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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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Malla Pollack*

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

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THE PROGRESS CLAUSE

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 Electric

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. To the extent that Congress chooses not to act under this clause, the default position is that each person in the United States has a property right not to be excluded


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&stat=gpjc4.5.45 (last visited Nov. 19, 2001). The slogan climaxd 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 "progress 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/html/G/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.\textsuperscript{5} Congress has only a very limited power to create private quasi-property, i.e., rights to exclude the rest of the commoners.\textsuperscript{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 \textit{Universal City Studios v. Corley}\textsuperscript{7} and \textit{Eldred v. Reno}.\textsuperscript{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).\textsuperscript{9} Of these, quantity is the

\textsuperscript{5} See Malla Pollack, \textit{The Owned Public Domain: The Constitutional Right Not to Be Excluded—Or the Supreme Court Chose the Right Breakfast Cereal} in \textit{Kellogg v. National Biscuit Co.}, 22 \textit{HASTINGS COMM. \\& ENT. L.J.} 265, 267-291 (2000). This is the most disputable part of my thesis.

\textsuperscript{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." \textit{JOHN LOCKE, Two TREATISES OF GOVERNMENT} 195 (Peter Laslett ed., Cambridge Univ. Press 1986) (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, \textit{Artifacts, Facilities, and Content: Information as a Common-Pool Resource}, \textit{Duke L.J.} (forthcoming 2002) (on file with author), \textit{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.


\textsuperscript{9} See infra notes 215-230 and accompanying text.
least supportable.\textsuperscript{10} Quality has low support and creates problems in context.\textsuperscript{11} Spread has the highest support.\textsuperscript{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 economy\textsuperscript{13} 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.\textsuperscript{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.\textsuperscript{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-

\textsuperscript{10} See infra notes 171-172, 215 and accompanying text.
\textsuperscript{11} See infra notes 165-168, 215-230 and accompanying text.
\textsuperscript{12} See infra notes 215-230 and accompanying text.
\textsuperscript{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.").
Transaction costs and right-holders' biases 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.


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).


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

For example, let us assume just for the current argument, that Congress asserts that it actually has a rational basis for believing that making digital circumvention and circumvention technology illegal 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 fair because they are unable to bypass the technological protections guarding the older works. 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. Second, the writings pro-

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. 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, 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 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.

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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."


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. \textsuperscript{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. \textsuperscript{31}

What about the Copyright Term Extension Act? \textsuperscript{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. \textsuperscript{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. \textsuperscript{34} Does this demonstrate that reading "progress" as "spread" would make the CTEA harder to assail? I think the opposite. \textit{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 \textit{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.

\textsuperscript{30} But see Jane Ginsburg, \textit{Copyright and Control over New Technologies of Dissemination}, 101 \textit{Columbia L. Rev.} 1613, 1618, 1636 (2001) (asserting possible benefits to public from DMCA because \textit{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 overlooks, \textit{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.

\textsuperscript{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. \textit{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. \textit{See}, e.g., Richard B. Saphire, \textit{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 \textit{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.").

\textsuperscript{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.

\textsuperscript{33} \textit{See} Eldred v. Reno, 239 F.3d 372, 378 (D.C. Cir. 2001).

\textsuperscript{34} \textit{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.\textsuperscript{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 corrupt\textsuperscript{36}—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 Monopolies\textsuperscript{37} was the first step in Parliament's control of the royal purse strings. No Authors' Exclusive Right (AER) or Inventors' Exclusive Right (IER)\textsuperscript{38} may be used to bypass full public scrutiny of political payoffs.\textsuperscript{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.\textsuperscript{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-

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


\textsuperscript{37} 21 Jam., ch. 3 (1624) (Eng.).

\textsuperscript{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).

\textsuperscript{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).

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 most 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).


\(^{45}\) 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. Furthermore, the legislative history of the CTEA does not demonstrate this as Congress' intent. 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. Humans, however, are not always good at, or interested in, making this type of cost/benefit prediction. 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. 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.


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).


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.\footnote{See S. Rep. No. 104-31 (statement of Senator Brown); Karjala, supra note 46, at 6-7.} 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.\footnote{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.go.com/disneyvideos/offers/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.} 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.\footnote{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.} 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.\footnote{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://eon.law.harvard.edu/openlaw/eldredvashcroft.} 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.\footnote{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).} 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...
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. 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 overthow 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 oversight of Congress' intellectual property legislation. This definition might also affect 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. 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. 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 BERELEY 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).

