have robbed the old rule of significant application or justification.” *Planned Parenthood of Southeastern Pennsylvania v. Casey*, 505 U.S. 833, 854–55 (1992) (citing *Swift & Co. v. Wickham*, 382 U.S. 111, 116 (1965); *United States v. Title Ins. & Trust Co.*, 265 U.S. 472, 486 (1924); *Patterson v. McLean Credit Union*, 491 U.S. 164, 173–74 (1989); *Burnet*, 285 U.S. 393, 412 (1932) (Brandeis, J., dissenting)). These considerations assume the existence of an “old rule” settled by precedent. That assumption may be incorrect in the § 101 context, since the scope of the implicit exceptions—as understood by the courts and the USPTO—has changed over time.

44. See, e.g., *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013) (stating that the implicit exceptions guard against the “considerable danger that the grant of patents would ‘tie up’ the use of such [basic] tools and thereby ‘inhibit future innovation premised upon them.’” (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1301 (2012))).

45. *Dolbear v. Am. Bell Tel. Co. (The Telephone Cases)*, 126 U.S. 1, 535 (1888).

46. *O’Reilly v. Morse*, 56 U.S. (15 How.) 62, 113 (1853).

him to a patent in terms equally broad. In our judgment the act of Congress cannot be so construed.<sup>47</sup>

With respect to biotechnology, the USPTO has been granting gene patents for over thirty years.<sup>48</sup> Thus, the Court's determination in *Myriad* holding isolated DNA categorically unpatentable was contrary to the well-settled expectations of the innovation community. Without a stable background rule, the traditional justifications for stare decisis do not apply.

The USPTO's MPEP likewise reflects that the agency's understanding of § 101 has changed over time. The original MPEP (1948–49) did not mention implicit exceptions to patent eligibility, such as laws of nature, natural phenomena, abstract ideas, or the like. The most pertinent passage simply stated that “[a] method which produces an intangible result, such as transmitting speech by a telephone comes within this definition [of Art] also.”<sup>49</sup> The first revision, in 1949, was more detailed. It listed the following as “nonstatutory subject matter”: (1) printed matter; (2) a naturally occurring article, defined as “a thing occurring in nature, which is substantially unaltered,” such as a “shrimp with the head and digestive tract removed”; (3) a method of doing business, even though it is “seemingly within the category of an ‘art’ or method”; and (4) a scientific principle, “divorced from any tangible structure.”<sup>50</sup>

The USPTO's description of patent eligibility remained substantially the same until 1980, at which time the MPEP was amended to account for the Court's decision in *Chakrabarty*.<sup>51</sup> While the USPTO quoted *Chakrabarty*'s statement that “the laws of nature, physical phenomena, and abstract ideas have been held not patentable,” the agency also explained that the “test set down by the Court for patentable subject matter in this area is whether the living

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47. *O'Reilly*, 56 U.S. at 119–20. Breadth was also the concern in *Gottshalk v. Benson*, in which the Court held that a method “for converting binary-coded decimal (BCD) numerals into pure binary numerals” was not patent eligible. See *Gottshalk*, 409 U.S. 63, 68, 72 (1972) (describing the claim as “so abstract and sweeping” as to “wholly pre-empt the mathematical formula”).

48. See Vincent Y. Ling, *Patently Ours? Constitutional Challenges to Gene Patents*, 14 U. PA. J. CONST. L. 813, 813 (2012) (observing that the first gene patent was granted in 1982, and about 40,000 more have been granted since then).

49. Original MPEP § 3-2 (1948–49), available at [http://www.uspto.gov/web/offices/pac/mpep/old/E0R0\\_300.pdf](http://www.uspto.gov/web/offices/pac/mpep/old/E0R0_300.pdf). No citation was provided for this statement, although it appears to be based on the Court's decision in *The Telephone Cases*.

50. MPEP § 706.03(a) (1st ed. rev. 1, Nov. 1949), available at [http://www.uspto.gov/web/offices/pac/mpep/old/E1R0\\_700.pdf](http://www.uspto.gov/web/offices/pac/mpep/old/E1R0_700.pdf).

51. MPEP § 2105 (4th ed. rev. 3, July 1980), available at [http://www.uspto.gov/web/offices/pac/mpep/old/E4R3\\_2100.pdf](http://www.uspto.gov/web/offices/pac/mpep/old/E4R3_2100.pdf). This revision did not discuss the Court's opinions in *Benson* (1972) or *Flook* (1978).

matter is the result of human intervention.”<sup>52</sup> The USPTO advised that it would decide § 101 issues “on a case-by-case basis,” commenting that it would be “inappropriate to try to attempt to set forth here in advance the exact parameters to be followed.”<sup>53</sup>

In 1981, the MPEP was amended again, this time in response to the Court’s decision in *Diehr*. The USPTO stated that the *Diehr* decision “significantly affect[s] an examiner’s analysis under 35 U.S.C. 101 of patent applications involving mathematical equations, mathematical algorithms and computer programs.”<sup>54</sup> The USPTO “gleaned” certain “significant points of law” from the *Diehr* opinion, including that patent eligibility is not determined by dissecting the claims:

The “claims must be considered as a whole. It is inappropriate to dissect the claims into old and new elements and then to ignore the presence of the old elements in the analysis.” . . . “The ‘novelty’ of any element or steps in a process, or even of the process itself, is of *no relevance* in determining whether the subject matter of a claim falls within the 101 categories of possibly patentable subject matter.”<sup>55</sup>

Compare this understanding of the statute to the Court’s present understanding, in which the novelty of various “elements or steps in a process” drives the § 101 inquiry:

[The Court’s precedents] insist that a process that focuses upon the use of a natural law also contain other elements or a combination of elements, sometimes referred to as an “inventive concept,” sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the natural law itself. . . . [Merely] well-understood, routine, conventional activity previously engaged in by researchers in the field [is not enough].<sup>56</sup>

In 1995, the USPTO eliminated the statement that “business methods” are categorically excluded from patent eligibility.<sup>57</sup> The other exclusions—for “printed matter,” “naturally occurring article[s],” and “scientific principle[s]”—were retained.<sup>58</sup> The revision also contained an expanded discussion of the patent eligibility of “computer-implemented inventions” to “respond to recent changes in the law.”<sup>59</sup> In 2001, the USPTO acknowledged that “[o]ffice personnel

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52. See MPEP § 2105 (4th ed. rev. 3, July 1980), available at [http://www.uspto.gov/web/offices/pac/mpep/old/E4R3\\_2100.pdf](http://www.uspto.gov/web/offices/pac/mpep/old/E4R3_2100.pdf).

53. See *id.*

54. MPEP § 2110 (4th ed. rev. 8, Oct. 1981), available at [http://www.uspto.gov/web/offices/pac/mpep/old/E4R8\\_2100.pdf](http://www.uspto.gov/web/offices/pac/mpep/old/E4R8_2100.pdf).

55. *Id.* (emphasis added by USPTO) (quoting *Diamond v. Diehr*, 209 USPQ 1 (1981)).

56. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1294 (2012) (citing *Parker v. Flook*, 437 U.S. 584, 594 (1978)).

57. See MPEP § 706.03(a) (6th ed. rev. 1, Sept. 1995) available at [http://www.uspto.gov/web/offices/pac/mpep/old/E6R1\\_700.pdf](http://www.uspto.gov/web/offices/pac/mpep/old/E6R1_700.pdf).

58. See *id.*

59. *Id.* § 2106 (6th ed. rev. 1, Sept. 1995), available at [http://www.uspto.gov/web/offices/pac/mpep/old/E6R1\\_2100.pdf](http://www.uspto.gov/web/offices/pac/mpep/old/E6R1_2100.pdf).

have had difficulty in properly treating claims directed to methods of doing business.”<sup>60</sup> The USPTO advised that “[c]laims should not be categorized as methods of doing business. Instead, such claims should be treated like any other process claims, pursuant to these Guidelines when relevant.”<sup>61</sup>

The current edition of the MPEP, published in August 2012, includes the USPTO’s most exhaustive discussion of § 101 to date.<sup>62</sup> There are now approximately thirty pages devoted to “subject matter eligibility.”<sup>63</sup> The agency’s present interpretation of the statute bears little resemblance to the guidance it once provided. Recall the original MPEP stated that “a method which produces an intangible result” is within the statutory definition of Art, without mentioning an implicit exception to patent eligibility.<sup>64</sup> The section on patentable subject matter consisted of a single page.<sup>65</sup>

The empirical evidence supports the notion that the § 101 requirement has become more demanding. For many years, questions of patent eligibility under § 101 were rarely raised, in either the USPTO or the courts. The patent community seemingly saw § 101 as a low bar, and the implicit exceptions to patent eligible subject matter as narrow. In recent years, that understanding has changed. Section 101 challenges have increased exponentially both at the USPTO’s Patent Trial and Appeal Board (PTAB)—formerly the Board of Patent Appeals and Interferences (BPAI)—and in litigation, as shown in the “Number of PTAB (BPAI) Decisions Citing 35 U.S.C. 101” and “Number of District Court Cases Citing 35 U.S.C. 101” tables below.<sup>66</sup>

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60. MPEP § 2106 (8th ed., Aug. 2001), available at [http://www.uspto.gov/web/offices/pac/mpep/old/E8R0\\_2100.pdf](http://www.uspto.gov/web/offices/pac/mpep/old/E8R0_2100.pdf).

61. *See id.*

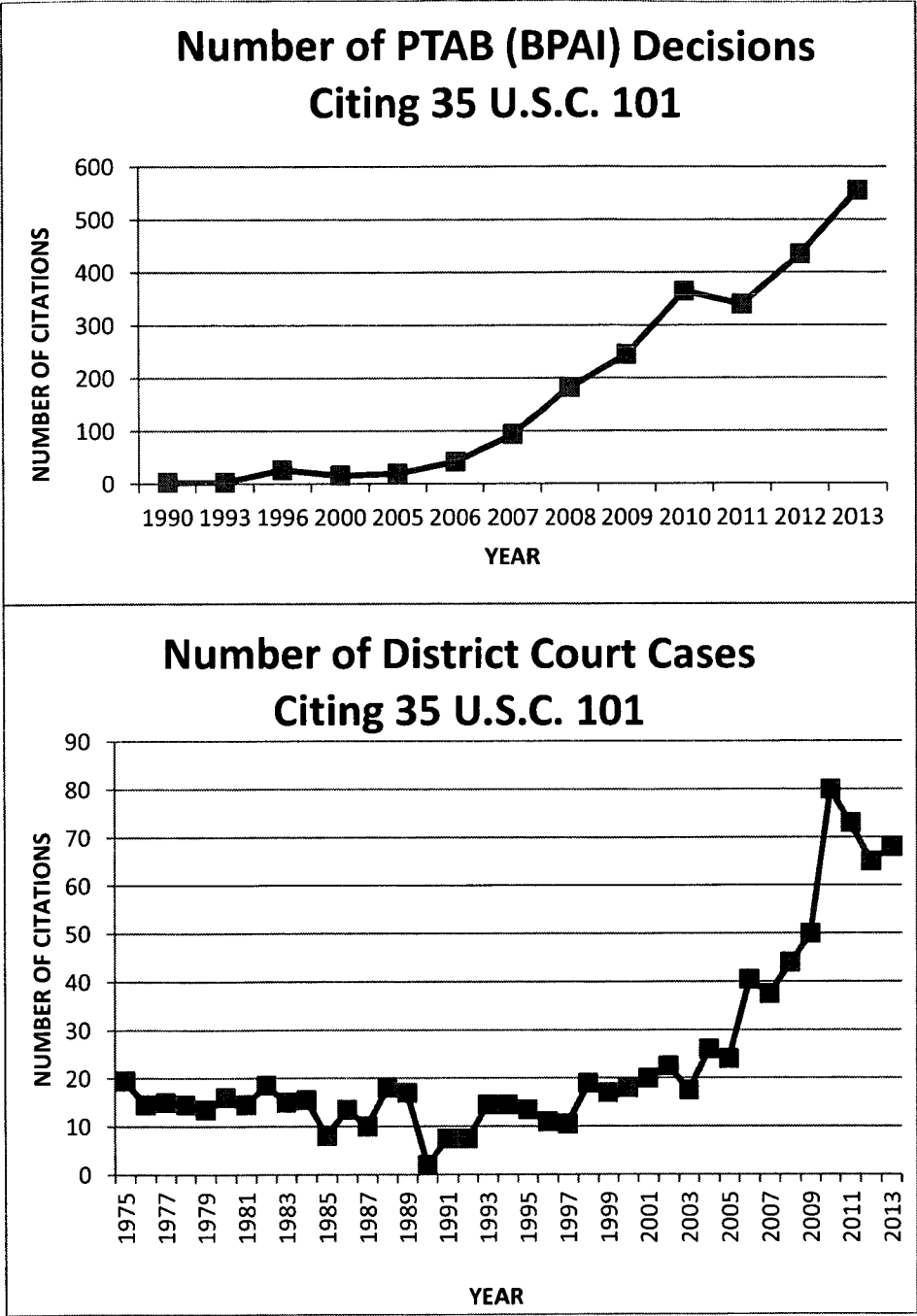
62. *See* MPEP §§ 706.03, 2103, 2106 (8th ed. rev. 9, Aug. 2012).

