

THE (CONSTITUTIONAL) CONVENTION ON IP: A NEW READING

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All have thus far considered the Constitutional Convention's record on intellectual property puzzling and uninformatively short. This Article revisits that conventional wisdom. Using various methods of analysis, including a statistical hypotheses test, it solves historical puzzles that have long accompanied the events at the Convention leading to the framing of the IP Clause, and shows that hitherto neglected portions of the Framers' debates are relevant to interpreting it. Its findings shed light on four unsettled questions of constitutional interpretation; they provide qualified support for the constitutionality of business method patents, patents for products of nature, and copyright protection for unoriginal factual compilations, and suggest that the IP Clause should be read as one unit rather than two independent powers for copyrights and patents.

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INTRODUCTION

Perhaps the most dramatic development in intellectual property (IP) law over the last decade has been the advent of an unprecedented body of constitutional jurisprudence.¹ In deciding whether various actions violated the Constitution's IP Clause (Clause),² courts—and especially the Supreme Court—have accorded the Framers' intent and the Clause's original understanding considerable weight.³ The recent voluminous commentary on the historical origins of our IP system dovetails with the Court's interpretive agenda.⁴ Still,

1. See, e.g., *Eldred v. Ashcroft*, 537 U.S. 186 (2003) (upholding a retroactive twenty-year extension of the copyright term); *Golan v. Gonzales*, 501 F.3d 1179, 1186–87 (10th Cir. 2007) (upholding the constitutionality of restoring copyright protection in public domain works); *Luck's Music Library, Inc. v. Gonzales*, 407 F.3d 1262 (D.C. Cir. 2005) (same); *United States v. Martignon*, 492 F.3d 140 (2d Cir. 2007) (upholding a criminal prohibition on the making of live bootleg recordings); *United States v. Moghadam*, 175 F.3d 1269, 1282 (11th Cir. 1999) (same); *KISS Catalog v. Passport Int'l Prods.*, 405 F. Supp. 2d 1169, 1173 (C.D. Cal. 2005) (upholding a provision granting a civil cause of action against the making of live bootleg recordings); *Universal City Studios, Inc. v. Corley*, 273 F.3d 429, 444–59 (2d Cir. 2000) (upholding the constitutionality of the Digital Millennium Copyright Act of 1998); *United States v. Elcom Ltd.*, 203 F. Supp. 2d 1111, 1141–42 (N.D. Cal. 2002) (same); *321 Studios v. MGM Studios*, 307 F. Supp. 2d 1085, 1101–05 (N.D. Cal. 2004) (same); *Kahle v. Ashcroft*, No. C-04-1127 MMC, 2004 WL 2663157 (N.D. Cal. Nov. 19, 2004) (upholding the constitutionality of the Copyright Act of 1976, the Berne Convention Implementation Act of 1988, the Copyright Renewal Act of 1992 and the Copyright Term Extension Act of 1998), *aff'd* *Kahle v. Gonzales*, 487 F.3d 697 (9th Cir. 2007); *Figueroa v. United States*, 66 Fed. Cl. 139, 152 (2005) (upholding the constitutionality of governmental use of patent fees for nonpatent ends).

2. U.S. CONST. art. I, § 8 (“The Congress shall have Power . . . To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries”).

3. In perhaps its greatest foray into the meaning of the IP Clause to date, the U.S. Supreme Court suggested that “[t]o comprehend the scope of Congress’ Copyright Clause power, ‘a page of history is worth a volume of logic.’” See *Eldred*, 537 U.S. at 188 (quoting *N.Y. Trust Co. v. Eisner*, 256 U.S. 345, 349 (1921)). As a part of its analysis, the Court referred no less than ten times to the Framers’ intent and the Clause’s original understanding, and the dissenting justices seemed to agree with the majority’s historical attention. See *infra* note 106.

4. See *infra* note 107.

all acknowledge that we know very little about the Clause's most important moment: its framing.⁵

In previous work,⁶ I addressed this deficiency by taking the first step in exploring the neglected IP-related record from the Federal Convention of 1787 (Convention). I made one major argument: The Framers intended the progress language in the Clause—"to promote the progress of science and useful art"—to limit Congress's power to grant IP rights. In saying so, I made several factual

5. See, e.g., DORON S. BEN-ATAR, *TRADE SECRETS: INTELLECTUAL PIRACY AND THE ORIGINS OF AMERICAN INDUSTRIAL POWER* 136 (2004) ("The framers have left us little by way of explaining their reasons [for including the Clause in the Constitution]."); Michael D. Birnhack, *The Idea of Progress in Copyright Law*, 1 *BUFF. INTELL. PROP. L.J.* 3, 33 (2001) ("Historians of American copyright law do not know much about the making of the constitutional clause, and most of what we have is historical interpretation, or at times, speculation."); Oren Bracha, *The Commodification of Patents 1600–1836: How Patents Became Rights and Why We Should Care*, 38 *LOY. L.A. L. REV.* 177, 216 (2004) (noting "the little we know about the legislative history of the clause"); Craig W. Dallan, *Original Intent and the Copyright Clause: Eldred v. Ashcroft Gets It Right*, 50 *ST. LOUIS U. L.J.* 307, 318 (2006) (explaining that "there is scarce evidence expressing any contemporaneous views of the Framers of the Copyright Clause"); Alan L. Durham, "Useful Arts" in the Information Age, 1999 *BYU L. REV.* 1419, 1429 ("There is little 'legislative history' to assist in interpreting the intellectual property clause of the Constitution."); Jane Ginsburg, *A Tale of Two Copyrights: Literary Property in Revolutionary France and America*, 64 *TUL. L. REV.* 991, 999 (1990) (noting that the "records from the Constitutional Convention concerning the copyright clause are extremely sparse"); Marci A. Hamilton, *Copyright at the Supreme Court: A Jurisprudence of Deference*, 47 *J. COPYRIGHT SOC'Y U.S.A.* 317, 320 (2000) (explaining that "the history of the drafting of the Clause left little for the courts to employ"); 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, 1148–49 (reviewing all that has been known about the Convention's intellectual property record, namely that James Madison and Charles Pinckney were "primary forces behind the addition of the Clause" and that the Clause was unanimously adopted without recorded debate); Malla Pollack, *Dealing With Old Father William, or Moving From Constitutional Text to Constitutional Doctrine: Progress Clause Review of the Copyright Term Extension Act*, 36 *LOY. L.A. L. REV.* 337, 343 (2002) (arguing that "any [interpretive] approach based on the drafting . . . discussions stumbles on the thinness of the record"); Paul M. Schwartz & William Michael Treanor, *Eldred and Lochner: Copyright Term Extension and Intellectual Property as Constitutional Property*, 112 *YALE L.J.* 2331, 2375 (2003) (calling the Convention's record "[t]he most relevant historical evidence directly bearing on the original understanding of the Copyright Clause" but noting that "[t]here is little evidence from the Constitutional Convention [directly bearing on the original understanding of the Copyright Clause]"); Edward C. Walterscheid, *To Promote the Progress of Science and Useful Arts: The Background and Origin of the Intellectual Property Clause of the United States Constitution*, 2 *J. INTELL. PROP. L.* 1, 26 (1994) ("[T]he question naturally arises as to how the Intellectual Property Clause came to be included in the Constitution. Little has been written on the point. The reason for the dearth of commentary undoubtedly is that so little is actually known about how its inclusion came about."); Diane Leenheer Zimmerman, *It's an Original! (?) : In Pursuit of Copyright's Elusive Essence*, 28 *COLUM. J.L. & ARTS* 187, 198 & n.73 (2005) ("[L]ittle . . . specific or direct information is available about the thinking of the Framers."); Recent Case, *Constitutional Law—Copyright Clause—Second Circuit Upholds Perpetual Anti-Bootlegging Protection Against Copyright Clause Challenge—United States v. Martignon*, 492 *F.3d* 140 (2d Cir. 2007), 121 *HARV. L. REV.* 1455, 1460 (2008) (observing that "the records of the Constitutional Convention provide little guidance as to the original understanding of the Copyright Clause").

6. 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 (2006).

assumptions as to what had happened at the Convention surrounding the Clause's framing. As I noted, however, these assumptions often departed from those accepted in the literature.⁷

This Article takes the second step in exploring the framing moment. It offers two major contributions. First, it establishes the groundwork for the assumptions I made in previous work about the Convention's events. It does so by suggesting solutions for historical puzzles that have long perplexed students of the Clause. Second, it draws out several additional implications for constitutional interpretation based on its historical findings.

The little we currently know about the Clause's framing is the result of a host of factors, some objective—relating to the (small) amount and (confused) nature of the relevant historical material that survived the Convention—and some interpretive—relating to the way in which scholars (mis)understood this material and the (little) significance they gave it. This Article challenges conventional wisdoms regarding each.

The historical material that relates to the framing of the Clause in the Convention is confusing. Two historical puzzles have troubled those who studied the Convention's IP-related events. The first is whether Charles Pinckney's Plan of Government—a proposed draft constitution of which no copy survived, and which preceded his later proposals in the Convention for IP powers—empowered the federal legislature to grant patents and copyrights. Conflicting sources have led scholars to different answers. Studying these sources carefully, this Article concludes that Pinckney's Plan provided no such empowerment, thereby removing the lingering doubt that we lack an important input—Pinckney's Plan—into the Framers' deliberations on IP.⁸

The second historical puzzle is whether James Madison proposed at the Convention that the future Congress should have the power to issue patents. Studying contradictory historical records, scholars have concluded that Madison did not. Reviewing the historical record carefully, however, and aided by a

7. See generally *id.* (arguing that the progress language in the Clause limits Congress's IP power and suggesting how judges might enforce this limitation). In that work I assumed implicitly that Pinckney's Plan did not affect the Framers' IP deliberations. I support that assumption in Part I of this Article. That work further assumed that Madison made a patent power proposal. See *id.* at 1790 n.98 (citing to an early draft of this Article). This Article shows this latter assumption to be true, and that the argument about the limiting nature of the progress language is therefore warranted. For the argument and how it relies on this latter assumption, see *infra* Part II.C. See also *infra* note 9 and accompanying text.

8. See *infra* Part I.

statistical hypotheses test reported in the Appendix, this Article concludes that Madison did.⁹

Having set the Convention's IP-related record straight, the Article notes that Madison's and Pinckney's proposals that Congress should have the power to issue patents and copyrights are not the Convention's only relevant legislative history, as was commonly thought. Rather, the IP Clause stemmed also from Madison's and Pinckney's proposals to empower Congress to promote industry, commerce, literature, and the arts and sciences by establishing federal universities and providing governmental rewards and subsidies. Although these proposals were rejected, they served as the source of the Clause's ends-means structure and of the language in the Clause's ends part, namely "to promote the progress of science and useful arts."¹⁰

The Article's findings contribute to resolving four current matters of constitutional interpretation. These findings lend qualified support to the constitutionality of, first, business method patents, a recent and highly controversial expansion of patentable subject matter;¹¹ second, patents on products of nature;¹² and third, copyright protection for unoriginal yet labor-intensive factual compilations.¹³ Finally, the findings imply that the conventional wisdom of reading the IP Clause as two independent and separate enumerated powers relating to patents and copyrights respectively rests on weak historical grounds.¹⁴ A common thread running through these applications is that they stem, at least in part, from the finding that the text of the Clause emerged from not only proposals pertaining to patents and copyrights, but also ones relating to universities and rewards.

The scope of these applications to current issues is not limited to illuminating the Framers' intentions—they also elucidate the Clause's original understanding.¹⁵ This is so primarily because the parts in the Convention's debates that this Article relies on (and which served the Framers in writing the Clause) were adapted from contemporaneous, publicly available intellectual property enactments. Moreover, the aforementioned applications do not rely solely on the Framers' intentions as they are reflected in the Convention's

9. See *infra* Part II. The truth of this finding, established here, was simply assumed and relied upon in my previous work. See Oliar, *supra* note 6, at 1790 n.98 (noting that reliance); see also *supra* note 7 and accompanying text.

10. See *infra* Part III.

11. See *infra* Part IV.A.

12. See *infra* Part IV.B.

13. See *infra* Part IV.B.

14. See *infra* Part IV.C.

15. Thus, this Article illuminates the interpretive pull of two of the various considerations that inform constitutional interpretation generally.

debates—they are also corroborated by publicly available sources from the time period attesting to the original public meaning of the Clause.¹⁶

I. THE PUZZLE SURROUNDING PINCKNEY'S PLAN

A. The Two Journals on IP in the Convention

The Federal Convention kicked off in Philadelphia on May 25, 1787. Its secretary, William Jackson, recorded its daily progress in a succinct official journal (Convention's Journal). Additionally, James Madison kept a private and more complete record of the events (Madison's Journal).¹⁷ According to these two (Two Journals), intellectual property did not come up during the Convention's first three months. Indeed, the August 6 Draft Constitution, authored by the Committee of Detail based upon agreements to date, does not mention it.¹⁸ Intellectual property was first mentioned therein on August 18, when the Framers were considering possible additions to Congress's power. On that day, Madison, of Virginia, and Charles Pinckney, a young and ambitious delegate from South Carolina,¹⁹ each proposed that the future Congress should have intellectual property powers.²⁰ Their proposals were referred to the Committee of Detail. The next reference to intellectual property in the Two Journals comes from September 5, when the Committee of Eleven,²¹ to which all pending matters were referred, recommended the adoption of a congressional power that later became the IP Clause: "[The Congress shall have power] To promote the progress of science and useful arts by securing for limited times to Authors and Inventors the exclusive right to their respective writings and discoveries."²²

16. See *infra* Part V.

17. The Convention's Journal and Madison's Journal are printed in scattered installments in THE RECORDS OF THE FEDERAL CONVENTION OF 1787 (Max Farrand ed., 1911) [hereinafter RECORDS]. This multi-volume source is ordered chronologically, and for each day of the Convention it prints all entries from the journals documenting it. Other delegates kept private journals of the Convention's events, but these—also printed in RECORDS, *supra*—are generally sporadic, incomplete, and in any case contain no information relevant to intellectual property.

18. See James Madison's Journal (Aug. 6, 1787), in 2 RECORDS, *supra* note 17, at 177, 177–89.

19. Charles Pinckney, 1757–1824, of whom this Article speaks, is not to be confused with his cousin and fellow South Carolina delegate to the Convention, Charles Cotesworth Pinckney, 1746–1825, nor with the many other Charles Pinckneys of the prominent South Carolina family.

20. For the intellectual property powers proposed, see *infra* Table 1.

21. This committee had one member from each state. It had eleven rather than thirteen members because Rhode Island did not send delegates and the New York delegation had left the Convention by that date.

22. Convention's Journal (Sept. 5, 1787), in 2 RECORDS, *supra* note 17, at 505, 505; see also U.S. CONST. art. I, § 8, cl. 8.

This power was unanimously agreed to, but the Two Journals do not document the debates and reasons that led the Framers from Madison's and Pinckney's initial proposals to the differently worded Clause.²³ Next, on September 8, the delegates appointed a Committee of Five "to revise the style of and arrange the articles agreed to by the House."²⁴ On September 12, this Committee presented a draft Constitution, which included the Clause.²⁵ This power remained intact when the Convention approved the final draft of the Constitution on September 17, 1787.²⁶

B. Pinckney on IP in the Convention

At the opening of the Convention, Pinckney put forth a Plan of Government (Plan), essentially a draft constitution, that he thought appropriate for the future union.²⁷ Unfortunately, this Plan was not among the papers that survived the Convention—although it should have been²⁸—and its text is thus unavailable to us. Shortly after the Convention ended,²⁹ however, Pinckney published a pamphlet that conveyed his "Observations on the Plan of Government [he had] Submitted to the Federal Convention in Philadelphia" (Observations).³⁰ The Observations suggest, in relevant part, that the Plan included "an authority to the National Legislature . . . to secure to Authors the exclusive rights to their Performances and Discoveries" (Observations' IP Part).³¹

23. In previous work, I suggested what these reasons likely were. See Oliar, *supra* note 6, at 1810–18 (suggesting, among other things, that the Framers intended Congress's power to grant IP rights to be limited to the ends of promoting progress in the arts and sciences, and to limit permissible means to exclusive rights).

24. Convention's Journal (Sept. 8, 1787), in 2 RECORDS, *supra* note 17, at 544, 547.

25. Report of Committee of Style (Sept. 10–12), in 2 RECORDS, *supra* note 17, at 595.

26. *Id.* at 655.

27. Four plans for a federal government were proposed in the early stages of the Convention. The Virginia Plan and Pinckney's Plan were proposed on May 29, 1787. In the following weeks, two additional plans were proposed: the New Jersey Plan (June 15, 1787), and Alexander Hamilton's Plan (June 18, 1787). For the plans, see DOCUMENTS ILLUSTRATIVE OF THE FORMATION OF THE UNION OF THE AMERICAN STATES 953–88 (Charles C. Tansill ed., 1927) [hereinafter DOCUMENTS ILLUSTRATIVE OF THE FORMATION].

28. See Letter From Charles Pinckney to Matthew Carey (Aug. 10, 1788), in 4 RECORDS, *supra* note 17, at 80 (suggesting that Pinckney had "laid before the convention" his original Plan and "the copy [he] gave to a gentleman at the northward").

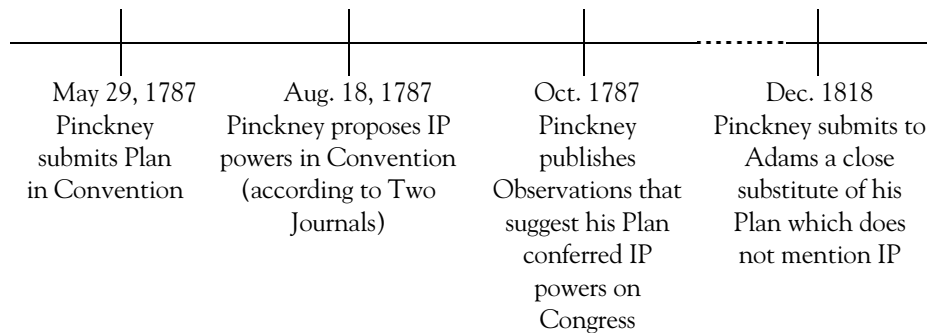
29. But no later than October 14, 1787. See Charles Pinckney, Observations on the Plan of Government Submitted to the Federal Convention in Philadelphia (May 28, 1787), 3 RECORDS, *supra* note 17, at 106, 106 n.1; see also *infra* note 43 (reviewing the Observations' publication in New York and South Carolina).

30. See Pinckney, *supra* note 29, at 106.

31. *Id.* at 122.

Whereas the Framers vowed to keep their debates secret, Congress lifted the veil of secrecy in 1818. President James Monroe ordered Secretary of State John Quincy Adams to publish the Convention's Journal. Adams noticed a mention of Pinckney's Plan, but could not find it among the Convention's papers, which were in a disorderly state. Adams asked Pinckney for a copy of his Plan.³² Pinckney searched his files and sent Adams one of the drafts of the Plan that he retained and which he believed to be a close substitute (1818 Substitute).³³ This substitute did not mention congressional intellectual property powers. Pinckney's actions can be summarized as follows:

FIGURE 1. TIMELINE OF PINCKNEY'S ACTIONS



C. The Puzzle and Its Resolution

Did Pinckney's Plan refer to intellectual property? Some sources suggest the answer is no. The Two Journals seem to indicate that the first time that IP was discussed in the Convention was on August 18, 1787. Pinckney's 1818 Substitute also seems to indicate that Pinckney's Plan did not mention congressional IP powers. At the same time, however, the Observations seem to suggest that Pinckney advocated congressional IP powers as a part of his Plan. The Observations thus leave a lingering doubt that our understanding of the Framers' intent behind the IP Clause is partial, or even distorted, because we lack a document—Pinckney's Plan—that may have influenced the Framers' deliberations.

