The Sussex Declaration:
Dating the Parchment Manuscript of the Declaration of Independence Held at the West Sussex Record Office (Chichester, UK)

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4.20.2017

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1. Introduction

The West Sussex Record Office (WSRO), in Chichester, West Sussex, England, holds a parchment manuscript of the Declaration of Independence. (West Sussex Record Office Add Mss 8981, see Figures 1 and 2.) Other than the engrossed and signed parchment at the National Archives in Washington, D.C. (the "Matlack Declaration"), this is the only other known contemporary manuscript of the Declaration on parchment. The WSRO acquiring archivist, who worked directly with the depositor, dated the manuscript to the late 18th century.[2] The document, which hereafter we refer to as the Sussex Declaration, was deposited in a group of seventy-eight items whose dates range from 1621 to 1910 (Accession 1396a).[3] The Declaration itself was stored in a folder of materials dating from 1775 to 1828.[4]

The parchment was deposited at the West Sussex Record Office in 1956 by Mr. Leslie Holden (1914-2009) of Chichester. Holden worked for Rapers, a local solicitors firm that now operates as Stone Milward Rapers or SMR. The firm is the oldest solicitors firm in Chichester, and dates back to 1730. Alison McCann, former archivist at the WSRO, remembers Holden recounting that, in 1956, the senior partner at Rapers told him to dispose of a large accumulation of documents from the Dukes of Richmond, who were clients of the firm. When Holden protested, the senior partner told him to take any documents he wanted. In that year Holden donated to the WSRO a set of papers from his firm, many of which are related to the Richmond family. The Sussex Declaration was among these papers.[5] The WSRO therefore believes the Dukes of Richmond, whose family seat, the Goodwood Estate, is in Sussex, at one time owned this parchment.[6] During the American Revolution, Charles Lennox, 3rd Duke of Richmond, spoke emphatically in support of the Americans in the House of Lords and thereby earned

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[2] The Holden deposit was catalogued chronologically. The Declaration manuscript was catalogued with a date of 1776 and was followed by a document that was dated "c. 1800, late 18th or early 19th century." The acquiring archivist and depositor understood the Declaration manuscript to pre-date the document that followed it. Neither Leslie Holden nor the acquiring archivist is still alive, so we can no longer access their knowledge about the original context in which the manuscript was found among the papers at Rapers.

[3] Thirty-two of the items in the accession date to 1830 or later.

[4] West Sussex Record Office Add Mss 8976-8982.

[5] Accession 1396a includes items 8915–8992. A number of the papers relate to the Richmond family, including correspondence, legal documents related to property and estates, documents related to the 2nd Duke's mayoralty of Chichester, and papers pertaining to the service of other members of the family in local government.

[6] The Goodwood Papers, as the papers of the Dukes of Richmond are known, are also housed at the West Sussex Record Office.

himself the nickname, "the Radical Duke." Despite the ownership by the Dukes of Richmond, the Sussex Declaration is originally of American provenance, as we will detail below.

Importantly, two 19th century engravings of the Declaration of Independence bear a genetic relationship to the Sussex Declaration. These are the 1818 engraving produced in Washington D.C. by Benjamin Owen Tyler and the 1836 miniature engraved in Boston by L.H. Bridgham.

In what follows, we argue that the Sussex Declaration was produced between 1783 and 1790 in New York or Philadelphia and that it was a source text for both the Tyler and the Bridgham engravings. We reserve for separate papers the additional provenance questions about the context of the parchment's production and the transatlantic transfer of ownership.

Fig. 1 Sussex Declaration, Obverse

Fig. 2 Sussex Declaration, Reverse

2. Physical Description[7]

The parchment is 24" (608 mm) tall and 30.5" (776mm) wide. It is the same size as the Matlack Declaration.[8] Yet whereas the Matlack Declaration was formatted broadside, in what is now known as portrait orientation, the Sussex Declaration was prepared in landscape orientation. Notably, within the entire publication tradition of the Declaration of Independence between 1776 and 1840, the Sussex Declaration is the only version prepared in landscape orientation.

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[7] The physical description of the parchment relies heavily on the written report of WRSO Conservator, Simon Hopkins, and is here supplemented by our own physical examination of the manuscript on a visit to the West Sussex Record Office on August 9th and 10th, 2016.
[8] The National Research and Archives Administration provides dimensions for the Matlack parchment of 24.5 x 29.75.

