

CONFORMING THE GENERAL WELFARE CLAUSE AND THE
INTELLECTUAL PROPERTY CLAUSE

Edward C. Walterscheid*

The Congress shall have Power to lay and collect Taxes, Duties, Imposts and Excises, to pay the Debts and provide for the common Defence and general Welfare of the United States; [General Welfare Clause] . . . [and] 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 [Intellectual Property Clause].¹

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* Mr. Walterscheid is a retired lawyer who served for many years as Deputy Laboratory Counsel at the University of California's Los Alamos National Laboratory, Los Alamos, N.M. His avocation is the study of the early history of intellectual property law in the United States, and he has published a book and numerous articles on this topic.

1. U.S. CONST., art. I, § 8.

I. INTRODUCTION

In 1936, in *United States v. Butler*,² the Supreme Court placed its imprimatur on the broad, or Hamiltonian, interpretation of the general welfare clause and rejected the narrow interpretation espoused by Madison and Jefferson. It held that while congressional authority to spend public monies for public purposes is not absolute, neither is it limited to the direct grants of legislative power found in the Constitution.³ The Court has subsequently noted that the spending power is subject to several general restrictions, one of which is that it must be for the general welfare, and another is that it is subject to any other constitutional clause that imposes an "independent bar" to the particular appropriation in question.⁴

The Court has never addressed the issue of whether the intellectual property clause constitutes an "independent bar" to the spending power of Congress.⁵ After 1936, there seems to have been a general perspective that the broad interpretation of the general welfare clause set forth in *Butler* sanctions and authorizes the massive federal expenditure in support of education and research and development ("R&D") that occurred in the twentieth century.⁶ While constitutional historians and legal commentators have analyzed the triumph of the Hamiltonian interpretation over that of Jefferson and Madison,⁷ I am not aware of anyone who has explored the relationship of the intellectual property clause to the general welfare clause, and specifically whether the intellectual property clause can be read to limit the authority of the federal government to fund education and R&D. Yet there were many in the late eighteenth and early nineteenth centuries who viewed it as

2. 297 U.S. 1 (1936).

3. *See id.* at 66.

4. *See South Dakota v. Dole*, 483 U.S. 203, 207-10 (1987).

5. Or for that matter whether it serves as an independent bar to a broad interpretation of any other constitutional clause. Recently, however, an argument has been presented that it serves as an independent constitutional bar to a broad interpretation of the commerce clause. *See Malla Pollack, The Right to Know?: Delimiting Database Protection at the Juncture of the Commerce Clause, the Intellectual Property Clause, and the First Amendment*, 17 CARDOZO ARTS & ENT. L.J. 47 (1999).

6. *See, e.g., STEVEN GOLDBERG, CULTURE CLASH: LAW AND SCIENCE IN AMERICA* 37 (1994).

7. *See, e.g.,* David E. Engdahl, *The Spending Power*, 44 DUKE L.J. 1 (1994); Richard D. Friedman, *Switching Time and Other Thought Experiments: The Hughes Court and Constitutional Transformation*, 142 U. PA. L. REV. 1891, 1953-60 (1994); Ryan C. Squire, *Effectuating Principles of Federalism: Reevaluating the Federal Spending Power as the Great Tenth Amendment Loophole*, 25 PEPP. L. REV. 869 (1998).

doing exactly that. To explore this issue requires us to delve into the thorny thicket of originalism in constitutional interpretation.

Historian Jack Rakove suggests that “since 1789 Americans have always possessed two constitutions, not one: the formal document adopted in 1787–88, and its amendments; and the working constitution comprising the body of precedents, habits, understandings, and attitudes that shape how the federal system operates at any historical moment.”⁸ Originalism challenges the increasingly tenuous relationship between these two constitutional identities by contending that a particular aspect of law or government should be brought nearer to — and be more closely controlled by — its constitutional source.

Rakove argues that originalism “is not only about the relation between the Constitution of 1787 and the constitutions of later periods; it is also about the relation between the interpretative predictions of 1787–88 and the interpretative processes developed afterward.”⁹ He suggests that the political struggles of the 1790s strongly influenced the evolution of theories of constitutional interpretation and “shaped the curiously intertwined role that Madison and Hamilton, the great collaborators turned protagonists, played in their development.”¹⁰

Here I seek to explore the early conceptions of the general welfare clause and the intellectual property clause with an emphasis on the intellectual property clause.¹¹ I begin by noting the unique nature of the intellectual property clause and briefly explaining why it is so unusual and why it contains its particular language. I then address in some detail the “curiously intertwined” roles of Madison and Hamilton in the early interpretations of these two clauses and suggest that Madison’s views on the interpretation of the intellectual property clause were a factor in Hamilton’s development of his broad interpretation of the general welfare clause. I review how the language of the intellectual property clause could be — and was — perceived to limit the spending power of Congress with respect to federal funding of education and R&D. In so doing, I first look to early congressional views on the interpretation of the intellectual property clause, then to Hamilton’s broad interpretation of the spending power under the general welfare clause and to early constitutional commentary concerning the interpretations of the two clauses. Finally, I review the modern judicial interpretations of both the

8. JACK RAKOVE, *ORIGINAL MEANINGS: POLITICS AND IDEAS IN THE MAKING OF THE CONSTITUTION* 339–40 (1996).

9. *Id.* at 340–41.

10. *Id.* at 342.

11. My emphasis on the intellectual property clause arises out of the fact that it has been largely ignored by constitutional historians, both as to its own interpretation and its relationship with other constitutional clauses.

intellectual property clause and the general welfare clause. I point out that these interpretations neither address the potential dichotomy in funding authority posed by the two clauses, nor make any attempt to conform the language of the two clauses to remove the dichotomy. I suggest how the language of the two clauses can be readily conformed to avoid any argument that the intellectual property clause constitutes an independent constitutional bar to federal funding of education and R&D. In so doing, I set forth a broad interpretation of the clause that varies significantly from the interpretation espoused by courts and commentators in the modern era.

In this article, I have sought to take to heart the concern expressed by Akhil Reed Amar about "how much is lost by the clausebound approach that now dominates constitutional discourse."¹² I concur fully in his view that we should never forget "that our Constitution is a single document, and not a jumble of disconnected clauses — that it is *a* Constitution we are expounding."¹³ Indeed, it is for this reason that I believe it is necessary to conform the language of the general welfare clause and that of the intellectual property clause. To show both the need for this and how it may be accomplished, I begin with a look at the language of the intellectual property clause and how it came to be drafted as it was.

II. A UNIQUE CLAUSE

The intellectual property clause is unique among the constitutional powers granted to Congress in that it is the only one that sets forth a particular and specific mode of exercising the power. The highly unusual nature of this approach is indicated by the fact that the Committee of Detail, which was responsible for preparing a working draft from which the delegates ultimately crafted the Constitution, in general deliberately avoided such specificity, preferring instead "to insert essential principles only" and "to use simple and precise language and general propositions."¹⁴ Some years later, Jefferson¹⁵ provided

12. AKHIL REED AMAR, *THE BILL OF RIGHTS: CREATION AND RECONSTRUCTION* 124–25 (1998).

13. *Id.* at 125. Professor Amar was referring to the famous statement by Chief Justice Marshall that "we must never forget that it is a Constitution we are expounding." *McCullough v. Maryland*, 16 U.S. (4 Wheat.) 316, 407 (1819).

14. As Edmund Randolph explained it:

In the draught of a fundamental constitution, two things deserve attention:

1. To insert essential principles only; lest the operation of government should be clogged by rendering those provisions

interesting evidence that, with the exception of the intellectual property clause, the delegates deliberately refused to give any “special power” to Congress.¹⁶

The clause was not proposed by any particular delegate, but rather was an amalgamation of a number of separate proposals that had been received by the convention on August 18, 1787. The Journal for the Convention for that date lists twenty additional powers “proposed to be vested in the Legislature of the United States,” among which were:

To secure to literary authors their copy rights for a limited time; To encourage, by proper premiums and provisions, the advancement of useful knowledge and discoveries; . . . To grant patents for useful inventions; . . . To secure to authors exclusive rights for a certain time; [and] To establish public institutions, rewards and immunities for the promotion of agriculture, commerce, trades, and manufactures.¹⁷

permanent and unalterable, which ought to be accommodated to times and events; and

2. To use simple and precise language, and general propositions, according to the example of the (several) constitutions of the several states. (For the construction of a constitution necessarily differs from that of law).

2 THE RECORDS OF THE FEDERAL CONVENTION OF 1787, at 137 (Max Farrand ed., 1937) [hereinafter RECORDS].

15. Jefferson was no particular friend of the intellectual property clause, although it is occasionally argued that he highly favored it. See Edward C. Walterscheid, *Patents and the Jeffersonian Mythology*, 29 JOHN MARSHALL L. REV. 269, 274, 305, 310 (1995); Edward C. Walterscheid, *The Use and Abuse of History: The Supreme Court's Interpretation of Thomas Jefferson's Influence on the Patent Law*, 39 IDEA 195, 217–219; cf. *Graham v. John Deere Co.*, 383 U.S. 1, 7–11 (1966).

16. Jefferson recorded the following as the result of a dinner conversation on March 11, 1798:

Baldwin mentions at table the following fact. When the bank bill was under discussion in the House of Representatives, Judge Wilson came in, and was standing by Baldwin. Baldwin reminded him of the following fact which passed in the grand convention. Among the enumerated powers given to Congress, was one to erect corporations. It was, on debate, struck out. Several particular powers were then proposed. Among others, Robert Morris proposed to give Congress a power to establish a national bank. . . . [This] was rejected, as was every other special power, except that of giving copyrights to authors, and patents to inventors; the general power of incorporating being whittled down to this shred. Wilson agreed to the fact.

2 RECORDS, *supra* note 14, at 375–76.

17. *Id.* at 321–22.

These proposals served as the genesis for the intellectual property clause, but, unfortunately, the Journal says not a word about who offered them or why. Madison's notes for August 18th are slightly more revealing. They state:

Mr. Madison submitted in order to be referred to the Committee of detail the following powers as proper to be added to those of the General Legislature . . . To secure to literary authors their copy rights for a limited time . . . To encourage by premiums & provisions, the advancement of useful knowledge and discoveries

[A]t the same time the following which was moved by Mr. Pinkney [sic]: in both cases unanimously. . . . To grant patents for useful inventions[;] To secure to Authors exclusive rights for a certain time[; and] To establish public institutions, rewards and immunities for the promotion of agriculture, commerce, trades and manufactures.¹⁸

This indicates who made the proposals, but provides no indication of why they were made.

The proposals submitted by Madison and Pinckney were referred to the Committee of Detail, which made a partial report on August 22nd, but said nothing about the proposals relating to intellectual property. Finally, on August 31st, the delegates agreed to submit all unfinished business pertaining to the Constitution to a committee having one member from each state. This became the Committee of Eleven.¹⁹ Madison was on it, but Pinckney was not. On September 5th, the Committee reported on the unresolved matters pertaining to the powers to be granted to Congress. In its report, the Committee proposed the intellectual property clause: "To promote the progress of Science and useful arts by securing for limited times to authors & inventors, the exclusive right to their respective writings and discoveries."²⁰ It was approved by the delegates without debate. There is no record to indicate how the intellectual property proposals submitted by Madison and

18. *Id.* at 324–25.