32. See John Quincy Adams, 4 *Memoirs* (May 13, 1819), in 3 *RECORDS*, *supra* note 17, at 430, 431 (describing the whereabouts of the Convention's papers after it adjourned, the disorderly state in which Adams found them, Congress's 1818 resolution to print them, and the President's request from Adams to print them).

33. See Letter From Charles Pinckney to John Quincy Adams (Dec. 30, 1818), in 3 *RECORDS*, *supra* note 17, at 427, 427–28 (containing Pinckney's response to Adams's request for a copy of his Plan).

Scholars to date assumed that in the Observations, Pinckney claimed that he had proposed congressional intellectual property powers as a part of his Plan (Pinckney's Claim).³⁴ This common assumption relies on several indicators. First, the title of the Observations' pamphlet—"Observations on the Plan of Government Submitted to the Federal Convention in Philadelphia, on the 28th of May, 1787"—suggested to scholars that the pamphlet refers to Pinckney's Plan.³⁵ Second, the Observations' text reads as a speech given before the Convention and accompanying the Plan's presentation.³⁶ Third, the Observations mention specific article numbers from the Plan on which they comment. Scholars have differed, however, in their assessment of Pinckney's Claim: Some think it was truthful, while others believe it was not.³⁷

All scholars rely on the contents of the 1818 Substitute and on Pinckney's character for their opposing cases. The evidence they depend on, however, is inconclusive. The 1818 Substitute does not mention intellectual property, which

34. See BRUCE W. BUGBEE, GENESIS OF AMERICAN PATENT AND COPYRIGHT LAW 193 n.8 (1967) ("After the Convention had ended, Pinckney published a pamphlet entitled *Observations* . . . [in] which he suggested that Congress be empowered 'to secure to authors the exclusive rights to their performances and discoveries.'"); EDWARD C. WALTERSCHEID, THE NATURE OF THE INTELLECTUAL PROPERTY CLAUSE 82, 104–05 (2002) ("[I]n a pamphlet published shortly after the federal convention ended, Pinckney alleged that in the South Carolina Plan he had proposed that the Congress have authority 'to secure to authors the exclusive rights to their performances and discoveries.'"); Karl Fenning, *The Origin of the Patent and Copyright Clause of the Constitution*, 17 GEO. L.J. 109, 109–10 (1929) ("In this pamphlet Pinckney proposed to give authority to Congress 'to secure to authors the exclusive rights to their performances and discoveries.'"); Justin Hughes, *How Extra-Copyright Protection of Databases Can Be Constitutional*, 28 U. DAYTON L. REV. 159, 172 n.47 (2002) (assuming that Pinckney's Plan referred to intellectual property); Thomas A. Mitchell, *Copyright, Congress, and Constitutionality: How the Digital Millennium Copyright Act Goes Too Far*, 79 NOTRE DAME L. REV. 2115, 2120 (2004) ("Intellectual property protection was first proposed by Charles Pinckney on May 28, 1787.").

35. The Plan was submitted on May 29. The one-day difference in date is discussed *infra* note 50.

36. For example, they begin by addressing "Mr. President," and immediately afterwards the delegates: "It is, perhaps, unnecessary to state to the House the reasons which have given rise to this Convention." Addresses to the Convention and fellow delegates are interwoven throughout the Observations, together with remarks concerning the greatness of the hour, the sense of heavy duty, the importance of the Convention, and the expectations of the American people and the world from the Convention. See generally Pinckney, *supra* note 29, at 106–23; see also *infra* note 50.

37. Bugbee, Fenning, and Walterscheid do not believe Pinckney's Claim; namely, they think that Pinckney's Plan did not mention intellectual property. See BUGBEE, *supra* note 34, at 193 n.8; WALTERSCHEID, *supra* note 34, at 82; Fenning, *supra* note 34, at 110–11. Walterscheid, however, is willing to accept as a possibility that the Plan included a copyright power, but not a patent power. See WALTERSCHEID, *supra* note 34, at 124–25. Farrand believes the Claim to be more likely true than not; therefore, his suggested reconstruction of Pinckney's Plan includes the Observations' IP Part, although with a disclaimer. See *The Draught of a Foederal Government to be Agreed Upon Between the Free and Independent States of America*, in 3 RECORDS, *supra* note 17, at 604, 609 & n.3.

was suggested as a reason to distrust the Claim, and thus its maker, Pinckney.³⁸ However, the 1818 Substitute was shown not to be a true substitute for the Plan;³⁹ therefore, the extent to which it can be relied on to disprove the Claim is doubtful. The fact that the 1818 Substitute was not a true substitute for the Plan—although Pinckney submitted it as one—damaged his reputation.⁴⁰ However, when Pinckney sent Adams the 1818 Substitute, he accompanied with it a disclaimer: He was sending one of the drafts of the Plan he retained, and he could not be sure that it was identical to the Plan.⁴¹ Pinckney's letter to Adams made some scholars conclude that the Observations and the 1818 Substitute relate to different drafts of the Plan, which explains their incompatibility.⁴² Another reason suggested for not believing the Claim was that

38. See BUGBEE, *supra* note 34, at 193 n.8 (noting that the contents of the 1818 Substitute are evidence tending to disprove the Claim); WALTERSCHEID, *supra* note 34, at 82, 105 (mentioning Pinckney's character and the 1818 Substitute as tending to disprove the Claim); see also *infra* note 39.

39. Madison was perhaps the first to suggest that the 1818 Substitute was not a true substitute for the Plan. See Letter From James Madison to W.A. Duer (June 5, 1835), in 9 THE WRITINGS OF JAMES MADISON 553 (Gaillard Hunt ed., 1910) (“[T]he copy sent to Mr. Adams could not be the same with the document laid before the Convention.”). There was no chance, he argued, that the delegates would have engaged in four months of intense argument only to agree on a text that was lying before them all that time. See *id.* at 553 (“[T]he details and phraseology of the Constitution appear to have been anticipated [by the 1818 Substitute].”). He also made a detailed comparison of the inconsistencies between the 1818 Substitute and the Observations. See *id.* at 558 n.1. In his correspondence, however, Madison mentioned a possible explanation for the resemblance between the 1818 Substitute and the Constitution. See *id.* at 555 (“One conjecture explaining the phenomenon has been, that Mr. Pinckney interwove with the draught [sic] sent to Mr. Adams passages as agreed to in the Convention in the progress of the work, and which, after a lapse of more than thirty years, were not separated by his recollection.”). Some of the contents of the 1818 Substitute differ from the views Pinckney expressed in the Convention. See, e.g., *id.* at 553–54 (noting that while the 1818 Substitute suggests election of the House of Representatives by the people, on June 6, 1787, only eight days after the Plan was laid before the Convention, Pinckney suggested that the House be elected by the state legislatures). Some scholars called the 1818 Substitute a “pseudo draft” that “should be relegated to the depository of historical lies.” Paul L. Ford, *Pinckney's Draft of a Constitution*, 60 NATION 458, 459 (June 13, 1895); Andrew C. McLaughlin, *Sketch of Pinckney's Plan for a Constitution, 1787*, 9 AM. HIST. REV. 735, 736 (1904) (“pseudo plan”); see also CLINTON ROSSITER, 1787: THE GRAND CONVENTION 331 n.* (1966) (“fraudulent document”). Also, it was shown convincingly that in response to Adams's request Pinckney had taken the August 6, 1787, Committee of Detail's Draft Constitution as a base from which to work and “paraphrase[ed] to a small extent here and there, and interwove[ed] as he went along some of the best-remembered features of his own plan . . . the result would have been precisely like [the 1818 Substitute].” John Franklin Jameson, *Studies in the History of the Federal Convention of 1787*, 1 ANN. REP. AM. HIST. ASS'N 87, 124 (1903).

40. See, e.g., ROSSITER, *supra* note 39 (“The kindest judgment that can be made about Pinckney is that his vanity was appalling and his memory even worse.”); see also *supra* note 39.

41. Letter From Charles Pinckney to John Quincy Adams, *supra* note 33, at 427–28 (cautioning that Pinckney has four or five drafts of the Plan, that he cannot be sure at the distance of thirty years which most resembles the Plan, that these drafts are generally the same, and admitting that a few days after the Convention began he changed some of his views).

42. See ANDREW J. BETHEA, THE CONTRIBUTION OF CHARLES PINCKNEY TO THE FORMATION OF THE AMERICAN UNION 44–47 (1937) (suggesting that the 1818 Substitute was one of the drafts

Pinckney had a general reputation for claiming authorship of many constitutional provisions, and bore the nickname “Constitution Charlie.”⁴³ However, a reputation for taking credit does not necessarily entail taking false credit, especially since it is accepted that Pinckney made valuable contributions to the Constitution’s drafting.⁴⁴ Also, some suggest that Pinckney’s character was nearly impeccable.⁴⁵

The debate over the truth or falsity of the Claim, however, can likely be put to a rest. A careful reading of the Observations’ opening suggests that Pinckney never in fact asserted that the Plan referred to intellectual property—thus, the conventional assumption that Pinckney made the Claim is wrong. This much is clear from the Observations’ fine print, which states explicitly that the Observations were “Delivered at different Times in the course of [the Framers’] Discussions.”⁴⁶ Had Pinckney proposed everything included in the Observations on May 29, 1787, he would have had no reason to add

of the Plan, but not identical to it); CHARLES C. NOTT, *THE MYSTERY OF THE PINCKNEY DRAUGHT* 130, 271–72 (1908) (suggesting that the Plan, the 1818 Substitute and the Observations were, or were related to, different versions of Pinckney’s Plan).

43. See WALTERSCHEID, *supra* note 34, at 82 & n.12 (noting that Pinckney was “famous for his self-aggrandizement” and that no other evidence supports Pinckney’s “self-serving claim”); see also CATHERINE DRINKER BOWEN, *MIRACLE AT PHILADELPHIA: THE STORY OF THE CONSTITUTIONAL CONVENTION MAY TO SEPTEMBER 1787*, at 39 (1966) (noting that Pinckney was known as “Constitution Charlie”); ROSSITER, *supra* note 39, at 327 (same). His reputation for taking credit is supported by the publication of the Observations, which were published almost in defiance of the secrecy vow the delegates made. See NOTT, *supra* note 42, at 138 (arguing that since the Observations were never read in the Convention, and since their copy was never among the Convention’s papers, their publication did not formally break the secrecy vow). Even though Pinckney claimed that he only circulated the Observations among a close circle of friends, the Observations happened to find their way into public printing in New York. See Letter From James Madison to George Washington (Oct. 14, 1787), in 5 *THE WRITINGS OF JAMES MADISON*, *supra* note 39, at 9–10. Additionally, they were published again in a newspaper in South Carolina, Pinckney’s home state. See Jameson, *supra* note 39, at 116 & n.c. (noting that the Observations were published in the State Gazette of South Carolina in installments between October 29 and November 29, 1787). Contemporaneous correspondence also supports this reputation, as do speeches made by Pinckney at various times. See Letter From George Washington to James Madison (Oct. 22, 1787), in 11 *THE WRITINGS OF GEORGE WASHINGTON* 175 (Worthington Chauncy Ford ed., 1891) (“Mr. C. Pinckney is unwilling . . . to lose any fame that can be acquired by the publication of his sentiments.”); Charles Pinckney at the House of Representatives (Feb. 13, 1821), in 3 *RECORDS*, *supra* note 17, at 445, 445–46.

44. See McLaughlin, *supra* note 39, at 741 (“[W]e can say that Pinckney suggested some thirty-one or thirty-two provisions which were finally embodied in the Constitution; of these, about twelve were originally in the Articles of Confederation . . .”); Max Farrand, *The Contributions of Charles Pinckney to the Formation of the American Union by Andrew J. Bethea*, 62 *PA. MAG. HIST. & BIOGRAPHY* 552, 552 (1938) (book review) (“Pinckney made considerable contributions to the framing of the Constitution that ought to be more generally recognized. To claim too much is to push him back into the shadow under which his reputation long rested.”).

45. See generally BETHEA, *supra* note 42; NOTT, *supra* note 42.

46. Pinckney, *supra* note 29, at 106.

this disclaimer.⁴⁷ If this disclaimer needed any further support, scholars have identified parts in the Observations that reference suggestions and speeches Pinckney made at different times during the Convention.⁴⁸ Thus, all the Observations really claim is that Pinckney proposed congressional IP powers at some point during the Convention.

A close reading of the Observations' text leads to the further inference that the Observations' IP Part refers to the proposals Pinckney made on August 18, and not to his Plan. The Observations are well structured, covering various articles of Pinckney's Plan, noting their number each time and then explaining each at length. Toward the end of the Observations and just before the closing paragraphs, two short paragraphs appear, the second of which includes the Observations' IP Part.⁴⁹

The two paragraphs stand out structurally from the rest of the Observations in three ways. First, in contrast to the discussion preceding them, the two paragraphs do not mention article numbers in Pinckney's Plan to which they refer. Second, each of the two paragraphs relates to various different congressional powers that are not thematically related and thus do not appear to have been proposed as part of one article in Pinckney's Plan. In contrast, before the two paragraphs, articles from Pinckney's Plan are generally elaborated upon by a few paragraphs in the Observations. Third, the two paragraphs are very brief. Before them, the discussion of articles from the Plan is accompanied by lengthy rhetorical exclamations and by elaborations of the underlying rationales. The second of the two paragraphs, which relates to intellectual

47. Jameson and McLaughlin interpreted this disclaimer literally: They understood the Claim to be that Pinckney may have delivered the Observations verbatim in parts on different dates. They seem not to have considered the possibility that the Observations put in a speech reveal views Pinckney expressed at different times and in various settings in the Convention. See Jameson, *supra* note 39, at 120–23 (noting the disclaimer and concluding that the speech was never made, not even in parts on different dates); McLaughlin, *supra* note 39, at 735 (noting that the Observations may have been delivered on different dates as shorter speeches); see also NOTT, *supra* note 42, at 138–39 (noting the disclaimer, but, since he believed that the Observations were truthfully prepared prior to the Convention and published after its adjournment without having been tampered with, concluding that Pinckney probably added the disclaimer as an afterthought since some of his speeches in the Convention resembled the Observations).

48. See, e.g., Jameson, *supra* note 39, at 121 & n.a (suggesting that Pinckney delivered the paragraph next to last in the Observations at the Convention on July 2, 1787); McLaughlin, *supra* note 39, at 736 (suggesting that the fourteenth and fifteenth paragraphs in Pinckney's Observations were a part of a speech he gave in the Convention on June 8, 1787, since they are strikingly similar to the way Madison recorded Pinckney's speech in his journal).

49. The first of the two paragraphs starts with “[t]he next Article provides for” The second paragraph that refers to intellectual property begins “[t]here is also an authority to” Pinckney, *supra* note 46, at 122.

property, stands out especially: It provides no explanations of the congressional powers it lists, and contains no exclamations.

The two paragraphs also differ from the rest of the Observations in that each paragraph references proposals that Pinckney made in the Convention on two respective dates, as judged by the contents of the Two Journals. The first of the two paragraphs lists proposals that Pinckney made on August 20. The second paragraph containing the Observations' IP Part lists proposals for congressional powers Pinckney made on August 18. The two paragraphs thus seem like a later addition to a document already written, rather than to reference material included in the original Plan.⁵⁰

There are two additional external indications that corroborate and further buttress the inference that Pinckney's Plan did not refer to intellectual property. The first are two memoranda, discovered in the early 1900s, that reference the contents of Pinckney's Plan. The memoranda are in the handwriting of James Wilson of the Committee of Detail, to which Pinckney's Plan was transferred and that authored the August 6 Draft Constitution. It is believed that Wilson wrote these two memoranda while serving on the Committee and working on this draft. The first memorandum has been shown, through a rigorous analysis, to embody extracts from Pinckney's Plan.⁵¹ The second memorandum has been shown to be an outline Wilson made of Pinckney's Plan.⁵² Neither memorandum mentions IP.

50. If this conclusion is accurate, a possible conjecture is that the Observations build on a written speech Pinckney intended to make in the Convention when he submitted his Plan, but which he never delivered. This sense is conveyed predominantly from the format of the Observations: Had Pinckney chosen to publicize his thoughts after the Convention ended, there would have been little reason for him to do so in a speech format. Surrounding circumstances support this conjecture. Pinckney probably expected to give a speech since Edmund Randolph, who presented the Virginia Plan before him, enjoyed this honor. Pinckney probably did not give a speech, as none is recorded in any of the several journals that survived the Convention. Further suggesting that he did not make a speech is the fact that he was the second youngest member of the Convention and did not secure other delegates' support for his Plan in advance. If indeed the Observations were based on such a speech, this may explain the fact that the Observations' title carries the date of May 28 rather than May 29. If in publishing the Observations Pinckney used the date that appeared on the speech he had prepared but did not make, and had this speech been finalized the day before it was due, it would have carried the date of May 28. Cf. NOTT, *supra* note 42, at 122, 137–39 (suggesting that the Observations are the exact speech Pinckney intended to make on May 29, 1787, but eventually did not).

51. This conclusion was based on the views Pinckney expressed in the Convention and on an elimination of other plans and propositions as possible sources of these extracts. See J. Franklin Jameson, *Portions of Charles Pinckney's Plan for a Constitution*, 8 AM. HIST. REV. 509, 509–10 (1903). For the analysis of James Wilson's Extracts, see Jameson, *supra* note 39, at 128–32.

52. This demonstration was based on a sophisticated comparison of Wilson's outline with the Observations that showed that the series of issues each goes through exhibits substantial similarity in content and order. See McLaughlin, *supra* note 39.

Second, the Convention's Journal for August 18 tends against the possibility that Pinckney proposed intellectual property powers prior to that date. The record begins: "The following additional powers proposed to be vested in the Legislature of the United States having been submitted to the consideration of the Convention—It was moved and seconded to refer them to the Committee to whom the proceedings of the Convention were referred."⁵³ The Committee mentioned is the Committee of Detail, to which Pinckney's Plan was already referred at the end of July. If the Plan included intellectual property powers, there would have been little reason for Pinckney to reintroduce them to the same Committee three weeks later. Since Madison also made intellectual property proposals that day, there similarly would have been little reason for him to do so if Pinckney's earlier proposals were under consideration.⁵⁴ In addition, if Pinckney had already suggested intellectual property powers, it is unlikely that the Convention's Journal would label them "additional" powers, which was also the way Madison labeled them.⁵⁵

D. Taking Stock

To date, scholars have not conclusively determined whether Pinckney's Plan referred to intellectual property, although many believed it did.⁵⁶ Available sources suggest that Pinckney's Plan did not relate to intellectual property, and that the Observations do not suggest it did, contrary to the common wisdom. Instead, the Observations reference Pinckney's August 18, 1787, IP proposals.⁵⁷ We can therefore be confident that in writing the Clause the Framers did not rely on a text—Pinckney's Plan—that we do not have today. The doubt that our understanding of the Framers' intent might be lacking or distorted is therefore no longer reasonable. Madison's and Pinckney's August 18 proposals are available to us from the Two Journals, however, and we shall analyze them in Part III below.

My argument in previous work that the progress language in the IP Clause limits Congress's power⁵⁸ assumed implicitly that Pinckney's Plan was not a

53. Convention's Journal (Aug. 18, 1787), in 2 RECORDS, *supra* note 17, at 321, 321.

54. See Jameson, *supra* note 39, at 122–23.

55. James Madison's Journal (Aug. 18, 1787), in 2 RECORDS, *supra* note 17, at 324, 324 n.3 ("Mr. Pinkney [sic] proposed for consideration several *additional powers* which had occurred to him." (emphasis added)).

56. See, e.g., Hughes, *supra* note 34, at 172 n.47 (assuming that Pinckney's Plan referred to IP); Mitchell, *supra* note 34, at 2120; see also *supra* note 34.