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, 58-59 (2001) (discussing copyrights and patents which were revived by private bills); 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)).


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.”).

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

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*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 acerbates 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-xliv, 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. 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 years to seventy years after the death of the author. One court even approved Congress's purported creation of perpetual rights to prevent fixation of sound recordings without the performers' permission. An "author" is "he to whom anything owes its origin; originator; maker; one who completes a work of science or literature." "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" limited only by a weak originality requirement. "Inventions" may include "anything under the sun that is made by man" including living entities.

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. Sarony, 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 "[originality [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").

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 "promotion 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-


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).

sional largess on this basis. 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." The Court's invocations of "progress," furthermore, are clearly dicta in all but two cases; even in these cases, most (or perhaps all) of the articulated limitation rests on other words in the Clause. 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. 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. 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) 85 (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).
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 Winthrop, Politcs and the Constitution 486 (1953) ([The 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. Cons. 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 Act and proposed database protection statutes. Congress' increase of the copyright term is under attack as violative of the "limited times" provision. 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.

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


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. Writing, therefore, was very important. Committing information to a lasting, mobile format allowed more people to share and build on earlier work. This, presumably, is why AERs are only allowable for “writings.”

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.” This true perfection includes universal education.


97. See id. at 182-84.

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


100. See id. at 182-84.
all, "are created equal and endowed by their Creator with certain inalienable rights" including the "pursuit of happiness."\textsuperscript{101} which requires intelligent, educated choice. General public education was a common, central tenet.\textsuperscript{102} Even the Bill of Rights created institutions for teaching governance skills to the general public.\textsuperscript{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."\textsuperscript{104} Madison, nevertheless, argued that the Constitution

\textsuperscript{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).


\textsuperscript{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").

\textsuperscript{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 manufactories, 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.\textsuperscript{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."\textsuperscript{106}

The Framers' infamous focus on preserving unequal private property\textsuperscript{107} does not undermine my argument. Some have argued that Madison, among other Framers, believed authors had a natural right to copyright protection.\textsuperscript{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 Hutchinson\textsuperscript{109} and John Wither-

\textsuperscript{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?").

\textsuperscript{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.

\textsuperscript{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 Verlagbuchhandlung 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).

\textsuperscript{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.

\textsuperscript{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
spoon\textsuperscript{110} 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.\textsuperscript{111} \textit{The Federalist} asserts that the rights of inventors and authors stand on the same logical premises.\textsuperscript{112}

2. \textit{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.\textsuperscript{113} Let me explain.

\textsuperscript{110} John Witherspoon may have been "the most influential religious and educational leader in Revolutionary America." Thomas Miller, Preface, in John Witherspoon, \textit{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. \textit{See id.} at vii; Miller, \textit{Introduction}, in \textit{id.} at 27-31 (1990).

\textsuperscript{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, \textit{Lectures on Moral Philosophy}, in \textit{id.} at 152, 228. Garry Wills interprets similarly the following language in Hutchinson. \textit{See Wills, supra} note 101:

\begin{quote}
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.
\end{quote}

\textit{2 Francis Hutchinson, A System of Moral Philosophy} 109 (1755).

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

\textit{Francis Hutchinson, A Short Introduction to Moral Philosophy} 246-47 (1747).

\textsuperscript{112} \textit{See The Federalist} No. 43 (Madison, quoted \textit{infra} note 161).

\textsuperscript{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. \textit{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."). \textit{See also} Carol M. Rose, \textit{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 \textit{res publicae} and \textit{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" 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. 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. 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. HENRET A, 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).

120. U.S. CONST. pmbl.
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. The last two methods often involve using modern definitions of amorphous words such as "reasonable" or "due process." As discussed in the next section, original intent, choice (b), seems unavailable for lack of evidence. 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. 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. "Nothing 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.


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


128. See, e.g., FRANCIS BACON, THE ADVANCEMENT OF LEARNING 9 (Oxford University Press ed., 2000) (1605) ("Let 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 worke.").
First, I will assume that the words of the Progress Clause were carefully chosen for substantive reasons. 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. The no surplusage rule is a time tested canon of statutory construction. I admit that the Court has been known to be less kind to constitutional language. The Court, however, usually gives intent-related reasons for such lapses. Intent, however, is too murky in this instance to be a useful tool for someone who wishes to persuade.

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.\textsuperscript{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."\textsuperscript{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.\textsuperscript{136} In the eighteenth century, "science" included all knowledge and all subjects of organized study.\textsuperscript{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 Monopolies\textsuperscript{138} ("Stat-

\textsuperscript{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.