63. *Id.*

64. *See* Original MPEP § 3-2 (1948–49), available at [http://www.uspto.gov/web/offices/pac/mpep/old/E0R0\\_300.pdf](http://www.uspto.gov/web/offices/pac/mpep/old/E0R0_300.pdf).

65. *See id.* § 3.

66. Data was collected using Keycite and Shepard’s on Westlaw and Lexis, respectively. The 2013 numbers were projected using data through mid-July.



This data is consistent with the Court’s emphasis on § 101 as a significant limit on patentability. The implicit exceptions have more bite than ever before. Given the unpredictable breadth of the

statutory exceptions, as well as their less-than-longstanding importance to those who participate in the patent system, reliance on *stare decisis* alone seems inadequate to justify their persistence. The exceptions have changed too much—in content and in name—to be considered a well-settled rule of law, immune from full reconsideration.

### *B. Avoiding Absurd Results*

This rationale—cabining § 101 to avoid patents perceived to be absurd—figures most prominently in Justice Stevens’s concurrence in *Bilski*, the risk-hedging case.<sup>67</sup> The concurring Justices<sup>68</sup> agreed that the claims in question were not patent eligible, but would have gone further than the majority, reasoning that “a claim that merely describes a method of doing business does not qualify as a ‘process’ under § 101.”<sup>69</sup> The concurrence criticized the Court’s reliance on implicit statutory exceptions to decide the subject matter eligibility question, worrying that the Court’s analysis “can only cause mischief.”<sup>70</sup>

Justice Stevens noted the Court’s expansion of the implicit exceptions, for risk hedging is not a “principle in the abstract,” a “fundamental truth,” or an “abstract idea” in the genre of a mathematical formula:

Although I happen to agree that petitioners seek to patent an abstract idea, the Court does not show how this conclusion follows “clear[ly],” . . . from our case law. The patent now before us is not for “[a] principle, in the abstract,” or a “fundamental truth.” Nor does it claim the sort of phenomenon of nature or abstract idea that was embodied by the mathematical formula at issue in *Gottschalk v. Benson* and in [*Parker v.*] *Flook*.<sup>71</sup>

The concurrence stated a concern that “what constitutes an unpatentable abstract idea” is unclear and cautioned that abstractness should not be confused with breadth. Justice Stevens criticized the Court for “artificially limit[ing] petitioners’ claims to hedging, and then conclud[ing] that hedging is an abstract idea rather than a term that describes a category of processes including petitioners’ claims.”<sup>72</sup>

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67. See *Bilski v. Kappos*, 130 S. Ct. 3218, 3232 (2010) (Stevens, J., concurring).

68. Justice Stevens was joined by Justices Ginsburg, Breyer, and Sotomayor. See *id.*

69. *Bilski*, 130 S. Ct. at 3232 (Stevens, J., concurring).

70. *Id.* (Stevens, J., concurring).

71. *Id.* at 3235 (Stevens, J., concurring) (alteration in original) (citations omitted) (quoting *Parker v. Flook*, 437 U.S. 584, 589 (1978)) (citing *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)).

72. *Bilski*, 130 S. Ct. at 3235 (Stevens, J., concurring).

Justice Stevens expressed concern that the Court failed to provide “a satisfying account of what constitutes an unpatentable abstract idea”.<sup>73</sup>

[A] rule that broadly-phrased claims cannot constitute patentable processes could call into question our approval of Alexander Graham Bell’s famous fifth claim on “[t]he method of, and apparatus for, transmitting vocal or other sounds telegraphically, as herein described, by causing electrical undulations, similar in form to the vibrations of the air accompanying the said vocal or other sounds, substantially as set forth.”<sup>74</sup>

In making the case that business methods are per se ineligible under § 101, the concurrence states—numerous times—that a contrary interpretation of the statute would be “absurd” or “comical.” Justice Stevens noted that, if taken literally, the Court’s broad definition of process would mean that “[a]nything that constitutes a series of steps would be patentable so long as it is novel, non-obvious, and described with specificity” before stating that “the opinion cannot be taken literally on this point.”<sup>75</sup>

Justice Stevens expanded on the so-called absurdity at various points throughout the opinion:

[T]he [Court’s] approach would render § 101 almost comical. A process for training a dog, a series of dance steps, a method of shooting a basketball, maybe even words, stories, or songs if framed as the steps of typing letters or uttering sounds—all would be patent-eligible. I am confident that the term “process” in § 101 is not nearly so capacious.<sup>76</sup>

The Court attempts to avoid such absurd results by stating that these “[c]oncerns” “can be met by making sure that the claim meets the requirements of § 101.” Because the only limitation on the plain meaning of “process” that the Court acknowledges explicitly is the bar on abstract ideas, laws of nature, and the like, it is presumably this limitation that is left to stand between all conceivable human activity and patent monopolies. But many processes that would make for absurd patents are not abstract ideas. Nor can the requirements of novelty, nonobviousness, and particular description pick up the slack. A great deal of human activity was at some time novel and nonobvious.<sup>77</sup>

[A]lthough certain processes, such as those related to the technology of the time, might have been considered patentable, it is possible that against this background, it would have been seen as absurd for an entrepreneur to file a patent on methods of conducting business.<sup>78</sup>

While Justice Stevens used the absurdity doctrine to justify a business method exception to § 101, a similar argument could be made to explain the implicit exceptions for abstract ideas, laws of nature, and the like. The common thread is that none of these exceptions fit

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74. *Id.* at 3236 n.2 (Stevens, J., concurring) (citing *The Telephone Cases*, 126 U.S. 1, 531 (1888)).

75. *Id.* at 3235 (Stevens, J., concurring).

76. *Id.* at 3238 (Stevens, J., concurring).

77. *Id.* at 3238 n.5 (Stevens, J., concurring) (internal citations omitted).

78. *Id.* at 3245 (Stevens, J., concurring) (citation and internal quotation marks omitted).



comfortably within the statutory text, which states without qualification that “any new and useful process” is eligible for examination on the merits.<sup>79</sup>

The absurdity doctrine comes into play when the Court determines that Congress cannot have meant what it said.<sup>80</sup> If a certain reading of a statute would lead to “absurd” consequences, that reading can be avoided, even if it appears to be the most “natural” or “ordinary” meaning of the law.<sup>81</sup> Various formulations of the doctrine have been stated, some narrow, some not.

On one end of the spectrum, it has been said that a court may “correct” a statute only when Congress made a “scrivener’s error,” and the statute as written serves no “plausible purpose.”<sup>82</sup> When the language of the statute is plain, “judicial inquiry is complete except in rare and exceptional circumstances,” such as “where the application of the statute as written will produce a result ‘demonstrably at odds with the intentions of its drafters.’”<sup>83</sup>

The doctrine has also been used more loosely; consequences believed to be in tension with the “object” of the statute are labeled “absurd.” The Court’s statement in *Holy Trinity Church v. United States* is paradigmatic:

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79. 35 U.S.C. § 101 (2012).

80. See, e.g., *Clinton v. City of New York*, 524 U.S. 417, 429 (1998) (“Acceptance of the Government’s new-found reading of [the statute] ‘would produce an absurd and unjust result which Congress could not have intended.’” (quoting *Griffin v. Oceanic Contractors, Inc.*, 458 U.S. 564 (1982))).

81. See, e.g., *Griffin v. Oceanic Contractors, Inc.*, 458 U.S. 564, 575 (1982) (“It is true that interpretations of a statute which would produce absurd results are to be avoided if alternative interpretations consistent with the legislative purpose are available.” (citing *United States v. Am. Trucking Ass’ns, Inc.* 310 U.S. 534, 542–43 (1940); *Haggar Co. v. Helvering*, 308 U.S. 389, 394 (1940))); *Comm’r of Internal Revenue v. Brown*, 380 U.S. 563, 571 (1965) (“Unquestionably the courts, in interpreting a statute, have some scope for adopting a restricted rather than a literal or usual meaning of its words where acceptance of that meaning would lead to absurd results or would thwart the obvious purpose of the statute.” (citations and internal alterations omitted)), *superseded by statute*, Tax Reform Act of 1969, Pub. L. No. 91-172, 83 Stat. 487.

82. *Holloway v. United States*, 526 U.S. 1, 19 n.2 (1999) (Scalia, J., dissenting) (“Note that I am discussing what was a *plausible* congressional purpose in enacting this language—not what I necessarily think was the real one. I search for a plausible purpose because a text without one may represent a ‘scrivener’s error’ that we may properly correct.” (citing *Green v. Bock Laundry Machine Co.*, 490 U.S. 504, 528–29 (1989) (Scalia, J., concurring in judgment); *United States v. X-Citement Video, Inc.*, 513 U.S. 64, 82 (1994) (Scalia, J., dissenting))); *Union Bank v. Wolas*, 502 U.S. 151, 163 (1991) (Scalia, J., concurring) (“The ‘plain text of the statute’ prevails absent a ‘scrivener’s error’ producing an absurd result.”).

83. *Demarest v. Manspeaker*, 498 U.S. 184, 190 (1991) (quoting *Griffin v. Oceanic Contractors, Inc.*, 458 U.S. 564, 571 (1982)) (citing *Burlington N. R.R. Co. v. Okla. Tax Comm’n*, 481 U.S. 454, 461 (1987); *Rubin v. United States*, 449 U.S. 424, 430 (1981); *TVA v. Hill*, 437 U.S. 153, 187 (1978)).

The language of the act, if construed literally, evidently leads to an absurd result. If a literal construction of the words of a statute be absurd, the act must be so construed as to avoid the absurdity. The court must restrain the words. The object designed to be reached by the act must limit and control the literal import of the terms and phrases employed.<sup>84</sup>

It is a stretch to say that § 101 is absurd unless it excludes, for example, a method of hedging risk in energy markets (*Bilski*) or dosing a particular drug according to its rate of metabolic breakdown (*Prometheus*). These are practical applications of “abstract ideas” or “laws of nature,” not disembodied concepts. “Useful” advances are the bread and butter of the patent system.<sup>85</sup> While it may be absurd to interpret § 101 to encompass fundamental principles such as gravity or electricity, it is at least plausible that Congress intended the statute to encompass applications of these principles—even if the applications seem obvious, once the principles are understood. Thus, although the absurdity doctrine may support certain limited exceptions for true fundamental principles, it does not necessarily mandate an inquiry into whether an invention or discovery “add[s] enough” to the principle to warrant further scrutiny under the other statutory provisions.<sup>86</sup>

The question is not whether Congress could have intended patents on things like hedging risk, or “training a dog,” or “a series of dance steps.”<sup>87</sup> It is whether Congress could have intended patents on such things, provided they were new, nonobvious, and well-described.<sup>88</sup> Context matters in statutory interpretation,<sup>89</sup> and

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84. *Holy Trinity Church v. United States*, 143 U.S. 457, 460 (1892).