57. The similarity between the Observations' IP Part and the Clause may suggest that the latter influenced the text of the former.

58. See Oliar, *supra* note 6, at 1810–16.

relevant input into the Framers' deliberations on the IP Clause. The analysis above offers reasons that justify that assumption.

II. THE PUZZLE SURROUNDING MADISON'S PATENT POWER PROPOSAL

A. The Puzzle and Conventional Wisdom

Did James Madison propose in the Convention that the future Congress have the power to issue patents? Scholars who studied the confused record that appears in the Two Journals have concluded that Madison did not. This Part argues that he did, a finding that will later be shown (in part II.C) to help resolve a current interpretive constitutional controversy.

The Convention's Journal for August 18, 1787, starts by listing twenty⁵⁹ additional proposed powers to be vested in Congress:

- To dispose of the unappropriated lands of the United States
- To institute temporary governments for new States arising thereon
- To regulate affairs with the Indians as well within as without the limits of the United States
- To exercise exclusively Legislative authority at the seat of the general Government, and over a district around the same, not exceeding square miles: the consent of the Legislature of the State or States comprising such district being first obtained
- To grant charters of incorporation in cases where the public good may require them, and the authority of a single State may be incompetent
- To secure to literary authors their copy rights for a limited time
- To establish an University
- To encourage, by proper premiums and provisions, the advancement of useful knowledge and discoveries
- To authorise the Executive to procure and hold for the use of the United States landed property for the erection of forts, magazines, and other necessary buildings
- To fix and permanently establish the seat of Government of the United-States in which they shall possess the exclusive right of soil and jurisdiction
- To establish seminaries for the promotion of literature and the arts and sciences
- To grant charters of incorporation

59. The sentence beginning with "That" may not be accurately tagged a congressional power, but the exact label is immaterial for present purposes.

- To grant patents for useful inventions
- To secure to authors exclusive rights for a certain time
- To establish public institutions, rewards and immunities for the promotion of agriculture, commerce, trades, and manufactures.
- That Funds which shall be appropriated for payment of public Creditors shall not during the time of such appropriation be diverted or applied to any other purpose—and to prepare a clause or clauses for restraining the Legislature of the United States from establishing a perpetual revenue
- To secure the payment of the public debt.
- To secure all Creditors, under the new Constitution, from a violation of the public faith when pledged by the authority of the Legislature
- To grant letters of marque and reprisal
- To regulate Stages on the post-roads.⁶⁰

The Convention's Journal does not detail who proposed these twenty powers, but only that the delegates agreed "to refer them to the Committee to whom the proceedings of the Convention were referred,"⁶¹ namely to the Committee of Detail.

Madison's Journal for that day starts as follows:

M^r. Pinkney [sic] proposed for consideration several additional powers which had occurred to him. See Journal of Convention.

M^r. M. proposed the following, to be referred to a committee. 1. to dispose of the unappropriated lands of the U.S. 2. To institute temporary Governments for new States arising thereon. 3. to regulate affairs with the Indians as well within as without the limits of the U. States. 4. to exercise exclusively legislative authority at the seat of the Gen^l Government, and over a district around the same not exceeding square miles; the consent of the State or States comprehending such district being first obtained. 5. to grant charters of incorporation in cases where the public good may require them and the authority of a single State may be incompetent. 6. to secure to literary authors their copyrights for a limited time. 7. To secure to the inventors of useful machines and implements the benefits thereof for a limited time. 8. to establish a University. 9. to encourage by proper præmiums and provisions, the advancement of useful knowledge and discoveries. 10. to authorise the Executive to procure

60. Convention's Journal (Aug. 18, 1787), in 1 DOCUMENTARY HISTORY OF THE CONSTITUTION OF THE UNITED STATES OF AMERICA, 1786–1870, at 130, 130–31 (U.S. Bureau of Rolls and Library ed., Washington D.C., U.S. Dep't of State 1894) [hereinafter DOCUMENTARY HISTORY OF THE CONSTITUTION].

61. *Id.* at 130.

and hold for the use of the U. States landed property for the erection of forts, magazines and other necessary buildings.⁶²

At a later time, Madison made changes to this text.⁶³ He drew two large X's over it, and pasted a sheet of paper on top of it. On this sheet, Madison wrote a slightly different, edited version (Madison's Edited Journal):

Mr. Madison submitted in order to be referred to the Committee of detail the following powers as proper to be added to those of the General Legislature

“To dispose of the unappropriated lands of the U. States”

“To institute temporary Governments for New States arising therein”

“To regulate affairs with the Indians as well within as without the limits of the U. States

“To exercise exclusively Legislative authority at the seat of the General Government, and over a district around the same, not exceeding square miles; the Consent of the Legislature of the State or States comprising the same, being first obtained”

“To grant charters of incorporation in cases where the Public good may require them, and the authority of a single State may be incompetent”

“To secure to literary authors their copyrights for a limited time”

“To establish an University”

“To encourage by premiums & provisions, the advancement of useful knowledge and discoveries”

“To authorize the Executive to procure and hold for the use of the U.S. landed property for the erection of Forts, Magazines, and other necessary buildings”

These propositions were referred to the Committee of detail which had prepared the Report and at the same time the following which were moved by Mr. Pinkney [sic]; in both cases unanimously.

“To fix and permanently establish the seat of Government of the U. S. in which they shall possess the exclusive right of soil & jurisdiction”

62. James Madison's Journal (Aug. 18, 1787), in 3 DOCUMENTARY HISTORY OF THE CONSTITUTION, *supra* note 60, at 554, 554–55.

63. Madison revised his notes from the Convention on two different occasions after 1818, wishing to prepare them for posthumous publication. He edited his original journal by marking changes on the papers, such as by crossing out words or sentences, adding words or sentences over the original text, and pasting onto his notes sheets of paper with added text. I use the term Madison's Edited Journal to denote the text of Madison's Journal as changed by Madison's revisions. See also *infra* note 77 and accompanying text.

- “To establish seminaries for the promotion of literature and the arts & sciences”
- “To grant charters of incorporation”
- “To grant patents for useful inventions”
- “To secure to Authors exclusive rights for a certain time”
- “To establish public institutions, rewards and immunities for the promotion of agriculture, commerce, trades and manufactures”
- “That funds which shall be appropriated for the payment of public Creditors, shall not during the time of such appropriation, be diverted or applied to any other purpose—and that the Committee prepare a clause or clauses for restraining the Legislature of the U. S. from establishing a perpetual revenue”
- “To secure the payment of the public debt”
- “To secure all creditors under the New Constitution from a violation of the public faith when pledged by the authority of the Legislature”
- “To grant letters of mark and reprisal”
- “To regulate Stages on the post roads”⁶⁴

Notably absent from Madison’s Edited Journal is his original number seven, namely “[t]o secure to the inventors of useful machines and implements the benefits thereof for a limited time” (The Missing Power). This power is also absent from the Convention’s Journal.

Aware of these differences, the literature has long been puzzled about whether Madison proposed a Congressional patent power, and, if he did, why he later edited his journal to reflect that he did not.⁶⁵ The conventional wisdom has been that Madison did not propose the Missing Power in the Convention.⁶⁶ Specifically, commentators have argued that in revising his notes, Madison admitted against his interest that he had not actually proposed

64. James Madison’s Edited Journal (Aug. 18, 1787), in 3 DOCUMENTARY HISTORY OF THE CONSTITUTION, *supra* note 60, at 555, 555–56; *see also supra* note 63.

65. For a few relatively recent mentions of this puzzle, *see*, for example, Birnhack, *supra* note 5, at 34 n.159 (noting the puzzle regarding the role played by Madison and Pinckney); Craig W. Dallan, *The Problem With Congress and Copyright Law: Forgetting the Past and Ignoring the Public Interest*, 44 SANTA CLARA L. REV. 365, 421 n.352 (2004) (noting the puzzle over who suggested patent proposals in the Convention, and discussing scholars’ disagreement); Durham, *supra* note 5, at 1431 n.52 (“The omission of [The Missing Power] from Madison’s edited notes has not been explained.”); Tyler T. Ochoa & Mark Rose, *The Anti-Monopoly Origins of the Patent and Copyright Clause*, 84 J. PAT. & TRADEMARK OFF. SOC’Y 909, 922 n.79 (2002) (noting the puzzle); Schwartz & Treanor, *supra* note 5, at 2375 (The puzzle is noted twice: “Madison may also have proposed a Patents Clause, although the record is confused . . . [I]t is not clear whether Madison proposed a Patents Clause.”). For the classic mention, *see* Fenning, *supra* note 34, at 112–13 (noting the omission of the Missing Power from the Convention’s Journal without reconciling the records).

66. *See, e.g.*, 3 THE FOUNDERS’ CONSTITUTION 40 (Philip B. Kurland & Ralph Lerner eds., 1987) (not mentioning the Missing Power among the intellectual property proposals made in the Convention).

the Missing Power (The Admission Argument).⁶⁷ The Admission Argument implicitly assumes that Madison revised his own journal because he suddenly realized that it was inaccurate.

B. Analysis

As will be shown below, the most reasonable inference from the three versions above is that Madison proposed that Congress should have a patent power. Contrary to the conventional Admission Argument, Madison's original version should be preferred to his later revision thereof. As between Madison's original journal and the Convention's Journal, there is good reason to prefer the former to the latter in any case of inconsistency between them, both generally and regarding the events of August 18 in particular.

1. Journals and Their Credibility: Generally

The Convention's Journal was kept by Secretary William Jackson. It is concise: It does not contain much more than the motions made and how they were voted on. It does not mention who made the motions, and does not generally record the Framers' discussions. Jackson was somewhat disorganized. Occasionally, he would fail to record an event or would keep a record in a confused or unclear manner.⁶⁸ He did not seem to see the importance of complete archiving, as when the Convention adjourned he burnt "all loose scraps of paper" before entrusting the Convention's Journal and papers to George

67. See BUGBEE, *supra* note 34, at 127 ("[Madison's] revised notes indicate that he did not suggest a Federal patent power. . . . Furthermore, Pinckney is credited in Madison's self-revised journal with the proposal of a national patent institution—in effect, an 'admission against interest' by Madison."); see also *id.* at 193 n.7 ("Only the patent proposal . . . was dropped. This would indicate that Madison, in editing his notes, felt that Pinckney alone had made the suggestion that the future Congress be empowered to grant patents."); Schwartz & Treanor, *supra* note 5, at 2375 ("[Madison] subsequently revised his notes to conform to the official journal, which suggests that he did not make this proposal concerning patents." (citation omitted)); WALTERSCHEID, *supra* note 34, at 103 ("Madison himself provides the best evidence that it was Pinckney who first proposed that the Constitution grant power to the Congress to issue patents for useful inventions. Nonetheless, the claim continues to be made that Madison was one of those responsible for suggesting that the Congress be given power to issue patents. This is not to say that Madison played no significant role in the origination of the intellectual property clause; he obviously did. But it was in the context of protecting the rights of authors rather than those of inventors." (citation omitted)); Ochoa & Rose, *supra* note 65, at 922 (suggesting that Pinckney made a patent proposal, while Madison's role is unclear).

68. See Max Farrand, *Introduction* to 1 RECORDS, *supra* note 17, at xiii–xiv ("With notes so carelessly kept, as were evidently those of the secretary, the Journal cannot be relied upon absolutely. The statement of questions is probably accurate in most cases, but the determination of those questions and in particular the votes upon them should be accepted somewhat tentatively.").

Washington's keep.⁶⁹ When John Quincy Adams retrieved these papers in 1818, he observed that "[t]he journals and papers were very loosely and imperfectly kept. They were no better than the daily minutes from which the regular journal ought to have been, but never was, made out."⁷⁰ When Adams asked Jackson for help in making sense of the papers, Jackson "looked over the papers, but he had no recollection of them which could remove the difficulties arising from their disorderly state, nor any papers to supply the deficiency of the missing papers."⁷¹ The incompleteness of the Journal may also have to do with the possibility that Jackson kept a fuller record that he intended to print for private gain at a later time.⁷² Although the Convention's Journal is a valuable source of information, it seems plausible that certain things said in the Convention were not properly reflected in it.

In contrast, Madison's Journal is the best-kept record from the Convention.⁷³ Madison recorded the events as they happened, and transcribed the motions put up for a vote, arguments made regarding them, and the names of the delegates speaking. His level of detail is outstanding. His fellow delegates had the utmost respect for his recordkeeping, and would often pass him copies of their speeches.⁷⁴ On many occasions in which Madison failed to record something that was said, he left a note in his journal to later fill it from other

69. See *id.* at xi; Letter From William Jackson to George Washington (Sept. 17, 1787), in 3 RECORDS, *supra* note 17, at 82.

70. Adams, *supra* note 32, at 433; see also *id.* at 431 (noting that when Adams found the Convention's papers, they "were so imperfect, and in such disorder, that to have published them, as they were, would have given to the public a book useless and in many respects inexplicable").

71. John Quincy Adams, 4 Memoirs, in 3 RECORDS, *supra* note 17, at 426, 426. Among the aforementioned missing papers was not only Pinckney's Plan, but also, among others, Alexander Hamilton's plan, see *supra* note 27, and minutes from the last days of the Convention. Adams, *supra* note 32, at 430, 431–32.

72. Farrand, *supra* note 68, at xii n.6 ("It would seem also that [Jackson] had taken notes of the debates . . . in addition to his formal minutes, and it is possible that he somewhat neglected his official duties in order to make his private records more complete."); Adams, *supra* note 71, at 426 ("[Jackson] told me that he had taken extensive minutes of the debates in the Convention, but, at the request of President Washington, had promised they should never be published during his own life, which he supposed had been a loss to him of many thousand dollars.").

73. See James Madison, Preface to Debates in the Convention of 1787, in 3 RECORDS, *supra* note 17, at 539, 550 (Madison's own note taking in the Convention is described as follows: "In pursuance of the task I had assumed I chose a seat in front of the presiding member with the other members, on my right & left hand. In this favorable position for hearing all that passed, I noted in terms legible & in abbreviations [sic] & marks intelligible to myself what was read from the Chair or spoken by the members; and losing not a moment unnecessarily between the adjournment & reassembling of the Convention I was enabled to write out my daily notes during the session [sic] or within a few finishing days after its close in the extent and form preserved in my own hand on my files.").

74. See CARL VAN DOREN, THE GREAT REHEARSAL: THE STORY OF THE MAKING AND RATIFYING OF THE CONSTITUTION OF THE UNITED STATES 30 (1948) (noting that "Madison seems to have been regarded by his fellow delegates as a licensed private recorder of their proceedings").

sources (as he did on August 18, 1787, respecting Pinckney's proposals).⁷⁵ In light of his detailed recordation and meticulous accuracy, Madison's Journal should be generally preferred to other sources, absent some specific reason to the contrary.

Madison's Edited Journal, however, should not be accorded much independent weight. Madison wanted his journal to be published only posthumously.⁷⁶ Prior to his 1836 death at the age of eighty-five, he apparently revised his journal on two different occasions.⁷⁷ Madison did not edit his notes based on a vivid memory from the Convention that he had retained for some forty years. Rather, to edit his notes, Madison mainly used the Convention's Journal, printed in 1819 by Adams, and Robert Yates' journal, published in 1821.⁷⁸ He used these primarily to complete parts he missed recording, but he also looked for places where the records were different. As judged by his edits, Madison apparently did not appreciate the completeness of his journal.⁷⁹ He would sometimes revise his notes because a third source, often Yates' journal, supported the Convention's Journal, but other times for no apparent reason. In some cases, Madison's correct record was changed to conform to the Journal's erroneous record,⁸⁰ or to that of Yates.⁸¹ Thus, whereas Madison wrote his original journal at the time events unfolded around him, he revised it at a much older age, when he no longer retained actual memory and acted more as an editor. We should therefore generally prefer Madison's authentic, real-time record and should not accord Madison's Edited Journal much independent weight. This is especially so when we have reason to doubt Madison's editorial judgment, which is the case before us.

2. Journals and Their Credibility: Record of August 18, 1787

The revisions Madison made to his record of August 18 suggest that they were not based on some specific recollection that he had retained. First, Madison left a note to himself in his Journal to complete Pinckney's August

75. See Farrand, *supra* note 68, at xv–xix.

76. See *id.* at xv.

77. *Id.* at xviii nn.20 & 23; see also *supra* note 63.

78. Farrand, *supra* note 68, at xvi–xviii.

79. See *id.* at xvi–xix.

80. For example, one instance in which Madison substituted the Convention's Journal's erroneous record for his own is detailed in Convention's Journal (July 20, 1787), in 2 RECORDS, *supra* note 17, at 61 n.3, 62. The error in the Convention's Journal resulted from a confused recordation of the votes by Secretary Jackson, which Adams had trouble making sense of when he brought the journal to print in 1818.

81. This is surprising, since Madison thought Yates' journal was "very erroneous." Farrand, *supra* note 68, at xviii & n.21.

18 proposals, which suggests that he may have missed or was too distracted to transcribe them and, if so, likely could not have kept a recollection of them.⁸²

Second, the way Madison compiled Pinckney's August 18 proposals in Madison's Edited Journal shows that Madison not only acted as an editor—lacking a specific recollection of events that occurred forty years earlier—but that he also conducted poor editorial work. Madison saw twenty powers listed in the Convention's Journal at the beginning of the entry for August 18. His own journal recorded that Pinckney had made some proposals, and then there was a list of proposals Madison had made. In his Edited Journal, Madison attributed to Pinckney the eleven powers that did not appear in his journal as his own. But the last five of the eleven powers Madison attributed to Pinckney were not Pinckney's.⁸³ As the rest of Madison's Journal for August 18 shows, they were proposed later that day by John Rutledge, George Mason, and Elbridge Gerry.⁸⁴ Since the Convention's Journal is succinct, it lists only the proposals that were made to augment Congress's powers. However, Madison's more complete journal recorded, in addition, discussions among the Framers before and after various powers were proposed. Were Madison, when he revised his notes, to have retained a specific recollection of that day's events or conducted a careful editorial job, he would not have misattributed these five powers to Pinckney.

Third, several indications suggest that Madison's revision of his original record for August 18 was not based on some vivid recollection that he retained from the Convention respecting what he had proposed, but rather was the result of an indiscriminate copying of text from the Convention's Journal into his own. In Madison's Journal, the powers he proposed are numbered, while in his Edited Journal and the Convention's Journal, they are not. The powers are written continuously as a part of one long paragraph in Madison's Journal, while each power begins on a new line in his Edited Journal and the Convention's Journal. In Madison's Journal, Pinckney appears as the first speaker of the day, but in the Edited Journal and in the Convention's Journal, Madison is the first speaker.⁸⁵ Moreover, although the contents of Madison's proposals are similar among the three journals, they are not identical. A careful comparison tends to show that Madison was copying the text of his Edited Journal from the Convention's

82. See *supra* text accompanying note 62 (containing Madison's note to himself).

83. These five powers are those from the one starting with, "That Funds which shall be appropriated for payment of public Creditors" to the last power, "To regulate Stages on the post-roads." See Convention's Journal, *supra* note 60, at 131.

84. James Madison's Journal, *supra* note 55, at 326–28.

85. It is possible to tell from Madison's Journal that the proposals that appear first in the Convention's Journal are Madison's.