The size of the Matlack is the largest format in which the Declaration was produced in the 18th and first half of the 19th century. Starting in 1824, even the use of parchment for legal documents had shifted to a smaller scale; public laws, for instance, were produced on a thinner, split parchment in leaves approximately 22" x 15".[9] Yet like the Sussex Declaration, the leading ceremonial engravings of the Declaration produced on parchment or paper in the years between 1818 and 1823 by Benjamin Owen Tyler, John Binns, William Woodruff, Eleazer Huntington, and William J. Stone also share the rough dimensions of the Matlack. The size of all of these engravings underscores their importance. Indeed, the great majority of the broadsides and engravings of the Declaration produced between 1776 and 1840 are considerably smaller. For instance, the first published version of the Declaration, John Dunlap's print broadside has dimensions of 19" x 15". In other words, the Sussex Declaration joins the small minority of texts that were prepared at the same ceremonial scale as the Matlack Declaration.

The thickness of the Sussex Declaration varies between .17-.27 mm at the edges. The parchment is unsplit, and was well prepared for text on the flesh side; the reverse skin-side was also slightly dressed. The manuscript, which never appears to have been rolled, is currently stored in an octavo fold. The bottom right quadrant of the reverse has more dirt, suggesting that the document was stored folded once vertically, then once horizontally. The secondary vertical folds are more recent, indicating that the document was stored in a quarto fold for a period before being folded a third time. Other than the WSRO call number, there are no identifying marks on the reverse.

Slits in the center of the parchment indicate that, when in quarto, the Sussex Declaration may have been sealed or pinned in some fashion.[10] There is no evidence of rods having been attached, and there are losses on the left and right edges as well as the central horizontal fold, apparently from being eaten (presumably by rodents). There are also holes at the top center and bottom center of the document. Finally, there are holes from cutting or piercing at the four corners as well as the center top and bottom. The four holes have the uneven, square shape of a

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[9] Nicholson 1994. As Ritzenthaler and Nicholson point out (personal communication 2016), the Stone engraving was produced on large parchment in 1823 and printed again in full size on paper in the 1830s so for this ceremonial document the government did continue to use the large format.
[10] We think it is unlikely that the slits are evidence of the parchment being stitched into some kind of cover or book structure but this is a question that requires further investigation.

hand-wrought nail. (See Figure 3.) There is some discoloration in the holes that may be iron and/or dirt, perhaps from nails used to hang the parchment.[11] Mass produced nails, which create more regular and/or round holes, were introduced in the 1790s in the U.S. and later in the United Kingdom, but mass produced nails would not have been widely available in the U.S. until well into the 1800s.[12] The nail holes do suggest, however, a *terminus ante quem* for the Sussex Declaration.

The parchment's size, legibility, and nail holes are evidence that it was prepared for a public, and not private, purpose. More specifically, it was prepared for visual display, not merely for reading. Nor was it prepared for the usual display context of the tavern or the post-house where, in 1776, the smaller, paper broadsides styled after the original Dunlap broadside sufficed.

Fig. 3 Nail Holes in Corners of Sussex Declaration

[11] The holes at the center top and bottom edges may also have resulted from hanging, with a need to support the parchment from the center. The full set of holes, however, may also have resulted from an effort to restrain the skin in a flat plane onto a surface for viewing or storage. Thanks to Mary Lynn Ritzenthaler and Catherine Nicholson for this point.

[12] Nelson 1968.

3. Description of Clerk's Hand

The Sussex Declaration is inscribed with the full text of the Declaration of Independence, the same title as the Matlack Declaration,[13] and the names of the 56 signers. The calligraphic work on the Sussex Declaration is still easily legible, far more so, than that of the Matlack Declaration in its current condition. Based on visual evidence, the title, body of text, and names of signatories appear to have been inscribed by the same individual. The handwriting is clear and consistent, most likely that of a clerk.

On the Matlack Declaration, the clerk, Timothy Matlack, employed a combination of a strong Roman hand and a Gothic hand for the title, and he used a cursive hand for the body of the text. Matlack's cursive hand is a good example of the English italic hand out of which the round hand developed. His letter forms are narrower than the standard roundhand, but he applies the ink more evenly than in the most exemplary versions of italic. Matlack used no decorative penwork on his parchment.

