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What Is Congress Supposed to Promote?: Defining "Progress" in Article I, Section 8, Clause 8 of the United States Constitution, or Introducing the Progress Clause

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What Is Congress Supposed to Promote?: Defining “Progress” in Article I, Section 8, Clause 8 of the United States Constitution, or Introducing the Progress Clause¹

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The Congress shall have the 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.

—U.S. Constitution, Article I, Section 8, Clause 8

Progress Is Our Most Important Product

—Ronald Reagan, for General Electric²

I. INTRODUCTION: WHY DEFINE "PROGRESS"?

A. The Stakes in Positive Law

I am fairly sure of what Article I, section 8, clause 8 means. I am hopeful, furthermore, that the core of my reading will be accepted by otherwise disparate interpreters of the Constitution: "progress" means "spread," i.e. diffusion, distribution.³ To the extent that Congress chooses not to act under this clause,⁴ the default position is that each person in the United States has a property right not to be excluded

1. Earlier academics call this the "Copyright and Patent Clause." Since neither "copyright" nor "patent" appears in the text, I have been using the phrase, "Intellectual Property Clause." See 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, 260 & n.1 (1995). That name, however, both uses words not in the text and incorrectly implies the primacy of the rights granted patent and copyright holders by Congress. Yochai Benkler has proposed the textual "Exclusive Rights Clause." See Yochai Benkler, *Through the Looking Glass: Alice and the Constitutional Foundations of the Public Domain*, DUKE L.J. (forthcoming 2002) (on file with author) available at <http://www.law.duke.edu/pd/papers/benkler.pdf> (last visited Nov. 2001). As this Article explains, the best name would be the "Progress Clause." Robert Goldwin earlier suggested the same name, but under the assumption that "progress" referred to "quality improvement." See ROBERT A. GOLDWIN, *WHY BLACKS, WOMEN, AND JEWS ARE NOT MENTIONED IN THE CONSTITUTION AND OTHER UNORTHODOX VIEWS* 37, 37-41 (1990).
2. This slogan was registered by General Electric with the U.S. P.T.O. on July 7, 1964 for, *inter alia*, "periodic entertainment programs" and was first used in commerce May 2, 1950. The service mark registration has expired. See Registration No. 0772966, at <http://tess.uspto.gov/bin/showfield?f=doc@statp=jpb4.5.45> (last visited Nov. 19, 2001). The slogan climaxed the institutional advertising pitches on the General Electric Theater which ruled Sunday night on CBS from February 1953 through May 1962. For most of this time, the slogan was delivered by proto-United States President Ronald Regan. G.E. claimed that "[p]rogress in products goes hand in hand with providing progress in the human values that enrich the lives of us all." See William L. Bird, *General Electric Theater*, at http://www.mbcnet.org/ETV/G/htmlG/general_elect.htm (last visited Nov. 19, 2001).
3. See *infra* Sections IV and V. This is the core of my analysis and has the strongest evidentiary support.
4. Congress, however, passed both the first patent and the first copyright statute in the second session of the first congress. Patent Act of 1790, 1 Stat. 109; Copyright Act of 1790, 1 Stat. 124. Neither the patent nor the copyright statute has ever been allowed to lapse.

from publicly accessible knowledge and technology.⁵ Congress has only a very limited power to create private quasi-property, i.e., rights to exclude the rest of the commoners.⁶ Congress may only create temporary individual rights for "authors" or "inventors" to exclude others from use of "their respective writings and discoveries" when such individual rights "promote" the *spread* of knowledge ("science") and technology ("useful arts").

I am much more certain that my suggested doctrine is not yet positive law. If the Supreme Court followed my analysis, it would reverse the pro-copyright holder decisions of *Universal City Studios v. Corley*⁷ and *Eldred v. Reno*.⁸

My research shows four possible 1780s meanings of "progress" in the Progress Clause: quality improvement in the knowledge base, quantity improvement in the knowledge base (judged numerically), quantity improvement in the knowledge base (judged economically), and spread (distribution to the population).⁹ Of these, quantity is the

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5. See Malla Pollack, *The Owned Public Domain: The Constitutional Right Not to Be Excluded—Or the Supreme Court Chose the Right Breakfast Cereal in Kellogg v. National Biscuit Co.*, 22 HASTINGS COMM. & ENT. L.J. 265, 267-291 (2000). This is the most disputable part of my thesis.
 6. Such a right to exclude is closer to a privilege allowing use than to a fee simple absolute. The remaindermen (the commoners) hold a future interest which will ripen into a much more robust quasi-property right. "Commoner" here means a person with an ownership right not to be excluded from using the resource, the "common," in 18th century parlance. This is John Locke's definition of "property," something "[t]he nature whereof is, that without a Man's own consent it cannot be taken from him." JOHN LOCKE, TWO TREATISES OF GOVERNMENT 195 (Peter Laslett ed., Cambridge Univ. Press 1996) (1690). This is a property law regime and should not be confused with the nature of goods "owned." The definition includes both common-property regimes (where a limited number of persons have rights not to be excluded) and open-access regimes where no one may be excluded. See Charlotte Hess & Elinor Ostrom, *Artifacts, Facilities, and Content: Information as a Common-Pool Resource*, DUKE L.J. (forthcoming 2002) (on file with author), available at <http://www.duke.edu/pd/papers/ostramhes.pdf> (last visited Nov. 2001). Unlike grass for sheep, or books in libraries, ideas are neither rival nor subtractable.
 7. 273 F.3d 429 (2d Cir. 2001), *aff'g sub nom.*, *Universal City Studios, Inc. v. Reimerdes*, 111 F. Supp. 2d 294 (S.D.N.Y. 2000) (upholding anti-circumvention provisions of the Digital Millennium Copyright Act, 17 U.S.C. §§ 1201-1205 (2000) [hereinafter DMCA]). See *infra* text accompanying notes 23-32.
 8. 239 F.3d 372 (D.C. Cir. 2001) (upholding Copyright Term Extension Act of 1998, Pub. L. No. 105-298, 112 Stat. 2827 [hereinafter CTEA]), *cert. granted sub nom. Eldred v. Ashcroft*, 122 S. Ct. 1062 (2002). See *infra* text accompanying notes 33-54 (discussing CTEA); see also *Golan v. Ashcroft*, Civ. 01-B-1854 (D. Colo.; complaint filed Sept. 19, 2001) (raising constitutional issues with both CTEA and Copyright Term Restoration Act, codified at 17 U.S.C. § 104A), at <http://con.law.harvard.edu/openlaw/golanvashcroft/> (last visited Jan. 10, 2002).
 9. See *infra* notes 215-230 and accompanying text.

least supportable.¹⁰ Quality has low support and creates problems in context.¹¹ Spread has the highest support.¹²

The most charitable reading of Congress' post-1970 intellectual property enactments might be that Congress sees the "Copyright and Patent Industries" as the strongest part of the current United States economy¹³ and, therefore, assumes that giving these industries whatever they request is the best policy. This approach ignores the probability that current major stakeholders are merely trying to protect and enlarge their own profit shares—even when self-protection blocks "the progress of science and useful arts," in any meaning of the phrase.¹⁴

If Congress is actually considering the language of the Constitution, Congress appears to be operating on the naive theory that since some protection promotes writings and discoveries, more protection necessarily promotes even more or even better writings and discoveries.¹⁵ Even leaving aside major normative and baseline problems, giving one entity exclusive intellectual property rights to a creation blocks other creative people from producing related works and discov-

10. See *infra* notes 171-172, 215 and accompanying text.

11. See *infra* notes 165-188, 215-230 and accompanying text.

12. See *infra* notes 215-230 and accompanying text.

13. See, e.g., Statement of Howard Coble, Chair of Subcommittee on Courts and Intellectual Property, at hearing of July 27, 2000, at 1, at <http://www.house.gov/judiciary/cob10727.htm> (last visited Dec. 15, 2000) ("Congress has enacted [intellectual property] laws since 1790, resulting in the development of American intellectual property that is the envy of the world. It is one of the top US exports, generates billions of dollars in revenue, creates jobs, and enriches the lives of the American people and the world.").

14. See, e.g., Jessica Litman, *Copyright Legislation and Technological Change*, 68 OR. L. REV. 275 (1989) (discussing stakeholder negotiation process used for drafting United States copyright statutes and how this process allows entrenched interests to block technological change in order to protect their current market power); L. Ray Patterson, *Eldred v. Reno: An Example of the Law of Unintended Consequences*, 8 J. INTEL. PROP. L. 223, 230 (2001) (asserting copyright industry lobbyists have written United States copyright statutes since 1905). Only the irrational assume that projects endorsed by paid lobbyists and projects in the public interest are the same thing. See RICHARD E. BALDWIN & FREDERIC ROBERT-NICOU, ENTRY AND ASYMMETRIC LOBBYING: WHY GOVERNMENTS PICK LOSERS (Nat'l Bur. of Econ. Research, Working Paper No. W8756) (asserting that groups in economic decline spend more on lobbying), available at http://papers.ssrn.com/so13/papers.cfm?abstract_id=299170 (last visited Feb. 7, 2002); AKIRA OKADA & ARNO RIEDL, RECIPROCITY, INEFFICIENCY AND SOCIAL EXCLUSION (Tingergen Institute Discussion Paper No. TI 99-044/1, 2001) (asserting that exclusive coalitions result in large efficiency losses), available at http://papers.ssrn.com/so13/papers.cfm?abstract_id=289185 (last visited Feb. 28, 2002).

15. See, e.g., Julie E. Cohen, *Lochner in Cyberspace: The New Economic Orthodoxy of "Rights Management,"* 97 MICH. L. REV. 462 (1998) (criticizing economic approach towards copyright policy); Julie E. Cohen, *Copyright and the Perfect Curve*, 53 VAND. L. REV. 1799 (2000) (same).

eries.¹⁶ Transaction costs¹⁷ and right-holders' biases¹⁸ increase these blocks.

Correcting the reading of the Progress Clause by recognizing that "progress" involves dissemination, as opposed to qualitative improvement of the knowledge base, has important results. Using the proper original reading should result in judicial trimming of congressional over-protection. For the argument in this section, I will assume mere rational basis review. The review standard should be higher because (i) Congress has never bothered to take the limits in the Clause seriously, (ii) Congress is treading close to textual limits on its power,¹⁹

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16. See 17 U.S.C. § 106 (2000); 35 U.S.C. § 271 (1994); see also Rebecca S. Eisenberg, *Patents and the Progress of Science: Exclusive Rights and Experimental Use*, 56 U. CHI. L. REV. 1017, 1086 (1989) (calling for an experimental use exception to patent infringement because "enforcement of [patents] against subsequent researchers can sometimes interfere with further progress in the field of the invention."). The level of protection is an especially complex issue because larger firms and firms holding larger patent portfolios have greater ability to chill other entities' research and development behavior. See JEAN O. LANJOUW & MARK SCHANKERMAN, ENFORCING INTELLECTUAL PROPERTY RIGHTS 3-44 (Nat'l Bureau of Econ. Research Working Paper No. 729, 2001), available at <http://papers.nber.org/papers/w8656> (last visited Dec. 21, 2001) (presenting results of empirical study of U.S. patent litigation). A similar portfolio advantage has been hypothesized in copyright. See Yochai Benkler, *Siren Songs and Amish Children: Autonomy, Information, and Law*, 76 N.Y.U. L. REV. 23, 106-111 (2001) (explaining power of holding a large copyright portfolio).
 17. For example, copyright no longer requires notice or prompt registration. See 17 U.S.C. §§ 401(a), 408(a) (2000). How do you make an offer without knowing the identity of the copyright holder? See Jessica Litman, Remarks on The Public Domain and the Commons: History & Theory, at Duke Conference on the Public Domain (Nov. 2001), available at http://realserver.law.duke.edu/ramgen/publicdomain/pubdom_1.smil (last visited Dec. 26, 2001) (pointing out that the United States' joining the Berne Convention has resulted in reversal of the baseline assumption that any copyrightable item without clear notice was available for use without permission or liability).
 18. Such biases support the fair use status of much parody. See *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 591-92 (1994) (recognizing that holder of copyright in original is unlikely to give permission to parody underlying work); see also Wendy J. Gordon, *Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and its Predecessors*, 82 COLUM. L. REV. 1600 (1982).
 19. See *Eldred v. Ashcroft*, 255 F.3d 849, 854 (D.C. Cir. 2001) (Sentelle, J., dissenting from denial of rehearing en banc) ("I do not accept that it is sufficient for Congress to merely articulate some hypothetical basis to justify the claimed exercise of an enumerated power."); Reply Brief of Appellant, *Eldred v. Reno*, 239 F.3d 372 (D.C. Cir. 2001) (99-00065), reprinted in 18 CARDOZO ARTS & ENT. L. REV. 655, 662-63 (2000) (arguing that *Feist Publications, Inc. v. Rural Telephone Service Co.*, 499 U.S. 340 (1991), was not decided under rational basis review).

and (iii) copyright statutes are limitations on speech.²⁰ The review standard issue, however, will have to wait for another article.²¹

For example, let us assume just for the current argument, that Congress asserts that it actually has a rational basis²² for believing that making digital circumvention and circumvention technology illegal²³ will affect the supply of new writings and discoveries at the margin. Let us also assume, *arguendo*, that the only relevant arguments pertain to the purpose section of the Progress Clause. Somewhere some writers would not compose and release new works if they cannot prevent persistent computer wizards from bypassing technological protections. They will write and publish the works only if they are assured protection from computer wizards. Let us dub this set of writers "Digital Control Driven." Some other writers, of course, would be blocked from composition by a ban on technological circumvention and circumvention devices. They will be unable to get permission to incorporate indispensable bits of pre-existing works into their creations and will be unable to act on the assumption that the uses are fair²⁴ because they are unable to bypass the technological protections guarding the older works.²⁵ Let us dub this set of writers "Public Domain Driven."

Congress bases the ban on circumvention and circumvention technology on alternate theories. First, if this protection is granted, the Digital Control Driven are likely to produce more writings than the Public Domain Driven will fail to produce.²⁶ Second, the writings pro-

20. See Reply Brief, *supra* note 19, at 668-69; Yochai Benkler, *Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain*, 74 N.Y.U. L. REV. 354 (1999).

21. See Malla Pollack, *Dealing with Old Father William*, LOY. L.A. L. REV. (forthcoming 2002).

22. Congress notoriously does not look at the facts allegedly supporting industry cries for greater rights to exclude. See, e.g., Steven Breyer, *The Uneasy Case for Copyright in Books*, 84 HARV. L. REV. 281 (1970) (general statement); Malla Pollack, *The Right to Know?: Delimiting Database Protection at the Juncture of the Commerce Clause, the Intellectual Property Clause, and the First Amendment*, 17 CARDOZO ARTS & ENT. L.J. 47, 89-97 (1999) (discussing lack of evidence supporting Congress' "factual findings" in proposed database protection bill).

23. See, e.g., 144 CONG. REC. H7102 (daily ed. Aug 4, 1998) (statement of Rep. Slaughter) (praising Digital Millennium Copyright Act because it helps "combat the devastating losses to American companies that are being caused by the international piracy of copyrighted works").

24. See 17 U.S.C. § 107 (2000).

25. See 17 U.S.C. § 1201 (2000). Even without technological barriers, the cost of facing copyright enforcement suits presumably chills a large number of arguably fair uses.

26. The relationship between quantity and quality is discussed *infra* section IV. As to this specific statute, the balance is skewed because the method of protection strongly discourages quality improvement in one specific "useful art," encryption technology. See, e.g., *Copyrights: Content Owners Making New DMCA Claims; GNUTELLA sites, SMI Expert All Get Letters*, BNA PATENT, TRADEMARK, & COPY-

duced by the Digital Control Driven are likely to improve human understanding more than would the writings produced by the Public Domain Driven. Similar arguments could be made regarding extensions of the term or scope of either copyright or patent.

As long as "progress" refers to the Idea of Progress, the constitutional issue involves the value or quantity of the works produced—largely regardless of their availability or cost to users. Of course, "The Idea of Progress" and "spread" are not a dichotomy; they are opposite poles on a continuum. "Spread" requires works to share. "Quality works" are useless without some users; the users, however, may be limited to a small elite section of the populace who work on the cutting-edge of knowledge.²⁷ Nevertheless, if the core meaning of "progress" is "quality improvement of the knowledge base," the courts are extremely unlikely to hold the legislation unconstitutional. To void the statute, a court would have to insist that Congress' theoretically informed guess on the Digital Control Driven/Public Domain Driven balance is irrational. Considering the complexity and diverse conclusions of the relevant literature,²⁸ a court is unlikely to go this far.

If "progress" means "spread," a court is more likely to second guess Congress. Now, Congress is required to prioritize public access to works over the mere existence of works. The change in priorities forces Congress to show that the additional rights to exclude create sufficient new access²⁹ to works to counter balance (a) the ability of right holders to restrict access to works whose copyrights have expired, (b) the ability of right holders to restrict fair uses of works covered by copyright, (c) the ability of right holders to restrict access to the uncopyrightable elements of copyrightable works, and (d) the ability of right holders to leverage technological protection into contracts

RIGHT DAILY, May 3, 2001 (reporting cease and desist letter sent by the Secure Digital Music Initiative warning Princeton University professor Edward Felton not to release his research on decryption technology for peer review; Felton decided not to present paper at a conference; SDMI's attorney then denied intention to sue academics).

27. Reading "progress" as "spread," does not eliminate the constitutional basis of the requirement for non-obviousness in patent law. As to the "useful arts," quality improvement is required by the words "inventors" and "discoveries." As to "science," a modicum of quality is required by the words "writings" and "authors."
28. See, e.g., ADAM B. JAFFE, *THE U.S. PATENT SYSTEM IN TRANSITION: POLICY INNOVATION AND THE INNOVATION PROCESS* (Nat'l Bur. Econ. Research, Working Paper, 1999) (reviewing recent economic analyses of patent protection); A. Samuel Oddi, *Un-Unified Economic Theories of Patents*, 71 NOTRE DAME L. REV. 267, 268 n.6 (1996) (mentioning conflicting literature on patents' economic effects).
29. The basic question would be how many times a person accessed a work. $P \times W = A$. Distribution of the people with access (geographically, demographically, etc.) might be relevant, as might the diversity etc. of the works accessed. The Commerce Committee admitted that the DMCA would lower public access to works. See H.R. REP. NO. 105-551, pt. 2, at 26 (1998).

limiting downstream distribution of works.³⁰ Now Congress has a much higher evidentiary problem with showing a good faith belief in a "rational basis" for its legislative balance of the creation/dissemination balance.³¹

What about the Copyright Term Extension Act?³² The District of Columbia Circuit held the act constitutional because "to promote the progress of science and the useful arts" was not a substantive limit on Congress' power.³³ The majority, however, went one unnecessary step further, and asserted in dicta that even if this language contained some limit, the necessary and proper clause allows Congress to promote progress by increasing the incentive for copyright holders to preserve old works, providing the sole example of movies in need of restoration.³⁴ Does this demonstrate that reading "progress" as "spread" would make the CTEA harder to assail? I think the opposite. *Eldred* was decided on the vacuity of the purpose section of the Progress Clause. If a court thoughtfully considers "progress" (under any definition), the CTEA should be held unconstitutional in all its applications. The *Eldred* court merely invoked the alleged upside of the change without considering the downside— an improper way to do any type of cost/benefit analysis.

30. But see Jane Ginsburg, *Copyright and Control over New Technologies of Dissemination*, 101 COLUM. L. REV. 1613, 1618, 1636 (2001) (asserting possible benefits to public from DMCA because *inter alia* (i) Library of Congress's first study of statute's effects did not find disaster, and (ii) some copyright holders might not release works in digital form sans DMCA). Professor Ginsburg's brilliant and nuanced analysis over looks, *inter alia*, (i) the extreme narrowness of the Library's study, (ii) the existence of works whose copyright holders are unclear, and (iii) the DMCA's grant to copyright holders of power to limit access to non-copyrightable material.

31. The hurdle, of course, would vary depending on which brand of rational review the court employed. The Supreme Court has looked hard at Congress' evidence in several recent cases where Congress had purported to abrogate state sovereign immunity. See *Board of Trustees v. Garrett*, 531 U.S. 356, 367-72 (2001); *Fla. Prepaid Postsecondary Educ. Expense Bd. v. Coll. Sav. Bank*, 527 U.S. 627, 639-41 (1999). However, rational basis review is most commonly toothless. See, e.g., Richard B. Saphire, *Equal Protection, Rational Basis Review, and the Impact of Cleburne Living Center, Inc.*, 88 Ky. L.J. 591, 639 (1999-2000) ("*Cleburne's* implicit challenge to the reigning equal protection paradigm proved to be short-lived. As things now stand, expecting that a court might invalidate a classification subject to rational basis scrutiny is like expecting to win the lottery."). But see *Eldred v. Ashcroft*, 255 F.3d 849, 854 (D.C. Cir. 2001) (Sentelle, J., dissenting from denial of rehearing en banc) ("I do not accept that it is sufficient for Congress to merely articulate some hypothetical basis to justify the claimed exercise of an enumerated power.").

32. The Copyright Term Extension Act of 1998, Pub. L. No. 105-298, 112 Stat. 2827, added twenty years to copyright term for both pre-existing and new works.

33. See *Eldred v. Reno*, 239 F.3d 372, 378 (D.C. Cir. 2001).

34. See *id.* at 379.

My reading does destroy one argument against the retrospective section of the act—the argument that extending existing copyrights cannot promote progress because this phrase requires each grant to be paid for with a new work.³⁵ However, the same limitation can be reached by other textual argument. Let me explain.