19. Rhode Island never sent delegates, and those from New York were absent from the convention.

20. 2 RECORDS, *supra* note 14, at 509.

Pinckney were transformed into this clause. It is quite conceivable, however, that Madison was its author.

The intellectual property clause attempts to harmoniously combine several of these proposals for congressional authority submitted by Madison and Pinckney. The terms “science” and “useful arts” do not appear in any of these proposals, but they correspond rather closely to the terminology of those proposals. The use of “science” is explained by the fact that in the latter part of the eighteenth century it was synonymous with “knowledge” and “learning”²¹ — terms which could readily be encompassed within the general ambit of education. The words “useful arts” were likely suggested to the Committee of Eleven by the contemporaneous formation in Philadelphia of a new group called the Pennsylvania Society for the Encouragement of Manufactures and the Useful Arts.²² The justification for the Society was to promote and extend manufactures and the useful arts in the United States.²³ On its face, this was also a purpose of the intellectual property clause.

A perusal of the clause reveals that it is a consolidation and incorporation of three separate and distinct proposals presented by Madison and Pinckney.²⁴ The reference to securing to authors for limited times an exclusive right to their writings incorporates the essentially identical proposals from Madison to secure to literary authors

21. Samuel Johnson's *A Dictionary of the English Language*, which was the most authoritative dictionary of the time, gives “knowledge” as the first definition of “science.” See Arthur H. Seidel, *The Constitution and a Standard of Patentability*, 48 J. PAT. OFF. SOC'Y 5, 12 n.14 (1966). Seidel points out that in 1787 “science” meant learning or knowledge generally and in fact had such a meaning since the times of Lord Coke. See *id.* at 12. Rich not only makes the same point, but emphasizes it by noting that the first copyright law in 1790 was entitled “An act for the encouragement of learning” and that the only word in the constitutional language corresponding to “learning” is “science.” See Giles S. Rich, *The Principles of Patentability*, 42 J. PAT. OFF. SOC'Y 75, 79–80 (1960).

22. See EDWARD C. WALTERSCHEID, *TO PROMOTE THE PROGRESS OF USEFUL ARTS: AMERICAN PATENT LAW AND ADMINISTRATION, 1787–1836*, at 51–52 (1998).

23. See 2 AM. MUSEUM 167 (1787).

24. But the legislative history of the 1952 Patent Act describes the clause as:

[T]wo provisions merged into one. The purpose of the first provision is to promote the progress of science by securing for limited times to authors the exclusive rights to their writings, the word “science” in this connection having the meaning of knowledge in general. . . . The other provision is that Congress has the power to promote the progress of the useful arts by securing for limited times to inventors the exclusive right to their discoveries.

S. REP. NO. 82-1979, at 3 (1952); H.R. REP. NO. 82-1923, at 4 (1952); see also *In re Bergy*, 596 F.2d 952, 958 (C.C.P.A. 1979) (“Scholars who have studied this provision, its origins, and its subsequent history, have, from time to time, pointed out that it is really two grants of power rolled into one; first, to establish a copyright system and, second, to establish a patent system.”).

their copyrights for a limited time and from Pinckney to secure to authors exclusive rights for limited times. The reference to securing to inventors for limited times an exclusive right to their discoveries incorporates Pinckney's proposal to grant patents for useful inventions. This much is generally accepted.²⁵ What is not generally recognized is that the clause incorporates a third proposal, namely, Madison's proposal to encourage the advancement of useful knowledge and discoveries by premiums and provisions. This is very similar to the actual language used, i.e., to promote the progress of science and useful arts. Clearly, this proposal by Madison is much broader in scope than the proposals that simply provide for patents and copyrights, and the incorporation of language closely analogous to it in the clause suggests that the Framers viewed the intellectual property clause expansively.

It is beyond doubt that the Framers, including Madison, thought that it was the duty of enlightened government "to promote the progress of science and useful arts." If the intellectual property clause had left it at that, without adding more, it is quite unlikely that the issue of the authority of the federal government to fund education or R&D would ever have arisen. But there is more, and the question quickly arose as to whether that "more," i.e., the express authority to make limited-term grants of exclusive rights to authors and inventors, was intended to be a limitation *only* to that mode of promoting the progress of science and useful arts.²⁶ If the clause be so interpreted, then clearly it could be taken as an independent constitutional bar to the authority of Congress to fund education and R&D.

To answer this first question, it is necessary to ask a second one, namely, why is there more? One answer, of course, could be that the additional language is in fact intended as a limitation on what would otherwise be a general grant of authority to promote the progress of science and useful arts in whatever manner Congress deemed appropriate. The literal grammatical construction of the clause certainly does not preclude this narrow interpretation and may even be said to favor it. The problem with this interpretation is that, aside from the literal language of the clause, there is nothing in the contemporaneous

25. But compare Pollack's argument that the Framers deliberately refused to use the terms "copyrights" and "patents" in the clause because they did not want to limit or tie the clause to the technical meaning of these two terms. See Malla Pollack, *Unconstitutional Incontestability? The Intersection of the Intellectual Property and Commerce Clauses of the Constitution: Beyond a Critique of Shakespeare Co. v. Silstar Corp.*, 18 SEATTLE U. L. REV. 259, 290 (1995).

26. For convenience, I will hereafter refer to this as the narrow interpretation, although, as I will show, the clause was also narrowly interpreted in another sense, namely, as precluding patents of importation. See *infra* text accompanying notes 57-63.

record to indicate why the delegates would seek to limit the power of Congress to promote the progress of science and useful arts to only the particular mode set forth in the clause, i.e., the grant of limited-term exclusive rights.²⁷ In light of the general practice otherwise followed by the Committee of Detail and presumably well known to the Committee of Eleven “to insert essential principles only” and “to use general propositions,” there is simply no good reason to assume that this was the intent of the delegates.

Why then is the additional language present? The reasonable answer is that it was included, not for the purpose of limiting Congress only to the authority to grant patents and copyrights, but rather to assure that Congress would in fact have authority to issue patents and copyrights in addition to whatever other means it saw fit to use to promote the progress of science and useful arts.²⁸ The reasons for such an approach are straightforward. First of all, the delegates had at least general familiarity with the British patent and copyright practice, which seemed to work reasonably well and which they desired to give Congress the power to emulate.²⁹ More importantly, however, in the impecunious

27. Various other approaches, such as honorary titles, medals or plaques, and monetary rewards, had been tried in Europe in the eighteenth century to accomplish this end. But in the republican frame of mind existing in the United States at this time, honorary titles were the last thing contemplated to encourage the promotion of science and useful arts. Medals and plaques failed to excite the pecuniary interests of writers and inventors. See H.I. DUTTON, *THE PATENT SYSTEM & INVENTIVE ACTIVITY DURING THE INDUSTRIAL REVOLUTION, 1750–1852*, at 109 (1984). Other schemes being proposed, such as premiums and other monetary rewards, would all cost money, while granting limited-term exclusive rights was perceived as being almost entirely without cost to the proposed federal government. This did not prevent both “premiums” and “rewards” from being proposed as means for promoting the advancement of useful knowledge and discoveries as well as agriculture, trade, commerce, and manufactures. See *supra* text accompanying notes 17–18. But neither proposal saw the light of day in the Constitution as drafted and ratified and, under the narrow interpretation of the clause, they were presumed to be precluded.

28. Hereafter I will term this the broad construction of the intellectual property clause.

29. See 3 JOSEPH STORY, *COMMENTARIES ON THE CONSTITUTION OF THE UNITED STATES* § 1147 (1833) (“It was doubtless to this knowledge of the common law and statuteable rights of authors and inventors, that we are to attribute this constitutional provision.”); cf. WILLIAM RAWLE, *A VIEW OF THE CONSTITUTION OF THE UNITED STATES OF AMERICA* 106 (2d ed. 1829) (According to Rawle, “as from the nature of our Constitution, no new rights can be considered as created by it,” and accordingly the intellectual property clause was merely intended to acknowledge the existence of a pre-existing legal right in both authors and inventors.). The Supreme Court rather quickly disagreed with the view expressed by Rawle and instead held that the intellectual property clause did not secure existing rights, but instead authorized Congress to create the limited-term exclusive rights known as copyrights and patents. See *Wheaton v. Peters*, 33 U.S. (8 Pet.) 591, 661 (1834).

nature of the times, giving Congress authority to issue patents and copyrights seemed the most financially prudent approach in that it would cost the government the least to implement of the various schemes then being contemplated for encouraging both learning and the rise of manufacturing while providing, at least potentially, a desired monetary incentive to authors and inventors.³⁰ Finally — and this is the crux of the matter — the additional language is there because without it the delegates did not believe Congress would have authority to grant patents and copyrights, regardless of how broad the authority “to promote the progress of science and useful arts” might on its face appear.

The problem is that patents and copyrights were perceived as monopolies, albeit desirable ones, and both the delegates and the American public were highly averse to giving Congress any general power to create monopolies.³¹ In their correspondence concerning the newly ratified Constitution, both Jefferson and Madison referred to the exclusive rights authorized by the intellectual property clause as monopolies.³² Indeed, it was the fact that patents and copyrights were viewed as monopolies that caused Jefferson to object to the intellectual property clause.³³ One of the reasons why Virginia delegate George Mason refused to sign the proposed Constitution was that “[u]nder their own construction of the general clause at the end of the enumerated powers, the congress may grant monopolies in trade and commerce.”³⁴

30. See WALTERSCHEID, *supra* note 22, at 36–37. Story argues that in the absence of limited-term exclusive rights, inventors would have little incentive to reveal their discoveries and “authors would have little inducement to prepare elaborate works for the public.” 3 STORY, *supra* note 29, § 1147.

31. It was the lack of an express prohibition of monopolies in the Constitution that caused Jefferson to recommend to Madison that the proposed bill of rights provide “clearly and without the aid of sophisms for . . . restriction against monopolies.” See Letter from Thomas Jefferson to James Madison (Dec. 20, 1787), in 1 THE REPUBLIC OF LETTERS 1776–1790, at 512 (James Morton Smith ed.) (1995) [hereinafter REPUBLIC].

32. See Letter from Thomas Jefferson to James Madison (July 31, 1788), in 1 REPUBLIC, *supra* note 31, at 545; Letter from James Madison to Thomas Jefferson (Oct. 17, 1788), in 1 REPUBLIC, *supra* note 31, at 566.

33. In his letter of July 31, 1788, Jefferson amplified his view that the Constitution should specifically preclude monopolies, including those authorized by the intellectual property clause, writing, “it is better . . . to abolish . . . [m]onopolies, in all cases, than not to do it in any.” He acknowledged that precluding patent and copyright monopolies “lessens the incitements to ingenuity, which is spurred on by the hope of a monopoly for a limited time, as of 14. years[,]” but argued that “the benefit even of limited monopolies is too doubtful to be opposed to that of their general suppression.” See Letter from Thomas Jefferson to James Madison (July 31, 1788), *supra* note 32, at 545.

34. See George Mason, *The Objections of the Hon. George Mason, One of the Delegates from Virginia, in the Late Continental Convention, to the Proposed Federal Constitution, Assigned as His Reasons for Not Signing the Same*, 2 AM. MUSEUM 534, 537 (1787).