\textsuperscript{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.

\textsuperscript{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").

\textsuperscript{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

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.).
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 sciences . . . 148

"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 civil-

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/amlawlawhome.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").

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.\footnote{150}

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

\footnote{150} Mass. Const. of 1780, ch. 5, § 2, reprinted in \textit{Phillip B. Kurland & Ralph Lerner, 3 The Founders' Constitution} 39 (1987). The 1780 Massachusetts Constitution is based on a draft composed by John Adams. \textit{See} \textit{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. \textit{See} \textit{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).

\footnote{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 conductive 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 . . .

\footnote{152} N.H. Const. of 1784, reprinted in \textit{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. \textit{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. \textit{See} \textit{11 Town Papers} 741-45 (Issac W. Hammond ed., 1882).

\footnote{152} Rhode Island remained governed by the royal charter creating the colony until 1842. \textit{See} \textit{8 Swindler, supra} note 151, at 340 (editorial note); \textit{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. \textit{R.I. Const.} art. XII § 1, re-
new works help "mankind," 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.

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." "To encourage by premiums & provisions, the advancement of useful knowledge and of discoveries." "To grant patents for useful inventions." "To secure to Authors exclusive rights for a limited time." 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.

The ratification debates and related literature are unhelpful. They barely mention the Progress Clause. No one defined the word "progress." The fullest discussion we have is Madison's short paragraph in the Federalist Papers. 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.").


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 con-
sider 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. The Federalists,
furthermore, were rather too busy replying to objections to the Consti-
tution to spend much thought on a clause whose positive grant of
tion had not been attacked.

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

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 COPY-
RIGHT 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. COPY-
RIGHT 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, re-
printed in LIBERTY, PROPERTY, AND THE FOUNDATION OF THE AMERICAN CONSTIT-
UTION 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 argu-
ments 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)
(Decision 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 con-
cerning 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 ac-
tion. 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.” 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 phase 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. Mandeville’s Fable of the Bees repeatedly refers to “promoting” arts and sciences, machines, 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, PUBLICK 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 . . . .”).
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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.\(^{177}\)

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\(^{172}\) 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 Robin- son 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.\textsuperscript{178} Not all of these can reasonably be supposed capable of qualitative improvement. Consider the "science" often touted as central to education, moral philosophy.\textsuperscript{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-

\textsuperscript{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, music, 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 Alchemy.” 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.

\textsuperscript{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”); SHAFTESBURY, 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 380 (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. 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 outshine Cicero, Homer, and Sophocles? I find this doubtful in light of these ancients almost canonical placement in the scholarly pantheon.

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. 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"?

180. But see, e.g., Jacques-Benigne Bossuet, Discourse on Universal History 114 (Elborg Forster 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 statuaries were superior to the modern is universally allowed."); 2 Hugh Blair, Lectures on Rhetoric and Belles Lettres 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. 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." 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, Congress can grant any exclusive intellectual property rights it wishes. This seems to be Merges' position. 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."

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

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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).


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. Chief Justice Rehnquist famously used "the first American Dictionary," Noah Webster's 1828 edition, to define "establishment" in the Bill of Rights. Dr. Samuel Johnson's famous tome has also figured in constitutional jurisprudence. 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." Second is "advancement; motion forward," illustrated only by lines involving physical motion. As definition three, Johnson separates

192. 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 adamantine 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." 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." 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." 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, "the 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. The source is interesting because American colonists were devotees of Blackstone's

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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.


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. A royal visit to the outlying districts may, therefore, be the eighteenth-century’s core example of a “progress.”

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”? 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.

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[,]” “instruct” its readers, and “fix the English lan-

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." Johnson intended to include "the words and phrases used in the general [polite] intercourse of life, [and] found in the works of those . . . commonly stilde[d] the polite writers," "the best writers" as chosen by Pope. Johnson's definitions are both upper class and inherently English—as opposed to American.

As for Webster, while on the correct continent, his work is almost fifty years post-ratification. Words changed rapidly in that time period in the United States. Webster did attempt to insert American words and American meanings for words, especially words with political overtones, 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.

In sum, dictionary definitions are not enough. 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 Mickeyethwait, 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. The word “progress” does not appear in the King James Version of the Bible. Because the Progress Clause also lacks exposition in the standard sources of original intent/meaning, 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. The results are:

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


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, bad weather, and possibly hostile ships. 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," 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." 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:

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

Next, we should recognize the difference between a person (or persons) 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.