Journal rather than basing it on his own. One notable difference, for example, is the fact that the relevant part of power three in Madison's Journal reads, "the consent of the State." Madison's Edited Journal and the Convention's Journal read, "the Consent of the Legislature of the State." It is improbable that, when Madison edited his Journal some forty years after the Convention ended, he added the words "of the legislature" to the text of his journal because he recalled that he had originally used these words. More likely, Madison copied the contents of this proposal from the Convention's Journal. Another example is that under that same power Madison's Journal reads, "or States comprehending." Madison's Edited Journal and the Convention's Journal read, "or States comprising."⁸⁶ These textual variations among the three texts are thoroughly discussed in the Appendix herein. Using a statistical hypotheses test, it appears that the suggestion that Madison copied the contents of the Convention's Journal into his Edited Journal is much more plausible than the conventional assumption that Madison's Edited Journal is a revision of Madison's Journal.⁸⁷

These reasons explain why Madison's Edited Journal for August 18 omits the Missing Power. The revised notes were simply copied from the Convention's Journal for that day. It seems that Madison had reasons to believe that the Convention's Journal for that day was more complete than his, rather than less so. After all, he had left a note to himself to take things he missed from the Convention's Journal. And since the Missing Power does not appear in the Convention's Journal, it also does not appear in Madison's Edited Journal. But what should we make of this? Should we take it to be a sign of an intentional omission by Madison of the Missing Power, or a result of careless editorial performance by him at old age? The latter seems more plausible.

If Madison had reviewed the record of the day closely, and decided to intentionally omit the Missing Power, then this would support the Admission Argument. But had Madison compared his journal and the Convention's Journal regarding the powers he proposed, he would have seen that but for the Missing Power, they were basically the same. In such a case what we would expect Madison to do is simply cross out the Missing Power rather than needlessly copy the whole list. The fact that he did not suggests that he was probably unaware of its omission.⁸⁸ Also, Madison recorded his own powers

86. The proposals in Madison's Edited Journal also start with quotation marks, which may suggest that they were copied from some other source. See James Madison's Edited Journal, in 2 RECORDS, *supra* note 17, at 324 n.3 (reporting the divergence between Madison's Edited Journal and Madison's Journal and suggesting that the revision was taken from the Convention's Journal).

87. See *infra* App.

88. Even if one assumes that Madison carefully compared his original notes with the Convention's Journal, and noticed that the Convention's Journal omitted the Missing Power, the evidence above would still suggest that not much independent weight should be given to Madison's Edited Journal.

by using numerals, as he often did when transcribing in abbreviated form. This may have caused Madison, giving his notes a casual glance, to think that he recorded his congressional power proposals in an abbreviated form, and to copy their text from the Journal, believing it to contain the full language.⁸⁹ His misattribution of five powers by Rutledge, Mason, and Gerry to Pinckney further tends against the possibility that Madison's copying was done as a result of careful editing. Moreover, to argue that Madison admitted that he did not propose the Missing Power just because he copied that day's record from the Convention's Journal is not much more convincing than arguing that in doing so, Madison also "admitted" that Pinckney proposed the five powers that we know were in truth made by Rutledge, Mason, and Gerry.⁹⁰ Lastly, the Admission Argument provides no reasonable explanation for why Madison would record in his journal that he had proposed a patent power if he did not. The Admission Argument assumes that Madison had an interest in portraying himself as the one who originated Congress's patent power and that Madison's revisions consist of an admission against that interest, but the fact that Madison prepared his journal for publication without the patent power tends, if at all, against the existence of such an interest.

The foregoing suggests that Madison's Edited Journal for August 18 is no more than a copy of the Convention's Journal for that day, rather than an independent revision by Madison based on some actual memory he retained. As such, Madison's Edited Journal for August 18 should not be accorded much independent weight. As far as Madison is then concerned, we should prefer his original August 18 record taken during the Convention to his apparently careless and copied revisions made some forty years later.

3. Reconciling Madison's Journal with the Convention's Journal

Once the logic of the Admission Argument has been invalidated, we are left with the basic fact that Madison's Journal records his patent power, and that the Convention's Journal, which lists Madison's powers in order (but without mentioning which delegate proposed them), skips his patent power. Why this happened is hard to tell based on available evidence, and one may

The evidence shows that in every case of divergence between his original notes and the Convention's Journal, Madison preferred the version in the Convention's Journal to his own, rather than sometimes prefer one and sometimes the other. Had he switched back and forth, it would tend to suggest deliberation and the retention of some actual memory, as opposed to a decision to always prefer one source to the other in cases of conflict.

89. See *supra* note 73 (noting that Madison used to transcribe events in abbreviated form in the Convention).

90. See *supra* note 84 and accompanying text.

only guess the actual reason.⁹¹ What is clear, however, is that there is no reason to doubt the contents of Madison's Journal. It is the most complete record from the Convention generally, and there is no reason to believe that Madison recorded the Missing Power in his journal even though he did not actually propose it. The patent power appears in the middle of his proposed powers, which, if anything, likely negates the possibility that it was added as an afterthought. Moreover, many other details pertaining to the events of that day are available to us only from Madison's Journal—such as which of the powers were his and which were made by Rutledge, Mason, and Gerry—and we similarly have no reason to doubt their truthfulness. Lastly, the text of the Clause is much closer to Madison's patent proposal than to Pinckney's patent proposal, which tends to suggest that Madison's patent power proposal entered into the Framers' deliberations.⁹²

C. Taking Stock

The conclusion that Madison proposed a congressional patent power sheds light on an important constitutional controversy. A currently open question is whether IP legislation might be struck down for failing to “promote the progress of science and useful arts,” or whether the progress language in the Clause is instead a preamble of no operative effect.⁹³ Elsewhere, I have argued that the Framers meant the progress language in the IP Clause to serve as a limitation on Congress's IP power.⁹⁴ That argument relied on the text of the Missing Power and on the assumption that Madison proposed it. First, as I explained there in greater detail, the text of the Missing Power is plenary: Madison would vest in Congress the Missing Power, namely an unconditional power “[t]o secure to the inventors of useful machines and implements the benefits thereof for a limited time.” The fact that the Framers did not adopt such plenary language but changed it so as to subject its exercise to the ends of

91. For example, perhaps Secretary Jackson was distracted for a moment and skipped one of Madison's proposed powers. Perhaps Madison handed Jackson the list of the powers he proposed, and Jackson skipped the Missing Power, which seemed similar to the one preceding it (both start with “to secure to” and end with “for a limited time”). Also, one might conjecture that Madison skipped reading that power. Although these and many other conjectures are possible, none is supported by evidence.

92. Both the IP Clause and the Missing Power use the verb “to secure” and the terms “inventors” and “for a limited time,” whereas Pinckney's proposal for a congressional patent power uses the verb “to grant,” does not use an explicit time limitation, and does not use “inventors.”

93. The Supreme Court explicitly denied certiorari on this question a few years ago. See *Eldred v. Ashcroft*, 534 U.S. 1160 (2002) (denying certiorari specifically on the question of whether the progress language in the Clause limits Congress's IP power).

94. See Oliar, *supra* note 6, at 1810–16.

promoting progress (but not other ends) tends to show that the Framers intended the progress language to act as a limitation. Second, in the Convention Madison was among the nationalists who supported a strong federal government. Among the delegates were also supporters of state rights, and the Constitution struck a compromise between these two camps. The fact that the Missing Power was proposed by Madison, a nationalist, and that its text was changed by the general body of the Convention to include the progress language, implies that the progress language was intended as a curtailment on national power.⁹⁵

In the aforementioned work I hinted that my assumption that Madison proposed the Missing Power—an assumption on which I relied—was contrary to accepted wisdom. Yet, I noted that I had my reasons for making it, but I did not detail them there.⁹⁶ I have done so here.

III. THE LEGISLATIVE HISTORY BEHIND THE CLAUSE: MADISON AND PINCKNEY'S EIGHT PROPOSALS FOR LEGISLATIVE POWER

The IP Clause was an output of the deliberations of the Committee of Eleven, which unfortunately were not recorded. However, once the IP-related contradictions in the historical record have been reconciled, it is possible to identify the input into that committee's deliberations. As will be shown below, knowledge of the IP-related input and output of the Committee of Eleven gives us valuable insight into the Committee's deliberations, and thus the Framers' likely intent. Before we get there, however, we must first review the information used by the Committee to deliberate. Eight out of the twenty congressional powers that Madison and Pinckney proposed on August 18, 1787, are relevant to this discussion. As Table 1 details, Madison and Pinckney each proposed to vest in Congress a patent power, a copyright power, an education power, and a power to grant encouragements,⁹⁷ as follows:⁹⁸

95. See *id.*

96. See *id.* at 1789 n.98.

97. The term "encouragements" describes monetary payments and nonmonetary honors that the American states, and many manufacturing countries, would contemporaneously give to reward industry and invention. Present day equivalents would include the Nobel Prize or U.S. government grants given by the National Science Foundation and the National Endowment for the Arts.

98. See Oliar, *supra* note 6, at 1789 tbl.1.

TABLE 1: THE LEGISLATIVE HISTORY BEHIND THE CLAUSE

Subject matter	Powers proposed by Madison	Powers proposed by Pinckney
Patent	to secure to the inventors of useful machines and implements the benefits thereof for a limited time (Madison's Patent Power)	to grant patents for useful inventions (Pinckney's Patent Power)
Copyright	to secure to literary authors their copyrights for a limited time (Madison's Copyright Power)	to secure to authors exclusive rights for a certain time (Pinckney's Copyright Power)
Education	to establish a university (Madison's Education Power)	to establish seminaries for the promotion of literature and the arts and sciences (Pinckney's Education Power)
Encouragements	to encourage by proper præmiums and provisions the advancement of useful knowledge and discoveries (Madison's Encouragements Power)	to establish public institutions, rewards and immunities for the promotion of agriculture, commerce, trades, and manufactures (Pinckney's Encouragements Power)

Why are the aforementioned eight powers suggested as the origins of the IP Clause in the Convention? In particular, why are four powers that relate to education and encouragements relevant?

As I have shown in previous work, the text of the IP Clause stemmed not only from Madison's and Pinckney's Patent and Copyright Powers but also from their Education and Encouragements Powers.⁹⁹ Textually, the Clause has a unique ends-means structure: "to promote the progress of science and useful arts" is the ends (Progress Clause), and "by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries" represents the means (Exclusive Rights Clause). Clearly, the Exclusive Rights Clause was adapted from Madison's and Pinckney's Patent and

99. See *id.* at 1805–10.

Copyright Powers. They refer to the same subject matter—and no other part in the records of the Convention relates to this subject matter—and share very similar language. But Madison’s and Pinckney’s patent and copyright powers do not have an ends-means structure that the IP Clause has, and there is nothing in them reminiscent of the language in the Progress Clause. A careful analysis of Table 1 shows that the text of the Progress Clause and the Clause’s overall ends-means structure were adapted from three proposals in Table 1, namely Pinckney’s Education Power and Madison’s and Pinckney’s Encouragements Powers. These three have an ends-means structure, and the text of the Progress Clause was adapted from the language in their “ends” parts.¹⁰⁰

How can we be sure that we are not missing some other additional source that affected the Framers’ IP-related deliberations? In truth, we cannot. The only window we have today into the Framers’ deliberations is the documents that survived the Convention. Until now, there remained a lingering doubt that Pinckney’s Plan may have been such a missing source, but Part I establishes that such doubt is no longer reasonable. Furthermore, no other part in the Convention’s record relates to the text of the Clause, and no other external source mentions language that the Framers considered incorporating into the IP Clause.¹⁰¹ Based on available documents, only the aforementioned eight powers can reasonably be considered as the origins of the Clause.

The finding that the Clause stemmed from the eight proposals in Table 1 above is significant. To date, the literature has generally accepted Madison’s Copyright Power and Pinckney’s Copyright and Patent Powers as sources of the Clause. But the literature has thus far missed the fact that their education and encouragements powers influenced the text and structure of the Clause substantially.¹⁰²

100. Note, for example, the similarity between “promote the progress” in the Progress Clause and “encourage . . . the advancement” in the ends part of Madison’s Encouragements Power. Note also the similarity between “science and useful arts” in the Progress Clause and “the arts and sciences” in the ends part of Pinckney’s Education Power. For a more detailed tracking of the language in Madison’s and Pinckney’s relevant proposals and the Progress Clause, see *id.* at 1788–1810. As mentioned earlier, my prior work assumed that Madison made a patent power proposal, an assumption I justify in Part II.

101. Different from such language, there are external sources that shed light on the Framers’ and ratifiers’ attitudes toward intellectual property and the IP Clause, the most relevant of which are Madison’s views in *The Federalist*. See *THE FEDERALIST NO. 43* (James Madison) (suggesting that the common law recognizes the rights of authors and inventors, noting that such rights further the common good, and justifying the national power in terms of a need for effective protection).

102. Indeed, the literature has shown awareness of only subsets of these eight powers. See, e.g., LYMAN RAY PATTERSON, *COPYRIGHT IN HISTORICAL PERSPECTIVE* 192–93 (1968) (simply mentioning all powers but for Madison’s Patent Power and Pinckney’s Encouragements Power as of “particular interest”); Fenning, *supra* note 34 (noting Pinckney’s Patent and Copyright Powers, Madison’s Patent and Copyright Power, and Madison’s Encouragements Power); Ginsburg, *supra* note 5, at 999 (noting

For the sake of completeness of the historical discussion of IP at the Convention, two things are worth a quick mention. The first is a comment in the Convention's records. On July 13, while discussing the purpose of government, and after his peers suggested that the primary objective was the guarantee of property, delegate James Wilson—whose role regarding Pinckney's Plan was mentioned above¹⁰³—suggested that government's primary objective is the cultivation and improvement of the human mind.¹⁰⁴ It is hard to know what interpretive weight this statement should be given. It was made more than a month before IP was first discussed in the Convention, and it was made in a general discussion relating to the goals of government. Wilson's emphasis on the "cultivation & improvement of the human mind" may however inform, and is in line with, the Progress Clause.

Second is the steamboat demonstration. While Madison's and Pinckney's IP proposals were before the Committee of Detail for consideration, inventor John Fitch arrived in Philadelphia and invited the Framers for a demonstration of his steamboat invention on the Delaware River. Our knowledge about this demonstration is lacking: The date on which it took place is unclear; we do not know exactly how many and which of the Framers attended; and, most unfortunately, there is no record of what was said there. What we do know is that during the 1780s, Fitch engaged in a head-to-head lobbying race with his archrival James Rumsey over securing steamboat patents in the various states. Because Fitch had previously petitioned Congress for protection, it is likely

Madison's Copyright and Encouragements Powers as origins of the copyright portion of the Clause); Craig Joyce, "A Curious Chapter in the History of *Judicature*": *Wheaton v. Peters and the Rest of the Story (of Copyright in the New Republic)*, 42 HOUS. L. REV. 325, 336 & n.29 (2005) (viewing the patent and copyright powers as the sources of the Clause); Lyman Ray Patterson & Craig Joyce, *Monopolizing the Law: The Scope of Copyright Protection for Law Reports and Statutory Compilations*, 36 UCLA L. REV. 719, 788 n.231 (1989) (noting Madison's and Pinckney's Copyright Powers as the sources of the copyright portion of the Clause); Malla Pollack, *Unconstitutional Incontestability? The Intersection of the Intellectual Property and Commerce Clauses of the Constitution: Beyond a Critique of Shakespeare Co. v. Silstar Corp.*, 18 SEATTLE U. L. REV. 259, 275 & n.96 (1995) (analyzing Pinckney's Patent and Copyright Powers and Madison's Copyright Power as the origins of the Clause); Schwartz & Treanor, *supra* note 5, at 2375 (suggesting that whereas the Exclusive Rights Clause draws on Madison's and Pinckney's Patent and Copyright Powers, the Progress Clause emerged first in the Committee of Eleven); *id.* at 2375, 2381 (noting Pinckney's Patent and Copyright Powers and Madison's Copyright Power as the sources of the Clause, expressing doubt on whether Madison's Patent Power was a source of the Clause, and rejecting Madison's Encouragements Power as a possible source of the IP Clause). Even the most sophisticated analysis of the Convention's record to date, which noticed Madison's Encouragements Power as a source of the Clause, did not think that Madison's and Pinckney's Education Powers were relevant. See WALTERSCHEID, *supra* note 34, at 117 (noting Pinckney's Patent Power, Madison's and Pinckney's Copyright Powers and Madison's Encouragements Power as the origins of the Clause).

103. See *supra* notes 51–52 and accompanying text.

104. See James Madison's Journal (July 13, 1787), in 1 RECORDS, *supra* note 17, at 605 ("[H]e could not agree that property was the sole or the primary object of Govern. & Society. The cultivation & improvement of the human mind was the most noble object.").

that he used the demonstration to further his lobbying efforts. With this partial knowledge, there is no reason to believe that the demonstration had any specific effect on the text of the Clause, although it may have alerted the Framers to the general need for encouraging innovation through patent protection.¹⁰⁵

I will now turn to how the findings above shed interpretive light on the Framers' intent and the Clause's original understanding, and thus help resolve four current questions of constitutional interpretation.

IV. IMPLICATIONS FOR OPEN QUESTIONS OF CONSTITUTIONAL INTERPRETATION

The U.S. Supreme Court¹⁰⁶ and commentators¹⁰⁷ widely accept the importance of originalist and intentionalist considerations in constitutional intellectual

105. See BUGBEE, *supra* note 34, at 95–99; see generally Frank D. Prager, *The Steamboat Pioneers Before the Founding Fathers*, 37 J. PAT. OFF. SOC'Y 486 (1955).

106. *Eldred v. Ashcroft*, 537 U.S. 186 (2003), gave much weight to the Framers' intent and to the Clause's original understanding. For intent, see *id.* at 202 n.8 (relying on Madison's and other Framers' views of Congress's power under the Clause); *id.* at 194, 196 n.3, 197, 200, 204 & n.8, 213 & n.19, 214 n.20 (noting or relying seven times on the fact that the First Congress granted copyright protection to previously existing works); *id.* at 210 n.16 (rejecting dissenting Justice Breyer's assessment of the copyright term extension according to the present value it provides authors because "[i]t is doubtful, however, that those architects of our Nation, in framing the 'limited Times' prescription, thought in terms of the calculator rather than the calendar"); *id.* at 213 ("Indeed, '[t]his Court has repeatedly laid down the principle that a contemporaneous legislative exposition of the Constitution when the founders of our Government and framers of our Constitution were actively participating in public affairs, acquiesced in for a long term of years, fixes the construction to be given [the Constitution's] provisions." (quoting *Myers v. United States*, 272 U.S. 52, 175 (1926))); *id.* at 222 ("[a]s we read the Framers' instruction"); *id.* at 228–33 (Stevens, J., dissenting) (dedicating considerable attention to studying "early Congresses' understanding of the constitutional limits of the Copyright/Patent Clause" and concluding that "history, in this case, does not provide the 'volume of logic' . . . necessary to the sustain the Sonny Bono Act's constitutionality"); *id.* at 246–48 (Breyer, J., dissenting) (reviewing the founders' objectives in the Clause and their abhorrence of monopolies). The justices similarly paid much attention to the original meaning of the text. See, e.g., *id.* at 199 (majority opinion) (looking at dictionaries contemporaneous with the nation's founding in order to understand the meaning of the word "limited" in the Clause); *id.* at 229–31 (Stevens, J., dissenting) (studying the early U.S. patent and copyright systems extensively); *id.* at 245–48 (Breyer, J., dissenting) (interpreting the word "science" in the Clause to mean knowledge or learning, which was arguably its meaning at the time of the founding, and consulting a 1773 dictionary to interpret "limited").

107. Recent years have seen a boom in historical intellectual property scholarship. See, e.g., BEN-ATAR, *supra* note 5; B. ZORINA KHAN, *THE DEMOCRATIZATION OF INVENTION: PATENTS AND COPYRIGHTS IN AMERICAN ECONOMIC DEVELOPMENT, 1790–1920* (2005); WALTERSCHEID, *supra* note 34; Oren Bracha, *The Ideology of Authorship Revisited: Authors, Markets, and Liberal Values in Early American Copyright*, 118 YALE L.J. 186 (2008); Heald & Sherry, *supra* note 5; Adam Mossoff, *Patents as Constitutional Private Property: The Historical Protection of Patents Under the Takings Clause*, 87 B.U. L. REV. 689 (2007); Thomas B. Nachbar, *Intellectual Property and Constitutional Norms*, 104 COLUM. L. REV. 272 (2004); Ochoa & Rose, *supra* note 65; Malla Pollack, *What Is Congress Supposed to Promote?: Defining "Progress" in Article I, Section 8, Clause 8 of the United States Constitution, or Introducing the Progress*

property interpretation. However, all have assumed that the Convention's records convey little or no information about the Framers' intent and the original understanding of the IP Clause.¹⁰⁸ As the analysis in this Part shows, however, Madison and Pinckney's eight powers provide us with new interpretive insight.