The best arguments against the CTEA are not related to the word “progress.” First, looking at policy, the CTEA should fail rational basis scrutiny because it is a subsidy granted to a small number of large corporations; copyright is merely a subterfuge used to deflect public scrutiny and outrage. Any such camouflaged wealth transfer should be suspect as corrupt³⁶—not rationally related to any *legitimate* legislative purpose. Such a disguised subsidy to powerful political backers is even more unacceptable when tied to a copyright grant. The historical ancestor of the Progress Clause, the English Statute of Monopolies³⁷ was the first step in Parliament’s control of the royal purse strings. No Authors’ Exclusive Right (AER) or Inventors’ Exclusive Right (IER)³⁸ may be used to bypass full public scrutiny of political payoffs.³⁹

Second, looking at the words of the Progress Clause, the CTEA’s extension of existing copyrights breaches the barrier erected by the interaction of “writers,” “authors,” and “limited times.” The Supreme Court has already read the junction of “writers” and “authors” to require originality.⁴⁰ The structure of the Progress Clause ties “limited times” tightly to author/writing and inventor/discovery. Therefore, in context, “limited times” should mean that any new term must be premised on additional contributions of “writings” from “authors” (or dis-

35. See Reply Brief of Appellant, *supra* note 19, at 660-62 (making this argument); Patterson, *supra* note 14, at 234 (same).

36. See Michael H. Davis, *Extending Copyright and the Constitution*, 52 FLA. L. REV. 989, 998 n.31 (2000) (discussing related campaign contributions); John M. Garon, *Media & Monopoly in the Information Age*, 17 CARDOZO ARTS & ENT. L.J. 491, 523-24 nn. 152-156 (same); 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, 1174-76 (2000); S. REP. NO. 104-31 (statement of Senator Brown).

37. 21 Jam., ch. 3 (1624) (Eng.).

38. I use these terms to clearly distinguish the rights allowed by the Constitution from those Congress has chosen to create by statute (patents and copyrights). See Pollack, *supra* note 1, at 291 (introducing terminology and explaining its usefulness).

39. See Malla Pollack, *Purveyance and Power, or Over-Priced Free Lunch: The Intellectual Property Clause as an Ally of the Takings Clause in the Public’s Control of Government*, 30 SW. U. L. REV. 1 (2000) (providing detailed historical backing for thesis that Progress Clause may not be used to side step government’s fiscal accountability).

40. See *Feist Publ’ns., Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 346-47 (1991). Similarly, “inventor” and “discovery” have been held to require “non-obviousness” for patent grants. See *Graham v. John Deere Co.*, 383 U.S. 1, 5-12 (1966).

coveries from inventors)—new original material. Lengthening existing copyrights is unconstitutional, regardless of the meaning of “progress.”

Third, the words “limited times” by themselves require a definite term limit set at the beginning of protection.⁴¹ Like patent, copyright is strongly analogous to a contractual bargain.⁴² In return for public availability, the copyright holder is granted a set of rights to exclude. If Congress later grants additional rights, the copyright holder must provide new consideration. If Congress enlarges the copyright holder’s power without requiring a *quid pro quo*, Congress is a dishonest agent.⁴³

Fourth, the CTEA only claims to promote “progress,” if “progress” means “economic value.” The CTEA’s announced primary rationales are (i) to give copyright holders more of the financial value of works, and (ii) to help the United States’ balance of payments by supporting a strong export industry.⁴⁴ Neither of these goals conceivably promote “progress” if that word means either “quality improvement” or “spread.” At best, these goals might increase the economic value of “writings.” Any such increase, however, is created by statutorily distorting the market—which clearly demonstrates that economic value and statutory grants are not independent. If “promoting progress” is a limitation on Congress, therefore, “economic value” is not a possible translation of “progress.”⁴⁵

Worse, the CTEA’s implied assertion that it increases the economic value of works is an empirical claim made without supporting evidence. The large entities which lobbied for the CTEA obviously believed that the act would increase the economic value of certain copyrights *to them*. Congress made no apparent effort to determine if the shift of power lowered the total value of copyrights in general or of any specific copyright. The legislative history does not discuss the economic value of the non-licensed uses foreclosed by term extension. Cost/benefit analysis cannot be done by listing benefits and ignoring costs.

41. The use of the plural “times” does not undercut this definition. The plural (i) allows the original grant to include a renewal term, and (ii) allows patents and copyrights to have different term limits.

42. See Pollack, *supra* note 5, at 291-93 (discussing case law support for the bargain theory of patents).

43. See Heald & Sherry, *supra* note 36, at 1162-1164 (finding a *quid pro quo* principle in the Progress Clause).

44. See S. REP. NO. 104-315, at 3-19 (1996). The export rationale is greatly weakened by the copyright industry’s major reliance on foreign-made copies of American works. See Pollack, *supra* note 22, at 94-96 (discussing fudge of difference between “foreign sales” and “exports” in a report submitted to Congress in support of the DMCA).

45. See also *infra* note 171 and accompanying text (discussing an economic reading of “progress.”).

If "progress" means "quality improvement," Congress could state that it believes the extra money which will be acquired by large copyright-holding corporations is likely to fund the highest quality works which will be created in next century. This assumption, however, is economically irrational.⁴⁶ Furthermore, the legislative history of the CTEA does not demonstrate this as Congress' intent.⁴⁷ If a court were to invoke this as Congress' rational basis for the CTEA, it should be faulted for using a contrived apologia to side-step judicial responsibility. Unfortunately, I doubt that the CTEA's opponents could prove the opposite—that individually written works (which will not be created because of the CTEA) would have been of higher quality. How do you prove the quality of works that will not be created? Over-deference to Congress, therefore, might result in a court's upholding the CTEA.

If "progress" means increase in the number of works, the CTEA should fail; but proof would be very hard to acquire. At the time an author is considering creation, or a publisher is considering initial publication, the additional twenty years (coming only twenty years after the author dies) is worth about zero.⁴⁸ Humans, however, are not always good at, or interested in, making this type of cost/benefit prediction.⁴⁹ Notoriously, few athletes make it rich; yet a disproportionate number of economically disadvantaged youths drop out of school with the intention of becoming basketball superstars.⁵⁰ Certainly, the longer term would cut down availability of building blocks for new works, but holders of large copyright portfolios would still have enough stock to keep writing. I do not know of any evidence I could show the court that would *prove* the numerical balance favors a shorter term: proving counterfactuals about likely creation is rather difficult. Again, judicial over-deference to Congress might result in the CTEA surviving.

46. See Dennis S. Karjala, *Statement of Copyright and Intellectual Property Law Professors in Opposition to H.R. 604, H.R. 2589, and S. 505 "The Copyright Term Extension Act," Submitted to the Committees on the Judiciary U.S. Senate [and] U.S. House of Representatives* 21 (Jan. 28, 1998), available at <http://www.law.asu.edu/HomePages/Karjala/OpposingCopyrightExtension/legmats/1998Statement.html> (demonstrating irrationality).

47. *Watchtower Bible & Tract Soc'y v. Village of Stratton*, 122 S. Ct. 2080 (2002) (Breyer, J., concurring) (objecting to the dissent's reliance on crime prevention rationale for ordinance *inter alia* because "there is no indication that the legislative body that passed the ordinance considered this justification").

48. See Heald & Sherry, *supra* note 36, at 1173-74 (providing calculations); Karjala, *supra* note 46 (demonstrating absence of additional incentive).

49. See, e.g., Timor Kuran & Cass R. Sunstein, *Availability Cascades and Risk Regulation*, 51 STAN. L. REV. 683 (1998) (discussing cognitive failures common in assessing probabilities); Paul H. Rubin, *How Humans Make Political Decisions*, 41 JURIMETRICS J. 337 (2001) (same).

50. See Michael Madow, *Private Ownership of Public Image: Popular Culture and Publicity Rights*, 81 CAL. L. REV. 125, 216-18 (1993).

If progress means "spread," I cannot guarantee that the CTEA would fail, but its opponents would have more evidence to show a court. Extending the United States copyright term extends the term inside the United States both for domestic works and for works from other countries.⁵¹ By exploring government records, opponents should be able to develop some quantitative approximation of how many works of various types are being fenced out of competitive circulation for an additional twenty-years.⁵² This large number of works which may be denied to the entire population of the United States for an additional twenty-years should compute into an impressive quantity of lost access.⁵³ Opponents would still have difficulty quantifying how many new works would be created under the different legal regimes, but now, they would have some very strong figures to show the court—figures Congress seemingly made no effort to obtain.⁵⁴ Since the supporters of the CTEA have better access to such statistics than its opponents, opponents might even convince the court to place a higher evidentiary burden on the government.

The progress by dissemination claim (that an additional term is necessary for preservation of old works) furthermore, seems facially unrealistic.⁵⁵ Generally, by fifty years after the death of its author, a work's market potential has already been tested. An interested distributor would know which works were worth continued marketing. Risk would be almost completely eliminated. Common experience shows that works without copyright protection continue to be published—Shakespeare, Milton, and the Bible are easy to find in book

51. See S. REP. NO. 104-31 (statement of Senator Brown); Karjala, *supra* note 46, at 6-7.

52. In the United States copyright holders are generally allowed to stop all distribution of a work. See S. REP. NO. 104-31 (statement of Senator Brown). To defuse the (to me transparently unconvincing) argument that copyright holders would allow most uses if paid, we might be able to estimate the number of works where locating the copyright holder would be quite difficult or impossible. Copyright holders might decide that maximum revenue would be produced by creating temporally limited availability. Disney, for example, is heavily advertising that DVD's of its popular films *Pinochio*, *Mulan*, *Tarzan*, and *Snow White and the Seven Dwarfs* will be unavailable after January 31, 2002. See <http://disney.com/disneyvideos/ofers/time.html> (last visited Jan. 8, 2002) (on file with the author). According to a national television advertising campaign, *Snow White* is allegedly disappearing into the vault for ten years.

53. Perhaps the "harmonization" rationale should be read as an assertion that the CTEA will increase global access to works by lowering trade barriers. See S. REP. 104-315 at 6, 10-11. Even accepting *arguendo* that access to works will increase outside the U.S. (even though it will decrease within the U.S.), the Constitution aims to promote the welfare of *United States*. U.S. CONST. pmbl.

54. Brief for Petitioners, *Eldred v. Ashcroft*, 239 F.3d 372, 377 (D.C. Cir. 2001), *cert. granted sub nom.* *Eldred v. Ashcroft*, 122 S. Ct. 1062 (2002), available at <http://econ.law.harvard.edu/openlaw/eldredvashcroft>.

55. See also Karjala, *supra* note 46, at 21-22 (arguing that businesses' willingness to take risks is not related to income available from unrelated projects).

stores.⁵⁶ If Congress considered crumbling old works to be important, furthermore, the CTEA is hardly a proportional response. The number of crumbling old works is presumably only a small subset of the old works granted the additional term.⁵⁷ Preservation seems mere camouflage; Congress did not limit the liability of persons who restored old-works after a reasonable, but unsuccessful, search for the current copyright holder. A court should have enough hard evidence to overthrow the CTEA on the ground that no rational legislature could conclude that it increased public access to writings.

In sum, reading "progress" as "spread" increases the possibility of effective court over-sight of Congress' intellectual property legislation.⁵⁸ This definition might also effect how the courts deal with Internet issues such as causes of action for trespass to websites, and attempts to require permission to set up hyperlinks.⁵⁹ I do not, of course, claim that this change would require the Supreme Court to reign-in Congress.

B. The Definitional Hole

The Supreme Court has never purported to define the individual word "progress" in the Progress Clause.⁶⁰ So far, the Court has said that the entire progress limitation—in conjunction with the require-

56. See S. REP. NO. 104-31 (statement of Senator Brown); Garon, *supra* note 36, at 520 (discussing study showing classics' availability).

57. Two major restorers of old films argued against the CTEA, partly because they had difficult in locating copyright holders in order to obtain permission to restore old works. See Reply Brief of Appellant, *supra* note 19.

58. I am not arguing that more court power is necessarily good. I am merely reacting to the facts that (a) Congress has abjectly failed to protect the public domain, and (b) public choice theory suggests we should expect a continuing institutional bias towards congressional over-protection of intellectual property. See, e.g., Mark A. Lemley, *The Constitutionalization of Technology Law*, 15 BERKELEY TECH. L. J. 529, 531-34 (2000). But see Robert P. Merges, *One Hundred Years of Solicitude: Intellectual Property Law, 1900-2000*, 88 CAL. L. REV. 2187, 2234-39 (2000) (arguing that over-protective legislation is usually blocked by competing interest groups).

59. See Dan L. Burk, *The Trouble with Trespass*, 4 J. SMALL & EMERGING BUS. L. 27 (2000) (suggesting that nuisance law provides better policy fit than does trespass or property law for cases where web-site operators wish to prevent types of access). But see I. Trotter Hardy, *The Ancient Doctrine of Trespass to Web Sites*, 1996 J. ONLINE L. art. 7 <http://www.wm.edu/law/publications/jol/articles.shtml> (arguing that web sites should be protected by analogy to property law).

60. This Clause is the only use of the word "progress" in the Constitution. See CHARLES W. STEARNS, *Concordance to the Constitution*, in THURSTON GREENE, *THE LANGUAGE OF THE CONSTITUTION: A SOURCEBOOK AND GUIDE TO THE IDEAS, TERMS, AND VOCABULARY OF THE UNITED STATES CONSTITUTION* 969, 1009 (1991). This concordance stops before the Reconstruction Era amendments. See Thurston Greene, *Preface*, in THURSTON GREENE, *THE LANGUAGE OF THE CONSTITUTION: A SOURCEBOOK AND GUIDE TO THE IDEAS, TERMS, AND VOCABULARY OF THE UNITED STATES CONSTITUTION* xv, xviii (1991). The author supplies no sources for

ment that the *res* protected be either the "writing" of an "author" or the "discovery" of an "inventor"—relates to Congress' supposed inability to remove *res* from the public domain,⁶¹ the non-obviousness requirement to obtain a patent,⁶² and the minimal standard of originality in copyright.⁶³ Additionally, the entire progress limitation has some relationship both to public availability of technology and writings,⁶⁴ and to the uncopyrightability of facts.⁶⁵

Academic literature is also oddly reticent about the eighteenth century meaning of the word "progress." I know of no article presenting a detailed explication. Most scholars seem to assume that "progress" in the Progress Clause relates to the well-known Enlightenment Idea of Progress:⁶⁶ all is getting better in this, the best of all possible,

explaining the 1789 word "progress." See *id.* at xi (demonstrating absence of "progress" from alphabetical list of words explained in source book).

61. See *Graham v. John Deere Co.*, 383 U.S. 1, 6 (1966) ("Congress may not authorize the issuance of patents whose effects are to remove existent knowledge from the public domain, or to restrict free access to materials already available."). But see 17 U.S.C. § 104A (purporting to restore copyright in certain works which had entered the public domain due to the right holders' failure to comply with formalities); Tyler T. Ochoa, *Patent and Copyright Term Extension and the Constitution: A Historical Perspective*, 49 J. COPYRIGHT SOC'Y 19, 46-52, 58-86 (2001) (discussing copyrights and patents which were revived by private laws); *Memorandum in Support of Defendant's Motion to Dismiss for Failure to State a Claim Upon Which Relief Can Be Granted* at 22-34, *Lawrence Golan v. John Ashcroft*, Civil Action No. 01-B-1854 (D. Colorado), available at <http://con.law.harvard.edu/openlaw/golanvashcroft> (last visited Jan. 10, 2002) (arguing that restoration is constitutional (i) under the Copyright Clause as demonstrated by first Congress' passage of statute providing copyright to works already printed in the U.S., and (ii) under the Treaty Power as demonstrated by *Missouri v. Holland*, 252 U.S. 416, 432 (1920)).
62. See *Graham*, 383 U.S. at 9.
63. See *Feist Publ'ns., Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 345 (1991).
64. See, e.g., *Fogarty v. Fantasy, Inc.*, 510 U.S. 517, 526 (1994) (stating that copyright's core purpose is "promoting broad public availability of literature, music, and other arts"); *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 164 (1989) (clarifying that Court's earlier pre-emption cases "protect more than the right of the public to contemplate the abstract beauty of an otherwise unprotected intellectual creation—they assure its efficient reduction to practice and sale in the marketplace").
65. See *Feist*, 499 U.S. at 344 ("[F]acts are not copyrightable.>").
66. Even my earlier articles may be read as making this assumption. Two interesting articles do analyze the "Idea of Progress" as applied to intellectual property. See Michael D. Birnhack, *The Idea of Progress in Copyright Law*, 1 BUFF. INT. PROP. L.J. 3 (2001) (discussing "the progress of" as central to the Clause, but assuming without discussion that these words refer to "the Idea of Progress."); Margaret Chon, *Postmodern "Progress": Reconsidering the Copyright and Patent Power*, 43 DEPAUL L. REV. 97 (1993) (same). Most articles merely assert the relevance of "The Idea of Progress." See, e.g., Karl B. Lutz, *Patents and Science: A Clarification of the Patent Clause of the U.S. Constitution*, 18 GEO. WASH. L. REV. 50, 54 (1948) (asserting the identity of the three phrases "To promote the progress of useful arts," "To promote the progress of technology," and "to accelerate technological progress"); Arthur H. Seidel, *The Constitution and a Standard of*

worlds⁶⁷ (smile when you say that, post-modern human).⁶⁸ Accepting this premise, Robert Merges asserts that the Framers' unfounded optimism cannot support any meaningful limitations on Congressional power.⁶⁹

Oh, the power of rampant anachronism and assumption! I agree with some of the general assumptions about "progress." The Idea of Progress had begun to flower by the late eighteenth century.⁷⁰ This Idea of Progress was an axiomatic, background, cultural assumption

Patentability, 48 J. PAT. OFF. SOC'Y 5, 10-11 & n.11 (1966) (looking at 1818 edition of Samuel Johnson's dictionary which lists both qualitative and physical movement definitions of "progress"; yet assuming without discussion that "progress" in the Progress Clause means the advancement of the human knowledge base and, therefore, concluding that "progress" merely requires "some utility" in each invention).

67. See VOLTAIRE, *CANDIDE* ch. 1, l.30; ch. 6, l.28; ch. 30, l.88. See also ADAM SMITH, *THE THEORY OF MORAL SENTIMENTS* 236 (Liberty Fund paperback ed., Indianapolis 1984) (1759) (discussing "the idea of that divine Being, whose benevolence and wisdom have, from all eternity, contrived and conducted the immense machine of the universe, so as at all times to produce the greatest possible quantity of happiness").
68. See, e.g., GABRIEL A. ALMOND ET AL., *PROGRESS AND ITS DISCONTENTS* (1982) (collecting essays on the Idea of Progress); HENRY GEORGE, *PROGRESS AND POVERTY* 541-43 (1899) (arguing that technological advancement exacerbates the problems caused by inequality in wealth, that increasing general prosperity does not lead to the end of disparities in wealth, that wealth disparities lead to the decline of civilizations, and suggesting the only solution is to abolish private property in land); GEORGES SOREL, *THE ILLUSIONS OF PROGRESS*, at xlii-xliiii, xlv (John Stanley & Charlotte Stanley trans., 1969) (presenting a Marxist account of "progress" as a theory supporting the dominance of the bourgeois, a "charlatan dogma").
69. See 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, 587 (1999) (stating that "[g]iven a constitutional provision rooted in a blind faith in 'progress,' we cannot read in historically contingent limitations on patentable subject matter" but failing to cite or discuss literature arguing the contrary position). Edward Walterscheid has recently suggested a different reading which gives Congress even more power: "The Congress shall have Power . . . To promote the Progress of Science and useful Arts [including] by securing for limited times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." Edward C. Walterscheid, *The Nature of the Intellectual Property Clause: A Study in Historical Perspective* (Part I), 83 J. PAT. & TRADEMARK OFF. SOC'Y 763, 767-68 (2001). But see L. RAY PATTERSON & STANLEY W. LINDBERG, *THE NATURE OF COPYRIGHT: A LAW OF USERS' RIGHTS* 49 (1991) (asserting that key value in Progress Clause is promoting learning by the public; second value is preserving the public domain; benefitting the author is merely instrumental).
70. Compare J.B. BURY, *THE IDEA OF PROGRESS* 192-94 (Dover Paperback ed. 1955) (1932) (claiming that first clear and complete exposition of the idea of progress was *L'an 2440*, a utopian fantasy first published anonymously in 1770 and suppressed in France), with ROBERT NISBET, *HISTORY OF THE IDEA OF PROGRESS*, at xi (Transaction paperback ed. 1994) (insisting that the idea of progress goes back to the ancient Greeks and Romans; idea of progress can be traced in a continuous line of works starting with St. Augustine).

in the United States by the mid-nineteenth century.⁷¹ But none of this evidences that the American-English word "progress" meant the same thing in 1789 that it meant in 1850 or means in 2001.

This definitional reticence has practical consequences. Unless "progress" is an independently monitored, objectively measurable goal, Congress' discretion to transfer the public domain to private right-holders is effectively almost unbounded. The other textual fences in the Progress Clause have already been breached. "Limited times" has been statutorily stretched from fourteen years⁷² to seventy years after the death of the author.⁷³ One court even approved Congress's purported creation of perpetual rights to prevent fixation of sound recordings without the performers' permission.⁷⁴ An "author" is "he to whom anything owes its origin; originator; maker; one who completes a work of science or literature."⁷⁵ "Writings," congruently, include "the literary productions of those authors . . . [including] all forms of writing, printing, engraving, etching, &c., by which the ideas in the mind of the author are given visible expression"⁷⁶ limited only by a weak originality requirement.⁷⁷ "Inventions" may include "anything under the sun that is made by man"⁷⁸ including living entities⁷⁹

71. See NISBET, *supra* note 70, at 204 ("By the second half of the nineteenth century, the concept of progress had become almost as sacred to Americans of all classes as any formal religious precept.").

