

Paths or Fences: Patents, Copyrights, and the Constitution

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ABSTRACT: Congressional power over patents and copyrights flows from the same constitutional source, and the doctrines have similar missions. Yet the Supreme Court has approached these areas from distinctly different angles. With copyright, the Court readily employs constitutional analysis, building fences to constrain Congress. With patent, it emphasizes statutory interpretation, demarcating paths the legislature can follow, or deviate from (potentially at its constitutional peril). This Article uses empirical and quantitative analysis to show this divergence. It offers two potential explanations, one based on entitlement strength, the other grounded in public choice concerns. Next, the Article explores border cases where the Court could have used either fences or paths, demonstrating the effects of this pattern. It sets out criteria that the Court should employ in choosing between these approaches: counter-majoritarian concerns, institutional competence, pragmatism, and avoidance theory. The Article argues that the key normative principle is that the Court should erect fences when cases impinge on intellectual property's core constitutional concerns—information disclosure for patent and information generation for copyright. It concludes with two examples where the Court should alter its approach based on this principle.

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I. INTRODUCTION

In recent years, the Supreme Court has decided a number of high-profile patent and copyright cases, on topics ranging from jurisdiction¹ to subject

1. See, e.g., *Reed Elsevier, Inc. v. Muchnick*, 559 U.S. 154, 160–71 (2010) (discussing jurisdiction and copyright); *Cardinal Chem. Co. v. Morton Int'l, Inc.*, 508 U.S. 83, 95–103 (1993) (discussing jurisdiction and patent).

matter eligibility² to the right to a jury.³ Although the two intellectual property (“IP”) doctrines often present similar questions,⁴ and even though both flow from the same constitutional grant of authority to Congress,⁵ the Court has shown a markedly different pattern in how it adjudicates copyright and patent cases.⁶ The Court has displayed a willingness to demarcate the constitutional boundaries for copyright law and a reluctance to do so for patent law. Instead, the Court grounds its patent jurisprudence in statutory analysis, even when it treats analogous questions as constitutional ones for copyright.⁷ This pattern has held true since the first Patent and Copyright Acts were passed in 1790, and shows no signs of changing, despite the hopes and pleas of scholarly commentators.⁸

Put simply, the difference between the Supreme Court’s copyright and patent precedent is the difference between creating paths and building fences. Paths show the traveler (here, Congress) one possible course to follow, but the wanderer remains free to strike out on her own, perhaps at her peril. Fences, by contrast, constrain completely: The explorer cannot lawfully

2. See, e.g., *Star Athletica, L.L.C. v. Varsity Brands, Inc.*, 137 S. Ct. 1002, 1008–09 (2017) (discussing subject matter eligibility and copyright); *Alice Corp. Pty. v. CLS Bank Int’l*, 573 U.S. 208, 215–27 (2014) (discussing subject matter eligibility and patent).

3. See, e.g., *Feltner v. Columbia Pictures Television, Inc.*, 523 U.S. 340, 342–55 (1998) (discussing the right to a jury and copyright); *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372–91 (1996) (discussing the right to a jury and patent).

4. See *Lee v. Runge*, 404 U.S. 887, 888 (1971) (Douglas, J., dissenting from denial of certiorari) (“The constitutional power over copyrights is found in the same clause that governs the issuance of patents . . . [m]any of the same interests underlie both grants of power.”).

5. See *Impression Prods., Inc. v. Lexmark Int’l, Inc.*, 137 S. Ct. 1523, 1536 (2017) (noting the “historic kinship between patent law and copyright law” (quoting *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 439 (1984))).

6. See Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575, 1596 (2003) (“[R]ecent Supreme Court jurisprudence suggests that even though congressional power to create patents arises from the same constitutional clause as the power to create copyrights, copyright and patent can be treated differently under the Constitution.”).

7. Compare *Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc.*, 563 U.S. 776, 782–93 (2011) (determining inventorship based on federal statute), with *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 54–61 (1884) (deciding scope of Congressional power to confer authorship based on constitutional considerations).

8. See, e.g., Christina Bohannon & Herbert Hovenkamp, *IP and Antitrust: Reformation and Harm*, 51 B.C. L. REV. 905, 950–64 (2010) (discussing the subject matter of patents); Dan L. Burk, *Patenting Speech*, 79 TEX. L. REV. 99, 150–58 (2000) (discussing possible reform to patents based on copyright developments); Dennis S. Karjala, *Distinguishing Patent and Copyright Subject Matter*, 35 CONN. L. REV. 439, 523 (2003) (advocating for changes to categorical exclusion); Sapna Kumar, *Life, Liberty, and the Pursuit of Genetic Information*, 65 ALA. L. REV. 625, 671–80 (2014) (discussing patent reform related to genetics); Kali Murray, *Constitutional Patent Law: Principles and Institutions*, 93 NEB. L. REV. 901, 947–49 (2015) (discussing the constitutional complexity of modern patent law). But see Michael Risch, *Everything Is Patentable*, 75 TENN. L. REV. 591, 635–37, 651–52 (2008) (rejecting a constitutional basis for limits on patentable subject matter). See generally Paul J. Heald & Suzanna Sherry, *Implied Limits on the Legislative Power: The Intellectual Property Clause as an Absolute Constraint on Congress*, 2000 U. ILL. L. REV. 1119 (discussing Constitutional limits on congressional powers vis-à-vis the intellectual property clause).

proceed any farther. When it employs statutory interpretation to answer an intellectual property question, the Supreme Court charts a path—Congress is free, at least nominally, to override the decision through legislation.⁹ But when the Court uses constitutional reasoning, it erects a fence: Absent a constitutional amendment, the legislature cannot alter the outcome.¹⁰

This straightforward metaphor leads directly to this Article's core normative claim. In deciding copyright and patent cases, when the Supreme Court knows that there are constitutional perils nearby—implicated by the case even if not directly posed by it—it ought to set up fences, not paths. When exploration is relatively safe, by contrast—when dangers are distant—the Court should create paths. As the Article explains later, the Court's own jurisprudence provides examples where it has failed to heed this basic principle.¹¹ For example, while its copyright precedent sensibly bars protection for mere facts,¹² the Court has treated similar limits in the patent context (for example, by disqualifying natural phenomena¹³ and laws of nature¹⁴ from protection) as matters of statutory interpretation. This is not merely bad patent policy—it is likely legal misdirection. If Congress were to enact legislation making natural laws and phenomena eligible subject matter for patents,¹⁵ the Court would likely strike down that statute on constitutional grounds.¹⁶ Congress plainly has some room to maneuver along the patent subject matter path, since all inventions employ natural laws to some degree, but venturing far off it risks becoming entangled in the constitutional brambles.¹⁷ For practical reasons, as well as out of respect for the autonomy and limited resources of a co-equal branch of government, the Court should be transparent about the constitutional limits (if any) of what may be patented.

There is a robust scholarly literature on the constitutional limitations for copyright, and a much smaller body of work treating those limits for patent

9. For example, while patent law's doctrine of equivalents mode of infringement is judicially created, "Congress can legislate the doctrine of equivalents out of existence any time it chooses." *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 28 (1997).

10. For example, Congress cannot confer copyright protection upon facts. *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 346–47 (1991) (holding "[o]riginality is a constitutional requirement" for copyright, and that facts lack the requisite creativity to be original).

11. See *infra* Part V.

12. *Feist Publ'ns, Inc.*, 499 U.S. at 346–47.

13. *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589–90 (2013).

14. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 77–78 (2012).

15. A number of intellectual property-related organizations are urging Congress to do precisely that. See JOHN R. THOMAS, CONG. RESEARCH SERV., *PATENTABLE SUBJECT MATTER REFORM* 15–16 (2017), <https://fas.org/sgp/crs/misc/R44943.pdf>; Orrin Hatch, *A Look Forward on Patent Reform*, MEDIUM (Oct. 2, 2017), <https://medium.com/@SenOrrinHatch/a-look-forward-on-patent-reform-288942e634f1>.

16. See Robert A. Kreiss, *Patent Protection for Computer Programs and Mathematical Algorithms: The Constitutional Limitations on Patentable Subject Matter*, 29 N.M. L. REV. 31, 66–68 (1999).

17. See *Alice Corp. Pty. v. CLS Bank Int'l*, 573 U.S. 208, 215–19 (2014).

law. Scholars mostly agree that the Supreme Court ought to be more active in policing IP legislation,¹⁸ though they disagree about how and why. For example, Paul Heald and Suzanna Sherry argue that the IP Clause¹⁹ contains both explicit and implicit limitations on Congressional power over copyrights and patents that ought to be policed by the courts.²⁰ Dotan Oliar believes courts should evaluate whether a statute's marginal benefits for creativity and knowledge outweigh its costs; if not, the statute should be pronounced unconstitutional.²¹ Ned Snow wants courts to deny protection to socially harmful content on the grounds that it fails to meet the requirements of the Progress Clause.²² Jeanne Fromer contends that the IP Clause bars Congress from using other constitutional grants of power to promote the progress of science and the useful arts.²³ Allen Yu views restrictions on patentable subject matter as constitutionally mandated.²⁴ Sapna Kumar asserts that diagnostic patents contravene the Fifth Amendment's protections for individual liberties.²⁵ And Margo Bagley posits that the pre-AIA Patent Act's geographical restrictions on prior art are unconstitutional.²⁶

However, few if any commentators have explored the divergence in the Court's approach to the two doctrines, or have analyzed its implications.²⁷ Thus, this Article's contribution to the literature is three-fold. First, it analyzes the bifurcation in the Supreme Court's patent and copyright jurisprudence both empirically and qualitatively. Second, it offers criteria for when the Court ought to ground its decisions in statutory interpretation, and when it should use constitutional reasoning. In other words, it assesses the merits of a path-based approach versus one that relies on fences. Put briefly, the Court ought

18. See Yochai Benkler, *Through the Looking Glass: Alice and the Constitutional Foundations of the Public Domain*, L. & CONTEMP. PROBS., Winter/Spring 2003, at 222–24. But see Paul M. Schwartz & William Michael Treanor, *Eldred and Lochner: Copyright Term Extension and Intellectual Property as Constitutional Property*, 112 YALE L.J. 2331, 2334 (2003) (arguing for deferential review of IP legislation).

19. U.S. CONST. art. I, § 8, cl. 8.

20. Heald & Sherry, *supra* note 8, at 1122–25.

21. Dotan Oliar, *Making Sense of the Intellectual Property Clause: Promotion of Progress as a Limitation on Congress's Intellectual Property Power*, 94 GEO. L.J. 1771, 1840–45 (2006).

22. Ned Snow, *The Regressing Progress Clause: Rethinking Constitutional Indifference to Harmful Content in Copyright*, 47 U.C. DAVIS L. REV. 1, 3–6 (2013).

23. Jeanne C. Fromer, *The Intellectual Property Clause's External Limitations*, 61 DUKE L.J. 1329, 1331–33 (2012).

24. Allen K. Yu, *Within Subject Matter Eligibility—A Disease and a Cure*, 84 S. CAL. L. REV. 387, 389–95 (2011).

25. Kumar, *supra* note 8, at 628.

26. Margo A. Bagley, *Patently Unconstitutional: The Geographical Limitation on Prior Art in a Small World*, 87 MINN. L. REV. 679, 704 (2003).

27. Cf. Dotan Oliar, *The (Constitutional) Convention on IP: A New Reading*, 57 UCLA L. REV. 421, 464–69 (2009) (arguing that a disjunctive interpretation of IP Clause is erroneous). See generally Edward C. Walterscheid, *Divergent Evolution of the Patent Power and the Copyright Power*, 9 MARQ. INTELL. PROP. L. REV. 307 (2005) (tracing the development of expansive copyright legislation relative to patent legislation).

to be most willing to construct fences—clear boundaries for the legislature—for doctrinal aspects of patent and copyright that are closest to the cores of each area, and thus most at risk from legislative mistake. The Article contends that these are public disclosure of information about technological advances for patent, and generation of original expression for copyright. Finally, it offers a novel approach based in IP law to the scholarly literature that engages with, and often challenges, the Supreme Court’s sometimes glib invocation of constitutional avoidance as a norm.²⁸

The Article has five additional Parts. Part II describes the difference between the Supreme Court’s patent and copyright jurisprudence, and why the divergence is noteworthy. Part III examines boundary cases for both doctrines—instances where the Court could have employed either type of analysis to resolve the questions before it. Part IV builds the normative case for when statutory interpretation is appropriate versus when constitutional analysis is preferable. Part V offers two examples of where the Court ought to proceed differently: setting out a constitutional mandate for patent disclosure and forgoing constitutional analysis when specifying the traditional contours of copyright. The last Part concludes.

II. DIFFERENT PATHS

A. COMMON PROBLEMS AND SOURCE

Patent and copyright law share doctrinal similarities and external pressures that should drive their development in parallel directions.²⁹ Put differently, they face common problems that should lead to comparable structural features, and that could readily raise similar concerns about the scope of Congressional power in addressing those issues. And, one might expect the Supreme Court to follow a common approach to puzzles in the two doctrines. Examples of congruity are legion. Both areas operate with strict liability for direct infringement.³⁰ This has led courts to insert scienter requirements into secondary infringement for both, either as a matter of

28. See, e.g., Neal Kumar Katyal & Thomas P. Schmidt, *Active Avoidance: The Modern Supreme Court and Legal Change*, 128 HARV. L. REV. 2109, 2115–18 (2015).

29. See EDWARD C. WALTERSCHEID, THE NATURE OF THE INTELLECTUAL PROPERTY CLAUSE: A STUDY IN HISTORICAL PERSPECTIVE 303 (2002) (“[C]ongressional discretion regarding the patent power is bounded by ‘the limits of the constitutional grant.’ Precisely the same limitations apply to the copyright power.” (quoting *Graham v. John Deere Co.*, 383 U.S. 1, 6 (1966))).

30. See 17 U.S.C. § 501(a) (2012); 35 U.S.C. § 271(a); *SCA Hygiene Prods. Aktiebolag v. First Quality Baby Prods., LLC*, 137 S. Ct. 954, 972 (2017) (Breyer, J., dissenting) (“Patent infringement is a strict-liability offense . . .”); *Buck v. Jewell-LaSalle Realty Co.*, 283 U.S. 191, 198 (1931) (“Intention to infringe is not essential under the [Copyright] Act. And knowledge of the particular selection to be played or received is immaterial.” (citations omitted)).

common law elaboration³¹ or of statutory interpretation.³² Adherence to international agreements and obligations constrains Congressional latitude in legislation, albeit imperfectly.³³ The pace of technological change plagues policymaking in both areas, leading to an approach of technological agnosticism in theory if not always in practice.³⁴ Defining and recording ownership is a common problem, although one that is worse for copyright given that doctrine's minimal bars to achieving authorship as compared to patent's formidable examination requirements.³⁵

Both doctrines must demarcate the boundaries of what subject matter—what types of information—qualifies for their respective protections.³⁶ These line-drawing efforts often require resolving contests over whether information qualifies simultaneously for multiple types of protection, such as copyright and trademark,³⁷ copyright and state-based rights of publicity,³⁸ patent and trademark,³⁹ or patent and trade secret.⁴⁰ And, these efforts must frequently confront rent-seeking by IP owners or claimants.⁴¹ Other times,

31. See, e.g., *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 439 (1984) (discussing the knowledge requirement for copyright contributory infringement); *Henry v. A.B. Dick Co.*, 224 U.S. 1, 33–34 (1912) (applying the knowledge requirement for patents).

32. See, e.g., *Commil USA, LLC v. Cisco Sys., Inc.*, 135 S. Ct. 1920, 1929 (2015) (holding that defendant's belief that plaintiff's patent was invalid did not act as defense to inducement); *Viacom Int'l, Inc. v. YouTube, Inc.*, 676 F.3d 19, 35 (2d Cir. 2012) (establishing the knowledge requirement for 17 U.S.C. § 512(c)(1)(A)).

33. See *In re Hilmer*, 359 F.2d 859, 876 (C.C.P.A. 1966); Sarah E. Henry, Comment, *The First International Challenge to U.S. Copyright Law: What Does the WTO Analysis of 17 U.S.C. § 110(5) Mean to the Future of International Harmonization of Copyright Laws Under the TRIPS Agreement?*, 20 PENN ST. INT'L L. REV. 301, 310–14, 324 (2001) (describing a World Trade Organization panel's finding that the Fairness in Music Licensing Act violated U.S. obligations under the Uruguay Round Multilateral Agreement on Trade-Related Aspects of Intellectual Property Rights).

34. See Dan L. Burk & Mark A. Lemley, *Is Patent Law Technology-Specific?*, 17 BERKELEY TECH. L.J. 1155, 1205–06 (2002); Jessica Litman, *Copyright Legislation and Technological Change*, 68 OR. L. REV. 275, 323 (1989).

35. See, e.g., Karjala, *supra* note 8, at 441–42.

36. See 17 U.S.C. § 102(a) (2012); 35 U.S.C. § 101.

37. See, e.g., *Comedy III Prods., Inc. v. New Line Cinema*, 200 F.3d 593, 596 (9th Cir. 2000) (rejecting trademark-based claim over public domain footage of *Three Stooges* film).

38. See, e.g., *Wendt v. Host Int'l, Inc.*, 197 F.3d 1284, 1285–88 (9th Cir. 1999) (Kozinski, J., dissenting from denial of petition for rehearing en banc) (noting conflict between an actor's right of publicity claim in a well-known television character and a copyright grant to show itself). But see *Landham v. Lewis Galoob Toys, Inc.*, 227 F.3d 619, 624–26 (6th Cir. 2000) (rejecting an actor's right of publicity claim against a toy depicting a movie character he portrayed).

39. See, e.g., *Traffix Devices, Inc. v. Mktg. Displays, Inc.*, 532 U.S. 23, 29–30 (2001) (holding that when an expired utility patent covers features claimed as trademark, the “patent is strong evidence that the features therein claimed are functional” and hence ineligible as mark).

40. *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 474, 478–79 (1974).

41. See William M. Landes & Richard A. Posner, *Indefinitely Renewable Copyright*, 70 U. CHI. L. REV. 471, 483–84 (2003) (describing rent-seeking in copyright policymaking); Robert P. Merges, *The Trouble With Trolls: Innovation, Rent-Seeking, and Patent Law Reform*, 24 BERKELEY TECH. L.J. 1583, 1592–604 (2009).

courts must determine whether a particular sort of information is within Congress's IP Clause power at all.⁴² Similarly, both patent and copyright confront pre-emption questions, both vertically (such as when states pass statutes affording similar protections)⁴³ and horizontally (such as when Congress, putatively forbidden from certain regulation based on the IP Clause, relies upon other grants of power, such as the Commerce Clause).⁴⁴ Thus, courts likely have to decide constitutional questions even if only implicitly, such as by determining whether restrictions upon one fount of Congressional power are exclusive, or can be bypassed by relying upon another⁴⁵—a conundrum familiar to constitutional scholars.⁴⁶

Finally, courts and commentators alike disagree about the underlying rationale and premises that justify copyright and patent's exclusive entitlements.⁴⁷ While a utilitarian framework largely holds sway in patent law, an influential minority of scholars and jurists plump for a natural rights approach to the doctrine based on the work of Hegel, Kant, and Locke.⁴⁸ Copyright also draws strongly upon an incentives-based approach,⁴⁹ but

42. See, e.g., *In re Trade-Mark Cases*, 100 U.S. 82, 87–89 (1879).

43. *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 157–58 (1989); *Goldstein v. California*, 412 U.S. 546, 552–60 (1973).

44. See, e.g., *MDY Indus., LLC v. Blizzard Entm't, Inc.*, 629 F.3d 928, 950 (9th Cir. 2010), *as amended on denial of reh'g*, (Feb. 17, 2011), *opinion amended and superseded on denial of reh'g*, No. 09-15932, 2011 WL 538748 (9th Cir. Feb. 17, 2011); *United States v. Martignon*, 492 F.3d 140, 144–52 (2d Cir. 2007); Thomas B. Nachbar, *Intellectual Property and Constitutional Norms*, 104 COLUM. L. REV. 272, 349–51 (2004).

45. 17 U.S.C. § 901 (2012); *Martignon*, 492 F.3d at 150–53; see Richard B. Graves III, *Globalization, Treaty Powers, and the Limits of the Intellectual Property Clause*, 50 J. COPYRIGHT SOC'Y U.S.A. 199, 212–19 (2003).

46. *Nat'l Fed'n of Indep. Bus. v. Sebelius*, 567 U.S. 519, 545–67 (2012) (holding that the Affordable Care Act was not a valid exercise of Commerce Clause power, but was valid under Congressional taxation power established in art. I, § 8, cl. 1).

47. See generally William Fisher, *Theories of Intellectual Property*, in *NEW ESSAYS IN THE LEGAL AND POLITICAL THEORY OF PROPERTY* 168 (Stephen R. Munzer ed., 2001) (explaining various rationales for interpreting IP issues).

48. See generally, e.g., ROBERT P. MERGES, *JUSTIFYING INTELLECTUAL PROPERTY* (2011) (analyzing intellectual property in light of the philosophies of Locke, Kant, Rawls, and Nozick); Justin Hughes, *The Philosophy of Intellectual Property*, 77 GEO. L.J. 287 (1988) (providing an extensive analysis of Lockean and Hegelian theories of property); Adam Mossoff, *Rethinking the Development of Patents: An Intellectual History, 1550-1800*, 52 HASTINGS L.J. 1255 (2001) (examining the history of intellectual property and various theories it is based in); Margaret Jane Radin, *Property and Personhood*, 34 STAN. L. REV. 957 (1982) (highlighting theories of property under Hegel, Kant, and Locke).

49. See, e.g., *Sony Corp. of Am. v. Universal City Studios*, 464 U.S. 417, 429 (1984) (stating copyright "is intended to motivate the creative activity of authors and inventors by the provision of a special reward"); William W. Fisher III, *Reconstructing the Fair Use Doctrine*, 101 HARV. L. REV. 1659, 1677 (1988); Wendy J. Gordon, *An Inquiry into the Merits of Copyright: The Challenges of Consistency, Consent, and Encouragement Theory*, 41 STAN. L. REV. 1343, 1448 (1989); William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL STUD. 325, 326 (1989).

conceptions that sound in labor-desert, personality theory, and semiotic democracy exert significant power to shape the law.⁵⁰

The following Subsections address in greater depth four forces that press similarly upon patent and copyright: circumvention of constitutional limits, rent-seeking, external constraints, and theoretical indeterminacy.