Listed below are four currently open questions of constitutional interpretation, to whose resolution the findings above contribute. It is not suggested that the findings above and the analysis below are capable of conclusively solving these questions. Rather, both enhance our understanding of the Framers' intent and the Clause's original understanding—relevant considerations in constitutional interpretation.

One common theme running through the applications below is that they all rely on the aforementioned finding that the IP Clause stemmed not only from Madison's and Pinckney's Patent and Copyright Powers, but also from their Education and Encouragements Powers. This finding thus has an important interpretive payoff. A second common theme is that the interpretive conclusions drawn from the Convention's record are corroborated by reinforcing external contemporaneous evidence. The significance of this will become clear in Part V, which argues that the interpretive conclusions reached in this Part are valid not only as an elaboration of the Framers' subjective intentions, but are also of importance to those interested primarily in the text's original public meaning.

A. The Constitutionality of Business Method Patents

Not long ago, a common belief was that one could not patent a way of doing business. But in 1998, the Federal Circuit—the court hearing the vast majority of patent appeals—ruled that business methods are patentable subject matter, and thus “[a]id th[e] ill-conceived [business method] exception to rest.”¹⁰⁹ Following that decision, a score of business-method patent applications were filed and granted; examples include Amazon.com's one-click shopping patent¹¹⁰ and patents relating to tax strategies.¹¹¹

Clause, 80 NEB. L. REV. 754 (2001); Schwartz & Treanor, *supra* note 5; Symposium, *Intellectual Property at a Crossroads: The Use of the Past in Intellectual Property Jurisprudence*, 38 LOY. L.A. L. REV. 1 (2004).

108. See *supra* note 5.

109. State St. Bank & Trust Co. v. Signature Fin. Group, Inc., 149 F.3d 1368, 1375 (Fed. Cir. 1998), *abrogated on other grounds by In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008).

110. U.S. Patent No. 5,960,411 (filed September 12, 1997). Many of the claims of this patent have been recently rejected. See U.S. Pat. & Trademark Office, Office Action in Ex Parte Reexamination (No. 90/007,946), available at <http://pub.bna.com/ptcj/PTOreexam.pdf> (rejecting claims 1–5 and 11–26).

111. See, e.g., U.S. Patent No. 6,567,790 (filed Dec. 1, 1999) (describing a method for minimizing tax liability).

Many oppose business method patents, believing them to be bad policy.¹¹² Critics contend that (1) there are already adequate incentives for people to come up with better ways of doing business, such that there is no good reason for society to bear the monopoly-related costs of business method patents; and (2) the patent office—which initially had no expertise in this area—was granting patents for methods that were not truly novel and nonobvious. Indeed, the patent office has since substantially reformed the way it examines and grants business method patents, suggesting agreement with this criticism. Similarly, Congress has enacted an exemption from enforcing such patents against prior users,¹¹³ and is considering banning patents on tax-planning methods.¹¹⁴ At the same time, despite widespread criticism, there is data to suggest that business method patents are not inferior in quality to other types of patents.¹¹⁵

There exists, however, a constitutional aspect to the debate over the legitimacy of business method patents. Some maintain that business method patents are unconstitutional because they lie outside what the Framers and the public originally understood “useful arts” to encompass.¹¹⁶ The Supreme Court has not yet considered the issue, but there is reason to believe that it may soon do so. In one recent case, four justices expressed concerns with business method

112. See, e.g., Adam B. Jaffe, *The U.S. Patent System in Transition: Policy Innovation and the Innovation Process*, 29 RES. POL’Y 531 (2000); Jay P. Kesan, *Carrots and Sticks to Create a Better Patent System*, 17 BERKELEY TECH. L.J. 763 (2002); Robert P. Merges, *As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts and Patent System Reform*, 14 BERKELEY TECH. L.J. 577 (1999).

113. See 35 U.S.C. § 273 (2006).

114. See, e.g., H.R. 2584, 111th Cong. (2009); S. 506, 111th Cong. § 303 (2009); H.R. 1265, 111th Cong. § 303 (2009).

115. See John R. Allison & Emerson H. Tiller, *The Business Method Patent Myth*, 18 BERKELEY TECH. L.J. 987 (2003) (arguing that the quality of those internet business method patents that were granted is no worse than that of other patents).

116. See Durham, *supra* note 5, at 1454–55 (“It is reasonable to conclude that industry is what the Framers intended to encourage by exclusive rights and that industry is what they meant by the ‘useful arts.’ There is no corresponding evidence that the Framers intended to encourage developments in business methods . . . In fact, there is no evidence that they viewed such endeavors as subject to improvement by ‘inventors.’ In all likelihood, it did not occur to the Framers to include such things in the patent system.” (citation omitted)); Robert A. Kreiss, *Patent Protection for Computer Programs and Mathematical Algorithms: The Constitutional Limitations on Patentable Subject Matter*, 29 N.M. L. REV. 31, 85–86 (1999) (arguing that “business systems are perceived to be far outside the bounds of the ‘useful arts’”); Malla Pollack, *The Multiple Unconstitutionality of Business Method Patents: Common Sense, Congressional Consideration, and Constitutional History*, 28 RUTGERS COMPUTER & TECH. L.J. 61, 119 (2002) (“‘Useful arts’ does not include methods of commerce; business method patents are therefore unconstitutional.”); John R. Thomas, *The Patenting of the Liberal Professions*, 40 B.C. L. REV. 1139, 1164 (1999) (“We have good reason to doubt whether [business method patents] lie within the ‘useful Arts,’ the constitutional stricture concerning patentable subject matter. The sparse materials we possess regarding this term suggest that it is unlikely the Framers saw every created thing as encompassed within it.” (citation omitted)).

patent grants,¹¹⁷ and in another case one justice seems to have doubted their constitutionality.¹¹⁸ The currently pending *In re Bilski*¹¹⁹ may provide the Supreme Court the opportunity to analyze the constitutionality of business method patents. Dissenting powerfully from the Federal Circuit's decision, Judge Haldane Robert Mayer wrote: "Affording patent protection to business methods lacks constitutional . . . support. . . . From a historical perspective, it is highly unlikely that the framers of the Constitution's intellectual property clause intended to grant patent protection to methods of conducting business."¹²⁰

At the same time, the aforementioned reforms by Congress and the patent office may suggest that they see business method patents as constitutional subject matter, even if they signal a desire to limit its statutory availability.

The findings of this Article provide qualified support for the constitutionality of business method patents. Specifically, the Convention's record, supported by contemporaneous evidence, tends against the suggestion that business method patents clearly lie beyond the Framers' intent and the original understanding of "useful arts." Clearly, the issue of business method patents was not before the Framers. But if one tries to speculate about the Framers' attitude toward business method patents in light of available source material, it is entirely possible that they would have approved of them.

As for the Framers' intent, in Part III it was argued that the Progress Clause likely incorporated the "ends" language in Madison's and Pinckney's Education and Encouragements Powers. The "ends" part of Pinckney's Encouragements Power consists of "the promotion of agriculture, commerce, trades, and manufactures." Thus, commerce and trade seem to have been a part of the "science and useful arts" whose progress the Framers wished to promote in passing the Clause. Business method patents are given for advancements in the ways people do business, and thus seem to satisfy these ends.

Contemporaneous sources, external to the Conventions' debates, would be hard to reconcile with a suggestion that business method patents were clearly beyond the confines of the Clause as originally understood. Rather, they may be read as supporting the constitutionality of business method patents as a matter of the Clause's original understanding. In 1776, the Continental Congress

117. See *eBay, Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 397 (2006) (Kennedy, J., concurring, joined by Stevens, Souter, & Breyer, JJ.) (commenting on the "potential vagueness and suspect validity" of some business method patents).

118. See *Excel Commc'ns, Inc. v. AT&T Corp.*, 528 U.S. 946, 946-47 (1999) ("The importance of the question presented in this certiorari petition makes it appropriate to reiterate the fact that the denial of the petition does not constitute a ruling on the merits.").

119. See *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008), *cert. granted*, *Bilski v. Doll*, 129 S. Ct. 2735 (U.S. June 1, 2009) (No. 08-964).

120. *Id.* at 998 (Mayer, J., dissenting).

called on each state to establish at the earliest convenience “a society for the improvement of agriculture, arts, manufactures, and commerce”—just the objectives Pinckney’s Encouragements Power enumerated.¹²¹ Massachusetts’s 1780 Constitution, on which Pinckney’s Encouragements Power likely drew,¹²² names various arts and sciences that should be promoted, including commerce and trades. North Carolina’s 1785 copyright statute stated in its preamble that the protection of literary property would encourage “the general extension of arts and commerce.”¹²³ George Washington addressed Congress on January 8, 1790, in an attempt to encourage it to pass laws under the Clause in order to promote arts and science. He restated the Progress Clause in pronouncing, “The advancement of agriculture, commerce, and manufactures, by all proper means, will not, I trust, need recommendation.”¹²⁴ In doing so, Washington essentially restated the arts mentioned in Pinckney’s proposed Encouragements Power, and the need to advance them.¹²⁵ A delegate in Congress noted in 1792 that intellectual property rights are to be given to encourage “fine arts, . . . commerce, . . . manufactures, and agriculture.”¹²⁶ Lastly, in his first inaugural speech, Madison restated the Clause as pertaining to “improvements of agriculture, in the successful enterprises of commerce, [and] in the progress of manufactures.”¹²⁷

All of these sources suggest that the Framers in the Convention, and readers of the Constitution at that time, plausibly saw improvements in trade and commerce as included within the Progress Clause. Certainly, Pinckney’s Encouragements Power did not enter the Constitution. However, it was not

121. 4 JOURNALS OF THE CONTINENTAL CONGRESS 1774–1789, at 224 (Worthington Chauncey Ford ed., 1906).

122. See *infra* note 214 and accompanying text.

123. See Act of Nov. 19, 1785, reprinted in COPYRIGHT OFFICE, LIBRARY OF CONGRESS, COPYRIGHT ENACTMENTS 1783–1900, at 23, 23 (1900) [hereinafter COPYRIGHT ENACTMENTS].

124. See 1 JOURNAL OF THE FIRST SESSION OF THE SENATE OF THE UNITED STATES 103 (Washington, Gales & Seaton 1820) (recording Washington’s address on Jan. 8, 1790).

125. The fact that Congress rejected several means Washington espoused—university and encouragements—does not affect the argument in the text, which relates to Washington’s statement of ends.

126. See 3 ANNALS OF CONG. 393–94 (1792) (“The framers of the Constitution guarded so much against a possibility of such partial preferences as might be given, if Congress had the right to grant them, that, even to encourage learning and useful arts, the granting of patents is the extent of their power. . . . The encouragement which the General Government might give to the fine arts, to commerce, to manufactures, and agriculture, might, if judiciously applied, redound to the honor of Congress, and the splendor, magnificence, and real advantage of the United States; but the wise framers of our Constitution saw that, if Congress had the power of exerting what has been called a royal munificence for these purposes, Congress might, like many royal benefactors, misplace their munificence; might elevate sycophants, and be inattentive to men unfriendly to the views of Government; might reward the ingenuity of the citizens of one State, and neglect a much greater genius of another.” (statement of Mr. Page)).

127. See James Madison, First Inaugural Address (Mar. 4, 1809), in 8 THE WRITINGS OF JAMES MADISON, *supra* note 39, at 47, 47.

because the Framers objected to its goals. On the contrary, the above quoted sources suggest that these goals were incorporated into the Progress Clause. Rather, this power by Pinckney was not incorporated because the Framers objected to the particular means it proposed to advance these goals, namely federal subsidies and encouragements.¹²⁸

Note that the arguments against the constitutionality of business method patents are largely premised on a disjunctive reading of the IP Clause, the merit of which Part IV.C challenges below. In short, the argument against their constitutionality is that commerce was not among what the Framers understood the “useful arts” to encompass. In noting the sources above I accepted the disjunctive reading *arguendo*, and suggested that the Framers plausibly saw improvements in commerce as reflecting progress in the useful arts. An alternative support to their constitutionality, however, comes from Part IV.C’s suggestion that the Framers plausibly intended Congress to have the power to award patents to advancements in “science” as well as in the “useful arts.”

The above is not presented as providing unequivocal support for the constitutionality of business method patents. The interpretive question we are now facing did not occupy the Framers’ generation, and we have no explicit discussion of it by them. However, the above seems to support the constitutionality of business method patents as an originalist matter at least in the weak sense: In light of the sources quoted above, one would be hard pressed to argue that the Framers would have unequivocally been opposed to the grant of business method patents, or that contemporaneous readers of the Clause unequivocally saw it as barring patents on business methods. Thus, a constitutional argument against business method patents, founded primarily on the Framers’ intent and the Clause’s original understanding, does not seem sound.¹²⁹

B. The Constitutionality of Patents on Products of Nature, and of Copyright in Unoriginal and Labor-Intensive Factual Compilations

Section 101 of the 1952 Patent Act states, “Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter . . . may obtain a patent”¹³⁰ Interpreting section 101 in *Diamond v. Chakrabarty*¹³¹—perhaps the Court’s most important subject matter decision

128. See Oliar, *supra* note 6, at 1795–810 (elaborating on this argument).

129. Saying so is not to advocate that Congress or the Patent and Trademark Office should actually issue business method patents, or if so, on what terms. These questions are beyond the present constitutional inquiry.

130. 35 U.S.C. § 101 (2006).

131. 447 U.S. 303 (1980).

to date—the Supreme Court stated that “Congress intended statutory subject matter to ‘include anything under the sun that is made by man.’”¹³² At the same time, the Court repeated an old patent law principle—the “products of nature” doctrine—that “laws of nature, physical phenomena, and abstract ideas” are unpatentable.¹³³

Why are products of nature unpatentable? *Chakrabarty* is not explicit on the reason. It simply cites a long list of cases that held so. If the doctrine is the result of statutory interpretation, then Congress may override it. Congress could clarify that section 101, which says that “whoever . . . discovers any new and useful . . . composition of matter . . . may obtain a patent,” means what a plain reading suggests—that is, that one may patent a newly discovered natural element, for example—rather than what the Supreme Court interpreted it to mean—namely, that the natural product doctrine bars such protection. If the basis for the doctrine is constitutional, however, then Congress would have to secure a constitutional amendment before allowing patents on natural products.

The Supreme Court has not yet answered this question. In *Chakrabarty*, a statutory case, the Court may have simply been interpreting the statute.¹³⁴ However, the fact that section 101’s plain meaning seems to run in the other direction, and that the Court was citing cases predating the 1952 Act, may instead suggest that the reason is grounded in the Constitution. To judge from recent comments, at least three justices think so. In *Labcorp v. Metabolite Labs*,¹³⁵ the petitioner challenged the validity of a patent claim over what was arguably a natural phenomenon. The Court first granted certiorari, then later dismissed the writ as improvidently granted. Three justices dissented from this dismissal; they would have kept the case and elaborated on the contours of the “products of nature” doctrine. These justices suggested that the doctrine is constitutionally mandated.¹³⁶ Because the Supreme Court has shown a growing interest in reviewing the Federal Circuit’s patent law decisions¹³⁷ (including subject matter

132. *Id.* at 309.

133. *Id.*

134. *Id.* at 307 (“The question before us in this case is a narrow one of statutory interpretation requiring us to construe 35 U.S.C. § 101.”).

135. 548 U.S. 124 (2006).

136. *See id.* at 126 (Breyer, J., dissenting, joined by Stevens and Souter, JJ.) (explaining that “the reason for the exclusion [of laws of nature from patentable subject matter] is that sometimes too much patent protection can impede rather than ‘promote the Progress of Science and useful Arts, the constitutional objective of patent and copyright protection’” (quoting U.S. CONST. art. I, § 8, cl. 8)).

137. *See, e.g.,* *Quanta Computer, Inc. v. LG Electronics, Inc.*, 128 S. Ct. 2109 (2008) (reversing the Federal Circuit and limiting patent owners’ ability to control downstream patent use); *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007) (rejecting and invigorating the Federal Circuit’s standard for nonobviousness, a bar to patentability); *Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437 (2007) (overturning a Federal Circuit’s finding of infringement abroad based on the supply of a patent

decisions),¹³⁸ while also limiting the reach of patent protection generally, the issue may arise again in the near future.

There are three indications in the record of the Convention tending against the conclusion that the doctrine of the unpatentability of products of nature is grounded in the Constitution. First, the IP Clause speaks of the patentability of “discoveries.” Current conventional wisdom understands the term to be largely synonymous with “inventions.”¹³⁹ But where did this word come from? As Table 1 above shows, it does not appear in either of Madison or Pinckney’s Patent Powers. Rather, the word “discoveries” likely originated in Madison’s Encouragements Power.

Why would Madison and Pinckney make their Encouragements Powers in addition to ones respecting patents and copyrights? Are grants of encouragements and intellectual property rights not redundant? The answer is no. Each of these two means—governmental encouragements and exclusive rights—is best suited to encourage different types of authorship and invention. Intellectual property rights are best suited to encourage intellectual labor that has immediate market value. Governmental encouragements are best suited to encourage intellectual labor that has no, or little, immediate market value, although it may be socially beneficial. Indeed, these are the types of works that the federal government encourages today through agencies like the National Science Foundation and the National Endowment for the Arts.¹⁴⁰ Thus, it is not surprising that Madison’s and Pinckney’s Patent Powers mention “inventors” and “inventions” while Madison’s Encouragements Power speaks of “discoveries.”

component from the United States); *MedImmune, Inc. v. Genentech, Inc.*, 549 U.S. 118 (2007) (reversing Federal Circuit doctrine that limited licensees’ ability to challenge the validity or enforceability of the underlying patents); *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006) (rejecting the Federal Circuit’s rule that courts should issue injunctions once infringement is found).

138. In addition to *Labcorp*, five justices asked questions about the patentability of computer software during oral argument in *Microsoft v. AT&T*, even though the issue was not before the Court.

139. See 35 U.S.C. § 100 (2006) (defining “invention” to include “discovery”).

140. See, e.g., National Science Foundation, <http://www.nsf.gov/about> (last visited Aug. 3, 2009) (“The National Science Foundation (NSF) is an independent federal agency created by Congress in 1950 ‘to promote the progress of science’”); National Endowment for the Arts, <http://www.nea.gov/recovery/index.html> (last visited Aug. 3, 2009) (noting that “[t]he National Endowment for the Arts is uniquely positioned to fund arts projects and activities that preserve jobs in the nonprofit arts sector threatened by declines in philanthropic and other support during the current economic downturn”); see also National Endowment for the Humanities, <http://www.neh.gov/whoweare/overview.html> (last visited Aug. 3, 2009) (stating that the National Endowment for the Humanities gives grants to individuals and institutions to “strengthen teaching and learning in the humanities in schools and colleges across the nation” and “facilitate research and original scholarship”); National Institutes of Health, <http://www.nih.gov/about/#mission> (last visited Aug. 3, 2009) (“The goals of the [National Institutes of Health] are . . . [to] foster fundamental creative discoveries . . .”).

