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REALLY COOL STUFF: DIGITAL SEARCHES INTO THE CONSTITUTIONAL PERIOD

*Calvin H. Johnson**

It is becoming considerably easier to find and organize the documents that have survived from the period of the adoption of our Constitution by electronic searches into digital archives. Research that once took years to accomplish can be pulled together in hours, sometimes even minutes. “Originalism,” for better or worse, is said to have become the prevailing approach in constitutional interpretation.¹ If originalism is going to be based on something more than historical myths and fantasies, then historical claims need to be validated by a return to the surviving sources. The digital archives are just now becoming large enough to allow exploitation of the technological advantages of digital searches into the founding period. Lawyers have used digital searches into the cases, statutes, and regulations for years, but the surviving 1787–1788 sources are just now becoming available online. Digital access to these sources allows constitutional scholars to satisfy Karl Llewellyn’s exhortation to “‘see it fresh,’ ‘see it clean’ and ‘come back to make sure.’”²

This note is an interim report on how the digital revolution is affecting the history of the period in which the Constitution was drafted and adopted. I do not forecast the full impact of the new search technology on constitutional history.

This note assumes that valid constitutional history is relevant for constitutional law, without seriously defending the as-

* Professor of Law, University of Texas Law School. This paper was presented to the annual meeting of the Society of Historians of the Early American Republic at Brown University on July 25, 2004. The author wishes to thank the participants in the SHEARS discussion for comments and Yvette Puggish of the University of Chicago for helpful research assistance.

1. See Randy E. Barnett, *An Originalism for Nonoriginalists*, 45 LOY. L. REV. 611, 613 (1999).

2. KARL N. LLEWELLYN, *THE COMMON LAW TRADITION: DECIDING APPEALS* 510 (1960).

sumption. My own attitude toward use of history in law is asymmetrical: we should use the wisdom of the Founders as inspiration when they are right, without being bound when they were wrong. The Founders were mercantilist in economics, anti-Catholic, anti-Semitic, sexist and racist in social attitudes, and often inept in valid statistical inferences. When they were wrong, as they often were, we should ignore them. What to do with accurate history, however, is an issue separable from the issue of making sure that the history is accurate.

I. SPOT SEARCHES FOR WORDS.

One of the great conveniences of digital searches is that one can marshal evidence on important historical arguments in a very short period of time. One might win some food fights. I had been arguing with Professor Bruce Ackerman of Yale Law School by e-mail not long ago. My position was that the most important issue in the debate on the ratification of the Constitution was whether the new federal government would have the power to lay “direct” or dry-land taxes. The Anti-Federalists generally conceded that the new general government could have the power to lay a tax on imports, called the “impost,” but no Anti-Federalist would concede that the federal government could lay internal taxes, except by requisitions upon the state governments. Professor Ackerman disagreed, arguing that the most important issue in the ratification debate involved the Bill of Rights, or the enforcement of the British peace treaty, but not taxation.

The University of Virginia had just announced that they had put the 39 volumes of John C. Fitzpatrick’s *Writings of George Washington* online,³ and I decided to play. I entered a search for “direct tax” and the first hit was a letter from George Washington to Thomas Jefferson: “For myself, . . . there are scarcely any of the [Anti-Federalists’] amendments . . . to which I have *much* objection, except that which goes to the prevention of direct taxation; and that, I presume, will be more strenuously advocated and insisted upon . . . than any other.”⁴ Washington went on to say that he had expected that the new government would

3. THE WRITINGS OF GEORGE WASHINGTON FROM THE ORIGINAL MANUSCRIPT SOURCES, 1745–1799 (John C. Fitzpatrick ed., 1931–1944), available at <http://etext.lib.virginia.edu/washington/fitzpatrick/index.html>.

4. Letter from George Washington to Thomas Jefferson (Aug. 31, 1788), in 30 WRITINGS OF GEORGE WASHINGTON, *supra* note 3, at 97.

“do justice to the public creditors and retrieve the National character. But if no means are to be employed but requisitions, that expectation was vain and we may as well recur to the old Confederation.”⁵ George Washington was telling Jefferson that the Constitution was about getting the war debts paid and that giving the new federal government power over direct, internal taxes was the key contested issue. I had not seen this letter before in the secondary literature.

Washington’s letter is not the only evidence that “direct tax” was the most important issue in the ratification debate,⁶ but Washington was the defining core of the constitutional movement, and therefore an important witness. To find that letter before the University of Virginia put Washington’s letters on line, I would have had to have been a Washington specialist who had read all thirty-nine volumes of Fitzpatrick’s *Writings of George Washington*,⁷ and I would have needed either a photographic memory or a very big shoebox to organize what I knew. It might have taken me days to find it even if I knew what I was looking for. As it was, it took me maybe thirty seconds to search for “direct tax” to find that very nice letter.