1. Circumvention

The states and the federal government have both attempted to work around the limits patent and copyright impose. The courts—particularly the Supreme Court—have taken divergent approaches to circumvention by these two sets of actors. With state attempts to encroach upon the patent or copyright power, the judiciary has been relatively vigorous in policing the vertical boundaries of federalism. While states can implement trade secrets⁵¹ and contract-based licensing⁵² regimes, attempts to impose quasi-patent systems through unfair competition law or industry-specific statutes were rebuffed.⁵³ Similarly, states remain free to institute copyright regimes where Congress has not acted,⁵⁴ or to grant rights of publicity to individuals (even where those rights tread close to copyright),⁵⁵ but federal legislation definitively displaces competing state laws.⁵⁶

By contrast, the courts have been largely tolerant of Congressional circumvention of the IP Clause's limits. For example, the courts of appeal have allowed application of the anti-bootlegging statutes that protect live musical performances, even though these laws seemingly run afoul of the "limited times" constraint in the IP Clause.⁵⁷ Congress has passed laws

50. See, e.g., Wendy J. Gordon, *A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property*, 102 YALE L.J. 1533, 1540, 1547 (1993); Justin Hughes, *The Personality Interest of Artists and Inventors in Intellectual Property*, 16 CARDOZO ARTS & ENT. L.J. 81, 81 (1998); Neil Weinstock Netanel, *Copyright and a Democratic Civil Society*, 106 YALE L.J. 283, 345–47 (1996); John Tehranian, *Et Tu, Fair Use? The Triumph of Natural-Law Copyright*, 38 U.C. DAVIS L. REV. 465, 468 (2005).

51. See *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 478–79 (1974). But see Charles Tait Graves & Elizabeth Tippet, *UTSA Preemption and the Public Domain: How Courts Have Overlooked Patent Preemption of State Law Claims Alleging Employee Wrongdoing*, 65 RUTGERS L. REV. 59, 60, 97–105 (2012).

52. *Aronson v. Quick Point Pencil Co.*, 440 U.S. 257, 262–64 (1979).

53. See, e.g., *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 156–57 (1989); *Compco Corp. v. Day-Brite Lighting Inc.*, 376 U.S. 234, 237–39 (1964); *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225, 231 (1964).

54. See *Goldstein v. California*, 412 U.S. 546, 559–60 (1973).

55. See *Zacchini v. Scripps-Howard Broad.*, 433 U.S. 562, 573 (1977). Later applications of the right of publicity bring the conflict with copyright into stark contrast. See, e.g., *Wendt v. Host Int'l, Inc.*, 125 F.3d 806, 808–10 (9th Cir. 1997) (finding for actors in a suit against airport bars that used robot likenesses of their characters from the TV series "Cheers," even though airport bars had licensed copyright in the show itself).

56. *Zacchini*, 433 U.S. at 578–79.

57. 17 U.S.C. § 1101 (2012); 18 U.S.C. § 2319A; see *United States v. Martignon*, 492 F.3d 140, 145 (2d Cir. 2007); Recent Case, *Constitutional Law—Copyright Clause—Second Circuit Upholds*

implementing specialized protections for boat hulls,⁵⁸ semiconductor chip mask works,⁵⁹ and technological protection measures for copyrighted works,⁶⁰ among others,⁶¹ even though some of these rules may also contravene constitutional limitations.⁶² In short, the judiciary often has to police legislative workarounds—strategic behavior by Congress or state legislatures to circumvent limits that the Constitution imposes on patents and copyrights.

2. Rent-seeking

Both copyright and patent law draw those seeking rents. Exclusive IP rights always create a legal monopoly. In some cases, the concomitant economic monopoly may be scant in scope (James Bond movies must contend with competition from Jason Bourne),⁶³ or it may be extensive (the antidepressant Prozac earned Eli Lilly over \$2.5 billion annually while under patent protection).⁶⁴ Patents that putatively cover foundational technologies can enable their owners to effectively hold up downstream users of those claimed inventions—the “patent troll” phenomenon—even if the validity of the patent is dubious. Copyright has seen a similar phenomenon—the copyright troll⁶⁵—especially where the nature of the copyrighted work is

Perpetual Anti-Bootlegging Protection Against Copyright Clause Challenge.—United States v. Martignon, 492 F.3d 140 (2d Cir. 2007), 121 HARV. L. REV. 1455, 1457–58 (2008).

58. 17 U.S.C. §§ 1301–1309.

59. *Id.* §§ 901–914.

60. *Id.* §§ 1201–1202.

61. See, e.g., *id.* § 1001(3) (digital audio recording devices); 35 U.S.C. §§ 171–173 (design patents).

62. *Compare* Chamberlain Grp., Inc. v. Skylink Techs., Inc., 381 F.3d 1178, 1192 (Fed. Cir. 2004) (“[17 U.S.C. § 1201] establish[es] causes of action for liability. [It] do[es] not establish a new property right. The DMCA’s text indicates that circumvention is not infringement . . .”), and *id.* at 1203 (holding that a § 1201 violation requires conduct that “infringes or facilitates infringing a right protected by the Copyright Act”), with *MDY Indus., LLC v. Blizzard Entm’t, Inc.*, 629 F.3d 928, 944–45 (9th Cir. 2010) (noting that “[h]istorically speaking, preventing ‘access’ to a protected work in itself has not been a right of a copyright owner arising from the Copyright Act” and deciding that there can be a § 1201 violation without attendant copyright infringement, viewing the provision “as extending a new form of protection, i.e., the right to prevent circumvention of access controls, broadly to works protected under Title 17, i.e., copyrighted works”). See Bradley J. Olson, *The Amendments to the Vessel Hull Design Protection Act of 1998: A New Tool for the Boating Industry*, 38 J. MAR. L. & COM. 177, 183–85 (2007) (noting that protection for vessel boat hulls extends to both the hull and the deck, even if novelty is found only in the deck). Some scholars argue that trademark law—in particular, anti-dilution provisions—creates a constitutional conflict with patent law. See generally Hugh Latimer & Karyn K. Ablin, *Stealth Patents: The Unconstitutionality of Protecting Product Designs Under the Federal Trademark Dilution Act*, 90 TRADEMARK REP. 489 (2000) (scrutinizing the Federal Trademark Dilution Act for extending patent-like protection to non-original designs).

63. See, e.g., Rohan Nadkarni, *Is the Jason Bourne Franchise Getting James Bond-ified?*, GQ (July 11, 2016), <https://www.gq.com/story/jason-bourne-james-bond-ification>.

64. John Simons, *Lilly Goes Off Prozac*, FORTUNE (June 28, 2004), http://archive.fortune.com/magazines/fortune/fortune_archive/2004/06/28/374398/index.htm.

65. See generally Shyamkrishna Balganesh, *The Uneasy Case Against Copyright Trolls*, 86 S. CAL. L. REV. 723 (2013) (arguing that copyright trolling is problematic, despite formal compliance

controversial (such as pornographic films)⁶⁶ or the legality of its use is not clear (such as sampling of sound recordings).⁶⁷ In the past, both doctrines have also confronted straightforward rent-seeking when rightsholders have petitioned Congress—sometimes successfully—to extend the term of their individual patents or copyrights.⁶⁸

Both doctrines have developed internal checks to try to ensure some proportionality between the creator's contribution to human knowledge and the scope of their exclusive rights. Patent law, for example, requires that inventions not only be novel,⁶⁹ but also not an obvious advance from the perspective of the average practitioner (the mythical person having ordinary skill in the art, or PHOSITA).⁷⁰ The enablement requirement and the reverse doctrine of equivalents perform a similar role. Enablement guards against applicants who try to shortchange the public by failing to reveal key technical details that could enable them to maintain a post-term monopoly through trade secrecy.⁷¹ And the reverse doctrine of equivalents—while rarely used—operates to exempt from liability an accused device or process that falls within the literal language of a patent claim, yet is so different as to constitute a separate invention.⁷² In addition, Congress has on occasion acted to limit patent rights when it was convinced of rent-seeking problems, such as when it

with the law, because it upsets the balance between enforced breaches and tolerated breaches); Brad A. Greenberg, *Copyright Trolls and Presumptively Fair Uses*, 85 U. COLO. L. REV. 53 (2014) (arguing for employment of the fair use doctrine to combat copyright trolling); Matthew Sag, *Copyright Trolling: An Empirical Study*, 100 IOWA L. REV. 1105 (2015) (arguing for a new conduct-based definition of copyright trolling because existing status-based definitions are underinclusive).

66. See Joe Mullin, *Prenda Law "Copyright Trolls" Steele and Hansmeier Arrested*, ARS TECHNICA (Dec. 16, 2016, 12:13 PM), <http://arstechnica.com/tech-policy/2016/12/breaking-prenda-law-copyright-trolls-steele-and-hansmeier-arrested>.

67. Compare *Bridgeport Music, Inc. v. Dimension Films*, 410 F.3d 792, 799–800 (6th Cir. 2005) (rejecting the “de minimis” inquiry analysis in sampling cases), with *VMG Salsoul, LLC v. Ciccone*, 824 F.3d 871, 874 (9th Cir. 2016) (holding “that the ‘de minimis’ exception applies to infringement actions concerning copyrighted sound recordings”).

68. See *Eldred v. Ashcroft*, 537 U.S. 186, 233–37 (2003) (Stevens, J., dissenting); *Bloomer v. McQuewan*, 55 U.S. (14 How.) 539, 541–43 (1852); Robert Patrick Merges & Glenn Harlan Reynolds, *The Proper Scope of the Copyright and Patent Power*, 37 HARV. J. ON LEGIS. 45, 53–54 (2000).

69. 35 U.S.C. § 102 (2012).

70. See *id.* § 103; *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 37 (1966).

71. See Derek E. Bambauer, *Secrecy is Dead – Long Live Trade Secrets*, 93 DENV. L. REV. 833, 833–34 (2016); W. Nicholson Price II, *Expired Patents, Trade Secrets, and Stymied Competition*, 92 NOTRE DAME L. REV. 1611, 1613 (2017). See generally *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200 (Fed. Cir. 1991) (holding that the claimed DNA sequence did not satisfy the enablement requirement); *In re Wands*, 858 F.2d 731 (Fed. Cir. 1988) (establishing a set of factors to determine if the enablement requirement is met).

72. See *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 608–09 (1950). The only case where the reverse doctrine of equivalents has actually shielded a defendant from liability is *Westinghouse v. Boyden Power-Brake Co.*, 170 U.S. 537, 568 (1898), and the Federal Circuit has all but foreclosed its application. See *Tate Access Floors, Inc. v. Interface Architectural Res., Inc.*, 279 F.3d 1357, 1367 (Fed. Cir. 2002). But see *Plant Genetic Sys. N.V. v. DeKalb Genetics Corp.*, 315 F.3d 1335, 1340–41 (Fed. Cir. 2003).

immunized doctors from direct liability for performing patented surgical techniques,⁷³ and when it made techniques for reducing one's tax bill ineligible for patents via the America Invents Act ("AIA").⁷⁴

Copyright has similar devices to guard against overclaiming. The Copyright Act prohibits protection for systems, processes, methods of operation, ideas, principles, concepts, and discoveries, to prevent claimants from obtaining patent-like rights without satisfying the Patent Act's more rigorous requirements.⁷⁵ Moreover, if there are but a few ways to express a particular idea, the merger doctrine blocks copyright for any of them, to prevent control over the idea.⁷⁶ And copyright parallels patent's non-obviousness requirement by barring claims to stock characters, scenes, plot elements, and the like under the *scènes à faire* doctrine.⁷⁷ And the originality requirement blocks copyright in facts.⁷⁸ These elements work to ensure that any market power that a copyrighted work enjoys is due to consumer preferences rather than a lack of substitutes.⁷⁹

3. External Constraints

Copyright and patent face similar external constraints on doctrinal innovation. Both must conform to multiple international treaties and instruments, which are nominally co-equal with Congressional legislation.⁸⁰ These have multiplied with the advent of bilateral trade agreements⁸¹ and new vigor in the creation of IP-related instruments.⁸² These constraints may be a hybrid of domestic and foreign IP policy. Bruce Lehman, the Commissioner of the Patent Office under President Bill Clinton, famously worked around Congressional resistance to the White House's White and Green Papers on intellectual property on the Internet by convincing the World Intellectual Property Organization to embody their recommendations in international

73. 35 U.S.C. § 287(c). *See generally* Cynthia M. Ho, *Patents, Patients, and Public Policy: An Incomplete Intersection at 35 U.S.C. § 287(c)*, 33 U.C. DAVIS L. REV. 601 (2000) (analyzing the effect of 35 U.S.C. § 287(c) on American and international medical patent policy).

74. Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 14(a), 125 Stat. 284, 327 (2011) (deeming all strategies for reducing tax liability within the prior art).

75. 17 U.S.C. § 102(b).

76. *See, e.g.,* *Morrissey v. Procter & Gamble Co.*, 379 F.2d 675, 678-79 (1st Cir. 1967).

77. *See, e.g.,* *Gaiman v. McFarlane*, 360 F.3d 644, 659-60 (7th Cir. 2004).

78. *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 349-50 (1991).

79. *See Southco, Inc. v. Kanebridge Corp.*, 258 F.3d 148, 153-56 (3d Cir. 2001) (holding that a part numbering system was ineligible for copyright). *But see* *Am. Dental Ass'n v. Delta Dental Plans Ass'n*, 126 F.3d 977, 978-79 (7th Cir. 1997) (holding that the code for dental procedures is eligible, even though it was designated by the federal government as a national standard).

80. U.S. CONST. art. VI, cl. 2; *see Foster v. Neilson*, 27 U.S. (2 Pet.) 253, 313-14 (1829).

81. *See, e.g.,* U.S.-Chile Free Trade Agreement, U.S.-Chile, ch. 17, June 6, 2003, https://ustr.gov/sites/default/files/uploads/agreements/fta/chile/asset_upload_file912_4011.pdf.

82. *See WIPO-Administered Treaties*, WORLD INTELL. PROP. ORG., <http://www.wipo.int/treaties/en> (last visited Jan. 8, 2019).

treaties.⁸³ Congress proved much more pliant when the provisions came to them as a matter of international IP conformity rather than domestic policy.⁸⁴ Thus, neither Congress nor the courts is entirely free to reshape patent and copyright law.

4. Theoretical Indeterminacy

There is uncertainty and disagreement about the theoretical underpinnings for both doctrines and for the IP Clause itself. Terry Fisher identifies four different rationales for protecting intellectual property, conceding that one of the four (semiotic democracy) is itself an admixture of multiple theories.⁸⁵ And while most scholars see patent law as principally utilitarian in orientation,⁸⁶ there are some who doggedly advocate for a natural rights approach to the doctrine.⁸⁷ With copyright, the Supreme Court's jurisprudence waivers among justifications; it is likely that the doctrine rests upon multiple rationales.⁸⁸ (For example, the adoption of a limited moral rights regime for certain works of high art strengthens the claim of personality theory to influence over the law.)⁸⁹ This haziness is not merely of academic interest. Without a consistent, principled normative framework, courts will have difficulty resolving both constitutional and statutory disputes—it is harder to tell how Congress likely intended to advance IP goals, or to determine if legislation runs counter to them. And even if one overarching justification emerges dominant, there will remain second-order questions to be solved. For example, if one accepts that copyright law's purpose is to provide incentives, are those incentives limited to the creation of new works of authorship, or do they extend to promoting the distribution of already extant works?⁹⁰

83. See JESSICA LITMAN, *DIGITAL COPYRIGHT* 91–95, 128–45 (2001).

84. *Id.* at 122–50.

85. Fisher, *supra* note 47, at 177–94.

86. See generally WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW* (2003) (tying the economic underpinnings and structures of property law to the law of intellectual property); Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265 (1977) (arguing that the patent system's purpose is to increase technological output).

87. See, e.g., Mossoff, *supra* note 48 *passim*.

88. Compare *Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151, 156 (1975) (“[T]he ultimate aim [of copyright] is . . . to stimulate artistic creativity for the general public good.”), with *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 58 (1884) (describing copyright as “the exclusive right of a man to the production of his own genius or intellect”), and *Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239, 250 (1903) (“Personality always contains something unique. . . . That something he may copyright unless there is a restriction in the words of the act.”).

89. Judicial Improvements Act of 1990, Pub. L. No. 101-650, § 603, 104 STAT. 5089, 5128 (1990) (codified at 17 U.S.C. § 106A (2012)); see Radin, *supra* note 48, at 1008–13.

90. See, e.g., *Eldred v. Ashcroft*, 537 U.S. 186, 207 (2003) (noting Congress extended the term of existing copyrights based on “projections that longer terms would encourage copyright

These four forces, among others, should tend to push patent and copyright doctrines to look more, rather than less, similar. In the next Part, I examine Supreme Court precedent to evaluate the degree of similarity in its jurisprudence in the two areas.

B. EMPIRICAL TEST

As one method of assessing this Article's descriptive claim, I used case coding on all Supreme Court patent and copyright cases.⁹¹ This quantified the relative frequency of constitutional versus statutory analysis in the Court's precedent in both doctrines.⁹² The results support the Article's claim: The Supreme Court uses constitutional reasoning much more often in copyright.

First, I created a baseline by determining how many patent-related and copyright-related cases that the Court decided on the merits. I searched the Westlaw Supreme Court cases database, first for the keyword "patent," and then for the keyword "copyright." In each instance, I then reduced the resulting sample to a subset by selecting only those cases with the relevant Westlaw heading for patent or copyright respectively (called a Key Number by West).⁹³ This led to subsets of 687 patent cases and 78 copyright cases, which I treated as the baseline for each doctrine.⁹⁴ The greater frequency with which the Court decides patent cases—over eight times as often as it does copyright ones—is in itself an interesting finding.

Next, I identified relevant cases that might include constitutional analysis. I did so by searching the same Westlaw Supreme Court database for instances where the terms "patent" and "constitution," or "copyright" and "constitution," appeared in the same sentence.⁹⁵ This generated 224 patent

holders to invest in . . . public distribution of their works"). *But see id.* at 260 (Breyer, J., dissenting) (arguing that the distribution rationale is not consistent with IP Clause because "it is the *disappearance* of the monopoly grant, not its *perpetuation*, that will, on balance, promote the dissemination of works already in existence"); *Golan v. Holder*, 565 U.S. 302, 362–64 (2012) (Breyer, J., dissenting) (arguing that the distribution rationale is not compatible with the traditional creative justification for copyright).

91. See Mark A. Hall & Ronald F. Wright, *Systematic Content Analysis of Judicial Opinions*, 96 CALIF. L. REV. 63, 71 n.29 (2008).

92. See Derek E. Bambauer, *Paths or Fences: Patents, Copyrights, and the Constitution* app. A (Univ. of Ariz. James E. Rogers Coll. of Law, Arizona Legal Studies Discussion Paper No. 18-12), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3143772.

93. The Key Number for patents is 291; for copyrights and intellectual property, it is 99.

94. West's system appears to have some coding errors. The Key Number for patent returns 690 cases, but three of these are actually copyright cases. Similarly, the Key Number for copyright returns 85 cases; however, six of these are patent cases and one (*International News Serv. v. Associated Press*, 248 U.S. 215 (1918)) is a tort case. Excluding those leads to the subsets of 687 patent and 78 copyright cases.

95. The Boolean search queries were "patent /s constitution!" and "copyright /s constitution!". This generated 224 results for the patent-related search and 58 for the copyright-related search.

cases from the first search and 58 copyright cases from the second.⁹⁶ I then read each case and excluded ones that were not related to patents or copyrights—for example, those that concerned trademark law⁹⁷—or that did not result in a decision on the merits, such as dissents from denials of certiorari.⁹⁸ This resulted in subsets of 89 patent cases and 30 copyright cases.

It is possible that these search terms may have inadvertently excluded relevant cases, perhaps due to unusual wording or sentence structure in the cases’ text. As a check, I searched two leading Westlaw treatises (one on patents, one on copyrights) for the term “constitution”; this led me to include five additional cases in the patent subset since they included constitutional analysis.⁹⁹ Thus, the subsets of cases that might include constitutional reasoning included 94 for patent and 30 for copyright.

Finally, after compiling these subsets of potentially constitution-related cases, I read each case in both samples and coded it as decided on statutory grounds, on constitutional grounds, or both.¹⁰⁰

Since cases do not carry equal importance, this type of empirical analysis cannot be conclusive, but its results concur with the Article’s core descriptive claim: The Supreme Court engages in constitutional analysis more frequently in copyright cases than in patent ones.

Figure 1 - Number of Cases by Type of Analysis

	Statute	Constitution	Both
Patent (n=94)	71	10	13
Copyright (n=30)	19	4	7

96.

See Bambauer, *supra* note 92, app. A (listing cases for each doctrine).

97.

See, e.g., *Matal v. Tam*, 137 S. Ct. 1744, 1751 (2017) (concerning a federal trademark registration application for a band’s name when the name was considered derogatory); *Traffix Devices, Inc. v. Marketing Displays, Inc.*, 532 U.S. 23, 26 (2001) (concerning trademark infringement regarding a new competitor creating a product that they marketed as “WindBuster” that had been reversed engineered based off a competitor’s product called “WindMaster”).

98.

See, e.g., *Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 528 U.S. 124, 125 (2006) (dismissing “the writ as improvidently granted”).

99.

The databases, both available on Westlaw, were MOY’S WALKER ON PATENTS and PATRY ON COPYRIGHT.

100.

See Hall & Wright, *supra* note 91, at 107–09; Bambauer, *supra* note 92, app. A (listing cases as coded).

Figure 2 - Percentage of Cases by Type of Analysis
(may not sum to 100 due to rounding)

	Statute	Constitution	Both
Patent (n=94)	75.5	10.6	13.8
Copyright (n=30)	63.3	13.3	23.3

Two trends stand out. First, the Supreme Court engages in constitutional analysis in its copyright decisions more frequently than it does in its patent decisions—50% as often in this analysis.

Figure 3 - Percentage of Cases with Constitutional Analysis

	% cases with constitutional analysis
Patent	24.4
Copyright	36.6

Second, the Court decides far more patent cases than copyright ones (687 in the baseline set versus 78). Thus, the constitution-related subset of cases understates the disparity in the frequencies with which the Court takes patent versus copyright cases (there are roughly three times as many patent cases as copyright ones in the constitution-related set, but eight times as many in the baseline set). It also means that the constitution-related set of cases overstates the frequency of constitutional adjudication in patent cases.

Figure 4 - Percentage of Cases with Only Constitutional, Both Constitutional and Statutory, or Any Constitutional Analysis

	Constitution Only	Both	Any
Patent (n=687)	1.5	1.9	3.3
Copyright (n=78)	5.1	9.0	14.1

This disparity might reflect the greater importance or complexity of patent law. But it also offers support for the fences and paths model. Constitutional rulemaking—building a fence—provides clearer guidance to Congress, while statutory interpretation may require the Court to revisit the same issues in subsequent terms. As one example, the Court has issued four decisions in the last seven years on patentable subject matter, principally due to a felt need to clarify the putatively statutory boundaries of its three principal

exceptions to patentability.¹⁰¹ By contrast, for copyright the Court disposed of constitutional questions regarding term length, term extensions for existing grants, and “the ‘traditional contours’ of copyright” in two cases in nine years at the early part of this century, and has not returned to the subject since.¹⁰² Having built a fence to constrain copyright legislation, the Court can move on to other matters.