The adoption of the word “discoveries” from Madison’s Encouragements Power into the IP Clause, rather than the words “machines” or “inventions” from Madison’s and Pinckney’s Patent Powers, may suggest that the Framers wished to promote basic scientific discoveries as well. On this reading, the Framers were willing to empower Congress to promote science and useful arts by granting exclusive rights for a limited time in discoveries lying on a spectrum ranging from basic to applied science (subject to statutory patentability conditions that Congress would find fit). Although the grant of exclusive rights may promote basic scientific research only in a limited manner, the Framers were perhaps not willing to empower Congress to spend on encouragements for that purpose.¹⁴¹

The second indication tending against the suggestion that products of nature and basic scientific discoveries were clearly beyond what the Framers were willing to vest exclusive rights in is the use of the word “science” in the Clause as one of the goals that the patent system should promote. Although many who read the Clause disjunctively deny that the word “science” is one of the goals of the patent system, Part IV.C argues at length that such strict reading is likely unwarranted. It will only be noted here that the grant of exclusive rights in “discoveries,” a word all agree relates to the patent system, fits well with the goal of advancing “science” as the word is used in the IP Clause (whether it originally meant “useful knowledge,” or even simply “knowledge” or “learning”).

The third indication that the Constitution may allow patents for products of nature rests in the language of the proposals forming the basis of the IP Clause. It was suggested above that the Progress Clause likely incorporated the “ends” parts of three of Madison’s and Pinckney’s powers relating to education and encouragements. Pinckney’s Encouragements Power refers, as one of its ends, to the promotion of agriculture. Additionally, many contemporaneous references to the Clause mentioned the promotion of agriculture as one of its goals.¹⁴²

141. Indeed, there is some evidence to suggest a contemporaneous concern about governmental abuse of such power to spend. See, e.g., 3 ANNALS OF CONG. 393–94 (1792) (“The framers of the Constitution guarded so much against a possibility of such partial preferences as might be given, if Congress had the right to grant them, that, even to encourage learning and useful arts, the granting of patents is the extent of their power. . . . [T]he wise framers of our Constitution saw that, if Congress had the power of exerting what has been called a royal munificence for these purposes, Congress might, like many royal benefactors, misplace their munificence; might elevate sycophants, and be inattentive to men unfriendly to the views of Government; might reward the ingenuity of the citizens of one State, and neglect a much greater genius of another.” (statement of Mr. Page)).

142. See *supra* notes 121–122, 124–127 and accompanying text (noting contemporaneous references to the goals of the Clause and mentioning the promotion of agriculture among them).

This is not surprising: The United States was an agricultural country at the time, and promotion of agriculture was an important national interest.

What did the Framers mean by “promotion of agriculture?” It is hard to tell, and the sources above are not explicit on this issue. That said, the making of new plant varieties by methods such as grafting and budding was already known to the Framers’ generation.¹⁴³ Many farmers and agricultural societies experimented with these methods, and also tried to find, improve, and acclimatize crops in order to make them appropriate for the conditions in North America.¹⁴⁴ It thus seems plausible that the Framers, and their generation, wished and understood the Clause to empower Congress to promote the useful arts by granting exclusive rights to those who discover or graft plants, namely to those who either invent or discover new and unknown natural products.¹⁴⁵ Indeed, the current patentability of plants under the Plant Patent Act of 1930 (PPA),¹⁴⁶ the Plant Variety Protection act of 1970,¹⁴⁷ and the Supreme Court’s

143. See, e.g., THOMAS MAWE ET AL., *EVERY MAN HIS OWN GARDENER* 349–50 (11th ed. 1787) (“Budding may now be performed in apricots, peaches, and nectarines; plums, cherries and pears.”). For a cultural reference suggesting the general knowledge of these arts more than a century and a half prior to the Convention, see, for example, WILLIAM SHAKESPEARE, *THE WINTER’S TALE* act 4, sc. 4., ll. 92–97 (Frances E. Dolan ed., Penguin Books 1999) (1623)

 (“You see, sweet maid, we marry
 A gentler scion to the wildest stock,
 And make conceive a bark of baser kind
 By bud of nobler race. This is an art
 Which does mend nature, change it rather; but
 The art itself is nature.”).

144. See, e.g., SIMON BAATZ, “VENERATE THE PLOW”: A HISTORY OF THE PHILADELPHIA SOCIETY FOR PROMOTING AGRICULTURE 1785–1985, at 3 (1985) (“[I]n 1784, a small circle of Philadelphians discussed the possibility of establishing an agricultural society. The idea was not new; there was a committee of the American Philosophical Society in the city which reported regularly on agricultural improvements at meetings of the Society.”); *id.* at 4, 6 (suggesting that four of the founding members of the Philadelphia Society for Promoting Agriculture signed the Declaration of Independence and four participated in the Convention, and that in 1785 George Washington joined as an honorary member and Benjamin Franklin joined as a resident member); *id.* at 6 (mentioning sister scientific and agricultural societies: the South Carolina Society of Agriculture, the Society for Promoting Arts, Manufactures and Agriculture in Connecticut, the Agricultural Society of New York, the Agricultural Society of the Province of New Brunswick, and the Burlington County Society for the Promotion of Agriculture and Domestic Manufactures); CONWAY ZIRKLE, *THE BEGINNINGS OF PLANT HYBRIDIZATION* 144–49 (1935) (reviewing the activities of John Bartram, 1699–1777, who established a botanic garden in Philadelphia, imported new and exotic species from abroad, was an intimate friend of Benjamin Franklin, and made experiments in hybridization such as one in which he “obtained curious mixed Colours in flowers never known before”).

145. It is probably so respecting members of Congress in 1930. See COMM. ON PATENTS, REPORT TO ACCOMPANY S. 4015, S. REP. NO. 71-315, at 6 (1930) (“There can be no doubt that the grant of plant patents constitutes a promotion of ‘the progress of science and useful arts’ . . .”).

146. See 35 U.S.C. §§ 161–164 (2006).

147. See 7 U.S.C. §§ 2321–2582 (2006).

holding that plant inventions may enjoy utility patent protection¹⁴⁸ seem to conform to such intention.

One may counter that the “products of nature” doctrine only bars protection for naturally occurring substances, but not man-made plants. This narrow formulation of the “products of nature” doctrine, however, is a recent one. Leading to the passage of the PPA were attempts by plant propagators to obtain legal protection.¹⁴⁹ At that time, however, some believed the Constitution barred protection for such arguably natural products.¹⁵⁰ This argument seems to have been serious enough that the Senate committee’s report on the PPA bill dealt with this argument at length, although it ultimately found the bill constitutional.¹⁵¹ The report can be read to suggest that Congress’s power under the Clause, according to the original meaning of its language, is broad enough to encompass protection for plant varieties that are merely found in nature.¹⁵² Such narrowing of the scope of what the “products of nature” doctrine encompasses pursuant to lobbying efforts and legislative acts may suggest that the doctrine is one of statutory interpretation.

This (and some of what shall come immediately below) is not evidence provided in support of a strong argument that the Framers clearly intended (or that the public clearly understood) Congress to have the power to issue patents for products of nature. One may question whether this argument would be adequate to support such a heavy burden. Rather, the evidence is brought, and seems adequate to suffice, for the argument here that it is doubtful that the Framers clearly wished to deny Congress the power to grant patent protection for products of nature and for basic scientific discoveries.

So far, I’ve noted three indications—“discoveries,” “science,” and “agriculture”—from the Convention’s record that tend against a constitutional basis for the products of nature doctrine. The early doctrine regarding the

148. See *J.E.M. Ag Supply, Inc. v. Pioneer Hi-Bred Int’l*, 534 U.S. 124, 145 (2001) (holding that newly developed plant breeds are patentable subject matter).

149. See Glenn E. Bugos & Daniel J. Kevles, *Plants as Intellectual Property: American Practice, Law, and Policy in World Context*, 7 *OSIRIS* 75, 78–84 (2d Ser. 1992).

150. See Harold C. Thorne, *Relation of Patent Law to Natural Products*, 6 *J. PAT. OFF. SOC’Y* 23 (1923) (mentioning attempts to obtain legal protection but suggesting that the desired protection cannot be granted under the IP Clause as interpreted by courts).

151. See *COMM. ON PATENTS, REPORT TO ACCOMPANY S. 4015*, S. REP. NO. 71-315, at 6 (1930) (“The committee is of the opinion after careful consideration that the amendments to the patent laws proposed by the bill fall within the legislative power of Congress under [the IP Clause.]”).

152. See *id.* at 7–8 (suggesting that Congress has the power to grant patents for plants in which human intervention is very minimal—probably not much more than plucking—because one major meaning of the word “inventor” at the time of the founding was discoverer or finder, even though that meaning became archaic by 1930). True, the report first finds the bill constitutional by making a make vs. discover distinction and suggesting that patenting under the bill requires human agency, see *id.* at 6–7, but it later shifts to the aforementioned alternative ground.

copyrightability of maps may suggest that this is the case also as a matter of the Clause's original public meaning.¹⁵³ Maps, or at least the common category of bare-bone ones, are generally unoriginal, labor-intensive factual compilations; their value lies in their depiction of natural phenomena, such as rivers and mountains. True, under the Supreme Court's decision in *Feist v. Rural*,¹⁵⁴ labor-intensive but unoriginal compilations of facts are not copyrightable.¹⁵⁵ Even if one spends much time and effort mapping a territory, she cannot currently use copyright law to prevent competitors from extracting all the facts from her map. But at least until well into the nineteenth century, this was not the case. If one were the first to map an area, secondcomers could not freeride on that effort. Rather, competing map sellers would have to incur the costs of their own independent mapping (or of a costly compilation).¹⁵⁶ That this was the law is also reflected in the state copyright statutes and the first Copyright Act of 1790, all of which mentioned "maps" explicitly as protectible subject matter. Clearly, mapping the United States was an important contemporaneous public interest. What inducement to mapmaking would these copyright statutes be if anyone could just freeride on others' mapping efforts?

Although the analogy to the protection of literary property, like any analogy, is not perfect,¹⁵⁷ it is still informative that the Framers did not see a problem in giving an exclusive right (of the kind available under copyright law) under the

153. One may argue that the fact that Congress considered but eventually did not allow for patents of importation (given to the first to import a technology not previously known domestically) in the first patent bill tends to show that the natural products doctrine is constitutionally mandated. However, it is not entirely clear why patents of importation were rejected. Although constitutional objections were mentioned, the fact that George Washington urged Congress publicly to grant them and that the first patent bill initially provided for them suggest that this was not a universal belief. Also, non-constitutional reasons were mentioned as well (such as the difficulty of drafting appropriate legislation and the desire to allow unencumbered domestic use of foreign technology). Even assuming that constitutional concerns were primary, these seem to have related to the nature of the patentee (i.e. importer as different from the constitutional requirement of inventor/discoverer) rather than the nature of the patent (whether it resulted from a man-made invention or a discovery of a preexisting natural product or principle, a distinction underlying the products of nature doctrine). See WALTERSCHEID, *supra* note 34, at 313–27.

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

155. See *id.* at 363–64.

156. See, e.g., *Emerson v. Davies*, 8 F. Cas. 615, 619 (C.C.D. Mass. 1845) ("A man has a right to the copy-right of a map of a state or country, which he has surveyed or caused to be compiled from existing materials, at his own expense, or skill, or labor, or money. Another man may publish another map of the same state or country, by using the like means or materials, and the like skill, labor and expense. But then he has no right to publish a map taken substantially and designedly from the map of the other person, without any such exercise of skill, or labor, or expense.").

157. To be sure, there are differences between copyright law and patent law, the most significant of which is that copyright doctrine protects only expression and allows for independent creation by third parties.

IP Clause for natural discoveries by authors who disclosed these discoveries through publication.

The analogy between the products of nature doctrine in patent law and the one concerning the protection of maps in early copyright law is further justified based on the similar rationale currently provided for the two. *Feist* and *Chakrabarty* use a make/discover distinction in order to distinguish protectible from unprotectible subject matter. Facts are discovered, not authored, says *Feist*.¹⁵⁸ Products of nature are discovered, not invented, says *Chakrabarty*.¹⁵⁹ Just like *Chakrabarty*, *Feist* was also a statutory case. But different from *Chakrabarty*, the Court in *Feist* noted that facts and unoriginal compilations of facts cannot be copyrighted as a constitutional matter, rather than only as a statutory matter.¹⁶⁰ This latter holding by the Court is hard to reconcile with the Framers' intentions, the Clause's original understanding, and the early statutory and case law on the copyrightability of maps, as reviewed above. These were clearly designed to protect facts discovered and collected at a cost. Although current doctrine uses a make vs. discover distinction, and suggests—at least in the *Feist* context—that it has constitutional roots, this turns out not to be the case as a historical matter. If the Clause was not intended and understood to incorporate a foundational make vs. discover distinction in the context of writings, it makes the existence of such a foundational distinction less probable in the context of invention.

The suggestion that *Feist* may have gotten the constitutional question wrong is significant. In recent years, a few database-protection bills were pending in Congress. The bills were driven in large part by post-*Feist* lobbying from concerned database-dependent industries, and by the fact that the European Union had passed a database-protection directive in 1996.¹⁶¹ Although proponents of these bills argued that Congress can pass them under its commerce power, many others have argued that database protection would be unconstitutional, as it would run counter to the constitutional originality requirement announced in *Feist*.¹⁶² Should activity resume respecting database legislation,

158. *Feist*, 499 U.S. at 347 (“The distinction is one between creation and discovery . . .”).

159. *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (“Congress intended statutory subject matter to ‘include anything under the sun that is made by man.’ . . . Thus, a new mineral discovered in the earth or a new plant found in the wild is not patentable subject matter. . . . Such discoveries are ‘manifestations of . . . nature . . .’” (quoting S. REP. NO. 82-1979, at 5 (1952), and H.R. REP. NO. 82-1923, at 6 (1952))).

160. *Feist*, 499 U.S. at 346 (“Originality is a constitutional requirement.”).

161. See Council Directive No. 96/9, 1996 O.J. (L 77) 20.

162. See Yochai Benkler, *Constitutional Bounds of Database Protection: The Role of Judicial Review in the Creation and Definition of Private Rights in Information*, 15 BERKELEY TECH. L.J. 535, 545, 548 (2000); see also generally Symposium, *The Constitutionality of Protecting Factual Compilations*, 28 U. DAYTON L. REV. 143 (2002). For an analysis of the ways in which the IP Clause might restrict congressional action under

the aforementioned discussion would likely inform interested parties, Congress, and the courts.¹⁶³

C. The Disjunctive Reading of the IP Clause

The text of the IP Clause includes three pairs of closely related terms: (1) science and useful arts, (2) authors and inventors, and (3) writings and discoveries.¹⁶⁴ Virtually all courts and commentators believe that the Clause should be read disjunctively. Almost without exception, all read the Clause as containing two independent powers, one “to promote the progress of science, by securing for limited times to authors the exclusive right to their writings” (a copyright power), and another “to promote the progress of useful arts, by securing for limited times to inventors the exclusive right to their discoveries” (a patent power). This initial observation¹⁶⁵ was propagated by an influential article¹⁶⁶ and consequently adopted by practically all members of the legal community (commentators,¹⁶⁷

the commerce clause, see generally Dotan Oliar, *Resolving Conflicts Among Congress’s Powers Regarding Statutes’ Constitutionality: The Case of Anti-Bootlegging Statutes*, 30 COLUM. J.L. & ARTS 467 (2007).

163. The analysis does not reflect on whether protecting products of nature and unoriginal factual compilations—and if so on what terms—would be good policy. These questions are beyond the present constitutional inquiry.

164. See RICHARD C. DE WOLF, AN OUTLINE OF COPYRIGHT LAW 15 (1925).

165. *Id.* De Wolf was not the first to advance a disjunctive reading. See *Wheaton v. Peters*, 33 U.S. (8 Pet.) 591, 684 (1834) (Thompson, J., dissenting) (“This article is to be construed distributively, and must have been so understood; for when congress came to execute this power by legislation, the subjects are kept distinct, and very different provisions are made respecting them.”).

166. Karl B. Lutz, *Patents and Science: A Clarification of the Patent Clause of the U.S. Constitution*, 18 GEO. WASH. L. REV. 50, 51 (1949); see also Karl B. Lutz, *Are the Courts Carrying Out Constitutional Public Policy on Patents?*, 34 J. PAT. OFF. SOC’Y 766, 789 (1952) (“This is indeed a perversion of the Constitution. . . . If they were really interested in ascertaining the original meaning of the Constitutional clause why did they not take a serious look into history? Had they done so they would have found that the word ‘science’ belongs with the copyright clause . . .”).

167. See, e.g., 1 DONALD S. CHISUM, CHISUM ON PATENTS § 1.01, at 1–6 (Mathew Bender & Co. ed., 2004) (“The Constitution and the statutes limit patents to ‘useful arts’ . . .”); *id.* § 2 (“The clause intermixes copyright and patent concepts. The patent concepts are ‘useful arts’, ‘inventors’ and ‘discoveries.’”); 1 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 1.03 (Mathew Bender ed., 2008) (generally accepting the exclusive association of “science,” “authors,” and “writings”); L. RAY PATTERSON & STANLEY W. LINDBERG, THE NATURE OF COPYRIGHT: A LAW OF USERS’ RIGHTS 48 (1991) (“Since the intellectual-property clause also empowers Congress to grant patents, one must read the passage distributively . . .”); WALTERSCHEID, *supra* note 34, at 116–18; *id.* at 122 (finding a “careful dichotomy between the patent and copyright provisions of the clause”); Kenneth J. Burchfiel, *The Constitutional Intellectual Property Power: Progress of Useful Arts and the Legal Protection of Semiconductor Technology*, 28 SANTA CLARA L. REV. 473, 501 (1988); Giles S. Rich, *Principles of Patentability*, 28 GEO. WASH. L. REV. 393 (1960); Lawrence B. Solum, *Congress’s Power to Promote the Progress of Science: Eldred v. Ashcroft*, 36 LOY. L.A. L. REV. 1, 11–12 (2002).

Congress,¹⁶⁸ and courts¹⁶⁹), and has become the accepted wisdom regarding the textual structure of the Clause. Importantly, the only justification supplied for reading the Clause disjunctively has been historical: The Framers of the Clause and its contemporaneous readers arguably, and respectively, intended it and understood it to be read disjunctively.¹⁷⁰

For expositional clarity, the Clause can be diagrammed as follows:

FIGURE 2. POTENTIAL READINGS OF THE CLAUSE

A	To promote the Progress of	1 science	B	By securing for limited Times to	3 Authors	C	The exclusive right to their respective	5 Writings
		2 useful Arts			4 Inventors			6 Discoveries

Although the Clause can conceivably be read to confer up to twenty-seven different powers,¹⁷¹ a disjunctive reading would suggest that only two—designated A1B3C5 (connecting “science,” “authors,” and “writings”) and A2B4C6 (connecting “useful arts,” “inventors,” and “discoveries”)—are interpretively legitimate.¹⁷² The area of constitutional intellectual property law is young and growing, and continued universal adherence to a disjunctive reading may lead to various holdings of unconstitutionality, such as in cases where a patent happened to advance “science” but not the “useful arts.”

This possibility is real. Above, we saw that commentators who follow the disjunctive reading believe that business method patents are unconstitutional

168. See H. COMM. ON THE JUDICIARY, 82D CONG., REVISION OF TITLE 35, UNITED STATES CODE “PATENTS” 4 (Comm. Print 1952); S. COMM. ON THE JUDICIARY, 82D CONG., REVISION OF TITLE 35, UNITED STATES CODE, 3 (Comm. Print 1952).

169. See, e.g., *Eldred v. Ashcroft*, 537 U.S. 186, 192–93 (2003) (“The [Clause] provides as to copyrights: ‘Congress shall have Power . . . [t]o promote the Progress of Science . . . by securing [to Authors] for limited Times . . . the exclusive Right to their . . . Writings.’” (quoting U.S. CONST. art. I, § 8, cl. 8)); *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 5 & n.1 (1966); *In re Comiskey*, 554 F.3d 967, 976 (Fed. Cir. 2009) (“[The IP Clause] limit[s] the subject matter eligible for patent protection to the ‘useful Arts.’”).