In the movie, *Annie Hall*, the Woody Allen character is waiting to get into a movie theater as a pretentious guy in front of him pontificates about what he teaches about Marshall McLuhan.⁸ Woody disagrees with the guy and then pulls Marshall McLuhan in person from behind a post. And McLuhan agrees with Woody: “You—you know nothing of my work” McLuhan tells the pretentious guy. “You mean my whole fallacy is wrong. How you ever got to teach a course [in anything] is totally amazing.”⁹ Doing digital searches is like that. If I had been able to summons George Washington as a witness, I could not have written any better testimony for my side of the debate with Bruce Ackerman than this letter.

5. *Id.*

6. See, .e.g., Letter from James Madison to Edmund Randolph (Dec. 2, 1787), in 12 THE DOCUMENTARY HISTORY OF THE RATIFICATION OF THE CONSTITUTION 332 (Merrill Jensen et. al. eds., 1978) (saying that denying Congress the power to lay direct taxes was the “most popular topic among the adversaries”); James Monroe, Debates in the Virginia Ratification Convention (June 10, 1788), in 9 DOCUMENTARY HISTORY OF RATIFICATION, *supra*, at 1109 (saying that to render the Congress “safe and proper, I would take from it one power only—I mean that of direct taxation”); Calvin H. Johnson, *Apportionment of Direct Taxes: The Foul-up in the Core of the Constitution*, 7 WM. & MARY BILL RTS. J. 1, 15–24 (1998).

7. *Supra* note 3.

8. ANNIE HALL (Rollins-Joffe Productions 1977).

9. *Id.*

Washington's letter is also important evidence on current issues in constitutional history. It is not uncommon to see the Constitution described as primarily a document to restrain government and safeguard individual liberties. My book, *Righteous Anger at the Wicked States: The Meaning of the Founders' Constitution*,¹⁰ argues that the Constitution was first a tax document, a pro-taxation document adopted to collect revenue to pay the Revolutionary War debts. The Constitution created a new three-part government on the federal level and transferred supremacy or sovereignty to the new government away from the states. There is not much that is pro-state in the historical Constitution. Although I am not sure the gem of a Washington letter ended all dispute about the meaning of the historical Constitution, searches are helpful in collecting a lot of evidence.

II. THE STATE OF THE DIGITAL REVOLUTION

A web search for a word or phrase is terrific in pulling in a large and diffuse catch. In minutes, a web search can collect quotes that used to take years to collect. Two generations ago, a serious historian of the constitutional period had to visit dozens of small archives spread along the east coast, from Portsmouth to Savannah. Forrest McDonald says he put 100,000 miles on his car when he got started.¹¹ You had to be working on your dissertation to do this research, and only once in your lifetime, because the work was otherwise not quite worth it. You also had to be a professional.

A generation ago, the scattered letters and documents on the constitutional era started to get collected into scholarly editions. The Evans Collection of Early American Imprints, covering every book published in America from 1639 to 1800, became available on microprints in 1968.¹² The first volume of the Julian Boyd-edited *Papers of Thomas Jefferson* came out in 1950.¹³ The Harold Syrett-edited twenty-seven volumes of the *Papers of Alexander Hamilton* began publication in 1961.¹⁴ The eighteen

10. CALVIN H. JOHNSON, *RIGHTEOUS ANGER AT THE WICKED STATES: THE MEANING OF THE FOUNDERS' CONSTITUTION* (2005).

11. Forrest McDonald, *Review of Documentary History of the Ratification of the Constitution*, 44 WM. & MARY Q. 643, 643 (1987).

12. Katherine Stebbins McCaffrey, *American Originals*, 3 COMMONPLACE no. 3, (2003) available at <http://www.common-place.org/vol-03/no-03/mccaffrey/>.

13. 1 THE PAPERS OF THOMAS JEFFERSON (Julian Boyd ed., 1950) (now 12 volumes).

14. THE PAPERS OF ALEXANDER HAMILTON (Harold C. Syrett ed., 1961-1987).

volumes of the *Papers of James Madison* began in 1962.¹⁵ The first published volume of the *Documentary History of the Ratification of the Constitution* was released in 1978.¹⁶ The collecting work is still not finished. The *Documentary History of the Ratification*, for instance, still needs the last third of its twenty-seven volumes. Still the collecting of key sources meant that a scholar with access to a research university could see the core of the important sources with days' or perhaps weeks' worth of work instead of months' or years'.

Now much of the original documentation is coming online. When this revolution is completed, the same quotes that used to take years to find will be found in minutes. Every researcher will have thousands of volumes of original sources available any time. You can search, play, double check quotes, run down ideas day or night with no preparation time.