72. See Patent Act of 1790, 1 Stat. 109, § 1 ("term not exceeding fourteen Years"); Copyright Act of 1790, 1 Stat. 124, § 1 (14 year term with additional 14 years to be granted only on additional application).

73. 17 U.S.C. § 302(a) (copyright term for works by natural authors). The copyright term for anonymous works, pseudonymous works, and works made for hire is 95 years from the year of first publication or 120 years from creation, which ever occurs first. 17 U.S.C. § 302(c). The term for patents is shorter. See 35 U.S.C. §§ 154(a)(2), 154(b) (utility patents end 20 years from date of application with certain exemptions); 35 U.S.C. § 173 (design patents last for 14 years from the date of grant); 35 U.S.C. § 161 (plant patents have the same term as utility patents).

74. See 17 U.S.C. § 1101. This statute was upheld against constitutional challenge. See *United States v. Moghadam*, 175 F.3d 1269 (11th Cir. 1999), *cert. denied*, Mar. 27, 2001, 2000 LEXIS 2203.

75. *Burrow-Giles Lithographing Co. v. Saroni*, 111 U.S. 53, 57-58 (1884) (holding that photograph of Oscar Wilde is copyrightable).

76. See *Burrow-Giles*, 111 U.S. at 57-58 (citing "Worcester"). Presumably, the Court relied upon Worcester's Dictionary. See Brief on the Part of the Defendant in Error at 3, *id.* ("Author: He to whom anything owes its origin; originator; creator; maker; first cause.—*Worcester's Dict.*").

77. See *Feist Publ'ns., Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 358-59 (1991) (stating that "[o]riginality [in factual compilations] requires only that the author make the selection or arrangement independently . . . and that it display some minimal level of creativity" or display a mere "creative spark").

78. *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980) (quoting S. REP. NO. 1979 (1951)). But see Malla Pollack, *The Multiple Unconstitutionality of Business Method Patents: Common Sense, Congressional Consideration, and Constitutional History*, 28 RUTGERS COMPUTER & TECH. L.J. 61, at nn.24-29 and accompa-

and business methods,⁸⁰ provided that any purported invention is not obvious to a person of ordinary skill in the relevant art.⁸¹

True, the Supreme Court⁸² has repeatedly stated that Congress' power to create private intellectual property is limited by the "promot[ion] of the progress of science and the useful arts," the recited purpose of Authors' Exclusive Rights (AERs) and Inventors' Exclusive Rights (IERs).⁸³ The Court, however, has yet to void any Congres-

nying text (2002) (pointing out Supreme Court's distortion of original language of report).

79. See, e.g., U.S. Pat. No. 6,323,390 for *Transgenic Mouse Models for Human Bladder Cancer*, available at <http://www.uspto.gov/patft/index/html> (last visited Dec. 20, 2001).
80. See *State St. Bank & Trust Co. v. Signature Fin. Group*, 149 F.3d 1368, 1375-77 (Fed. Cir. 1998) (declaring nonexistence of so-called business method exception to patentability). But see John I. Coulter, *The Field of the Statutory Useful Arts, Part II*, 34 J. PAT. OFF. SOC'Y 487, 494-99 (1952) (arguing that business methods are not included in the "useful arts"); Pollack, *supra* note 78, at section V.B (same); John R. Thomas, *The Patenting of the Liberal Professions*, 40 B.C. L. REV. 1139, 1169-75 (1999) (same).
81. See 35 U.S.C. § 103(a).
82. The D.C. Circuit, on the contrary, rejected the argument that "[t]he introductory language of the Copyright Clause constitutes a limit on congressional power." *Schnapper v. Foley*, 667 F.2d 102, 112 (D.C. Cir. 1981). This statement was merely dicta in *Schnapper* which approved copyright in a bicentennial movie commissioned by the federal government. The D.C. Circuit, however, recently relied on this language (among other grounds) to uphold the Copyright Term Extension Act of 1998. See *Eldred v. Ashcroft*, 239 F.3d 372, 377 (D.C. Cir. 2001), cert. granted sub nom. *Eldred v. Ashcroft*, 122 S. Ct. 1062 (2002). But see *Eldred v. Reno*, 255 F.3d 849, 854 (D.C. Cir. 2001) (Sentelle, J., dissenting from denial of rehearing en banc).
83. I use these terms to clearly distinguish the rights allowed by the Constitution from those Congress has chosen to create by statute (patents and copyrights). See Pollack, *supra* note 1, at 291 (introducing terminology and explaining its usefulness). The relevant Supreme Court cases are: *New York Times Co. v. Tasini*, 533 U.S. 483, 121 S. Ct. 2381, 2401, 2403 n.20 (2001) (Stevens, J., dissenting); *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 574-76 (1994); *Fogarty v. Fantasy*, 510 U.S. 517, 526 (1994); *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 349, 354 (1991); *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 146-48, 150, 151, 157, 164-65, 167 (1989); *Harper & Row Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 558, 563, 580, 589 (1985); *Sony Corp. v. Universal City Studios*, 464 U.S. 417, 429 (1984); *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 480-81, 484 (1974); *Goldstein v. California*, 412 U.S. 546, 546, 555 (1973); *Lee v. Runge*, 404 U.S. 887, 890-93 (1971); *Graham v. John Deere Co.*, 383 U.S. 1, 5-6, 9, 10 (1966); *Great Atlantic & Pacific Tea Co. v. Supermarket Equip. Corp.*, 340 U.S. 147, 155 (1951); *Automatic Radio Mfg. v. Hazeltine Research, Inc.*, 399 U.S. 827, 836-37, 839 (1950) (Douglas, J., dissenting); *Special Equip. Co. v. Coe*, 324 U.S. 370, 746-48 (1945) (Douglas, J., dissenting); *Fox Film Corp. v. Doyal*, 286 U.S. 123, 127-28 (1932); *Ware v. Winsor*, 62 U.S. (21 How.) 322, 327-29, 330 (1858); *Wheaton v. Peters*, 33 U.S. (8 Pet.) 591, 654, 668 (1834); *Shaw v. Cooper*, 32 U.S. (7 Pet.) 292, 310 (1833); *Pennock v. Dialogue*, 27 U.S. (2 Pet.) 1, 13, 19, 21 (1829).

sional largess on this basis.⁸⁴ The Court has never even checked to see if Congress purposely or rationally reached the conclusion that some statutory scheme does, or is likely to, "promote progress."⁸⁵ The Court's invocations of "progress," furthermore, are clearly dicta in all but two cases;⁸⁶ even in these cases, most (or perhaps all) of the articulated limitation rests on other words in the Clause.⁸⁷ These cases, furthermore, merely construe and enforce statutes. By the narrowest definition of "holding," we have no Supreme Court holding on the meaning or enforceability of the "progress" limitation in the Progress Clause.

The Progress Clause's limit should have real bite, because it should constrain the Commerce Clause by negative implication.⁸⁸ Such an implied limit should exist because the Court has held that the "uniformity" limit in the Bankruptcy Clause cannot be bypassed by invocation of the Commerce Clause.⁸⁹ The Progress Clause/Commerce

84. The Court did void the first federal trademark statute as, *inter alia*, not limited to "writings" of "authors," but that statute did not enlarge common law substantive rights. See *The Trade-Mark Cases*, 100 U.S. (18 Otto) 82 (1879).

85. *J.E.M. Agriculture v. Pioneer Int'l*, 122 S. Ct. 593 (2001), ignored this issue, see *id.* at 596 (stating question presented is merely statutory construction), even though the constitutional issue was raised in the Brief of Amicus Malla Pollack and Other Law Professors. See http://jurist.law.pitt.edu/amicus/jem_v_pioneer.pdf (last visited Dec. 25, 2001).

86. *Feist*, 499 U.S. 340 (1991); *Graham*, 383 U.S. 1 (1966).

87. Author/writing in *Feist*; inventor/discovery in *Graham*.

88. Negative implication was a common eighteenth century method of legal drafting. See, e.g., *THE FEDERALIST* No. 83 (Alexander Hamilton) ("The plan of the convention declares that the power of Congress . . . shall extend to certain enumerated cases. This specification of particulars evidently excludes all pretension to a general legislative authority."); *id.* No. 32 (Alexander Hamilton) (discussing pregnant negatives in relation to the taxing power); *id.* No. 84 (discussing the danger of including an incomplete list of rights); I WILLIAM WINSLOW CROSSKEY, *POLITICS AND THE CONSTITUTION* 486 (1953) ("[T]he enumerating of particular governmental powers in order to express limitations upon them was a favorite device of the Federal Convention.") (emphasis in original). Congress, furthermore, only has "the legislative powers" which were "herein granted." U.S. CONST. art. I, § 1. In contrast, the President has "the executive power," *id.* art. II, § 1, and the Supreme Court and lower federal courts have "the judicial power of the United States," *id.* art. III, § 1. See Gary Lawson, *Delegation and Original Meaning*, 88 VA. L. REV. 327, 336-38 (2002) (making this textual point).

89. See *Ry. Labor Executives Ass'n v. Gibbons*, 455 U.S. 457, 465 (1982); see also Paul J. Heald, *The Vices of Originality*, 1991 SUP. CT. REV. 143, 168-75 (arguing that *Gibbons* should prevent Congress from granting copyright in sweat works); Pollack, *supra* note 21, at 57-62 (supporting even stronger reading of *Gibbons*). But see Jane Ginsburg, "No Sweat?": *Copyright and Other Protection of Works of Information After Feist v. Rural Telephone*, 92 COLUM. L. REV. 338, 369-74 (1992) (proposing narrower reading of *Gibbons*). See also Heald & Sherry, *supra* note 36 (arguing that the Clause contains four limiting principles: the Suspect Grant Principle, the Quid Pro Quo Principle, the Authorship Principle, and the Public Domain Principle). The Necessary and Proper Clause does not undermine these limits because it cannot be used to "adopt measures which are prohibited by the

Clause interaction is currently under attack by the anti-circumvention provisions of the Digital Millennium Copyright Act⁹⁰ and proposed database protection statutes.⁹¹ Congress' increase of the copyright term is under attack as violative of the "limited times" provision.⁹² Another issue which seems over-ripe for litigation is the intersection between Constitutional/Congressional policy and state-based legal rights, including contractual expansion of AERs and IERs.⁹³

In sum, the Court has yet to enforce the negative implication of the Progress Clause,⁹⁴ but the pressure to do so is rising.⁹⁵ To enforce this limit, the Court will need a definition of "progress." This Article posits "spread."

Constitution" or "pass laws for the accomplishment of objects not intrusted to the government." *McCulloch v. Maryland*, 17 U.S. 316, 423 (1819). *But see Eldred v. Ashcroft*, 239 F.3d 372, 378 (D.C. Cir. 2001) (providing that Copyright Term Extension Act of 1998 would be constitutional under the Necessary and Proper Clause even if, *arguendo*, it was beyond the scope of the Progress Clause), *cert. granted* (Feb. 19, 2002) (U.S. No. 01-618). The Treaty Power does not allow by pass of the Progress Clause limits. *See Heald & Sherry, supra* note 36, at 1181-1182. The First Amendment also trumps the Treaty Power. *See Boos v. Barry*, 485 U.S. 312 (1988) (refusing to allow counselor treaty to permit limit First Amendment rights).

90. Digital Millennium Copyright Act, P.L. 105-304; *see also* Brief of Prof. Julie Cohen et al., *Universal City Studios v. Remeides* (Argument sections II, III), *available at* http://jurist.law.pitt.edu/amicus/universal_v_reimerdes_cohen.htm#II (visited Aug. 4, 2001). *But see Universal City Studios v. Corley*, 273 F.3d 429 (2d Cir. 2001), Nov. 28, 2001, *affg sub nom.*, *Universal Studios v. Remeides* (denying multiple constitutional challenges on the DMCA as applied to injunction against posting on the Internet hyperlinks to or text of DeCSS decryption software for decoding DVD movies).
91. *See, e.g., 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 (2000) (discussing problems with proposed statutes); Pollack, *supra* note 21, (same).
92. *Eldred v. Ashcroft*, 239 F.3d 372 (D.C. Cir., 2001), *cert. granted sub nom. Eldred v. Ashcroft*, 122 S. Ct. 1062 (2002).
93. I have argued that the states should be limited by the Progress Clause. *See Pollack, supra* note 1, at 300-26. The Court has said otherwise. *See Goldstein v. California*, 416 U.S. 470, 560-61 (1983); *Kewanee Oil v. Bicron Corp.*, 416 U.S. 470, 478-79 (1974).
94. Preemption cases routinely invoke the federal statutes as central, if not totally determinative. *See Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141 (1989); *Kewanee Oil Co. v. Bicron Co.*, 416 U.S. 470 (1974); *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225 (1964); *Compco Corp. v. Day-Brite Lighting Inc.*, 376 U.S. 234 (1964).
95. The Court expressly declined to reach the Progress Clause's limitation on trade dress protection of product configurations covered by expired utility patents. *See Traffix Devices, Inc. v. Mktg. Displays, Inc.*, 532 U.S. 23, 35 (2001).

C. How the Suggested Reading Fits the Constitutional Scheme

1. Originalism

No matter how good my empirical research, I would not expect anyone to accept my analysis if it was incongruent with basic principles held by the Federalists who drafted and ratified the Constitution. This section briefly demonstrates that my reading of the Progress Clause makes sense inside the Federalist belief structure. I am not, of course, claiming that mine is the only reading of the Progress Clause congruent with Federalist principles. A stronger claim is impossible. "Federalist principles" is an umbrella name, a short hand designation, for the differing, inconsistent, often incompletely analyzed beliefs held by a multitude of human beings who cooperated in supporting ratification of a political document.

First, according to Enlightenment Idea of Progress theorists, wide dissemination of information was a requirement for qualitative improvement of arts and sciences. Any subgroup of humans, any nation, might stagnate or regress. Mankind as a whole would "progress" because of the large number of individuals who would have the opportunity to add onto what earlier individuals had learned.⁹⁶ Writing, therefore, was very important. Committing information to a lasting, mobile format allowed more people to share and build on earlier work.⁹⁷ This, presumably, is why AERs are only allowable for "writings."⁹⁸

Second, according to both Enlightenment Idea of Progress theorists and many of the Framers, relative equality of all humans was part of the perfect society. According to Condorcet, "Our hopes for the future condition of the human race can be subsumed under three important heads; the abolition of inequality between nations, the progress of equality within each nation, and the true perfection of mankind."⁹⁹ This true perfection includes universal education.¹⁰⁰ "All men," after

96. See CONDORCET, SKETCH FOR A HISTORICAL PICTURE OF THE PROGRESS OF THE HUMAN MIND 33, 38, 42, 73-76, 92-93, 99-106, 117-20, 136-40, 164, 171, 186-88 (June Barraclough trans, Noonday Press, New York, n.d.) (1795); Turgot, *On Universal History*, in TURGOT ON PROGRESS, SOCIOLOGY AND ECONOMICS 61, 116-18 (Ronald L. Meek trans. & ed., Cambridge Univ. Press 1973).

97. See CONDORCET, *supra* note 96, at 76; Turgot, *supra* note 96, at 117-18; see also James Beattie, *The Theory of Language*, in DISSERTATIONS MORAL AND CRITICAL 231, 318 (Friedrich Frommann Verlag 1970 facsimile of 1783 ed.) ("Of the usefulness of Printing, as the means of multiplying books without end, of promoting the improvement of arts and sciences, and of diffusing knowledge through all the classes of mankind, I need not enlarge, as the thing is too obvious to require illustration.").

98. U.S. CONST. art. 1, § 8, cl. 8; 17 U.S.C. § 102(a) ("fixed in any tangible medium").

99. CONDORCET, *supra* note 96, at 173.

100. See *id.* at 182-84.

all, "are created equal and endowed by their Creator with certain inalienable rights" including the "pursuit of happiness"¹⁰¹ which requires intelligent, educated choice. General public education was a common, central tenet.¹⁰² Even the Bill of Rights created institutions for teaching governance skills to the general public.¹⁰³

As Madison famously said, "[k]nowledge will forever govern ignorance"; "[a] popular government without popular information[] or the means of acquiring it is but a prologue to a farce or a tragedy or perhaps both."¹⁰⁴ Madison, nevertheless, argued that the Constitution

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101. See Declaration of Independence. Garry Wills reads Jefferson's words as invoking the moral sense philosophy of Francis Hutchinson in which the "pursuit of happiness" involved constant attention to what was good for human society. See GARRY WILLS, *INVENTING AMERICA: JEFFERSON'S DECLARATION OF INDEPENDENCE* 250-55 (1978); see also John Adams, *Thoughts on Government: Applicable to the Present State of the American Colonies*, in 4 CHARLES FRANCIS ADAMS, *THE WORKS OF JOHN ADAMS, SECOND PRESIDENT OF THE UNITED STATES WITH A LIFE OF THE AUTHOR* 189, 193 (1851) ("[T]he happiness of society is the end of government"; "the happiness of man, as well as his dignity, consists in virtue."). But see Gordon S. Wood, *Heroics*, in N.Y. REV. 16-18 (Apr. 2, 1981) (disputing thesis that the Declaration of Independence invokes Hutchinson specifically, without disputing the Declaration's foundation in moral sentiment theory). See also FORREST McDONALD, *NOVUS ORDO SECLORUM* 53-55 (1985) (listing several different 18th century meanings of "equal," most of which allowed slavery).
 102. See GORDON S. WOOD, *THE CREATION OF THE AMERICAN REPUBLIC 1776-1787*, at 72, 120, 426, 570 (1998 paperback ed.) (1969). Many state constitutions mentioned public education. See GA. CONS. (1777) Art. LIV; MASS. CONS. (1780), ch. V, § II; N.C. CONS. (1776) LXI; N.H. CONS. (1784); PA. CONS. (1776) § 44; see also ADAMS, *supra* note 101, at 199 ("Laws for the liberal education of youth, especially of the lower class of people, are so extremely wise and useful, that to a humane and generous mind, no expense for this purpose would be thought extravagant."); Noah Webster, *An Examination into the Leading Principles of the Federal Constitution, by a Citizen of America*, in PAMPHLETS ON THE CONSTITUTION OF THE UNITED STATES, PUBLISHED DURING ITS DISCUSSION BY THE PEOPLE 1787-1788, at 25, 65 (Paul Leicester Ford ed., 1888, Da Capo Press reprint ed. 1968) ("[L]iberty stands on the immovable basis of a general distribution of property and diffusion of knowledge.").
 103. See AKIL REED AMAR, *THE BILL OF RIGHTS* xii (1998) (arguing that Bill of Rights involved "protection of various intermediate associations—church, militia, and jury—designed to create an educated and virtuous electorate").
 104. Letter from James Madison to W.T. Berry (Aug. 4, 1822), in JAMES MADISON, *THE COMPLETE MADISON* 337 (Saul K. Padover ed. 1953). A "gentleman from Rhode Island" was quoted in the *Pennsylvania Gazette* for similar sentiments:

Tyrants are the only enemies of literature, and ignorance and slavery go hand in hand. *Nothing but the general diffusion of knowledge* will ever lead us to adopt or support proper forms of government—for the weak and absurd constitutions are, like slavery, the offspring of ignorance. Nor does learning benefit government alone; agriculture, the basis of our national wealth and manufactures, owe all their modern improvements to it.

Letter from a gentleman of Rhode Island, June 7, 1787, *printed in* PENN. GAZETTE, June 20, 1787, Accessible Archives Item no. 73991) (emphasis added).

did not need a Bill of Rights.¹⁰⁵ Presumably, he thought the Progress Clause was not a danger to the public's ability to acquire knowledge. This may be because "progress" meant "spread," i.e. distribution. Certainly the tension between the First Amendment and the Progress Clause is tamed by my reading of "progress."¹⁰⁶

The Framers' infamous focus on preserving unequal private property¹⁰⁷ does not undermine my argument. Some have argued that Madison, among other Framers, believed authors had a natural right to copyright protection.¹⁰⁸ This argument, however, overlooks the limited quasi-property right such Framers seemingly supported. Besides the much narrower scope of both copyright and patent in English law at the time, we have contemporaneous statements to that effect by influential persons. Both Francis Hutchinson¹⁰⁹ and John Withers-

105. See THE FEDERALIST NO. 38 (James Madison); see also *id.* NO. 84 (Alexander Hamilton) ("For why declare that things shall not be done which there is no power to do? Why, for instance, should it be said that the liberty of the press shall not be restrained, when no power is given by which restrictions may be imposed?").

106. Even without this gloss on original language, many scholars have placed dissemination at the center of copyright theory. See, e.g., PATTERSON & LINDBERG, *supra* note 69. As Eileen Kane has suggested in conversation, dissemination's centrality is also supported by the disclosure requirement for patents, 35 U.S.C. § 112.