C. HYPOTHESES AND EXPLANATIONS

There are a number of plausible explanations for the divergence in constitutional treatment of copyright and patent cases,¹⁰³ even though the Court has frequently drawn explicit parallels between the two doctrines as an explanation for its analysis.¹⁰⁴ The strongest contenders are, first, differences in entitlement strength, and second, public choice and counter-majoritarian considerations.

1. Entitlement Strength

Although patents provide stronger entitlements than copyrights do, their shorter duration, higher barriers to attainment, greater risk of defeasance, and robust public domain make patents less worrisome as a policy matter. The Supreme Court may see less need to fence in congressional policymaking on patents since the legislature has already created fairly firm boundaries. The rights that accrue to an issued patent are similar to those for a valid copyright; the major difference is that unauthorized use of a patented invention constitutes infringement, while unauthorized use of a copy of a protected

101. *Alice Corp. Pty. v. CLS Bank Int'l*, 573 U.S. 208, 215–17 (2014); *Ass'n for Molecular Pathology v. Myriad Genetics*, 569 U.S. 576, 589–94 (2012); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70–73 (2012); *Bilski v. Kappos*, 561 U.S. 593, 601–25 (2010). *See generally* Dan L. Burk, *The Curious Incident of the Supreme Court in Myriad Genetics*, 90 NOTRE DAME L. REV. 505 (2014) (focusing on ways in which the Supreme Court can reconcile its holding in *Myriad Genetics* with its holding in *Mayo*); Jeffrey A. Lefstin, *The Three Faces of Prometheus: A Post-Alice Jurisprudence of Abstractions*, 16 N.C. J.L. & TECH. 647 (2015) (arguing for a different framework for applying the “inventive concept” so that two classes of subject matter would remain patent eligible). Note that only *Bilski* falls within the Article’s case set—none of the other three cases contains the word “constitution.”

102. *Golan v. Holder*, 565 U.S. 302, 328 (2012); *Eldred v. Ashcroft*, 537 U.S. 186, 219–21 (2003).

103. Intentionally disparate treatment is unlikely but not impossible. The Court has observed that “patents and copyrights do not entail the same exchange,” albeit in a case where it also noted that “[b]ecause the Clause empowering Congress to confer copyrights also authorizes patents, congressional practice with respect to patents informs our inquiry.” *Eldred*, 537 U.S. at 190, 201, 216.

104. *See, e.g.*, *eBay v. MercExchange*, 547 U.S. 388, 392–93 (2006) (explaining treatment of injunctive relief in patent cases through comparison to copyright); *Eldred*, 537 U.S. at 188 (“[B]ecause the Clause empowering Congress to confer copyrights also authorizes patents, the Court’s inquiry is significantly informed by the fact that early Congresses extended the duration of numerous individual patents as well as copyrights.”); *Sony Corp. of Am. v. Universal City Studios*, 464 U.S. 417, 439–42 (1984) (defining copyright contributory infringement with reference to patent law “because of the historic kinship between patent law and copyright law”).

work does not.¹⁰⁵ (However, copyright provides stronger control over downstream development via its exclusive right of creating derivative works, while patent enables others to obtain exclusive rights over improvements that create “blocking patents.”)¹⁰⁶ Copyright, though, has significant defenses to infringement—some broad-based,¹⁰⁷ some industry-specific¹⁰⁸—that patent law largely lacks.¹⁰⁹ For example, copyright’s fair use defense operates as a significant exemption from liability,¹¹⁰ even for wholesale copying,¹¹¹ while patent law’s conceptually similar experimental use is effectively a dead letter.¹¹² Someone who independently creates information that is substantially similar to a copyrighted work is not liable for infringement and can obtain their own copyright in that creation.¹¹³ By contrast, patent imposes liability on *anyone* who makes a protected invention.¹¹⁴ And, all existing publicly-known¹¹⁵

105. Compare 35 U.S.C. § 154 (2012) (delineating patent entitlements to prevent others from making, using, selling, offering to sell, or importing patented inventions), with 17 U.S.C. §§ 106, 106A, 602 (setting out copyright entitlements to prevent others from reproducing, distributing, publicly displaying, publicly performing, or creating derivative works of protected creations; establishing a limited moral rights regime for limited works of visual art; and describing the exclusive right to authorize importation for works). The rights to exclusive making and copying are similar, as are those of offering to sell or selling and distribution, and importation.

106. Compare 17 U.S.C. § 106(3) (granting derivative works rights), with 35 U.S.C. § 101 (establishing, as eligible subject matter, “any new and useful improvement” on an existing technology).

107. See, e.g., 17 U.S.C. § 107 (codifying fair use defense).

108. See, e.g., *id.* § 117 (detailing the limitations on exclusive rights to computer programs).

109. See, e.g., 35 U.S.C. § 273 (exempting commercial users of processes if they used the process at least one year prior to the effective filing or disclosure date of the patented invention); *id.* § 287(c) (exempting medical practitioners from liability for practicing patented surgical techniques); Leahy-Smith America Invents Act, Pub. L. No. 112-29, §§ 14(a), 33(a), 125 Stat. 284, 327, 340 (2011) (barring patents on tax reduction strategies and on human organisms).

110. 17 U.S.C. § 107; see *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 576–78 (1994).

111. See, e.g., *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 442–56 (1984); *Cambridge Univ. Press v. Patton*, 769 F.3d 1232, 1262 (11th Cir. 2014).

112. See *Madey v. Duke Univ.*, 307 F.3d 1351, 1360–61 (Fed. Cir. 2002); Alan Devlin, *Restricting Experimental Use*, 32 HARV. J.L. & PUB. POL’Y 599, 601–22 (2009); Katherine J. Strandburg, *What Does the Public Get? Experimental Use and the Patent Bargain*, 2004 WIS. L. REV. 81, 81–85.

113. See, e.g., *Zalewski v. Cicero Builder Dev., Inc.*, 754 F.3d 95, 101 (2d Cir. 2014) (“Independent creation is a defense to copyright infringement.”).

114. 35 U.S.C. § 271(a).

115. There is an ongoing debate about whether “secret” prior art disqualifies an inventor’s application for a patent. See *Helsinn Healthcare S.A. v. Dr. Reddy’s Labs. Ltd.*, No. CV 11-3962, 2016 WL 832089, at *38, *45 (D.N.J. Mar. 3, 2016) (holding that although “[h]istorically, a secret sale or offer for sale of a claimed invention has precluded patentability under the on-sale bar[,]” the AIA creates a “new requirement that the on-sale bar apply [only] to *public* sales” (emphasis added)), *rev’d sub nom.* *Helsinn Healthcare S.A. v. Teva Pharm. USA, Inc.*, 855 F.3d 1356 (Fed. Cir. 2017), *cert. granted*, 138 S. Ct. 2678 (2018); Mark A. Lemley, *Does “Public Use” Mean the Same Thing It Did Last Year?*, 93 TEX. L. REV. 1119, 1120–23 (2015); Robert P. Merges, *Priority and Novelty Under the AIA*, 27 BERKELEY TECH. L.J. 1023, 1033–37 (2012); Dennis Crouch, *Battle Over Secret Sales and Secret Commercialization Under the AIA*, PATENTLY-O (Mar. 15, 2016), <https://patentlyo.com/patent/2016/03/battle-secret-commercialization.html>.

technology operates to disqualify an invention from patentability: One cannot obtain a patent on the prior art, even if one has independently invented it.¹¹⁶

Patents are also far harder to obtain than copyrights.¹¹⁷ After passage of the 1976 Act,¹¹⁸ copyright is virtually automatic: The moment one fixes a work of sufficient originality, one holds copyright in that work. The United States has moved into grudging compliance with the Berne Convention by eliminating formalities required for protection for foreign authors, and by greatly reducing their importance for domestic ones.¹¹⁹ So, while filing a copyright registration is necessary for U.S. authors to sue for infringement,¹²⁰ registration is not required for ownership.¹²¹ A prospective patentee, by contrast, must apply to the Patent Office and endure examination of that patent for both the substantive requirements under the Patent Act and the technical or procedural ones imposed by the PTO.¹²² Copyrights need only be minimally original¹²³ and fixed;¹²⁴ patents must be novel,¹²⁵ non-obvious,¹²⁶ useful,¹²⁷ and adequately described in an application.¹²⁸ Obtaining¹²⁹ a copyright is effectively costless (beyond the expenses involved in creating the work), while getting a patent involves both application fees and oft-expensive prosecution work.¹³⁰ Authors enjoy copyright the moment they fix their work,

116. See Stephen M. Maurer & Suzanne Scotchmer, *The Independent Invention Defence in Intellectual Property*, 69 *ECONOMICA* 535, 535 (2002).

117. See David Fagundes & Jonathan S. Masur, *Costly Intellectual Property*, 65 *VAND. L. REV.* 677, 679 (2012).

118. Copyright Act of 1976, Pub. L. No. 94-553, 90 Stat. 2541 (1976).

119. See generally Berne Convention Implementation Act of 1988, Pub. L. No. 100-568, 102 Stat. 2853 (codified as amended in scattered sections of 17 U.S.C.) (implementing the Berne Convention domestically).

120. 17 U.S.C. § 411(a) (2012).

121. *Id.* § 201(a).

122. See 35 U.S.C. §§ 100–105, 601–609. See generally USPTO, MANUAL OF PATENT EXAMINING PROCEDURE (9th ed. rev. 2018), <https://mpep.uspto.gov/RDMS/MPEP/current#/current/doi:18.html> (setting out rules and regulations to be followed by the USPTO in examining patents).

123. 17 U.S.C. § 102(a). See generally *Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239 (1903) (analyzing the originality requirement for a valid copyright).

124. 17 U.S.C. § 102(a).

125. 35 U.S.C. § 102.

126. *Id.* § 103.

127. *Id.* § 101.

128. *Id.* § 112.

129. Both patented inventions and copyrighted works must, of course, be composed of eligible subject matter.

130. The base fee for filing a patent electronically is \$300. However, the Patent Office charges additional fees in a number of circumstances, such as in cases of paper filing, having more than three independent claims, having more than 20 claims overall, having an application that exceeds 100 sheets, and so forth. See 37 C.F.R. § 1.16 (2018). See generally *USPTO Fee Schedule*, USPTO, <https://www.uspto.gov/learning-and-resources/fees-and-payment/uspto-fee-schedule> (last updated Jan. 1, 2019) (providing the current fee schedule). Other costs involved in prosecution, such as attorney fees, are highly variable. An AIPLA survey of IP attorneys estimated that an application covering a simple invention would cost \$7,000 on average; an application for

while inventors must wait for over two years on average for the Patent Office to come to a final decision on their applications.¹³¹ While scholars have argued that the costs of obtaining a patent are instrumentally useful in screening out low-value inventions, those costs clearly dwarf the expense of obtaining a copyright.¹³²

Patent owners are also far more likely to lose their entitlements than copyright owners are. The ease of obtaining a valid copyright corresponds to the difficulty of invalidating one in litigation. While works occasionally lose copyright protection for lack of originality, these exceptional cases tend to prove the rule of enduring protection.¹³³ By contrast, invalidity is an oft-litigated and frequently successful defense in patent suits. One study of patent cases filed in 2008–2009 (and decided between 2009 and 2013) found that 43% of litigated patents were invalidated,¹³⁴ a rate roughly consistent with that from an earlier study of patent litigation in the 1990s.¹³⁵ Recent Supreme Court precedent, particularly on patentable subject matter,¹³⁶ definiteness,¹³⁷ and obviousness,¹³⁸ has made it easier to invalidate patents. The America Invents Act introduced two new forms of administrative review of issued patents, and early precedent suggests that challenges are successful a majority of the time.¹³⁹ The effective scope of the entitlements that a patent or

a relatively complex biotechnology or chemical invention was estimated at over \$10,000. AM. INTELL. PROP. LAW ASS'N, REPORT OF THE ECONOMIC SURVEY 2015, at 29 (2015), <http://files.ctctcdn.com/e79ee274201/b6ced6c3-d1ee-4ee7-9873-352dbe08d8fd.pdf>. Patent attorney Gene Quinn cites average figures in his practice of \$5,000–\$7,000 for an “extremely simple” invention, and over \$16,000 for a software-related invention. Gene Quinn, *The Cost of Obtaining a Patent in the US*, IPWATCHDOG (Apr. 4, 2015), <http://www.ipwatchdog.com/2015/04/04/the-cost-of-obtaining-a-patent-in-the-us/id=56485>.

131. U.S. PATENT AND TRADEMARK OFFICE, PERFORMANCE AND ACCOUNTABILITY REPORT: FISCAL YEAR 2016, at 180 (2016), <https://www.uspto.gov/sites/default/files/documents/USPTOFY16PAR.pdf> (listing overall average patent pendency of 25.3 months).

132. See Fagundes & Masur, *supra* note 117, at 679; Jonathan S. Masur, *Costly Screens and Patent Examination*, 2 J. LEGAL ANALYSIS 687, 716 (2010).

133. See, e.g., *Feist Publ'ns, Inc. v. Rural Tel. Serv.*, 499 U.S. 340, 364 (1991); *Meshwerks, Inc. v. Toyota Motor Sales U.S.A., Inc.*, 528 F.3d 1258, 1260 (10th Cir. 2008).

134. John R. Allison et al., *Understanding the Realities of Modern Patent Litigation*, 92 TEX. L. REV. 1769, 1801 (2014). An important caveat is that there may be selection effects, since over 90% of patent cases settle before any ruling on the merits of the suit. *Id.* at 1780.

135. John R. Allison & Mark A. Lemley, *Empirical Evidence on the Validity of Litigated Patents*, 26 AIPLA Q.J. 185, 205 (1998).

136. *Alice Corp. Pty. v. CLS Bank Int'l*, 573 U.S. 208, 212–14 (2014); see Jasper L. Tran, *Two Years After Alice v. CLS Bank*, 98 J. PAT. & TRADEMARK OFF. SOC'Y 354, 356–57 (2016).

137. *Nautilus, Inc. v. Biosig Instruments*, 572 U.S. 898, 901 (2014); see Allison et al., *supra* note 134, at 1782 (finding that, in study cohort, “the single largest category of adjudicated challenges was for indefiniteness”).

138. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 422 (2007); see Allison et al., *supra* note 134, at 1782.

139. See Douglas R. Nemec & Scott M. Flanz, *After Period of High Invalidation Rates, New US Patent Challenge Procedures May Slow Down to Moderate Pace*, SKADDEN (Apr. 26, 2016),

copyright provides is always somewhat uncertain, since infringement depends upon an analysis of substantial similarity for copyright, or the presence of each claim limitation or its substantial equivalent in the accused device or process for patent. However, patents appear to have greater uncertainty in scope. During an infringement suit, the district court must engage in claim construction, determining what each term in the patent claims means.¹⁴⁰ Not only is this a fraught exercise, it is one that is highly vulnerable to reversal on appeal: The Federal Circuit reverses claim construction (which it reviews *de novo*) in roughly 25% to 40% of cases.¹⁴¹ Thus, even once a patent has been issued, and even if it remains valid during litigation, the patent owner is at some risk of effective defeasance if an adjudicating court issues a narrow claim construction.

Finally, unlike copyright, patent creates—and respects—a thriving commons of knowledge in the public domain. Existing technologies that are publicly available immediately become part of the prior art, preventing future applicants from obtaining exclusive rights over them (or over obvious variants of them).¹⁴² Congress has been willing to extend the terms of individual patents on occasion, and once authorized patentees to apply for an additional seven-year term if they could show that they had not received sufficient remuneration during the initial period.¹⁴³ However, there has been no systematic extension of patent terms beyond their expiration, even as the patent term has modestly increased. By contrast, Congress has frequently lengthened terms not only for future copyrights, but also for those existing at the time the legislation was enacted.¹⁴⁴ So, even if patents potentially confer greater monopoly power than copyrights do—there may be few substitutes for a pharmaceutical therapy, but even popular works of authorship usually have attractive alternatives—those monopolies end relatively quickly. Thus, with copyright, the Court felt it had to consider the risk that Congress had engaged in a clever legislative version of Zeno's paradox: effectively extending terms in perpetuity without ever reaching the forbidden zone of an unlimited

<https://www.skadden.com/insights/publications/2016/04/after-period-of-high-invalidation-rates-new-us-pat>.

140. See *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996).

141. See, e.g., J. Jonas Anderson & Peter S. Menell, *Informal Deference: A Historical, Empirical, and Normative Analysis of Patent Claim Construction*, 108 NW. U. L. REV. 1, 40–41 (2013); Christian A. Chu, *Empirical Analysis of the Federal Circuit's Claim Construction Trends*, 16 BERKELEY TECH. L.J. 1075, 1098 (2001); Kimberly A. Moore, *Markman Eight Years Later: Is Claim Construction More Predictable?*, 9 LEWIS & CLARK L. REV. 231, 232–33 (2005).

142. See 35 U.S.C. §§ 102–103 (2012).

143. Patent Act of 1836, Pub. L. No. 24-357, § 18, 5 Stat. 117, 124–25 (1836); *Eldred v. Ashcroft*, 537 U.S. 186, 233–35 (2003) (Stevens, J., dissenting); *Bloomer v. McQuewan*, 55 U.S. (14 How.) 539, 541–42 (1852).

144. See *Eldred*, 537 U.S. at 194–96, 213–14 (tracing the history of extensions).

time.¹⁴⁵ With patent, that worry has not been present, allowing the Court to forgo constitutional analysis of patent terms.

2. Public Choice

The Supreme Court may engage in less constitutional scrutiny of patent law because there are fewer public choice problems plaguing the doctrine, while in copyright's domain, nearly all relevant interest groups favor the ever-increasing strength of IP entitlements. With patents, most IP owners are also consumers: They have interests in protecting their own inventions, in accessing a robust public domain of technology, and in obtaining certainty about the scope of others' rights.¹⁴⁶ By contrast, with copyrights, owners and consumers are typically separate groups.¹⁴⁷

The potential for public choice problems is clear. Both doctrines provide exclusivity for rightsholders that enables them to charge super-competitive prices. The potential availability of monopoly rents not only leads people to become authors or inventors, it also encourages them to try to expand the availability and scope of intellectual property entitlements. Innovators whose inventions do not qualify currently as patentable subject matter may lobby for an expansion of eligibility;¹⁴⁸ compilers of data that cannot be copyrighted may seek similar legislative reform.¹⁴⁹ For example, in the wake of a string of Supreme Court decisions that trimmed the ambit of patentable subject matter, stakeholders such as the Intellectual Property Owners Association ("IPO") and American Intellectual Property Law Association ("AIPLA") pushed legislation that would effectively overturn this precedent.¹⁵⁰ And as part of the Patent Act of 1952, Congress trimmed the misuse doctrine considerably,¹⁵¹ thereby expanding the scope of protection against contributory infringement and "effectively confer[ring] upon the patentee

145. U.S. CONST. art. I, § 8, cl. 8 (empowering Congress to grant patents and copyrights, but only for "limited times"); see Nick Huggett, *Zeno's Paradoxes*, in STAN. ENCYCLOPEDIA PHIL. § 3.2 (Edward N. Zalta ed., 2002), <https://plato.stanford.edu/archives/win2010/entries/paradox-zeno> (explaining the paradox of motion from Achilles and the Tortoise).

146. See Rachel Sachs, *The New Model of Interest Group Representation in Patent Law*, 16 YALE J.L. & TECH. 344, 345-48 (2014).

147. See LITMAN, *supra* note 83, at 167.

148. See, e.g., Dennis Crouch, *AIPLA On Board with Statutory Reform of 101*, PATENTLY-O (May 16, 2017), <https://patentlyo.com/patent/2017/05/aipla-statutory-reform.html> (comparing AIPLA and IPO proposals to reform 35 U.S.C. § 101).

149. See Jacqueline Lipton, *Balancing Private Rights and Public Policies: Reconceptualizing Property in Databases*, 18 BERKELEY TECH. L.J. 773, 803-05 (2003) (listing U.S. legislative proposals).

150. See AM. INTEL. PROP. LAW ASS'N, AILPA LEGISLATIVE PROPOSAL AND REPORT ON PATENT ELIGIBLE SUBJECT MATTER 4-5 (2017), <http://admin.aipla.org/resources2/reports/2017/AIPLADirect/Documents/AIPLA%20Report%20on%20101%20Reform-5-19-17-Errata.pdf>; INTEL. PROP. OWNERS ASS'N, PROPOSED AMENDMENTS TO PATENT ELIGIBLE SUBJECT MATTER UNDER 35 U.S.C. § 101, at 1-2, https://cdn.patentlyo.com/media/2017/02/20170207_IPO-101-TF-Proposed-Amendments-and-Report.pdf; Crouch, *supra* note 148.

151. See 35 U.S.C. § 271(d)(1)-(3).

... a limited power to exclude others from competition in nonstaple goods.”¹⁵² As the Supreme Court dryly noted, the legislation came after “[c]ertain segments of the patent bar eventually decided to ask Congress for corrective legislation that would restore some scope to the contributory infringement doctrine”; showing “great perseverance, they advanced their proposal in three successive Congresses before it eventually was enacted in 1952.”¹⁵³ In the other doctrine, owners of copyrights in sound recordings do not generally hold an exclusive right of public performance.¹⁵⁴ These copyright holders, such as record labels and recording artists, have long felt aggrieved about this exclusion,¹⁵⁵ even though empirical data suggests that expansion of the public performance right is not necessary.¹⁵⁶ Lobbying efforts paid off in part in 1995, when Congress passed legislation creating a public performance right for sound recordings broadcast as a digital audio transmission.¹⁵⁷

The process also works in reverse—entities threatened by patents in a new area may try to have Congress declare it off-limits. For example, tax planning firms convinced Congress to declare that techniques reducing tax liability were uniformly obvious or non-novel in the America Invents Act of 2011.¹⁵⁸ Or, they may ask for bespoke immunity from being sued for infringement. Thus, medical practitioners persuaded Congress that they should be exempted from infringement for practicing medical and surgical procedures covered by a patent.¹⁵⁹

The Court may feel less compelled to erect fences in patent law because the balance of interest groups tends to keep public choice problems in greater check than in copyright law. For example, the AIA did not include controversial patent damages reform because of a split between the information technology and biotechnology industries on its merits.¹⁶⁰ Irina Manta points to the lack of criminal penalties for patent infringement as

152. Dawson Chem. Co. v. Rohm & Haas Co., 448 U.S. 176, 201 (1980).

153. *Id.* at 200.

154. 17 U.S.C. § 106(4), (6); see Matthew S. DelNero, *Long Overdue? An Exploration of the Status and Merit of a General Public Performance Right in Sound Recordings*, 51 J. COPYRIGHT SOC'Y U.S.A. 473, 484–85 (2004).

155. See Shourin Sen, *The Denial of a General Performance Right in Sound Recordings: A Policy that Facilitates Our Democratic Civil Society?*, 21 HARV. J.L. & TECH. 233, 234–35 (2007).