85. *See* 35 U.S.C. § 101 (2012).

86. *See Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1297 (2012).

87. *Bilski v. Kappos*, 130 S. Ct. 3218, 3238 (2010) (Stevens, J., concurring).

88. 35 U.S.C. §§ 102, 103, 112. The Court has in the past shown a willingness to deal with “bad” patents without resorting to the implicit exceptions. For example, in *Dann v. Johnston*, the Court found “no need to treat” the extensively briefed question of “the general patentability of computer programs,” since the claims were obvious under § 103. 425 U.S. 219, 220 (1976). The claims were directed to a “machine system for automatic record-keeping of bank checks and deposits.” *Id.* However, there is a concern—legitimate, in my opinion—that the normal screens for novelty and non-obviousness don’t work particularly well for business method claims “because business methods are both vague and not confined to any one industry, [and] there is not a well-confined body of prior art to consult.” *Bilski*, 130 S. Ct. at 3256 n.55 (Stevens, J., concurring) (citing Dreyfuss, *Are Business Methods Patents Bad for Business?*, 16 SANTA CLARA COMPUTER & HIGH TECH. L.J. 263, 268–70 (2000); Eisenberg, *Analyze This: A Law and Economics Agenda for the Patent System*, 53 VAND. L. REV. 2081, 2090 (2000); Merges, *Property Rights for Business Concepts and Patent System Reform*, 14 BERKELEY TECH. L.J. 577, 589–90 (1999)) (noting an argument made in academic debate).

89. *See Caraco Pharm. Labs., Ltd. v. Novo Nordisk A/S*, 132 S. Ct. 1670, 1680 (2012) (“Statutory interpretation focuses on ‘the language itself, the specific context in which that language is used, and the broader context of the statute as a whole.’” (quoting *Robinson v. Shell Oil Co.*, 519 U.S. 337, 341 (1997))).

when § 101 is viewed in concert with the other statutory criteria of patentability, it is at least debatable whether the implicit exceptions are necessary to avoid absurd results.

### C. A Textual Basis

By the terms of the statute, an invention or discovery must be “new and useful” to be patent eligible.<sup>90</sup> This language may provide a textual hook for the implicit exceptions. For example, it would be fair to characterize a “law of nature” (gravity, electricity, etc.) as preexisting—i.e., not “new”—even if just discovered. Some of the language in *Le Roy v. Tatham* is in accord:

[T]he processes used to extract, modify, and concentrate natural agencies [such as electricity], constitute the invention. The elements of the power exist; the invention is not in discovering them, but in applying them to useful objects.<sup>91</sup>

*Benson* similarly relies on the “new and useful” language to justify the natural law exception.<sup>92</sup>

This textual approach has several shortcomings. First, as recognized by the Court in *Bilski*, while the exceptions may be “consistent” with the “statutory text,” they are not “required” by it.<sup>93</sup> Section 101 covers both inventions and discoveries.<sup>94</sup> Invention connotes creation;<sup>95</sup> discovery, on the other hand, suggests finding (perhaps for the first time) something that was already there.<sup>96</sup> It is possible, then, that “new” in § 101 includes “newly discovered,” as in the first realization of a previously unknown natural law, or the first understanding of the medicinal properties of a plant lurking in the depths of the rainforest. It is difficult to reconcile the “or discovers” language in § 101 with the implicit exceptions.

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90. 35 U.S.C. § 101 (2012).

91. *Le Roy v. Tatham*, 55 U.S. (14 How.) 156, 175 (1852).

92. *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) (“If there is to be invention from such a discovery, it must come from the application of the law of nature to a new and useful end.” (quoting *Funk Bros. Seed Co. v. Kalo Co.*, 333 U.S. 127, 130 (1948))).

93. *Bilski*, 130 S. Ct. at 3225; see also Peter S. Menell, *Forty Years of Wandering in the Wilderness and No Closer to the Promised Land: Bilski’s Superficial Textualism and the Missed Opportunity to Return Patent Law to its Technology Mooring*, 63 STAN. L. REV. 1289, 1292 (2011) (criticizing *Bilski*’s “effort to shoehorn patentable subject matter into a superficial textual mold[, which] obfuscates patentable subject matter boundaries”).

94. 35 U.S.C. § 101 (“Whoever invents or discovers”).

95. *Invent*, MERRIAM-WEBSTER DICTIONARY ONLINE, <http://www.merriam-webster.com/dictionary/invent> (defining “invent” as “to produce (as something useful) for the first time through the use of the imagination or of ingenious thinking and experiment”).

96. *Discover*, MERRIAM-WEBSTER DICTIONARY ONLINE, <http://www.merriam-webster.com/dictionary/discover> (defining “discover” as “to make known or visible,” or “to obtain sight or knowledge of for the first time”).

Furthermore, the Court has expressly disavowed the inclusion of any “novelty” requirement in § 101. In *Diehr*, the Court stated:

It has been urged that novelty is an appropriate consideration under § 101. Presumably, this argument results from the language in § 101 referring to any “new and useful” process, machine, etc. Section 101, however, is a general statement of the type of subject matter that is eligible for patent protection “subject to the conditions and requirements of this title.” Specific conditions for patentability follow and § 102 covers in detail the conditions relating to novelty. The question therefore of whether a particular invention is novel is “wholly apart from whether the invention falls into a category of statutory subject matter.”<sup>97</sup>

And, even if certain implicit exceptions—laws of nature, physical phenomena—can be justified as not “new,” others—most notably, “abstract ideas”—cannot. Gravity exists, independent of Newton and his apple. A method of hedging risk, however, is not free-floating in the ether. It is a human creation, “new” to the first person to conceive of it.<sup>98</sup>

The Court’s belief that isolated DNA is not “new” played an important role in the § 101 analysis in *Myriad*. Speaking for the Court, Justice Thomas emphasized the Court’s obligation to “determine whether Myriad’s patents claim any ‘new and useful . . . composition of matter,’ or instead claim naturally occurring phenomena.”<sup>99</sup> Comparing the invention of Chakrabarty to Myriad’s patents, the opinion noted that “[t]he Chakrabarty bacterium was new ‘with markedly different characteristics from any found in nature . . . due to the additional plasmids and resultant capacity for degrading oil.’ In this case, by contrast, Myriad did not create anything.”<sup>100</sup>

Justice Thomas characterized much of Myriad’s work as discovery: “Myriad found the location of the BRCA1 and BRCA2 genes, but that discovery, by itself, does not render the BRCA genes

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97. *Diamond v. Diehr*, 450 U.S. 175, 189–90 (quoting *In re Bergy*, 596 F.2d 952, 961 (Cust. & Pat. App. 1979)). Justice Stevens reiterated this point in his concurrence in *Bilski*: “[T]he fact that hedging is long prevalent in our system of commerce cannot justify the Court’s conclusion, as the proper construction of § 101 does not involve the familiar issue of novelty that arises under § 102.” 130 S. Ct. at 3236 (Stevens, J., concurring) (quotation marks, and internal alterations omitted) (quoting *Parker v. Flook*, 437 U.S. 584, 588 (1978)).

98. See Menell, *supra* note 93 at 1300–01 (2011) (noting that Benson’s binary conversion algorithm was both new and useful, for “his discovery had not been publicly known or used in the United States, nor patented or described in a printed publication anywhere in the world, prior to his patent,” and “provided specific, substantial, and credible benefits to society”); Douglas L. Rogers, *After Prometheus, are Human Genes Patentable Subject Matter?*, 11 DUKE L. & TECH. REV. 434, 451 n.92 (2013) (commenting that the law of nature and natural phenomena exceptions are “fully consistent” with the statutory requirement of newness, but the abstract idea exception may not be).

99. *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013) (internal citations omitted) (quoting 35 U.S.C. § 101).

100. *Id.* at 2117 (internal citations omitted) (quoting *Diamond v. Chakrabarty*, 447 U.S. 303, 305 n.1, 310 (1980)).

‘new . . . composition[s] of matter,’ that are patent eligible.”<sup>101</sup> cDNA was distinguished as “unquestionably . . . new,” and therefore possibly patent eligible:

[T]he lab technician unquestionably creates something new when cDNA is made. cDNA retains the naturally occurring exons of DNA, but it is distinct from the DNA from which it was derived. As a result, cDNA is not a “product of nature” and is patent eligible under § 101, except insofar as very short series of DNA may have no intervening introns to remove when creating cDNA. In that situation, a short strand of cDNA may be indistinguishable from natural DNA.<sup>102</sup>

Section 101’s “newness” requirement, as articulated in *Myriad*, is squishy. The Court conceded that isolating DNA “technically creates new molecules with unique chemical compositions,”<sup>103</sup> but this was not enough to confer patent eligibility on *Myriad*’s claims. “Unquestionable” newness is sufficient; “technical” newness is not.

Unlike the novelty inquiry under § 102, a “newness” analysis under § 101 does not turn on details such as who published or sold what, when, and where. This flexibility permits a conclusion that certain portions of an invention are “routine” or “conventional” without elaborate discussion of the matter, or citation to pertinent prior art. In his *Diehr* dissent, Justice Stevens explained the distinction as follows:

[T]he character of the subject matter that the inventor claims to be novel [is the § 101 issue] and the question whether that subject matter is in fact novel [is] the § 102 issue.<sup>104</sup>

Later in the dissent, he elaborated:

If there is not even a claim that anything constituting patentable subject matter has been discovered, there is no occasion to address the novelty issue. Or, as was true in *Flook*, if the only concept that the inventor claims to have discovered is not patentable subject matter, § 101 requires that the application be rejected without reaching any issue under § 102; for it is irrelevant that unpatentable subject matter—in that case a formula for updating alarm limits—may in fact be novel.<sup>105</sup>

This mode of analysis is consistent with the Court’s present inclination to require “an ‘inventive concept,’ sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [implicit exception] itself.”<sup>106</sup> A patent that discloses nothing “new” beyond one of the implicit exceptions is not a “new” invention or discovery under § 101 (or so the argument goes). But, as already

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101. *Myriad*, 133 S. Ct. at 2117 (internal citations omitted) (quoting 35 U.S.C. § 101).

102. *Id.* at 2119.

103. *Id.* at 2115 (citing *Ass’n for Molecular Pathology v. United States Patent & Trademark Office*, 689 F.3d 1303, 1328 (2012)).

104. *Diamond v. Diehr*, 450 U.S. 175, 194 (1981) (Stevens, J., dissenting).

105. *Id.* at 211–12 (Stevens, J., dissenting).

106. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1294 (2012) (quoting *Parker v. Flook*, 437 U.S. 584, 593 (1978)).

discussed, the text of § 101 does not compel this result, which is premised on the idea that the implicit exceptions themselves cannot be “new.” That premise is doubtful, at least with respect to the abstract idea exception. The statutory text would appear to accommodate an invention based on a “new” idea implemented in an otherwise conventional manner.