107. See JENNIFER NEDELSKY, PRIVATE PROPERTY AND THE LIMITS OF AMERICAN CONSTITUTIONALISM: THE MADISONIAN FRAMEWORK AND ITS LEGACY 3 (paperback ed. 1994) (1990). Furthermore, in the proto-United States "[t]he rich and the poor [were] not so far removed from each other as they [were] in Europe." J. HECTOR ST. JOHN DE CREVECOEUR, LETTERS FROM AN AMERICAN FARMER 41 (Susan Manning ed., Oxford Univ. Press paperback 1997). The Framers were proud of this relative equality and implied that they intended to preserve it. See Webster, *supra* note 102, at 59 ("A general and tolerably equal distribution of landed property is the whole basis of national freedom . . ."); see also 2 HENRY HOME, LORD KAMES, SKETCHES OF THE HISTORY OF MAN 326 (Georg Olms Verlagsbuchhandlung Hildesheim 1968 facsimile of 2d ed., 1778) (1775) ("No cause hitherto mentioned hath such influence in depressing patriotism, as inequality of rank and riches in an opulent monarchy."). See also McDonald, *supra* note 101, at 87-93 (discussing the ideological tie between republicanism and relatively equal property in early period of revolution); GORDON S. WOOD, THE RADICALISM OF THE AMERICAN REVOLUTION 170-72 (Vintage paperback ed. 1993) (1992) (asserting that white, male residents of North American colonies valued the absence of extreme property disparities).

108. See Alfred C. Yen, *Restoring the Natural Law: Copyright as Labor and Possession*, 51 OHIO ST. L.J. 517, 529 (1990) (relying on Madison's comment in Federalist). But see *infra* notes 161-63 and accompanying text (discounting importance of Federalist squib). The natural rights claim can also be supported by the Committee Report which led the Continental Congress to suggest the states pass copyright legislation, see *infra* note 147.

109. Francis Hutchinson seems to have had major influence in colonial North America both through his writings and through influential educator-ministers who followed his philosophy, such as John Witherspoon in New Jersey and Francis Allison in Pennsylvania. See David Fate Norton, *Francis Hutchinson in America*, in STUDIES ON VOLTAIRE AND THE EIGHTEENTH CENTURY 1547-68 (Theodore

spoon¹¹⁰ taught that an inventor has a natural right to reasonable compensation for his efforts, but does not have any right to hoard his learning if such reasonable compensation is available.¹¹¹ *The Federalist* asserts that the rights of inventors and authors stand on the same logical premises.¹¹²

2. *An Evolving Constitution*

Allowing the meaning of "progress" to evolve results in the same reading of the Progress Clause as using the original meaning of the word "progress." Both methods converge on "spread" as the meaning of "progress"; both, therefore, construe the Progress Clause to allow only such private property as helps the dissemination of science and the useful arts.¹¹³ Let me explain.

Besterman ed., 1976) (Transactions of the Fourth International Congress on the Enlightenment, Voltaire Foundation at the Taylor Institution, Oxford); see also WILLS, *supra* note 101; Wood, *supra* note 101.

110. John Witherspoon may have been "the most influential religious and educational leader in Revolutionary America." Thomas Miller, *Preface*, in JOHN WITHERSPOON, *THE SELECTED WRITINGS OF JOHN WITHERSPOON* vii, vii (Thomas Miller ed., 1990). Witherspoon was professor and President of the College of New Jersey, which became Princeton University. James Madison was one of his famous students. Witherspoon was the only clergyman to sign the Declaration of Independence, was a member of the Continental Congress, founded the American Presbyterian Church, and stumped in favor of the 1787 federal Constitution. See *id.* at vii; Miller, *Introduction*, in *id.* at 27-31 (1990).

111. John Witherspoon taught that "the public" has certain rights over every person in society. Society may demand that each person be useful, and has "a right to the discovery of useful inventions, provided an adequate price be paid to the discoverer." John Witherspoon, *Lectures on Moral Philosophy*, in *id.* at 152, 228. Garry Wills interprets similarly the following language in Hutchinson. See WILLS, *supra* note 101:

A like right we may justly assert to mankind as a system, and to every society of men, even before civil government, to compel any person who has fallen upon any fortunate invention, of great necessity or use for the preservation of life or for a great increase of human happiness, to divulge it upon reasonable terms.

2 FRANCIS HUTCHINSON, *A SYSTEM OF MORAL PHILOSOPHY* 109 (1755).

As a man cannot hoard useful ideas, he cannot destroy his own property if it is still useful to the community.

FRANCIS HUTCHINSON, *A SHORT INTRODUCTION TO MORAL PHILOSOPHY* 246-47 (1747).

112. See *THE FEDERALIST* NO. 43 (Madison, quoted *infra* note 161).

113. Using a completely different route, Margaret Chon reaches the same definition for the "post-modern progress" she wishes Congress to promote with intellectual property grants. See Chon, *supra* note 66, at 146 ("The project of the patent and copyright clause must be understood as access to knowledge, which is a type of property and civil right."). See also Carol M. Rose, *Romans, Roads, and Romantic Creators: Traditions of Public Property in the Information Age* 29, 31 (Nov. 2001) (Working Paper on file with author) (using Roman law categories of *res publicae* and *res divini juris* to explain importance of sharing intellectual works).

If the "progress" we want Congress to promote is the latest, most evolved meaning of "progress," we should not turn back to the nineteenth century "Idea of Progress." As post-moderns we know, of course, that a poll of the current common use of the word "progress" would result in a useless cacophony. The language in the Constitution has been removed from every day speech and imbued with an almost religious aura. Certainly the aura is too overpowering, too vague, and too disputed for this type of simplistic empirical research to be an acceptable method of defining legal limitations.

We have, however, a very simple way of determining the modern meaning of "progress." At its core, the post-Renaissance concept of progress is the claim that humans will change over time into more knowledgeable residents of a better society. To modernize "progress," therefore, we can ask how "We, The People of the United States"¹¹⁴ improved our fundamental charter, the Constitution. What did We enact as constitutional "progress"?

"We, the People" changed the Constitution to allow more of us to be part of "We, the People." This conclusion does not require any subjective evaluation. Just look at the Amendments to the Constitution.¹¹⁵ The first ten can be viewed in two different ways. First, they are part of the original document because the Constitution would not have been ratified without a promise to enact them; they are merely part of the baseline before we look for change. Alternatively, they protect individual citizens against the power of the newly created federal government.¹¹⁶ Either view is consistent with my thesis.

As for the other Amendments, the general trend is an increase in participation by more individual citizens. In 1804, the Twelfth Amendment separates out the votes for President and Vice President to allow the viability of the political party; a pooling of resources al-

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115. Court made doctrine is imposed on "We, the people." It also tends to oscillate. I, therefore, hesitate to rely on it here. One major change, however, seems both irrevokable and strongly supports my thesis. The Incorporation of most of the Bill of Rights against the States recognizes that these government units have become large enough to become oppressive. Incorporation gives more power to the people. See MICHAEL J. PERRY, *THE CONSTITUTION IN THE COURTS: LAW OR POLITICS?* 140 (1994) (asserting that incorporation "is a fixed feature of the American constitutional law: indeed, it has become a constitutive feature of modern American government. . . . It is not surprising, therefore, that today few persons are interested in challenging the application to the states of those Bill of Rights provisions on which it has relied in striking down state action."). But see RAOUL BERGER, *GOVERNMENT BY JUDICIARY: THE TRANSFORMATION OF THE FOURTEENTH AMENDMENT* 155-198 (2d ed. 1997) (attacking allegations that Congress intended to incorporate any of the Bill of Rights against the states when drafting the Fourteenth Amendment).

116. Part of this protection is protecting the intermediate protector, the State. Under this reading, the Eleventh Amendment might be read to support my thesis. It protects the financial viability of States.

lowing some groups to overcome collective action problems.¹¹⁷ 1865 through 1870 give us the Reconstruction Amendments ending slavery, giving former slaves the vote, and starting the process of forcing the rest of "We, the People" to treat African-Americans with equality. In 1913, the Sixteenth Amendment allows the direct federal income tax—a democratization of the cost of government.¹¹⁸ Amendment Seventeen makes the election of Senators more direct. In 1920, the Nineteenth Amendment gives women the right to vote. Sections one and two of the Twentieth Amendment enhance popular control of Congress by severely limiting the power of lame-duck members.¹¹⁹ The Twenty-Second Amendment creates a term limit for the Presidency. In 1961, the Twenty-Third Amendment finally allows the residents of the District of Columbia to vote for President and Vice President. The Twenty-Fourth Amendment, in 1964, outlaws the poll tax as a method of curtailing the right to vote. In 1971, the Twenty-Sixth Amendment lowers the voting age to eighteen. In 1992, the Twenty-Seventh Amendment restrains the power of Senators and Representatives to raise their own salaries without electoral feedback.

Some of these changes are minor. Some are major. All however are part of an ongoing movement towards allowing more people to have more power over their government. "We, the people," therefore, have demonstrated unequivocally that "progress" in "promoting the general welfare"¹²⁰ means spread, dissemination, sharing of power.

In sum, if we want to find an evolved meaning for "progress," we can look at the evolution of the Constitution. Constitutional "Progress" means sharing, spreading, disseminating the power. "Progress," therefore, means "spread." The Progress Clause, thus, allows Congress to create individual rights to exclude only when those rights promote *the spread* of science and the useful arts. The explanation is

117. See, e.g., JAMES A. HENRETTA, *THE EVOLUTION OF AMERICAN SOCIETY, 1700-1815: AN INTERDISCIPLINARY STUDY* 221 (paperback ed., D. C. Heath & Co. 1973) (1973) (explaining that ideologically disparate political parties were institutions for enabling larger percentage of population to have some political power).

118. See ROBERT A. BECKER, *REVOLUTION, REFORM AND THE POLITICS OF AMERICAN TAXATION, 1763-1783*, at 6-7 (1980) (pointing out that early tax systems overburdened the poor and the politically impotent in relation to the rich and powerful).

119. The original Constitution did not seat new members until the following December. U.S. CONST. art. 1, § 4, cl. 2. The interaction of this provision with the date of the national election and Congressional procedures left a long period of lame-duck control. If the Electoral College threw the Presidential or Vice Presidential choice into the Congress, the lame-duck Congress decided on the next executive. See S. REP. 72-26 (1932), *reprinted in* 75 CONG. REC. 1372-73. The latter disagreements between the House and the Senate were on the exact dates various officials took office, not on the underlying desire to enhance government responsiveness to general elections. See 75 CONG. REC. 5026-27 (1932).

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supported by the undoubted dependence of political decision making on access to information. If more people are involved in governing, more people need to be informed; information needs to be spread throughout the politically empowered population.

II. STARTING POINTS AND ASSUMPTIONS FOR TEXTUAL ANALYSIS

Constitutional construction is generally divisible into four methods: (a) asking what the words meant when enacted, (b) asking the intent of the drafters or ratifiers of the language at issue, (c) asking how the principles of the drafters or ratifiers counsel us to act in the present case requiring decision, and (d) asking how modern principles counsel us to act in the present case requiring decision.¹²¹ The last two methods often involve using modern definitions of amorphous words such as "reasonable" or "due process."¹²² As discussed in the next section, original intent, choice (b), seems unavailable for lack of evidence.¹²³ Choices (c) and (d) founder on the lack of consensus. Both now and in 1789, people disagree about both the correct baseline and the empirical outcome of different protection levels.¹²⁴ If we wish

121. Functional or structural analysis are variations of these stances. For example, *Alden v. Maine*, 527 US 706, 712-26 (1999), posits a non-textual limit on federal power based on the ratifying generation's alleged assumptions about sovereign entities, i.e. a variation of approaches (b) and (c).

122. See, e.g., *McGautha v. California*, 402 U.S. 183, 202 (1971) (providing that due process limits on jury instructions "reflect the evolving standards of decency that mark the progress of a maturing society") (internal quotation marks and citation omitted); *id.* at 241 (Douglas, J., dissenting) (providing that "the wooden position of the Court, reflected in today's decision, cannot be reconciled with the evolving gloss of civilized standards" which the Supreme Court has long read into the "procedural due process safeguards of the Bill of Rights"); *Duncan v. Louisiana*, 391 U.S. 145, 183 (1968) (Harlan, J., dissenting) (providing that "due process is an evolving concept" requiring "that old principles [be] subject[ed] to re-evaluation in light of later experience").

123. As usual, some exceptions exist. Hopefully, the history of the Statute of Anne should lead us to refuse to use copyright to empower censorship; a choice also compelled by the modern view of the First Amendment's speech and press clauses. The history of the Statute of Monopolies counsels us to refuse to allow government use of copyright or patent for indirect funding of government functions. See Malla Pollack, *supra* note 39, at 116-140 (making this argument while admitting that the courts have not taken this position).

124. "[N]othing is more properly a man's own than the fruit of his study" according to a 1783 report joined by James Madison. 24 JOURNALS OF THE CONTINENTAL CONGRESS 326 (1783), available at <http://memory.loc.gov/ammem/amlaw/lawhome.html> (last visited Aug. 4, 2001). Thomas Jefferson, however, wrote:

If nature has made any one thing less susceptible than all others of exclusive property, it is the action of the thinking power called an idea Its peculiar character, too, is that no one possesses the less, because every other possesses the whole of it. He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me Inventions then

to convince disparate others, therefore, we are left with only method (a), Original Meaning. Original Meaning also has the virtue of current Supreme Court approval.¹²⁵

Completely rejecting the original meaning approach as to this particular constitutional clause, furthermore, would seriously upset current practice. "Writings" has been expanded to include two and three dimensional art objects and music.¹²⁶ Under original meaning analysis, this move is easily supportable. "Author" in eighteenth century English was a very broad term. "God" was commonly described as the "author" of the physical world.¹²⁷ The physical world was a text in which man could read divine messages congruent with those in the Scriptures, God's verbal text.¹²⁸ Do we wish to cancel copyright protection of art and music? Do we wish to admit the level of inconsistency required to use an eighteenth century definition of "author," yet insist on a mid-nineteenth century definition of "progress"? I suggest that all interpreters of the Constitution admit that we should at least start construction of the Progress Clause with late eighteenth century word use.

To make any headway, even under Original Meaning theory, I need to make several assumptions. All are reasonable, but all are merely assumptions.

cannot, in nature, be a subject of property. Society may give an exclusive right to the profits arising from them, as an encouragement to men to pursue ideas, which may produce utility.

Letter to Isaac McPherson (813), in VI WRITINGS OF THOMAS JEFFERSON, at 180-81 (Washington ed.) (cited in *Graham v. John Deere Co.*, 383 U.S. 1, 8-9 n.2 (1966)).

125. See *Alden*, 527 U.S. at 734.

126. See 17 U.S.C. § 102(a) (2000).

127. See, e.g., JOHN MILTON, *PARADISE LOST*, in *THE POETICAL WORKS OF JOHN MILTON* 1, 173 (Oxford University Press ed., 1961) ("Author of all this thou seest."). Milton describes Satan as "author" of his children, Sin and Death, and as "author and prime architect" of the bridge Sin and Death build between hell and earth. *Id.* at 219, 222 (Book X, ll. 236, 356). See also JONATHAN BOUCHER, *A View of the Causes and Consequences of the American Revolution*, in *THIRTEEN DISCOURSES, PREACHED IN NORTH AMERICA BETWEEN THE YEARS 1763 AND 1755, WITH AN HISTORICAL PREFACE* 485 (Russell & Russell photo reprint, 1967) (1797) (referring to Satan as the "first author and founder of rebellion"); THOMAS BURNET, *THE SACRED THEORY OF THE EARTH* 26 (Centaur Press photo. reprint, 1965) (2d ed. 1691) (referring to God as the "author" of both human "Reason" and the "Sacred writings."). But see E.C. WALTERSCHEID, *THE NATURE OF THE INTELLECTUAL PROPERTY CLAUSE: A STUDY IN HISTORICAL PERSPECTIVE*, (forthcoming Spring 2002) (on file with author) (arguing that "writings" in Clause bears narrow meaning because it invokes narrower of meanings for "author" in Samuel Johnson's 1755 dictionary, "the first writer of anything; a writer in general").

128. See, e.g., FRANCIS BACON, *THE ADVANCEMENT OF LEARNING* 9 (Oxford University Press ed., 2000) (1605) ("[L]et no man . . . maintaine, that a man can search too farre, or bee too well studied in the Booke of Gods word, or in the Booke of Gods workes.").

First, I will assume that the words of the Progress Clause were carefully chosen for substantive reasons.¹²⁹ As discussed below, the wording does not follow any of the suggestions made at the 1787 Constitutional Convention. It does not quote any ancestral document. Perhaps the drafting committee merely considered the sound of the words. I will assume, however, that the committee purposefully chose words that were not legal terms of art. I will assume that the committee chose these words because of what they meant.

Second, I will assume that the Progress Clause contains no surplusage. Eighteenth century authorities on style demanded brevity and clarity.¹³⁰ The no surplusage rule is a time tested canon of statutory construction.¹³¹ I admit that the Court has been known to be less kind to constitutional language.¹³² The Court, however, usually gives intent-related reasons for such lapses.¹³³ Intent, however, is too murky in this instance to be a useful tool for someone who wishes to persuade.

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129. *But see* LEONARD W. LEVY, *ORIGINAL INTENT AND THE FRAMERS' CONSTITUTION* 179 (1988) (asserting that Framers were not careful draftsmen).
 130. *See* John Witherspoon, *Lectures on Eloquence*, in *SELECTED WRITINGS OF JOHN WITHERSPOON* 231, 245, 272, 291 (Thomas Miller ed., 1990) (insisting on brevity and clarity). "The first rule for promoting the strength of a sentence is, to *prune it of all redundant words and members*." LINDLEY MURRAY, *ENGLISH GRAMMAR* 200 (Scolar Press Ltd. photo. reprint) (1795) (emphasis in original). *See also id.* at 191 ("All unmeaning words, introduced merely to round the period, or fill up the melody, are great blemishes in writing. They are childish and puerile ornaments, but which a sentence always loses more in point of weight, than it can gain by such additions to its sound"). Murray's grammar was "without doubt the most popular and frequently reprinted grammar of English during the nineteenth century" and very popular in the United States. *Id.* at n.p. (editor's note before facsimile of original title page).
 131. *See, e.g.,* *TRW, Inc. v. Andrews*, 534 U.S. 19, 24 (2001) ("It is a cardinal principle of statutory construction that a statute ought, upon the whole, to be so construed that, if it can be prevented, no clause, sentence, or word shall be superfluous, void, or insignificant") (internal quotation marks omitted); *Platt v. Union Pac. R.R.*, 99 U.S. (9 Otto) 48, 58 (1878) (mem.) ("[A] legislature is assumed to have used no superfluous words"). *But see* *Chickasaw Nation v. United States*, 122 S. Ct. 528, 532 (2001) (admitting that Court's interpretation of statute renders some words mere surplusage, but asserting that "no other reasonable reading of the statute" is possible).
 132. *See* *Board of Trustees v. Garrett*, 531 U.S. 356, 363 (2000) (admitting that Court's case law oversteps the language of the Eleventh Amendment); *Maryland v. Craig*, 497 U.S. 836, 870 (1990) (Scalia, J. dissenting) (asserting that majority opinion "gives the defendant virtually everything the Confrontation Clause guarantees (everything, that is, except confrontation)").
 133. *See* *Hans v. Louisiana*, 134 U.S. 1, 15 (1890) (refusing to follow literal reading of the Eleventh Amendment because allowing a citizen to sue his own state in federal court is "a construction never imagined or dreamed of" when the Eleventh Amendment was adopted or when Constitution was established); *Craig*, 497 U.S. at 845 (discussing "central concern of the Confrontation Clause" in light of historical practices it rejected).

Third, I will assume that the word "progress" has the same meaning as to the discoveries of inventors as it does regarding the writings of authors.¹³⁴ The parallel construction of the Progress Clause implies this conclusion. At least one leading scholar, however, argues that "commerce" may have a different meaning in Article I, Section 8, Clause 3 when applied to "commerce among the several states" than when applied to commerce "with foreign nations."¹³⁵ That argument, however, claims an original intent basis for the distinction and admits that, absent an original intent record, the default position should be to give a word the same meaning throughout.

Before I discuss "progress," I need to provide 1789 definitions for some of the other words in the Clause. "Useful arts" are the technological arts, as opposed to the liberal arts.¹³⁶ In the eighteenth century, "science" included all knowledge and all subjects of organized study.¹³⁷

With this background, we are prepared to construe the word "progress."

III. DRAFTING AND RATIFICATION

The standard explicative sources from the constitutional drafting and ratification process are not helpful in defining "progress" as used in the Progress Clause.

First, the historical precursors of the Progress Clause do not use the same language. The English 1624 Statute of Monopolies¹³⁸ ("Stat-

134. *But see* Birnhack, *supra* note 66, at 16-17 (arguing that "copyright law is best understood in terms of *intellectual* progress, while patent law is best understood in terms of *material* progress."). Larry Lessig, in email conversation, raised the possibility that Congress has the powers to "promote the progress of science" and "to promote the useful arts." While possible, this reading strains my sense of eighteenth century parallelism. *See* *Martin v. Hunter's Lessee*, 14 U.S. (1 Wheat.) 304, 332-33 (1816) (discussing similar parallelism issue in article II, section 2). Furthermore, "useful arts" is a common eighteenth century phrase, while "progress of science" is not.

135. *See* Randy E. Barnett, *The Original Meaning of the Commerce Clause*, 68 U. CHI. L. REV. 101, 144-45 (2001).

136. *See* NOAH WEBSTER, AMERICAN DICTIONARY OF THE ENGLISH LANGUAGE, at unnumbered page headed "ARR - ARS - ART" (Foundation for American Christian Education photo. reprint, 1998) (1828) (stating within second definition of "art" that "[a]rts are divided into *useful* or *mechanic* and *liberal* or *polite*."). *See also* Coulter, *supra* note 80, at 494-99 (1952); Pollack, *supra* note 78, at 86-119; Thomas, *supra* note 80, at 1169-75.