There is getting to be a lot online. The best free site is the Library of Congress, *A Century of Lawmaking for a New Nation*,¹⁷ which has the three volumes of Farrand's *The Records of the Federal Convention*,¹⁸ the five volumes of Elliot's *The Debates on the Ratification*,¹⁹ the thirty-four volumes of the *Journals of the Continental Congress*, the twenty-six volumes of *Letters of Delegates to Congress*,²⁰ and the six volumes of *The Revolutionary Diplomatic Correspondence of the United States*.²¹ The *Century of Lawmaking* collection²² is also the most useful because you can copy electronically. Electronic copying allows you to get your quotes and bibliographical cites right the first time. You can take notes by copying a whole paragraph and boiling it down to the core idea. The digital archives are now getting to be large

15. THE PAPERS OF JAMES MADISON (William T. Hutchinson et. al. ed., 1962–1991).

16. 1 DOCUMENTARY HISTORY OF THE RATIFICATION OF THE CONSTITUTION, *supra* note 6.

17. Word and phrase searches can be made from <http://memory.loc.gov/ammem/hlawquery.html>.

18. THE RECORDS OF THE FEDERAL CONVENTION OF 1787 (Max Farrand ed., 1911), available at <http://memory.loc.gov/ammem/amlaw/lwfr.html>.

19. THE DEBATES IN THE SEVERAL STATE CONVENTIONS ON THE ADOPTION OF THE FEDERAL CONSTITUTION (Jonathan Elliot ed., Taylor & Maury 1861), available at <http://memory.loc.gov/ammem/amlaw/lwed.html> [hereinafter THE DEBATES].

20. LETTERS OF DELEGATES TO CONGRESS, 1774–1789 (Paul H. Smith ed., 1976–2000), available at <http://memory.loc.gov/ammem/amlaw/lwdg.html>.

21. THE REVOLUTIONARY DIPLOMATIC CORRESPONDENCE OF THE UNITED STATES (Francis Wharton ed., 1889), available at <http://memory.loc.gov/ammem/amlaw/lwdc.html>.

22. *Supra* note 17.

enough to allow exploitation of the technological advantages of digital searches.

There are also useful subscription services. The Evans Collection, Series I of Early American Imprints is now online, covering books published in America between 1639 and 1800.²³ American Periodicals Series Online²⁴ allows access to 101 magazines and journals published before 1800. JSTOR²⁵ gives you access to scholarly history journals after a three to five year black-out period.

The subscription services are expensive. How much they charge is a proprietary secret and subject to negotiation, but the fees in any case are very high. The Gale-Thomson collection of everything published in English in the Eighteenth Century is said to be asking for a half million dollar initiation fee.²⁶ The Evans collection is allegedly asking for more than a \$100,000 initiation fee for a large library.²⁷ American Periodicals Series Online is said to ask for something under \$10,000 per year for one big library.²⁸ JSTOR fees are supposedly \$20,000 a year for large libraries. The price range is higher than an unaffiliated scholar can afford. Indeed, the services are commonly not available at all to individuals who are not associated with a major research library.

The subscription services also protect the ability to charge for their product by reducing their utility. To allow searches, these services must create a digital text, but users get to see only pictures of the original documents. Searches will take you to the document, or sometimes to the page, but they do not allow you to go directly to the word sought. For long documents, finding the word can be an extra burden. The services will also not allow you to copy electronically.

A short annotated bibliography of what archives are available online follows this note as an appendix.

III. CASTING OUT THE NET

In my seminar on the history of the adoption of the Constitution, I give a training exercise very early. My students have to

23. <http://quod.lib.umich.edu/e/evans/>.

24. Described at http://training.proquest.com/trc/splash/aps/about_general.html.

25. Described at <http://www.jstor.org/>.

26. Eighteenth Century Collections Online, <http://gale.com/EighteenthCentury/>.

27. Described at Evans Text Creation Partnership, <http://www.lib.umich.edu/tcp/evans/goals.html>.

28. Described at *supra* note 24.

search the Library of Congress's *Century of Lawmaking*²⁹ site for a word, phrase, or cluster of words on a single topic or thesis until they find thirty-five significant quotes. They then have to put the quotes into some sort of outline or order. I want them to do field work in the archives in a way in which they must provide the organization and intelligence. I want them to get the sense of serendipity and also the thrill of finding new things in a historical search. The digital searches do that quickly. Finding, organizing, and describing the thirty-five hits is about two hours' worth of work.

With thirty-five samples of the word "militia" you can come up a pretty good idea of what programs and fears were at issue in the ratification debates. "Militia" is generally a reference to the state-controlled armies, which might be nationalized and sent to the other end of the country.³⁰ In thirty-five hits, you can trace the evolution in the thinking of Oliver Ellsworth, a Connecticut delegate to the Philadelphia Convention. Oliver Ellsworth came into the convention favoring the states and converted over the course of the discussions to become a quite strong nationalist.³¹ In thirty-five hits you can look at how the concepts of "Consolidation," "Sovereignty," or "Liberty" were used and how "slavery" or "Negro" or "tobacco" came up in debates.