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. Deducing 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. 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-

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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. Many of the references to books may easily be using "progress" in the historical/temporal 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. In that famous religious text, "progress" is an allegorical journey. 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. 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.

None of the forty-six possibilities avoids all of these problems. In summation, the *Pennsylvania Gazette* entries demonstrate that "progress" was overwhelmingly 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. This may have been the public debut of the Idea of Progress thesis in its Enlightenment formulation. The philosophical theory is based on the

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229. See, e.g., James Beattie, *The Minstrel; or The Progress of Genius*: with Other Poems 189-90, 195, 201-02, 214, 216 (1811) (showing hero is traveling). *The Minstrel* 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 58857.

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. Over time, 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.

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 progress 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. While it may have reached North America, the Pennsylvania
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. Seven refer to physical movement. Three could as easily refer to the quality improvement of some type of knowledge or the physical diffusion of that knowledge. Three refer to chronological ordering. The book, however, uses another word to mean quality improvement of either a knowledge set or mankind at least twenty-four times.

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.

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. 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.

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

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

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. The collection includes eight uses of the word "progress." I classify seven of these as meaning history, a chronological ordering. The eighth refers to specific persons gaining proficiency.

Replying to Shaftesbury, Bernard Mandeville's The Fable of the Bees presented the notorious thesis that many of mankind's selfish actions help society. 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. By 1787, the work was sufficiently well known in the United States to be referred to in a stage play. The work runs almost 800 pages 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 195 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).
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.
257. See id. at 202.
258. See 2 Mandeville, supra note 164, at 43.
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

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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, pp.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.
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.).
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 Sentiments276 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.
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.”\footnote{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.\footnote{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.\footnote{291}
## APPENDIX

<table>
<thead>
<tr>
<th>Year</th>
<th>Item No.</th>
<th>Subject which is progressing</th>
<th>Substrate in/through which progress is being made</th>
<th>Comments</th>
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<tr>
<td>1739</td>
<td>3638</td>
<td>our colony</td>
<td>[not mentioned]</td>
<td>resignation speech of speaker of Pennsylvania legislature</td>
</tr>
<tr>
<td>1739</td>
<td>same</td>
<td>our colony</td>
<td>[not mentioned]</td>
<td>same</td>
</tr>
<tr>
<td>1752</td>
<td>14881</td>
<td>human mind</td>
<td>“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”</td>
<td>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.”</td>
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<tr>
<td>1754</td>
<td>16632</td>
<td>liberal sciences</td>
<td>[not mentioned]</td>
<td>announcement of lottery to raise funds for College of New Jersey</td>
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<tr>
<td>1755</td>
<td>17858</td>
<td>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]</td>
<td>speech by Gov. of S. Carolina at opening of legislative session</td>
<td></td>
</tr>
<tr>
<td>1771</td>
<td>48758</td>
<td>science</td>
<td>“in this infant country”</td>
<td>open letter from trustees of a charity school to Lt. Gov. John Penn on the sad occasion of his return to England</td>
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292. This column provides the item number attached to the document by the database organizer.