137. *See* WEBSTER, *supra* note 136, at unnumbered page headed SCI-SCI-SLA ("SCIENCE, n. . . (1) In a *general sense* . . . knowledge . . . (2) In *philosophy*, a collection of the general principles or leading truths relating to any subject. . . (3) Art derived from precepts or built on principles. . . (4) Any art or species of knowledge. . . (5) One of the seven liberal branches of knowledge, viz. grammar, logic, rhetoric, arithmetic, geometry, astronomy and music").

138. 21 Jam., ch. 3 (1624) (Eng.).

ute") is the recognized ancestor of American utility patents.¹³⁹ This Statute was an early Parliamentary attempt to limit monarchical power by preventing royal access to revenue sources unguarded by Parliament.¹⁴⁰ The Statute opens by banning all legal claims of "monopoly,"¹⁴¹ but excepts from this general ban certain privileges granted to "the first and true inventor" of any "new manufacture."¹⁴² The Statute does not mention anything akin to "progress." The purpose preamble discusses only preventing harm to the public from improper grants.¹⁴³ The English Statute of Anne¹⁴⁴ ("Anne") is the acknowledged ancestor of American copyright statutes.¹⁴⁵ Anne is labeled "An act for the encouragement of learning" and declares that it is enacted both to prevent "printers, booksellers and other persons" from printing books "without the consent of the authors or proprietors" and "for the encouragement of learned men to compose and write useful books."¹⁴⁶ Anne does foreshadow the Progress Clause's assumption that legal control creates monetary rewards which, in turn, may provide a motive for publishing books. The word "progress," however, is absent.

During the Articles of Confederation period, a committee of the Continental Congress did submit a report requesting the member states to pass copyright statutes. Twelve enacted such statutes. Neither the committee report nor the statutes, however, mention the "progress" of technology, learning, knowledge, science, or literature.¹⁴⁷

139. See, e.g., *Graham v. John Deere Co.*, 383 U.S. 1, 5 (1966).

140. See CHARLES HOWARD McILWAIN, *CONSTITUTIONALISM ANCIENT AND MODERN* 138 (1940) (characterizing Statute as first win by Parliament in its fight against absolute monarchy). But see Chris R. Kyle, *'But a New Button to an Old Coat': The Enactment of the Statute of Monopolies*, 21 *James I* chap. 3, 19 J. LEGAL HIST. 203 (1998) (arguing that Statute was enacted with James I's cooperation).

141. "Monopoly" in the 1624 statute is a vague pejorative term. See Pollack, *supra* note 39, at 40 & n.221.

142. 21 Jam., ch. 3, §§ V-VI (1624) (Eng.) (regarding existing and future grants).

143. 21 Jam., ch. 3 § I (1624) (Eng.) (stating that "upon Misinformations, and untrue Pretences of publick Good" persons have obtained illegal grants "to the great Grievance and Inconvenience of your Majesty's Subjects").

144. 8 Anne, ch. 19 (1710) (Eng.).

145. See, e.g., PAUL GOLDSTEIN, *COPYRIGHT* § 1.13.1, at 1:27 (2d ed. 2000).

146. 8 Anne, ch. 19 (1710) (Eng.).

147. The committee, consisting of Mr. [Hugh] Williamson, Mr. [Ralph] Izard and Mr. [James] Madison, to whom were referred sundry papers and memorials from different persons on the subject of literary property, being persuaded that nothing is more properly a man's own than the fruit of his study, and that the protection and security of literary property would greatly tend to encourage genius, to promote useful discoveries and to the general extension of arts and commerce, beg leave to submit the following report:

Resolved, That it be recommended to the several states, to secure to the authors or publishers of any new books not hitherto printed, being citi-

The word "progress" does appear in the preambles to the almost identical Massachusetts, New Hampshire, and Rhode Island statutes:

Whereas the improvement of knowledge, the progress of civilization, the public weal of the community, and the advancement of human happiness, greatly depend on the efforts of learned and ingenious persons in the various arts and sciences¹⁴⁸

"Progress" is not tied to "knowledge"; it is tied to "civilization." This phrase may easily mean that civilization is to spread geographically and throughout the population—hardly an odd thought considering how little of the available land had been settled by Europeans and how many niceties of society were confined to large settlements with water transport.¹⁴⁹ This geographic reading of "the progress of civili-

zens of the United States, and to their heir or assigns 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 heirs or assigns 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, or their assigns their executors, administrators and assigns, by such laws and under restrictions as to the several states may seem proper.

24 JOURNALS OF THE CONTINENTAL CONGRESS 326-27 (Friday, May 2, 1783), available at <http://memory.loc.gov/ammem/amlaw/lawhome.html> (last visited Aug. 4, 2001). For full text of all copyright statutes passed by the states during the Articles of Confederation period, see Copyright Office, Library of Congress, *Copyright Enactments: Laws Passed in the United States Since 1783 Relating to Copyright*, 3 COPYRIGHT OFF. BULL. (rev. ed. 1963); see also *id.* at 140 (providing the text of 1672 enactment of the Massachusetts Bay Colony forbidding any printer from printing more copies of any book than agreed to by the "outer of the said coppie or coppies").

148. *An Act for the Purpose of Securing to Authors the Exclusive Right and Benefit of Publishing Their Literary Productions, for Twenty-One Years* (enacted Mar. 17, 1783) reprinted in *id.*, at 4-5. The New Hampshire statute of Nov. 7, 1783 opens with almost identical language:

As the improvement of knowledge, the progress of civilization, and the advancement of human happiness, greatly depend on the efforts of ingenious persons in the various arts and sciences . . .

An Act for the Encouragement of Literature and Genius, and for securing to authors the exclusive right and benefit of publishing their literary productions, for twenty years, reprinted in *id.* at 8. The Rhode Island statute enacted in the December session of 1783 opens:

Whereas the improvement of knowledge, the progress of civilization, the public weal of the community, and the advancement of human happiness, greatly depend on the efforts of learned and ingenious persons, in the various arts and sciences . . .

An Act for the Purpose of securing to authors the exclusive right and benefit of publishing their literary productions for twenty-one years, reprinted in *id.* at 9.

149. Colonizing a new continent necessarily involved discovering new knowledge. "Perhaps never before in a civilized country had physical and intellectual expansion been so clearly synonymous" as in colonial North America. DANIEL J. BOORSTEIN, *THE AMERICANS: THE COLONIAL EXPERIENCE* 159 (Vintage Paperback ed., 1958).

zation" is congruent with the wording of the then-current constitution of the state of Massachusetts.

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 this commonwealth to cherish the interests of literature and the sciences, and all seminaries of them; especially the university at Cambridge, public schools and grammar schools in the towns; to encourage private societies and public institutions, rewards and immunities, for the promotion of agriculture, arts, sciences, commerce, trades, manufactures, 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.¹⁵⁰

This passage is repeated almost verbatim in the New Hampshire state constitution;¹⁵¹ it is slightly echoed in the Rhode Island Constitution.¹⁵² Similarly, four of these early copyright statutes assert that

150. MASS. CONST. of 1780, ch. 5, § 2, reprinted in PHILLIP B. KURLAND & RALPH LERNER, 3 *THE FOUNDERS' CONSTITUTION* 39 (1987). The 1780 Massachusetts Constitution is based on a draft composed by John Adams. See LOUIS ADAMS FROTHINGHAM, *A BRIEF HISTORY OF THE CONSTITUTION AND GOVERNMENT OF MASSACHUSETTS WITH A CHAPTER ON LEGISLATIVE PROCEDURE* 25-27 (1916). This subsection appears to have been drafted completely by John Adams and enacted as suggested without negative comment. See ADAMS, *supra* note 101, at 259 n.1 at 261 (1851) ("I was somewhat apprehensive that criticism and objections would be made to the section, and particularly that the "natural history" and the "good humor" would be stricken out; but the whole was received very kindly, and passed the convention unanimously, without amendment") (allegedly quoting an 1809 statement by John Adams).

151. Knowledge and learning, generally diffused through a community, being essential to the preservation of a free government; and spreading the opportunities and advantages of education through the various parts of the country, being highly conducive to promote this end; it shall be the duty of this government to cherish the interest of literature and the sciences, and all seminaries and public schools, to encourage the promotion of agriculture, arts, sciences, commerce, trades, manufactures and natural history of the country . . .

N.H. CONST. of 1784, reprinted in 6 WILLIAM F. SWINDLER, *SOURCES AND DOCUMENTS OF UNITED STATES CONSTITUTIONS* 344, 355 (1975). When New Hampshire passed its first copyright statute, it was governed by the Constitution of 1776—a very brief document passed by the colonial legislature after the "sudden and abrupt departure" of the royal governor and many of his council. *Id.* at 342. A new state constitution was drafted in 1779 and presented to the voters, but it was rejected at the polls. The suggested 1779 New Hampshire Constitution did not contain any mention of knowledge or learning. See 11 *TOWN PAPERS* 741-45 (Isaac W. Hammond ed., 1882).

152. Rhode Island remained governed by the royal charter creating the colony until 1842. See 8 SWINDLER, *supra* note 151, at 340 (editorial note); *id.* at 363 (reprinting Charter of Rhode Island and Providence Plantations issued 1663 by Charles II of England). The 1842 Rhode Island Constitution recites diffusion of knowledge as the basis for requiring public schools. R.I. CONST. art. XII § 1, re-

new works help "mankind,"¹⁵³ and five make provision for overriding the author's privilege if he fails to make sufficient copies of his work available locally at reasonable prices.¹⁵⁴

In summation, eight of the twelve pre-U.S. Constitution copyright statutes officially endorse the spread of knowledge.

At the 1787 Constitutional Convention, delegates voiced several relevant suggestions for congressional powers. "To grant to literary authors their copy rights for a limited time."¹⁵⁵ "To encourage by premiums & provisions, the advancement of useful knowledge and of discoveries."¹⁵⁶ "To grant patents for useful inventions."¹⁵⁷ "To secure to Authors exclusive rights for a limited time."¹⁵⁸ While several of these suggestions rely on the concept of monetary incentive, none uses the word "progress." Madison's notes, furthermore, do not include any discussion of these suggestions. All we know is that the current language of Article I, section 8, clause 8 emerged complete from committee on September 5, 1787 and was accepted with no one contradicting.¹⁵⁹

The ratification debates and related literature are unhelpful. They barely mention the Progress Clause. No one defined the word "progress."¹⁶⁰ The fullest discussion we have is Madison's short paragraph in the *Federalist Papers*.¹⁶¹ Madison claimed that, as to

printed in 8 SWINDLER, *supra* note 151, at 386, 395 ("The diffusion of knowledge, as well as of virtue, among the people being essential to the preservation of their rights and liberties, it shall be the duty of the general assembly to promote public schools, and to adopt all means which they may deem necessary and proper to secure to the people the advantages and opportunities of education.").

153. Connecticut and New York mention "service to mankind." COPYRIGHT OFF. BULL., *supra* note 147, at 1, 19. Massachusetts refers to the "benefit of mankind." *Id.* at 4. New Jersey invokes the "general good of mankind." *Id.* at 6.

154. Connecticut, South Carolina, North Carolina, Georgia, and New York. *See id.* at 2-3, 13, 16, 18, 20. Massachusetts required two copies be given free to the library of the University of Cambridge. *See id.* at 4-5.

155. JAMES MADISON, NOTES ON DEBATES IN THE FEDERAL CONVENTION OF 1787, at 480 (1966) (1787) (Madison's suggestion).

156. *Id.* (Madison's suggestion).

157. *Id.* (Pinkney's suggestion).

158. *Id.* (Pinkney's suggestion). Pinkney also suggested "To establish seminaries for the promotion of literature and the arts & sciences" and "To establish public institutions, rewards and immunities for the promotion of agriculture, trades, and manufactures." *Id.*

159. *Id.* at 580-81.

160. *See* Pollack, *supra* note 39, at 99-116 (discussing mentions of the Progress Clause during the ratification process); Walterscheid, *supra* note 69, at 773-74 (same).

161. THE FOURTH class comprises the following miscellaneous powers: 1. A power "to promote the progress of science and useful arts, by securing, for a limited time, to authors and inventors, the exclusive right to their respective writings and discoveries." "The utility of this power will scarcely be questioned. The copyright of authors has been solemnly adjudged, in Great Britain, to be a right of common law. The right to useful inventions seems with equal reason to belong to the inventors. The

patents and copyrights, "the public good fully coincides with the claims of individuals." This seems simplistic at best. We might consider Madison's words a gloss on the word "progress," but I am more inclined to dismiss The Federalist's squib as a rapidly penned attempt to discuss all clauses in the proposed Constitution. The *Federalist* paragraph misstates then-current English law.¹⁶² The Federalists, furthermore, were rather too busy replying to objections to the Constitution to spend much thought on a clause whose positive grant of power had not been attacked.¹⁶³

In sum, while many scholars assume that the words in the Progress Clause invoke the Idea of Progress and paraphrase earlier documents, these are mere assumptions. The Progress Clause has unique wording and comes without an official set of definitions.¹⁶⁴ We must, therefore, turn to other evidence.

public good fully coincides in both cases with the claims of individuals. The States cannot separately make effectual provisions for either of the cases, and most of them have anticipated the decision of this point, by laws passed at the instance of Congress.

THE FEDERALIST NO. 43 (James Madison)

162. Madison implied that inventors had common law rights in their inventions, but the eighteenth century crown had no obligation to issue any specific patent of invention. See, e.g., Edward Armitage, *Two Hundred Years of English Patent Law*, in 200 YEARS OF ENGLISH AND AMERICAN PATENT, TRADEMARK, AND COPYRIGHT LAW 3, 4 (1976). During the reign of Elizabeth I, patents were refused for Lee's stocking frame and Harrington's water closet. See E. Wyndham Hulme, *The History of the Patent System Under the Prerogative and at Common Law. A Sequel.*, 16 L.Q. REV. 44, 53 (1900). On copyright, English law had recently changed, perhaps without Madison's knowledge. See John F. Whicher, *The Ghost of Donaldson v. Beckett: An Inquiry into the Constitutional Distribution of Powers over the Law of Literary Property in the United States,—Part I*, 9 BULL. COPYRIGHT SOC'Y U.S. 102, 133 (1961) (asserting that Madison was probably relying on an outdated version of Blackstone).
163. See Andrew J. Reck, *Moral Philosophy and the Framing of the Constitution*, reprinted in LIBERTY, PROPERTY, AND THE FOUNDATION OF THE AMERICAN CONSTITUTION 23, 36 (Ellen Frankel Paul & Howard Dickman eds., 1989) (stating that the authors of the *Federalist Papers* were "preoccupied with the immediate task of elucidating and defending the provisions of the Constitution against the arguments of the Antifederalists.").
164. Some interpreters claim special authority for constitutional readings endorsed by the first Congress. See, e.g., Harmelin v. Michigan, 501 U.S. 957, 980 (1991) (Opinion of Scalia, J.) ("The actions of the First Congress, which are of course persuasive evidence of what the Constitution means . . .") (citations omitted). But see *id.* at 1014 (Kennedy, J., dissenting) ("[T]he Court's jurisprudence concerning the scope of the prohibition against cruel and unusual punishments has long understood the limitations of a purely historical analysis.") (citations omitted). Leaving aside the weight of such evidence, I have not discovered any early congressional discussion on this specific point, let alone any group-endorsed action. At most, we have records demonstrating a reluctance to read the Progress Clause broadly. When one would-be explorer requested funding for an expedition to Baffin's Bay, Mr. Tucker "expressed a doubt whether the Legislature has power by the Constitution to go further in rewarding the inventors of useful ma-

IV. TESTING DEFINITIONS IN CONTEXT

The Progress Clause makes more linguistic sense when "progress" is defined as "spread" of knowledge and technology rather than either "qualitative improvement" or "quantitative improvement" (whether quantity is judged numerically or by economic value).

The first problem with accepting either of these alternative definitions is surplusage. If, as I have assumed, the Progress Clause contains no surplusage, "promoting the progress of science and useful arts" must mean something different from "promoting science and useful arts."¹⁶⁵ This alone bars both the quantity and quality definitions.

"Quality improvement" makes the language redundant. Telling a legislature "to promote the quality improvement of science and the useful arts" is the same as instructing it to "to promote science and the useful arts"; both reduce to encouraging the investment of time and money into work in science and the useful arts. My hunt through seventeenth and eighteenth century sources, furthermore, located numerous usages of the shorter phrase or its equivalent with this meaning. Francis Bacon's leading book arguing the practical usefulness of the search for knowledge is titled *The Advancement of Learning*, not *The Advancement of the Progress of Learning*.¹⁶⁶ Mandeville's *Fable of the Bees* repeatedly refers to "promoting" arts and sciences,¹⁶⁷

chines, or discoveries in sciences, than merely to secure to them for a time the right of making, publishing and vending them." 1 ANNALS OF CONGRESS 180 (April 20, 1789), at <http://memory.loc.gov> (last visited May 3, 2001); see also IV DOCUMENTARY HISTORY OF THE FIRST FEDERAL CONGRESS OF THE UNITED STATES OF AMERICA 531 (Charlene B. Bickford & Helen E. Veit eds., 1986) (reprinting committee report stating that the request "involves an enquiry into the Constitutional powers of Congress"). Some persons were concerned that "inventor" and "discovery" might not include importers of new technology, even though such persons were allowed utility patents in Great Britain. See Pollack, *supra* note 78, at nn.71-78 and accompanying text.

165. But see Heath W. Hoglund, *Patent Fee Diversion Crosses Constitutional Boundary*, 83 J. PAT. & TRADEMARK SOC'Y 725, 725 (2001) (arguing that "Congress' power must be exercised in a way that promotes science and technological inventions," without noticing omission of "progress" from the constitutional command).
166. See BACON, *supra* note 128. But see SAMUEL JOHNSON, THE PLAN OF A DICTIONARY 2 (Scalar Press Ltd. photo. reprint 1970) (1747) (stating that the purpose of the dictionary was "to promote the improvement of [his] native tongue"); Jonathan Swift, *The Bickerstaff Papers*, in JONATHAN SWIFT, GULLIVER'S TRAVELS AND OTHER WRITINGS 455, 467 (Miriam Kosh Starkman ed., Bantam paperback 1962) ("But it seems this gentleman, instead of encouraging the progress of his own art, is pleased to . . .").
167. See, e.g., 2 BERNARD MANDEVILLE, THE FABLE OF THE BEES: OR, PRIVATE VICES, PUBLIC BENEFITS 43 (Clarendon Press 1924) (1714) ("I am convinced that the Money of most rich men is laid out with the social Design of promoting Arts and Sciences . . ."); *id.* at 366 ("[O]ur pride, sloth, sensuality and fickleness are the great patrons that promote all Arts and Sciences . . .").

but never to "promoting the progress" of any art or science. Alexander Hamilton's famous manufacturing group called itself the Pennsylvania Society for Encouragement of Manufactures and the Useful Arts,¹⁶⁸ not the Pennsylvania Society for the Encouragement of the Progress of Manufactures and the Useful Arts. The Statute of Anne is "An act for the encouragement of learning," not for "the encouragement of the progress of learning." The Massachusetts and New Hampshire Constitutions call for the "promotion of agriculture, arts, sciences, commerce, trades, manufactures, and a natural history of the country," not for the "promotion of the progress of agriculture, [etc.]." Even the Continental Congress' committee report argues that "the protection and security of literary property would greatly tend to encourage genius [and] to promote useful discoveries";¹⁶⁹ it does not speak of "encouraging the progress of genius" or "promoting the progress of useful discoveries."¹⁷⁰

The quantitative definition makes "the progress of" even more clearly redundant. What does it mean to "promote science and the useful arts," if not to take action that will increase the quantity of time, effort, money, or other resources devoted to "science and the useful arts" so as to increase the probable output? What about an economic interpretation of quantity? Under an economic reading, Congress is supposed to create those rights to exclude which result in the creation of works with the greatest total economic value. Unfortunately, the economic value of a work depends on the legal rights Congress creates.¹⁷¹

168. See *Announcements Concerning the Pennsylvania Society for Encouragement of Manufacture and the Useful Arts*, in 2 THE AMERICAN MUSEUM, OR REPOSITORY OF ANCIENT AND MODERN FUGITIVE PIECES 167.

169. JOURNALS OF THE CONTINENTAL CONGRESS, *supra* note 147, at 326-27.

170. See also John Milton, *Paradise Regained*, in JOHN MILTON, THE POETICAL WORKS OF JOHN MILTON 283, 290 (Helen Darbishire ed., Oxford University Press photo. reprint 1961) (including self-description by Jesus that "my self I thought/Born to that end, born to promote all truth,/ All righteous things").

171. For example, Congress grants music composers more leverage over public performances than it grants to recorded vocalists. See 17 U.S.C. § 106(5) (1996). See *supra* note 41 and accompanying text (discussing this circularity in reference to the CTEA); see also Cohen, *Copyright and the Perfect Curve*, *supra* note 15, at 1800 (arguing that "the assumption that 'progress' is qualitatively independent of the underlying entitlement structure is wrong" and that protection choices influence types of works created). I would object to the economic reading on several other grounds. I do not accept Kaldor-Hicks optimality as a suitable social goal. I doubt that either most Framers or their generation would have adopted Kaldor-Hicks. The federal government, for example, would have been much less expensive to run with an unicameral legislature. However, one version of "progress" theory is held by economic rationalists who conflate social improvement with increase in material prosperity and generally assume that such material progress requires a modern, liberal market. See David A. Westbrook, *Law Through War*, 48 BUFF. L. REV. 299, 311-13 (2000).