156. See WILLIAM W. FISHER III, PROMISES TO KEEP: TECHNOLOGY, LAW, AND THE FUTURE OF ENTERTAINMENT 53–54, 58–59 (2004).

157. Digital Performance Right in Sound Recordings Act of 1995, § 2, 17 U.S.C. § 106.

158. Leahy–Smith America Invents Act, Pub. L. No. 112-29, § 14(a), 125 Stat. 284, 327 (2011); see Tejas N. Narechania, *Patent Conflicts*, 103 GEO. L.J. 1483, 1506–09 (2015).

159. 35 U.S.C. § 287(c); see Ho, *supra* note 73, at 634–45.

160. See Jonas Anderson, *Congress as a Catalyst of Patent Reform at the Federal Circuit*, 63 AM. U. L. REV. 961, 983–84 (2014).

evidence of the relative balance of interest groups in the area.¹⁶¹ The relatively greater uniformity of patent law—or, put different, its relative lack of industry-specific tuning compared to copyright—may be one indicator of greater interest group parity.¹⁶²

With these potential explanations in mind, the Article now turns to exploring instances in each doctrine where the Supreme Court could have employed either mode of analysis.

III. BOUNDARY CASES

A. INTRODUCTION

This Part explores boundary cases—instances where the Court, in resolving patent and copyright questions, could have employed either statutory analysis or constitutional reasoning. The contrast between the doctrines is plain: Courts are quite reluctant to engage in constitutional adjudication of patent questions, but much more amenable to doing so in copyright cases.

B. PATENT

1. Patentable Subject Matter

In recent years, the Supreme Court has repeatedly grappled with determining what sorts of inventions qualify to receive a patent. The cases arise from a problem of the Court's own making: Its precedent creates three types of advances—abstract ideas, laws of nature, and physical phenomena—that cannot be patented.¹⁶³ Thus, even if a claimed invention falls within one or more of the four eligible categories under Section 101 of the Patent Act (compositions of matter, machines, manufactures, and processes), it must be denied a patent if it claims, for example, an abstract idea. To illustrate, the Court recently held that a claimed method of hedging risk in energy markets was invalid because it covered the abstract idea of hedging investments.¹⁶⁴ These limitations do not appear in the Patent Act; instead, the Court has stated that these are “implicit exceptions” necessary to ensure that patent grants advance, rather than impede, the development of innovation.¹⁶⁵ By

161. Irina D. Manta, *The Puzzle of Criminal Sanctions for Intellectual Property Infringement*, 24 HARV. J.L. & TECH. 469, 472 (2011). *But see* Sachs, *supra* note 146, at 357–85.

162. *But see* 35 U.S.C. § 273(e)(5)(A) (exempting patents owned by universities from otherwise extant prior user defense); Burk & Lemley, *supra* note 34, at 1161–82 (arguing obviousness and disclosure requirements effectively vary by industry, even if there are no statutory differences).

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

164. *Bilski v. Kappos*, 561 U.S. 593, 612 (2010).

165. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012); *see also Bilski*, 561 U.S. at 602 (“The § 101 patent-eligibility inquiry is only a threshold test.”).

failing to override the Court's decisions through subsequent legislation, Congress has evidently codified this understanding of Section 101.¹⁶⁶

The Court's reasoning uses the Patent Act's text as the root of the Section 101 exceptions.¹⁶⁷ However, the language of its decisions hints strongly that these carve-outs are constitutionally required. The Court repeatedly notes that granting patents for alleged inventions in the suspect categories would contravene the purpose of the IP Clause by "inhibit[ing] future innovation."¹⁶⁸ That implies, however, that Congress could not override this judicial determination, since doing so would run afoul of the IP Clause's demands. The Court has, in effect, given Congress a strong hint, rather than a command, by helpfully finding these limits contained within the Patent Act's text. Congress has not yet shown much appetite for overturning or revisiting these exceptions; recent legislation has removed subject matter from eligibility rather than augmenting it.¹⁶⁹

However, if the subject matter exceptions are a fence rather than a path, it would be useful for the Court to make that plain. Stakeholders have suggested that Congress ought to adopt legislation to overturn one or more of the recent subject matter cases; in particular, the biotechnology lobby is openly hostile to the rejection of claims to isolated genetic sequences as ineligible under *Association for Molecular Pathology v. Myriad Genetics*.¹⁷⁰ If such reform would be constitutionally dead on arrival, Congress could be saved the hassle and indignity of a legislative snipe hunt.¹⁷¹

2. Inventorship

The Constitution is specific about whom Congress may reward with patent rights: inventors, and only inventors.¹⁷² Although there is sparse historical evidence available to interpret the IP Clause,¹⁷³ the drafters clearly operated with the British crown's use of monopolies as political favors firmly in mind.¹⁷⁴ Thus, patent legislation could confer entitlements only upon those

166. See *Bilski*, 561 U.S. at 601–02.

167. See, e.g., *Alice Corp. Pty. v. CLS Bank Int'l*, 573 U.S. 208, 216–17 (2014); *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2012); *Diamond*, 447 U.S. at 307.

168. *Mayo Collaborative Servs.*, 566 U.S. at 86; see *Bilski*, 561 U.S. at 651–56 (Stevens, J., concurring); *id.* at 657 (Breyer, J., concurring).

169. The America Invents Act of 2011 provides that "no patent may issue on a claim directed to or encompassing a human organism." Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 33, 125 Stat. 284, 340 (2011).

170. *Myriad Genetics, Inc.*, 569 U.S. at 590–94; see Daniel K. Yarbrough, Note, *After Myriad: Reconsidering the Incentives for Innovation in the Biotech Industry*, 21 MICH. TELECOMM. & TECH. L. REV. 141, 142–47 (2014).

171. Congress might want to pass legislation for expressive purposes, but from a utilitarian perspective, spending time on a bill known to be unconstitutional is simply a waste.

172. U.S. CONST. art. I, § 8, cl. 8.

173. Walterscheid, *supra* note 27, at 308.

174. *Id.* at 328.

who invented some new innovation, rather than those who funded it, distributed it, or lobbied for it.

Narrowing patent rights to inventors limits the set of questions about granting entitlements, but it does not eliminate them. For example, courts have struggled to define the threshold contribution necessary to qualify a participant as an “inventor”; for many, if not most inventions, the spectrum of potential claimants is large, ranging from the person who formulated the original research question to those who carried out practical implementation tasks.¹⁷⁵

Unlike in copyright, though, the Supreme Court has treated inventorship—the question of who qualifies to own a patent initially—as an issue of statute or patent common law. For example, the Court has had to consider whether an employee or their employer owned an invention made by the employee, resulting in the genesis of the “shop right” license based either in contract or equity.¹⁷⁶ The “shop right” is a defense to infringement, though, rather than any ownership interest in the patent itself.¹⁷⁷ Patent precedent may require employees to assign title to their patents to their employers, but it does not vest it in the employer initially.¹⁷⁸ While inventorship is clearly grounded in the IP Clause, the Court’s analysis has focused on statutory and contract issues for over 150 years.¹⁷⁹

3. Novelty

It sounds repetitive to state that patents can be granted only for novel innovations; novelty seems inherently tied to the idea of invention or discovery. Yet while the Supreme Court has hinted that the novelty requirement is constitutionally mandated, it has never held so outright. Moreover, absolute novelty has never been required,¹⁸⁰ and Congress has changed the definition of what counts as sufficiently “new” for a patent over time.¹⁸¹ Thus, novelty is intimately bound up with the notion of the public

175. See generally, e.g., *Hess v. Advanced Cardiovascular Sys., Inc.*, 106 F.3d 976 (Fed. Cir. 1997) (considering the plaintiff’s claim that he was a co-inventor because he provided information about how the product worked, but ultimately finding that the plaintiff was not a co-inventor because he was uninvolved in the research and development of the product).

176. See *United States v. Dubilier Condenser Corp.*, 289 U.S. 178, 180 (1933); *Solomons v. United States*, 137 U.S. 342, 345–46 (1890); *McClurg v. Kingsland*, 42 U.S. 202, 203 (1843).

177. See *McElmurry v. Ark. Power & Light Co.*, 995 F.2d 1576, 1580 (Fed. Cir. 1993).

178. See, e.g., *Standard Parts Co. v. Peck*, 264 U.S. 52, 60 (1924).

179. *Gayler v. Wilder*, 51 U.S. 477, 493–94 (1850). See generally *Bd. of Trs. of the Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc.*, 563 U.S. 776 (2011) (interpreting the Bayh-Dole Act and relying on common practices of contractors to resolve a patent dispute).

180. See, e.g., *Gayler*, 51 U.S. at 496–97 (preferring the inventor who brings forward the invention even if the invention had been used privately by another inventor); *Gillman v. Stern*, 114 F.2d 28, 30 (2d Cir. 1940) (alluding that secret prior use does not anticipate invention).

181. Compare 35 U.S.C. § 102 (2006) (pre-AIA), with 35 U.S.C. § 102 (2012) (post-AIA) (shifting American law from a “first to invent” to a “first inventor to file” system).

domain—a commons of technology and innovation available to all, free as the air to common use.¹⁸²

In parsing whether the Patent Act pre-empted state trade secret laws, the Court noted “the [patent] policy that matter once in the public domain must remain in the public domain.”¹⁸³ However, the decision emphasized the risk that state laws would infringe upon the commons, not that federal law would be forbidden from doing so.¹⁸⁴ And while the Court pointed out that the public domain was sufficiently important that even a patent’s licensee could challenge its validity, that approach also emphasizes error within the patent system rather than in its overall design.¹⁸⁵ The closest that the Court has come to laying bare the constitutional nature of novelty was in a case about non-obviousness.¹⁸⁶ While considering whether a patent on a plow was sufficiently inventive given the state of the art, the Court noted that Congress is not unrestrained in crafting the patent system: “Congress may not authorize the issuance of patents whose effects are to remove existent knowledge from the public domain, or to restrict free access to materials already available.”¹⁸⁷ The decision emphasized the nature of the constraint: “This is the *standard* expressed in the Constitution and it may not be ignored.”¹⁸⁸ The remainder of the analysis, though, focused on the non-obviousness requirement codified in the 1952 Patent Act, concluding that the plow in suit failed to meet its test.¹⁸⁹

Even if the Constitution bars both state and federal governments from removing matter from the public domain, this highlights the importance of what counts as “public”—and who decides that issue. Prior to 2011, the Patent Act theoretically awarded rights to the first person to invent an advance that met the other patentability criteria.¹⁹⁰ However, this rule was riddled with exceptions.¹⁹¹ Later inventors could obtain a patent if the first one

182. Cf. Yochai Benkler, *Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain*, 74 N.Y.U. L. REV. 354, 355, 390–93 (1999) (“Only an increase in the public domain—an increase in the range of uses presumptively privileged to all—generally increases the freedom of a society’s constituents to communicate.” (quoting *Int’l News Serv. v. Associated Press*, 248 U.S. 215, 250 (1918) (Brandeis, J., dissenting))).

183. *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 484 (1974).

184. *Id.* at 481 (articulating the goal “that which is in the public domain cannot be removed therefrom by action of *the States*” (emphasis added)).

185. *Id.* at 488–89 (citing *Lear, Inc. v. Adkins*, 395 U.S. 653 (1969)).

186. See *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 3 (1966).

187. *Id.* at 6.

188. *Id.*

189. See *id.* at 19–26.

190. 35 U.S.C. § 102 (2006) (pre-AIA).

191. In addition, an inventor who conceived of an advance first, but reduced it to practice after another inventor, could forfeit patent rights if she failed to pursue reduction to practice with sufficient diligence. See 35 U.S.C. § 102(g)(1) (pre-AIA) (governing interferences); *Griffith v. Kanamaru*, 816 F.2d 624, 628–29 (Fed. Cir. 1987).

“abandoned, suppressed, or concealed” the innovation;¹⁹² used it publicly or sold it outside the United States;¹⁹³ or published information about it in a way not sufficiently available to the general public.¹⁹⁴ After 2011, with the passage of the America Invents Act, the United States discarded the first-to-invent standard, even nominally, and moved to award patent rights to the first independent inventor to file an application or to disclose sufficient information about it to the public.¹⁹⁵ This shifted novelty’s inherent focus from inventorship to disclosure—the concern is with rewarding the inventor who enriches the commonwealth of knowledge over the one who is first to achieve an advance.

Thus far, the courts have avoided creating a fence for the novelty requirement, even when evading it has been awkward. For example, a Florida inventor sought to invalidate the AIA on the grounds that the IP Clause required patents to be awarded to the first to invent, not merely the first to file an application.¹⁹⁶ Both the district court and the Federal Circuit dismissed for lack of standing, avoiding the substantive question.¹⁹⁷ Commentators have criticized the AIA as unconstitutionally transgressing the Fifth Amendment’s prohibition on takings,¹⁹⁸ the IP clause’s designation of inventors as the recipients of patents,¹⁹⁹ and historical precedent on patent law.²⁰⁰ Nonetheless, the Court has yet to impose constitutional limits on Congressional latitude regarding novelty.

192. See 35 U.S.C. § 102(c), (g) (2) (pre-AIA); *Teva Pharm. Indus. Ltd. v. AstraZeneca Pharm. LP*, 661 F.3d 1378, 1384–85 (Fed. Cir. 2011). Compare *Gillman v. Stern*, 114 F.2d 28, 31 (2d Cir. 1940) (finding that secret prior art did not invalidate patent), with *Dunlop Holdings Ltd. v. Ram Golf Corp.*, 524 F.2d 33, 35–37 (7th Cir. 1975) (holding noninforming public use was not concealment and therefore anticipated later invention).

193. See 35 U.S.C. § 102(a)–(b) (pre-AIA) (limiting prior art via public use or sale to United States). See generally *In re Hilmer*, 359 F.2d 859, 863–64 (C.C.P.A. 1966) (holding that a foreign patent application did not count as anticipating patent reference until filed in U.S.) (negated by the America Invents Act).

194. See 35 U.S.C. § 102(b) (pre-AIA); *In re Cronyn*, 890 F.2d 1158, 1161 (Fed. Cir. 1989).

195. See 35 U.S.C. § 102 (2012) (post-AIA); Merges, *supra* note 115, at 1027–28.

196. *MadStad Eng’g, Inc. v. U.S. Patent & Trademark Office*, No. 8:12-cv-1589-T-23MAP, 2013 WL 3155280, at *1–2 (M.D. Fla. May 8, 2013), *aff’d*, 756 F.3d 1366 (Fed. Cir. 2014).

197. *MadStad Eng’g, Inc.*, 2013 WL 3155280 at *6–7. See generally Christopher J. Ferrell, Note, *Standing Room Only: MadStad Engineering and the Potential to Challenge the Constitutionality of the America Invents Act’s “First-Inventor-to-File” Patenting System*, 10 WASH. J. L. TECH. & ARTS 205 (2015) (discussing how the courts avoided the constitutional issues with the AIA by dismissing MadStad Engineering’s suit for lack of standing).

198. Andrew L. Sharp, Note, *Misguided Patent Reform: The Questionable Constitutionality of First-to-File*, 84 U. COLO. L. REV. 1227, 1247–48 (2013).

199. Ferrell, *supra* note 197, at 1243–47.

200. See Adam Mossoff, *The America Invents Act, a First-to-Invent Patent System, and “Obama-Birther” Accusations*, TRUTH ON THE MKT. (July 6, 2016), <https://truthonthemarket.com/2016/07/06/the-america-invents-act-a-first-to-invent-patent-system-and-obama-birther-accusations>.

4. Obviousness

The requirement that a claimed invention be not only novel, but non-obvious to an artisan in the field, presents a difficult boundary case for patent law. While the Supreme Court has putatively treated non-obviousness as a fence, Congress abolished the requirement for the biotechnology industry for sixteen years.²⁰¹

Obviousness entered patent doctrine in 1851, 61 years after passage of the first federal patent legislation, via the Supreme Court's decision in *Hotchkiss v. Greenwood*.²⁰² Invention, the Court concluded, required more than strict novelty; combinations of known elements that would occur to any ordinary craftsperson did not qualify.²⁰³ Twenty-five years later, the Court stated that "[t]he distinction between mechanical skill, with its conveniences and advantages and inventive genius, is recognized in all the cases."²⁰⁴ But the requirement that inventions be non-obvious did not enter the text of the Patent Act until 1952, over a century after the doctrine's inception.²⁰⁵ The Supreme Court took up the question of how statutory incorporation affected obviousness in the seminal case of *Graham v. John Deere*.²⁰⁶ In evaluating whether a claimed advance in plow technology qualified as non-obvious, the Court emphasized the constitutional dimensions of the requirement. It reiterated the "constitutional command" requiring that inventions contain "[i]nnovation, advancement, and things which add to the sum of useful knowledge" for patentability.²⁰⁷ Certainly Congress could not "remove existent knowledge from the public domain, or . . . restrict free access to materials already available."²⁰⁸ Ultimately, the Court viewed the statutory non-obviousness requirement as an implementation of the functional approach demanded by *Hotchkiss*,²⁰⁹ and hence one that "comports with the constitutional strictures [sic]."²¹⁰ While Congress was free to implement patent policy within constitutional limits, the Court made clear that the non-obviousness requirement was one of those limits.²¹¹

The Court has continued to frame non-obviousness as mandated by the Constitution's demand that patent law "promote the Progress of . . . useful

201. Act of Nov. 1, 1995, Pub. L. No. 104-41, § 1, 109 Stat. 351, 351 (1995); see *infra* notes 214–21.

202. *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248, 265–67 (1850).

203. *Id.* at 266–67.

204. *Reckendorfer v. Faber*, 92 U.S. 347, 357 (1875).

205. U.S. Patent Act of 1952, Pub. L. No. 82-593, 66 Stat. 792, 798 (July 19, 1952) (codified as amended at 35 U.S.C. § 103 (2012)).

206. *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 3–4 (1966).

207. *Id.* at 5–6.

208. *Id.* at 6.

209. *Id.* at 11–17.

210. *Id.* at 17.

211. *Id.* at 6.

Arts,”²¹² including in its most recent case on the subject.²¹³ In theory, the Court has erected a fence, one that precludes Congress from authorizing patents on claimed inventions that are obvious. In fact, though, Congress did precisely that for almost two decades. In 1995, under pressure from the American biotechnology industry, Congress passed a bill on Biotechnological Process Patents that amended Section 103.²¹⁴ The legislation effectively overturned a decision by the Court of Appeals for the Federal Circuit that had invalidated, as obvious, a claimed invention that applied a well-known process to novel starting material to produce a known, naturally-existing compound.²¹⁵ While a patent on the starting material could be valid, the process could not be eligible, since the treatment and output of the material were routine in the field.

The statute reversed that outcome for biotechnology inventions: Such claimed processes would be automatically deemed non-obvious.²¹⁶ Previously, the U.S. Patent Office treated these inventions “on a case-by-case basis,” with some rejected as obvious and others allowed.²¹⁷ Now, all of them—including the obvious—would be granted as a matter of course. In short, Congress engaged in patent alchemy, transmuting obvious inventions into non-obvious ones through legislative fiat. The legislation was allegedly a move to align U.S. patent doctrine with laws in the European Union and Japan, which had no qualms about granting such patents.²¹⁸ The biotechnology firm Amgen championed the legislation after losing a case against a foreign competitor because of the ineligibility of its technology for a process patent; however, witnesses at a legislative hearing could not offer evidence of any other such instances, nor are there any in the Congressional record.²¹⁹

This sector-specific aspect of U.S. patent law vanished with the adoption of the America Invents Act in 2011, and there are no court cases involving its provisions.²²⁰ Yet, if the doctrine of non-obviousness is a fence, then the 1995

212. *Id.* at 5; *see, e.g.*, *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273, 279 (1976); *Dann v. Johnston*, 425 U.S. 219, 225–26 (1976); *Great Atl. & Pac. Tea Co. v. Supermarket Equip. Corp.*, 340 U.S. 147, 152 (1950).

213. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 427 (2007) (“[T]he results of ordinary innovation are not the subject of exclusive rights under the patent laws. Were it otherwise patents might stifle, rather than promote, the progress of useful arts.”).

214. Act of Nov. 1, 1995, Pub. L. No. 104-41, 109 Stat. 351, 351 (1995).

215. *In re Durden*, 763 F.2d 1406, 1410–11 (Fed. Cir. 1985).

216. Pub. L. No. 104-41, § 103(b)(1), 109 Stat. at 351 (creating 35 U.S.C. § 103(b)).

217. *Patents on Biotechnological Processes; and to Authorize Use by Regulation: The Representation of “Woody Owl,” Hearing on H.R. 587 and H.R. 1269 Before the H. Subcomm. on Courts and Intellectual Prop. of the H. Comm. on the Judiciary*, 104th Cong. 13 (1995) (statement of H. Dieter Hoinkes, Senior Counsel, Office of Legis. & Int’l Affs., Patent & Trademark Office, U.S. Department of Commerce).

218. *Id.* at 10 (statement of Rep. Boucher, Member, H. Comm. on the Judiciary).

219. *Amgen v. Chugai Pharm. Co.*, 706 F. Supp. 94, 107–08 (D. Mass. 1989); *see* David Beier & Robert H. Benson, *Biotechnology Patent Protection Act*, 68 DENV. U. L. REV. 173, 181–83 (1991).

220. Leahy–Smith America Invents Act § 3(c), 35 U.S.C. § 103 (2012).

legislation exceeded Congressional authority. It conferred rights to inventions that, while novel due to the starter material, were nonetheless obvious because the processes involved routine, conventional techniques in biotechnology. The courts may simply have lacked a challenge sufficient enough to bring constitutional scrutiny to bear, perhaps because the legislation conferred benefits but no costs for domestic firms.²²¹

5. Utility

The IP Clause is purposive: Congress can establish exclusive rights only “[t]o promote the Progress of . . . [the] useful Arts.”²²² This strongly phrased clause implies that only useful inventions qualify for protection,²²³ for they are the only ones “worth to the public the embarrassment [sic] of an exclusive patent,” as Thomas Jefferson wrote.²²⁴ The 1790 Patent Act conditioned eligibility upon invention or discovery of “any useful art,” and the federal courts have adjusted the stringency of what is now termed the utility requirement ever since.²²⁵ However, in deciding how much social value an applicant for a patent must demonstrate, the courts have consistently blazed a path rather than building a fence.²²⁶ The Supreme Court described the utility mandate as “neither disputed nor disputable,” since “the concept of utility has maintained a central place in all of our patent legislation, beginning with the first patent law in 1790.”²²⁷ And while the Court went on to describe utility as “[t]he basic *quid pro quo* contemplated by the Constitution and . . . Congress,” it proceeded to analyze the standard for an invention’s usefulness strictly in statutory terms.²²⁸

221. The limitation of § 103(b) to the biotechnology industry was plainly due to politics. During Congressional hearings, an official from the Patent Office testified that a broad-scope version of the legislation had failed due to “howls of protest” from industries that might be negatively affected, such as the retail sector. *Patents on Biotechnological Processes*, *supra* note 217, at 41 (response by Hoinkes to question by Rep. Schroeder).