I have collected illuminating quotes from digital searches in my published writing:

29. <http://memory.loc.gov/ammem/amlaw/>.

30. See, e.g., *Essay by a Farmer and Planter*, MARYLAND JOURNAL, Apr. 1, 1788, reprinted in 5 THE COMPLETE ANTI-FEDERALIST 74, 76 (Herbert J. Storing ed., 1981) (saying that to enforce direct taxes, Congress would send the militia of some other state "to cut your throats, ravage and destroy your plantations, drive away your cattle and horses, abuse your wives, kill your infants, and ravish your daughters, and live in free quarters, until you get into a good humour, and pay all that they may think proper to ask of you"); George Mason, Remarks at the Virginia Ratification Convention, June 14, 1788, in 3 THE DEBATES, *supra* note 19, at 387 (calling for a limitation on federal nationalization of the militia, lest Congress use the Georgia militia in New Hampshire and vice versa, which would be such harassment that people would abolish the militias and rely on the standing army).

31. Compare Oliver Ellsworth, Speech to the Federal Convention (June 20, 1787), in 1 THE RECORDS OF THE FEDERAL CONVENTION OF 1787, *supra* note 18, at 335 (arguing that the Confederation should be considered as still subsisting and that the Convention's proposal should be sent to state legislatures for ratification as an amendment to the Articles of Confederation), with Oliver Ellsworth, Speech to the Connecticut Convention (Jan. 4, 1788), 2 THE DEBATES, *supra* note 19, at 186, 191 (arguing that the Constitution was based on the "the necessity of combining our whole force, and, as to national purposes, becoming one state" and that the national government must be able to command the whole power of the purse).

The Constitution gives the federal government the power to regulate commerce. I have a collection of 161 quotes about what programs the Founders were trying to accomplish under the cover of the phrase “regulation of commerce.”³² It turns out that the Founders were mercantilists who believed that imports were enervating luxuries that would drain us of our precious specie. The programs contemplated by “regulation of commerce” were to suppress imports, to give monopolies or protection to American business, and to exclude or punish British and other foreign competitors. The historical intent is not very attractive.

“Direct taxes” need to be apportioned among the states according to population. Apportionment is often an absurd requirement. It requires tax rates in Mississippi to be twice as high as tax rates in the richest states. In thirty-five hits you can discover that “direct tax” was often used as a synonym for all internal or dry land tax. The Founders’ did not know how absurd apportionment by population could be.³³

Word or phrase searches for eighteenth-century texts encounter some special problems. Spelling is not standardized. Printers created new abbreviations to fit within the right-hand margin. Optical recognition of the text is frequently defeated by the “long s” in these documents. For example, searching “Shakespeare” in Evans³⁴ turned up 95 hits. The wildcard character “?” turned up 349 hits with a search for “Shake?peare” and the multiple wildcard character “*” turned up 350 hits for the search “Shake*peare.” Gale-Thomson’s Eighteenth Century Collection employs a fuzzy-logic algorithm that allows you to misspell by two, four or more characters.³⁵ Some correct hits of the right word emerge with as many as eight wrong letters.

IV. IMPROVING SCHOLARLY VIRTUE

The dramatic increase in good quotes per hour should change one’s attitude about the feasibility of any project. The Oxford English Dictionary took more than a generation to complete. If James Murray had had access to a large enough digital archive, the *OED* could have been done in weeks – albeit per-

32. Calvin H. Johnson, *The Panda’s Thumb: The Modest and Mercantilist Original Meaning of the Commerce Clause*, 13 WM. & MARY BILL RTS J. 1 (2004).

33. Johnson, *supra* note 6; Calvin H. Johnson, *Fixing the Constitutional Absurdity of the Apportionment of Direct Tax*, 21 CONST. COMMENT. 295 (2004).

34. Evans Early American Imprint Collection, *supra* note 23.

35. Eighteenth Century Collections Online, *supra* note 26.

haps many weeks. Historian Quentin Skinner argues that the meaning of historical documents is derived from the programs that the words were trying to accomplish and not from dictionary meanings.³⁶ One can get more quotes, more closely focused on what the historical actors were trying to accomplish, with a digital word search than with the *OED*.

When you can collect a fair sample of relevant quotes with a word or phrase search, you develop a different attitude toward footnotes. I used to try to find a secondary source on a topic covered by a footnote. I needed to find someone else who had done the hard work of searching through the archives. But if you can find five letters yourself in perhaps thirty minutes, you start to distrust the secondary sources and return to the primary sources on your own. The surviving documentation is a constant check.

The law of large numbers and the law of offsetting errors say that you best correct errors with a very large sample. There are instances in which the original books and documents are artifacts that will tell you something that web searches can not. Sometimes there are pencil notes in the margin, clippings flattened by the pages, or ornamentation or weight of the paper that can make a difference to the interpretation. Without denigrating the value of careful attention to physical clues, however, one should also understand the value of a very large sample of diverse materials. The fishing net needs to be cast very widely. To gather a very large sample without traveling 100,000 miles to two dozen archives, you will need to cast out your net electronically.