As the chart on the *Pennsylvania Gazette* demonstrates,¹⁷² furthermore, the quantitative increase meaning of "progress" was quite rare. I found only twenty-one numerical uses out of a total of 575 occurrences of the word "progress."

The next problem is clarity. Why use an unusual meaning of a common word when more usual words exist?¹⁷³ My research evidences that an eighteenth century writer of English who wanted to indicate a desire for qualitative improvement would have been more likely to use some form of "improvement,"¹⁷⁴ "perfection,"¹⁷⁵ or "advancement."¹⁷⁶ Pinkney, for example, suggested that Congress have the power "to encourage by premiums & provisions, the advancement of useful knowledge and of discoveries," echoing Bacon's treatise.¹⁷⁷

172. See *infra* Section V.B.

173. "Clearness is secured by using the words (nouns and verbs alike) that are current and ordinary." Aristotle, *Rhetoric*, in *RHETORIC AND POETICS* 167 (Modern Library ed. 1954). See also MURRAY, *supra*, note 130, at 188 ("Hardly in the language are there two words that convey precisely the same idea . . . to be full and easy, and at the same time correct and exact in the choice of every word, is no doubt one of the highest and most difficult attainments in writing."); *id.* at 191 ("Whatever leaves the mind in any sort of suspense as to the meaning, ought to be avoided with great care."); Witherspoon, *supra* note 130, at 245, 272, 291 (insisting on clarity as well as brevity).

174. Thomas Reid, a member of the Scottish Enlightenment with strong influence on colonial North America, uses "improvement" for Idea of Progress quality increase. See THOMAS REID, *INQUIRY AND ESSAYS* 31 (Keith Lehrer & Ronald E. Beanblossom eds., Bobbs-Merrill paperback ed. 1983) (1863) (showing use of "improvement" by suggesting that "[o]ne of the noblest purposes of sound undoubtedly is language, without which mankind would hardly be able to attain any degree of improvement above the brutes"); *id.* at 32 ("But the origin of language deserves to be more carefully enquired into, not only as this inquiry may be of importance for the improvement of language, but as is related to the present subject, and tends to lay open some of the first principles of human nature."); *id.* at 33 ("These artificial signs [words with merely conventional denotations] must multiply with the arts of life, and the Improvements of knowledge."); see also WILLS, *supra* note 101, at 181-89 (discussing importance of Reid's philosophy, especially its reliance on common sense).

175. Defoe's Robinson Crusoe repeatedly uses forms of "perfection" and "improvement" in this way. See DANIEL DEFOE, *THE LIFE AND STRANGE ADVENTURES OF ROBINSON CRUSOE, OF YORK, MARINER* 123, 145, 154 (Oxford World Classics ed. 1999). Defoe wrote in careful imitation of the language the characters would actually have used. See J. M. Coetzee, *Introduction*, in *id.* at v, vii. Robinson Crusoe appeared in 1719 and sold very well. See *id.* at v. Crusoe was a man of "the upper station of *Low Life*," that is a person of the "middle state." He had a "house education" and what ever further instruction was available at a "country free-school." DEFOE, *supra*, at 5-6. Jonathan Swift has multiple such uses of variations on "perfection" and "improvement." See Swift, *Gulliver's Travels*, in SWIFT, *supra* note 166, at 31, 43, 110, 134, 137, 168, 179, 181, 184, 262, 272; Swift, *Tale of A Tub*, in *id.*, at 278, 282, 331.

176. See Swift, *The Bickerstaff Papers*, *supra* note 166, at 466.

177. Jessica Litman kindly suggested that "progress" means "advancement." I respectfully disagree. "Advancement" is not an acceptable definition because (i) the Framers chose not to use it, despite this suggestion by Pinkney, and (ii) it has the

Additionally, the wide meaning of "science" makes "qualitative improvement" an unreasonable goal for an eighteenth century American. "Science" included all knowledge, especially all subjects of study.¹⁷⁸ Not all of these can reasonably be supposed capable of qualitative improvement. Consider the "science" often touted as central to education, moral philosophy.¹⁷⁹ If "progress" means "qualitative improvement," we seem to be imputing to a mass of eighteenth century Christians the belief that human effort will improve on the les-

same clarity problems as "progress." See *infra* note 201 (discussing definition). The Framers might, of course, have chosen "progress" or "advancement" because they allowed multiple interpretations. Distinguish, however, between (1) a word with several distinct meanings, but which is properly read in only one sense in any specific placement, and (2) a word which refers to an elastic concept, such as "reasonable." The Constitution abounds in type 2 words, but not in type 1 words. Based on the linguistic evidence discussed below, see *supra* Section V, I think that in the eighteenth century, "progress" was a type 1 word.

178. See *supra* note 137 (quoting Webster's definition). Johnson defines "science" as "1. Knowledge . . . 2. Certainty grounded on demonstration . . . 3. Art attained by precepts, or built on principles . . . 4. Any art or species of knowledge . . . 5. One of the seven liberal arts, grammar, rhetorick, logick, arithmetick, musick, geometry, astronomy." 2 SAMUEL JOHNSON, A DICTIONARY OF THE ENGLISH LANGUAGE 1715 (Librairie Du Liban photo. reprint 1978) (1773). Political economy is a branch of the science of the statesman or legislature. See ADAM SMITH, THE WEALTH OF NATIONS 397 (Modern Library ed., n.d.) (1776). See also *id.* at 724-26 (discussing moral philosophy, logic, the nature of God, the nature of the human mind, metaphysics, physics, and ontology as sciences). Francis Bacon divided science into three branches, "Astrology, Natural Magicke, and Alchymy." BACON, *supra* note 128, at 27. Bacon also names as "sciences" logic, rhetoric, history, natural history, medicine, metaphysics, mathematics, perspective, astronomy, architecture, engineering, morality, law, divinity, grammar, rhetoric, poetical meter, government, conversation, negotiation, and religion. See *id.* at 59, 85, 88, 110, 121, 158, 182. Humor expanded the definition of "science" even further. See PETER OLIVER, ORIGIN & PROGRESS OF THE AMERICAN REBELLION (1967) (referring to Benjamin Franklin as an "Adept in the Science of Perfidy"). "Progress" in the book title merely indicates a history.
179. See Miller, *supra* note 110, at 18; see also 2 JAMES BEATTIE, ELEMENTS OF MORAL SCIENCE 10, 21 (Garland Publishers photo. reprint 1977) (1790-93) (asserting that man's two ends are action and knowledge, of which action is primary, and that conscience is man's supreme faculty to whose decisions all other human faculties should defer); JAMES BEATTIE, AN ESSAY ON THE NATURE AND IMMUTABILITY OF TRUTH IN OPPOSITION TO SOPHISTRY AND SCEPTICISM 4-5, 14-15, 21 (Routledge/Thomemmes Press photo. reprint 1996) (1771) (listing "moral philosophy" as a science, identifying "moral philosophy" with the "science of human nature," and declaring that the latter is "commonly acknowledged" to be the "most important"); SHAFESBURY, CHARACTERISTICS OF MEN, MANNERS, OPINIONS, TIMES 133, 152 (Lawrence E. Klein ed., 1999) (1711) (referring to study of human behavior and morals as sciences); *id.* at 360 (referring to religion as a science); WITHERSPOON, *supra* note 110, at 152, 154 (asserting that students should start their study with the "nature of man"; "moral philosophy is that branch of science which treats of the principles and laws of duty or morals").

sons taught by Jesus and the Scriptures.¹⁸⁰ The literary sciences are also problematic. Rhetoric, poetry, and drama are "sciences" in eighteenth century terminology. Would the general public of the United States (or even a major segment of the Framers) go on record that later authors will out shine Cicero, Homer, and Sophocles? I find this doubtful in light of these ancients almost canonical placement in the scholarly pantheon.¹⁸¹

The contrary assumption makes the Framers bad politicians. Fear that any denigration of revealed religion would lead to the total breakdown of civilization was common in the eighteenth century.¹⁸² Even if the majority of the drafters took an extreme modernist position on literature and religion, why enshrine this position in a constitution? At the least, antagonizing supporters of ancient writers or apostles seems an absurd way to start an important, contentious, political battle.

Assuming, *arguendo*, that "progress" originally meant "qualitative improvement," what happens to the Progress Clause if we accept current scepticism about the possibility of objective decisions on qualitative improvement in some types of "science"?¹⁸³ Many commentators

180. *But see, e.g.,* JACQUES-BENIGNE BOSSUET, DISCOURSE ON UNIVERSAL HISTORY 114 (Elborg Forester trans., Orest Ranum ed., 1976) (1681) (doctrines of religion have existed "without interruption and without alteration" since "beginning of the world"). Bossuet was the Catholic chaplain at the court of Louis XIV of France and tutored the royal heir. *See* Orest Ranum, *Editor's Introduction*, in *id.* at xiv, xxx.

181. *See, e.g.,* BOSSUET, *supra* note 180, at 70 (providing that Latin poetry was at the point of "supreme perfection" at the time of Virgil and Horace). *See also* BEATTIE, ESSAY ON TRUTH, *supra* note 179, at 499 ("That the ancient painters and statuary were superior to the modern is universally allowed."); 2 HUGH BLAIR, LECTURES ON RHETORIC AND BELLES LETTERS 218-19 (Garland Publishing photo. reprint 1970) (1785) (arguing that the ancients surpassed the moderns in eloquence of rhetoric); TURGOT, *supra* note 96, at 61, 103 (providing that in the "arts of taste, to painting, poetry, and music," we have become more knowledgeable about these arts "without having surpassed or even attained in the arts of design that sublime beauty of which Greece (over a very short period) provided the models"). *But see* 1 HOME, *supra* note 107, at 281 ("In a word, Homer was a blazing star, and the more to be admired, because he blazed in an obscure age. But that he should in no degree be tainted with the imperfections of such an age, is a wild thought: it is scarce possible, but by supposing him to be more than man."). *See generally* 3 BLAIR, *supra*, at 1-18 (discussing ancient/modern controversy and concluding that in studies involving facts, the moderns are more correct, while in areas involving taste and sentiment, the ancients are largely unmatched).

182. *See* BEATTIE, *supra* note 179, at 331 ("If a man can reconcile himself to atheism, which is the greatest of all absurdities, I fear I shall hardly put him out of conceit with his doctrine, which I show him, that other less enormous absurdities are implied in it."); *see also* Roger J. Robinson, *Introduction*, in *id.* at v, vii-ix (describing commonness and depth of such fear).

183. *See, e.g.,* Cohen, *Copyright and the Perfect Curve*, *supra* note 15, at 1800 (recognizing general "agnosticism about prospects for value-neutrality" in the legal system's treatment of copyrightable subject matter). *But see* Riley M Sinder et al.,

have noted the later importance of scientific advances which were originally seen as mere curiosities.¹⁸⁴ As for literature, art, and music, Justice Holmes warned us in 1903 that "[i]t would be a dangerous undertaking for persons trained only to the law to constitute themselves final judges of the worth of pictorial illustrations, outside of the narrowest and most obvious limits."¹⁸⁵ If Congress can only grant intellectual property rights which promote "progress," but we have no objective way to decide what constitutes "progress," we have three options—all bad.

First option, because we must take the Constitution's limits seriously, and because Congress cannot tell if any proposed action is within constitutional limits, Congress no longer has power to grant intellectual property rights. No one wants this result.

Second option, because no one can demonstrate that Congress' "progress" guess is wrong, and because Congress is presumed to act constitutionally,¹⁸⁶ Congress can grant any exclusive intellectual property rights it wishes. This seems to be Merges' position.¹⁸⁷ Option two, however, stands the Federalists' claims of a limited government on their head. Albeit in dicta, furthermore, the Supreme Court has repeatedly asserted a limit lurking in the phrase "to promote the progress of science and useful arts."¹⁸⁸

Third option, Congress cannot be sure what produces higher quality, so Congress may act to promote greater quantity on the assumption that some of the additional writings and discoveries will raise quality. This is the best of the three approaches, but it still has several problems. First, we are amending the Constitution without the required process. Second, we are selectively allowing the Constitution's words to change meaning over time—discarding both consistency and the Original Meaning approach.

In sum, the leading alternatives to "spread" as the definition of "progress" do not work in the context of the Progress Clause. Now

Promoting Progress: The Supreme Court's Duty of Care, 23 OHIO N.U. L. REV. 71, 78, 92-94 (1996) (asserting that Supreme Court is value neutral when deciding patent cases and arguing that Court should act similarly in civil rights cases by not imposing specific solutions).

184. See, e.g., Gerald Weissman, *Nullius in Verba*, in *THEY ALL LAUGHED AT CHRISTOPHER COLUMBUS*, 109, 118-19 (1987) (pointing out that microbes seen under Hooke's microscope in 1660s were not linked to disease for about 200 years; "They remained playthings for amateur curiosity," unlike astronomy whose tie to useful navigation was recognized immediately).

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

186. See *United States R.R. Retirement Bd. v. Fritz*, 449 U.S. 166, 184 (Brennan, J., dissenting) ("The enactments of Congress are entitled to a presumption of constitutionality . . ."); NORMAN J. SINGER, *STATUTES AND STATUTORY CONSTRUCTION* § 45:11 (6th ed. 2000).

187. See Merges, *supra* note 69, at 587.

188. See *supra* note 83 (listing cases).

that I have explained why "spread" should be accepted if it is a possible definition, let us turn to the overwhelming linguistic evidence that "spread" is the most likely eighteenth century American meaning of the word "progress."

V. LINGUISTIC EVIDENCE

A. Dictionaries

Dictionary definitions have a pedigree in constitutional interpretation. The Supreme Court cited dictionaries in approximately two hundred cases during the 1990s.¹⁸⁹ Chief Justice Rehnquist famously used "the first American Dictionary," Noah Webster's 1828 edition, to define "establishment" in the Bill of Rights.¹⁹⁰ Dr. Samuel Johnson's famous tome has also figured in constitutional jurisprudence.¹⁹¹ I will, therefore, start with these judicially approved sources—and then discuss why they are problematic evidence.

Johnson provides five definitions of the noun "progress." First "course; procession; passage" as illustrated by Shakespeare's line "I cannot, by the progress of the stars, Give guess how near to day."¹⁹² Second is "advancement; motion forward," illustrated only by lines involving physical motion.¹⁹³ As definition three, Johnson separates

189. See Samuel A. Thumma & Jeffrey Kirchmeier, *The Lexicon Remains a Fortress: An Update*, 5 GREEN BAG 2d 51, 51-52 (2001).

190. See *Wallace v. Jaffree*, 472 U.S. 38, 106 (1985) (Rehnquist, J., dissenting).

191. See, e.g., *Dept't of Commerce v. U.S. House of Rep.*, 525 U.S. 316, 347 (1999) (Scalia, J., concurring); *United States v. Bajakajian*, 524 U.S. 321, 335 (1998); *Nixon v. United States*, 506 U.S. 224, 229-30 (1993).

192. 2 JOHNSON, *supra* note 178, at 1532.

193. See *id.* For example, Johnson quotes *Raleigh's History*, "Out of Ethiopia beyond Egypt had been a strange progress for ten hundred thousand men." *Id.* The sentence quoted from Locke seems different: "It is impossible the mind should ever be stopped in its progress in this space." In context, however, Locke is describing human conception of physical space. The sentence is part of Paragraph 4 in Chapter 17, "Infinity," in Locke's *An Essay Concerning Human Understanding*. Paragraph 4 reads in full:

4. Our idea of space boundless. This, I think, is the way whereby the mind gets the idea of infinite space. It is a quite different consideration, to examine whether the mind has the idea of such a boundless space actually existing; since our ideas are not always proofs of the existence of things: but yet, since this comes here in our way, I suppose I may say, that we are apt to think that space in itself is actually boundless, to which imagination the idea of space or expansion of itself naturally leads us. For, it being considered by us, either as the extension of body, or as existing by itself, without any solid matter taking it up, (for of such a void space we have not only the idea, but I have proved, as I think, from the motion of body, its necessary existence), *it is impossible the mind should be ever able to find or suppose any end of it, or be stopped anywhere in its progress in this space, how far soever it extends its thoughts.* Any bounds made with body, even adamant walls, are so far from putting a stop to the mind in its further progress in space and extension

out "intellectual improvement; advancement in knowledge; proficiency."¹⁹⁴ Fourth, "progress" may mean "removal from one place to another." Fifth, a "progress" is "a journey of state; a circuit" as Bacon describes, "He gave order, that there should be nothing in his journey like unto a warlike march, but rather like unto the progress of a king in full peace."¹⁹⁵ In sum, Johnson supplies definitions including both physical movement and mental change. Physical motion predominates.

The 1828 Webster also emphasizes the physical motion aspect of "progress." The first definition is "a moving or going forward," for example, "a man makes a slow progress or a rapid progress on a journey."¹⁹⁶ The second is "a moving forward in growth; increase; as the progress of a plant." Third is "advance in business of any kind; as the progress of a negotiation; the progress of arts." Fourth, is an "advance in knowledge; intellectual or moral improvement; proficiency." For example, "[t]he student is commended for progress in learning; the christian for his progress in virtue and piety." The fifth definition is "removal; passage from place to place." Sixth is "a journey of state, a circuit," a usage credited to Addison and Blackstone.¹⁹⁷ The source is interesting because American colonists were devotees of Blackstone's

that it rather facilitates and enlarges it. For so far as that body reaches, so far no one can doubt of extension; and when we are come to the utmost extremity of body, what is there that can there put a stop, and satisfy the mind that it is at the end of space, when it perceives that it is not; nay, when it is satisfied that body itself can move into it? For, if it be necessary for the motion of body, that there should be an empty space, though ever so little, here amongst bodies; and if it be possible for body to move in or through that empty space;—nay, it is impossible for any particle of matter to move but into an empty space; the same possibility of a body's moving into a void space, beyond the utmost bounds of body, as well as into a void space interspersed amongst bodies, will always remain clear and evident: the idea of empty pure space, whether within or beyond the confines of all bodies, being exactly the same, differing not in nature, though in bulk; and there being nothing to hinder body from moving into it. So that wherever the mind places itself by any thought, either amongst, or remote from all bodies, it can, in this uniform idea of space, nowhere find any bounds, any end; and so must necessarily conclude it, by the very nature and idea of each part of it, to be actually infinite.

Id. (emphasis added), available at <http://socserv2.mcmaster.ca/~econ/ugcm/3113/locke/Essay.htm> (last visited Nov. 24, 2001).

194. For example, from Locke, "Several defects in the understanding hinder it in its progress to knowledge." 2 JOHNSON, *supra* note 178, at 1532.

195. *See id.*

196. *See* WEBSTER, *supra* note 136, at unnumbered page headed "pro pro pro."

197. *See id.*

Commentaries.¹⁹⁸ A royal visit to the outlying districts may, therefore, be the eighteenth-century's core example of a "progress."¹⁹⁹

Webster's third definition is confusing. Why is "advancement in business" the same meaning as "advancement in arts"? Is Webster using "art" to mean "hand craft"?²⁰⁰ The best reading of Webster's third definition is change over time towards a specific goal—as completing a business negotiation or finishing a piece of hand crafting. I found repeated use of this definition in the *Pennsylvania Gazette*.²⁰¹

In sum, these two dictionaries evidence the importance of physical motion in the 1789 meaning of "progress."

Dictionary making by Johnson or Webster is not, however, the best evidence of word usage in the 1789 United States. Such early dictionaries were fundamentally prescriptive, not descriptive. We have an unimpeachable source for this, Johnson's and Webster's own descriptions of their dictionary projects.

Johnson wished his dictionary to spur "the improvement of [his] native tongue[,]"²⁰² "instruct" its readers,²⁰³ and "fix the English lan-

198. See LAWRENCE M. FRIEDMAN, A HISTORY OF AMERICAN LAW 88-89 (2d ed. 1973).

199. See also SUSIE I. TUCKER, PROTEAN SHAPE: A STUDY IN EIGHTEENTH-CENTURY VOCABULARY AND USAGE 185 (1967) (asserting that "Royal Progresses were still remembered. . . . College officials and Judges still made Progresses in the eighteenth century").

200. Webster's definition of "art" includes "the modification of things by human skills," as opposed to "nature." He also defines "art" as a "system of rules, serving to facilitate the performance of certain actions" which is opposed to the "speculative principles" of "science." Yet, Webster's "arts" include both the "useful" or "mechanic" (in which the hands and body are most concerned) and the "liberal" or "polite" (with mind predominating, e.g. poetry, music, painting). See WEBSTER, *supra* note 136, at unnumbered page headed "ARR ARS ART."

201. Other explanations are possible. Webster's third definition might translate into earning more money in either business or a hand craft. Webster may be referring to change in practice over time. If so, Webster is unclear on whether qualitative improvement is a necessary component of the "advancement." Webster's multiple definitions of "advance" and "advancement" do not answer these questions with certainty. The definitions include physical movement, improvement, and giving temporally beforehand. The "trade" definition is "additional price; profit; as, an advance on the prime cost of the goods." WEBSTER, *supra* note 136, at unnumbered page headed "ADU ADV ADV."

"Moving towards a pre-set goal" is an unlikely meaning for "progress" in the Constitution because the spectacular advances in physical sciences in the 17th and 18th centuries commonly led to the conclusion that "no bounds could be put to their further development." Ronald L. Meek, *Introduction*, in TURGOT ON PROGRESS, SOCIOLOGY AND ECONOMICS 1, 29 (1973). See also TURGOT, *supra* note 96, at 113 ("The sciences, which are based on the combination or the knowledge of objects, are as boundless as nature. The arts, which are only relations to ourselves, are as limited as we are"; even the arts, while reaching perfection in certain respects, are "capable of continuous progress in other respects").