This was also a concern of a number of the ratifying conventions.³⁵ If the delegates wanted Congress to have authority to grant limited-term exclusive rights to authors and inventors, they had good reason to believe that they had to say so expressly and explicitly.³⁶

Unfortunately, in saying so explicitly, the delegates seem not to have contemplated that their express language could be taken as a limitation on the general grant of authority to promote the progress of science and useful arts and, as a consequence, they inartfully phrased it. Rather than limiting the general grant of authority, they actually sought to increase it to expressly include the power to grant the limited-term monopolies known as patents and copyrights. But that was not what the literal language of the clause appeared to say.

As we shall now see, the question of whether that literal language precluded Congress from doing anything more “to promote the progress of science and useful arts” other than providing for copyrights and patents was an issue of real concern in early congressional debate. The concern was real because, if read narrowly, the language appeared to bar Congress from funding either education or R&D.

III. EARLY CONGRESSIONAL INTERPRETATION OF THE INTELLECTUAL PROPERTY CLAUSE

On April 15, 1789, John Churchman petitioned the House of Representatives for an exclusive right with respect to his invention for determining longitude based on the magnetic variation at places of known latitude. He also requested that the House fund a voyage to Baffin’s Bay to aid in further development of the invention.³⁷ This is the

35. See Francis Hopkinson, *The New Roof*, 4 AM. MUSEUM 146 (1788); *Remarks on the Amendments to the Federal Constitution, Proposed by the Conventions of Massachusetts, New Hampshire, New York, Virginia, South and North Carolina, with the Minorities of Pennsylvania and Maryland*, 6 AM. MUSEUM 303 (1789).

36. But cf. Rochelle Cooper Dreyfuss, *A Wiseguy’s Approach to Information Products: Muscling Copyright and Patent into a Unitary Theory of Intellectual Property*, 1992 SUP. CT. REV. 195, 231 (Dreyfuss states that “[a]t the time of the Constitutional Convention, exclusive rights were not conflated with the notion of monopoly because theorists understood monopolies as privatizing matter already in use by the public while exclusive rights were for newly developed material.”). Dreyfuss seems to have been totally unaware of the correspondence between Jefferson and Madison, which did indeed “conflate” the exclusive rights authorized by the intellectual property clause with monopoly.

37. See Journal of the First Session of the House of Representatives (Apr. 20, 1789), reprinted in 3 DOCUMENTARY HISTORY OF THE FIRST FEDERAL CONGRESS OF THE UNITED STATES, MAR. 4, 1789–MAR. 3, 1791, at 28–29 (Linda Grant De Pauw et al. eds., 1977) [hereinafter DOCUMENTARY HISTORY].

first known request for federal funding of what would today be known as R&D. Debate on this request for funding rather quickly raised the question of whether the exclusive rights provision of the intellectual property clause was intended to be the exclusive and only mode granted to Congress for promoting the progress of science and useful arts.³⁸ Two years later, Hamilton would provide a strong constitutional argument that other means, such as bounties, could be used for this purpose under the general welfare clause.³⁹

In light of the narrow construction that Madison would soon place on the intellectual property clause, it is interesting to note that he originally spoke in favor of funding the voyage without making any mention of what authority Congress might have to provide such funding.⁴⁰ Brant argues that Madison's support for the voyage "could be justified only by a sweeping interpretation of the power to spend for the general welfare."⁴¹ Alternatively, Currie suggests that Madison was "conjur[ing] up the ubiquitous Commerce Clause."⁴² There is no evidence to support either of these perspectives, because at this early stage in congressional debate no one, including Madison, had proposed a broad reading of either the commerce clause or the general welfare clause. Moreover, the context of the debate makes clear that it was conducted under the supposition that at issue was the authority given by the intellectual property clause.

Nor is there anything to suggest that Madison actually contemplated the broad interpretation of the intellectual property clause that I have stated. Rather, it appears that initially he gave little thought to the constitutional implications of Churchman's request, although he would soon thereafter admonish the House "that constitutional issues be given 'careful investigation and full discussion' because '[t]he decision that is at this time' made, will become the permanent exposition of the

38. See Lloyd's Notes (Apr. 20, 1789), reprinted in 10 DOCUMENTARY HISTORY OF THE FIRST FEDERAL CONGRESS OF THE UNITED STATES, MAR. 4, 1789–MAR. 3, 1791, at 211–20 (Charlene Bangs Bickford et al. eds., 1992).

39. See *infra* text accompanying notes 52–54.

40. See Lloyd's Notes, *supra* note 38, at 211–12, 217–18.

41. IRVING BRANT, JAMES MADISON: THE FATHER OF THE CONSTITUTION, 1787–1800, at 332 (1950). Levy makes the same assertion, saying: "Madison supported an expenditure justifiable only upon a breathtaking interpretation of the general welfare clause." LEONARD W. LEVY, ORIGINAL INTENT AND THE FRAMERS' CONSTITUTION 9 (1988).

42. David P. Currie, *The Constitution in Congress: Substantive Issues in the First Federal Congress*, 61 U. CHI. L. REV. 775, 799 (1994). The commerce clause states, "Congress shall have Power . . . To regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes." U.S. CONST. art. I, § 8, cl. 3.

Constitution.”⁴³ In supporting Churchman’s request, he seems not to have given any thought to the specific language of the intellectual property clause. Several other representatives, however, expressed doubt as to whether Congress had power under the clause to do anything other than merely secure to inventors for limited times the exclusive right to their discoveries.⁴⁴ As a result, no action was taken on Churchman’s request.

When Churchman renewed his efforts to obtain federal funding for the voyage, a House Committee Report dated January 6, 1791, stated that the issue of funding the voyage “involve[d] an enquiry into the Constitutional powers of Congress,” which the committee was not prepared to make.⁴⁵ In 1796, a congressional committee made the point even more clearly, saying, “[t]hat it is their opinion that application to Congress for pecuniary encouragement of important discoveries, or of useful arts, cannot be complied with, as the Constitution of the United States appears to have limited the powers of Congress to granting patents only.”⁴⁶

Nor were the congressional concerns limited to the funding of R&D. In 1790, House debate expressed similar doubts about federal funding of education.⁴⁷ Clearly, the early federal Congresses were not certain that the grant of authority to promote the progress of science and useful arts in the introductory “to” portion of the clause was not limited to the particular modes set forth in the remainder of the clause, i.e., the “by” portion, authorizing the issuance of patents and copyrights.⁴⁸ In this way

43. DAVID P. CURRIE, *THE CONSTITUTION IN CONGRESS: THE FEDERALIST PERIOD, 1789–1801*, at 116 (1997) (citing 1 *ANNALS OF CONG.* 514 (Joseph Gales ed., 1789)). Little did Madison realize how much constitutional interpretation would vary in the subsequent two centuries.

44. See Lloyd’s Notes, *supra* note 38, at 213–14, 220. For example, Rep. Tucker: expressed a doubt whether the Legislature has power, by the Constitution, to go further in rewarding the inventor of useful machines, or discoveries in sciences, than merely to secure to them for a time the right of making, publishing and vending them: in case of a doubt, he thought it best to err on the safe side.
Id. at 220.

45. House Committee Report (Jan. 6, 1791), *reprinted in* 4 *DOCUMENTARY HISTORY OF THE FIRST FEDERAL CONGRESS OF THE UNITED STATES, MAR. 4, 1789–MAR. 3, 1791*, at 531 (Charlene Bangs Bickford & Helen E. Veit eds., 1986) (report on Copyright Bill, H.R. 123).

46. See H.R. DOC. NO. 74 (1796), *reprinted in* 1 *AMERICAN STATE PAPERS: MISCELLANEOUS* 140 (Walter Lowrie & Walter S. Franklin eds., 1832). One House member said that he was “sorry to have it established as a principle, that this Government cannot Constitutionally extend its fostering aid to the useful arts and discoveries,” but he did not make an issue of it. 5 *ANNALS OF CONG.* 288 (1796).

47. See *infra* text accompanying notes 66–67.

48. As stated by Dupree:

of interpreting the clause, the "by" portion is treated as a limitation on the power set forth in the "to" portion.

Currie contends that the congressional doubts were "solidly supported by the text of the provision"⁴⁹ and that the Constitution confers "not a general power 'to promote the progress of science and useful arts,' but instead only the power to grant limited exclusive rights to accomplish that goal."⁵⁰ Although Currie did not cite to him, St. George Tucker, one of the earliest commentators on the Constitution, interpreted the intellectual property clause in exactly the same way, saying:

For the constitution not only declares the object, but points out the express *mode* of giving encouragement; viz. 'by securing for a limited time to authors and inventors, the exclusive right to their respective writings, and discoveries.' Nothing could be more

[T]he tide ran clear and strong against the establishment of any power of the government to subsidize science directly. The failure of the patent clause to become what it might have been — a basis for scientific activity of all sorts — well illustrates the reluctance of the Congress in this period to become active in science, even where, as in the case of patents themselves, they had to make no appropriation. The people's representatives settled into a silent groove of strict construction of the Constitution concerning a subject where popular enthusiasm did not measure up to the cost of action both in controversy and money.

A. HUNTER DUPREE, *SCIENCE IN THE FEDERAL GOVERNMENT: A HISTORY OF POLICIES AND ACTIVITIES TO 1940*, at 14 (1957). Compare this statement to Reingold's view that:

The Constitution ostensibly gives the federal government only two explicit authorizations for the support of science and technology, the patent clause and the authority to fix standards of weights and measures. The absence of constitutional authority was often raised as an objection to scientific and technological programs. On a number of occasions constitutional issues even carried the day. . . . [But w]hen stimulated by proper pressures, constitutional qualms were easily bypassed and constitutional justifications confidently propounded.

Nathan Reingold, *Introduction* to 1 *THE NEW AMERICAN STATE PAPERS: SCIENCE AND TECHNOLOGY* 12 (1973). Reingold failed to note that during the administrations of Jefferson and Madison, the perceived constitutional qualms did in fact carry the day and it would be several decades before they would be as easily bypassed as he suggests.

49. Currie, *supra* note 42, at 799.

50. CURRIE, *supra* note 43, at 93. In a somewhat different context, economic historian Fritz Machlup has suggested that the constitutional language was intended solely for the promotion of invention and that there is a "question whether the promotion of innovating enterprise and of entrepreneurial investment can be held subsumed in the promotion of 'science and the useful arts' which the Constitution of the United States stipulated as the sole objective of patent legislation." SENATE COMM. ON THE JUDICIARY, 85TH CONG., *AN ECONOMIC REVIEW OF THE PATENT SYSTEM* 56, 74 (Comm. Print 1958).

superfluous, or incompatible, with the object contended for, than these words, if it was, indeed, the intention of the constitution to authorize congress, to adopt any other mode which they might think proper.⁵¹

This view would prevail during much of the first half of the nineteenth century.

This, of course, is what is now termed the narrow view of the spending power of Congress, namely, that it is limited to that specifically authorized in the enumerated powers given to Congress. This was the view espoused by both Madison and Jefferson. Hamilton, however, had appeared to propose a much broader view of the spending power under the welfare clause, one that at first glance appeared not in any way limited by any other enumerated power.