Digital searches should also improve rigor by allowing an easier rechecking of the original sources once the draft is complete. The notes that a researcher takes depends upon the theory that organizes the facts. If one's original notes were made before the ultimate theory of the article came into focus, then return to the same sources to verify that the quotes and the context were understood the first time. When archive research involved 100,000 miles of travel, one had to rest on the original notes of archival work, perhaps done years ago, or on someone else's archival work. When it is easier to recheck the sources, there will naturally be more rechecking.

36. See Quentin Skinner, *Meaning and Understanding in the History of Ideas*, in *MEANING AND UNDERSTANDING: QUENTIN SKINNER AND HIS CRITICS* 29–55 (James Tully ed., 1988).

Easy access to the original sources will also encourage playful scholarship. One does not need to go into the office. Easy access means that one can chase down ideas about as soon as they pop into one's head. Five minutes is enough time to accomplish something. "Best of all," Professor Cathy N. Davidson of Duke has revealed, "I was able to visit the Evans Digital site in my pajamas at 5:00 a.m. on a national holiday. This may be as close to scholarly nirvana as one can come."³⁷

Professional historians are always looking for new sources of information that can be exploited and an archive that has not yet been collected cannot be online. Digital searches exploit archives that are in some sense already known and have been examined. Still, the web search tool is so extraordinary in collecting a big sample and finding nuggets from the "known" archives that the wisdom that can be pulled from the existing archives is richer and deeper than the wisdom that could be extracted before the digital searches existed.

Lawyers' use of history is commonly criticized by professional historians as "law office history" or "history 'lite.'"³⁸ Lawyers sometimes use history the way that a preacher uses the Bible, that is, by picking a quote that supports a current moral lesson. Even a lawyer can quote history for his own purposes. The best remedy for bad legal history, however, is more evidence. If an adverse party is selecting a few random quotes out of context, then the better advocate should be able to give a better history using more sources. Digital sources allow lawyers to rest arguments on better, richer history.

V. WHAT IS MISSING?

There is a lot of evidence that cannot yet be reached by a digital search. Not all of the best collections of documents are online. Missing are most of the *Documentary History of the Ratification of the Constitution*, all of the scholarly editions of the papers of Madison, Hamilton and Jefferson, as well as Storing's *The Complete Anti-Federalist*.³⁹ The *Documentary History of the*

37. Cathy N. Davidson, *From Movable Type to Searchable Text*, 3 COMMONPLACE no. 3 (2003), <http://www.common-place.org/vol-03/no-03/tales/tales-1.shtml>.

38. See Martin S. Flaherty, *History 'Lite' in Modern American Constitutionalism*, 95 COLUM. L. REV. 523 (1995); Laura Kalman, *Border Patrol: Reflections on the Turn to History in Legal Scholarship*, 66 FORDHAM L. REV. 87, 89 (1997).

39. See, e.g., *supra* notes 13–16, 30.

Ratification of the Constitution is online only with respect to the four volumes of the Massachusetts ratification debates.

VI. PARTICIPATION FROM NONPROFESSIONALS.

Documents on the founding of our Constitution are of interest to the world at large. Many scholars who do not have access to a major research library can make meaningful contributions to our understanding of the history if they can get access to the archives. Michael Ryan of the Penn Electronic Text Center tells the story of the “independent scholar in San Francisco who (amazingly) is producing an annotated edition of Holinshed’s *Chronicles* (1580?)—a huge beast of [a six volume] book in gothic type face—based on the copy on our site.”⁴⁰ Many foreign libraries have trivial budgets, he says, and thus must rely for scholarly sources on what is available free online. As Ryan tells it:

We seem to be the principal destination for a large swath of academics and others in Europe and Asia involved in American and English studies: we have texts they can’t get elsewhere, especially in areas where local libraries are poorly stocked, even in vernacular literature. Last month we were visited by a delegation of Slovenian librarians, computer scientists, and academics who had specifically asked the State Dept. to set up the visit. They love us! Who knew?

As the idea of democracy continues to sweep the globe, there will be foreign interest in and foreign scholarship on the constitutional period. Some important scholarship on our Constitution is by foreign scholars.⁴¹

When the full documentary history is available online, researchers from eastern Montana, southern Maine, central Minnesota, Britain, China, and Bashkyria will be able to do valid archival research, testing interesting theories against a full set of the surviving documents. They will not need to be affiliated with a large research university. The digital archives will allow the founding documents of this democracy to become available to the democracies and the people everywhere.

40. E-mail of Nov. 6, 2003, Michael Ryan, Schoenberg Center for Electronic Text & Image, University of Pennsylvania to Calvin H. Johnson (on file with the author).