202. JOHNSON, *supra* note 166, at 2. *The Plan* is written in the form of a letter to Johnson's patron, Philip Dormer, Earl of Chesterfield. *Id.* at 1.

203. See *id.* at 5.

guage.”²⁰⁴ Johnson intended to include “the words and phrases used in the general [polite] intercourse of life, [and] found in the works of those . . . commonly stile[d] the polite writers,”²⁰⁵ “the best writers” as chosen by Pope.²⁰⁶ Johnson’s definitions are both upper class and inherently English—as opposed to American.

As for Webster,²⁰⁷ while on the correct continent, his work is almost fifty years post-ratification. Words changed rapidly in that time period in the United States.²⁰⁸ Webster did attempt to insert American words and American meanings for words, especially words with political overtones,²⁰⁹ but he did not claim to have taken any survey of public usage to obtain accurate definitions. Like Dr. Johnson, Webster relied on the best writers, but, unlike Johnson, Webster’s “best writers” included Americans such as Franklin, Washington, and Kent.²¹⁰

In sum, dictionary definitions are not enough.²¹¹ The dictionaries are not empirical reports on the word usage of any group of persons. Additionally, Johnson is on the wrong continent and Webster is almost fifty years too late. Furthermore, each word has multiple dictionary definitions. You do not have to believe in an evolving Constitution to refuse determinative weight to either Webster or Johnson.

204. *Id.* at 11 (discussing pronunciation).

205. *Id.* at 4.

206. *Id.* at 21, 31. Johnson considered himself to be purifying the English language as the French Academy had done for the French tongue. *See id.* at 29-30.

207. Webster was not an unbiased spectator as to the meaning of the Progress Clause. *See, e.g.,* Letter from Noah Webster to Senator Daniel Webster (Sept. 30, 1826), reprinted in NOAH WEBSTER, A COLLECTION OF PAPERS ON POLITICAL, LITERARY, AND MORAL SUBJECTS (Burt Franklin ed. 1968) (1843) (requesting perpetual protection for his writings). *But see* DAVID MICKELTHWAIT, NOAH WEBSTER AND THE AMERICAN DICTIONARY 2, 10-11, 82-83 (2000) (providing that Webster inconsistently wanted extreme protection for books he issued even though he borrowed heavily from earlier works).

208. *See, e.g.,* WOOD, *supra* note 102, at 345 (describing change in meaning of the word “gentleman”). *See also* McDONALD, *supra* note 101, at 71-72, 284-91 (discussing changes in meaning of words “federal,” “federation,” “republic,” and “republican.”).

209. Webster, *Preface*, *supra* note 136, at second unnumbered page.

210. *See id.*

211. The upper class and prescriptive focus of these dictionaries, furthermore, highlight the evidentiary issue I discuss more fully in the companion piece to this article, *The Constitution as Promise: Textualism, Originalism, and Evidentiary Bias*. Even if one accepts the original meaning theory of constitutional exegesis, whose “ordinary meaning” is relevant? The drafters? The delegates to the ratifying conventions? The persons who elected those delegates? The persons who were legally entitled to elect those delegates? What about the persons living in the 1789 United States who would have been entitled to vote by current United States standards?

B. *The Pennsylvania Gazette*

The electronic age has provided a wonderful new access point to 18th century American word usage. We now have searchable access to the full text of each surviving issue of the New York Times of the American colonies, the *Pennsylvania Gazette*. Because "progress" is not a technical word of the legal art, I consider the word usage of the *Pennsylvania Gazette* the best currently available evidence of what 1789 American residents would have understood from the word "progress" in the Progress Clause. Many ordinary Americans limited their reading to the Bible and the newspapers.²¹² The word "progress" does not appear in the King James Version of the Bible.²¹³ Because the Progress Clause also lacks exposition in the standard sources of original intent/meaning,²¹⁴ many originalist scholars should agree on the *Gazette's* primacy.

To decide the meaning of "progress," I ran a full text search for just that one word in all existing issues of the *Pennsylvania Gazette* printed from its inception through the end of the eighteenth century. I located 575 uses of the word "progress." Based on the results, I formulated five distinct definitions. I then divided the occurrences into six categories: the five definitions and mere quotations of the constitutional clause.²¹⁵ The results are:

Definition	Occurrences
[a quote of the phrase in the Constitution]	6
movement through time, i.e. a chronologically arranged account without implication of qualitative improvement ²¹⁶	80
numerical increase without implication of qualitative improvement	21
change or action towards a pre-set goal, e.g. progress towards finishing a book	125
qualitative improvement	124
physical movement without implication of qualitative improvement, e.g. progress of a fire or a traveler	213

212. See FORREST McDONALD & ELLEN SHAPIRO McDONALD, *REQUIEM: VARIATIONS ON EIGHTEENTH CENTURY THEMES* 9 (1988).

213. I base this assertion on my on-line search. See <http://www.av1611.org/kjv> (last visited July 4, 2001). The King James' version was the standard American Bible at least until Noah Webster published the first American revision of the Bible in 1833. See THURSTON GREENE, *THE LANGUAGE OF THE CONSTITUTION*, at xviii (1991).

214. See *supra* section III.

215. Some of the decisions are difficult and disputable. Therefore, I originally placed doubtful occurrences into the "quality improvement" category. See *infra* text accompanying notes 223-230 (removing some from this category).

216. Neither Johnson nor Webster lists this meaning of "progress," unless you force Webster's second definition into teleological chronology. Yet, in his pamphlet on

These results do not support the usual assumption that "the progress of science and useful arts" means qualitative improvement in "science" and "useful arts." By far, the most common use of "progress" was for destructive physical movement. The single most common word in the phrase "the progress of . . ." is "fire." The *Gazette* speaks of the "progress of a fire" when a modern newspaper would report its "spread." Fifty-one times fire made a "progress" through some human construction, such as a house. Eighty-five times the geographical "progress" was by an armed man, group of men, or an entire army—quite often the enemy's troops. Thirteen times some illness made a "progress." The *Gazette* also reported the "progress" of other destructive entities—such as ravenous insects,²¹⁷ bad weather,²¹⁸ and possibly hostile ships.²¹⁹ This pattern of use is inconsistent with the persistent assumption that in colonial North America "progress" meant "qualitative improvement."

The result is even more striking when one notes that the text of the proposed federal Constitution, the *Federalist Papers*, and numerous other ratification discussions were printed in the *Pennsylvania Gazette*.

The *Federalist Papers*, for example, contain two uses of the word "progress,"²²⁰ neither of which involves qualitative improvement. The *Federalist* printed in the November 14, 1787 issue of the *Pennsylvania Gazette* referred to the "progress of hostility and desolation" among the colonies during the Revolutionary War; the same description of the colonists also asserts that "their habitations were in flames" and "many of their citizens were bleeding."²²¹ *Federalist No. 5* uses "progress" while arguing that multiple confederacies are not a good idea because, *inter alia*, they will not remain "on an equal footing in point

the Constitution, Webster's two uses of the word "progress" are best read as invoking "chronological ordering" or "history." See WEBSTER, *supra* note 102, at 29, 58. For quality improvement, the pamphlet uses variations of perfection, improvement, and advancement. See *id.* at 30, 31, 34, 36, 41 n.*, 58, 64.

"Chronological progression," furthermore, does not create a viable, separate meaning for the Progress Clause. The Clause would translate into: "Congress shall have the power . . . to promote the chronological progression of science and the useful arts, by . . ." This presumably means that Congress is allowed to speed up change in knowledge and technology. That power, however, seems identical to a power to promote the "qualitative improvement" or "quantitative improvement" of knowledge and technology.

217. To access the *Pennsylvania Gazette*, I used an online archive. See <http://srch.accessible.com>. See Archive Item Numbers 45706 (twice), 60587, 73571, 75075, and 75508.

218. See *Pennsylvania Gazette* Archive Item Numbers 01164 (twice), 42736, and 70594.

219. See *Pennsylvania Gazette* Archive Item Numbers 04118 and 06546.

220. This is in addition to the constitutional quote in *The Federalist No. 43*, *supra* note 161.

221. *Pennsylvania Gazette*, Archive Item Number 74382.

of strength." "Independent of those local circumstances which tend to beget and increase power in one part, and to impede its *progress* in another, we must advert to the effects of that superior policy and good management . . ."222

Let us, now, look more closely at the 124 entries where "progress" might mean some type of qualitative improvement (but not change over time towards a pre-set goal). The following chart lists the *subjects* which were said to progress qualitatively:

Subject	Occurrences
individual humans or schools	15
populated geographic areas	27
religious vices or virtues	12
Arts	4
commerce & manufacturing	10
Mankind	7
Architecture	1
public & private improvements	1
Liberty	3
Militia	7
liberal sciences	6
Science	6
national assembly	1
agriculture & commerce	1
Revolution	5
Government	2
Language	2
Poetry	1
useful arts	1
Illness	2
arts & sciences	2
geographic knowledge	1
truth & reason	1
political knowledge	2
dangerous innovations	1
[unclear oddities]	3

222. *Pennsylvania Gazette*, Archive Item Number 74466 (emphasis added).

Next, we should recognize the difference between a person (or persons²²³) showing qualitative improvement in a skill or pre-existing knowledge set and the improvement of the knowledge set available. Only the second is The Idea of Progress. The first is the acquiring of personal proficiency—as covered by Webster's fourth definition and Johnson's third. Congruently, both of Webster's examples of this definition involve a person obtaining more proficiency. At least three of Johnson's five examples involve increase in some specific person's proficiency in knowledge or virtue.²²⁴

Seventy of the *Gazette's* "quality" occurrences refer to increase in proficiency by some person or group of persons: "progress" by schools, individuals, populated geographic areas, and the national assembly. Several of the other progressing subjects are likely to be increasing in quality by increasing geographically or quantitatively (numerically or in economic value)—religious vices and virtues, commerce & manufacturing, public & private improvements, agriculture and commerce, revolution, illness, and dangerous innovations; these total another thirty-two occurrences. Deducting the three oddities, the proficiency increases, and the quantity increases, leaves us only twenty possible occurrences of "progress" for quality improvement in the fund of knowledge, The Idea of Progress.

To recheck, I went back through my notes looking for occurrences of "progress" that might be references to improvement in the knowledge-base. I found forty-six which, on first reading, might be so construed.²²⁵ However, a more critical review of these forty-six occurrences of "progress" demonstrates the paucity of relevant Idea of Progress uses. First, seventeen are from after ratification. They may easily be unreflective echoes of the constitutional phrase. Fully thirty are puffs—writings intended for emotional effect, such as advertisements or ceremonial speeches. The empowering clauses of a legal doc-

223. I classified improvement by "mankind," i.e. all humans, as improvement of the knowledge set.

224. The two examples which facially invoke the qualitative improvement of mankind's knowledge base are: "Several defects in the understanding hinder it in its progress to knowledge." Locke." and "[i]t is strange, that men should not have made more progress in the knowledge of these things." Burne." 2 JOHNSON, *supra* note 178, at 1532. The Burnet quote does refer to qualitative improvement of man's knowledge base. Burnet is disproving Aristotle's theory that the current earth is eternal. Burnet argues that men have very imperfect knowledge of geography and navigation. Assuming the world is only 6000 years old, as the Bible states, "[i]t is strange, that men should not have made more progress in the knowledge of these things." If men had existed forever, their ignorance would be even more unfathomable. See BURNET, *supra* note 127, at 46. I failed to locate the John Locke quote by doing a text search of all his work I could find on the Internet.

225. See Appendix.

ument use language much more precisely.²²⁶ Many of the references to books may easily be using "progress" in the historical/temporal or organization sense. A number are more reasonably read as referring to geographic spread or numerical increase.

Let us look more closely at the *Gazette's* numerous "progress"-mentioning advertisements for books—some available to buy and others which will become available if the advertiser receives sufficient advance subscriptions. The most common such book advertised is Bunyan's *Pilgrim's Progress*.²²⁷ In that famous religious text, "progress" is an allegorical journey.²²⁸ In 1771, James Beattie, a well

226. Eighteenth century writers were quite taken with the concept that different modes of discourse belonged to different occasions and subjects. See Aristotle, *supra* note 173, at 196 ("[E]ach kind of rhetoric has its own appropriate style."); JAMES BEATTIE, *ESSAYS: ON POETRY AND MUSIC* 7 (1996) ("[T]he essential or indispensable rules of an art are those that direct to the accomplishment of the end proposed by the artist."). See also DANIEL DEFOE, *THE COMPLETE ENGLISH TRADESMAN* 7 (Historical Conservation Society photo. reprint 1989) (4th ed. 1738) ("[A] tradesman's letters should be plain, concise, and to the purpose; no quaint expressions, no book-phrases, no flourishes . . ."); JOHN TENNENT, *EVERY MAN HIS OWN DOCTOR* 8 (*microformed on Early American Imprints*, 2d series no. 2200) (4th ed. 1802) ("In setting down the following prescriptions, I have been cautious of talking like an apothecary; that is, of using hard words, that perhaps neither my patient, nor I myself understand."). Compare *id.* at 7 ("[T]he symptoms cannot be easily be mistaken."), with [Dr.] Thomas Young, Letter Printed in *Pennsylvania Gazette* Oct. 17, 1775 at 1 (Accessible Archives Item No. 58370) ("I must beg your favor to convey this general intelligence to all who may think my poor advice worthy of their attention, namely, that the grand mystery in our profession is, to determine accurately the peculiar constitution, habit, particular disposition, natural or accidental, of every patient we take upon us to advise. Understanding then to satisfaction how such patient has been, as to the common operation of the several functions of the body, we are next to examine into the several deviations from that standard which now take place in the system[.]").

227. See *Pennsylvania Gazette* Archive Item Numbers 06302 (1744), 06382 (1744), 5272 (1742), 04907 (1742), 04850 (1741), 04533 (1741), 36763 (1765)35749 (1765), 34048 (1764), 19071 (1755), 10647 (1749), and 27581 (1761) (including advertisements for *Pilgrim's Progress*).

228. *The Pilgrim's Progress* is John Bunyan's addition to a pre-existing genre of religious books using a journey as an allegory for a sinner's attempt to attain salvation. See, e.g., *Memoir of John Bunyan*, in *THE PILGRIM'S PROGRESS* 1, 4 (Fleming H. Revell ed., n.d.) (mentioning that Bunyan's wife owned a copy of *THE PLAIN MAN'S PATHWAY TO HEAVEN*). The journey allegory is noted in, for example, the fuller title, *THE PILGRIM'S PROGRESS FROM THIS WORLD TO THAT WHICH IS TO COME, DELIVERED UNDER THE SIMILITUDE OF A DREAM: WHEREIN IS DISCOVERED THE MANNER OF HIS SETTING OUT, HIS DANGEROUS JOURNEY, AND SAFE ARRIVAL AT THE DESIRED COUNTRY* (1678). See also, e.g. BUNYAN, *supra*, at 13 (the saints' "journey"); 19 ("This book will make a traveler of thee."); 21 ("As I walked through the wilderness of this world . . ."); 42 (Christian describing himself as "a traveler" requesting "help to me in my journey"). A more modern, comic use of "progress" for a journey of discovery is MARK TWAIN'S, *THE INNOCENTS ABROAD, OR THE NEW PILGRIMS' PROGRESS: BEING AN ACCOUNT OF THE STEAMSHIP QUAKER CITY'S PLEASURE EXCURSION TO EUROPE AND THE HOLY LAND* (Harper & Bros. Publ. ed. 1906) (1869).

known literary scholar, published *The Minstrel; or, The Progress of Genius*, recounting the allegorical journey of a poetical genius.²²⁹ Many titles include the phrase "the rise and progress of ____". These books are merely histories, as shown by the chronological use of the term "progress" in descriptions of books with the word "history" in their titles.²³⁰

None of the forty-six possibilities avoids all of these problems.

In summation, the *Pennsylvania Gazette* entries demonstrate that "progress" was overwhelming used to mean something other than qualitative improvement, the Idea of Progress. The most common usage was "spread," or some other type of physical movement.

C. Idea of Progress Literature

Even if the most common meaning of "progress" was something other than "quality improvement of the human knowledge base," my thesis would be problematic if the standard eighteenth century method of denoting such quality improvement had been the word "progress." My research, however, demonstrates the opposite. During discussions of the Idea of Progress thesis, late eighteenth century speakers of English more commonly used "improvement," "perfection," or "advancement" (as opposed to "progress") when referring to the betterment of mankind's knowledge base.

On December 11, 1750, Turgot gave a public lecture at the Sorbonne on the philosophical advances of the human mind.²³¹ This may have been the public debut of the Idea of Progress thesis in its Enlightenment formulation.²³² The philosophical theory is based on the

229. See, e.g., JAMES BEATTIE, *THE MINSTRAL; OR THE PROGRESS OF GENIUS: WITH OTHER POEMS* 189-90, 195, 201-02, 214, 216 (1811) (showing hero is traveling). *THE MINSTRAL* sold five large editions in less than four years and attracted major attention abroad in several translations. See Alexander Chalmers, *Memoirs of the Life of Dr. James Beattie*, in *id.* at iii, xii. Beattie's book is advertised in *Pennsylvania Gazette* Archive Item Number 70456 (1784). The *Gazette* also includes an advertisement for the picture series *The Rake's Progress*. See *Pennsylvania Gazette* Archive Item Number 24217 (1760). This is one of two famous etching series by Hogarth showing the life and infamous death of moral types, an outgrowth of the allegorical journey genre. The other picture set is *THE HARLOT'S PROGRESS*. See HENRY FIELDING, *TOM JONES* 91, 139 (Penguin Paperback ed. 1966) (1749) (mentioning *The Harlot's Progress*).

230. See *Pennsylvania Gazette* Archive Item Number 59857.

231. See Meek, *supra* note 201, at 6.

232. See *id.* at 11. The standard alternative European view of human history was Christian. See, e.g., BOSSUET, *supra* note 180, at 114 (presenting history of mankind with strong reliance on the Bible). See also BURNET, *supra* note 127 (presenting a biblically-based, geological history of the earth). The relationship between secular progress theses and religious hope in a messianic age is complex and disputed. Compare, e.g., Meek, *supra* note 201, at 29 (asserting that Turgot's theory was both an alternative to and strongly influenced by Bossuet's) and ERNEST LEE TUVESON, *MILLENNIUM AND UTOPIA: A STUDY IN THE BACKGROUND OF*

Lockian concept that man's mind at birth is a clean slate. All man's ideas originate in some form of sensory input. Since all men basically have the same sensory equipment and roughly similar inputs, all men tend towards the same ideas.²³³ Over time,²³⁴ mankind as a whole will accumulate and integrate information and ideas; over time, therefore, as by natural law, mankind will advance in knowledge and virtue. Different nations, however, will advance at different rates because of local conditions. Many nations, at many times, furthermore, will regress. Natural law requires merely that mankind as a whole advance over time.²³⁵ Condorcet closely followed Turgot in time and theory.²³⁶ Both men wrote in French.²³⁷

The Idea of Progress, of course, allows the word "progress" to accumulate the disparate meanings discussed above. The history of mankind becomes a chronicle of mankind's improvement—thus allowing the extension of the noun "progress" from "journey" to "allegorical journey" to "movement through time" to "quality improvement over time." If you believe that natural law will necessarily lead to the improvement of mankind over time, instances of chronological progression largely overlap instances of quality improvement. Additionally, if you believe that the improvement of human society and its knowledge base require the diffusion of knowledge, the "progress of knowledge" may refer to its spread. These overlaps often obscure the writer's definition of the single word "progress."

Condorcet's *Life of M. Turgot* was printed in London, in English, in 1787.²³⁸ While it may have reached North America, the *Pennsylvania*

THE IDEAL OF PROGRESS 4 (1949) (arguing that religious, teleological approach to the world is one ancestor of the belief in a scientific, evolutionary type of progress), with Burry, *supra* note 63, at 68 (describing Christian belief in "an active intervening Providence" as opposed to the Idea of Progress).

233. This attitude is congruent with colonial North America's notorious disrespect for professionals and specialists. See, e.g., BOORSTIN, *supra* note 149, at 168, 189-265.
234. Cumulation is premised on language, especially in written form. See Turgot, *A Philosophical Review of the Successive Advances of the Human Mind*, in TURGOT ON PROGRESS, SOCIOLOGY AND ECONOMICS 41, 41-44 (Ronald L. Meeck trans. & ed., Cambridge Univ. Press 1973).
235. See *id.* (outlining thesis); see also TURGOT ON PROGRESS, *supra* note 201, at 7-13 (same).
236. CONDORCET, *supra* note 96.
237. Condorcet's SKETCH was not published in any language until 1795. See CONDORCET, *supra* note 94 at xiii (inside "a note on the text"). The first English language statement of Turgot's position may have been CONDORCET'S LIFE OF TURGOT which was published in English in 1787. See TURGOT ON PROGRESS, *supra* note 201, at 13 n.5.
238. CONDORCET, THE LIFE OF M. TURGOT, COMPTROLLER GENERAL OF THE FINANCES OF FRANCE IN THE YEARS 1774, 1775, AND 1776 (1787).