170. De Wolf originally termed it a “balanced style of composition so much used in the days of the colonial worthies.” DE WOLF, *supra* note 164, at 15. Lutz termed it a “balanced sentence” and argued that it was “much used by sixteenth century writers.” Lutz, *supra* note 166; see also WALTERSCHEID, *supra* note 34, at 116 (describing the Clause as “a balanced style of composition much favored in the eighteenth century”); Robert I. Coulter, *The Field of the Statutory Useful Arts (Part II)*, 34 J. PAT. OFF. SOC’Y 487, 491 (1952) (claiming the Clause to be an example of the “so-called ‘balanced sentence,’” and to have “followed 18th century practice”); Arthur H. Seidel, *The Constitution and a Standard of Patentability*, 48 J. PAT. OFF. SOC’Y 5, 9 n.10 (1966) (claiming the Clause to be a “balanced sentence”); *supra* notes 165–167 (containing quotes basing the disjunctive reading on contemporaneous historical language-use grounds).

171. There are three junctions on this graph. In each junction either element or both can be chosen. Thus there are 3³, or 27 different ways of reading the Clause.

172. See Solum, *supra* note 167, at 11–12 & tbl.2 (using a similar figure).

because business is not a useful art.¹⁷³ Similarly, courts that employ a disjunctive reading while interpreting Congress's copyright power ignore the words in the Clause that they assume apply only to patents, and the other way around.¹⁷⁴ Indeed, in suggesting that business methods are unpatentable subject matter, the powerful Federal Circuit dissent in *In re Bilski*¹⁷⁵ (quoted above) followed the disjunctive reading. It suggested that patents may only be issued to inventions pertaining to "technological arts," which is what it understood the "useful arts" to mean.¹⁷⁶ Similarly, a group of intellectual property professors who filed an amicus brief in *Bilski* argued that patents can only be issued for advancements in the "useful arts," but not for advancements in "science."¹⁷⁷ Before the aforementioned trends turn into currents, and since these views are going to be before the Supreme Court when it decides *Bilski*, it is worthwhile to examine the extent to which the Clause was originally intended to be and understood as two completely separate grants of power.

Madison and Pinckney's eight powers give reason to doubt that the Clause should be read disjunctively. In the eight powers, we do not find the promotion of science as the exclusive goal of the copyright power and the promotion of useful arts as the exclusive goal of the patent power. Rather, we find the promotion of both arts and sciences as the goal that each of the education and encouragements powers should have promoted. It thus seems unconvincing that the Framers intended the goals of advancing "science" and "useful arts" in the Clause as exclusive of one another, and that they intended "science" to relate exclusively to copyrights and "useful arts" exclusively to patents. One may thus argue that the eight powers may suggest that only the Exclusive

173. See *supra* note 116.

174. See, e.g., *Eldred*, 537 U.S. at 192–93 ("The Copyright and Patent Clause of the Constitution, Art. I, § 8, cl. 8, provides as to copyrights: 'Congress shall have Power . . . [t]o promote the Progress of Science . . . by securing [to Authors] for limited Times . . . the exclusive Right to their . . . Writings.'"); *Graham*, 383 U.S. at 5 (noting that "the federal patent power stems from a specific constitutional provision which authorizes the Congress 'To promote the Progress of . . . useful Arts, by securing for limited Times to . . . Inventors the exclusive Right to their . . . Discoveries.'" (citation omitted) (quoting U.S. CONST. art. I, § 8, cl. 8)); *id.* at 5 n.1 ("The provision appears in the Constitution spliced together with the copyright provision, which we omit as not relevant here.").

175. 545 F.3d 943 (Fed. Cir. 2008), *cert. granted*, *Bilski v. Doll*, 129 S. Ct. 2735 (U.S. June 1, 2009) (No. 08-964).

176. See *id.* at 1001–02 (2008) (Mayer, J., dissenting) ("What the framers described as 'useful arts,' we in modern times call 'technology.' Therefore, by mandating that patents advance the useful arts, '[t]he Constitution explicitly limited patentability to . . . "the process today called *technological innovation*.'" . . . We stated that patentable processes must 'be in the technological arts so as to be in consonance with the Constitutional purpose to promote the progress of "useful arts.'" Business method patents do not promote the 'useful arts' because they are not directed to any technological or scientific innovation." (citations omitted and emphasis added)).

177. See Brief of Amici Curiae Ten Law Professors In Support of Appellee Director of the United States Patent and Trademark Office at *7, *Bilski*, 545 F.3d 943 (No. 2007-1130), 2008 WL 1842283.

Rights Clause should be read disjunctively (because it emerged from two different types of proposals—for patents and copyrights),¹⁷⁸ but not the Progress Clause and hence not the IP Clause as a whole.¹⁷⁹ This reading would be more defensible than the disjunctive reading. However, the fact that the Framers used the word “discoveries,” which can be plausibly connected to “science,” may suggest that such reading should not be exclusive of other ways in which the Clause could be read. In addition, the Observations’ IP Part, which rephrases the Exclusive Rights Clause as “to secure to Authors the exclusive rights to their Performances and Discoveries,” shows original intent (by Pinckney, one of the Clause’s major two contributors) and understanding (due to its publication shortly after the Convention ended) of the Exclusive Rights Clause in a nondisjunctive manner.

The sources from the Convention’s debates thus push against a strict disjunctive reading of the Clause. What about the original public meaning? Did the public read the various words in the Clause as relating exclusively either to a patent part or to a copyright part? As detailed below, much evidence about contemporaneous use of language tends to cut against the disjunctive reading by showing the lack of a clear, disjunctive distinction among the words in the Clause.¹⁸⁰

It seems that there was no dichotomous distinction between “science” and “useful arts” in 1787, just as there is none today.¹⁸¹ These two terms complement each other in describing a large swath of human knowledge, as the familiar phrase “faculty of arts and sciences” might suggest, rather than clearly delineate two mutually exclusive components of it. Massachusetts’s 1780 Constitution (the likely source of Pinckney’s Education and Encouragements Powers)¹⁸² highlighted the importance of promoting three sciences and four arts moving

178. One may argue that the word “respective” suggests that the Exclusive Rights Clause should be read disjunctively. This would have been the case had the Clause used “respectively.” The word “respective,” however, may plausibly express an intent to protect the writings and discoveries of authors as well as those of inventors.

179. A contemporaneous public expression supports the argument that the Clause could have been read in a way that applies the progress of both science and useful arts to each of the patent and copyright systems. See 3 ANNALS OF CONG. 393–94 (1792) (suggesting in Congress that “even to encourage learning and useful arts, the granting of patents is the extent of their power”).

180. The evidence below should not be taken to suggest that the clause does not empower Congress in the two ways the disjunctive reading claims it does. Rather, it tends to refute the disjunctive reading by showing that these were not the *only* ways in which the Clause could be read at the time of the framing.

181. Samuel Johnson’s 1783 dictionary defines the word “science” by the use of the word “art,” and the word “art” by the use of the word “science.” See SAMUEL JOHNSON, A DICTIONARY OF THE ENGLISH LANGUAGE (London, W. Strahan et al. 1783).

182. See MASS. CONST. 1780, ch. 5, § 2, reprinted in 3 THE FOUNDERS’ CONSTITUTION, *supra* note 66, at 39, 39; see also *infra* note 214 and accompanying text.

indistinctly from one to the other.¹⁸³ Moreover, the inability of scholars, courts, and dictionaries to precisely distinguish among knowledge, useful knowledge, science, art, and useful art further proves the point.¹⁸⁴

At the time of the framing, the protection of literary property seems to have been simultaneously intended to promote also “useful arts” (supporting an A2B3C5 reading in Figure 2). North Carolina’s Copyright Act of 1785 states in its preamble that the “security of literary property must greatly tend to encourage genius, to promote useful discoveries, and to the general extension of arts and commerce.”¹⁸⁵ The Copyright Act of 1802 added protection to several useful arts, thus encouraging artisans of various types.¹⁸⁶

Contemporaneous evidence suggests that “inventors” were not disassociated completely from copyright law (supporting an A1B4C5 reading). The Copyright Act of 1802 protected any person “who shall invent . . . historical or other print or prints” and anyone who “from his own works and inventions” shall cause the same to be made.¹⁸⁷ “Inventors” were explicitly protected in the Copyright Act of 1831,¹⁸⁸ Copyright Act of 1870,¹⁸⁹ and mentioned in an amendment to the Act as late as 1905.¹⁹⁰ It is hard to reconcile these enactments with the arguments that the Framers and the first congresses intended and understood the Clause disjunctively. Under a disjunctive reading, all these enactments would have clearly been unconstitutional. The fact that they were enacted and never challenged tends against a disjunctive original public meaning of the Clause.

Similar evidence supports a reading of copyright law as aimed to protect inventions and discoveries (supporting an A1B3C6 reading). The preamble of North Carolina’s Copyright Act of 1785 states that the protection of literary property tends to “promote useful discoveries.”¹⁹¹ Additionally, the second

183. It spoke of the “promotion of agriculture, arts, sciences, commerce, trades, manufactures, and a natural history of the country.” I have designated these terms as “useful arts” (A) or “science” (S) according to conventional wisdom, leading to the following sequence: A, S, S, A, A, A, S. One may disagree with the classification of the terms above as either “art” or “science,” which only further proves the point that there is no clear demarcation. See *infra* note 214.

184. See generally Solum, *supra* note 167, at 47–53 and references therein.

185. See Act of Nov. 19, 1785, reprinted in COPYRIGHT ENACTMENTS, *supra* note 123, at 23, 23.

186. See Copyright Act of 1802, ch. 36, 2 Stat. 171, 171 (1802) (repealed 1831) (extending copyright protection “to the arts of designing, engraving, and etching historical and other prints”).

187. See *id.* § 2.

188. See Copyright Act of 1831, ch. 16, §§ 1, 2, 16, 4 Stat. 436, 436, 439 (1831) (repealed 1870).

189. See Copyright Act of 1870, ch. 230, § 86, 16 Stat. 198, 212 (1870) (amended 1905) (granting protection to any “author, inventor, designer, or proprietor” of protected works); *id.* § 88 (granting copyright renewal rights to “the author, inventor or designer”).

190. See Act of Mar. 3, 1905, ch. 1432, § 4952, 33 Stat. 1000, 1000 (“An amendatory act relating to the protection of books in foreign languages first published abroad.”).

191. See Act of Nov. 19, 1785, reprinted in COPYRIGHT ENACTMENTS, *supra* note 123, at 23, 23.

intellectual property petition to Congress was by John Churchman, who “hath invented several different methods” by which the longitude of a place can be determined given its latitude.¹⁹² The committee to which his petition was passed reported that Churchman had found a way to apply his ingenious ideas to practice, and recommended “that a law should pass to secure to Mr. Churchman . . . the exclusive pecuniary emoluments to be derived from the publication of these several inventions.”¹⁹³ Churchman’s petition and its grant by Congress combine elements that we would now classify as relating separately to patents (a method reduced to practice) and copyrights (protection of published works).

A disjunctive reading would seem to suggest that the promotion of “science” was considered by contemporaneous readers of the Constitution to be an end totally unrelated to patent law. It thus weighs against a disjunctive reading that we do not find the word “science” in early copyright acts, and that we do find it in a draft of the Patent Act of 1790,¹⁹⁴ and in the text of the Patent Acts of 1793,¹⁹⁵ 1836,¹⁹⁶ and 1870.¹⁹⁷ In these four instances, “science” is used in a sense generally indistinguishable from “useful art.”¹⁹⁸

192. 1 ANNALS OF CONG. 143 (Joseph Gales ed., 1789).

193. *Id.* at 170–71. Churchman petitioned “that a law may pass for vesting in the petitioner, his heirs and assigns, an exclusive right of vending spheres, hemispheres, maps, charts, and tables, on his principles of magnetism, throughout the United States.” *Id.* at 143. Churchman’s protection was in copyright: he got the same protection given to David Ramsay for his two books on the American Revolution. *Id.* at 173.

194. See Patent Bill, H.R. 41 § 2 (Feb. 16, 1790), reprinted in 6 DOCUMENTARY HISTORY OF THE FIRST FEDERAL CONGRESS OF THE UNITED STATES OF AMERICA 1628 (Carolie Bangs Bickford & Helen E. Veit eds., 1986) (requiring patentees to deliver a written specification that will “enable a workman or other person skilled in the art, science or manufacture whereof it is a branch, or wherewith it may be nearest connected, to make, construct or use the same”). The House struck out “science.” See *id.* at 1628 n.19.

195. See Patent Act of 1793, ch. 11, § 3, 1 Stat. 318, 321 (repealed 1836) (requiring patentees to deliver a written description of their inventions as “to enable any person skilled in the art or science, of which it is a branch, or with which it is most nearly connected, to make, compound, and use the same”).

196. See Patent Act of 1836, ch. 357, § 6, 5 Stat. 117, 119 (repealed 1842) (requiring patentees to deliver a written description of their inventions “as to enable any person skilled in the art or science to which it appertains, or with which it is most nearly connected, to make, construct, compound, and use the same”); *id.* § 7 (relating to a patent examiner who has “knowledge and skill in the particular art, manufacture, or branch of science to which the alleged invention appertains”).

197. See Patent Act of 1870, ch. 230, § 26, 16 Stat. 198, 201 (repealed 1952) (requiring patentees to file a writing description of their inventions “as to enable any person skilled in the art or science to which it appertains, or with which it is most nearly connected, to make, construct, compound, and use the same”).

198. Moreover, the 1837 Patent Act had the word “science” in its title. See Patent Act of 1837, ch. 45, 5 Stat. 191, 191 (“An Act in addition to the act to promote the progress of science and useful arts.”). This title is clearly erroneous, since there was no such previous patent act. This fact, however, further cuts against the existence of a clear dichotomy between “science” and “arts.”

In addition, contemporaneous evidence shows that the word “authors” was very close in its original meaning to the word “inventors” (supporting, for example, an A2B3C6 reading). Blackstone’s Commentaries refer to the “authors of new inventions.”¹⁹⁹ In the Convention’s debates, God was referred to once as the “author of man,”²⁰⁰ although present-day speakers would not generally associate authorship with physical creation. Pinckney’s Observations restates the Clause as “to secure to Authors the exclusive rights to their Performances and Discoveries.”²⁰¹ In this apparent rephrasing of the Clause, “authors” encompasses both what we would today call authors and inventors. “Authors” also seemed to mean “inventors” to the Supreme Court as late as 1832.²⁰²

Since the only basis provided for the disjunctive reading has been original intent and understanding, the findings above suggest that this basis rests on shaky grounds, and caution against giving it much operative effect.

V. FROM ORIGINAL INTENT TO ORIGINAL UNDERSTANDING

For years, historically oriented interpreters of the Constitution have tried to discover the Framers’ intentions. In recent decades, however, the originalist focus has shifted to the original public meaning of the text. The reasons for this shift are many, and reviewing them would be beyond the scope of this Article. One important move accompanying this focal shift, however, has been a discounting of the Convention’s records as relevant sources in constitutional interpretation. This is so, the argument goes, because the Convention’s debates were not known by the public at the time the Constitution was ratified. They were made public only thirty years later.²⁰³ Such originalists believe that the only thing that can bind the people and the states is the ordinary public meaning of the text at the time it was ratified. They contend that secret intentions that are not embodied in the text should not bind.²⁰⁴

199. 4 WILLIAM BLACKSTONE, COMMENTARIES *159.

200. See James Madison’s Journal (July 25, 1787), in 2 RECORDS, *supra* note 17, at 108, 113 (“Such is the nature of man, formed by his benevolent author no doubt for wise ends . . .” (transcription of Gouverneur Morris’s comments)); see also John Dickinson, Draft on Taking Arms, in 2 JOURNALS OF THE CONTINENTAL CONGRESS 140 (Washington Chauncey Ford ed., 1905) (referring to God as “the Divine Author”).

201. See Pinckney, *supra* note 29, at 106, 122.

202. Grant v. Raymond, 31 U.S. (6 Pet.) 218, 241 (1832) (stating that “the settled purpose of the United States” was “to confer on the authors of useful inventions an exclusive right in their inventions for the time mentioned in their patent”).

203. The Convention’s records were published only in 1819. See *supra* Part I.B.

204. See ROBERT H. BORK, THE TEMPTING OF AMERICA 144 (1990) (“The search is not for a subjective intention. If someone found a letter from George Washington to Martha telling her that what he meant by the power to lay taxes was not what other people meant, that would not change our reading of the Constitution in the slightest. Nor would the subjective intentions of all the

There are, however, good reasons why this criticism does not apply forcefully in the particular context of the IP Clause. First, the contents of the Convention's debates relating to the Clause—Madison and Pinckney's eight powers—were adapted from publicly available state enactments that the ratifiers and the public at large could reasonably expect the Framers to consult, primarily the state copyright statutes.²⁰⁵ Until the early 1780s, the various colonies issued various exclusive rights by specific acts of their legislatures. On May 2, 1783, a committee of the Continental Congress, of which Madison was a member, recommended that the states enact general laws respecting literary property. By the time of the Framing, twelve of the thirteen states had a general copyright statute in place.²⁰⁶ However, they would still grant patents by specific acts of their legislatures.²⁰⁷

These copyright statutes (and some other state enactments) likely served as the source of Madison and Pinckney's eight proposals for Congressional power. Madison's Patent Power seems to draw on a clause from South Carolina's "Act for the Encouragement of arts and sciences." South Carolina was unique in having a general patent provision added to its copyright statute. This short provision states "[t]hat the inventors of useful machines shall have a like exclusive privilege of making or vending their machines for the like term of fourteen years, under the same privileges and restrictions hereby granted to, and imposed on, the authors of books."²⁰⁸ This provision would have been a most natural one to use in formulating a congressional patent-power proposal, and indeed it shares the phrase "the inventors of useful machines" with Madison's Patent Power.

Madison's Copyright Power appears to draw on the title of the copyright statute of Virginia, Madison's home state. This title reads: "An act securing to the authors of literary works an exclusive property therein for a limited

members of a ratifying convention alter anything. When lawmakers use words, the law that results is what those words ordinarily mean."); ANTONIN SCALIA, *A MATTER OF INTERPRETATION: FEDERAL COURTS AND THE LAW* 17 (1997) ("[W]e do not really look for subjective legislative intent. We look for a sort of 'objectified' intent—the intent that a reasonable person would gather from the text of the law . . . Government by unexpressed intent is . . . tyrannical. It is the law that governs, not the intent of the lawgiver."); Randy E. Barnett, *The Original Meaning of the Commerce Clause*, 68 U. CHI. L. REV. 101, 105–08 (2001). See generally Vasan Kesavan & Michael Stokes Paulsen, *The Interpretive Force of the Constitution's Secret Drafting History*, 91 GEO. L.J. 1113, 1115–18 (2003), and references therein.

205. This fact was overlooked by previous students of the Clause. See, e.g., PATTERSON, *supra* note 102, at 192 (explaining that "the copyright of the American states' statutes" was "ignored, in the subsequent development of copyright, to the extent that [it] became historical curiosit[y] for the purposes of copyright law").

206. Delaware was the only state that did not have a copyright statute.

207. See generally BUGBEE, *supra* note 34, at 84–124.

208. See Act of Mar. 26, 1784, reprinted in COPYRIGHT ENACTMENTS, *supra* note 123, at 19, 21.

time.”²⁰⁹ Among all state copyright statutes, the term “limited time,” which appears in both Madison’s Patent Power and Madison’s Copyright Power, appears only in the title of the Virginia statute.