#### *D. Natural Rights Theory*

Today, the primary justification for patents is utilitarian; society (through Congress) grants limited monopoly rights to incentivize innovation and corresponding disclosure, from which the next generation of advances springs.<sup>107</sup> Sir Isaac Newton got the idea: “If I have seen further it is by standing on the shoulders of giants.”<sup>108</sup> The utilitarian justification for patents is most often attributed to Thomas Jefferson.<sup>109</sup> It is recognized in the Intellectual Property Clause of our Constitution, which gives Congress 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>110</sup>

There is an alternative to this utilitarian view of patents, a belief that an inventor has a “natural right” to the “product of her mind.”<sup>111</sup> On this view, “it is right for a person, and only that person, to exploit the values that she creates.”<sup>112</sup> The creator cannot be separated from her creation.<sup>113</sup> Society may recognize the property

107. See, e.g., Adam Mossoff, *Who Cares What Thomas Jefferson Thought About Patents? Reevaluating the Patent “Privilege” in Historical Context*, 92 CORNELL L. REV. 953, 962 (2007) (commenting that Thomas Jefferson “forcefully advanced the utilitarian and economic justification of the patent system—the primary justification for patents today”).

108. Letter from Isaac Newton to Robert Hooke (Feb. 5, 1676), as transcribed in JEAN-PIERRE MAURY, *NEWTON: UNDERSTANDING THE COSMOS: NEW HORIZONS* (1992).

109. See Mossoff, *supra* note 107, at 959–67 (explaining the now well-accepted “Jeffersonian Story of Patent Law”); see also Eric Maughan, Note, *Protecting the Rights of Inventors: How Natural Rights Theory Should Influence the Injunction Analysis in Patent Infringement Cases*, 10 GEO. J.L. & PUB. POL’Y 215, 230 (2012) (noting that Jefferson’s writings are generally cited “as evidence that utilitarianism is the enshrined American patent theory”).

110. U.S. CONST. art. I, § 8, cl. 8.

111. Maughan, *supra* note 109, at 229–34 (discussing natural rights theory of intellectual property); see also Adam D. Moore, *A Lockean Theory of Intellectual Property*, 21 HAMLINE L. REV. 65 (1997) (“Rights to control intellectual works are not ultimately based solely on grounds of social utility.”).

112. Maughan, *supra* note 109, at 233.

113. See Chidi Oguamanam, *Beyond Theories: Intellectual Property Dynamics in the Global Knowledge Economy*, 9 WAKE FOREST INTELL. PROP. L.J. 104, 108 (2009) (“[T]he crux of natural rights thinking is that creators’ or inventors’ entitlement to their work is akin to an inherent natural right which the state is under an obligation to protect and enforce. . . . [T]he

right, but the “natural rights theory holds that the rights exist independent of any grant.”<sup>114</sup> The natural rights theory of intellectual property is associated with James Madison,<sup>115</sup> and although it has fallen out of favor, it was “relied upon by many early American courts.”<sup>116</sup>

The belief that intellectual property is a natural right is a twist on John Locke’s theory that one acquires a property interest in a material object by laboring on it:

It being by him removed from the common state nature hath placed it in, it hath by this labour something annexed to it, that excludes the common right of other men: for this labour being the unquestionable property of the labourer, no man but he can have a right to what that is once joined to, at least where there is enough, and as good, left in common for others.<sup>117</sup>

Locke’s theory can be adapted to explain intellectual property rights by recognizing that creation through intellectual labor can be as personal, and valuable, as might modification through physical labor.<sup>118</sup> Note, however, that Locke stated an important caveat: an individual’s claim to exclusive rights should leave “enough, and as good, . . . in common for others.”<sup>119</sup>

The Court’s patent-eligibility jurisprudence took on a natural rights flavor from the beginning. In *Le Roy*, the Court stated that certain things—“a fundamental truth; an original cause; a motive”—“cannot be patented, as no one can claim in either of them an exclusive right.”<sup>120</sup> The same with “any . . . power in nature,” such as

theory builds upon the primacy of personhood which promotes the notion of the inseparability of the creator from her creation.”).

114. Maughan, *supra* note 109, at 233.

115. See *id.* at 231; Mosoff, *supra* note 107, at 977–85. But see *Golan v. Holder*, 132 S. Ct. 873, 901 (2012) (Breyer, J., dissenting) (stating that both Jefferson and Madison “embraced” a “utilitarian view of copyrights and patents”).

116. Maughan, *supra* note 109, at 231 & n.92 (collecting cases); cf. Andrew M. Hetherington, *Constitutional Purpose and Inter-Clause Conflict: The Constraints Imposed on Congress by the Copyright Clause*, 9 MICH. TELECOMM. & TECH. L. REV. 457, 468 (2003) (noting that both “theoretical justifications for intellectual property rights”—the natural rights theory and the instrumentalist theory—were floating around at the time of the Founding).

117. JOHN LOCKE, *SECOND TREATISE OF CIVIL GOVERNMENT*, ch. 5, § 27 (1690).

118. See Kenneth Einar Himma, *Toward a Lockean Moral Justification of Legal Protection of Intellectual Property*, 49 SAN DIEGO L. REV. 1105, 1134 (2012) (commenting that Locke’s views on intellectual property are unknown, but that his labor mixing theory “would have to be modified in some significant way to apply to . . . intellectual objects”); Maughan, *supra* note 109, at 232 n.98 (noting that a natural rights-based theory of intellectual property “differs slightly from the usual interpretation of Locke, in that the focus is on *creation* of value (production), rather than merely one form of creating value (physical labor)”).

119. LOCKE, *supra* note 117, at ch. 5, § 27; see Himma, *supra* note 118, at 1136 (“[I]f it makes sense to think that there is enough left for others in the ‘intellectual commons’ or if there is nothing that would count as an intellectual commons at all, then the argument for intellectual property protection seems that much stronger.”).

120. *Le Roy v. Tatham*, 55 U.S. (14 How.) 156, 175 (1852).

electricity, “which is alike open to all.”<sup>121</sup> A property right arises only upon human intervention—“the processes used to extract, modify, and concentrate natural agencies,” to “apply[] them to useful objects.”<sup>122</sup>

Later cases continued to stress the natural rights ideals that a genuine human contribution (“labor,” in the words of Locke) is necessary to create exclusive rights, and that such rights must leave “enough” in the public domain (Locke’s “commons”). In *Funk Brothers Seed Co. v. Kalo Inoculant Co.*, the Court held that a plant inoculant made from a particularly effective mixture of bacteria was not patent eligible, for

[t]he qualities of these bacteria, like the heat of the sun, electricity, or the qualities of metals, are part of the storehouse of knowledge of all men. They are manifestations of laws of nature, free to all men and reserved exclusively to none. . . . If there is to be invention from such a discovery, it must come from the application of the law of nature to a new and useful end.<sup>123</sup>

The Court in *Chakrabarty* relied on *Funk Brothers*’s “free to all men and reserved exclusively to none” language in explaining the limits of § 101:

[A] new mineral discovered in the earth or a new plant found in the wild is not patentable subject matter. Likewise, Einstein could not patent his celebrated law that  $E=mc^2$ ; nor could Newton have patented the law of gravity.<sup>124</sup>

The *Funk Brothers* passage was repeated in *Diehr*,<sup>125</sup> *Bilski*,<sup>126</sup> *Prometheus*,<sup>127</sup> and *Myriad*.<sup>128</sup>

In the latter three cases, the Court’s concern that certain patents may take too much from the public domain is evident. In *Bilski*, the Court stated that “[a]llowing petitioners to patent risk hedging would pre-empt use of this approach in all fields, and would effectively grant a monopoly over an abstract idea.”<sup>129</sup> In *Prometheus*, the Court stated the “basic underlying concern that [the asserted] patents tie up too much future use of laws of nature.”<sup>130</sup> Most recently, in *Myriad*, the Court began by observing that *Myriad*’s assertions of infringement “solidified its position as the only entity

121. *Id.*

122. *Id.*

123. *Funk Bros. Seed Co. v. Kalo Co.*, 333 U.S. 127, 130 (1948) (citing *Telephone Cases*, 126 U.S. 1, 532–33 (1888); *De Forest Radio Co. v. General Electric Co.*, 283 U.S. 664, 684–85 (1931); *Mackay Radio & Tel. Co. v. Radio Corp.*, 306 U.S. 86, 94 (1939); *Cameron Septic Tank Co. v. Saratoga Springs*, 159 F. 453, 462–63 (2d Cir. 1908)).

124. *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980).

125. *Diamond v. Diehr*, 450 U.S. 175, 185 (1981).

126. *Bilski v. Kappos*, 130 S. Ct. 3218, 3225 (2010).

127. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293 (2012).

128. *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013).

129. *Bilski*, 130 S. Ct. at 3231.

130. *Prometheus*, 132 S. Ct. at 1302.



providing BRCA testing.”<sup>131</sup> The Court explained that the implicit exceptions to § 101 were needed to avoid the “considerable danger that the grant of patents would ‘tie up’” the “basic tools of scientific and technological work.”<sup>132</sup> *Flook* had previously acknowledged a similar interest in preserving the intellectual commons, stating that “the public must not be deprived of any rights that it theretofore freely enjoyed.”<sup>133</sup>

As discussed below, the preemption concern can be understood on a utilitarian basis. If we allow people to take (in the form of exclusive property rights) more than they give (their inventive contributions, as disclosed to the world), innovation may slow rather than grow. The natural rights rubric, however, provides a similar critique of excessive preemption. Preempting too much is the same as failing to leave “enough, and as good” for others, a violation of one of Locke’s central tenets.

The problem with this position is that the Court has rejected a natural law justification for our patent system. In *Graham v. John Deere Co. of Kansas City*, the Court stated that the patent power is a “qualified authority,” which “is limited to the promotion of advances in the ‘useful arts.’”<sup>134</sup> The Court dubbed Jefferson the “moving spirit” behind our patent system and noted his rejection of intellectual property as a natural right:

[Jefferson] rejected a natural-rights theory in intellectual property rights and clearly recognized the social and economic rationale of the patent system. The patent monopoly was not designed to secure to the inventor his natural right in his discoveries. Rather, it was a reward, an inducement, to bring forth new knowledge. The grant of an exclusive right to an invention was the creation of society—at odds with the inherent free nature of disclosed ideas—and was not to be freely given.<sup>135</sup>

The Court in *Golan v. Holder*, a case concerning legislation that extended copyright to certain works previously in the public domain, expressed skepticism that the “public domain [is] a category of constitutional significance.”<sup>136</sup> Thus, while the implicit exceptions may have a basis in natural rights theory, the Court has never said so.

131. *Myriad*, 133 S. Ct. at 2114.

132. *Id.* at 2116 (quoting *Prometheus*, 132 S. Ct. at 1293, 1301).

133. *Parker v. Flook*, 437 U.S. 584, 593 n.15 (1978) (quoting P. ROSENBERG, PATENT LAW FUNDAMENTALS, § 4, p. 13 (1975)).

134. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 5 (1966).

135. *Id.* at 8–9; see also *Golan v. Holder*, 132 S. Ct. 873, 902 (2012) (Breyer, J., dissenting) (observing that a “utilitarian understanding of the Copyright Clause has long been reflected in the Court’s case law,” and collecting cases).

136. *Golan*, 132 S. Ct. at 884–88 & 88 n.26 (2012).