IV. HAMILTON AND THE SPENDING POWER

In his famous *Report on the Subject of Manufactures*⁵² submitted to Congress on December 5, 1791, Hamilton argued that the federal government had constitutional authority under the general welfare clause to issue “pecuniary bounties” as an encouragement to the development of manufacturing in the United States. He contended that under this clause:

[T]he power to *raise money* is *plenary*, and *indefinite*; and the objects to which it may be *appropriated* are no less comprehensive, than the payment of the public debts and the providing for the common defence and “*general Welfare*.” The terms “*general Welfare*” were doubtless intended to signify more than was expressed or imported in those which Preceded;⁵³ otherwise numerous exigencies incident to the affairs of a Nation would have been left without a provision. The phrase is as comprehensive as any that could have been used;

51. 1 ST. GEORGE TUCKER, BLACKSTONE'S COMMENTARIES: WITH NOTES OF REFERENCE TO THE CONSTITUTION AND LAWS OF THE UNITED STATES; AND OF THE COMMONWEALTH OF VIRGINIA (Philadelphia, Birch & Small 1803), app. note D at 266 (emphasis in original).

52. Alexander Hamilton, *Report on the Subject of Manufactures* (Dec. 5, 1791), in 10 THE PAPERS OF ALEXANDER HAMILTON 230–340 (Harold C. Syrett et al. eds., 1966).

53. Hamilton's use of “preceded” is confusing. What he apparently meant is that the general welfare is intended to encompass more than merely paying the debts and providing for the common defense of the United States.

because it was not fit that the constitutional authority of the Union, to appropriate its revenues shou'd [sic] have been restricted within narrower limits than the "General Welfare" and because this necessarily embraces a vast variety of particulars, which are susceptible neither of specification nor of definition.

It is therefore of necessity left to the discretion of the National Legislature, to pronounce, upon the objects, which concern the general Welfare, and for which under that description, an appropriation of money is requisite and proper. And there seems to be no room for a doubt that whatever concerns the general Interests of *learning of Agriculture of Manufactures* and of *Commerce* are within the sphere of the national Councils *as far as regards an application of Money*.⁵⁴

Hamilton seems to have been fully aware that his broad interpretation of the general welfare clause could — and indeed would — be challenged on the ground that it rendered the limitations either expressly specified or inherent in the following seventeen grants of power essentially meaningless. Accordingly, he sought to meet an anticipated challenge of this kind by arguing in essence that the limitations of the other enumerated grants of power would still be in effect, saying:

No objection ought to arise to this construction from a supposition that it would imply a power to do whatever else should appear to Congress conducive to the General Welfare. A power to appropriate money with this latitude which is granted too in *express terms* would not carry a power to do any other thing, not authorised in the constitution, either expressly or by fair implication.⁵⁵

In other words, it was Hamilton's view that spending for the general welfare was not limited *to* the legislative purposes set forth in the other enumerated powers, but that it might be limited *by* the particular language of an enumerated power, if such limitation was expressly stated or could be inferred "by fair implication." This was almost exactly the

54. Hamilton, *supra* note 52, at 303.

55. *Id.* at 303–04.

same view that the Supreme Court would enunciate almost 200 years later in *South Dakota v. Dole*⁵⁶ when it would point out that spending for the general welfare could be limited by an independent constitutional bar.

As we shall now see, in the 1790s, four Framers either expressly or implicitly expressed views on the power of Congress to fund education or R&D. Although not expressly articulated, in each instance the views advanced necessarily involved an interpretation of the intellectual property clause.

V. THE VIEWS OF FOUR FRAMERS

The four Framers with relevant views on the intellectual property clause were George Washington, James Madison, Alexander Hamilton, and Roger Sherman. One of them, Washington, favored an expansive interpretation of the intellectual property clause, whereas two others, Madison and Sherman, narrowly construed the clause. While Hamilton generally favored an expansive interpretation, he seems to have agreed with Madison on one point of narrow construction. By discussing these differing perspectives, we shall explore the “curiously intertwined” roles of Madison and Hamilton.

In its first session, the first federal Congress failed to enact a patent law, although a combined patent and copyright bill, H.R. 10, was introduced.⁵⁷ This bill had no language which specifically authorized or excluded patents of importation.⁵⁸ It was the failure to produce patent legislation, including an authorization for patents of importation, that at the start of the second session on January 8, 1790 caused Washington to recommend to Congress “the expediency of giving effectual encouragement . . . to the introduction of new and useful inventions from abroad, as to the exertions of skill and genius in producing them at home.”⁵⁹ Regardless of how Washington contemplated such

56. 483 U.S. 203 (1987).

57. H.R. 10 was closely patterned after contemporaneous British practice. What is believed to be an informal copy of H.R. 10 is reproduced in 4 DOCUMENTARY HISTORY, *supra* note 45, at 513–19.

58. A patent of importation is a patent granted to one who introduced new technology into the country. Such a patent did not require that the patentee be the original inventor of the patented subject matter, but only that he or she be the first to introduce it into the country. British legal interpretation under the Statute of Monopolies had authorized patents of importation for almost one hundred years at the time the Constitution was drafted. *See generally* Edward C. Walterscheid, *Patents and Manufacturing in the Early Republic*, 80 J. PAT. & TRADEMARK OFF. SOC’Y 855 (1998).

59. Journal of the Second Session of the House of Representatives (Jan. 8, 1790), *reprinted in* 3 DOCUMENTARY HISTORY, *supra* note 37, at 253; *Proceedings in Congress*

"introduction," it is apparent from this language that he interpreted the intellectual property clause broadly as it related to promoting the progress of useful arts.

As a result of Washington's request, a new patent bill, H.R. 41, was introduced on February 16, 1790.⁶⁰ It contained a provision expressly stating that the first importer of any art, machine, engine, device, or invention, or any improvement thereon, should be treated as the original inventor or improver within the United States.⁶¹ On March 5th, however, during House debate, this provision was removed. The legislative history of H.R. 41, which became the Patent Act of 1790,⁶² is silent as to how or why this occurred. I have explained elsewhere that the removal was the result of a belief that patents of importation were unconstitutional because they violated the intellectual property clause, and that Madison was one of those who argued that they were unconstitutional.⁶³

On March 21, 1790, Tench Coxe wrote to Madison seeking support for a scheme to encourage the diffusion of European technology into the United States through the offering of premiums of land in return for the importation of such technology.⁶⁴ In a letter one week later, Madison rejected Coxe's land premium scheme, saying:

Your idea of appropriating a district of territory to the encouragement of imported inventions is new and worthy of consideration.⁶⁵ *I can not but apprehend*

During the Years 1789 and 1790, Relating to the First Patent and Copyright Laws, 22 J. PAT. OFF. SOC'Y 243, 253-54 (1940) [hereinafter *Proceedings*].

60. See Journal of the Second Session of the House of Representatives (Feb. 16, 1790), reprinted in 3 DOCUMENTARY HISTORY, *supra* note 37, at 299; see also *Proceedings*, *supra* note 59, at 264. For the text of H.R. 41, see Patents Bill (Feb. 16, 1790), reprinted in 6 DOCUMENTARY HISTORY OF THE FIRST FEDERAL CONGRESS OF THE UNITED STATES, MAR. 4, 1789-MAR. 3, 1791, at 1626-32 (Charlene Bangs Bickford & Helen E. Veit eds., 1986). See generally Edward C. Walterscheid, *Charting a Novel Course: The Creation of the Patent Act of 1790*, 25 AIPLA Q.J. 445, 483-99 (1997) (detailed discussion of the introduction of H.R. 41).

61. See Patents Bill, *supra* note 60, at 1631.

62. Act of April 10, 1790, 1 Stat. 109 (repealed 1793).

63. See Walterscheid, *supra* note 60, at 501-09.

64. See Letter from Tench Coxe to James Madison (Mar. 21, 1790), in 13 THE PAPERS OF JAMES MADISON, 111-14 (Charles F. Hobson et al. eds., 1981).

65. It was not as new as Madison supposed, for Coxe had first proposed the scheme several years earlier in Philadelphia at the very time the constitutional convention was taking place. See *An Address to an Assembly of the Friends of American Manufactures, Convened for the Purpose of Establishing a Society for the Encouragement of Manufactures and the Useful Arts, Read in the University of Pennsylvania On Thursday the 9th of August, 1787 — by Tench Coxe, Esq. and Published at Their Request*, 2 AM. MUSEUM 248, 253 (1787) [hereinafter *Coxe Address*].

however that the clause in the constitution which forbids patents for that purpose will lie equally in the way of your expedient. Congress seems to be tied down to the single mode of encouraging inventions by granting the exclusive benefit of them for a limited time, and therefore to have no more power to give a further encouragement out of a fund of land than a fund of money. This fetter on the National Legislature tho' an unfortunate one, was a deliberate one. The Latitude of authority now wished for was strongly urged and expressly rejected.⁶⁶

It is evident from this letter that in early 1790, Madison narrowly construed the intellectual property clause as authorizing *only* the issuance of patents of invention and precluding any other means of promoting the progress of useful arts. Although he was silent as to the issue of promoting the progress of science, i.e., learning and knowledge as encompassed within the broad compass of education, it is apparent that his argument necessarily applied to federal funding of education as well. Late in his life, Madison would expressly reject the type of argument he was presenting in 1790, but there is nothing to indicate that he ever again broadly construed the intellectual property clause.⁶⁷

Washington, as President, held a more expansive view of the intellectual property clause than merely permitting and authorizing patents of invention to promote the progress of useful arts. Washington's interest in the promotion of "science" was in the context of its broad meaning of learning or knowledge, as he made clear in his first annual message to Congress on January 8, 1790:

66. Letter from James Madison to Tench Coxe (Mar. 28, 1790), in 13 THE PAPERS OF JAMES MADISON, *supra* note 64, at 128 (emphasis added).

67. In 1832, Madison wrote with respect to the constitutional convention:

The intention is inferred from the rejection or not adopting of particular propositions which embraced a power to encourage them [i.e., domestic manufactures]. But, without knowing the reasons for the votes in those cases, no such inference can be sustained. The propositions might be disapproved because they were in a bad form or not in order; because they blended other powers with the particular power in question; or because the object had been, or would be, elsewhere provided for. No one acquainted with the proceedings of deliberative bodies can have failed to notice the frequent uncertainty of inferences from a record of naked votes.

Letter from James Madison to Professor Davis (1832), in 3 RECORDS, *supra* note 14, at 520.

Nor am I less persuaded that you will agree with me in opinion, that there is nothing which can better deserve your patronage, than the promotion of Science and Literature. Knowledge is in every Country the surest basis of public happiness. In one, in which the measures of Government receive their impression so immediately from the sense of the Community, as in our's, it is proportionably essential. To the security of a free Constitution it contributes in various ways: By convincing those, who are entrusted with the public administration that every valuable end of Government is best answered by the enlightened confidence of the people: And by teaching the people themselves to know and to value their own rights; to discern and provide against invasions of them; to distinguish between oppression and the necessary exercise of lawful authority; between burthens proceeding from an disregard of their convenience and those resulting from the inevitable exigencies of Society; to discriminate the spirit of liberty from that of licentiousness, cherishing the first, avoiding the last, and uniting a speedy, but temperate vigilance against encroachments, with an inviolable respect to the laws.

Whether this desirable object will be best promoted by affording aids to Seminaries of Learning already established — by the institution of a national University — or by any other expedients, will be well worthy of a place in the deliberations of the Legislature.⁶⁸

By proposing federal aid to existing schools and the establishment of a national university, as well as “other expedients,” Washington clearly did not perceive the intellectual property clause to limit the promotion of “science” by Congress merely to the issuance of copyrights and patents.