In contrast to Matlack, the clerk of the Sussex Declaration combines a Gothic hand, a cursive round hand, and decorative penwork for the titling. For the body of the text, the clerk used the non-cursive mercantile "round hand," marked by the relative infrequency of letter joins. His roundhand is distinguished from Matlack's italic by the shape of the letters (particularly the "f," "g," "b," and "v"), the relative weighting of thick and thin lines in the letters, and minimization of looped ascenders or descenders. As was common in legal documents on parchment in the 18th and even into the 19th century, some words in the Sussex Declaration are given emphasis with larger size and heavier inking (see Figures 4 and 5).[14] The round hand used for the list of signatories is larger than the body of text, and comparable to the words enlarged for

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[13] "In Congress July 4th 1776 The Unanimous Declaration of The Thirteen United States of America." In the print and manuscript tradition of the Declaration of Independence, few use this title, unless they are specifically referencing the Matlack Declaration. A more popularly used title comes from the Dunlap broadside, which was printed before the vote for independence was unanimous: "In Congress, July 4, 1776. A Declaration By the Representatives of the United States of America, In General Congress assembled."

[14] For the emergence of "bolding" in the context of manuscript legal documents, well before its appearance in print, see Clayton 2013, p. 232.

emphasis throughout the text. The round hand, in contrast to the italic hand, signaled a mercantile niche within the social order.[15]

The parchment was prepared with a pricking wheel that was used on the entirety of the left and right edges, and horizontal lines were ruled in dry point, to ensure the text was written level.[16] The text and two-line ruled borders are all in the same iron gall ink, and in good condition.[17] The color depth of the ink is variable. In five locations, the parchment surface has been scraped off before rewriting single words or parts of words.[18] The parchment surface was also scraped to the right of "In Congress" in the title. It appears as though the scraped area may have had the words "July 4 1776" or another date or phrase of similar shape.[19] The reason for scraping this portion of the title and rewriting the date in smaller, less decorative lettering on either side of "In Congress" is unclear (apart from the full title being otherwise off-center). The whole text conveys a strong sense of symmetry. The right margin is roughly justified, with modest decorative penwork used to bring some lines fully to the right margin, and the clerk avoids breaking any words at line end. Moreover, the last line is fully justified, thus the entire text forms a perfect rectangle. Indeed, the entire document, including signatures fits neatly and proportionally within the dimensions of the parchment leaf.[20] These details provide evidence of careful arrangement and multiple attempts before a final "fair copy" was produced, especially since the clerk was working from an original text situated vertically, not horizontally, on the

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[15] Thornton 1996. For another excellent and concurring discussion of the social meanings of different hands, see Christen 2012. He describes the round hand thus (2012, 500) : "Nearly every late eighteenth-century colonial writer—shopkeeper as well as aristocrat, man as well as woman—used some form of roundhand, a relatively simple script that merged elements of both running secretary and italic. Commercial groups, however, tended toward a spare and tidy roundhand, concerned more with speed and efficiency than with beauty; less dependent on practicality, female writers across classes and aristocratic males retained as many elements of the elegant italic as possible."

[16] Conservator Simon Hopkins writes: "The lines were probably created by pressure from a round-ended or similar tool, joining the holes running up both edge margins of the document, either by a pin wheel, or possibly individually measured and perforated with a needle or pin. There was no inking, only a very light mark that, as you note, can still be visible in the margins and body of the document. The lines (made up of 1,2 or 3 parallel lines) denoting the edge of the text areas were made with iron ink, and there are no visible pin holes, or lines created by pressure from a tool, at either end of the lines." Personal communication, on file with authors.

[17] This point about the ink is based on visual examination. In collaboration with the WSRO, British Library, and Library of Congress, we will soon be conducting imaging studies of the parchment in order to develop a more refined analysis.

[18] 3rd line, right side – "se" of "these"; 10th line, left side – "ance" of "sufferance"; 5th line below middle fold, right side – "hemselves" of "themselves"; 10th line from the bottom, right side – "totally"; 4th line from the bottom, right side – "ger" of "Roger"

[19] See n. 17.

[20] We thank Timothy Whelan and David Gants for these points.

page (all possible source texts had vertical preparations).[21] The absence of word breaks as well as the effortful nature of the production of a horizontally oriented broadside on a full parchment leaf provides further evidence that the Sussex Declaration was produced for a significant, non-casual, display context.