*E. Purposive Interpretation*

One of the longstanding statutory interpretation debates concerns just how far a court may go in conforming (or bending, or construing, or reconciling) Congress's words to achieve the perceived purpose of the law. Must the literal text yield to the statutory objective, or vice versa? The Court's *Holy Trinity Church* opinion provides the classic statement that purpose must prevail: "It is a familiar rule that a thing may be within the letter of the statute and yet not within the statute, because not within its spirit nor within the intention of its makers."<sup>137</sup> Contemporary versions tend to be more respectful of the statutory text, while still stressing the importance of interpreting the law in light of its purpose. The Court's statement in *Dolan v. United States Postal Service* is exemplary: "Interpretation of a word or phrase depends upon reading the whole statutory text, considering the purpose and context of the statute, and consulting any precedents or authorities that inform the analysis."<sup>138</sup>

Critics of this approach see over-reliance on statutory purpose as a usurpation of the legislative role. The courts are to interpret what Congress actually did, not decide what Congress should have done. Justice Scalia, speaking for the Court in *Great-West Life & Annuity Insurance Company v. Knudson*, expressed the sentiment: "It is . . . not our job to find reasons for what Congress has plainly done; and it is our job to avoid rendering what Congress has plainly done . . . devoid of reason and effect."<sup>139</sup> Justice Thomas reiterated the point in *Florida Department of Revenue v. Piccadilly Cafeterias, Inc.* that courts should not substitute their "policy" views "for the legislation which has been passed by Congress."<sup>140</sup> Under this approach, "vague notions" of the "basic purpose" of a statute cannot "overcome the words of its text regarding the specific issue under consideration."<sup>141</sup>

The Court has said that the implicit exceptions to § 101 may further the basic purpose of the patent system, namely to promote innovation. In *Le Roy*, the Court warned that patenting "[a] principle,

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137. *Holy Trinity Church v. United States*, 143 U.S. 457, 459 (1892).

138. *Dolan v. United States Postal Serv.*, 546 U.S. 481, 486 (2006); *see also* *Chapman v. Houston Welfare Rights Org.*, 441 U.S. 600, 608 (1979) ("As in all cases of statutory construction, our task is to interpret the words of the[] statutes in light of the purposes Congress sought to serve."); *Comm'r of Internal Revenue v. Brown*, 380 U.S. 563, 571 (1965) (noting that a statute need not be given its "usual meaning" if doing so would "thwart" the law's "obvious purpose").

139. *Great-West Life & Annuity Ins. Co. v. Knudson*, 534 U.S. 204, 217–18 (2002).

140. *Fla. Dep't of Revenue v. Piccadilly Cafeterias, Inc.*, 554 U.S. 33, 52 (2008) (quoting *In re Hechinger Inv. Co. of Del., Inc.*, 335 F.3d 243, 256 (2003)).

141. *Mertens v. Hewitt Assocs.*, 508 U.S. 248, 262 (1993) (citing *Pension Benefit Guar. Corp. v. LTV Corp.*, 496 U.S. 633, 646–47 (1990)).

in the abstract,” or a “power in nature” would “discourage” innovation, thereby frustrating the “avowed policy of the patent laws.”<sup>142</sup>

The *Bilski* concurrences likewise relied on the statute’s utilitarian purpose to explain the implicit exceptions. Justice Stevens, joined by Justices Ginsburg, Breyer, and Sotomayor, stated that patenting “‘laws of nature, natural phenomena, and abstract ideas’ . . . would stifle the very progress that Congress is authorized to promote.”<sup>143</sup> Justice Breyer, joined by Justice Scalia, opined that the “underlying policy of the patent system” (i.e., that the public good must outweigh “the restrictive effect of the limited patent monopoly”) serves as a limit to § 101’s “broad” text.<sup>144</sup>

This policy rationale was adopted by the Court in *Prometheus* and *Myriad*. In *Prometheus*, the unanimous Court equated the implicit exceptions to “the basic tools of scientific and technological work,” monopolization of which “might tend to impede innovation more than it would tend to promote it.”<sup>145</sup> *Myriad* reiterated that, by recognizing implicit exceptions to § 101, the Court avoided the “considerable danger” that patents might “tie up” too much and “inhibit further innovation,” which would be contrary to “the very point of patents, which exist to promote creation.”<sup>146</sup>

The Court’s purpose-based interpretation of § 101 is noteworthy in several respects. In searching for congressional purpose, courts typically rely, at least somewhat, on the words of the statute to guide the way. It has often been said that there is “no more persuasive evidence of the purpose of a statute than the words by which the legislature undertook to give expression to its wishes,”<sup>147</sup> and that “no legislation pursues its purposes at all costs.”<sup>148</sup> Yet the text of § 101 is little discussed in the Court’s opinions. It is unclear, for example, how Congress’s inclusion of “any new and useful process” in § 101 suggests exclusion of *Bilski*’s claimed method for risk hedging

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142. *Le Roy v. Tatham*, 55 U.S. (14 How.) 156, 175 (1852).

143. *Bilski v. Kappos*, 130 S. Ct. 3218, 3253 (2010) (Stevens, J., concurring) (quoting *Diamond v. Diehr*, 450 U.S. 175, 185 (1981)) (citing *O’Reilly v. Morse*, 56 U.S. (15 How.) 62, 113 (1853)).

144. *Id.* at 3258 (Breyer, J., concurring) (quoting *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 10–11 (1966)).

145. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293 (2012) (quoting *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)).

146. *See Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013) (quoting *Prometheus*, 132 S. Ct. at 1289, 1301) (citing *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980)).

147. *See, e.g., Perry v. Commerce Loan Co.*, 383 U.S. 392, 400 (1966) (quoting *United States v. Am. Trucking Ass’n*, 310 U.S. 534, 543 (1940)).

148. *See Rodriguez v. United States*, 480 U.S. 522, 525–26 (1987).

in energy markets (which is certainly “useful” and is “new” so long as no one had come up with it before).<sup>149</sup>

Courts may use statutory purpose to resolve ambiguities in the text, but “[w]hen the words of a statute are unambiguous . . . ‘judicial inquiry is complete.’”<sup>150</sup> The Court has not held that § 101 is ambiguous; to the contrary. In *Chakrabarty*, that Court stated:

[W]e perceive no ambiguity [in § 101]. The subject-matter provisions of the patent law have been cast in broad terms to fulfill the constitutional and statutory goal of promoting “the Progress of Science and the useful Arts” with all that means for the social and economic benefits envisioned by Jefferson. Broad general language is not necessarily ambiguous when congressional objectives require broad terms.<sup>151</sup>

The clarity of § 101’s text seems to work against the creation of implicit statutory exceptions. And, even if § 101 was somewhat ambiguous—is a natural law or a fundamental principle “new”? Is a method of doing business a “process”?—it would be odd to solve that perceived ambiguity by adding an additional layer of uncertainty to the statute’s scope. For example, how much more than an “abstract idea” is “enough” to satisfy § 101?

Given the straightforward language of § 101, what accounts for the implicit exceptions to the statute? Recall that the “implicit exception” label showed-up for the first time in the § 101 context in *Prometheus*.<sup>152</sup> Justice Breyer wrote *Prometheus*, and his past opinions reveal a willingness to find statutory exceptions when necessary to achieve the purpose of the law.

In *F.C.C. v. NextWave Personal Communications Inc.*, Justice Breyer dissented from the Court’s interpretation of a bankruptcy statute.<sup>153</sup> Justice Breyer took the majority to task for “rely[ing] exclusively upon the literal meaning of [the] statute’s words divorced from consideration of the statute’s purpose.”<sup>154</sup> He explained that “[l]aw is tied to life” and should not be interpreted to “undermine the very human activity that the law seeks to benefit.”<sup>155</sup> In Justice Breyer’s view, “[g]eneral terms as used on particular occasions often

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149. Cf. *Bilski*, 130 S. Ct. at 3226 (“Any suggestion in this Court’s case law that the Patent Act’s terms deviate from their ordinary meaning has only been an explanation for the exceptions for laws of nature, physical phenomena, and abstract ideas.” (citing *Parker v. Flook*, 437 U.S. 584, 588–89 (1978))).

150. *Conn. Nat’l Bank v. Germain*, 503 U.S. 249, 254 (1992) (quoting *Rubin v. United States*, 449 U.S. 424, 430 (1981)).

151. *Diamond v. Chakrabarty*, 447 U.S. 303, 315 (1980).

152. See *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1289 (2012).

153. See *FCC v. NextWave Personal Commc’ns Inc.*, 537 U.S. 293, 310–11 (2003) (Breyer, J., dissenting).

154. *Id.* at 311 (Breyer, J., dissenting).

155. *Id.* (Breyer, J., dissenting).

carry with them implied restrictions” so as to avoid consequences which are “at odds with the statute’s basic objectives.”<sup>156</sup>

This explains Justice Breyer’s view of patent eligibility, which he articulated in *Laboratory Corp. of America Holdings v. Metabolite Laboratories, Inc.*<sup>157</sup> *LabCorp* was *Prometheus* before *Prometheus*. The patent at issue was to “a process for helping to diagnose deficiencies of two vitamins, folate and cobalamin.”<sup>158</sup> The diagnostic test was based on the correlation between the level of a particular amino acid in the body and vitamin deficiency.<sup>159</sup> The Court granted certiorari to decide the following question:

Whether a method patent setting forth an indefinite, undescribed, and non-enabling step directing a party simply to “correlate” test results can validly claim a monopoly over a basic scientific relationship used in medical treatment such that any doctor necessarily infringes the patent merely by thinking about the relationship after looking at a test result.<sup>160</sup>

The Court later dismissed the petition as improvidently granted, over Justice Breyer’s dissent. The dissent argued that the patent was invalid under the “natural phenomenon” doctrine, and it wasn’t even close.<sup>161</sup> The unpatentability of “fundamental scientific principles” and “manifestations of laws of nature” was justified as consistent with promoting innovation. Such exclusions “reflect[] a basic judgment that protection in such cases, despite its potentially positive incentive effects, would too often severely interfere with, or discourage, development and the further spread of useful knowledge itself.”<sup>162</sup> Interestingly, Justice Breyer’s opinion suggests that the Court in 2006 had not yet settled on a home for the implicit exceptions, stating that “the ‘law of nature’ principle most comfortably fits” in § 101 of the Patent Act.<sup>163</sup> That a statutory exception can exist in the abstract, untethered to any particular provision of the law,

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156. *Id.* (Breyer, J., dissenting).

157. *See* *Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 548 U.S. 124, 126–27 (2006) (Breyer, J., dissenting from dismissal of writ of certiorari).

158. *Id.* at 125 (Breyer, J., dissenting from dismissal of writ of certiorari).

159. *See id.* (Breyer, J., dissenting from dismissal of writ of certiorari).

160. *Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 546 U.S. 975 (2005) (granting certiorari on question three of the petition), *order vacated on reconsideration by* *Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 546 U.S. 999 (2005).

161. *See* *Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 548 U.S. 124, 135 (2006) (Breyer, J., dissenting from dismissal of writ of certiorari) (“[T]his case is not at the boundary. It does not require us to consider the precise scope of the ‘natural phenomenon’ doctrine or any other difficulty issue. In my view, [the claim] is invalid no matter how narrowly one reasonably interprets that doctrine.”).

162. *Id.* at 128 (Breyer, J., dissenting from dismissal of writ of certiorari).

163. *See id.* at 132 (Breyer, J., dissenting from dismissal of writ of certiorari) (citing 35 U.S.C. § 101; *Parker v. Flook*, 437 U.S. 584, 588–89 (1978)).

further illustrates the purposive approach to defining patent eligibility.

As discussed above, *Prometheus* is similarly reasoned. This is not surprising, given Justice Breyer's authorship. What is surprising, at least at first glance, is that the entire Court signed-on to an opinion that so plainly exalts the purpose of the law over the words of the statute. And then the entire Court ratified the *Prometheus* approach in *Myriad*, an opinion penned by Justice Thomas. How does the purpose-first methodology of *Prometheus* square with the idea that "courts must presume that a legislature says in a statute what it means and means in a statute what it says there"?<sup>164</sup> Why doesn't "any new and useful process" mean any new and useful process?<sup>165</sup> The key, I think, derives from the source of the patent power.

The purpose of patents—to promote innovation—is no ordinary legislative purpose. It resides in the Constitution, not the congressional record. Thus, the patent eligibility question has a constitutional dimension, as articulated by Justice Breyer in his *LabCorp* dissent:

The justification for the [implicit exceptions] does not lie in any claim that "laws of nature" are obvious, or that their discovery is easy, or that they are not useful. . . . Rather, the reason for the exclusion is that sometimes *too much* patent protection can impede rather than "promote the Progress of Science and useful Arts," the constitutional objective of patent and copyright protection. U.S. Const., Art. I, § 8, cl. 8.<sup>166</sup>

When the Constitution is involved, statutory interpretation changes. Here, it changes in a way that might explain the Court's unanimous acceptance of the implicit exceptions.