The rest of Madison’s and Pinckney’s Copyright Powers seems to be influenced by the aforementioned 1783 recommendation of the Continental Congress to the thirteen states to adopt general copyright statutes. The terms “for a certain time” and “exclusive right” in Pinckney’s Copyright Power and the term “copyrights” in Madison’s Copyright Power appear in that recommendation.²¹⁰ This recommendation, which Madison helped formulate, would have been a natural place to go to for instruction regarding copyright legislation.²¹¹

Madison’s Encouragements Power seems to have been influenced by North Carolina’s “Act for securing literary property,” the preamble of which reads:

Whereas nothing is more strictly a man’s own than the fruit of his study, and it is proper that men should be *encouraged* to pursue *useful knowledge* by the hope of *reward*; and as the security of literary property must greatly tend to encourage genius, to promote *useful discoveries*, and to the general extension of arts and commerce.²¹²

North Carolina’s preamble is the only one among the twelve copyright statutes to use the terms “useful knowledge” and “discoveries.” It is also the only statute in which the word “reward” appears in this sense.²¹³

Further, Madison’s Encouragements Power and the North Carolina statute have structural and thematic similarity. This statute places the means (“by rewards”) in the middle of a sentence relating to ends (encouragement of useful

209. See Act of Oct. 1785, reprinted in COPYRIGHT ENACTMENTS, *supra* note 123, at 22.

210. See 24 JOURNALS OF THE CONTINENTAL CONGRESS, 1774–1789, at 326–27 (Gaillard Hunt ed., 1922) (“Resolved, That it be recommended to the several states, to secure to the authors or publishers of any new books not hitherto printed, being citizens of the United States, and to their executors, administrators and assigns, the copyright of such books for a certain time, not less than fourteen years from the first publication; and to secure to the said authors, if they shall survive the term first mentioned, and to their executors, administrators and assigns, the copyright of such books for another term of time not less than fourteen years, such copy or exclusive right of printing, publishing and vending the same, to be secured to the original authors, or publishers, their executors, administrators and assigns, by such laws and under restrictions as to the several states may seem proper.”).

211. Among all the state copyright statutes, the terms “for a certain time” and “copyright” appear only in Pennsylvania’s statute. Pennsylvania’s statute probably drew most literally on the recommendation of the Continental Congress’s committee on literary property. See Act of Mar. 15, 1784, reprinted in COPYRIGHT ENACTMENTS, *supra* note 123, at 18.

212. See *id.* at 23 (emphases added). But see WALTERSCHEID, *supra* note 34, at 96–97 (suggesting that in proposing his Encouragements Power, Madison may have been influenced by an August 9, 1787 address of Tench Coxe to the Pennsylvania Society for the Encouragement of Manufactures and the Useful Arts).

213. The term “rewards” appears in the copyright statutes of Maryland, Pennsylvania, and South Carolina, but in the sense of a third party’s payment for inspection of records in the respective state’s copyright registry.

knowledge, promotion of discoveries). Similarly, Madison's Encouragements Power places the means ("by proper premiums and provisions") in the middle of the ends portion of the proposal ("to encourage the advancement of useful knowledge and discoveries"). The same words appear in the "ends" part of the two (encouragement, useful knowledge, discoveries). Equivalent words are used in the "means" part: "premiums and provisions" in Madison's Encouragements Power and "rewards" in the statute. Premiums and provisions are likely close substitutes for rewards, as evinced by the fact that Pinckney's parallel Encouragements Power uses "rewards and immunities."

Pinckney's Education and Encouragements Powers exhibit great similarity to the Massachusetts Constitution of 1780, which suggests that these proposals likely drew on it.²¹⁴ This inference is supported by additional similarities between the proposals Pinckney made on the next day of debates, August 20, 1787, and the Massachusetts state constitution.²¹⁵ It is possible that Madison's Education Power drew on Massachusetts's 1780 Constitution as well. This constitution anchors the status of a university (Harvard), and since Pinckney and Madison seem to have been coordinated that day, they may have looked at

214. See MASS. CONST. of 1780, ch. 5, § 2, reprinted in 3 THE FOUNDERS' CONSTITUTION, *supra* note 66, at 39, 39. This similarity is demonstrated below by the use of emphases:

Power	MASS. CONST. of 1780, ch. 5, § 2
Pinckney's Education Power— "to establish <i>seminaries for the promotion of literature and the arts and sciences</i> "	Wisdom and knowledge, as well as virtue, diffused generally among the body of the people, being necessary for the preservation of their rights and liberties; and as these depend on spreading the opportunities and advantages of education in the various parts of the country, and among the different orders of the people, it shall be the duty of legislatures and magistrates, in all future periods of this commonwealth, to cherish the interests of <i>literature and the sciences</i> , and all <i>seminaries of them</i> ; especially the university at Cambridge, public schools and grammar schools in the towns;
Pinckney's Encouragements Power— "to establish <i>public institutions, rewards and immunities for the promotion of agriculture, commerce, trades, and manufactures</i> "	to encourage private societies and <i>public institutions, rewards and immunities, for the promotion of agriculture, arts, sciences, commerce, trades, manufactures</i> , and a natural history of the country; to countenance and inculcate the principles of humanity and general benevolence, public and private charity, industry and frugality, honesty and punctuality in their dealings; sincerity, good humor, and all social affections, and generous sentiments, among the people.

215. Both refer, for example, to freedom of the press, writ of habeas corpus, quartering of soldiers in times of peace, keeping armies in times of peace, the ability to hold only one U.S. office of trust at a time, and the keeping of the great seal by the head of the executive. Some of these proposals, however, were common in several of the state constitutions.

the same source.²¹⁶ Madison's Education Power may have also drawn on Pennsylvania's 1776 Constitution that provides for schools and universities.²¹⁷

Thus, although the Convention's debates were secret at the time of the ratification, Madison and Pinckney's eight proposals—which served as the basis of both the IP Clause and much of the analysis in this Article—were adapted from publicly available legislative acts (primarily the state copyright statutes) that the public would likely have expected them to consult. In the particular context of intellectual property, there is no indication of the Framers having secret intentions or agendas of which the ratifiers were not aware. Rather, it seems that the Framers wished Congress to have a power that was previously enjoyed by the states exclusively. Namely, it suggests that no discernable wedge existed between the Framers' intentions in writing the Clause and the original public meaning of the text.

One could argue that—as different from the patent and copyright powers—the ratifiers and the public could not know from the text of the Constitution that the Framers had considered and rejected university and encouragements proposals. Public expressions shortly after the Convention ended, however, suggest that the public was on notice regarding the rejection of these measures. For example, Pinckney's Observations, published in New York and South Carolina within two and a half months after the Convention adjourned, note explicitly his proposal to empower Congress to establish a federal university.²¹⁸ Clearly, such power does not appear in the Constitution. In addition, open debates in the first Congresses²¹⁹ and Framers' correspondences that were not

216. One can infer that they were coordinated because on August 18, 1787, they each proposed that the federal government should have power over patents, copyrights, education, encouragements, incorporation charters, and the seat of government—the first five being discussed for the first time in the Convention. Seminaries are also mentioned in a pamphlet Madison wrote in April 1787, just before the Convention, in which he detailed the vices of the Confederation that needed to be amended. See James Madison, *Vices of the Political System of the United States*, in 9 THE PAPERS OF JAMES MADISON 345, 345–58 (Robert A. Rutland et al. eds., 1975).

217. Section 44 of the Pennsylvania Constitution of 1776 suggests: “A school or schools shall be established in each county by the legislature, for the convenient instruction of youth, with such salaries to the masters paid by the public, as may enable them to instruct youth at low prices: And all useful learning shall be duly encouraged and promoted in one or more universities.” PA. CONST. 1776, § 44.

218. See Pinckney, *supra* note 29, at 122 (noting the Observations' mentioning of Pinckney's university proposal); *id.* at 106 & n.1 (noting that the Observations were published in New York no later than October 14, 1787, and in South Carolina no later than November 29, 1787).

219. See Statement of Roger Sherman (May 25, 1790), in 3 RECORDS, *supra* note 17, at 362, 362 (documenting a statement made at the House of Representatives on May 3, 1790, that the Convention had considered and rejected a suggestion to vest Congress with the power to establish a national university); 3 ANNALS OF CONG. 393–94 (1792) (documenting a statement at the House of Representatives on February 7, 1792 that the Convention considered and rejected the grant of encouragements as means to promote progress in the arts and sciences); H.R. MISC. DOC. NO. 4-74, (1796),

private in nature²²⁰ (although not strictly contemporaneous with ratification), coupled with a lack of evidence of a secret agenda on IP, at least allow for the possibility that the public was also aware at the time that the Convention considered and rejected proposals for encouragements (even if there may be no written evidence attesting to that).²²¹

A second reason why the Convention's debates are important even for those who are primarily interested in the original public understanding of the text is that the Framers' intentions are an important source illuminating the text's original understanding.²²² This argument is particularly important in the IP context, in which there is no reason to believe that a disconnect exists between the Clause's underlying intent and its original understanding—and there is a dearth of other materials illuminating the latter.²²³ Since the Framers were active statesmen during ratification and the first Congresses, and since they were not secretive about the Convention's debates surrounding the Clause, there seems to be less of a reason not to rely on the various journals from the Convention that provide relevant information concerning the Clause's original meaning.

Third, the Framers' intent is important because it is one relevant consideration in constitutional interpretation, and one that the Supreme Court has highlighted recently in the context of interpreting the IP Clause.²²⁴ Supreme Court precedent, in other words, makes the Framers' intent important in constitutional intellectual property interpretation.

Lastly, in suggesting the various implications in Part IV, the analysis does not rely solely on the record of the Convention. Rather, it corroborates its findings with evidence from other contemporaneous sources that are external to the Convention's record.

reprinted in 1 AMERICAN STATE PAPERS: CLASS X MISCELLANEOUS, at 140 (Washington, Gales & Seaton 1834) (reporting a committee's view that Congress does not have the constitutional power to grant encouragements).

220. See Letter From James Madison to Tench Coxe (Mar. 28, 1790), in 13 THE PAPERS OF JAMES MADISON 128, 128 (Charles F. Hobson et al. eds., 1981) (suggesting the Clause prohibits Congress from giving encouragements to promote progress in the arts and sciences). Coxe was then acting as the equivalent of a present-day industry lobbyist, so that the content of his correspondence with Madison was not of a private nature.

221. That the Convention considered intellectual property powers is of course obvious from the face of the Clause, from the Observations, and from the copyright and patent acts of 1790, among others.

222. See Kesavan & Paulsen, *supra* note 204, at 1118–21, 1183–1214 (suggesting that the Convention's debates are admissible evidence of the first degree in searching for the Constitution's original meaning and clearly useful when the text of the Constitution is ambiguous).

223. See *supra* note 5.

224. See *supra* note 106.

CONCLUSION

While intellectual property law has long been statutory, it is increasingly litigated as a matter of constitutional law. Courts and commentators have accorded much weight to the Framers' intent and the Clause's original understanding, but have neglected studying the relevant record from the Constitutional Convention. This neglect is attributable, in large part, to the confusing nature of this record, and to its perceived shortness. This Article suggests ways to reconcile the apparent contradictions in the source documents, identifies overlooked parts from the Convention's record that affected the framing of the IP Clause, and sheds light on four open questions of constitutional interpretation. As the constitutional development in intellectual property law is expected to continue, the findings and implications will hopefully assist courts, commentators, and litigants in making informed interpretive decisions.

APPENDIX: TESTING COMPETING HYPOTHESES REGARDING
MADISON'S JOURNAL

Initially, James Madison's journal for August 18, 1787, noted that he had proposed in the Convention that Congress should have power to issue patents. This proposal did not survive the revisions he made while preparing his journal for posthumous publication,²²⁵ nor is it reflected in the official journal of the Convention for that day. Thus the question arises: Did Madison propose a congressional patent power?

The conventional wisdom has concluded from these source documents that Madison did not propose a patent power. It has done so by reading into Madison's revised notes an admission that he had not actually proposed a Congressional patent power. However, Part II of this Article concludes from the aforementioned documents that Madison proposed a patent power in the Convention, and argues against inferring such an admission. It suggests that Madison revised his notes for that day without much attention to detail, and that those revised notes are nothing more than text Madison copied from the Convention's Journal. Consequently, Part II refuses to give Madison's revised text much independent weight. This Appendix supports Part II's argument by showing that Madison's revised notes bear a much greater textual similarity to the Convention's Journal than to Madison's original notes. The Appendix shows that this Article's suggestion that Madison's revised notes are a substantially similar copy of the Convention's Journal is much more probable than the conventional wisdom, according to which Madison's revised notes are a thoughtful revision of the text he had originally transcribed in his own journal.

Table 2 contains the proposals for congressional power Madison made that day as recorded in three sources: the Convention's Journal (CJ), Madison's Journal (MJ), and Madison's Edited Journal (MEJ).²²⁶ For ease of reference, Table 2 lists the three sources one above the other, with ">" characters inserted

225. Some of the changes in Madison's Edited Journal may be in the handwriting of John C. Payne, to whom Madison dictated them. See Max Farrand, *Introduction to 1 RECORDS*, *supra* note 17, at xviii n.23. None of the major students of the Convention's records could tell Madison's handwriting from Payne's. See *id.* Even if the relevant revisions are in Payne's handwriting, the analysis in this Appendix would not change because it seeks to determine the origin of the text rather than the identity of its scribe.

226. MEJ stands for the contents of a sheet of paper Madison pasted over his original record. See *supra* notes 63–64 and accompanying text. For printed versions of the three sources, see, for example, U.S. DEP'T OF STATE, III DOCUMENTARY HISTORY OF THE CONSTITUTION OF THE UNITED STATES OF AMERICA 1786–1870, at 554–56 (1900) (containing MJ, MEJ); Convention's Journal (Aug. 18, 1787), *supra* note 53 (containing CJ). Table 2's content was taken from microfilm versions of the original handwritings which at a few places diverge from the printed sources.

to align their conforming parts. The “¶” characters designate end of paragraphs in these sources. As Table 2 shows, Madison’s Patent Power was recorded in MJ but neither in CJ nor in MEJ.

The line above the three texts, SMLR, notes which two of the three sources are in accord, where the three are not identical: M designates that MEJ is the same as MJ, which seems to support the conventional wisdom; and C designates that MEJ is the same as CJ, which seems to support the argument in this Article. Where MEJ is different from MJ and from CJ, the letter I (irrelevant) appears in the SMLR line.²²⁷ The patent power is left out of the analysis.²²⁸ The three rightmost columns total the M, C, and I indications in each line. The bottom line of Table 2 totals the M, C, and I indications over the whole text. It shows that there are ninety indications that MEJ was copied from CJ and only twenty indications that MEJ was copied from MJ.²²⁹ This Article’s hypothesis is thus significantly more plausible.²³⁰

A simple model for Madison’s revision process could give us a general sense of the relative plausibility of the two competing theses. Assume that in preparing MEJ, Madison copied the contents of one of the two preexisting sources letter by letter (or more accurately, character by character), and that he would copy each letter correctly with a probability p and incorrectly (or would make an occasional change) with a probability of $(1-p)$. If we knew what p was, then given a text of n characters that Madison copied, we would expect to find that Madison has copied correctly about $p * n$ characters and about $(1-p) * n$ characters incorrectly. The number of correct characters copied, under these assumptions, has the characteristics of a random variable with a binomial distribution.²³¹ Thus, if we knew the value of p (Madison’s propensity to copy

227. The Appendix does not check the improbable hypotheses that MJ was copied from CJ or the other way around.

228. This is because the Appendix aims to find the reasons for the omission of the patent power from MEJ by examining textual indications surrounding that omission. As for the patent power itself, there are two competing hypotheses for its absence from MEJ—the conventional wisdom and the one advanced in this Article. We should therefore not count the patent power’s absence from MEJ as evidence supporting only one of the hypotheses. Leaving the Missing Power out of the analysis clearly works against the argument advanced in this Article.

229. The text’s length is 1,028 characters. There are fifty-two Is.

230. Some textual differences among the three texts have more probative value than others, which tends to favor this Article’s argument. See *supra* note 86 and accompanying text. The test assigns all differences similar probative weight, which distorts the findings against this Article’s argument. If one were to give the textual differences weights, the findings would be even more striking in favor of this Article’s argument. The giving of different weights to different types of textual differences (such as weighing substantive differences more than those of punctuation or capitalization) would necessarily involve injecting a subjective value judgment, which is avoided here.

231. $X \sim B(n, p)$ notes that X has a binomial distribution with parameters n and p . This distribution serves to calculate the number of heads one would expect if she flipped a coin n times when the

letters without a change), we could calculate the likelihood that Madison was working off MJ in writing MEJ in light of the C count (namely, ninety changes or errors), and compare it to the likelihood that Madison was working off CJ in writing MEJ in light of the M count (namely, twenty errors).²³²

To form an opinion about the magnitude of p we would have to look at a sample that is outside what we will choose as our test group. We shall thus look first at a sample comprising the 918 places (in a 1,028 character-long text) where the Two Journals are identical (so we'll exclude the 110 places marked by C and M; as it happens, in all Is MJ and CJ are identical). In those places, MEJ differs from CJ and from MJ in fifty-two places (the places marked with Is). Thus, whether Madison was copying MEJ from MJ or CJ, he did so with an error (or occasional change) rate of $(1-p) = 52 / 918 = 0.057$, and we get that $p = 0.943$.

Now we can turn to examine the remaining 110 places where the contents of MJ and CJ differ. We would expect MEJ to be identical with the source from which it was copied 94.3 percent of the time. MEJ is identical with CJ 82 percent of the time (90 / 110), and with MJ 18 percent of the time (20 / 110). Using a likelihood ratio test, we can strongly reject the conventional wisdom's assumption in favor of that posited in this Article.²³³

probability of getting heads (or "success") each time is p . The mean of X is pn and the variance is $pn(1-p)$. The binomial model of Madison's copying necessarily involves an abstraction from reality's complexity. For example, using the binomial distribution, the test assumes that the copying of each letter correctly or incorrectly is a probabilistically independent event, namely that whether a letter was copied correctly does not depend on whether the letter before it was copied correctly, and that the probability of copying any letter correctly is the same. Although the model's assumptions are not perfectly true to reality, there is reason to believe that they are not too far off. Running the test below by word counts rather than letter counts achieves largely the same result. In addition, binomial distribution was chosen as it is suitable for analyzing a series of finite binary events, and is suitable for discrete rather than continuous probability distributions.

232. One may get an intuitive understanding of the binomial model, and how it is used to estimate probabilities, by thinking about coin tosses. A coin can be characterized by the probability p of falling on "heads." If $p = 0.6$, then after tossing it a hundred times you would expect to get about sixty "heads." Alternatively, if you tossed a coin a hundred times and got twenty-five "heads," you would suggest that the chances that $p = 0.6$ are fairly low. Statistically, it is easy to assess the probability that a coin with a known p would return a certain "heads" count after a certain number of tosses. In our model, every letter copied into MEJ represents a coin toss, and the probability p is that of Madison copying that letter correctly from the source on which he based MEJ.

233. The test suggests that, under the assumptions above, this Article's position that Madison based his revisions on the text of the Convention's Journal is many orders of magnitude more likely than the conventional wisdom's position that he based it on his own journal. This is so because $P(x = 90 | X \sim B(110, 0.943)) / P(x = 20 | X \sim B(110, 0.943)) = 2.02 * 10^{85}$. It is true that, standing alone, a result of about 18 percent (i.e. $1 - 90/110$) error (or occasional change) rate under this Article's alternative hypothesis is surprisingly high when one expects a rate of about 5.7 percent. However, an 82 percent (i.e. $1 - 20/110$) error (or occasional change) rate, obtained under the conventional wisdom's hypothesis, is far more improbable. Theoretically, it is possible that a third hypothesis as to Madison's copying process would prove more likely than the two considered here, but none has thus far been