The fact that we can assume the use of "drafts" prior to the production of this "fair copy" means that we need to understand the Sussex Declaration as the result of a two-step process: the production of a transcription from the source document and the subsequent production of an ornamental "fair copy" on parchment for display.

We have compared the handwriting of this document to that of all signers of the Declaration, all signers of the Constitution, Charles Thomson, all known clerks and assistants to the Congress, all clerks and assistants to the Department of State, facsimile engravers in the 1810s-1820s, and to Charles Lennox, 3rd Duke of Richmond. None is a match. We therefore hypothesize that the fair copy scribal work should be attributed to an as of yet unidentified clerk.

There are two further notable features of the clerk's hand on the Sussex Declaration, one having to do with punctuation and the other having to do with letter formation.

With regard to punctuation, the Sussex Declaration is strikingly characterized by a preference for visual punctuation—calling out pauses and emphases—over sense punctuation, whose purpose is to track the syntax. The parchment is characterized by a near total absence of commas, with the exception of four that appear within the list of grievances. The phrase, "pursuit of happiness," is followed by a long dash,[22] and the subsequent clause, introduced without

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[21] One might ask whether the underlying source is not the Matlack itself but a 19th century engraving with facsimiles of the signatures placed in the same order as on the Matlack parchment. There are only two candidates for this role: the 1818 Benjamin Owen Tyler engraving and the 1823 William Stone engraving. Neither the John Binns engraving, nor the William Woodruff engraving, nor the Eleazer Huntington engraving preserved the Matlack column order. As we argue below (Section 6.1-2), the Tyler is genetically related to the Sussex Declaration, as the Stone engraving is not. Moreover, the nature of the relations among the Sussex Declaration, the Tyler engraving, and a third engraving, the 1836 Bridgham engraving indicate that the Sussex is the earliest of the three texts.

[22] The dash after "pursuit of happiness" is placed on the writing line, as was often done in the period; the short dash in "self-evident" in the line above is also placed on the writing line. Every period in the Sussex Declaration is followed by capitalization of the subsequent word. The absence of subsequent capitalization, the similar placement of this mark to the dash in "self-evident," and the length of the stroke in comparison to the periods on the parchment permit identification of this mark as a dash.

capitalization, continues the sentence (Figure 4). The periods, dashes, and colons, which do mark pauses, also follow syntax, as would be expected.[23]
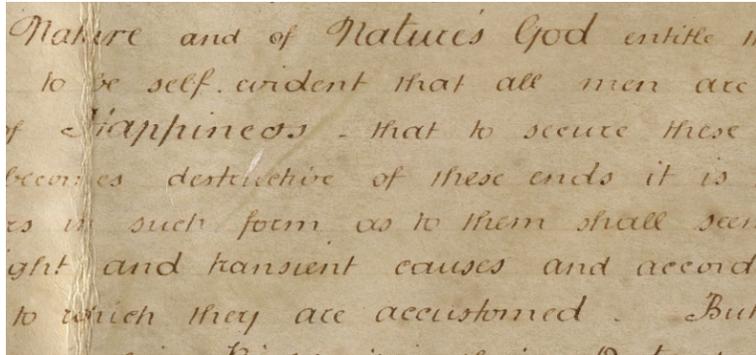

Fig. 4 Detail from Sussex Declaration, capturing dash in "self-evident," dash after "pursuit of Happiness," and period after "accustomed."

This dash after "pursuit of happiness," which appears in the first Dunlap printing and in the Matlack parchment, is one of the most unusual and distinctive features of the early tradition of publishing the Declaration, whether in manuscript or print. The fact that it was preserved in the fair copy Sussex Declaration suggests that the transcribing clerk worked from a text with punctuation. The absence of sense punctuation and presence of the "visual" punctuation of the dash therefore reinforce the interpretation that this document was prepared for display rather than for reading.[24]

With regard to letter formation, the clerk uses the tailed or long "s" in the Gothic titling for "Congreſ" but does not otherwise use it in the round hand employed for the body of the text and the list of signatories. This fact can easily lead to confusion with regard to the issue of dating. It is well known that the presence or absence of the long "s" in *printed* materials can be taken as strong evidence for dating; printed materials without the long "s" are generally

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[23] There is one exception to the use of punctuation to track syntax. In the second sentence of the Declaration, the Sussex Declaration uses a period at the end of the fourth clause, following, "consent of the governed." This leaves the clause beginning "That whenever" as a fragment.
[24] We thank David Gants for calling our attention to the distinction between sense punctuation and visual punctuation.

presumed to date to *after* 1800.[25] But what is true for print, is not true for the manuscript tradition.[26] The long "s" was abandoned by some as early as the mid-18th century but also continued in existence as late as the 1890s.[27] For manuscripts possibly dating to either the late 18th or early 19th century, the absence of a long "s" provides little information about the side of the century line on which the manuscript belongs.