### *F. The Constitutional Avoidance Twist*

Courts interpret statutes so that they do not conflict with the Constitution. This is called the constitutional avoidance canon. An oft-cited formulation is stated in *I.N.S. v. St. Cyr*:

[I]f an otherwise acceptable construction of a statute would raise serious constitutional problems, and where an alternative interpretation of the statute is "fairly possible," [courts] are obligated to construe the statute to avoid such problems.<sup>167</sup>

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164. Conn. Nat'l Bank v. Germain, 503 U.S. 249, 253–54 (1992) (citing United States v. Ron Pair Enters., Inc., 489 U.S. 235, 241–42 (1989); United States v. Goldenberg, 168 U.S. 95, 102–03 (1897); Oneale v. Thornton, 10 U.S. (6 Cranch) 53, 68 (1810)).

165. See 35 U.S.C. § 101 (2012); Cf. Ali v. Fed. Bureau of Prisons, 552 U.S. 214, 218–19 (2008) (interpreting the statutory term "any" as "broad" and "expansive").

166. *Lab. Corp.*, 548 U.S. at 126–27.

167. See *I.N.S. v. St. Cyr*, 533 U.S. 289, 299–300 (2001) (internal citations omitted) (quoting *Crowell v. Benson*, 285 U.S. 22, 65 (1932)) (citing *Ashwander v. TVA*, 297 U.S. 288, 341, 345–48 (1936) (Brandeis, J., concurring); *United States ex rel Attorney General v. Del. & Hudson Co.*, 213 U.S. 366, 408 (1909)), *superseded by statute*, REAL ID Act, 8 U.S.C. § 1252.

The canon has been justified by assuming that Congress would not have intended to pass unconstitutional laws. As stated in *Edward J. DeBartolo Corp. v. Florida Gulf Coast Building & Construction Trades Council*, “[t]his approach . . . recognizes that Congress, like this Court, is bound by and swears an oath to uphold the Constitution. The courts will therefore not lightly assume that Congress intended to infringe constitutionally protected liberties or usurp power constitutionally forbidden it.”<sup>168</sup> Another argument for constitutional avoidance is its longevity. It “has for so long been applied by th[e] Court that it is beyond debate.”<sup>169</sup>

The constitutional provision that has shaped the Court’s patent eligibility jurisprudence is, not surprisingly, the Intellectual Property Clause. The Court’s § 101 opinions, particularly the recent ones, reflect a belief that the implicit exceptions may be needed “to promote the progress of . . . useful Arts.” In *Myriad*, the Court stated that patents on laws of nature or abstract ideas would pose “considerable danger” to “future innovation,” which would be “at odds with the very point of patents, which exist to promote creation.”<sup>170</sup> The *Myriad* Court also referenced the “delicate balance” struck by patent law, a desire to locate the tipping point at which exclusive rights hinder innovation rather than help.<sup>171</sup> The Intellectual Property Clause was not cited, but its influence is apparent.

In *Prometheus*, the Court stated that patenting “basic tools of scientific and technological work . . . might tend to impede innovation more than it would tend to promote it.”<sup>172</sup> As in *Myriad*, the Court’s concern with promoting progress calls the Intellectual Property Clause

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168. See *Edward J. DeBartolo Corp. v. Fla. Gulf Coast Bldg & Constr. Trades Council*, 485 U.S. 568, 575 (1988) (citing *Grenada Co. Supervisors v. Brogden*, 112 U.S. 261, 269 (1884)); see also *Regan v. Time, Inc.*, 468 U.S. 641, 697 (1984) (“[T]he [constitutional avoidance] maxim . . . reflects a judicial presumption concerning the intent of the draftsmen of the language in question. In areas where legislation might intrude on constitutional guarantees, we believe that Congress, which also has sworn to protect the Constitution, would intend to err on the side of fundamental constitutional liberties when its legislation implicates those liberties.”).

169. *Edward J. DeBartolo Corp.*, 485 U.S. at 575 (citations omitted); see also Richard L. Hasen, *Constitutional Avoidance and Anti-Avoidance by the Roberts Court*, 2009 SUP. CT. REV. 181, 186–87 (noting additional justifications for the avoidance canon, including as “a low salience mechanism for giving effect to . . . ‘underenforced constitutional norms’” and as a mechanism to help “courts conserve their institutional capital” (quoting William N. Eskridge, Jr., Philip P. Frickey & Elizabeth Garret, *Cases and Materials on Legislation: Statutes and the Creation of Public Policy* 918 (West, 4th ed. 2007))).

170. *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013) (citations omitted).

171. *Id.*

172. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293 (2012) (internal citations and quotation marks omitted).

to mind, although it was not mentioned explicitly.<sup>173</sup> Later on, the Court reiterated the “risk” that “tying up” natural laws could “inhibit[] their use in the making of further discoveries.”<sup>174</sup>

Justice Stevens’s concurrence in *Bilski* expressed similar sentiments, but unlike *Prometheus* and *Myriad*, Justice Stevens expressly noted the constitutional aspect:

The Court has kept this “constitutional standard” in mind when deciding what is patentable subject matter under § 101. For example, we have held that no one can patent “laws of nature, natural phenomena, and abstract ideas.” These “are the basic tools of scientific and technological work,” and therefore, if patented, would stifle the very progress that Congress is authorized to promote.<sup>175</sup>

The concurrence saw ambiguity in § 101, such that the statute could be interpreted to achieve a “careful balance” between patents that promote innovation and those that do not.<sup>176</sup> Business method patents fell on the wrong side of the line.

Since the constitutional concern is so evident, why has the Court not called upon the avoidance canon to justify the implicit exceptions, despite the opportunity to do so? The constitutional question was presented in *Myriad*. In its petition for certiorari, the Association for Molecular Pathology argued that patents on isolated DNA are invalid under the Constitution, since “[t]he rationale for granting a patent - the need to create economic incentives to advance science - did not apply in this case.”<sup>177</sup> In *Prometheus*, LabCorp as amicus argued that “patents on measurements of nature” lack “originality,” which “raises serious questions under” the Intellectual Property Clause that should be avoided if possible.<sup>178</sup> Yet, the Court’s recent opinions in both *Prometheus* and *Myriad* use the language of the Constitution (to “promote” innovation) without actually citing the document. There are several reasons why the Court might hesitate to openly constitutionalize the issue of patent eligibility.

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173. Compare U.S. Const. art. I, § 8, cl. 8 (“To 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.”), with *Prometheus*, 132 S. Ct. at 1293 (“[G]rant of a patent might tend to impede innovation more than it would tend to promote it.”).

174. *Id.* at 1294.

175. See *Bilski v. Kappos*, 130 S. Ct. 3218, 3253 (2010) (Stevens, J., concurring) (quoting *Diamond v. Diehr*, 450 U.S. 175, 185 (1981); *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)) (citing *O’Reilly*, 56 U.S. (15 How.) 62, 113 (1853)).

176. See *id.* at 3252.

177. Petition for Writ of Certiorari at 26, *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107 (2013) (No. 12-398), 2012 WL 4502947, at \*26.

178. Brief for ARUP Labs., Inc. & Lab. Corp. of Am. Holdings as Amici Curiae in Support of Petitioners at 20–21, *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289 (2012) (No. 10-1150), 2011 WL 4071919, at \*20–21.



First, the avoidance canon applies when the constitutional interpretation of the statute “is fairly possible.”<sup>179</sup> It “has no application in the absence of statutory ambiguity.”<sup>180</sup> As discussed above, Justice Stevens, concurring in *Bilski*, found § 101 ambiguous.<sup>181</sup> But the Court has never rejected *Chakrabarty*’s position that the statute is broad but not ambiguous.<sup>182</sup> The Court has not explained how the text of § 101 may bear a reading that excludes all things which do not, in the eyes of the judiciary, amount to “significantly more” than an “abstract idea” or “law of nature.” Because the Court has yet to undertake an “ordinary textual analysis” of § 101 to demonstrate that the statute is “susceptible of more than one construction,” the canon of constitutional avoidance is inapplicable, at least in its traditional sense.<sup>183</sup>

Even presuming ambiguity in § 101, the canon is generally used to avoid “serious constitutional problems”<sup>184</sup> and “serious doubt[s] of constitutionality.”<sup>185</sup> It is, at best, an educated guess that implicit exceptions to § 101 are necessary to “promote the progress of . . . useful arts,” i.e., to avoid a potential conflict with the Intellectual Property Clause. The Court has acknowledged as much through the soft language used to describe the consequences of an exception-less § 101. The *Prometheus* Court stated that an overly inclusive view of patent eligibility “might tend to impede innovation more than it would tend to promote it.”<sup>186</sup> A broad § 101 would “risk” inhibiting further discoveries.<sup>187</sup> *Myriad* uses slightly stronger

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179. See *I.N.S. v. St. Cyr*, 533 U.S. 289, 299–300 (2001).

180. *United States v. Oakland Cannabis Buyers’ Coop.*, 532 U.S. 483, 494 (2001); see also *Gonzalez v. Carhart*, 550 U.S. 124, 154 (2007) (“[T]he canon of constitutional avoidance does not apply if a statute is not ‘genuinely susceptible to two constructions.’” (quoting *Alamendarez-Torres v. United States*, 523 U.S. 224, 238 (1998))); *Chapman v. United States*, 500 U.S. 453, 464 (1991) (“The canon of construction that a court should strive to interpret a statute in a way that will avoid an unconstitutional construction is useful in close cases, but it is ‘not a license for the judiciary to rewrite language enacted by the legislature.’” (quoting *United States v. Monsanto*, 491 U.S. 600, 611 (1989))).

181. See *Bilski v. Kappos*, 130 S. Ct. 3218, 3252 (Stevens, J., concurring).

182. See *Diamond v. Chakrabarty*, 447 U.S. 303, 315 (1980).

183. See *Clark v. Martinez*, 543 U.S. 371, 385 (2005) (citing *Almendarez-Torres v. United States*, 523 U.S. 224, 237–38 (1998); *United States ex rel. Attorney General v. Del. & Hudson Co.*, 213 U.S. 366 (1909)).

184. *St. Cyr*, 533 U.S. at 299–300 (citing *Crowell v. Benson*, 285 U.S. 22, 62 (1932)).

185. *United States v. Thirty-Seven (37) Photographs*, 402 U.S. 363, 369 (1971) (citing *Crowell v. Benson*, 285 U.S. 22, 62 (1932)).

186. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293 (2012).

187. *Id.* at 1294.

language—“considerable danger”<sup>188</sup>—but it still falls short of proclaiming grave or “serious” constitutional doubts.

Whether or not the substantive criteria of patentability set forth in § 102 (novelty), § 103 (nonobviousness), and § 112 (enablement and adequate written description) are capable of screening out enough “bad” patents such that the patent system, as a whole, could promote innovation consistent with the Intellectual Property Clause would seem to be unknowable,<sup>189</sup> or at least beyond the purview of the judiciary.<sup>190</sup> When a statute might (or might not) conflict with the Constitution, the avoidance canon need not be applied. As the Court said in *Almendarez-Torres v. United States*, the absence of an “obvious answer” to the constitutional question is crucial in determining the canon’s applicability (or lack thereof):

[T]he “constitutional doubt” doctrine does not apply mechanically whenever there arises a significant constitutional question the answer to which is not obvious. And precedent makes clear that the Court need not apply (for it has not always applied) the doctrine in circumstances . . . where a constitutional question, while lacking an obvious answer, does not lead a majority gravely to doubt that the statute is constitutional.<sup>191</sup>

Without an “obvious answer,” Congress’s policy judgment usually prevails, as it did in *Golan v. Holder*.<sup>192</sup>

In *Golan*, the Court held that the Uruguay Round Agreements Act (URAA), which had the effect of removing certain works from the public domain, did not violate the Intellectual Property Clause.<sup>193</sup> The Court stressed that Congress has discretion to craft an “intellectual

188. See *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013).

189. Cf. Vincent Y. Ling, *Patently Ours? Constitutional Challenges to Gene Patents*, 14 U. PA. J. CONST. L. 813, 832–34 (2012) (surveying studies and concluding that “the net effect of upstream patents on research is far from clear”).