41. See, e.g., MAX M. EDLING, *A REVOLUTION IN FAVOR OF GOVERNMENT* (2003).

APPENDIX

SURVEY OF DIGITAL SEARCHES IN THE
CONSTITUTIONAL PERIOD.

1. CENTURY OF LAWMAKING.

The best of the publicly available sites for electronic searches in the constitutional period is the Library of Congress, *A Century of Lawmaking for a New Nation* collection.⁴² The Library of Congress has the three volumes of Farrand's *Records of the Federal Convention*,⁴³ the five volumes of *Elliot's Debates on the Ratification*,⁴⁴ the thirty-four volumes of the *Journals of the Continental Congress*,⁴⁵ the twenty-six volumes of *Letters of Delegates to Congress*,⁴⁶ and the six volumes of *The Revolutionary Diplomatic Correspondence of the United States*.⁴⁷

The *Century of Lawmaking* is the most user-friendly of the archives. When you combine their general search browser with a "find in this page" function, you get to the exact word you seek and it is highlighted. They have no worry about protecting fees or copyrights, so they allow you to copy electronically. Copying allows one to get the quotes and citation right, effortlessly. One can take notes by editing down a paragraph of text into a line or two.

The Library of Congress has also put its *Thomas Jefferson Papers*⁴⁸ and *James Madison Papers*⁴⁹ online, as images or pictures of the letters, but without transcriptions or the ability to copy quotes. There are many transcriptions in the Library's online *Papers of George Washington*,⁵⁰ but many of the works

42. Word and phrase searches start from <http://memory.loc.gov/ammem/hlawquery.html>.

43. THE RECORDS OF THE FEDERAL CONVENTION OF 1787, *supra* note 18.

44. THE DEBATES, *supra* note 19.

45. JOURNALS OF THE CONTINENTAL CONGRESS, 1774-1789 (1904-1937), available at <http://memory.loc.gov/ammem/amlaw/lwjc.html>.

46. LETTERS OF DELEGATES TO CONGRESS, 1774-1789, *supra* note 20.

47. THE REVOLUTIONARY DIPLOMATIC CORRESPONDENCE OF THE UNITED STATES, *supra* note 21.

48. The Thomas Jefferson Papers, <http://memory.loc.gov/ammem/mtjhtml/mtjhome.html>.

49. The James Madison Papers, http://memory.loc.gov/ammem/collections/madison_papers/mjmser.html.

50. George Washington Papers at the Library of Congress, 1741-1799, <http://lcweb2.loc.gov/ammem/gwhtml/gwhome.html>.

appear only as images of the letters. Sometimes having the image is an advantage, as with Washington's surveys. But a reliable transcription is also a valuable service because you do not need to decipher handwriting, and because the transcription allows you to copy and edit quickly.

2. OTHER FREE SOURCES

Outside the Library of Congress, the University of Virginia has posted an extensive collection of its Thomas Jefferson material⁵¹ and the thirty-nine volume *Writings of George Washington, 1745–1799*⁵² in transcriptions that can be searched and copied. The University of Chicago has put its five volume *Founders' Constitution* online, which is a collection of document excerpts, which is organized primarily according to individual sections of the Constitution.⁵³ The best search engine for the *Federalist* is maintained by Emory.⁵⁴ The Yale Law Avalon project has put online a long list of official documents from the constitutional period.⁵⁵ Constitution.org has scanned a diffuse archive of copyable original sources and anti-government commentary, filled with a serendipitous collection of things not online elsewhere, including, for example, Joseph Story's *Commentaries on the Constitution*.⁵⁶ The Constitution.org site also maintains a long list of primary sources from early American history, including works that have been scanned into that site specially as well as links to other websites.⁵⁷ Four volumes of John Jay's papers are online as images.⁵⁸ *Documentary History of the Ratification of the Constitution* has put its four volumes on the Massachusetts ratification online, in a form that can be searched by page but not copied.⁵⁹

51. Thomas Jefferson Digital Archive. <http://etext.virginia.edu/jefferson/>.

52. THE WRITINGS OF GEORGE WASHINGTON FROM THE ORIGINAL MANUSCRIPT SOURCES, 1745–1799. *supra* note 3.

53. THE FOUNDERS' CONSTITUTION (Philip B. Kurland & Ralph Lerner eds., 1987). *available at* <http://press-pubs.uchicago.edu/founders/>.

54. Historical Documents—The Federalist Papers. <http://www.law.emory.edu/law-library/research/ready-reference/us-federal-law-and-documents/historical-documents-the-federalist-papers.html>.

55. The Avalon Project at Yale Law School. <http://www.yale.edu/law-web/avalon/constpap.htm>.

56. JOSEPH STORY, COMMENTARIES ON THE CONSTITUTION OF THE UNITED STATES (1833). *available at* http://www.constitution.org/js/js_000.htm.