For instance, as early as 1748, George Fisher, in his penmanship book, *The American Instructor: Or, Young Man's Best Companion*, could affirm that it was not "any very great abuse" to deploy the short "s" at the beginning and in the middle of words. In so doing, the *American Instructor* was cribbing from Fisher's English *Instructor*.[28] The fourth edition, published in London in 1737, includes the same passage. American editions printed in 1753, 1760, and 1770 again repeated these points, defining the difference between the long and the short "s," and indicating that using the latter was not "any very great abuse." By the edition of 1787, the explicit comment on the subject had disappeared from the book. Presumably it was no longer necessary to offer explicit guidance on the subject; this must mean that the lesson had been assimilated.[29] Indeed, by the 1770s the group of stylistic radicals who had begun to write without the long "s" included Thomas Jefferson and his teacher George Wythe. In contrast, James Madison consistently used the long "s" in the 1770s, but by 1804 he had ceased to employ it in at least some of his correspondence.[30]

With regard to an effort to date the Sussex Declaration, the most important feature of the hand used by the clerk who engrossed the Sussex Declaration is the fine example the parchment provides of the non-cursive mercantile round hand. That was a dominant American and English hand in the late 18th century, whether with or without a long "s." It would give way in the 19th

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[25] For a good review of the relationship between the print and manuscript histories with regard to the disappearance of the long-s, see Fens-De Zeeuw and Straaijer 2012.

[26] See Fens-De Zeeuw and Straaijer (2012, p. 332) for instances of this pattern in the 18th century manuscript tradition. The transition away from it was abrupt for printed materials (Fens-De Zeeuw and Straaijer 2012, p. 322). Fens-De Zeeuw and Straaijer 2012, p. 323: "In a sample of books published in London at the very start of the nineteenth century, the use of <ſ> dropped from 90 per cent in 1800 to less than 25 per cent in 1801 (Nash 2001: 9–10)."

[27] See Fens-De Zeeuw and Straaijer (2012, p. 333-334) for a discussion of the long extension into the 19th century in the U.S. of the use of the long-s, with evidence taken from a "Corpus of Nineteenth-Century Informal American Family Letters" assembled by Bas van Elburg.

[28] Our thanks to Tamara Thornton for pointing out the precedent in the English edition.

[29] Fisher 1748, pp. 6-7.

[30] Communication from James McClure, editor, Jefferson Papers, to authors, on file with authors.

century to various forms of cursive, which became increasingly looping and flowing as the century progressed. The hand seen on the Sussex Declaration is anticipated in several pages (pp. 116, 130, 189) of Bickham's 1731 *Universal Penman*, which was, alongside *The American Instructor*, the dominant resource for writing instruction in both England and the colonies in the 18th century. Its particularly distinctive features are the "t"s without curvature and minimal looping in general.

In sum, the business-like mercantile round hand and symmetric but simple decorative penwork on the Sussex Declaration support a late 18th century dating for this parchment.

4. Description of Style: Document Genre

Four stylistic features of the Sussex Declaration indicate that the Sussex Declaration derives its formal features from the textual genre of legal documents, most importantly property deeds and delegate credentials. The parchment is styled with a distinctive use of parallel ruled lines along all four edges of the parchment, which cross in the corners forming squares. (See Figure 1.) The large, centered title is characterized by decorative penwork. (See Figure 1.) In addition, several words in the parchment are emphasized by being written in a larger size with thicker pen strokes and more ink. (See Figures 4 and 5.) Finally, as we have seen, the parchment is prepared horizontally, not vertically. As with the use of the round hand, this set of formal features — the marginal ruling, the penwork on the titling, the use of emphasis, and the horizontal orientation— locates the parchment in the American legal context of the 1770s and 1780s.
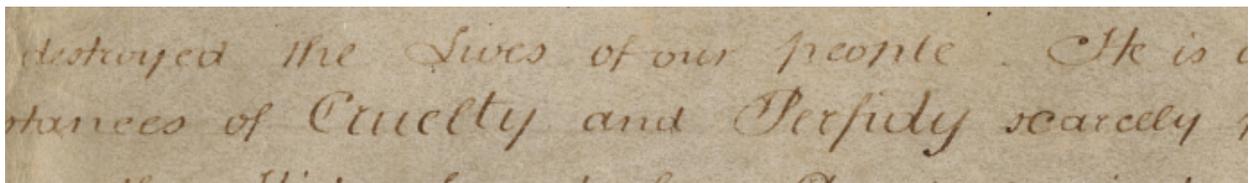