190. Cf. *Prometheus*, 132 S. Ct. at 1303 (“[O]ur cases have not distinguished among different laws of nature according to whether or not the principles they embody are sufficiently narrow. And this is understandable. Courts and judges are not institutionally well suited to making the kinds of judgments needed to distinguish among different laws of nature.” (citation omitted)); Simone A. Rose, *The Supreme Court and Patents: Moving Toward a Postmodern Vision of “Progress”*, 23 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 1197, 1246 (2013) (opining that the otherwise flawless *Prometheus* opinion “fails to clearly articulate a connection between the constitutional limitation ‘to promote progress’ and how the limitation necessitates the ‘bright-line’ law of nature exclusion and restores balance to evaluating the law of nature exclusion and Section 101 as the threshold test for patentability” (quoting Peter S. Menell, *Forty Years of Wondering in the Wilderness and No Closer to the Promise Land: Bilski’s Superficial Textualism and the Missed Opportunity to Return Patent Law to its Technology Mooring*, 63 STAN. L. REV. 1289, 1307–08 (2011))).

191. *Almendarez-Torres v. United States*, 523 U.S. 224, 239 (1998) (citing *Rust v. Sullivan*, 500 U.S. 173, 190–91 (1991); *id.* at 204–07 (Blackmun, J., dissenting); *United States v. Monsanto*, 491 U.S. 600, 611 (1989); *id.* at 636 (Blackmun, J., dissenting); *United States v. Locke*, 471 U.S. 84, 95 (1985); *id.* at 120 (Stevens, J., dissenting)).

192. See *Golan v. Holder*, 132 S. Ct. 873, 889 (2012).

193. See *id.* at 889.

property regime[] that, overall, in that body's judgment, will serve the ends of the Clause."<sup>194</sup> This echoes the Court's statement in *Chakrabarty*, that it is for Congress, not the courts, to define patentable subject matter; Congress has done so in "broad terms to fulfill the constitutional and statutory goal of promoting 'the Progress of Science and the useful Arts.'"<sup>195</sup>

Judging the constitutionality of intellectual property statutes, § 101 included, is further complicated by the uncertain import of the Intellectual Property Clause. It could be seen as a broad "restraint on Congress's authority to enact intellectual-property laws," such that Congress cannot legislate in this area unless the laws "in actuality, promote . . . progress."<sup>196</sup> This raises the question of how "progress" could or should be measured, and how Congress, *ex ante*, could possibly know the answer to that question.

The Intellectual Property Clause could also mean that "if Congress desires to promote the progress of science and useful arts, it may do so only by awarding to authors and inventors the exclusive right in their writings and discoveries for limited times."<sup>197</sup> In other words, patents and copyrights are the whole ballgame. However, this view might leave Congress free to pass intellectual property-like laws to achieve other objectives.

Alternatively, the Intellectual Property Clause could be read as entirely unrelated to Congress's other enumerated powers. Under this view, patents could be justified under, say, the Commerce Clause.<sup>198</sup> Proponents of this interpretation believe that "Congress, as a matter of policy, ought to decide the Intellectual Property Clause's boundaries vis-à-vis Congress's other powers."<sup>199</sup>

A discussion of the relative merit of these interpretations is beyond the scope of this Article; suffice it to say that the question is open.<sup>200</sup> Consider, for example, the Court's declaration in *Graham* that the Intellectual Property Clause is "both a grant of power and a limitation."<sup>201</sup> A limitation on what? The Court stated that "Congress in the exercise of the patent power may not overreach the restraints

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194. *Id.* at 888 (quoting *Eldred v. Ashcroft*, 537 U.S. 186, 222 (2003)).

195. *Diamond v. Chakrabarty*, 447 U.S. 303, 315 (1980).

196. Jeanne C. Fromer, *The Intellectual Property Clause's External Limitations*, 61 DUKE L.J. 1329, 1336 (2012) (attributing such a view to Justice Breyer, among others).

197. *See id.* at 1337 (arguing for this approach).

198. Fromer, *supra* note 196, at 1337–38 (referencing the work of Professor Thomas Nachbar).

199. *Id.*

200. *Id.* at 1359–65 (arguing that while "[t]he Supreme Court has not yet addressed the IP Clause's external limitations directly," the great weight of precedent is consistent with the view of the IP Clause as a limitation on Congress's other powers).

201. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 5 (1966).

imposed by the stated constitutional purpose.”<sup>202</sup> This says nothing about whether Congress can avoid the “limitation” in the Intellectual Property Clause by relying on its other powers.

The issue arose again in *Eldred v. Ashcroft*, in which the Court upheld the constitutionality of the Copyright Term Extension Act (CTEA) over petitioners’ arguments that legislation extending existing copyrights “categorically fail[ed] to ‘promote the Progress of Science.’”<sup>203</sup> The petitioners did not argue that the “[Intellectual Property] Clause’s preamble is an independently enforceable limit on Congress’ power,” but rather that it “identifies the sole end to which Congress may legislate.”<sup>204</sup> Citing *Graham*, the Court agreed that, “to the extent [Congress] enacts copyright laws at all,” it must “create a system that promotes the *Progress of Science*.”<sup>205</sup> But, the Court cautioned that “it is generally for Congress, not the courts, to decide how to best pursue the Copyright Clause’s objectives.”<sup>206</sup>

In dissent, Justice Breyer argued that while the Copyright Clause “grants broad legislative power to Congress,” the CTEA exceeded constitutional limits because “its practical effect is not to promote, but to inhibit, the progress of Science.”<sup>207</sup> As discussed above, Justice Breyer’s § 101 opinions express the same concern. Also dissenting in *Eldred*, Justice Stevens worried that the majority’s reading of the Constitution “provide[s] essentially no limit on congressional action under the Clause.”<sup>208</sup> The Court divided again in *Golan*, with the majority taking an expansive view of what it means to promote progress, and Justice Breyer in dissent arguing that a law “withdraw[ing] works from the public domain” without “providing any additional incentive for the production of new material” exceeds “any plausible reading of the Copyright Clause.”<sup>209</sup>

The question of how, and how much, the Intellectual Property Clause restricts congressional power is complicated and potentially divisive, as seen in *Eldred* and *Golan*. The Court’s interpretive methodology in *Prometheus* and *Myriad*—alluding to the Constitution,

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202. *Id.* at 5–6 (emphasis added).

203. *Eldred v. Ashcroft*, 537 U.S. 186, 211–12, 218 (2003).

204. *Id.* at 211.

205. *Id.* at 212 (internal quotation marks and alterations omitted) (quoting *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 5, 6 (1966)).

206. *Id.* at 212–13 (citing *Stewart v. Abend*, 495 U.S. 207, 230 (1990); *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 429 (1984); *Graham*, 383 U.S. at 6).

207. *Id.* at 243 (Breyer, J., dissenting).

208. *Id.* at 230 (Stevens, J., dissenting).

209. *Golan v. Holder*, 132 S. Ct. 873, 903 (2012) (Breyer, J., joined by Alito, J., dissenting) (emphasis in original).

without expressly relying on it—avoids the question.<sup>210</sup> This less-direct approach has won over the entire Court.<sup>211</sup>

The Court's adoption, without dissent, of the position that § 101 contains implicit exceptions may be best understood as an aggressive form of constitutional avoidance, wherein an interpretation that "might tend" to raise a constitutional problem is eschewed even if the chosen construction is far less consistent with the statutory text.<sup>212</sup> *Prometheus's* portrayal of the implicit exceptions as a solution to a potential constitutional problem, instead of a mere manifestation of congressional intent or purpose, has apparently fallen on sympathetic ears.<sup>213</sup> This is not all that surprising; when a constitutional question is implicated, statutory text is more flexible.

Consider *14 Penn Plaza LLC v. Pyett*, in which the Court held that the Age Discrimination in Employment Act (ADEA) did not bar the mandatory arbitration provision in a union's collective bargaining agreement.<sup>214</sup> Speaking for the Court, Justice Thomas stated that a "judicial policy concern" is no basis "for introducing a qualification into

210. See *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1305 (2012); *Ass'n for Molecular Pathology v. USPTO*, 702 F. Supp. 2d 181, 238 (S.D.N.Y. 2010), *aff'd in part and rev'd in part*, 689 F.3d 1303 (Fed. Cir. 2012), *aff'd in part and rev'd in part sub nom. Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107 (2013). The district court in *Myriad* applied a related, but distinct, principle of constitutional avoidance. 702 F. Supp. 2d at 238. The court held that *Myriad's* patents were "directed to a law of nature and were therefore improperly granted." *Id.* at 237. Because that holding gave the plaintiffs the relief they sought, the court declined to decide whether the "USPTO's policy permitting the grant of the *Myriad* patents violates Article I, Section 8, Clause 8 and the First Amendment of the Constitution," and dismissed the constitutional claims. *Id.* at 238. In other words, the district court's reliance on the avoidance canon was *predicated* on the validity and applicability of the law of nature exception; constitutional avoidance was not used to *justify* the exception in the first place, which is what this Article proposes. See *id.*

211. See, e.g., *Prometheus*, 132 S. Ct. at 1305; *Ass'n for Molecular Pathology v. USPTO*, 702 F. Supp. 2d at 238. An intermediate approach might also be available. One could argue that even if § 101 (without the implicit exceptions) would hypothetically be justifiable under the Commerce Clause, Congress in actuality relied on the Intellectual Property Clause for legislative authority and so must be bound by its restrictions. See S. REP. NO. 82-1979, at 3 (1952) ("[P]atent laws are enacted by Congress in accordance with the power granted by article 1, section 8, of the Constitution.").

212. Cf. Richard L. Hasen, *Constitutional Avoidance and Anti-Avoidance by the Roberts Court*, 2009 SUP. CT. REV. 181 (discussing the Roberts' Court's occasionally enthusiastic application of the constitutional avoidance canon). Hasen criticizes the Court's reliance on the avoidance doctrine in *Nw. Austin Mun. Util. Dist. No. 1 v. Holder (NAMUDNO)*, 557 U.S. 193 (2009), commenting that "the Court adopted an implausible interpretation of the statute. Indeed, the Court's statutory interpretation analysis was so weak that the Court failed even to respond to the contrary statutory points raised by the government and offered in detail by the district court." Hasen, *supra*.

213. See, e.g., *Prometheus*, 133 S. Ct. at 2116. *NAMUDNO*—like the Court's recent § 101 decisions—was unanimous in relevant part. Hasen, *supra* note 212, at 206. Hasen finds it "most remarkable" that the Court, without dissent, employed the avoidance canon to achieve a statutory interpretation that "mangled Congress's statutory intent." *Id.* at 206.