293. Samuel Johnson, *Noetica*, in *Elementa Philosopica: 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).
<table>
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<th>Page</th>
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<tr>
<td>1771</td>
<td>49682</td>
<td>“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”</td>
<td>advertisements for pupils to learn French</td>
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<td>1771</td>
<td>49224</td>
<td>“Cultivation of the arts and Sciences” “your Province”</td>
<td>Letter from man in Williamsburg, VA to Philadelphia, mentioning reward given by Pennsylvania Assembly to person who “improved the Orrery”</td>
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<td>50481</td>
<td>science</td>
<td>[not mentioned]</td>
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<td>52679</td>
<td>“useful arts”</td>
<td>in America</td>
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<td>1775</td>
<td>57092</td>
<td>province of Pennsylvania</td>
<td>in science and literature</td>
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<tr>
<td>1776</td>
<td>59903</td>
<td>arts and sciences</td>
<td>in America</td>
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<tr>
<td>1776</td>
<td>59857</td>
<td>men</td>
<td>“as individuals”</td>
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<tr>
<td>1776</td>
<td></td>
<td>“the origin and progress of arts”</td>
<td>[not mentioned]</td>
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<tr>
<td>1776</td>
<td></td>
<td>“the female [sex]”</td>
<td>[not mentioned]</td>
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<td>1777</td>
<td>60919</td>
<td>USA</td>
<td>towards “an elegance of freedom”</td>
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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).
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<tr>
<td>1778</td>
<td>62959</td>
<td>truth</td>
<td>[not mentioned]</td>
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<td>advertisement for Dr. Price's book, &quot;Additional Observations on Civil Liberty and the war with America&quot;</td>
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<td>67818</td>
<td>arts</td>
<td>USA</td>
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<td>wording of recommendation of an American edition of the Holy Scriptures. Congress gave printer permission to publish this recommendation</td>
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<td>1783</td>
<td>69297</td>
<td>language etc.</td>
<td>[unmentioned]</td>
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<td>advertisement for Hugh Blair's book &quot;Lectures on Rhetoric and Belles Lettres&quot;</td>
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<td></td>
<td></td>
<td>citizens of Rhode Island</td>
<td>ironic opening to commercial announcement that a RI person had paid a mortgage in paper currency</td>
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<td>1788</td>
<td>75402</td>
<td>&quot;political knowledge&quot;</td>
<td>[unmentioned]</td>
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<td>Dec. 10 letter from &quot;an american citizen&quot; giving &quot;thoughts on the subject of amendments to the federal constitution&quot;</td>
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<td>75380</td>
<td>&quot;political science&quot;</td>
<td>[unmentioned]</td>
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<td></td>
<td></td>
<td>Dec. 3 &quot; &quot;</td>
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<td>1788</td>
<td>same</td>
<td>&quot;our progress&quot;</td>
<td>&quot;to greater perfection&quot;</td>
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<td></td>
<td></td>
<td></td>
<td>same</td>
</tr>
<tr>
<td>1789</td>
<td>75916</td>
<td>the arts</td>
<td>&quot;their progress and improvement&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>advertisement for subscription to a dictionary especially useful for artificers</td>
</tr>
</tbody>
</table>


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.").
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<tr>
<th>Year</th>
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<td>1789</td>
<td>76360</td>
<td>&quot;an industrious and frugal people&quot;</td>
<td>“towards wealth and comfort” Letter from North Carolina on inter alia ratification of US Const.</td>
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<td>76338</td>
<td>truth and reason</td>
<td>Paris Aug. 30, 1789 letter from Paris</td>
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<tr>
<td>1789</td>
<td>same</td>
<td>“such ideas” [limitation of king's power]</td>
<td>&quot;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 . . .&quot; same</td>
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<td>1789</td>
<td>76353</td>
<td>science</td>
<td>in not falling for delusions, such as tales of evil spirits from the Gazette of the United States, The Tablet No. LXXII</td>
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<td>1790</td>
<td>76728</td>
<td>humanity</td>
<td>[not mentioned] announcement of contents of the May 1790 issue of “The Universal Asylum and Columbian Magazine&quot;</td>
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<tr>
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<td>76909</td>
<td>science</td>
<td>in America announcement of dialogues spoken at public commencement exercises of the college of Philadelphia</td>
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<tr>
<td>1790</td>
<td>77075</td>
<td>“violated rights of reason and humanity”</td>
<td>in France Americans should congratulate themselves on giving France the spirit of liberty</td>
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<td>1790</td>
<td>77159</td>
<td>“further progress is daily making in the geographic knowledge of our country&quot;</td>
<td>advertisement for maps to be published on subscription from title of a “dialogue” performed at college commencement</td>
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<td>1790</td>
<td>76877</td>
<td>sciences</td>
<td>[not mentioned] from title of a “dialogue” performed at college commencement</td>
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<td>Year</td>
<td>Code</td>
<td>Topic</td>
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<td>1791</td>
<td>77582</td>
<td>liberty</td>
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<td>1794</td>
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<td>the arts and sciences</td>
<td>in the USA</td>
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<td>mankind</td>
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<td>human race</td>
<td>[unclear, seems to be arts, sciences, liberty, social happiness, and philosophy]</td>
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<tr>
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<td>81970</td>
<td>human mind</td>
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<td>1797</td>
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<td>of an enlightened nation</td>
<td>to the summit of public virtue and happiness</td>
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<td>Year</td>
<td>Code</td>
<td>Phrase</td>
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<td>1798</td>
<td>82518</td>
<td>&quot;sacred flame of liberty&quot;</td>
<td>among English people, including fleets and armies</td>
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<td>1798</td>
<td>82268</td>
<td>&quot;revolutionary principles&quot;</td>
<td>in Cantons of Switzerland</td>
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<td>1800</td>
<td>83321</td>
<td>science</td>
<td>[not mentioned]</td>
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