222. U.S. CONST. art. I, § 8, cl. 8.

223. *But see generally* Sean B. Seymore, *Making Patents Useful*, 98 MINN. L. REV. 1046 (2014) (arguing for elimination of the utility requirement).

224. Letter from Thomas Jefferson to Isaac McPherson (Aug. 13, 1813), <https://founders.archives.gov/documents/Jefferson/03-06-02-0322>.

225. Patent Act of 1790, ch. 7, 1 STAT. 109, 109–10 (1790).

226. The courts have been clear that the claimed invention must function as described—it must be “capable of being used to effect the object proposed.” *Mitchell v. Tilghman*, 86 U.S. (19 Wall.) 287, 396 (1873). Thus, the Patent Office should reject applications covering, for example, cold fusion or perpetual motion machines on utility grounds. *See, e.g., In re Swartz*, 232 F.3d 862, 864 (Fed. Cir. 2000) (denying an application for a cold fusion invention); *Newman v. Quigg*, 877 F.2d 1575, 1581–82 (Fed. Cir. 1989) (denying a patent for a perpetual motion device). Some such applications inevitably sneak through. *See, e.g., Space Vehicle Propelled by the Pressure of Inflationary Vacuum State*, U.S. Patent No. 6,960,975 (issued Nov. 1, 2005).

227. *Brenner v. Manson*, 383 U.S. 519, 528–29 (1966).

228. *Id.* at 534.

It's not plain that the Court ought to erect a fence around utility. Useless inventions would seem to have no value except for the questionable benefit of conferring recognition upon their owners, especially in a system (like the U.S. one) where the patent application process is funded completely via fees.²²⁹ Litigation, however, is hardly self-funding, and courts may make mistakes, conferring coverage for useful inventions based upon useless patents. Moreover, applicants may get lucky, especially in rapidly developing technological fields: A conjectural application today might be proven correct tomorrow, even when the original claimant had neither knowledge nor proof of utility.²³⁰ Granting patents without requiring that they possess social utility risks locking up innovation for no public benefit in return; even those skilled in the art who read patents could not reliably sort guesswork from genuine advances. Finally, while the prior art is capacious, it is also supposed to play a pedagogical function for practitioners.²³¹ Useless patents impose a cost by detracting from the limited store of attention that people can devote to staying current with the literature in their field. Thus, the intuition that useless patents can be safely ignored is incorrect; the Court might well be advised to set utility as a constitutional fence.²³²

C. COPYRIGHT

1. Authorship

The IP clause limits the grant of federal copyrights to “Authors”; that grant can only cover their “Writings.”²³³ Those terms are hardly self-defining,²³⁴ but the Supreme Court has interpreted them to impose three fences: one related to who can receive entitlements initially, and two related to the works that can qualify for protection.²³⁵

The restriction of copyright to authors, born of the drafters’ experience with monopolies granted by the British crown, meant that there could be no

229. See Deepak Hegde, *Funding and Performance at the US Patent and Trademark Office*, 30 NATURE BIOTECHNOLOGY 148, 148–49 (2012); *Budget and Financial Information: Congressional Budget Justifications*, USPTO (Feb. 13, 2018, 11:35 AM), <https://www.uspto.gov/aboutus/performance-and-planning/budget-and-financial-information> (“With full access to its fee collections to offset its funding requirements, the USPTO’s FY 2019 net appropriation would be \$0.”).

230. Cf. *In re Fisher*, 421 F.3d 1365, 1373 (Fed. Cir. 2005) (rejecting, on utility grounds, an application claiming purified nucleic acid sequences in maize plants, since the applicant did not know what function, if any, the genes played).

231. See, e.g., Jeanne C. Fromer, *Patent Disclosure*, 94 IOWA L. REV. 539, 576–78 (2009).

232. But see Sean B. Seymore, *Patently Impossible*, 64 VAND. L. REV. 1491, 1500–05 (2011) (arguing that the operability requirement should be eliminated in favor of enablement analysis).

233. U.S. CONST. art. I, § 8, cl. 8; *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 56 (1884).

234. For example, the Court noted that the term “author” could be explicated as “he to whom anything owes its origin; originator; maker; one who completes a work of science or literature.” *Burrow-Giles Lithographic Co.*, 111 U.S. at 57–58.

235. See generally Christopher Buccafusco, *A Theory of Copyright Authorship*, 102 VA. L. REV. 1229 (2016) (positing a theory of authorship).

American equivalent of the Stationers' Company.²³⁶ Distributors and other intermediaries could not earn copyrights initially; to receive the entitlements, a claimant would have to show that the relevant work was "the production of his own genius or intellect."²³⁷ This limitation ruled out some potential copyright holders, but largely just relocated the dispute to deciding who, among rivals, could successfully contend for authorship.²³⁸ In setting forth a methodology for this issue, the Supreme Court looked to British precedent, where the British courts adopted the "master mind" theory: The author was "the person who effectively is[,] as near as he can be[,] the cause of the picture which is produced," as the one "who really represents, creates, or gives effect to the idea, fancy, or imagination."²³⁹ This meant, for example, awarding copyright to the employee who took a photograph rather than his employers.²⁴⁰ The constitutional restriction thus limited the grant of copyright to someone who contributed from their "own genius or intellect" to an eligible work.²⁴¹

In practice, the constitutional limit may have more leeway than the case law would suggest. The most obvious example is the "work made for hire" doctrine.²⁴² If a piece of copyrightable expression qualifies as a work for hire, copyright vests not in the creator, but in another party, who may have only an evanescent connection or contribution to the work.²⁴³ The 1976 Copyright Act sets out two paths by which this can occur.²⁴⁴ The first is when an employee creates a copyrighted work in the scope of their employment; copyright vests immediately in the employer.²⁴⁵ The second is when the creator prepares one of nine types of enumerated works at the instruction of someone else.²⁴⁶ As long as the creator and the commissioning party agree in writing to treat the resulting expression as a work made for hire, the copyright is held by the latter; the creator takes nothing. Conceptually, the work made for hire doctrine operates like a patronage system—rights to the work, and the rewards flowing from it, accrue to the employer/commissioning

236. See Paul Heald, *Federal Intellectual Property Law and the Economics of Preemption*, 76 IOWA L. REV. 959, 993 (1991).

237. *Burrow-Giles Lithographic Co.*, 111 U.S. at 58.

238. See, e.g., *id.* at 58–61; Eva E. Subotnik, *The Author Was Not an Author: The Copyright Interests of Photographic Subjects from Wilde to Garcia*, 39 COLUM. J.L. & ARTS 449, 449–52 (2016).

239. *Burrow-Giles Lithographic Co.*, 111 U.S. at 61 (quoting *Nottage v. Jackson*, [1883] QB 627 at 635, 637 (1883) (Eng.)); see F. Jay Dougherty, *Not A Spike Lee Joint? Issues in The Authorship of Motion Pictures Under U.S. Copyright Law*, 49 UCLA L. REV. 225, 272–73 (2001) (discussing "master mind" theory in *Nottage*).

240. *Nottage*, [1883] QB 627 at 630 (opinion of Brett, M.R.).

241. *Burrow-Giles Lithographic*, 111 U.S. at 58.

242. See *Cnty. for Creative Non-Violence v. Reid*, 490 U.S. 730, 732–33, 735, 737–38 (1989).

243. 17 U.S.C. § 201(b) (2012).

244. 17 U.S.C. § 101; *Cnty. for Creative Non-Violence*, 490 U.S. at 738.

245. 17 U.S.C. § 101; *Cnty. for Creative Non-Violence*, 490 U.S. at 741.

246. 17 U.S.C. § 101; *Cnty. for Creative Non-Violence*, 490 U.S. at 741.

party/patron, rather than the actual creator.²⁴⁷ This seems to run afoul of the constitutional fence that copyrights go only to authors, who must contribute some original, minimally creative content to a work. Employers and other commissioning parties might provide that sort of input, but they are not required to by the Copyright Act.

The works made for hire doctrine has been encoded in copyright legislation since 1909, and at this point, there seems little likelihood that it will be invalidated on constitutional grounds.²⁴⁸ The provision is plainly an instrumental workaround that avoids the risk of error in transfer agreements²⁴⁹ and that evades the termination provisions created for the first time in the 1976 Act.²⁵⁰ It has some rough causal logic engrained in it: But for the funding and direction of the employer, or the prompting of the commissioning party, the work would not come into existence, so from an incentives-based perspective, conferring copyright on those entities makes sense. And, the rules are at least nominally fair to creators, who elected either to enter an employment relationship or to produce a commissioned work (as memorialized by a written agreement signed by both sides). Presumably, the creator would negotiate to obtain a share of the proceeds likely to flow from the work in the latter case or is compensated via wages in the former.

Works made for hire may make sense for authors, but they undercut the constitutional rule regarding authorship. In effect, they conflate the requirements for a copyrightable work with those for an eligible author. If a work has sufficient novelty and originality, the courts will not look too closely at to whom Congress decides to grant rights. This suggests that, in practice, copyright's rules on authorship are more path-like than they seem.

The Court has also decided that there are two other constitutional requirements for a work to be eligible for copyright. The first is that it exhibit at least a trivial amount of creativity and originality—meaning both that it displays “something unique” that “is the personal reaction of an individual upon nature,” and also that it has not been copied.²⁵¹ The threshold is minimal, and the Court expressly cautioned against enabling judges to engage in aesthetic calculations “outside of the narrowest and most obvious limits.”²⁵² The courts have made clear that only works utterly devoid of human

247. See Shubha Ghosh, *Deprivatizing Copyright*, 54 CASE W. RES. L. REV. 387, 438 (2003).

248. See Copyright Act of 1909, Pub L. No. 60-349, § 62, 35 Stat. 1075, 1087–88 (1909) (repealed 1976) (“[T]he word ‘author’ shall include an employer in the case of works made for hire.”); Michael B. Landau, “*Works Made For Hire*” After Community for Creative Non-Violence v. Reid: *The Need for Statutory Reform and the Importance of Contract*, 9 CARDOZO ARTS & ENT. L.J. 107, 110–14 (1990).

249. See, e.g., *Effects Assocs., Inc. v. Cohen*, 908 F.2d 555, 556–58 (9th Cir. 1990).

250. 17 U.S.C. § 203(a).

251. *Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239, 250 (1903).

252. *Id.* at 251.

creativity fall outside the scope of copyright,²⁵³ rejecting challenges based on a work's commercial purpose,²⁵⁴ representation of objects in nature,²⁵⁵ and identical appearance to an independently created work.²⁵⁶ The major theoretical implication of the originality requirement is that it obviated the "sweat of the brow" doctrine, which conferred copyright based upon a purported author's effort and investment in assembling a work rather than evaluating the level of creativity of it.²⁵⁷ Thus, a Kansas telephone company could not obtain copyright in its "white pages" listing of subscribers' telephone numbers and addresses (listed alphabetically); the directory was merely a compendium of facts, with no trace of human ingenuity.²⁵⁸ The Supreme Court made plain that "[o]riginality is a constitutional requirement."²⁵⁹

Lastly, the Constitution's limit on grants of copyright to "writings" means that expression must be fixed in tangible form in order to be protected.²⁶⁰ The Supreme Court has characterized the term "writings" with a broad brush,²⁶¹ as "any physical rendering of the fruits of creative intellectual or aesthetic labor."²⁶² The fixation requirement has generated two puzzles. The first is whether protection attaches to an otherwise-eligible work before fixation occurs, such as the live television broadcast of a sporting event. To date, the lower courts' approach to the delayed fixation question has been: close enough.²⁶³ The second is whether Congress can grant copyright-like protection to concededly unfixed works, such as bootlegs of live musical performances, without running afoul of the IP Clause's limitations.²⁶⁴ Here, too, the lower courts have been lenient, permitting anti-bootlegging laws to

253. See, e.g., *Meshwerks, Inc. v. Toyota Motor Sales U.S.A., Inc.*, 528 F.3d 1258, 1262–65 (10th Cir. 2008) (cataloging the development of the jurisprudence on originality and finding that the plaintiff design firm's "digital wire-frame computer models" of Toyota vehicles were not original since they "d[id] not involve any expression apart from the raw facts in the world"); *Bridgeman Art Library, Ltd. v. Corel Corp.*, 36 F. Supp. 2d 191, 195–96 (S.D.N.Y. 1999) ("[P]laintiff's exact photographic copies of public domain works of art [can] not be copyrightable under United States law because they are not original.").

254. *Bleistein*, 188 U.S. at 251–52.

255. *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 59–60 (1884); see also *Mannion v. Coors Brewing Co.*, 377 F. Supp. 2d 444, 450, 454–55 (S.D.N.Y. 2005) (holding that a staged photograph of athlete Kevin Garnett was original).

256. See, e.g., *Mag Jewelry Co. v. Cherokee, Inc.*, 496 F.3d 108, 115–16 (1st Cir. 2007).

257. *Feist Publ'ns Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 345 (1991) ("The *sine qua non* of copyright is originality.").

258. *Id.* at 361–62.

259. *Id.* at 346.

260. But see *supra* note 57 and accompanying text (discussing protection for unfixed musical performances pursuant to Commerce Clause).

261. See *Goldstein v. California*, 412 U.S. 546, 561 (1973).

262. *Id.*

263. See, e.g., *Nat'l Football League v. McBee & Bruno's, Inc.*, 792 F.2d 726, 731–32 (8th Cir. 1986).

264. See 17 U.S.C. § 1101 (2012); 18 U.S.C. § 2319A.

survive based on the Commerce Clause even if they arguably would fail under IP Clause review.²⁶⁵

Thus, while aspects of authorship are constitutionally mandated as fences, Congress still enjoys considerable latitude in fine-tuning it.

2. Copyrightable Subject Matter

Unlike with patentable subject matter, the Supreme Court has been willing to address the constitutional dimensions of copyrightable subject matter, though mostly by confirming Congressional power to expand the category. The Court began in 1884 by addressing whether photography—a relatively new medium—displayed sufficient originality and authorship to bring it within the ambit of both the IP Clause and the Copyright Act.²⁶⁶ It affirmed that photos were “of a class of inventions for which the Constitution intended that Congress should secure to him the exclusive right” via copyright.²⁶⁷ This decision in *Burrow-Giles Lithographic* set out a trend of considerable latitude for copyright legislation; the Court has resisted imposing medium-specific limits, focusing instead upon whether the claimed expression contains “original intellectual conceptions of the author.”²⁶⁸

The Court’s subsequent cases have followed this pattern. In 1991, a small Kansas telephone company sued a publishing company that copied its listing of local numbers and subscribers, claiming copyright infringement.²⁶⁹ While the lower courts readily found for the telecom provider, the Supreme Court reversed, finding that because facts lacked originality, the Constitution prevented the extension of copyright protection to the directory.²⁷⁰ Compilations of facts, as a category of subject matter, could come within copyright provided they evinced sufficient originality, such as via metadata.²⁷¹ Similarly, the Court has refused to rule out protection for subject matter such as computer software,²⁷² commercial advertisements,²⁷³ and that which is part of a utilitarian object.²⁷⁴

265. See, e.g., *United States v. Martignon*, 492 F.3d 140, 142 (2d Cir. 2007); *United States v. Moghadam*, 175 F.3d 1269, 1274–75 (11th Cir. 1999).

266. *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 55–56 (1884).

267. *Id.* at 60.

268. *Id.* at 58.

269. *Feist Publ’ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 343 (1991).

270. *Id.* at 345–46.

271. *Id.* at 344–45.

272. *Lotus Dev. Corp. v. Borland Int’l, Inc.*, 49 F.3d 807, 814–15 (1st Cir. 1995), *aff’d per curiam*, 516 U.S. 233, 233 (1996).

273. *Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239, 248–50 (1903). The court made its ruling over a vigorous dissent that argued if a work’s only value is advertising, it fails to promote the useful arts and hence is constitutionally excluded from copyright. *Id.* at 252–53 (Harlan, J., dissenting).

274. *Star Athletica, L.L.C. v. Varsity Brands, Inc.*, 137 S. Ct. 1002, 1007 (2017); *Mazer v. Stein*, 347 U.S. 201, 217 (1954).

Thus, with subject matter in copyright, the Court has found it necessary to erect a fence, albeit to constrain the lower courts rather than Congress.

3. Fair Use

Fair use, the most famous defense against copyright infringement, is a judicially-invented exception to copyright's otherwise strict liability. The defense²⁷⁵ was codified (though not altered) in the 1976 Copyright Act,²⁷⁶ and in 2012, the Supreme Court decided that fair use is constitutionally mandated to avoid running afoul of the First Amendment.²⁷⁷ Congress has been deferential to the judiciary in defining fair use. Section 107 of the Copyright Act sets forth four factors that courts must consider in evaluating fair use, but it does not limit the analysis to that quartet, nor does it provide a methodology for concatenating them.²⁷⁸ The provision thus acts as a sort of shuttle that ferries analysis between the statute and the common law. The Court mandated that the Copyright Act include fair use, but was otherwise largely silent about the constitutional dimensions of its configuration;²⁷⁹ in turn, Congress has reacted to that mandate by largely outsourcing the task of shaping fair use to federal judges.

This leeway has let the Court deal with fair use questions almost exclusively via the mixture of statutory interpretation and common law evolution that Section 107 contemplates. Fair use's flexibility has enabled the Court to subtly adjust considerations such as the importance of commerciality in the purpose and character of a use;²⁸⁰ the role of intent;²⁸¹ and the relative importance of quantitative versus qualitative measures of the amount borrowed from the original work.²⁸² Fair use thus serves as an interesting example of a fence in copyright law: Its existence is constitutionally mandated,

275. Scholars differ on whether fair use is a defense or a species of non-infringement. See Jessica Litman, *Lawful Personal Use*, 85 TEX. L. REV. 1871, 1887–93 (2007).

276. 17 U.S.C. § 107 (2012); see H.R. REP. NO. 94-1476, at 66 (1976) (“Section 107 is intended to restate the present judicial doctrine of fair use, not to change, narrow, or enlarge it in any way.”).

277. *Golan v. Holder*, 565 U.S. 302, 328–29 (2012).

278. See *Campbell v. Acuff–Rose Music, Inc.*, 510 U.S. 569, 577–78 (1994); Pierre N. Leval, *Toward a Fair Use Standard*, 103 HARV. L. REV. 1105, 1110 (1990).

279. *Golan*, 565 U.S. at 328 (setting out the “‘traditional contours’ of copyright[,]” which Congress may not alter).

280. Compare *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 449 (1984) (“[C]opies for a commercial or profit-making purpose . . . would presumptively be unfair.”), and *Harper & Row, Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 562 (1985) (“The fact that a publication was commercial as opposed to nonprofit is a separate factor that tends to weigh against a finding of fair use.”), with *Campbell*, 510 U.S. at 591 (“No ‘presumption’ or inference of market harm that might find support in *Sony* is applicable to a case involving something beyond mere duplication for commercial purposes.”).

281. See *Campbell*, 510 U.S. at 585 n.18.

282. *Harper & Row*, 471 U.S. at 583.

but its form results from an ongoing dialogue between the legislative and judicial branches.

4. Idea-Expression Dichotomy

Copyright protects an author's original expression, but not the ideas behind it.²⁸³ Accountants can own the rights to a book that describes a new type of bookkeeping, but that copyright provides no coverage for the method of reconciling debits and credits itself.²⁸⁴ Every novelist can play out their own conception of a cynical private detective without fear of infringement—Sam Spade and Philip Marlowe can co-exist. Ideas are part of the intellectual commons. If they can be protected at all, it is via patent, not copyright.

This idea-expression dichotomy is codified in Section 102(b) of the current Copyright Act, which bars coverage for ideas, processes, concepts, and principles, among other intangibles.²⁸⁵ Courts thus use Section 102(b) as a mechanism to police the boundaries between copyright and patent.²⁸⁶ The dichotomy is not a doctrinal convenience however; the Supreme Court has identified it as part of the “‘traditional contours’ of copyright[,]” which Congress is not free to alter.²⁸⁷ Like fair use, the divide between idea and expression prevents copyright law from clashing with the First Amendment's protection for freedom of speech.²⁸⁸ The Court has sought to reconcile free speech doctrine and copyright by aligning them towards the same end, such that the latter becomes “an ‘engine of free expression.’”²⁸⁹

Although the Court has specified the line between idea and expression as a constitutional boundary, it has done little (if anything) to indicate where it lies. Lower courts have been frequently vexed by this task, which is central to copyright's infringement analysis.²⁹⁰ Someone who copies expression may be liable, but someone who copies an idea is not. To infringe, an accused work must be substantially similar to the expression in a protected one.²⁹¹ The quandary lies in determining where expression begins, or ends. As Judge Learned Hand complained, “Nobody has ever been able to fix that boundary, and nobody ever can.”²⁹² Courts have devised ever more refined mechanisms

283. 17 U.S.C. § 102(b) (2012).

284. See *Baker v. Selden*, 101 U.S. 99, 107 (1879).

285. 17 U.S.C. § 102(b).

286. See, e.g., *Lotus Dev. Corp. v. Borland Int'l, Inc.*, 49 F.3d 807, 815–20 (1st Cir. 1995) (holding that “Methods of operation” such as computer command hierarchies are uncopyrightable), *aff'd per curiam*, 516 U.S. 233, 233 (1996).

287. See *Golan v. Holder*, 565 U.S. 302, 328 (2012) (quoting *Eldred v. Ashcroft*, 537 U.S. 186, 219 (2003)).

288. *Id.* at 328–30.

289. *Id.* at 328 (quoting *Harper & Row, Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 558 (1985)).

290. See, e.g., *Nichols v. Universal Pictures Corp.*, 45 F.2d 119, 121–23 (2d Cir. 1930).

291. See *id.* at 121.

292. *Id.*

for elucidating the levels of abstraction at which two works can be compared, but they have been utterly unable to identify a formula for choosing one.²⁹³ And judges have had to invent workarounds for special situations, such as when there are but a few ways to express a given idea. In those instances, the expression is said to “merge” with the idea, making the entirety unprotected.²⁹⁴

While differentiating idea from expression is a difficult task, the Supreme Court’s decision to forgo a methodology is not merely inconvenient—it risks causing a category error. Decisions that erroneously confer protection on ideas, rather than expressions of them, run afoul of the First Amendment. If Congress cannot extend rights over conceptions without contravening the Constitution, neither can courts. It is, of course, ultimately the duty of the courts to say what the Constitution requires. In the case of the idea-expression dichotomy, the Supreme Court has named that requirement, but has failed to provide any description of it whatsoever. The Court has effectively built a fence with posts but no rails.

This Part describes the course that the Court has charted in handling boundary cases in IP: tending towards statutory analysis in patent cases, but being more amenable to constitutional thinking in copyright cases. The next Part tackles how the Court ought to approach such questions.