214. *14 Penn Plaza LLC v. Pyett*, 556 U.S. 247, 255 (2009).

the ADEA that is not found in its text.”<sup>215</sup> However, Justice Thomas implied a caveat: a “constitutional barrier” may suffice to read policy-related implicit exceptions into a statute.<sup>216</sup> Justice Thomas’s opinion for the Court in *Myriad* suggests that the Court may see a “constitutional barrier” to reading § 101 too broadly.<sup>217</sup>

Justice Scalia’s concurrence in *Green v. Bock Laundry Machine Co.* reveals a similar willingness to depart from a literal reading of a statute to avoid a “perhaps unconstitutional[] result.”<sup>218</sup> The *Bock Laundry* case required the Court to interpret Federal Rule of Evidence 609(a), which at the time ordered that certain evidence “shall be admitted . . . only if . . . the court determines that the probative value of admitting th[e] evidence outweighs its prejudicial effect to the defendant.”<sup>219</sup> This clause, if interpreted literally, would give “civil defendants but not civil plaintiffs . . . the benefit of weighing prejudice.”<sup>220</sup> Justice Scalia agreed with the Court that such a construction could not be correct, for a literal interpretation of “defendant” would be “absurd,” “unthinkable,” “bizarre,” and “perhaps unconstitutional.”<sup>221</sup> The implicit exceptions might reflect a view that patents on abstract ideas and products of nature are “perhaps unconstitutional,” because they could impede progress rather than promote it.

Chief Justice Roberts’s opinion in *National Federation of Independent Business (NFIB) v. Sebelius* is also instructive. In *NFIB*, the Chief Justice relied on the avoidance canon to uphold the constitutionality of the Affordable Care Act’s (ACA) individual mandate as a legitimate exercise of Congress’s taxing power.<sup>222</sup> Although Congress referred to the consequences of failing to purchase health insurance as a “penalty,” not a “tax,” this was not dispositive.<sup>223</sup> The Chief Justice acknowledged that the “most straightforward reading of the mandate is that it commands individuals to purchase

215. *Id.* at 270.

216. *Id.* (“Absent a constitutional barrier, ‘it is not for us to substitute our view of . . . policy for the legislation which has been passed by Congress.’” (quoting *Fla. Dept. of Revenue v. Piccadilly Cafeterias, Inc.*, 554 U.S. 33, 50 (2008))).

217. *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013) (noting “considerable danger” that patents on laws of nature or abstract ideas would not “promote creation,” and would therefore be “at odds with the very point of patents” (citations omitted)).

218. *Green v. Bock Laundry Mach. Co.*, 490 U.S. 504, 527 (1989) (Scalia, J., concurring).

219. *Id.* at 509 (quoting *Fed. R. Evid.* 609(a)).

220. *Id.* at 527 (Scalia, J., concurring).

221. *Id.* at 527–28 (Scalia, J., concurring).

222. *National Federation of Independent Business (NFIB) v. Sebelius*, 132 S. Ct. 2566, 2597–2600 (2012).

223. *Id.* at 2594.

insurance,” but read the mandate as a tax anyway.<sup>224</sup> He explained that “every reasonable construction must be resorted to, in order to save a statute from unconstitutionality,” and that it was “fairly possible” to read the mandate as a tax.<sup>225</sup> Four dissenters disagreed, arguing that interpreting the mandate as a tax would “do[] violence to the fair meaning of the words used.”<sup>226</sup> Courts “cannot rewrite the statute to be what it is not” under the guise of constitutional avoidance.<sup>227</sup>

An aggressive use of constitutional avoidance, such as that applied by the Chief Justice in the ACA case, or suggested by Justices Thomas and Scalia in *14 Penn Plaza* and *Bock Laundry*, respectively, could explain the Court’s unanimous endorsement of the implicit exceptions to § 101. One scholar has said that the Chief Justice “has shown an occasional fondness for creative statutory interpretations that avoid constitutional invalidation of prominent legislation, even at the cost of some contortion of the text,” and that “his fellow Justices often have been happy to go along.”<sup>228</sup> If § 101 might possibly be read to include the exceptions, and the Court sees a potential constitutional problem with doing otherwise, the avoidance canon may come into play.

Professor Richard Hasen has proposed three explanations for the Roberts Court’s sometimes-aggressive application of constitutional avoidance to massage seemingly plain statutory text: the “fruitful dialogue” explanation; the “political legitimacy” explanation; and the “political calculus” explanation.<sup>229</sup> The first posits that the Court will avoid a constitutional question and “remand” the issue to Congress when there is a “realistic chance” of a legislative fix.<sup>230</sup> The second posits that the Court uses the constitutional avoidance doctrine when it “fears that a fullblown constitutional pronouncement would harm its legitimacy.”<sup>231</sup> The third and least charitable explanation posits that the Court uses constitutional avoidance “to soften public and

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224. *Id.* at 2593.

225. *Id.* (quoting *Hooper v. California*, 155 U.S. 648, 657 (1895)) (citing *Crowell v. Benson*, 285 U.S. 22, 62 (1932)). *But see* *United States v. Stevens*, 130 S. Ct. 1577, 1591–92 (2010) (holding avoidance canon permits reinterpretation, not rewriting, of a statute, and then only when the statute is “readily susceptible” to the chosen interpretation).

226. *Id.* at 2651 (2012) (Scalia, J., dissenting) (quoting *Grenada Co. Supervisors v. Brogden*, 112 U.S. 261, 269 (1884)).

227. *Id.* (Scalia, J., dissenting).

228. Gillian E. Metzger, *To Tax, To Spend, To Regulate*, 126 HARV. L. REV. 83, 92 (2012) (critiquing *National Federation of Independent Business v. Sebelius*, 132 S. Ct. 2566, 2597–2600 (2012)).

229. Hasen, *supra* note 212, at 183–84.

230. *Id.* at 183.

231. *Id.*

Congressional resistance to the Court's movement of the law in a direction that the Court prefers as a matter of policy."<sup>232</sup>

Hasen's three theories all have some appeal in the § 101 context. Congress has shown a willingness to reform the patent system when perceived problems arise, as in the Leahy-Smith America Invents Act of 2011.<sup>233</sup> Of course, if Congress sees the Court as fixing the problem of "bad patents" on its own, legislation may be viewed as unnecessary.<sup>234</sup>

As to the "political legitimacy" rationale, a "fullblown . . . pronouncement" that § 101 is so broad as to be unconstitutional may be problematic.<sup>235</sup> It could require the Court to interpret the preamble of the Intellectual Property Clause as a significant restriction on Congress's power, which would likely meet resistance in the legislative branch. The Court was unwilling to take this step in *Eldred* and *Golan*. Additionally, if § 101 is struck down (and assuming it is severable from the rest of the patent statute), our patent laws would be left without any restriction on patent eligible subject matter. Anything at all new, non-obvious, and well-described would be entitled to patent protection. This may exacerbate the problem of "bad" patents, which has attracted significant public attention.<sup>236</sup>

Finally, as to the "political calculus" explanation, the idea that patents are not necessary to spur innovation is in vogue. In his recent article in *The Atlantic* entitled "Why There Are Too Many Patents in America," Judge Richard Posner proposes that "[m]ost industries

232. *Id.* at 183–84.

233. Pub. L. No. 112-29, 125 Stat. 284 (2011); *see also* Press Release, The White House, President Obama Signs America Invents Act, Overhauling the Patent System to Stimulate Economic Growth, and Announces New Steps to Help Entrepreneurs Create Jobs (Sept. 16, 2011), *available at* <http://www.whitehouse.gov/the-press-office/2011/09/16/president-obama-signs-america-invents-act-overhauling-patent-system-stim> (touting the AIA as "historic patent reform legislation that will help American entrepreneurs and businesses bring their inventions to market sooner, creating new businesses and new jobs").

234. *See* DONALD S. CHISUM, CHISUM PATENT ACADEMY: PATENTS ON COMPUTER-IMPLEMENTED METHODS AND SYSTEMS: THE SUPREME COURT GRANTS REVIEW (*CLS BANK*) BACKGROUND DEVELOPMENTS AND COMMENTS (Dec. 10, 2013), *available at* <http://www.chisum-patent-academy.com/wp-content/uploads/Supreme-Court-on-Computer-Software-Patents-1.pdf>. Professor Chisum recently opined that Congress, in the AIA, "tossed away the 'hot potato' of interpreting Section 101 patent eligibility in the context of software." *Id.* at 58. According to Professor Chisum, this "Congressional abdication" obliges the Supreme Court to address the issue. *Id.*

235. *See* Hasen, *supra* note 212, at 183.

236. *See, e.g.,* Joshua Brustein, *Fixing America's Patent Problem Means Going Beyond Trolls*, BLOOMBERG BUSINESSWEEK TECHNOLOGY (June 4, 2013), <http://www.businessweek.com/articles/2013-06-04/fixing-americas-patent-problem-means-going-beyond-trolls> (discussing the Obama Administration's efforts to deal with bad patents); Tim Worstall, *Crowdsourcing The Fight Against Bad Software Patents*, FORBES (July 23, 2013, 12:44 PM), <http://www.forbes.com/sites/timworstall/2013/07/23/crowdsourcing-the-fight-against-bad-software-patents>.



could get along fine without patent protection,” because, e.g., innovation is cheap, and a race-to-be-first (the so-called first mover advantage) could drive research and development.<sup>237</sup> According to Judge Posner, in industries where teams of salaried engineers make minor advances in technology, the “improvement[s] will be made anyway, without patent protection, as part of the normal competitive process in markets where patents are unimportant.”<sup>238</sup> Justice Stevens expressed similar sentiments with respect to business methods in his *Bilski* concurrence:

Companies have ample incentives to develop business methods even without patent protection, because the competitive marketplace rewards companies that use more efficient business methods. . . . Business innovation, moreover, generally does not entail the same kinds of risk as does more traditional, technological innovation. It generally does not require the same enormous costs in terms of time, research, and development, and thus does not require the same kind of compensation to innovators for their labor, toil, and expense.<sup>239</sup>

The Court’s present interpretation of § 101 could be understood as reflective of this belief, aligning the Court with public perception that patents do more harm than good.<sup>240</sup>

#### IV. CONCLUSION

The Court has not yet picked (or at least, articulated) any particular legal justification for discovering or creating implicit exceptions to § 101. Upon close examination, the several potential rationales for the Court’s opinions are not altogether satisfying. Individually, they all have flaws. Collectively, though, they have swayed the entire Court. This Article posits that the Court’s unanimous acceptance of the implicit exceptions may be explained as an aggressive use of the constitutional avoidance doctrine: broad patents on things too close to “abstract ideas” or “laws of nature”

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237. Richard A. Posner, *Why There Are Too Many Patents In America*, THE ATLANTIC (July 12, 2012, 10:20 AM), <http://www.theatlantic.com/business/archive/2012/07/why-there-are-too-many-patents-in-america/259725>. Judge Posner contrasts these industries with the pharmaceutical industry, which he acknowledges is a “prime example of an industry that really does need [patent] protection” for a variety of reasons. *Id.*

238. *Id.*

239. *Bilski v. Kappos*, 130 S. Ct. 3218, 3254 (2010) (Stevens, J., concurring) (internal citations, quotation marks, and alterations omitted).

240. See John R. Thomas, *Into a Silver Age: U.S. Patent Law 1992–2012*, 23 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 525, 526 (2013) (noting that “[t]he patent community has become far more fractured, with many observers holding diverse perspectives on the effectiveness and moral worth of the patent system”); Andrew Williams, *When NPR Podcasters Hit the Patent System*, PATENT DOCS (June 12, 2013, 11:59 PM), <http://www.patentdocs.org/2013/06/when-npr-podcasters-hit-the-patent-system.html> (“NPR has mounted what appears to be an all-out assault on the allegedly ‘broken’ patent system . . . . It is no surprise that public opinion of the patent system appears to be waning.”).

might impede progress, which might violate the preamble of the Intellectual Property Clause. Like the Court in *Prometheus*, I say “might” because the proposition is uncertain, both as a matter of fact and a matter of law. If this uncertain constitutional conflict supplies the basis for the implicit exceptions, they may be broad indeed. There is no apparent limiting principle to a rule invalidating all patents that might tend to slow progress, and that is quite a scary thought.