The House debate on May 3, 1790 on this aspect of Washington's message demonstrated an ambivalence concerning whether constitutional authority existed to proceed as proposed by Washington. When a motion was made to refer Washington's proposal to a select committee:

68. Journal (Jan. 8, 1790), *supra* note 59, at 253–54; 1 THE STATE OF THE UNION MESSAGES OF THE PRESIDENT, 1790–1966, at 3 (Fred L. Israel ed., 1967) [hereinafter STATE OF THE UNION].

Mr. Stone enquired what part of the Constitution authorized Congress to taken any steps in a business of this kind — for his part he knew of none. We have already done as much as we can with propriety — We have encouraged learning, by giving to authors an exclusive privilege of vending their works — this is going as far as we have power to do, by the Constitution.

Mr. Sherman said that a proposition to vest Congress with power to establish a National University was made in the General Convention — but it was negatived — It was thought sufficient that this power should be exercised by the States in their separate capacity.

Mr. Page observed, that he was in favor of the motion. He wished to have the matter determined whether Congress has or has not a right to do anything for the promotion of science and literature — He rather supposed they had such a right — but if on investigation of the subject, it shall appear they have not, I should consider the circumstance said he, as a very essential defect in the Constitution — and should be for proposing an amendment — for on the diffusion of knowledge and literature depend the liberties of this country, and the preservation of the Constitution.⁶⁹

Sherman's view that the refusal to incorporate a proposal into the Constitution by the constitutional convention rendered the subject matter of the proposal unconstitutional was similar to that expressed by Madison to Tench Coxe some weeks earlier.⁷⁰

69. *Gazette of the United States* (May 5, 1790), reprinted in 13 DOCUMENTARY HISTORY OF THE FIRST FEDERAL CONGRESS OF THE UNITED STATES, MAR. 4, 1789–MAR. 3, 1791, at 1221 (Helen E. Veit et al. eds., 1994).

70. See *supra* text accompanying note 66. Charles Pinckney had proposed to the constitutional convention on May 28, 1787, that the draft Constitution include a provision “to establish a Federal University.” 3 RECORDS, *supra* note 14, at 122. This provision was among the “additional powers proposed to be vested in the Legislature” on August 18, 1787, and referred to the Committee of Detail. 2 *id.* at 321. On that same day, Pinckney proposed somewhat different language to grant Congress the power “[t]o establish seminaries for the promotion of literature & sciences.” 2 *id.* at 325. Both

It is against this background that we turn now to the language of Hamilton in the *Report on the Subject of Manufactures*. I will now demonstrate that Hamilton's language was in no small measure influenced by — and in reaction to — Madison's views on interpretation of the intellectual property clause.

Unfortunately, Hamilton never provided an analysis or interpretation of the intellectual property clause in the same manner that he did for the general welfare clause. Had he done so, the interpretations given to this clause over the past 200 years would very likely have been quite different, for it is apparent that Hamilton espoused a broad rather than a narrow interpretation of it, at least insofar as it might affect the spending power of Congress. At the same time, he seems to have accepted the congressional view that the clause precluded patents of importation, something that he very much favored.⁷¹ It was in no small measure because he believed this congressional concern might be justified that he proposed his broad interpretation of the spending power under the general welfare clause.⁷² Although he never mentioned the intellectual property clause in the *Report*, it is apparent from some of his language that he adopted an expansive interpretation of it.

The *Report* is a powerful, well-reasoned, pragmatic and theoretical justification for the development of manufacturing in the United States and the need for the government to aid in such development. Hamilton set forth eleven particular means which he stated had been used with success by foreign governments for the purpose of supporting manufactures.⁷³ The fourth of these means was pecuniary bounties, which have already been mentioned in the context of the constitutional justification for them.⁷⁴ The fifth means was premiums.⁷⁵ Hamilton clearly distinguished between the two, noting that bounties apply to the whole quantity of an article produced, manufactured, or exported, whereas premiums "serve to reward some particular excellence or

proposals failed to make the final draft submitted to the convention on September 12, 1787. On September 14th, Madison and Pinckney moved to add this authority to the enumerated list of congressional powers. *See 2 id.* at 616. James Wilson supported the motion but Gouverneur Morris thought it "unnecessary because [t]he exclusive power at the Seat of Government, will reach the object." *2 id.* In essence, he was arguing that Congress could do whatever it wanted to in the proposed federal district, in the absence of any express constitutional prohibition. Whether because of this or some other argument (now unknown), the motion was defeated. *See 2 id.* Sherman had been one of those voting against the motion at the convention. *See 2 id.*

71. *See supra* text accompanying note 54.

72. *See supra* text accompanying notes 55–56.

73. *See* Hamilton, *supra* note 52, at 296–313.

74. *See supra* text accompanying notes 52–55.

75. *See* Hamilton, *supra* note 52, at 304.

superiority, some extraordinary exertion or skill, and are dispensed [only] in a small number of cases.”⁷⁶ He made no attempt to set forth constitutional authority for premiums, clearly assuming that the spending power under the welfare clause encompassed both bounties and premiums.

Hamilton’s eighth means was: “The encouragement of new inventions and discoveries, at home, and of the introduction into the United States of such as may have been made in other countries; particularly those which relate to machinery.”⁷⁷ In his discussion of this means he stated that while patent and copyright laws had been enacted, “it is desirable . . . to be able to extend the same benefits to Introducers, as well as Authors and Inventors; a policy which has been practiced with advantage in other countries.”⁷⁸ Unfortunately, this could not be done because “there is cause to regret, that the competency of the authority of the National Government to the *good*, which might be done, is not without a question.”⁷⁹

Nowhere in the *Report* does Hamilton indicate what he intended by this circumspect language, but I have shown elsewhere that he was referring to congressional concerns about the constitutionality of patents of importation.⁸⁰ As indicated there, Madison was one of those who raised this issue and in fact may have been largely responsible for the deletion from H.R. 41 of language specifically authorizing patents of importation.⁸¹ Because he presented no constitutional argument in favor of patents of importation in the manner that he did to support bounties and premiums, it can only be assumed that Hamilton concurred in this view that patents of importation were unconstitutional. If so, this was one of the rare areas of agreement between Madison and Hamilton on constitutional interpretation. It was also predicated on a narrow interpretation of the language of the intellectual property clause.⁸²

If Congress lacked authority to grant patents of importation, which in Hamilton’s view was the most efficacious means of supporting manufactures through the transfer of foreign technology to the United

76. *Id.*

77. *Id.* at 307.

78. *Id.* at 308.

79. *Id.*

80. See Edward C. Walterscheid, *Patents and Manufacturing in the Early Republic*, 80 J. PAT. & TRADEMARK OFF. SOC’Y 855, 863–75 (1998).

81. See *id.* at 874–75.

82. As I have indicated elsewhere, there was “nothing in extant dictionary definitions or in the English common law opinions concerning the terms ‘inventor,’ ‘invention,’ and ‘discoveries’” that compelled an interpretation precluding patents of importation. *Id.* at 867.

States,⁸³ he argued that it nonetheless had other means that it could apply to this end. Having established to his satisfaction that Congress had broad constitutional authority under the general welfare clause to appropriate and spend money for a wide variety of purposes, Hamilton proposed a specific scheme. He recommended that Congress appropriate an annual sum to be spent by a Board of Commissioners empowered, among other things, “to induce the prosecution and introduction of useful discoveries, inventions and improvements, by proportionate rewards, judiciously held out and applied — to encourage by premiums both honorable and lucrative the exertions of individuals.”⁸⁴ From the context it appears that Hamilton was not actually recommending that Congress fund R&D, but rather that in certain cases of successful discovery and invention it reward the individuals responsible through monetary premiums, presumably thereby encouraging others to make similar efforts.⁸⁵

Although Hamilton used quite broad language in setting forth this scheme, it appears that his primary intent was to set up a mechanism “for promoting the introduction of foreign improvements” into the United States.⁸⁶ Although he made absolutely no reference to the intellectual property clause, it is apparent that in proposing this scheme he necessarily interpreted the clause broadly as authorizing mechanisms other than simply patents for promoting the progress of useful arts. This was in clear contradistinction to the views expressed by Madison in his March 28, 1790, letter to Tench Coxe.⁸⁷ It also provides a very tenable explanation for why Hamilton included his constitutional argument that Congress had authority to tax and appropriate for bounties and premiums.

Although legal and constitutional historians have addressed almost every aspect of Hamilton’s interpretation of the spending power under the general welfare clause, I am aware of no commentator who has asked why Hamilton included his constitutional argument in favor of a broad interpretation of the spending power in the *Report*. I suggest here that he presented this argument precisely because he was aware of the position taken by Madison in his March 28, 1790 letter to Tench Coxe.

Coxe seems to have been one of the earliest American proponents of premiums as a means of encouraging the development of

83. See Hamilton, *supra* note 52, at 307–08.

84. *Id.* at 338.

85. Recall that this idea of using premiums to encourage invention had been specifically proposed in the constitutional convention by Madison and indirectly by Pinckney. See *supra* text accompanying notes 17–18.

86. Hamilton, *supra* note 52, at 308.

87. See *supra* text accompanying notes 65–66.

manufacturing in the United States. Speaking in Philadelphia in early August 1787, he suggested that as one means of encouraging manufactures, “[p]remiums for useful inventions and improvements, whether foreign or American . . . must have an excellent effect.”⁸⁸ Quite likely because Coxe was a strong advocate for American manufactures, Hamilton appointed him an Assistant Secretary of the Treasury. He would have considerable influence, not only on Hamilton’s thinking but also on the ultimate content of the *Report*. Indeed, he prepared the first draft of what eventually became the *Report*.⁸⁹

Coxe and Hamilton undoubtedly discussed in considerable detail the various mechanisms that could be used to support the development of American manufacturing. The use of bounties and premiums must have come up in the discussion. At some point, Coxe must either have shown Madison’s letter of March 28, 1790, which argued that the use of premiums to support invention was precluded by the intellectual property clause, to Hamilton, or have discussed the content of the letter in some detail with him. Hamilton must then have realized that if he was going to argue in favor of premiums as a means of encouraging the development of American manufacturing, he would need to provide a constitutional argument showing congressional power to do so.

Rather than simply challenging Madison’s narrow interpretation of the intellectual property clause, Hamilton sought to trump it with a broad interpretation of the spending power under the general welfare clause. Nonetheless, despite his making no reference to the intellectual property clause, he implicitly adopted a broad interpretation of the congressional power to promote the progress of science and useful arts as not limited to merely the issuance of copyrights and patents. Only by such a broad interpretation could he have proposed the use of premiums as a means “to induce the prosecution and introduction of useful discoveries, inventions and improvements.” Although Madison is never mentioned in the *Report*, the “curiously intertwined roles” of both he and Hamilton are evidenced in the positions that Hamilton espoused therein.

If Hamilton did not view the intellectual property clause as a bar to congressional funding of premiums to promote invention, then it followed that he did not view it as precluding congressional funding of education. This is made clear by his interactions with Washington on this topic toward the end of Washington’s presidency.

88. Coxe Address, *supra* note 65, at 253.

89. See *Introductory Note* to 10 THE PAPERS OF ALEXANDER HAMILTON, *supra* note 52, at 10–12. See generally J. E. Cooke, *Tench Coxe, Alexander Hamilton, and the Encouragement of American Manufactures*, 32 WM. & MARY Q. 369 (1975) (detailed discussion of the history of the *Report on the Subject of Manufactures*).