IV. NORMATIVE ANALYSIS

A. CRITERIA

The difficult question that the prior Parts inevitably raise is how the Supreme Court and lower courts ought to approach patent and copyright cases that raise boundary issues. The answer is neither straightforward nor amenable to resolution by rules rather than standards. However, it is possible to discern four criteria in the murk: counter-majoritarian concerns, institutional competence, pragmatism, and avoidance. Critically, there is one principle that joins them and helps answer the questions they generate in turn. The Court should build fences, rather than blazing paths, when the question in the case before it touches the core constitutional concern of each doctrine. For patent law, that is informational disclosure; for copyright, it is informational generativity.

293. See, e.g., *Comput. Assocs. Int’l, Inc. v. Altai, Inc.*, 982 F.2d 693, 696–97 (2d Cir. 1992); *Brown Bag Software v. Symantec Corp.*, 960 F.2d 1465, 1476–78 (9th Cir. 1992); *Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc.*, 797 F.2d 1222, 1240–42 (3d Cir. 1986); *Peter Pan Fabrics, Inc. v. Martin Weiner Corp.*, 274 F.2d 487, 489 (2d Cir. 1960).

294. See, e.g., *Oracle Am., Inc. v. Google Inc.*, 750 F.3d 1339, 1359 (Fed. Cir. 2014); *Herbert Rosenthal Jewelry Corp. v. Kalpakian*, 446 F.2d 738, 741–42 (9th Cir. 1971).

1. Counter-majoritarian Concerns

While legislative bargaining is often necessary to pass complex IP bills affecting multiple industries, the Supreme Court (and lower courts) should play a counter-majoritarian role in policing the logrolling. This is particularly true where public choice problems are pronounced. As Jessica Litman documents, copyright legislation is best characterized as Congressional enactment of interest group bargaining.²⁹⁵ The problem is not that some groups get very little—librarians get the scant comforts of 17 U.S.C. § 108’s liability limitations for their accession to the deal²⁹⁶—it’s that a vital group, consumers, get none.²⁹⁷ Consumers lack a seat at the proverbial table, except insofar as their interests happen to correspond with those of other, more powerful groups.

Counter-majoritarian supervision seems relatively manageable: all courts need do is verify that the public receives something in return for copyright’s monopoly—what Paul Heald and Suzanna Sherry describe as the “Quid Pro Quo Principle.”²⁹⁸ The challenge, though, is that interest groups nearly always tell a plausible story about the benefits to the commonweal. Stronger IP protections generate ever-greater innovation and creativity. Even the seven cents of estimated net present value accruing from \$100 annually over the twenty-year extension of copyright passed by Congress in 1998 might make a difference to a starving artist or penurious inventor.²⁹⁹ And, the definition of “quid pro quo” is susceptible to gaming. In *Eldred v. Ashcroft*, for example, the Supreme Court credited the argument that extending existing copyrights might encourage preservation and distribution of old movies.³⁰⁰ But that credulous approach fails to take seriously the core purpose of the IP Clause for copyright, which is to generate new output that will enrich the public domain in time.³⁰¹ Monopoly rights will always incentivize the rightsholder to engage in some distribution; the question is whether the public gets more or less output in return for higher costs.³⁰² In short, the Quid Pro Quo Principle has the built-in dependency that requires courts to engage in a non-silly version of rational review when assessing Congressional bargains.³⁰³

295. See LITMAN, *supra* note 83, at 23–24, 134–35.

296. See 17 U.S.C. § 108 (2012); LITMAN, *supra* note 83, at 25; Laura N. Gasaway, *Libraries, Digital Content, and Copyright*, 12 VAND. J. ENT. & TECH. L. 755, 761–64 (2010).

297. See LITMAN, *supra* note 83, at 51–54.

298. Heald & Sherry, *supra* note 8, at 1162–64.

299. See *Eldred v. Ashcroft*, 537 U.S. 186, 254–55 (2003) (Breyer, J., dissenting) (citing Brief of George A. Akerlof et al. as Amicus Curiae in Support of Petitioners, *Eldred v. Ashcroft*, 537 U.S. 186 (2003) (No. 01-618), 2002 WL 1041846, at *5–7).

300. *Id.* at 206–07, 239.

301. See Jessica Litman, *The Public Domain*, 39 EMORY L.J. 965, 1013 (1990).

302. *Eldred*, 537 U.S. at 248–54 (Breyer, J., dissenting).

303. See generally Jane R. Bambauer & Toni M. Massaro, *Outrageous and Irrational*, 100 MINN. L. REV. 281 (2015) (discussing rational basis review and its connection with the outrageousness test).

An example illustrates the point. Most patent scholars describe contests over changes to the Patent Act as, crudely, struggles between the information technology industry and the biotechnology industry—Silicon Valley versus San Diego.³⁰⁴ But both sides might agree to a patent version of the Copyright Term Extension Act, such as legislation that extended existing patents in the relevant classes by five years, with no other changes to the law. If this Patent Term Extension Act (“PTEA”) passed political muster, it might well pass rational review in the courts.³⁰⁵ After all, firms could shift resources from seeking improvement patents or tying up competitors in the courts to investing in new research and development. Yet the hypothetical PTEA seems like nothing more than rent-seeking with no real public benefit. Firms in selected industries would get a one-time windfall and the public domain would be deprived of a set of valuable technologies for half a decade.³⁰⁶ In such a case, the Court might need to affirm that its caution in *Graham* about Congress removing knowledge from the public domain is indeed a fence, not a path.³⁰⁷

2. Institutional Competence

Institutional competence is undoubtedly a factor in courts’ decisions on when and how to shape copyright and patent doctrine. However, it is not clear in which direction this consideration pushes judges—or how it ought to push them.

One approach is that courts should be reticent, if not outright reluctant, to intrude into what is essentially a set of questions about economic policymaking.³⁰⁸ In the post-*Lochner* era, federal courts have largely ceded questions of economics to the legislative and executive branches, generally intervening only in the rare instances when a statute or regulation fails rational basis review.³⁰⁹ Congress and executive agencies possess analytical resources that courts typically do not: they can hold hearings, obtain expert

304. See, e.g., Robert P. Merges, *Intellectual Property Rights and the New Institutional Economics*, 53 VAND. L. REV. 1857, 1875 (2000) (“There is broad consensus that industry groups have unusually broad input into the drafting of IPR-related legislation.”).

305. Cf. *Eldred*, 537 U.S. at 212–13 (emphasizing Congressional role and rational basis review).

306. Cf. *id.* at 248–54 (Breyer, J., dissenting) (explaining how copyright royalties affect different industries relative to their public benefit).

307. *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 6 (1966). This would require the Court, of course, to disavow the Congressional practice of passing private bills to extend individual patent terms—but this is precisely in line with policing public choice concerns. See *Eldred*, 537 U.S. at 201–02 (describing private bills).

308. This argument depends on the framing of copyright and patent law as a utilitarian set of incentives, rather than as a matter of natural rights. If these types of intellectual property are recognized by legislation, rather than created by it, then courts might readily assume a more prominent role. See MERGES, *supra* note 48, at 94–95; Mossoff, *supra* note 48, at 1255–56.

309. See, e.g., *St. Joseph Abbey v. Castille*, 712 F.3d 215, 226 (5th Cir. 2013); see Bambauer & Massaro, *supra* note 303, at 297–99.

testimony, commission analysis, assign staff, and receive wide-ranging public input while crafting rules for intellectual property.³¹⁰ The courts, by contrast, can generally deploy only a few judges and clerks, and must rely principally on limited submissions from litigants and amici. And, legislation or administrative rules can adjust more quickly and with greater fine-tuning to changes in technology or the larger economy.³¹¹

A related concern, framed most prominently by Andy Coan, is that courts have difficulty crafting rules that can be applied cleanly and reliably.³¹² Any lack of clarity, or the choice to employ standards rather than rules, risks overwhelming the courts' dockets with litigation by parties who are confused, motivated by strategic considerations, or both.³¹³ The Supreme Court's jurisprudence on patentable subject matter may be an example of this failing. While the Court has set out three concise categories of exceptions to patentable inventions—laws of nature, natural phenomena, and abstract ideas³¹⁴—those rubrics have defied easy explication. The Court has had to return repeatedly to each category in an effort to provide definitional rigor to them and has thus far failed to craft clear tests for what is in or out of bounds in terms of subject matter. Thus, even if the federal courts possessed the expertise for detailed decision making about patent and copyright policy—and perhaps the Federal Circuit might—they lack the capacity to do so at the necessary scale.³¹⁵ Only the more political branches possess the personnel to process these problems.

There are at least two rejoinders to institutional competence concerns, both of which tend to push towards a greater judicial role rather than a more constrained one. The first derives from public choice problems. Federal courts, whose Article III judges enjoy life tenure (absent impeachment), are likely more insulated from interest group lobbying than are the political branches of government, whose members depend directly or indirectly upon electoral support for their positions.³¹⁶ Interest groups are well-positioned to deliver that support and may have an outsized voice in policymaking as a

310. See Andrew Coan & Nicholas Bullard, *Judicial Capacity and Executive Power*, 102 VA. L. REV. 765, 779–80 (2016); Andrew B. Coan, *Judicial Capacity and the Substance of Constitutional Law*, 122 YALE L.J. 422, 430–31 (2012).

311. See Kenneth A. Bamberger, *Normative Canons in the Review of Administrative Policymaking*, 118 YALE L.J. 64, 83 (2008).

312. See Coan & Bullard, *supra* note 310, at 426–31.

313. *Id.* at 436–42.

314. See *Alice Corp. Pty. v. CLS Bank Int'l*, 573 U.S. 208, 214–16 (2014).

315. See Rochelle Cooper Dreyfuss, *The Federal Circuit: A Continuing Experiment in Specialization*, 54 CASE W. RES. L. REV. 769, 773, 797–800 (2004).

316. See, e.g., Andrew P. Morriss & Craig Allen Nard, *Institutional Choice & Interest Groups in the Development of American Patent Law: 1790–1865*, 19 SUP. CT. ECON. REV. 143, 215 (2011) (“American federal courts were successfully designed to largely insulate judges from the types of influences that appear in Congress.”); Sachs, *supra* note 146, at 352–56.

result.³¹⁷ While courts too are subject to capture—indeed, this is a common critique of the Federal Circuit—they are generally less susceptible than the other branches.³¹⁸ Structurally, the federal courts may be more institutionally competent to engage in IP policymaking because they operate from a more disinterested position.

The second critique is a more empirical one: The resources that courts devote to copyright and patent policy may not be substantially less than those that the legislature and executive branch do. While there is an expert agency for each domain, neither the U.S. Copyright Office nor the U.S. Patent Office has significant authority over the substance of the relevant federal laws, and both agencies receive limited deference when courts review their rules.³¹⁹ Congress revisits copyright and patent policy relatively infrequently, with major enactments occurring only a few times each century on average. By contrast, litigants filed over 4500 patent cases in federal court in 2016—which was a 22% drop from the previous year.³²⁰

Finally, the institutional competence point is ultimately indeterminate on the normative question of whether courts ought to resolve IP questions as matters of statutory or constitutional adjudication. While a statutory interpretation approach is more aligned with limited judicial competence than a constitutional one, that approach merely relocates the analysis rather than completing it. In theory, Congress can overturn any federal court's interpretation of a statute by appropriate corrective legislation.³²¹ However, the legislature too has a limited docket, with many pressing issues outside intellectual property. The question, then, is the institutional competence of Congress to reverse controversial or wrongheaded judicial interpretations. The legislature does act at times, but it is not clear whether these interventions constitute the rule or the exceptions.³²² Moreover, constitutional adjudication also has a legislative override (albeit one requiring action by the states), amendment.³²³ Constitutional override by the legislatures is exceedingly unlikely, but not impossible—it remains a question of relative capacity, not

317. See Michael J. Burstein, *Rules for Patents*, 52 WM. & MARY L. REV. 1747, 1795–96 (2011).

318. See *id.* at 1795–98.

319. Christopher J. Walker, *Chevron Deference and Patent Exceptionalism*, 65 DUKE L.J. ONLINE 149, 151–58 (2016); see, e.g., *Varsity Brands, Inc. v. Star Athletica, LLC*, 799 F.3d 468, 479 (6th Cir. 2015) (applying *Skidmore* deference to the Copyright Office's determinations that designs are protectable).

320. *Lex Machina's Fourth Annual Patent Litigation Year in Review Report Shows 22 Percent Decline in Patent Filings in 2016*, LEX MACHINA (Mar. 2, 2017), <https://lexmachina.com/media/press/report-shows-22-percent-decline-in-patent-filings-in-2016>.

321. See, e.g., Trademark Dilution Revision Act of 2006, Pub. L. No. 109–312, 120 Stat. 1730 (2006) (superseding the result in *Moseley v. V Secret Catalogue, Inc.* 537 U.S. 418 (2003)).

322. See, e.g., *id.*

323. U.S. CONST. art. V.

one of absolute power.³²⁴ Thus, institutional competence concerns may overrate the capacity of the political branches, and underrate the capacity of the judicial one.

3. Pragmatism

The potential virtues of maintaining flexibility might be a pragmatic consideration in assessing the relative merits of paths and fences.³²⁵ The Court might deprecate fixed constitutional boundaries in favor of more movable legislative or administrative rules for several reasons. First, policy judgments might change over time, perhaps radically so. For example, the fair use doctrine and the idea-expression dichotomy might suffice to safeguard free speech interests in the early twenty-first century, but the First Amendment might need more protection later.³²⁶ If so, then the Supreme Court's decision to fix these "traditional contours of copyright" as the constitutional bellwether could prove to be a mistake.³²⁷ Similarly, classifying isolated DNA sequences as unprotectable natural phenomena might guard against conferring an outsized government monopoly today, but classifying that judgment as one of statutory interpretation rather than constitutional mandate lets future Congresses re-evaluate the need for incentives in genetic research.³²⁸ Thus, courts might be reluctant to do more than fix the outermost limits of the patent and copyright systems, with due regard for the limits of judicial foresight and the pace of technological change.

Second, courts might have a teleological view of the development of knowledge about the law or about innovation. Future decision makers, in any branch of government, might be expected to have better information about how to shape IP doctrine and policy.³²⁹ Thus, a decision tomorrow is generally better-informed than one today.

Third, judicial modesty might come into play: Judges might think that the craft of jurisprudence improves over time.³³⁰ Thus, the craft of judging will be better in the future than it is now, which might militate in favor of delaying difficult questions. The obvious problem is that, at the extreme, this view postpones resolution forever: Additional delay always improves

324. See John O. McGinnis & Michael B. Rappaport, *Our Supermajoritarian Constitution*, 80 TEX. L. REV. 703, 712 (2002).

325. See Gillian E. Metzger, *Ordinary Administrative Law as Constitutional Common Law*, 110 COLUM. L. REV. 479, 530-34 (2010).

326. See *infra* Section V.C.

327. Cf. *Eldred v. Ashcroft*, 537 U.S. 186, 221 (2003) (holding the plaintiff's First Amendment rights were not violated by the Copyright Term Extension Act of 1998).

328. See *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 590-91 (2013).

329. See, e.g., Orin S. Kerr, *The Fourth Amendment and New Technologies: Constitutional Myths and the Case for Caution*, 102 MICH. L. REV. 801, 875-82 (2004).

330. See generally Michael J. Gerhardt, *Constitutional Humility*, 76 U. CIN. L. REV. 23 (2007) (explaining the importance of judicial restraint when deciding cases).

decisional quality, even if only slightly. Copyright and patent questions would wait for a judicial Godot who never arrives.³³¹

All three of these pragmatic considerations tend to weigh in favor of statutory rather than constitutional engagement, since statutes are subject to easier revision than constitutional doctrine. There are, however, rejoinders to each point. Regarding policy, courts could be more circumspect, for example, by declaring that fair use and the idea-expression dichotomy are constitutionally necessary to protect First Amendment interests, but perhaps not sufficient to do so. And the grip of constitutional constraint can be more or less ironclad. Since all inventions involve the operation of a natural law or phenomenon to some degree—plows³³² and brake pedals³³³ respond to friction—judges can fine-tune the amount of additional contribution required for a patent without doing violence to constitutional precedent. Similarly, even if facts are not eligible for copyright, courts could grant protection to their organization or metadata at varying levels of originality,³³⁴ and could treat “created facts”³³⁵ as entirely original. Constitutional constraints may be standards rather than rules.

Even if both information and judicial skill increase over time, courts may need to engage in constitutional analysis at a given temporal point. If Congress passed a statute enabling patents on technologies already in the public domain,³³⁶ or providing copyright terms of one billion years,³³⁷ the courts could not temporize by pretending to interpret the statute. Instead, they would have to confront whether the public domain is a constitutional limitation upon the power to grant patents,³³⁸ and whether a copyright term that is effectively infinite contravenes the constraint of “limited times.”³³⁹ Edge cases may thus force the judiciary’s hand. However, those cases likely run little risk of precluding effective legislation, since they address the outer extremes of IP minima or maxima, leaving the interior domains to the judgment of Congress and the Executive.

331. See SAMUEL BECKETT, *WAITING FOR GODOT* 109 (Grove Press, Inc. 1982) (1953) (“Vladimir: ‘We’ll hang ourselves to-morrow. (Pause.) Unless Godot comes.’ Estragon: ‘And if he comes?’ Vladimir: ‘We’ll be saved.’”).

332. *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 20 (1966).

333. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 408–09 (2007).

334. See *Feist Publ’ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 348 (1991).

335. See Justin Hughes, *Created Facts and the Flawed Ontology of Copyright Law*, 83 NOTRE DAME L. REV. 43, 59–60 (2007). But see *Nash v. CBS, Inc.*, 899 F.2d 1537, 1541–42 (7th Cir. 1990).

336. Cf. *Graham*, 383 U.S. at 6 (“Congress may not authorize the issuance of patents whose effects are to remove existent knowledge from the public domain, or to restrict free access to materials already available.”).

337. Cf. *Eldred v. Ashcroft*, 537 U.S. 186, 206 n.11, 208 (2003) (noting that perpetual copyright terms are constitutionally impermissible, but finding that the extensions provided by the CTEA satisfied rational basis review).

338. See *Graham*, 383 U.S. at 6.

339. See Landes & Posner, *supra* note 41, at 472–73.

Thus, pragmatic considerations may push courts towards statutory resolution and away from constitutional interpretation, but the force of these factors is not certain.

4. Avoidance

In theory, the correct course of action for a court confronted with a constitutional challenge to a statute is clear: if possible, avoid deciding the constitutional question.³⁴⁰ The primary dodge is via statutory interpretation. If a court confronts two possible ways to read a law where one remains within constitutional boundaries while the second transgresses them, then the court must opt for the former.³⁴¹ This doctrine, called the canon of constitutional avoidance, has its roots in interbranch federalism.³⁴² Courts must assume that their co-institution, the legislature, has enacted laws with due care.³⁴³ If they did not, the judicial branch could easily operate as a second Congress, advancing implausible readings of statutes and then leveraging those readings to invalidate the laws.³⁴⁴ The goal, in short, is to save the statute whenever possible.

The canon has several significant flaws, however. The first is that it allows courts to hide the ball, concealing their actual analysis.³⁴⁵ Regardless of how many or few interpretive choices a court must assess, it will need to form at least a rough idea of what the constitutional constraints are in order to test whether each of those options exceeds Congressional authority. If the court is not transparent or clear about why it accepts or rejects various interpretations, then the legislature must work with incomplete information in the future.³⁴⁶

The second flaw is that the canon can enable courts to destroy legislation in the guise of saving it.³⁴⁷ Most statutes embody hard-fought compromises among competing interests. When a court rewrites a statute—especially if it does so in a manner that favors one of those interests—it can impede legislative override of its decision.³⁴⁸ Bargaining to overcome public choice problems may be impossible if the judiciary hands one interest group an outsized victory after the fact. Moreover, legislatures have limited energy and

340. See *Crowell v. Benson*, 285 U.S. 22, 62 (1932).

341. *Id.*

342. See Richard L. Hasen, *Constitutional Avoidance and Anti-Avoidance by the Roberts Court*, 2009 SUP. CT. REV. 181, 186–87.

343. See *Rust v. Sullivan*, 500 U.S. 173, 191 (1991).

344. See Hasen, *supra* note 342, at 186–87.

345. *Id.* at 219–21.

346. See *id.* at 215–18 (stating one explanation suggests “the Court will use constitutional avoidance only when doing so would further a dialogue with Congress that has a realistic chance of actually avoiding constitutional problems through redrafting”).

347. Katyal & Schmidt, *supra* note 28, at 2128.

348. *Id.* at 2118–22.

time. It may be difficult for them to revisit more than a few erroneous interpretations each year, particularly given the possibility of another round of judicial second-guessing.³⁴⁹

Finally, the canon can let judges set out new constitutional doctrines or limits without having to pay the concomitant cost: striking down the statute. As Neal Kumar Katyal and Thomas P. Schmidt show, this approach—which they term “generative avoidance”—can lead to judicial bootstrapping, where background principles in one case are brought into active duty in a later one.³⁵⁰ To no one’s surprise, the gun from the first act goes off in the third.³⁵¹ This move inverts the canon, transforming it from a way to avoid overriding legislation into a method for expanding a court’s ability to do so. It evades scrutiny and skirts the federal courts’ own limits under Article III’s “case or controversy” requirement. While one might defend the appearance of soon-to-be-controlling dicta through generative avoidance as providing notice of new rules before their application, that defense has two shortcomings. It may contribute to sloppy or ungrounded elucidation of the new principle, as Katyal and Schmidt contend.³⁵² And the warning operates only prospectively—extant legislation was enacted without the benefit of the new rule.

Intellectual property provides useful exemplars of these problems with the canon of constitutional avoidance. Copyright cases on the scope of Congressional power to extend protection to works about to enter the public domain, or already in it, demonstrate the first flaw (obfuscation of reasoning) and the third one (announcing new rules in dicta). For example, the Court heard a constitutional challenge to the Copyright Term Extension Act of 1998 (“CTEA”), which increased the term of existing and future copyrights by twenty years.³⁵³ The challengers in *Eldred v. Ashcroft* conceded that Congress could set copyright duration prospectively,³⁵⁴ so long as it obeyed the mandate that it be for a “limited [t]ime[.]”³⁵⁵ However, they attacked the retrospective extension as violating the limits that the IP Clause and the First Amendment

349. *Id.*

350. *Id.* at 2112–14.

351. See AIMEE MANN, *Frankenstein, on I’M WITH STUPID* (Geffen Records, Inc. 1995) (“I won’t find it fantastic or think it absurd / When the gun in the first act goes off in the third.”). The underlying reference is to a plot device known as “Chekhov’s gun,” which holds that when a playwright introduces a gun over the mantle early in the play, it must be used by the end. See *Chekhov’s Gun: What It Is and How to Use It Like A Pro*, NOW NOVEL, <https://www.nownovel.com/blog/use-chekhovs-gun> (last visited Jan. 11, 2019).