57. Primary Source Documents Pertaining to Early American History. <http://www.constitution.org/primarysources/primarysources.html>.

58. The Papers of John Jay. <http://www.columbia.edu/cu/lweb/eresources/archives/jay/>.

59. The Massachusetts Volumes of the Documentary History of the Ratification of the Constitution. <http://www.wisconsinhistory.org/ratification/digital/index.asp>.

Maryland maintains a virtually complete transcription of colonial and early state laws and court proceedings.⁶⁰ On comparative law, a German site, *The Rise of Modern Constitutionalism, 1776–1849*,⁶¹ has put nonsearchable images of 459 international constitutional documents online and the collection will eventually include the American state constitutions of the Revolutionary War period. Search capability will be added eventually on a fee-paid basis.

3. SUBSCRIPTION SERVICES

Subscription services are priced well beyond the reach of independent researchers. Indeed, they do not generally allow unaffiliated researchers to buy access at any price. They also worry about users downloading their product and bypassing their subscription fees. As a result, they make their product uncopyable and therefore less useful. To allow a user to conduct a search for a word, the services had to convert original text to a digital text (ASCII). A digital text therefore exists if the document can be searched, but users cannot access the ASCII version. They are shown a picture of the document that cannot be copied. There is no electronic copying of quotes or bibliographies and no copying of paragraphs that can be boiled down into research notes or paraphrases. You have to print out pages. Indeed, the services sometimes even limit the number of pages that can be printed in any day. Beyond that, you have to pull out your quill pen. Still, the search function allows you to go through thousands of pages to find a word or phrase. You find things you would never have found by manual search of the originals. You can collect quotes in days instead of years. If you have access to the service, it is also like having a hard copy version of thousands of volumes at your desk to recheck quotes or context.

American Periodicals Series Online allows access to 101 magazines published before 1800.⁶² The browser gets you only to the article, and then you are on your own to find the word. For a long article that can be a burden. Users see an image of the original newspaper or magazine. There is no copying of text for quotes or footnotes, but the pages can be printed.

Evans Collection Digital Edition has put two and a half million pages on line, covering almost every book published in

60. Maryland State Archives, <http://www.msa.md.gov/>.

61. <http://www.modern-constitutions.de/>.

62. American Periodicals Series Online, *supra* note 24.

America from 1640 through 1800 and many pamphlets.⁶³ Searches for words or phrases are done on the text (ASCII) versions of the documents, but users see only images of the document pages. The images are at least as clear as they would appear on microfilm, and they can be zoomed up to 300 percent if necessary. The images allow users to see the print styles, the placement of words on pages, and textual ornamentation. Because users do not have access to the ASCII text, however, there is no copying of quotes or cites. The search engine will find the page on which the target word appears, but the word is not highlighted. This service allows no more than 20 pages a day to be printed. An office history of the Evans Collection is found at Katherine Stebbins McCaffrey, *American Originals*.⁶⁴ There are entertaining reviews of the Evans collection by historians including Cathy N. Davidson (Duke), *From Movable Type to Searchable Text*,⁶⁵ and Jay Fliegelman (Stanford), *An MRI of Early America*.⁶⁶

Since April 2004, publisher Thomson-Gale has offered digital access to 150,000 books published in Britain and America in the eighteenth century.⁶⁷ Nothing can be copied online. The asking price is said to be over a half million dollar initiation fee plus expensive annual maintenance fees for the largest libraries. Thomson-Gale services are not available for individual researchers not attached to a subscriber library, and even for the largest libraries, the fee seems to make sense only if the digital access counts as volumes in the rating of the libraries. The prices are too high to allow widespread world use.

JSTOR, which stands for Journal Storage, is a broad collection of periodicals in the social sciences, originally constructed to save library space.⁶⁸ JSTOR collects only secondary periodicals, except for the occasional original documents, such as those that *William and Mary Quarterly* once published. JSTOR has needed to keep value for the hard-copy publishers, so they restrict the user-friendly aspects, at levels below what the technology would allow. A search for a word will take you to the page on which the word is used but not to the word itself. You can print both text

63. Described at <http://www.lib.umich.edu/tcp/evans/>.

64. McCaffrey, *supra* note 12.

65. Davidson, *supra* note 37.

66. Jay Fliegelman, *An MRI of Early America*, 3 COMMONPLACE no. 3 (2003), <http://www.common-place.org/vol-03/no-03/tales/tales-2.shtml>.

67. Eighteenth Century Collections Online, *supra* note 26.

68. *Supra* note 25.

and bibliography, but you cannot copy electronically. JSTOR will not put anything online until after three to five years after publication, just so that the publishers have a chance to make some money on the hard copy before they make their works available to scholars by web. The advantage of JSTOR is that it delivers thousands of volumes of vintage periodicals to your fingertips. Indeed, the JSTOR word searches make JSTOR better than just having hard copies of the periodicals because a search for words or phrases will collect words quickly, including from journals you have never heard of or would never suspect would be helpful.