After Congress failed to act on his first request to fund education in 1790, Washington was content to let the issue lie until near the end of his administration when he again raised it in his eighth annual message to Congress. He had enlisted Hamilton's aid in the preparation of his farewell message, and on September 1, 1796, Washington asked him to draft a section for the message which would once again recommend that Congress fund a national university.⁹⁰ Hamilton responded by stating that "[t]he idea of the university is one of those which I think will be most properly reserved for your speech at the opening of the session,"⁹¹ namely, Washington's eighth annual message to Congress. He thereafter prepared a draft, which was incorporated with some variations into Washington's message delivered to Congress on December 7, 1796.⁹²

Neither Washington nor Hamilton made any mention of constitutional issues, but it is apparent that Washington endorsed Hamilton's broad interpretation of the general welfare clause, albeit not as strongly as Hamilton would have hoped. Thus, Hamilton sought to begin the recommendation for a national university with the comment that Congress "will not doubt that the extension of science and knowlege [sic] is an object primarily interesting to our national welfare."⁹³ Washington replaced this with a statement that Congress "is too enlightened not to be fully sensible how much a flourishing state of the Arts and Sciences, contributes to National prosperity and reputation."⁹⁴ He incorporated Hamilton's argument that state institutions of learning were inadequately funded "to command the ablest Professors" but added the argument that "a primary object of such a National Institution should be, the education of our Youth in the science of *Government*."⁹⁵

Washington also incorporated Hamilton's effort to get Congress to fund his proposal for premiums to encourage invention, although in the context of promoting agriculture, saying that of the means adopted for this purpose:

90. See Letter from Washington to Hamilton (Sept. 1, 1796), in 20 THE PAPERS OF ALEXANDER HAMILTON, *supra* note 52, at 311-14.

91. Letter from Hamilton to Washington (Sept. 4, 1796), in 20 THE PAPERS OF ALEXANDER HAMILTON, *supra* note 52, at 316.

92. See Letter from Hamilton to Washington (Nov. 10, 1796), in 20 THE PAPERS OF ALEXANDER HAMILTON, *supra* note 52, at 381-85 (enclosing Hamilton's draft).

93. *Id.* at 384.

94. George Washington, Eighth Annual Message to Congress (Dec. 7, 1796), in GEORGE WASHINGTON WRITINGS 978, 982 (John Rhodehamel ed., 1997); 1 STATE OF THE UNION, *supra* note 68, at 35.

95. Washington, *supra* note 94, at 982-83; 1 STATE OF THE UNION, *supra* note 68, at 35.

[N]one have been attended with greater success than the establishment of Boards, composed of proper characters, charged with collecting and diffusing information, and enabled by premiums, and small pecuniary aids, to encourage and assist a spirit of discovery and improvement. This species of establishment contributes doubly to the increase of improvement; by stimulating to enterprise and experiment, and by drawing to a common centre, the results everywhere of individual skill and observation; and spreading thence over the whole Nation. Experience accordingly has shewn, that they are very cheap Instruments, of immense National benefits.⁹⁶

It is doubtful that premiums or pecuniary rewards were nearly as widespread or as useful to promote discovery as Washington seemed to think,⁹⁷ but it is apparent that he did not perceive a constitutional impediment to their use. Contrary to various members of Congress, he did not view the intellectual property clause as limiting the promotion of knowledge by the federal government to the issuance of copyrights. For that matter, neither did Hamilton.

Regardless of Washington's views, both Jefferson and Madison rather quickly challenged Hamilton's broad interpretation of the spending power under the general welfare clause,⁹⁸ and Congress was

96. Washington, *supra* note 94, at 982; 1 STATE OF THE UNION, *supra* note 68, at 34–35.

97. See WALTERSCHEID, *supra* note 22, at 149–50.

98. See, e.g., Letter from James Madison to Henry Lee (Jan. 21, 1792), in 14 THE PAPERS OF JAMES MADISON 193, 193–94 (Robert A. Rutland et al. eds., 1983); Letter from James Madison to Edmund Pendleton (Jan. 21, 1792), in 14 THE PAPERS OF JAMES MADISON 193, 195–96 (Robert A. Rutland et al. eds., 1983). In a discussion with Washington during this same period, Jefferson indicated that he had recently informed Hamilton:

That it was a fact, as certainly known as that he & I were then conversing, that particular members of the legislature . . . had from time to time aided in making such legislative constructions of the constitution as made it a very different thing from what the people thought they had submitted to; that they had now brought forward a proposition, far beyond every one ever yet advanced, & to which the eyes of many were turned as the decision which was to let us know whether we live under a limited or an unlimited government. — He asked me to what I alluded? I answered to that in the Report on manufactures, which, under colour of giving *bounties* for the encouragment of particular manufactures, meant to establish the doctrine that the power given by the Constitution to collect taxes to provide for the general *welfare* . . . permitted

not generally disposed to adopt it for the purpose of either creating a national university or funding R&D, as evidenced by the 1796 congressional report noted earlier.⁹⁹ In any case, Congress largely ignored the *Report on the Subject of Manufactures* and failed either to create the Board of Commissioners or to appropriate funds as recommended by Hamilton. A patent bill, H.R. 166,¹⁰⁰ introduced March 1, 1792, did contain a provision providing that, among other things, the fees collected for patents should be "appropriated for the expense of procuring and importing useful arts or machines from foreign countries."¹⁰¹ This provision was promptly challenged by American inventors and was not enacted in the Patent Act of 1793.¹⁰² Either out of parsimony, constitutional objections, or a combination thereof, Congress simply ignored Washington and Hamilton's later effort in 1796 to fund a national university and to promote invention through premiums.

VI. CONSTITUTIONAL COMMENTARIES

In the early part of the nineteenth century, three constitutional commentaries were published which would be commonly referenced. The first, published in 1803, was that of St. George Tucker.¹⁰³ The second, written by William Rawle, was first published in 1825.¹⁰⁴ The

Congress to take everything under their management which *they* should deem for *the public welfare*, & which is susceptible of the application of money: consequently that the subsequent enumeration of their powers was not the description to which resort must be had, & did not at all constitute the limits of their authority

Thomas Jefferson, *Conversations with the President* (Feb. 29, 1792), 1 *THE WORKS OF THOMAS JEFFERSON* 196-97 (Paul Leicester Ford ed., 1904).

99. See *supra* text accompanying note 46.

100. See WALTERSCHEID, *supra* note 22, at 473-77.

101. *Id.* at 477.

102. See, e.g., JOSEPH BARNES, *TREATISE ON THE JUSTICE, POLICY, AND UTILITY OF ESTABLISHING AN EFFECTUAL SYSTEM OF PROMOTING THE PROGRESS OF USEFUL ARTS, BY ASSURING PROPERTY IN THE PRODUCTS OF GENIUS* 20 (1792). Rather than having a constitutional basis, the challenge seems founded on the assumption that importing foreign inventions was somehow unfair to American inventors. It should be noted that the bill did not contemplate an appropriation for the purpose of importing foreign inventions, such as Hamilton had contemplated, but instead obligated a portion of the patent fee to be used for this purpose.

103. See *supra* note 51.

104. See *infra* note 110.

third, by Joseph Story, first published in 1833,¹⁰⁵ was the primary reference later relied on by the Supreme Court in *Butler*.¹⁰⁶

In addressing the general welfare clause, Tucker's emphasis is almost entirely on the grant of authority to tax. He says almost nothing regarding the power to spend, and fails to consider what limitations, if any, are inherent in "the general welfare." He makes no mention of Hamilton's broad interpretation of this clause, although it is apparent from the general tenor of his remarks that he believed that the Constitution should be strictly construed and that the powers of Congress, including the spending power, were limited to those specifically enumerated.¹⁰⁷ He does refer to Hamilton in his discussion of the intellectual property clause, noting that while it was unclear whether Hamilton "grounded his opinion of the right of congress to establish trading companies, for the purpose of encouraging arts and manufactures" on this clause, "nothing could be more fallacious" than interpreting this clause to authorize such an approach.¹⁰⁸ Rather, he argues that under the intellectual property clause, Congress is expressly limited to the issuance of copyrights and patents for the purpose of promoting the progress of science and the useful arts.¹⁰⁹

Rawle, in turn, states that the enumerated powers of Congress "will be all found to relate to, and be consistent with, the main principle; the common defence and general welfare."¹¹⁰ In so stating, however, he neither addresses the meaning of the phrase "the general welfare" nor mentions Hamilton's broad interpretation of this phrase. Although he has a chapter partially entitled "Of the Restrictions on the Powers of Congress,"¹¹¹ he does not mention therein the view that "the general welfare" is a restriction on the general power to tax and to appropriate or spend. Nor does he address the issue of whether the power to promote the progress of science and the useful arts is limited in any way, for example, to only the issuance of copyrights and patents.

Story, however, has an extensive discussion of the meaning of the general welfare clause, and he strongly endorses the Hamiltonian interpretation. Interestingly, in analyzing the intellectual property clause, he does make specific reference to the *Report on the Subject of Manufactures*, but only in the context of indicating that "some persons

105. See *supra* note 29.

106. See *infra* text accompanying notes 125–28.

107. See 1 TUCKER, *supra* note 51, app. note D at 266.

108. *Id.* at 266.

109. See *id.* at 266–67.

110. WILLIAM RAWLE, A VIEW OF THE CONSTITUTION OF THE UNITED STATES 73 (Philadelphia, H.C. Carey & I. Lea, 1825).

111. *Id.* at 111.

of high distinction" have thought that the inability under the clause to issue patents of importation to the introducers of new inventions is a defect in the constitutional language.¹¹² In his discussion of the intellectual property clause, he does not address the issue of the breadth that can reasonably be attributed to the clause. But, as will be seen, in his discussion of the general welfare clause it is apparent that he interprets the intellectual property clause broadly, i.e., as not limiting the power of Congress in the promotion of science and the useful arts only to the issuance of copyrights and patents.

Story strongly opposes strict construction of the Constitution. As he puts it, if "we are to give a reasonable construction to this instrument, as a constitution of government established for the common good, we must throw aside all notions of subjecting it to a strict interpretation, as if it were subversive of the great interests of society, or derogated from the inherent sovereignty of the people."¹¹³ Perhaps his basic rule of interpretation is that "every clause ought, at all events, to be construed according to its fair intent and objects, as disclosed in its language."¹¹⁴ He quotes with favor the view expressed by President Monroe in 1822 that:

The order generally observed in grants [of congressional power], an order founded in common sense, since it promotes a clear understanding of their import, is to grant the power intended to be conveyed in the most full and explicit manner; and then to explain or qualify it, if explanation or qualification should be necessary. This order has, it is believed, been invariably observed in all the grants contained in the constitution.¹¹⁵

Story sets forth a straightforward rule for interpreting a grant of power, namely, that "all the ordinary and appropriate means to execute it are to be deemed a part of the power itself."¹¹⁶ He argues that this "results from the very nature and design of a constitution" which in granting the power "does not intend to limit it to any one mode of exercising it, exclusive of all others."¹¹⁷ He points out that "if the power

112. 3 STORY, *supra* note 29, § 1148.

113. 1 *id.* § 423.

114. 1 *id.* § 407 n.1.