Gazette collection contains no mention of it.²³⁹ This book contains thirty uses of the word "progress." Seventeen seem to refer to the qualitative improvement of either some type of science or of mankind as a whole.²⁴⁰ Seven refer to physical movement.²⁴¹ Three could as easily refer to the quality improvement of some type of knowledge or the physical diffusion of that knowledge.²⁴² Three refer to chronological ordering.²⁴³ The book, however, uses another word to mean quality improvement of either a knowledge set or mankind at least twenty-four times.²⁴⁴

Well known English-language treatments of the Idea of Progress from the seventeenth and eighteenth centuries are found in books on disparate subjects. Francis Bacon's subject was how to advance human knowledge. His call for empiricism was followed in 1655 by Meric Casaubon's scientific treatment of incidents commonly explained religiously. Bernard Mandeville, George Berkeley, Lord Shaftesbury, Francis Hutchinson, and Adam Smith treat the Idea of Progress as part of moral philosophy. Adam Smith then expands moral philosophy into economics.²⁴⁵

Let us start with Francis Bacon. Bacon usually wrote in Latin, but around 1605 he did publish an English work addressed to James I of England, *The Twoo Bookes of Francis Bacon: Of the Proficience and Advancement of Learning, Divine and Humane*.²⁴⁶ Bacon attempts to prove the practical usefulness of increasing mankind's knowledge of

239. I did a full text search for "turgot" and located two items, neither of which mentioned this volume. See *Pennsylvania Gazette* Archive Item Numbers 71617 and 73991.

240. See CONDORCET, *supra* note 238, at 15, 16, 17 (three occurrences), 116, 133, 150, 169, 190, 279 n*, 339, 360, 361, 363 (twice), 364.

241. See *id.* at 43, 67, 254, 257, 328, 337, 418.

242. See *id.* at iv, 37, 372.

243. See *id.* at 27, 104, 297.

244. See *id.* at xii, 16 (twice), 17 (twice), 89, 132, 169, 232, 258, 259, 330, 360, 361 (three times), 362, 364, 365, 367, 369, 392, 393, 394.

245. The standard eighteenth century concept of "economics" was that part of moral science which dealt with an individual's duty to his or her family. See 2 BEATTIE, *supra* note 176 [Moral Science], at 10. Smith's extension leads to the dismal first essay on population by Thomas Robert Malthus. Malthus was responding to one of Godwin's essays in *The Enquirer*. See ROBERT THOMAS MALTHUS, POPULATION: THE FIRST ESSAY, at xiii (1st ed. of Ann Arbor Paperback) (1798) ("The following Essay owes its origin to a conversation with a friend, on the subject of Mr. Godwin's Essay, on avarice and profusion, in his *Enquirer*."). The last two works, however, were published respectively in 1797 and 1798, after the drafting and ratification of the U.S. Constitution. See MALTHUS, *supra*, at xii, xiv; WILLIAM GODWIN, THE ENQUIRER: REFLECTIONS ON EDUCATION, MANNERS, AND LITERATURE IN A SERIES OF ESSAYS (Garland Publishing facsimile 1971) (1797) (reproducing date on unnumbered title page of original ed.). I, therefore, exclude them from my "progress" survey.

246. See Michael Kiernan, *Preface to FRANCIS BACON, THE ADVANCEMENT OF KNOWLEDGE* vii, vii (Michael Kiernan ed., Clarendon Press, Oxford 2000).

the natural world, surveys the then-current state of knowledge, and presents suggestions for action.²⁴⁷ In the course of the work, Bacon uses the word "progress" four times—twice for a specific human's increase in proficiency,²⁴⁸ once for a journey,²⁴⁹ and once for change over time.²⁵⁰ As displayed in his title, Bacon uses "advancement" when referring to improvement in the human knowledge base.²⁵¹

Meric Casaubon uses the word "progress" three times in *A Treatise Concerning Enthusiasm*.²⁵² Twice the word means history, that is a chronological ordering of events.²⁵³ The third use denotes quality improvement in the sense of a specific person's obtaining proficiency.²⁵⁴

In 1711, Anthony Ashley Cooper, third Earl of Shaftesbury, published an almost complete collection of his earlier writings as *Characteristics of Men, Manners, Opinions, Times*.²⁵⁵ The collection includes eight uses of the word "progress." I classify seven of these as meaning history, a chronological ordering.²⁵⁶ The eighth refers to specific persons gaining proficiency.²⁵⁷

Replying to Shaftesbury,²⁵⁸ Bernard Mandeville's *The Fable of the Bees* presented the notorious thesis that many of mankind's selfish actions help society.²⁵⁹ The first part was published under another title in 1705, but did not attract much attention until republished in 1723. While negative comments accumulated, Mandeville wrote a second volume which was published in 1728.²⁶⁰ By 1787, the work was sufficiently well known in the United States to be referred to in a stage play.²⁶¹ The work runs almost 800 pages²⁶² but only uses the

247. See *id.* at xvii, xvi, xxiv.

248. See BACON, *supra* at 128, at 9, 23.

249. See *id.* at 111. This is the Bacon quote used by Johnson's dictionary. See *supra* note 193 and accompanying text.

250. See BACON, *supra* note 128, at 191. I admit that this quote is difficult to parse. I may, therefore, be in error.

251. See also *id.* at 5, 25, 27, 32, 55 (using "advancement" to mean improvement in knowledge base).

252. See MERIC CASAUBON, *A TREATISE CONCERNING ENTHUSIASM* (facsimile 1970) (1655).

253. See *id.* at 176, 199.

254. See *id.* at 184.

255. Lawrence E. Klein, *Editor's Introduction* to SHAFTESBURY, *CHARACTERISTICS OF MEN, MANNERS, OPINIONS, TIMES*, at vii, vii (Lawrence E. Klein ed., Cambridge Univ. Press 1999). Shaftesbury's optimistic philosophy links aesthetic and moral senses; it teaches that political liberty is central to men's intellectual and cultural achievement, which he labeled "politeness." See *id.* at vii, xvii-xviii.

256. See SHAFTESBURY, *supra* note 176, at 22, 11, 354, 395, 396, 464 (twice).

257. See *id.* at 202.

258. See 2 Mandeville, *supra* note 164, at 43.

259. See F. B. Kaye, *Introduction* to BERNARD MANDEVILLE, *THE FABLE OF THE BEES: OR PRIVATE VICES, PUBLIC BENEFITS* xvii, xxxix, lx-lxi (Clarendon Press, Oxford, Eng. 1924).

260. See *id.* at xxxiii-xxxvi.

261. See *id.* at cxvii.

word "progress" four times. One use refers to specific persons obtaining proficiency.²⁶³ One refers to approaching a set goal.²⁶⁴ The other two refer to the improvement of the human race's capability or knowledge base.²⁶⁵ When referring to the quality improvement of human knowledge or character, however, Mandeville is much more likely to say "perfection," "improvement," or "advance."²⁶⁶ In *A Letter to Dion*, Mandeville never uses the word "progress." He does refer, however, to "the Advancement of worldly Glory."²⁶⁷

George Berkeley wrote *Alciphron, or the Minute Philosopher* in Rhode Island while waiting in vain for Parliament to fund a missionary college in Bermuda. *Alciphron* was published in England in 1732. It quickly attracted comment, but was generally denigrated.²⁶⁸ The text includes eight uses of the word "progress." Six times "progress" means chronological ordering;²⁶⁹ once the "progress" is a metaphorical journey by the soul;²⁷⁰ the last use refers to a person's increase in proficiency.²⁷¹

Looking for the word "progress," I read a number of works by Francis Hutchinson: *Reflections Upon Laughter and Remarks upon the Fable of the Bees*,²⁷² *An Inquiry into the Original of Our Ideas of Beauty and Virtue*,²⁷³ *Reflections on Our Common Systems of Morality*, and *On the Social Nature of Man*.²⁷⁴ I located not one use of the

262. See Mandeville, *supra* note 167, at xv-xvi (table of contents).

263. See *id.* at vol. 1, p. 288 ("Few children make any progress at school, but at the same time they are capable of being employed in some Business or other . . .").

264. See *id.* at vol. 2, p. 221 (referring to lack of "progress" towards hearing Horatio's theory of the origin of society).

265. See *id.* at vol. 2, 143 ("Which all together make a strong Proof of the slow Progress that Art [shipbuilding] has made . . ."); *id.* at vol. 2, p. 146 ("Men would make but a small progress in good Manners the first three hundred Years [after barbarism].").

266. See, e.g., *id.* vol. 2, at 187-88, 319-23.

267. See BERNARD MANDEVILLE, *A LETTER TO DION* 40 (Bonamy Dobree ed., Univ. Press of Liverpool 1954) (1732).

268. See David Berman, *Introduction* to GEORGE BERKELEY, *ALCIPHRON OR THE MINUTE PHILOSOPHER* 1, 1-2 (David Berman ed., 1993). The work is written as a dialogue between characters representing freethinkers (including Shaftesbury and Mandeville) and Christians (such as Berkeley). See *id.* at 10.

269. See GEORGE BERKELEY, *ALCIPHRON OR THE MINUTE PHILOSOPHER* 6, 12, 24, 29, 52, 158 (David Berman ed., 1993).

270. See *id.* at 139.

271. See *id.* at 39.

272. FRANCIS HUTCHINSON, *REFLECTIONS UPON LAUGHTER AND REMARKS UPON THE FABLE OF THE BEES* (Garland Publishing 1971 facsimile of 1750 ed.).

273. FRANCIS HUTCHINSON, *AN INQUIRY INTO THE ORIGINAL OF OUR IDEAS OF BEAUTY AND VIRTUE* (Garland Publishing facsimile 1971) (2d ed. 1726).

274. FRANCIS HUTCHESON, *FRANCIS HUTCHINSON ON HUMAN NATURE* (Thomas Mautner ed., Cambridge Univ. Press 1993) (containing both "Reflections on Our Common Systems of Morality," and "On the Social Nature of Man").

word "progress." Hutchinson uses the word "improvement" when discussing qualitative advances in science or arts.²⁷⁵

Now for Adam Smith's two main works: *The Theory of Moral Sentiments*²⁷⁶ and *The Wealth of Nations*.²⁷⁷ *The Theory of Moral Sentiments* includes only two uses of the word "progress," neither for quality improvement of any kind.²⁷⁸ *The Wealth of Nations* contains many instances of the word "progress." The clearest support of my claim (that "progress" usually does not mean "quality improvement") is that Smith twenty-eight times uses the phrase "the progress of improvement" to mean the chronological progression of quality increase.²⁷⁹ In this phrase, "improvement" means "advance in quality." In an additional thirty-eight instances, Smith uses "progress" (by itself) to mean chronological ordering.²⁸⁰ Twice "progress" means advancement toward a preset goal;²⁸¹ once it means journey;²⁸² once it means a person's increase in proficiency.²⁸³ Smith uses "progress" only four times to mean quality improvement of some knowledge or skill base.²⁸⁴ Improvement in quantity (either numerical or economic) is the best meaning of "progress" seven times.²⁸⁵ On sixteen occasions, Smith uses "progress" in a way that might mean either quantity or quality improvement,²⁸⁶ or a mixture of both.²⁸⁷ Smith's favorite meaning for "progress," therefore, is chronological ordering, i.e. history. As discussed earlier, in the Progress Clause, "progress" as "chronological ordering" reduces into quantitative or qualitative improvement.²⁸⁸

275. See HUTCHINSON, *supra* note 273, at 50, 54, 72.

276. SMITH, *supra* note 67. This work was first published in 1759. See D. D. Raphael & Al. L. Macfie, *Introduction*, in *id.* at 1, 1.

277. ADAM SMITH, *THE WEALTH OF NATIONS* (Modern Library n.d.) (1776). This book was first published in 1776. See Max Lerner, *Introduction* to *id.* at v, vii.

278. See SMITH, *supra* note 67, at 88 (meaning spread or numerical increase); *id.* at 289 (meaning figurative movement or chronological ordering).

279. See SMITH, *supra* note 277, at 148, 175, 176, 217 (three times), 218, 219 (twice), 220 (twice), 224 (twice), 225, 226, 228 (twice), 229, 230, 235, 242 (twice), 318, 658, 668, 669, 738.

280. See *id.* at 10, 38, 51, 8 (twice), 89, 135, 191, 217, 326, 327, 328, 329, 347, 348, 356 (twice), 357, 373, 393, 397, 533 (twice), 618, 638, 651, 658, 659, 661, 664, 680 (twice), 687, 730, 734, 757, 876, 881.

281. See *id.* at 885, 886.

282. See *id.* at 654.

283. See *id.* at 723.

284. See *id.* at 347, 394, 532 (twice).

285. See *id.* at 533 (twice), 551, 657, 708, 757, 879.

286. See *id.* at 320, 360, 380, 383, 534 (twice), 537 (twice), 538 (three times), 553 (twice), 565, 590, 599.

287. By "mixture," I mean phrases such as "the progress of population and law" where presumably the population increase is numerical and the legal increase is qualitative.

288. See *supra* note 216 (discussing).

Looking at all the linguistic evidence, I conclude that an ordinary American of 1789 was most likely to have read "progress" in the Progress Clause of the Constitution to mean "spread," i.e. to allow Congress to grant limited monopolies only when they promote the distribution of science and the useful arts throughout the population.

VI. CONCLUSION

This Article uses linguistic evidence to disprove a long standing assumption about the Progress Clause, which gives Congress "the 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."²⁸⁹ The word "progress" is not a reference to the Enlightenment Idea of Progress and, thus, an anachronistic bias incapable of cabining Congress. The word "progress" means "spread." Congress does not have the power to create any intellectual property regime it thinks will increase the Gross National Product, campaign donations from holders of large copyright portfolios, or world harmonization.²⁹⁰ Any right to exclude others from use of writings and discoveries must promote the *spread* of knowledge and technology. This clarification of the constitutional language warrants court overthrow of both the circumvention limitations in the Digital Millennium Copyright Act and the twenty year subsidy provided copyright holders by the Copyright Term Extension Act.

Long live the public domain.²⁹¹

289. U.S. CONST. art. I, § 8, Cl. 8.

290. See *supra* note 89 (discussing Treaty Power).

291. This Article is dedicated to David Lange in partial repayment for *Recognizing the Public Domain*, 44 (4) L. & CONTEMP. PROBS. 147 (1981).

APPENDIX

Year	Item No. ²⁹²	Subject which is progressing	Substrate in/ through which progress is being made	Comments
1739	3638	our colony	[not mentioned]	resignation speech of speaker of Pennsylvania legislature
1739	same	our colony	[not mentioned]	same
1752	14881	human mind	"an account of the gradual progress of the human mind, from its first dawning of sense to the highest perfection, both intellectual and moral of which it is capable"	advertisement for "Noetica: or the first principles of human knowledge," author not mentioned. The book is "very proper to form the minds of youth in knowledge and virtue." ²⁹³
1754	16632	liberal sciences	[not mentioned]	announcement of lottery to raise funds for College of New Jersey
1755	17858	the earliest settlers of South Carolina "brought with them the Laws of the Mother Country . . . the privilege of enacting laws for their good Government, without which they could have made no progress" [but asking legislature not to pass any unusual act without first learning King's pleasure]		speech by Gov. of S. Carolina at opening of legislative session
1771	48758	science	"in this infant country"	open letter from trustees of a charity school to Lt. Gov. John Penn on the sad occasion of his return to England

292. This column provides the item number attached to the document by the database organizer.

293. Samuel Johnson, *Noetica*, in *ELEMENTA PHILOSOPHICA: CONTAINING CHIEFLY, NOETICA, OR THINGS RELATING TO THE MIND OR UNDERSTANDING: AND ETHICA, OR THINGS RELATING TO THE MORAL BEHAVIOUR* (Kraus Reprint Co., 1969 facsimile ed. of 1752 ed. printed by B. Franklin & D. Hall, Phila; *Noetica* is separately paginated inside volume). Chapter VI, "Of the Progress of the Mind, towards its highest Perfection," deals with the developmental stages through which individuals pass as they grow up, i.e. "progress" means increase in an individual's proficiency in pre-existing knowledge and skill bases. See *id.* at xxxiii-xxxiv (Table of Contents showing subject headings).

1771	49682	"the French language is like to keep pace with the liberal arts and sciences which have already made such great progress in this infant colony"		advertisements for pupils to learn French
1771	49224	"Cultivation of the arts and Sciences"	"your Province"	Letter from man in Williamsburg, VA to Philadelphia, mentioning reward given by Pennsylvania Assembly to person who "improved the Orrery"
1772	50481	science	[not mentioned]	Letter from American Philosophical Society asking readers to contribute readings on magnetic variations for compilations into a useful report
1773	52679	"useful arts"	in America	advertisement for a locally produced varnish
1775	57092	province of Pennsylvania	in science and literature	opening of flowery political essay by Camillus
1776	59903	arts and sciences	in America	address by Governor of Georgia to state legislature; requesting more persons to manufacture gunpowder
1776	59857	men	"as individuals"	subtopic in book being advertised, Lord Kaims (Henry Home), "Six Sketches on the History of Man" ²⁹⁴
1776	same	"the origin and progress of arts"	[not mentioned]	subtopic in book
1776	same	"the female [sex]"	[not mentioned]	subtopic in book
1777	60919	USA	towards "an elegance of freedom"	address in Pennsylvania legislature

294. See HOME, *supra* note 107, The *Gazette* advertisement is presumably for the shorter first edition which was published in 2 volumes in 1774. See *id.* at unnumbered page before title page. Lord Kames describes his work as "a natural history of man." *Id.* at vii (author's preface).

1778	62959	truth	[not mentioned]	advertisement for Dr. Price's book, "Additional Observations on Civil Liberty and the war with America" ²⁹⁵
1782	67818	arts	USA	wording of recommendation of an American edition of the Holy Scriptures. Congress gave printer permission to publish this recommendation
1783	69297	language etc. [phrase used is 'rise and progress of language, etc']	[unmentioned]	advertisement for Hugh Blair's book "Lectures on Rhetoric and Belles Lettres" ²⁹⁶
1783	same	poetry		same
1786	73117	"these laudable sciences" of "fraud and injustice"	citizens of Rhode Island	ironic opening to commercial announcement that a RI person had paid a mortgage in paper currency
1788	75402	"political knowledge"	[unmentioned]	Dec. 10 letter from "an american citizen" giving "thoughts on the subject of amendments to the foederal constitution"
1788	75380	"political science"	[unmentioned]	Dec. 3 " "
1788	same	"our progress"	"to greater perfection"	same
1789	75916	the arts	"their progress and improvement"	advertisement for subscription to a dictionary especially useful for artificers

295. See RICHARD PRICE, TWO TRACTS ON CIVIL LIBERTY, THE WAR WITH AMERICA, AND THE DEBTS AND FINANCES OF THE KINGDOM: WITH A GENERAL INTRODUCTION AND SUPPLEMENT (De Capo Press 1972 reprint of 1778 first combined ed. of *Additional Observations on the Nature and Value of Civil Liberty, and the War with America* and *Observations on the Nature of Civil Liberty, The Principles of Government, and the Justice and Policy of the War with America*, first published 1777).

296. See 1 BLAIR, *supra* note 181, at 122 ("I shall first give a History of the Rise and Progress of Language in several particulars . . . which shall be followed by a similar History of the Rise and Progress of Writing.").

1789	76360	"an industrious and frugal people"	"towards wealth and comfort"	Letter from North Carolina on <i>inter alia</i> ratification of US Const.
1789	76338	truth and reason	Paris	Aug. 30, 1789 letter from Paris
1789	same	"such ideas" [limitation of king's power]	"from the days of Magna Carta to the last revolution in England, their retrograde motion from the time of the great Henry, to Louis XVIth in France, and their dormant state for many ages in all of Europe, it is astonishing . . ."	same
1789	76353	science	in not falling for delusions, such as tales of evil spirits	from the Gazette of the United States, The Tablet No. LXXII
1790	76728	humanity	[not mentioned]	announcement of contents of the May 1790 issue of "The Universal Asylum and Columbian Magazine"
1790	76909	science	in America	announcement of dialogues spoken at public commencement exercises of the college of Philadelphia
1790	77075	"violated rights of reason and humanity"	in France	Americans should congratulate themselves on giving France the spirit of liberty
1790	77159	"further progress is daily making in the geographic knowledge of our country"		advertisement for maps to be published on subscription
1790	76877	sciences	[not mentioned]	from title of a "dialogue" performed at college commencement

1791	77582	liberty	USA	ceremonial address on the Anniversary of the Columbian Order by the Sons of Tammany
1793	78935	architecture	USA	announces prize choice in competition for plan of a new hotel
1794	79575	the arts and sciences	in the USA	letter complaining of British actions against the USA; responds to King's expression of pleasure in prosperity of the USA
1794	79441	mankind	[not mentioned]	letter from a gentleman in the western territory reporting Louisiana revolt against Spain
1795	80551	arts	in the USA	announces invention of a machine
1796	81010	USA	[not mentioned]	Patriotic Toast at a celebration of the President's Birthday
1796	81165	human race [implied]	[unclear, seems to be arts, sciences, liberty, social happiness, and philosophy]	US Constitution should be amended to clarify relative treaty power of President and Congress
1797	81970	human mind	[not mentioned]	discussion of distribution of books to the public libraries of the French Republic. Mentions some libraries should contain "everything that can perfect reason, industry, and the arts."
1797	82039	of an enlightened nation	to the summit of public virtue and happiness	speech at entertainment given to Pres. Adams by the citizens of New York

1798	82518	"sacred flame of liberty"	among English people, including fleets and armies	English traitor's letter to French government
1798	82268	"revolutionary principles"	in Cantons of Switzerland	
1800	83321	science	[not mentioned]	Toast at Independence Day party of the Society of Cincinnati