4. TOPICAL WEBSITES AND BLOGS.

Websites are also delivering well-developed topical collections and topical essays to the public. Data from the 1790 census is available from a University of Virginia site.⁶⁹ Slavery data or documents are provided, for instance, at *Slave Movement During the Eighteenth and Nineteenth Century*,⁷⁰ at *The Atlantic Slave Trade and Slave Life in the Americas: A Visual Record*,⁷¹ and at *Virginia Runaways*.⁷² The Library of Congress has an index of its African American exhibition sites, 1763–1815,⁷³ a collection of twenty-three slave narratives and a collection of documents on slaves in court starting in 1740.⁷⁴ Studies of women's perspectives are found, for instance, at *A Women's Work is Never Done: Online Exhibition from the American Antiquarian Society*,⁷⁵ and at *A Midwife's Tale*.⁷⁶ The value of colonial paper money is discussed at Leslie Brock's website.⁷⁷ These websites have a lot of original material on them, but they are not the broad archives that, for example, the *Documentary History of the Ratification of the Constitution*,⁷⁸ the Thomson-Gale *Eighteenth Century*

69. Census Data for Year 1790. <http://fisher.lib.virginia.edu/collections/stats/histcensus/php/start.php?year=V1790>.

70. <http://dpls.dacc.wisc.edu/slavedata/index.html>.

71. <http://hitchcock.itc.virginia.edu/Slavery/> (including lots of pictures).

72. <http://www.wise.virginia.edu/history/runaways/> (contains a fully searchable database of 18th-century runaway slave ads from Virginia newspapers).

73. 1763–1815: The American Revolution & a New Nation. <http://www.loc.gov/rr/program/bib/afam/afam-1763.html>.

74. Slaves and the Courts, 1740–1860. <http://memory.loc.gov/ammem/sthtml/sthome.html>.

75. <http://www.americanantiquarian.org/Exhibitions/Womanswork/>.

76. LAUREL THATCHER ULRICH, *A MIDWIFE'S TALE* (1991). available at <http://dohistory.org/book/index.html>.

77. The Leslie Brock Center for the Study of Colonial Currency. <http://etext.lib.virginia.edu/users/brock/>.

78. *Supra* note 16.

Online,⁷⁹ and the *Evans Collection*⁸⁰ are attempting to make public.

The topical websites have an overwhelming technological advantage as to pictures, maps and diagrams. With digital cameras, distributions of photographs and images via topical websites have become almost free. Hard-copy picture books—called coffee table books—are very expensive. That implies that any scholarly history that depends critically on pictures will in the not-too-distant future be distributed solely online.

5. WHAT'S MISSING

The leaders of the last scholarly revolution, who collected the scattered letters into volumes with commentaries, are the laggards of the digital revolution. The university presses that published the learned multivolume annotated editions of the Founders' letters have not put the papers online. The Julian Boyd-edited *Papers of Thomas Jefferson*⁸¹ is not online, but the earlier Paul Leicester Ford-edited *Works of Thomas Jefferson* is available through the Library of Congress.⁸² We need the twenty-seven volume modern editions of the *Papers of Alexander Hamilton*⁸³ and the seventeen volume *Papers of James Madison*⁸⁴ to be online in searchable, copyable form. Unlike the Library of Congress, which is just trying to get the information out to the public, the university presses seem to be trying to preserve the value of their hardback books by being slow in getting the letters out. Herbert Storing's *Complete Anti-Federalist*⁸⁵ is not online and, indeed, the Anti-Federalists are not well represented on the Web. Constitution.org has some Anti-Federalists,⁸⁶ but nothing is complete and the scholarly support is not up to the level of Storing or the various *Papers* volumes. Merrill Jensen started the massive *Documentary History of the Ratification* project to get the full ratification arguments out to the people,⁸⁷ in part to counterbalance *Publius* and the Philadelphia Federalists, but so far the Documentary History project has found only enough funding to get its four volumes of the Massachusetts ratification

79. Eighteenth Century Collections Online. *supra* note 26.

80. *Supra* note 23.

81. THE PAPERS OF THOMAS JEFFERSON. *supra* note 13.

82. *Supra* note 48.

83. THE PAPERS OF ALEXANDER HAMILTON. *supra* note 14.

84. THE PAPERS OF JAMES MADISON. *supra* note 15.

85. STORING. *supra* note 30.

86. *Supra* note 57.

87. *Supra* note 16.

online. In fairness, however, it is difficult to raise funds for scholarly history, and sales of the hardback volumes have made at least a modest contribution to funding for the editorial work. But the contribution is modest enough that it is possible that some good scout should be able to intervene and pay them for the modest value of their intellectual property rights.