115. 2 *id.* § 977.

116. 1 *id.* § 430.

117. 1 *id.*

only is given, without pointing out the means, how are we to ascertain, that any one means, rather than another, is exclusively within its scope?"¹¹⁸ This is an important question, but Story fails to address another important question, whether a means set forth is to be construed as the exclusive means to exercise the power, i.e., as a limitation on the power.

This, of course, is the issue presented by the wording of the intellectual property clause. Story clearly considers the power granted by the intellectual property clause to be that "to promote the progress of science and useful arts,"¹¹⁹ but he is silent as to whether this power is limited solely to the granting of copyrights and patents. Nonetheless, he clearly did not believe this to be the case. Rather, Story broadly interpreted the clause and in effect read it as: "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." How else could he have raised the following rhetorical question: "Take the power to promote the progress of science and useful arts; might not a tax be laid on foreigners, and foreign inventions, in aid of this power, so as to suppress foreign competition, or encourage domestic science and arts?"¹²⁰

While Story never expressly rendered the intellectual property clause in this fashion, he did lay a clear framework for this type of interpretation in his analysis of the general welfare clause. He began by pointing out that in order to understand the nature and extent of the power conferred by this clause, it is necessary to settle its grammatical construction. In this regard, he asked: "Do the words, 'to lay and collect taxes, duties, imposts, and excises,' constitute a distinct, substantial power; and the words, 'to pay debts and provide for the common defence, and general welfare of the United States,' constitute another distinct and substantial power? Or are the latter words connected with the former, so as to constitute a qualification upon them?"¹²¹ He stated that the reading he would follow "in these commentaries" is "that, which makes the latter words a qualification of the former."¹²² To do this, he would supply certain words necessarily understood by such interpretation, to wit: "The congress shall have power to lay and collect taxes, duties, imposts, and excises, *in order* to pay the debts, and to

118. 1 *id.* § 431.

119. 2 *id.* § 968.

120. 2 *id.*

121. 2 *id.* § 904.

122. 2 *id.* § 905.

provide for the common defence and general welfare of the United States."¹²³

VII. THE MODERN JUDICIAL INTERPRETATIONS

It was not until 1936 in *United States v. Butler* that the Supreme Court gave a definitive interpretation of the general welfare clause,¹²⁴ although in light of the ultimate ruling in the case it was only dicta.¹²⁵ According to Justice Roberts:

The Congress is expressly empowered to lay taxes to provide for the general welfare. Funds in the Treasury as the result of taxation may be expended only through appropriation. (Art. I, § 9, cl. 7.) They can never accomplish the objects for which they were collected unless the power to appropriate is as broad as the power to tax. The necessary implication from the terms of the grant is that the public funds may be appropriated "to provide for the general welfare of the United States." . . .

Since the foundation of the Nation sharp differences of opinion have persisted as to the true interpretation of the phrase. Madison asserted it amounted to no more than a reference to the other powers enumerated in the subsequent clauses of the same section; that, as the United States is a government of limited and enumerated powers, the grant of power to tax and spend for the general national welfare must be

123. 2 *id.*

124. The reason a definitive interpretation was so long delayed appears to have been predicated in no small measure on the Court's reluctance to grant federal taxpayers standing to question the federal spending power. See LAURENCE H. TRIBE, *AMERICAN CONSTITUTIONAL LAW* § 5-6, at 834 n.5 (3d ed. 2000).

125. In *Butler*, the Court held certain central provisions of the Agricultural Adjustment Act of 1933 unconstitutional. The intent of the Act was to stabilize farm prices at levels they had occupied during the period 1909 to 1914. It authorized the Agricultural Adjustment Administration ("AAA") to engage in a variety of practices to induce farmers not to produce various commodities. The funds to operate this program for any particular commodity were raised by a tax on the processors of that commodity. The AAA had justified the Act on the basis of the general welfare clause, but the Court found it to be unconstitutional under the Tenth Amendment in that nothing in the Constitution gave Congress the power to regulate agricultural production. See *Butler*, 297 U.S. at 53-56, 64-65, 68.

confined to the enumerated legislative fields committed to the Congress. In this view the phrase is mere tautology, for taxation and appropriation are or may be necessary incidents of the exercise of any of the enumerated legislative powers. Hamilton, on the other hand, maintained the clause confers a power separate and distinct from those later enumerated, is not restricted in meaning by the grant of them, and Congress consequently has a substantive power to tax and to appropriate, limited only by the requirement that it shall be exercised to provide for the general welfare of the United States. Each contention has had the support of those whose views are entitled to weight. . . . Mr. Justice Story, in his Commentaries, espouses the Hamiltonian position. We shall not review the writings of public men and commentators or discuss the legislative practice. Study of all these lead us to conclude that the reading advocated by Mr. Justice Story is the correct one. While, therefore, the power to tax is not unlimited, its confines are set in the clause which confers it, and not in those of § 8 which bestow and define the legislative powers of the Congress. It results that the power of Congress to authorize expenditure of public moneys for public purposes is not limited by the direct grants of legislative power found in the Constitution.¹²⁶

Justice Roberts, writing for the Court, provided no citation of authority for the views attributed to Hamilton and Madison, but Goldberg argues that in adopting the Hamiltonian view Justice Roberts “relied on the very passage in *The Report on the Subject of Manufactures* in which Hamilton supported premiums for scientific advances.”¹²⁷ As a practical matter, however, the Court relied not on Hamilton’s views per se, but rather on Story’s exposition of them.¹²⁸

It should be noted that the views attributed to Justice Story were in his capacity as a commentator and not in his role as a Justice of the Supreme Court. Moreover, it is unfortunate that Justice Roberts declined to review “the writings of public men,” and in particular those of Hamilton, because he materially misrepresented Hamilton’s position. As

126. *Id.* at 65–66.

127. GOLDBERG, *supra* note 6, at 37.

128. *See, e.g.*, 297 U.S. at 66 (citing 2 STORY, *supra* note 29, ch. XIV).

I have shown, Hamilton never argued that the power to tax and spend under the general welfare clause was "not restricted in meaning by the grant of them," i.e., the enumerated powers, as Justice Roberts alleged. Rather, Hamilton's view was that the power to tax and spend under the general welfare clause was not limited *to* the specifically enumerated powers. There is a world of difference between "by" and "to."

Since *Butler*, the Supreme Court has had no difficulty in confirming and indeed expanding the broad interpretation of the general welfare clause,¹²⁹ although it has never addressed the issue of whether the intellectual property clause can be read to limit the authority of Congress to tax and spend for the general welfare. Goldberg makes the interesting observation that the brief for the government in *Butler* urged the Court to interpret the general welfare clause expansively "in part so that federal science spending programs would not be endangered."¹³⁰ In this regard, the brief argued that, "[t]he Hamiltonian view has been so continuously and so extensively followed by Congress that many of our most familiar and significant government policies and activities are dependent upon its validity."¹³¹ Examples included education and science.¹³² This appears to have been a tacit admission of a concern not only that the intellectual property clause provides no explicit authority for federal funding "to support the progress of science and useful arts," but that it actually could be interpreted to preclude such funding. The Court's failure to address the validity of a narrow interpretation of the intellectual property clause has left open the question of whether the literal language of the intellectual property clause could in fact limit its broad interpretation of the general welfare clause, insofar as federal funding of education and R&D is concerned.

In light of the literal language of the intellectual property clause, it is remarkable that no judicial challenge to the constitutionality of federal funding of R&D seems to have occurred until 1988. Unfortunately, the plaintiff who raised the issue was acting pro se and did not attempt to give any historical perspective on the interpretation given to the intellectual property clause. As a consequence, the Court of Appeals for

129. See, e.g., *Charles C. Steward Mach. Co. v. Davis*, 301 U.S. 548 (1937); *Helvering v. Davis*, 301 U.S. 619 (1937); *Buckley v. Valeo*, 424 U.S. 1 (1976). Specifically, the Court has rejected the notion it espoused in *Butler*, that the Tenth Amendment limits the power of Congress to tax and spend for the general welfare.

130. GOLDBERG, *supra* note 6, at 37.

131. Brief for the United States, *Butler*, reprinted in 30 LANDMARK BRIEFS AND ARGUMENTS OF THE SUPREME COURT OF THE UNITED STATES: CONSTITUTIONAL LAW 111, 306 (Phillip B. Kurland and Gerhard Casper eds., 1975).

132. See *id.* at 309-12.

the Federal Circuit in *Constant v. Advanced Micro-Devices, Inc.*¹³³ rather summarily rejected the argument.¹³⁴

According to the Federal Circuit, the intellectual property clause

does not state that the Government may promote the progress of the useful arts *only* through the patent and copyright system. Ample constitutional power for Government funding of research and development can be found in art. I, § 8, cl. 1 (provide for the common Defense and general Welfare), cl. 3 (Commerce), cl. 12 (Army), cl. 13 (Navy) and cl. 18 (necessary and proper clause). It is also settled that art. I, § 8 authorizes Congress to spend money to promote the “general welfare,” and that the definition of the general welfare and decisions concerning how to promote it are within the discretion of Congress. Government support for research and development is well within this discretionary power.¹³⁵

It is apparent from this language that the Federal Circuit viewed the issue not so much as whether the intellectual property clause precluded federal funding of R&D, but whether other discretionary constitutional authority exists for such funding.

By its summary view that the intellectual property clause does not expressly state that promotion of the useful arts can occur *only* through the patent and copyright system, the Federal Circuit arbitrarily concluded that it could not reasonably be interpreted in such a limiting fashion. In so doing, it ignored the fact that both the Supreme Court and its own predecessor court, the Court of Customs and Patent Appeals (“C.C.P.A.”), had used language suggesting that promotion of the useful arts could in fact *only* occur through the patent and copyright systems or something closely akin thereto. For example, in 1973, the Supreme Court stated in *Goldstein v. California* that the clause “describes both the objective which Congress may seek and *the* means to achieve it.”¹³⁶

133. 848 F.2d 1560 (Fed. Cir. 1988).

134. Constant had argued that “Government sponsorship of research and development offends the ‘Science Clause’ of the Constitution,” i.e., the intellectual property clause. The Federal Circuit began its analysis by pointing out: “The power to grant patents to inventors is for the promotion of the useful arts, while the power to grant copyrights to authors is for the promotion of ‘Science,’ which had a much broader meaning in the 18th Century than it does today.” *Id.* at 1564 n.4.

135. 848 F.2d at 1565 (citations omitted).

136. 412 U.S. 546, 555 (1973) (emphasis added).