352. Katyal & Schmidt, *supra* note 28, 2113–14. The result seems an ironic inversion of the Queen’s reasoning from *Alice’s Adventures in Wonderland*: “Sentence first—verdict afterwards.” LEWIS CARROLL, *ALICE’S ADVENTURES IN WONDERLAND* 187 (The Macmillan Co. 1920) (1865).

353. *Eldred v. Ashcroft*, 537 U.S. 186, 192–93 (2003).

354. *Id.* at 193.

355. U.S. CONST. art. I, § 8, cl. 8.

impose.³⁵⁶ For all its complexities, the case was decided on fairly straightforward grounds: there was a long history of Congressional extensions of copyright terms without controversy,³⁵⁷ and Congress had included speech-protective provisions in the Copyright Act such as the fair use doctrine and distinction between uncopyrightable ideas and copyrightable expression.³⁵⁸

However, the Court's opinion subtly announced a new rule in the bland summation at the end of its First Amendment analysis: "[W]hen, as in this case, Congress has not altered the traditional contours of copyright protection, further First Amendment scrutiny is unnecessary."³⁵⁹ The Court did not bother to elaborate on what those traditional contours were, citing only a prior case on fair use³⁶⁰ and one on whether Congress could limit the commercial use of the term "Olympic" in quasi-trademark fashion.³⁶¹ It did signal, however, that the canon was in play. A footnote quoted language from an earlier case noting that courts must "read the statute to eliminate [serious constitutional] doubts so long as such a reading is not plainly contrary to the intent of Congress."³⁶²

The "traditional contours" rule laid dormant and largely unnoticed for almost ten years, when it re-emerged in a case challenging copyright legislation that granted protection to foreign works that had previously been in the public domain.³⁶³ These works had been free to use domestically because the United States did not have an agreement with the author's country of origin, because the work did not qualify for protection (such as pre-1972 sound recordings), or because the author had not complied with the formalities required for U.S. copyright protection.³⁶⁴ A set of plaintiffs who had relied on these previously public domain works challenged the law in *Golan v. Holder*, arguing that the law transgressed the First Amendment by readmitting the works to copyright protection.³⁶⁵

The Court summarily rejected that argument.³⁶⁶ In doing so, it reified its earlier discussion of the built-in, statutory safeguards for free expression into an iron rule. Fair use and the idea/expression dichotomy were not merely two

356. *Eldred*, 537 U.S. at 193.

357. *Id.* at 194–95, 200.

358. *Id.* at 218–21.

359. *Id.* at 221.

360. *Id.*; *Harper & Row, Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 560 (1985).

361. *Eldred*, 537 U.S. at 221; *S.F. Arts & Athletics, Inc. v. U.S. Olympic Comm.*, 483 U.S. 522, 544 (1987).

362. *Eldred*, 537 U.S. at 221 n.24 (alteration in original) (quoting *United States v. X-Citement Video, Inc.*, 513 U.S. 64, 78 (1994)).

363. See *Golan v. Holder*, 565 U.S. 302, 317, 328 (2012). The relevant legislation is the Uruguay Round Agreements Act, Pub. L. No. 103-465, § 514, 108 Stat. 4809, 4976 (codified as amended at 17 U.S.C. §§ 104A, 109(a) (2012)).

364. 17 U.S.C. § 104A(h)(6)(C).

365. *Golan*, 565 U.S. at 307–08.

366. *Id.* at 330.

examples of First Amendment safety valves in the Copyright Act; they were the only such accommodations the Constitution required.³⁶⁷ The connection between the shadow rule in *Eldred* and the concrete one in *Golan* may seem obvious in retrospect, but it was not so at the time: the Tenth Circuit Court of Appeals thought that the legislation “alter[ed] the traditional contours of copyright protection” by changing the “bedrock principle” that entry into the public domain was a one-way journey for copyrighted works.³⁶⁸

In one sense, the decision in *Golan* is admirable: It set out in straightforward fashion the Constitutional limits on Congress’ copyright powers, at least as far as the First Amendment was concerned, and avoided statutory interpretation that might have distorted legislative intent. It did so, however, by relying on a principle invented in a prior case without elaboration, and by defining that principle in arbitrary terms without justification.³⁶⁹ There are other traditional features of American copyright law that might well have First Amendment implications. For example, for over a century the United States refused to adhere to the Berne Convention’s requirement that copyright protection not be conditioned on formalities such as notice, registration, or deposit.³⁷⁰ While formalities may have represented a “trap for the unwary” author in America, they also functioned to convey works into the public domain.³⁷¹ Similarly, the requirement that authors renew copyrights to enjoy a second term of protection pushed works out of copyright—some authors chose not to expend the effort for works that likely would not justify the modest investment of renewal.³⁷² The Court deserves credit for setting a fence in *Eldred* and *Golan*, but its decisions suggest the problems when the barrier is in the wrong place.

These criteria help one to understand the values at play in deciding whether to use fences or paths to resolve IP questions, but they do not necessarily answer the harder questions, such as when the Court needs to play a counter-majoritarian role, or to forgo avoidance. The next sub-Part proposes a principle to assist in answering those conundrums.

B. DISCLOSURE AND GENERATIVITY AS CORE CONSTITUTIONAL CONCERNS

The Supreme Court ought to erect fences, rather than blazing paths, where the issue at hand, such as legislation, presents risks to the key constitutional goals for patents and copyright law.³⁷³ For patent law, this is the

367. See *id.* at 327–30.

368. *Golan v. Gonzales*, 501 F.3d 1179, 1187–88 (10th Cir. 2007).

369. See Robert Kasunic, *Preserving the Traditional Contours of Copyright*, 30 COLUM. J.L. & ARTS 397, 402 (2007).

370. See Christopher Sprigman, *Reform(aliz)ing Copyright*, 57 STAN. L. REV. 485, 490, 539–45 (2004).

371. *Id.* at 493, 502–19.

372. *Id.* at 519–21.

373. One might reasonably defend other doctrinal priorities, such as maximizing pure innovation for patent law or distribution of information for copyright law. This would merely shift

disclosure of technical information that enriches the prior art and hence the public commons of information. For copyright law, this is the maximization of the doctrine's generativity, which in practice often means the minimization of its conflicts with the First Amendment.

The Supreme Court has repeatedly described disclosure of technical information as the key driver in patent law's *quid pro quo*, which trades two decades' worth of exclusive rights (and potential monopoly rents) in exchange for the patentee's decision to share details of her discovery. Thus, "the ultimate goal of the patent system is to bring new designs and technologies into the public domain through disclosure."³⁷⁴ Trade secret lurks in the background as an alternative.³⁷⁵ Secrecy can be perpetual,³⁷⁶ and while trade secrecy's entitlements are more limited than those offered by patent law,³⁷⁷ they have been recently strengthened by passage of federal legislation protecting confidential information.³⁷⁸ Thus, the Court has emphasized the centrality of disclosure as the principal justification for the patent system.³⁷⁹ For example, when considering whether federal patent law pre-empted state trade secret law, the Court noted that patents' "additions to the general store of knowledge are of such importance to the public weal that the Federal Government is willing to pay the high price of 17 years of exclusive use for its disclosure."³⁸⁰ It went on to frame its analysis of pre-emption in terms of the effects of trade secret law on disclosure and information sharing for various types of innovations.³⁸¹ The court called "disclosure[] the *quid pro quo* of the right to exclude."³⁸² It enables the public to practice inventions after their patent terms expire, and simultaneously aids competitors in avoiding inadvertent infringement by alerting them to the boundaries of an inventor's claims.³⁸³ Even core patentability questions such as the required standard of utility have been framed in terms of disclosure.³⁸⁴ And, interestingly, the

where fences and paths are of relative importance, not the need for the former in place of the latter at times.

374. *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 151 (1989).

375. *See* Bambauer, *supra* note 71, at 833–34.

376. *See* Andrew A. Schwartz, *The Corporate Preference for Trade Secret*, 74 OHIO ST. L.J. 623, 648–52 (2013).

377. *See* Mark A. Lemley, *The Surprising Virtues of Treating Trade Secrets as IP Rights*, 61 STAN. L. REV. 311, 319 (2008).

378. *See* Sharon K. Sandeen & Christopher B. Seaman, *Toward a Federal Jurisprudence of Trade Secret Law*, 32 BERKELEY TECH. L.J. 829, 833–34 (2017).

379. *See, e.g., J.E.M. Ag Supply, Inc. v. Pioneer Hi-Bred Int'l, Inc.*, 534 U.S. 124, 142 (2001) (describing disclosure requirements for both plant and utility patents as the core of patent bargain).

380. *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 481 (1974).

381. *Id.* at 483–92 (assessing the impact on patentable, unpatentable, and uncertain subject matter).

382. *Id.* at 484.

383. *Universal Oil Prods. Co. v. Globe Oil & Ref. Co.*, 322 U.S. 471, 484 (1944).

384. *See* *Brenner v. Manson*, 383 U.S. 519, 533–36 (1966).

Court has differentiated copyright law from patent by emphasizing the importance of disclosure in the latter relative to the former.³⁸⁵

Scholars, too, emphasize the pre-eminent place of disclosure as a patent objective.³⁸⁶ This centrality has important implications; for example, it suggests that patent law must limit inventors' rights in certain respects to enforce requirements to reveal information and to protect the public in disseminating it.³⁸⁷ Commentators such as Lisa Larrimore Ouellette examine the benefits of disclosure in the current system and find that, contrary to critics' contentions, patents contain a significant amount of "useful, nonduplicative technical information."³⁸⁸ Jeanne Fromer defends disclosure's "deserved centrality" in the patent system and argues for reforms that invigorate its mandates.³⁸⁹ Kevin Collins frames patentable subject matter limitations as necessary to defend disclosure and prevent claims that read upon informational activities such as human thought.³⁹⁰ And Jonas Anderson contends that patents play an undervalued role in conveying non-technical information, such as the value of an innovation.³⁹¹

For copyright, the Court emphasizes the doctrine's role in generating expression as constitutionally central. "[T]he ultimate aim is," the Court stated, "to stimulate artistic creativity for the general public good."³⁹² Thus, the grant of authority to Congress to confer copyrights "is intended to motivate the creative activity of authors and inventors."³⁹³ In assessing the scope of the fair use doctrine and copyright's need to accommodate the First Amendment, the Court wrote "that the Framers intended copyright itself to

385. See *Eldred v. Ashcroft*, 537 U.S. 186, 216–17 (2003); Shubha Ghosh, *Patents and the Regulatory State: Rethinking the Patent Bargain Metaphor After Eldred*, 19 BERKELEY TECH. L.J. 1315, 1316–17 (2004).

386. See generally Benjamin N. Roin, Note, *The Disclosure Function of the Patent System (Or Lack Thereof)*, 118 HARV. L. REV. 2007 (2005) (examining the U.S. patent system's disclosure function and critiquing its failure to advance this function).

387. See Kevin Emerson Collins, *The Structural Implications of Inventors' Disclosure Obligations*, 69 VAND. L. REV. 1785, 1790–95 (2016).

388. Lisa Larrimore Ouellette, *Do Patents Disclose Useful Information?*, 25 HARV. J.L. & TECH. 545, 547 (2012).

389. Fromer, *supra* note 231, at 542, 563–94.

390. Kevin Emerson Collins, *Propertizing Thought*, 60 SMU L. REV. 317, 357–60 (2007).

391. J. Jonas Anderson, *Nontechnical Disclosure*, 69 VAND. L. REV. 1573, 1591–92 (2016); see also Clark D. Asay, *The Informational Value of Patents*, 31 BERKELEY TECH. L.J. 259, 276–86 (2016) (discussing how patent holders use patent pledges as a way "to credibly signal information to product, labor, and capital markets").

392. *Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151, 156 (1975); accord *U.S. v. Paramount Pictures, Inc.*, 334 U.S. 131, 158 (1948) ("[R]eward to the author or artist serves to induce release to the public of the products of his creative genius."); *Fox Film Corp. v. Doyal*, 286 U.S. 123, 127 (1932) ("The sole interest of the United States . . . lie[s] in the general benefits derived by the public from the labors of authors.").

393. *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 429 (1984).

be the engine of free expression.”³⁹⁴ While the Court has at times (and awkwardly) included dissemination in addition to generation of information as a constitutional goal, production of expression is at the heart of copyright precedent.³⁹⁵

The consensus among scholarly commentators is, similarly, that generativity is the constitutional core of copyright.³⁹⁶ Wendy Gordon notes that copyright, like patent, is “seen as serving primarily economic incentive functions.”³⁹⁷ Julie Cohen notes that copyright law conceives of its constitutional role “in two distinct but related ways: First, it seeks to increase both the quantity and quality of creative output. Second, it seeks to broaden public access to creative works.”³⁹⁸ And Paul Goldstein, while advancing greater First Amendment limits on copyright protection, nonetheless sees the doctrine as advancing “the community’s right to hear,” since it “theoretically assures that the range of subject matter disseminated will include that which is prompted by profit considerations and will not be left merely to the chance of political motivation.”³⁹⁹

With this principle in mind, the Article next turns to one example from each doctrine where the Court ought to have proceeded differently: using a path for the traditional contours of copyright and using a fence for the best mode aspects of patent enablement.

V. THE PATH LESS TRAVELED BY⁴⁰⁰

A. INTRODUCTION

The Article’s analysis thus far suggests, implicitly, that there are situations where the Court should proceed differently in assessing copyright and patent cases. This Part offers one example for each doctrine.

394. *Harper & Row, Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 558 (1985); *accord Eldred v. Ashcroft*, 537 U.S. 186, 219 (2003) (“[C]opyright’s purpose is to *promote* the creation and publication of free expression.”).

395. *See, e.g., Golan v. Holder*, 565 U.S. 302, 326–28 (2012); *accord Eldred*, 537 U.S. at 206–08.

396. *Cf. Jonathan L. Zittrain, The Generative Internet*, 119 HARV. L. REV. 1974, 2039–40 (2006) (arguing that the internet’s generativity has led to progress in information technology and artistic and political expression).

397. Gordon, *supra* note 49, at 1348. Gordon herself is skeptical of utilitarian-style challenges to copyright’s legitimacy. *See id.* at 1353–54, 1437.

398. Julie E. Cohen, *Copyright and the Perfect Curve*, 53 VAND. L. REV. 1799, 1801 (2000).

399. Paul Goldstein, *Copyright and the First Amendment*, 70 COLUM. L. REV. 983, 990 (1970).

400. *See* ROBERT FROST, *The Road Not Taken*, in *THE ROAD NOT TAKEN AND OTHER POEMS* 1 (Stanley Appelbaum ed., 1993) (1916).

B. PATENT

The 2011 America Invents Act (“AIA”), the largest patent reform since passage of the 1952 Act, worked massive changes on U.S. patent law.⁴⁰¹ One of the AIA’s least-lamented provisions is the virtual elimination of the requirement to disclose the best mode of practicing the invention, if one is known.⁴⁰² Technically, the Act still conditions a patent’s issuance on describing any best mode in the application.⁴⁰³ However, this provision is nearly toothless. An examiner who can somehow detect that an inventor knew of a preferred embodiment, but failed to adequately detail it in the application, can respond with a rejection on this ground.⁴⁰⁴ But once a patent issues, failure to describe best mode cannot be used to invalidate the grant.⁴⁰⁵ Thus, even if the patentee withholds a preferred embodiment, challengers cannot attack the patent in litigation based on this failure to disclose.⁴⁰⁶ While the Patent Act normally relies on third parties to help police patent validity, with best mode, Congress seems to have decided that the game was not worth the candle.⁴⁰⁷ But if disclosure is at the constitutional core of patent law, the AIA’s change to best mode should be deemed unconstitutional.

Best mode is integral to information disclosure. The requirement interacts with obviousness to prevent strategic behavior by patentees.⁴⁰⁸ Best mode prevents applicants from waiting to disclose their preferred embodiment until after the patent issues, either to attempt to claim it as an improvement patent (and thereby extend their effective monopoly over the most commercially valuable aspect of the invention), or to preserve it indefinitely as a trade secret. These are not hypothetical risks. Google’s vaunted PageRank algorithm is the subject of a patent covering a method of determining a web page’s relevance to a search query by treating links to that

401. Leahy–Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (codified in scattered sections of 35 U.S.C.).

402. Leahy–Smith America Invents Act § 15, 35 U.S.C. § 282(b)(3) (2012).

403. See 35 U.S.C. § 112(a) (“The specification shall . . . set forth the best mode contemplated by the inventor.”).

404. See 3 DONALD S. CHISUM, CHISUM ON PATENTS § 7.05 (“[F]acts concerning a potential [best mode] violation will rarely be reviewed by the Patent and Trademark Office.”).

405. It is possible that deliberate withholding of a known best mode might qualify as inequitable conduct, which would invalidate the patent. *Cf.* *Consol. Aluminum Corp. v. Foseco Int’l Ltd.*, 910 F.2d 804, 807 (Fed. Cir. 1990) (holding that “a broad pattern of inequitable conduct,” namely, “intentional concealment of the best mode and disclosure of a fictitious inoperable mode during prosecution of the application for” one patent also rendered related patents unenforceable).

406. See 3 CHISUM, *supra* note 404, § 7.05 (“Often, the facts [of best mode non-disclosure] will come to light only in the course of litigation over a patent many years after the event . . .”).

407. See Joe Matal, *A Guide to the Legislative History of the America Invents Act: Part II of II*, 21 FED. CIR. B.J. 539, 581–84 (2012).

408. See *Gen. Foods Corp. v. Studiengesellschaft Kohle mbH*, 972 F.2d 1272, 1274–75, 1282–83 (Fed. Cir. 1992).

page as votes in its favor.⁴⁰⁹ The concept of voting is fully enabled by the patent.⁴¹⁰ But the key to making PageRank work effectively—the formula for determining how to weight and aggregate votes for various Web sites—cannot be found in the patent document.⁴¹¹ Google protects it as a trade secret.⁴¹² Even when the PageRank patent expires, and the invention passes into the public domain, others will not be able to effectively practice Larry Page and Sergey Brin’s invention.⁴¹³

This gives Google a significant, two-fold advantage. While PageRank’s patent is in force, the search firm can prevent competitors from using the claimed voting system entirely. But even once it expires, Google has the edge of nearly two decades of refinements to its weighting algorithm.⁴¹⁴ Competitors could follow Google’s basic model for evaluating and responding to Web queries. But they would have to independently reproduce not only twenty years’ worth of tweaking, but also the starting point Google used for the algorithm. Since combatting strategic behavior by Web sites in response to rankings is a key element in competitive success, this secret information creates significant value for the firm.⁴¹⁵ Disclosure of a preferred embodiment is necessary to confer fully the benefit of the invention to the public—there is no social value to forcing future innovators to guess at how best to employ the advance (although there may be considerable private value for the patentee).⁴¹⁶

409. Method for Node Ranking in a Linked Database, U.S. Patent No. 6,285,999 col. 4 (filed Jan. 9, 1998) (issued Sept. 4, 2001); see Sergey Brin & Lawrence Page, *The Anatomy of a Large-Scale Hypertextual Web Search Engine*, 30 COMPUTER NETWORKS & ISDN SYS. 107, 109–10 (1998).

410. If the patent meets the enablement and written description requirements of 35 U.S.C. § 112, the patentee can withhold implementation details—even ones vital to commercial success—as secrets. See *Ven-Tel, Inc. v. Hayes Microcomputer Prods., Inc.* (*In re Hayes Microcomputer Prods., Inc. Patent Litig.*), 982 F.2d 1527, 1534–35 (Fed. Cir. 1992); Michael J. Burstein, *Exchanging Information Without Intellectual Property*, 91 TEX. L. REV. 227, 238 & n.40 (2012).

411. See *Introduction to Google PageRank: Myths & Facts*, SEARCH ENGINE WATCH (Apr. 15, 2011), <https://searchenginewatch.com/sew/opinion/2064605/introduction-google-pagerank-myths-facts>.

412. See Schwartz, *supra* note 376, at 651.

413. Cf. LESLIE BERLIN, *TROUBLEMAKERS: SILICON VALLEY’S COMING OF AGE* 351 (2018) (“Google . . . granted Stanford 1.8 million shares of stock in exchange for a license to the search algorithm developed by Sergey Brin and Larry Page while they were graduate students Google equity alone brought \$336 million to Stanford.”).

414. See Danny Sullivan, *Google Has New Head of Web Spam but Won’t Be the “New Matt Cutts,”* SEARCH ENGINE LAND (May 22, 2015, 9:00 AM), <http://searchengineland.com/google-head-web-spam-221482>.

415. See David Segal, *The Dirty Little Secrets of Search*, N.Y. TIMES (Feb. 12, 2011), <https://www.nytimes.com/2011/02/13/business/13search.html>.

416. See *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1570 (Fed. Cir. 1997) (deciding that patent adequately disclosed American’s SABRE reservation system, even though “essential algorithms of the SABRE software were proprietary and confidential and that those aspects of the system that were readily apparent to the public would not have been sufficient to enable one skilled in the art to duplicate [SABRE]”).

As the Google example demonstrates, even the pre-AIA best mode requirement had significant and potentially harmful shortcomings. Patentees could keep secret information critical to the competitive success of a patented advance, provided they adequately enabled and showed possession of the invention.⁴¹⁷ Moreover, so long as the patent document included the preferred embodiment, it did not need to take any steps to highlight or draw attention to it.⁴¹⁸ The 2011 reform only made things worse. An inventor now need only ensure that the patent examiner does not detect their failure to convey best mode, and the resulting patent becomes immune from attack even if that information surfaces post-issuance. Best mode is properly viewed as a central part of disclosure, which is incontestably vital to the patent *quid pro quo*.⁴¹⁹

The Supreme Court, though, has not addressed the constitutional dimensions of best mode, or even of Section 112 more generally.⁴²⁰ Its latest disclosure precedent sets forth a new standard for evaluating whether a patent's claims are sufficiently definite, as mandated by the statute.⁴²¹ The Court assessed whether claims to a heart-rate monitor used with treadmills met the requirement to "particularly point[] out and distinctly claim[]" the invention.⁴²² In a brief opinion, the justices discarded the Federal Circuit's test of whether a claim, after construction by the court, was "insolubly ambiguous," or could not be construed since it was "not amenable to construction."⁴²³ In its place, the Court adopted the mandate "that a patent's claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty."⁴²⁴ Although the Court discussed the policies behind the

417. See *id.*; *Ven-Tel, Inc. v. Hayes Microcomputer Prods., Inc.* (*In re Hayes Microcomputer Prods., Inc. Patent Litig.*), 982 F.2d 1527, 1533 (Fed. Cir. 1992).