Note that the Court did not say that the clause sets forth "a" means or "one" means, but rather interpreted it as setting forth "the" means. In 1979, the C.C.P.A. took an essentially similar position in *In re Bergy* when it stated: "The only restraints placed on Congress pertained to the *means* by which it could promote useful arts, namely, through the device of securing 'exclusive rights' which were required to be limited in time, a device known to governments for centuries."¹³⁷ More recently, the Supreme Court's opinion in *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*¹³⁸ has been described as standing "for the proposition that the national interest in encouraging the progress of science and useful arts is exhausted by conferring upon Congress the limited right to act with respect to writings and discoveries, authors and inventors."¹³⁹

Moreover, the view expressed by the Federal Circuit in *Constant*, without more, is a form of sophistry of the first order, which if taken at face value renders meaningless every limitation set forth in the Constitution because nowhere does that document contain any express statement that a particular limitation defines the only permitted authority. Applied literally, this argument would effectively remove the constitutional limitations on the power to tax inherent in the language "to pay the Debts and provide for the common Defence and general Welfare of the United States" because these quoted limitations are not expressly stated to be the *only* purposes of taxation. Yet, as expressly stated by the Supreme Court in *Butler*, this qualifying phrase "must be given effect all advocates of broad construction admit."¹⁴⁰

This is not to suggest that the Federal Circuit's conclusion that the intellectual property clause does not limit the authority of Congress "to promote the progress of useful arts" only to the patent and copyright systems is incorrect, but instead to emphasize that its rationale for so concluding is on its face illogical. Had the court engaged in the type of analysis of the constitutional language set forth herein, it would have realized that if the clause does not limit the promotion of science and useful arts to the granting of the limited-term exclusive rights known as patents and copyrights, then it can be viewed as authority in its own right for a wide variety of means of promoting science and useful arts, including governmental funding of science and education.

Unfortunately, Justice Roberts' opinion in *Butler* is not an example of clear judicial reasoning. Justice Roberts argued that the Madisonian view, that the qualifying phrase in the welfare clause represented no

137. 596 F.2d 952, 958 n.2 (C.C.P.A. 1979).

138. 489 U.S. 141 (1989).

139. Dreyfuss, *supra* note 36, at 230.

140. 297 U.S. 1, 66 (1935).

more than a reference to the other powers enumerated in the same section, amounted to “mere tautology, for taxation and appropriation are or may be necessary incidents of the exercise of any of the enumerated legislative powers.”¹⁴¹ But if there is tautology under the Madisonian argument, then it cuts both ways. If all the subsequently enumerated powers are encompassed within the power to tax, then they too can be viewed as mere tautological expressions without meaning outside the qualifying phrase in the first clause of the enumerated powers. Obviously, the Court has never taken such a view, and Story argued vigorously against it. As one of a number of examples, Story asked rhetorically, would the power to tax for the general welfare “confide to congress the power to grant patent rights for invention?”¹⁴² He answered: “The constitution itself upon its face refutes any such notion. It gives the power to tax, as a substantive power; and gives others, as equally substantive and independent.”¹⁴³

In his analysis of the constitutional authority for federal funding of science, Goldberg argues that “from the framers’ point of view, three areas of congressional authority — the military, coinage weights and measures, and patents — were the most important in bringing about government support for science.”¹⁴⁴ He goes on to state that in modern times “a fourth power — to spend for the general welfare — has outstripped all of the others in this respect.”¹⁴⁵ While acknowledging that “awarding patents does not involve the government directly in funding or in choosing precise areas of research,”¹⁴⁶ Goldberg, like the Federal Circuit, fails to recognize that in the first decades of its existence, the intellectual property clause was interpreted as a constitutional barrier to federal R&D funding.¹⁴⁷

VIII. CONCLUSION

For many years, the judiciary, including the Supreme Court, and constitutional commentators have misapprehended and improperly narrowed the grant of power set forth in the intellectual property clause. They invariably characterize it as the power to issue the limited-term

141. *Id.* at 65.

142. 2 STORY, *supra* note 29, § 920.

143. 2 *id.*

144. GOLDBERG, *supra* note 6, at 32.

145. *Id.*

146. *Id.* at 34 (footnote omitted).

147. He acknowledges that there were “constitutional objections,” without saying what they were or on what they were predicated. *Id.* at 36. As a practical matter, they could only have been based on a narrow reading of the intellectual property clause.

exclusive rights known as copyrights and patents. While this is certainly a part of the grant of power set forth in the intellectual property clause, it is not *the* grant of power. Rather, the generic grant is power “to promote the progress of science and useful arts,” and the power to issue limited-term exclusive rights to authors and inventors is intended to be incorporated into the generic grant.

The misapprehension as to the scope of the grant set forth in the intellectual property clause arises out of a propensity to look at the clause in isolation and to ignore the fact that it is part and parcel of Art. I, § 8, enumerating the various grants of power to Congress. A look at that section quickly reveals a uniform parallel construction of the grants and that those grants all follow the standardized format noted by President Monroe in 1822, namely, that a grant of power is first set forth “in the most full and explicit manner,” which is followed by an “explanation or qualification” if such is thought necessary.¹⁴⁸ He noted that this “order has . . . been invariably observed in all the grants contained in the constitution.”¹⁴⁹ Justice Story strongly agreed that this was the mode followed in enumerating the grants of power to Congress.¹⁵⁰

Thus, rather than being “clausebound,” any analysis of the powers granted by the intellectual property clause ought to begin by comparing the form and language of the clause to the form and language of the other clauses granting powers to Congress.¹⁵¹ With the exception of the intellectual property clause, all of the granting clauses provide for generic grants of power to Congress to do specifically enumerated tasks without setting forth a particular mode of accomplishing the task. For example, Congress is given power “to lay and collect taxes,” “to borrow money,” “to declare war,” and “to provide for a navy.” In each instance, Congress is given the authority to accomplish the enumerated task without limitation or with broad limitation as to how it is to be accomplished. If there is a limitation or explanation, that limitation or explanation follows the generic grant in each instance.

148. 2 STORY, *supra* note 29, § 977.

149. 2 *id.*

150. See *supra* notes 121–22 and accompanying text.

151. In construing the intellectual property clause in another context, the Supreme Court stated: “There is no mode by which the meaning affixed to any word or sentence, by a deliberative body, can be so well ascertained, as by comparing it with the words and sentences with which it stands connected.” *Wheaton v. Peters*, 33 U.S. (8 Pet.) 591, 661 (1834). While the Court in *Wheaton* was looking at words within the intellectual property clause, its interpretative approach argues just as forcefully for comparing the form and language of the intellectual property clause to those of the other enumerated grants of power.

The intellectual property clause is no different. It begins with a generic grant of power and follows it with an explanation. That explanation is that the generic grant of power “to promote the progress of science and useful arts” includes the power to authorize limited-term exclusive rights, more commonly known as copyrights and patents, to authors and inventors. The Framers included this explanation for a very pragmatic reason, namely, to assure that among the various means for promoting the progress of science and useful arts, this particular approach would in fact be included. They did so because they wanted to adopt the same general approach set forth in the English Statute of Monopolies, i.e., precluding authority in Congress (as opposed to the Crown) to create monopolies in general, but nonetheless providing a specific exception in the case of the limited-term monopolies that came to be known as patents and copyrights.

Unfortunately, in drafting the intellectual property clause, the Framers inartfully phrased it, just as they inartfully phrased the general welfare clause. As Story correctly pointed out, in order to properly understand the nature and extent of the power conferred by the general welfare clause it is necessary to settle its grammatical construction. He did so by supplying certain words inferred from the proper construction. This same approach is necessary for the intellectual property clause, so that it is interpreted to read: “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.” This renders the structure and form of interpretation of the intellectual property clause fully consonant with the structure and form of interpretation applied to the general welfare clause by the Supreme Court in *Butler*.

Admittedly, the approach taken by Story to the grammatical construction of the general welfare clause can be read as a limitation on the power to tax and spend, whereas the interpretation set forth here for the intellectual property clause is a broadening of the generic power to promote the progress of science and useful arts. Nonetheless, the principle of interpretation is the same in both cases, i.e., the inclusion of a word or words that clarify the interpretation consistent with the general structure and intent of the enumerated powers given to Congress.

The Framers seem to have taken for granted the eighteenth century view that it was the duty of enlightened government to promote what they called the progress of science and useful arts. But in their efforts to assure that this could be done through the issuance of copyrights and patents they used language that, as pointed out by commentators from St. George Tucker in the early nineteenth century to Currie in the late twentieth century, appeared to place an express limitation on any general

authority of Congress to promote the progress of science and useful arts. As I have shown here, this was an oft-repeated concern during the first decades after the Constitution was ratified.

There is simply nothing to indicate that there was any general intent by the Framers to limit the authority of Congress to promote the progress of science and useful arts to the issuance of limited-term monopolies to authors and inventors. Indeed, no rationale has ever been advanced that provides a convincing argument why the Framers should have favored such a restriction on congressional authority. Nonetheless, in 1790, two of the Framers, Madison and Sherman, put forth an argument that seemed to endorse such a view. By arguing that the failure of the constitutional convention to incorporate particular proposals for congressional authority into the Constitution effectively precluded Congress from exercising such authority, they placed a narrow construction on the intellectual property clause.¹⁵² Many years later, Madison expressly rejected the view he had espoused in 1790, and instead argued that the refusal of the convention to incorporate a particular proposal was not evidence that Congress did not have equivalent powers under language actually incorporated into the Constitution. Although neither Hamilton nor Washington ever discussed the intellectual property clause *per se*, their views on congressional authority to fund a national university and to establish premiums to encourage invention could only be consonant with a broad interpretation of the clause, such as I have set forth.

Under the narrow interpretation of the intellectual property clause raised during the first decades of the federal government, the introductory phrase was considered to be the grant of power, but the "by" portion of the clause was treated as a limitation of the grant to the particular mode set forth therein, i.e., the issuance of limited-term exclusive rights to authors and inventors. Under the broad interpretation implicitly recognized by Hamilton, Washington, and Story, and which I have made explicit here, both portions of the clause are considered to be grants of power. The "by" portion was considered an expansion of the generic power, granted to assure that Congress would have the power to grant the limited-term monopolies known as copyrights and patents. The broad interpretation appears most consonant with both the structure of the Constitution and the actual legislative and judicial constructions of the constitutional powers of Congress, taken as a whole, that have occurred in the twentieth century.

152. This approach to constitutional interpretation seems to have had a very short life, and few, if any, commentators appear to have seriously espoused it past the end of the eighteenth century.

In the modern era, both commentators and the courts have almost uniformly treated the grant of authority as residing in the “by” portion of the clause with the first portion being viewed as either a statement of purpose or as merely a limitation on the scope of authority granted, although to a much lesser extent with regard to copyrights than with regard to patents.¹⁵³ In so doing, they treat the intellectual property clause different from the other enumerated powers of Congress, reversing the form of the clause from that followed in every other enumerated power. The generic power set forth in the first portion of the clause arguably serves as a form of limitation to the grant of power set forth in the “by” portion, but this does not — and ought not — require an interpretation of the clause that renders its form and structure inconsistent with that of the other enumerated grants of power to Congress.

The broad interpretation of the form and structure of the intellectual property clause that I have set forth is fully consonant with the form and structure of each of the other enumerated powers. It removes any argument that the intellectual property clause can be viewed as an independent constitutional bar to federal funding of education or R&D. Moreover, my interpretation removes any need for the type of sophistry engaged in by the Federal Circuit in *Advanced Micro-Devices*. It truly does conform the language of the general welfare clause and the language of the intellectual property clause.

153. See, e.g., 1 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 1.03[A] (Rel. No. 44, 1997); 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*, 9 BULL. COPYRIGHT SOC'Y 194, 228 (1962); see also *Goldstein v. California*, 412 U.S. 546, 555 (1973); *In re Bergy*, 596 F.2d 952, 958 n.2 (C.C.P.A. 1979); cf. *Graham v. John Deere Co.*, 383 U.S. 1, 5–6 (1966) (“The [intellectual property] clause is both a grant of power and a limitation . . . the promotion of advances in the ‘useful arts’”).