418. See *Randomex, Inc. v. Scopus Corp.*, 849 F.2d 585, 589 (Fed. Cir. 1988) (agreeing with the statement that "[t]here is no requirement in 35 USC 112 that an applicant point out which of his embodiments he considers his best mode" (alteration in original) (quoting *Ernsthausen v. Nakayama*, 1 U.S.P.Q.2d 1539, 1549 (B.P.I.A. Sept. 30, 1985), 1985 WL 71768, at *12)).

419. See *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1209-10 (Fed. Cir. 1991).

420. See, e.g., *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 724, 732-33, 736-37 (2002); *Permutit Co. v. Graver Corp.*, 284 U.S. 52, 57-60 (1931); *Loom Co. v. Higgins*, 105 U.S. 580, 587-91 (1882); *O'Reilly v. Morse*, 56 U.S. (15 How.) 62, 118-22 (1854) (invalidating a patent claim for want of enablement and description); *Grant v. Raymond*, 31 U.S. (6 Pet.) 218, 239, 245-49 (1832).

421. Compare 35 U.S.C. § 112(b) (2012) (post-AIA) ("The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention."), with 35 U.S.C. § 112, para. 2 (2006) (pre-AIA) ("The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention."); see *Nautilus, Inc. v. Biosig Instruments*, 572 U.S. 898, 909-10 (2014).

422. 35 U.S.C. § 112 para. 2 (2006) (pre-AIA).

423. *Nautilus*, 572 U.S. at 506 (quoting *Biosig Instruments, Inc. v. Nautilus, Inc.*, 715 F.3d 891, 898 (Fed. Cir. 2013)).

424. *Id.* at 910.

definiteness requirement, its resolution of the case depended entirely upon interpretation of Section 112.⁴²⁵ The opinion left resolution of the heart monitor question to the Federal Circuit; its purpose was simply to refine the definiteness standard required under the Patent Act.⁴²⁶

The Supreme Court seems to have changed the trail signs rather than the path in its recent definiteness opinion; in future cases, it should seek to build a fence instead, particularly regarding best mode. Pre-AIA patent doctrine already risked allowing patentees to protect innovation with a patent–trade secret hybrid; the AIA’s changes all but guarantee they will do so whenever possible.⁴²⁷ In altering best mode, Congress looked to evidence showing that the requirement increased litigation costs, since evaluating compliance necessitates assessing the inventor’s subjective understanding.⁴²⁸ Even if these findings are correct, they are directed to the wrong question. Best mode, and other disclosure requirements, are not rules of evidence subject to cost–benefit weighting. Rather, they are an indispensable part of the larger patent bargain.⁴²⁹ Shirking best mode allows patentees to withhold some—if not a significant portion—of an advance’s value from the public.⁴³⁰ That choice is more properly framed as the decision between relying on trade secrets and filing for a patent.⁴³¹ There is an irresolvable tension between the patent system’s goals of enriching the public commons of knowledge and its statutory disclosure requirements that reward concealment.⁴³² The AIA’s changes preserve best mode only in the most formalistic sense; they retain the shell, but gut the substance.⁴³³ Disclosure is the constitutional core of patent law;

425. *Id.* at 907–12.

426. *Id.* at 2130 n.10, 2131. It is not yet clear how, substantively, the new and old definiteness standards differ. The Federal Circuit has held, somewhat snarkily, that *Nautilus* clarified—but did not alter—the underlying calculus. *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1379–81 (Fed. Cir. 2015) (“The Court has accordingly modified the standard by which lower courts examine allegedly ambiguous claims; we may now steer by the bright star of ‘reasonable certainty,’ rather than the unreliable compass of ‘insoluble ambiguity.’”).

427. See Brian J. Love & Christopher B. Seaman, *Best Mode Trade Secrets*, 15 YALE J.L. & TECH. 1, 12–13 (2012).

428. See NAT’L RES. COUNCIL OF THE NAT’L ACADEMIES, A PATENT SYSTEM FOR THE 21ST CENTURY 120–21 (Stephen A. Merrill et al. eds., 2004) (criticizing the “cost and inefficiency” of best mode, particularly given “its limited contribution to the inventor’s motivation to disclose beyond [enablement],” and recommending its abolition); see Matal, *supra* note 407, at 581–84.

429. But see Ryan Vacca, *Patent Reform and Best Mode: A Signal to the Patent Office or a Step Toward Elimination?*, 75 ALB. L. REV. 279, 295–96 (2012) (advocating the complete elimination of best mode).

430. See Lee Petherbridge & Jason Rantanen, *In Memoriam Best Mode*, 64 STAN. L. REV. ONLINE 125, 126 (2012).

431. See Bambauer, *supra* note 71, at 833.

432. See Petherbridge & Rantanen, *supra* note 430, at 128 (“[I]t is almost universally agreed that the incentive for patent applicants is to withhold information concerning the most commercially valuable embodiments.”).

433. See *id.* at 126–27 (“There is little dispute that [the AIA] has, as a practical matter, effectively eliminated the best mode requirement from patent law.”).

the Court should reinforce those requirements and rein in changes to best mode at its earliest opportunity.

C. COPYRIGHT

Copyright law is limited not only by the IP Clause, but by other parts of the Constitution. Congress may not grant copyrights of infinite duration,⁴³⁴ nor may the legislature authorize judges (rather than juries) to set the amount of damages for infringement in all cases.⁴³⁵ The most obvious conflict or constraint, though, is imposed by the First Amendment. Despite the Supreme Court's reassurance that both the IP Clause and the First Amendment share the same purpose⁴³⁶—generating new information—copyright operates in a way that is normally anathema to free speech doctrine.⁴³⁷ Copyright law enables an author to employ the power of the state to censor on her behalf: No one else can make a copy of her expression, or distribute it, or adapt it, without her authorization. This sort of prior restraint is standard practice for copyright, but highly disfavored by the First Amendment.⁴³⁸ Accordingly, copyright must at times yield to First Amendment demands, not as a matter of legislative grace, but as a matter of constitutional imperative.

Given the long and ever-increasing term of copyright, the expansion of entitlements that it confers, and the risk of rising statutory damages, one might expect that copyright would require significant free speech safety valves. The Supreme Court, though, has decided that Congress must only respect the “‘traditional contours’ of copyright protection,”⁴³⁹ and in particular must maintain two limitations on owners to comport with the First Amendment: the idea–expression dichotomy (forbidding copyright in ideas), and fair use (excusing otherwise infringing conduct that is socially beneficial).⁴⁴⁰ This formulation—even if it suffices now—may not prove equal to the task of protecting free speech in the future. Copyright claims over state statutes help illustrate why.

Copyright in state legislative materials provides a cogent example of the need for greater constitutional protections in copyright law.⁴⁴¹ At least 28 states asserted some copyright interest in their statutes according to a 2011

434. See *Eldred v. Ashcroft*, 537 U.S. 186, 192 (2003).

435. See *Feltner v. Columbia Pictures Television, Inc.*, 523 U.S. 340, 341 (1998).

436. See *Eldred*, 537 U.S. at 219 (“The Copyright Clause and First Amendment were adopted close in time. This proximity indicates that, in the Framers’ view, copyright’s limited monopolies are compatible with free speech principles. . . . [C]opyright’s purpose is to *promote* the creation and publication of free expression.”).

437. See Mark A. Lemley & Eugene Volokh, *Freedom of Speech and Injunctions in Intellectual Property Cases*, 48 DUKE L.J. 147, 165–69 (1998).

438. *Id.*

439. See *Golan v. Holder*, 565 U.S. 302, 328 (2012).

440. *Id.* at 328–29.

441. Under section 105 of the Copyright Act, federal statutes are in the public domain. See 17 U.S.C. § 105 (2012).

survey by the National Conference of State Legislatures.⁴⁴² Some assert control that sweeps far more broadly than federal copyright law. Mississippi, for example, imposes a \$1,000 fine for each day that anyone uses any part of its official code, unless that use has been authorized by the state's Joint Committee on Compilation, Revision and Publication of Legislation.⁴⁴³ While the unannotated Mississippi code is available free of charge⁴⁴⁴ (though subject to significant limitations based on its Terms and Conditions),⁴⁴⁵ the annotated version is not.⁴⁴⁶ And, the state is prepared to assert its copyright interests, as public domain activist Carl Malamud learned when he placed a (lawfully purchased) copy of the annotated code online.⁴⁴⁷ Idaho asserts that anyone who reproduces or distributes its code for direct or indirect commercial advantage owes the state a royalty in addition to the standard fee for copying.⁴⁴⁸ Kentucky forbids anyone from obtaining a copy of a public record for a commercial purpose without the agreement of the relevant agency and, generally, payment of a fee.⁴⁴⁹ And South Dakota makes unauthorized printing or distribution of its codified laws a misdemeanor criminal offense.⁴⁵⁰

These prohibitions raise considerable constitutional concerns. The Due Process Clause of the Fourteenth Amendment requires that citizens have notice of how to conform their conduct to the law.⁴⁵¹ The legal fiction of universal knowledge of the law rests on the assumption that law is accessible

442. NAT'L CONFERENCE OF STATE LEGISLATURES, STATE STATUTES/CODE: HOLDER OF COPYRIGHT (2011), http://www.ncsl.org/documents/lssc/Copyright_Statutes.pdf.

443. MISS. CODE ANN. § 1-1-9(2), (3)(a) (2016); *see also* Irina Y. Dmitrieva, *State Ownership of Copyrights in Primary Law Materials*, 23 HASTINGS COMM. & ENT. L.J. 81, 98-99 (2000) ("The [Mississippi] law prohibits not only unauthorized copying, but also a mere use of state statutory materials without prior permission from the [Joint Committee].").

444. *See* Beth Ford, Comment, *Open Wide the Gates of Legal Access*, 93 OR. L. REV. 539, 553 (2014).

445. *See* Letter from Carl Malamud, Public.Resource.Org, to Larry A. Schemmel, Special Assistant Attorney General, State of Mississippi, Ex. B (Oct. 11, 2013), <https://www.documentcloud.org/documents/804618-ms-gov-20131011.html> (reproducing the Terms and Conditions as of 2013).

446. *See* Ford, *supra* note 444, at 553-55.

447. *See* Letter from Larry A. Schemmel, Special Assistant Attorney General, State of Mississippi, to Carl Malamud, Public.Resource.Org (Oct. 7, 2013), <https://law.resource.org/pub/us/code/ms/ms.gov.20131007.pdf>; Mike Masnick, *Mississippi the Latest State to Claim Copyright Over Official Compilation of Its Laws*, TECHDIRT (Oct. 14, 2013, 11:47 AM), <https://www.techdirt.com/articles/20131012/23510924854/mississippi-latest-state-to-claim-copyright-over-official-compilation-its-laws.shtml>.

448. IDAHO CODE § 74-123(1) (2017); *see* Dmitrieva, *supra* note 443, at 100-01.

449. KY. REV. STAT. ANN. § 61.874(5) (West 2006).

450. S.D. CODIFIED LAWS § 2-16-8.1 (2012); *see* Dmitrieva, *supra* note 443, at 101. While the South Dakota statute does permit printing and distribution "as authorized by federal copyright law," the penalty is in addition to those available under the Copyright Act. *See generally* 17 U.S.C. §§ 502-506, 510, 511(b), 603(c) (2012) (enumerating the penalties and enforcement mechanisms for copyright infringement).

451. U.S. CONST. amend. XIV, § 1; *see* United States v. Lanier, 520 U.S. 259, 267 (1997) ("The touchstone is whether the statute, either standing alone or as construed, made it reasonably clear at the relevant time that the defendant's conduct was criminal.").

to anyone who wishes to learn it.⁴⁵² Until recently, Georgia made only the *unannotated* version of the state's statute freely available, even though the annotated version is binding law.⁴⁵³ Purchasing an official printed copy of the annotated statutes costs Georgia citizens \$404.⁴⁵⁴ Copyright in state laws also potentially interferes with the First Amendment's right to petition freely.⁴⁵⁵ To argue for legal change, one must first learn the relevant law's content, and then both copy and distribute it in the course of persuading others. Finally, political speech is at the core of free expression doctrine under the First Amendment. State laws that preclude or penalize such speech are strongly disfavored.⁴⁵⁶

In theory, copyright law has internal safeguards to protect citizens who want to know the law or to share its contents. The merger doctrine could operate to unify any expression in legal analysis or annotation with the idea of the law itself, preventing anyone from claiming copyright in it.⁴⁵⁷ Fair use could excuse any infringement based on the societal value of knowing the law's commands.⁴⁵⁸ The Copyright Act's pre-emption provision might eliminate some of the more onerous aspects of state laws conferring ownership on their statutes.⁴⁵⁹ Less convincingly, statutes and related materials might be treated as outside the scope of statutory subject matter.⁴⁶⁰ Finally, some states may have dealt affirmatively with the problem by dedicating their laws to the public domain.⁴⁶¹

In practice, these purported protections either do not apply or are insufficient. Merger operates when there are but a few ways to express an idea.

452. See, e.g., *Atkins v. Parker*, 472 U.S. 115, 130 (1985) ("All citizens are presumptively charged with knowledge of the law."); *Lambert v. California*, 355 U.S. 225, 228–30 (1957).

453. See *Code Revision Comm'n v. Public.Resource.Org, Inc.*, 244 F. Supp. 3d 1350, 1354 (N.D. Ga. 2017), *rev'd and remanded sub nom. Code Revision Comm'n for Gen. Assembly of Georgia v. Public.Resource.Org, Inc.*, 906 F.3d 1229 (11th Cir. 2018).

454. *Code Revision Comm'n for Gen. Assembly of Ga.*, 906 F.3d at 1234.

455. See generally Stephen A. Higginson, Note, *A Short History of the Right to Petition Government for the Redress of Grievances*, 96 YALE L.J. 142 (1986) (discussing the history of the right to petition, particularly the narrowing of the right).

456. See *United States v. Alvarez*, 567 U.S. 709, 729–30 (2012). *But see Eldred v. Ashcroft*, 537 U.S. 186, 218–21 (2003) (refusing to apply heightened scrutiny to copyright legislation).

457. See 17 U.S.C. § 102(b) (2012); *Baker v. Selden*, 101 U.S. 99, 104 (1879).

458. See 17 U.S.C. § 107; Dmitrieva, *supra* note 443, at 114–15; cf. *Harper & Row, Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 556–58 (1985) (discussing and rejecting a theory of expanded fair use based on the "substantial public import of the subject matter").

459. 17 U.S.C. § 301; see L. Ray Patterson & Craig Joyce, *Monopolizing the Law: The Scope of Copyright Protection for Law Reports and Statutory Compilations*, 36 UCLA L. REV. 719, 777–81 (1989).

460. See 17 U.S.C. § 102(a); Patterson & Joyce, *supra* note 459, at 759–67.

461. 25 ILL. COMP. STAT. 135 /5.04(a) (2015) ("Statutes . . . shall be entirely in the public domain for purposes of federal copyright law."); see Dmitrieva, *supra* note 443, at 103.

However, there are generally many ways to summarize or describe a statute,⁴⁶² and metadata such as pagination may be arbitrary and therefore capable of protection.⁴⁶³ Thus, statutory compilations may have sufficient originality both in organization and in content contributed by publishers. Fair use is perhaps the most appropriate defense to liability in this context, but the courts have generally been hostile to its invocation.⁴⁶⁴ Moreover, on initial inspection, the four factors do not necessarily favor copiers. Even if a defendant is engaged in non-commercial activity, reproduction and distribution are generally substitutes for the official, paid versions of statutes—that is the point of them. Copyright in compilations or annotations is likely thin, but to be effective, duplication must be extensive if not complete.⁴⁶⁵ And, in assessing market impact, the analysis overlaps with that of the first factor: providing copies of a state's code can supersede entirely the non-trivial income a state earns from selling the official versions.⁴⁶⁶

Similarly, pre-emption could erase some noxious aspects of state law, such as Mississippi's \$1,000 daily fine for unauthorized use.⁴⁶⁷ However, the federal Copyright Act already provides potent penalties, including statutory damages of up to \$30,000 per work infringed,⁴⁶⁸ attorney's fees,⁴⁶⁹ and injunctive relief.⁴⁷⁰ Pre-emption merely reduces the number of arrows in a state plaintiff's quiver. And while many courts and commentators argue, on public policy grounds,⁴⁷¹ that statutory compilations are not copyrightable

462. See, e.g., *Code Revision Comm'n v. Public.Resource.Org, Inc.*, 244 F. Supp. 3d 1350, 1357 (N.D. Ga. 2017) ("There is no question that there are a multitude of ways to write a paragraph summarizing a judicial decision, and further, a multitude of ways to compile the different annotations"), *rev'd and remanded sub nom.* *Code Revision Comm'n for Gen. Assembly of Ga. v. Public.Resource.Org, Inc.*, 906 F.3d 1229 (11th Cir. 2018).

463. *West Publ'g Co. v. Mead Data Cent., Inc.*, 799 F.2d 1219, 1226–28 (8th Cir. 1986). *But see Code Revision Comm'n*, 244 F. Supp. 3d at 1357–59 (finding that annotations did not comprise copyrightable subject matter); *Patterson & Joyce*, *supra* note 459, at 757–81 (criticizing the *West Publishing* decision and rationale).

464. See, e.g., *West Publ'g Co.*, 799 F.2d at 1228 n.3 (agreeing with the District Court's finding use was not fair); *Code Revision Comm'n*, 244 F. Supp. 3d at 1357–59; *Oasis Publ'g Co., Inc. v. West Publ'g Co.*, 924 F. Supp. 918, 926–29 (D. Minn. 1986). *But see* *Matthew Bender & Co. v. West Publ'g Co.*, 158 F.3d 693, 701–02 (2d Cir. 1998) ("[A] compilation has limited protectability; only the original elements of a compilation (*i.e.*, its selection, arrangement, and coordination) are protected from copying.").

465. See *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 349 (1991) ("[I]nvariably . . . the copyright in a factual compilation is thin.").

466. For example, in fiscal year 2014, Georgia earned over \$85,000 in licensing royalties from the official, annotated version of its state code. *Code Revision Comm'n*, 244 F. Supp. 3d at 1354.

467. See 17 U.S.C. § 301 (2012); *Barclays Capital Inc. v. Theflyonthewall.com, Inc.*, 650 F.3d 876, 891–906 (2d Cir. 2011).

468. 17 U.S.C. § 504(c).

469. *Id.* § 505.

470. *Id.* § 502(a).

471. See, e.g., *Georgia v. Harrison Co.*, 548 F. Supp. 110, 114–15 (N.D. Ga. 1982), *vacated sub nom. on different grounds*, *State of Ga. on Behalf of Gen. Assembly of Ga. By & Through Code*

subject matter, this runs counter to the text of the Copyright Act⁴⁷² and relevant Supreme Court precedent.⁴⁷³ Absent special pleading, it would be difficult to read statutory compilations out of copyrightable subject matter without doing violence to the eligibility of other, similar types of derivative works. And states' attempts to place their codes into the public domain might operate as a license, or a covenant not to sue anyone who relied upon that statement, but they do not actually transfer copyright. Copyright protection is easy to obtain but hard to irrevocably relinquish. It attaches upon fixation⁴⁷⁴ and lasts for the author's lifetime plus seventy years, or either 95 or 120 years for a work made for hire.⁴⁷⁵ A copyright's owner can assign it via a signed, written instrument,⁴⁷⁶ or issue non-exclusive licenses verbally.⁴⁷⁷ However, copyright has no equivalent to patent law's terminal disclaimer—there is no straightforward means to surrender IP rights to the public.⁴⁷⁸ The public domain advocacy organization Creative Commons faced this puzzle in designing its licenses: how could creators reliably assure the world at large that they would not assert copyrights in a CC-licensed work? Creative Commons' answer to this quandary is the "CCo license," which operates as a permanent waiver of copyright and related rights (and a public license as a fallback provision).⁴⁷⁹ Candidly, this is a workaround: the Copyright Act does not provide a mechanism to extinguish an owner's entitlements, and CCo seeks to use waiver or estoppel to accomplish that end.⁴⁸⁰ In short, a state's attempt to place its statutes in the public domain might prevent a suit from succeeding against those who would otherwise be infringers, but it is not irrevocable and does not act as an assignment. Despite their good intentions, states such as Illinois may be issuing promises that do not necessarily have to be honored.⁴⁸¹

Revision Comm'n v. Harrison Co., 559 F. Supp. 37 (N.D. Ga. 1983); Patterson & Joyce, *supra* note 459, at 725 n.16; Dmitrieva, *supra* note 443, at 93–97, 109–16.

472. See 17 U.S.C. § 103(a) (extending copyright to compilations and derivative works); *id.* § 101 (defining derivative works to include annotations and abridgments).

473. See *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 348 (1991) (holding that "choices as to selection and arrangement, so long as they are made independently by the compiler and entail a minimal degree of creativity, are sufficiently original that Congress may protect such compilations through the copyright laws"); *Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239, 251 (1903) (holding that courts should interpret originality on the "narrowest and most obvious limits").

474. 17 U.S.C. § 102(a).

475. *Id.* § 302(a), (c).

476. *Id.* § 204(a).

477. See *Effects Assocs., Inc. v. Cohen*, 908 F.2d 555, 559 (9th Cir. 1990) (finding that an oral agreement created a non-exclusive license to a copyrighted work).

478. See 35 U.S.C. § 253(b); 37 C.F.R. § 1.321(a) (2018).

479. *Statement of Purpose*, CREATIVE COMMONS, <https://creativecommons.org/publicdomain/zero/1.0/legalcode> (last visited Jan. 11, 2019).

480. See *CCo FAQ: How Does It Work?*, CREATIVE COMMONS, https://wiki.creativecommons.org/wiki/CCo_FAQ#How_does_it_work.3F (last modified Jan. 11, 2019).

481. See 25 ILL. COMP. STAT. 135/5.04(a) (2015).

VI. CONCLUSION

There are times when Robert Frost's poem "Mending Wall" is literal rather than ironic: good fences make good neighbors.⁴⁸²

In deciding when to use constitutional analysis rather than statutory interpretation, the Supreme Court is relatively parsimonious in patent law and relatively copious in copyright. Despite scholars' complaints, this divergence may not be a defect. The dichotomy, though, inevitably poses the question as to which approach is superior. The answer is: both, or, it depends. When cases pose difficult pragmatic or empirical questions, such as the appropriate term length or entitlement strength, the Court should set out paths, giving Congress the chance for interbranch dialogue via statutory alteration. However, the Court should erect fences that limit the legislature when the issue in question implicates core constitutional concerns such as disclosure or generativity. Barriers also share information—they place Congress on notice as to the extent of its institutional discretion in IP. This lets both branches know what the Court is walling in, and what it is walling out.

482. ROBERT FROST, *Mending Wall*, in NORTH OF BOSTON 11–13 (1917); see Eleanor Barkhorn, *Sarah Palin Misinterprets Robert Frost*, ATLANTIC (May 25, 2010), <https://www.theatlantic.com/entertainment/archive/2010/05/sarah-palin-misinterprets-robert-frost/57248>.