Fig. 5 Detail from Sussex Declaration

Three other types of parchment document employed precisely this set of formal features: (1) property deeds produced in Britain, from the middle of the 17th century onward; (2) property

deeds produced in the colonies and the new United States from the middle of the 18th century onward; and (3) credentials for delegates to Congress from Massachusetts, New Hampshire, New York, and New Jersey produced between 1780 and 1790. (For an example of a 1784 New York delegate credential, please see Figure 6.[31])
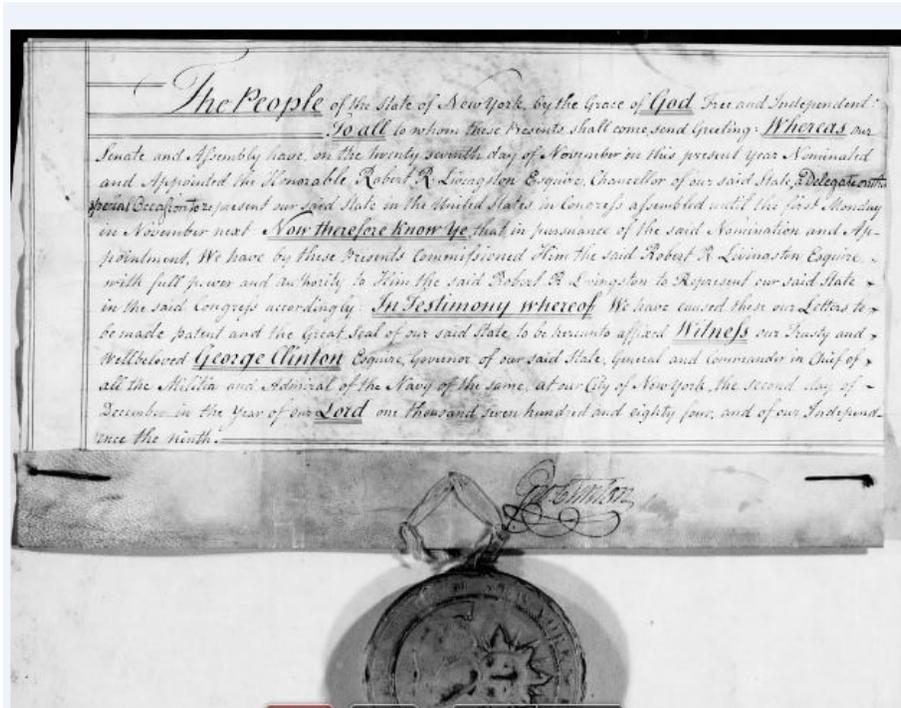

Fig. 6 Credentials of Robert R. Livingston as delegate from New York, signed by George Clinton, 1784

These four states drew on the pre-existing tradition of property deeds to develop the formal features of their delegate credentials. The documentary context for securing property rights appears to have provided the aesthetic forms necessary to imbue new state documents with legitimacy.

Importantly, and unsurprisingly, the British tradition of property deeds and the American traditions of deeds and credentials diverge in the period leading up to the American Revolution. Documents from each tradition continue to have a family resemblance to one another but there

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[31] Examples of the other categories of documents can be found on the Declaration Resources Project website (http://declaration.fas.harvard.edu/resources/)

are also clear differences. Those differences concern ink and titling, and they permit us to distinguish British and American variants within the tradition.

Beginning in the middle of the 18th century, British deeds began to make regular use of red ink for the ruled parallel lines (See Figure 7) while American property deeds almost never used red ink.[32] Indeed, rubrication in printed material was quite rare in the American colonies in the 18th century because of the difficulty of securing and producing red inks (Goff, 1969), and it appears also to have been rare on manuscripts.[33] The Sussex Declaration has no rubrication.
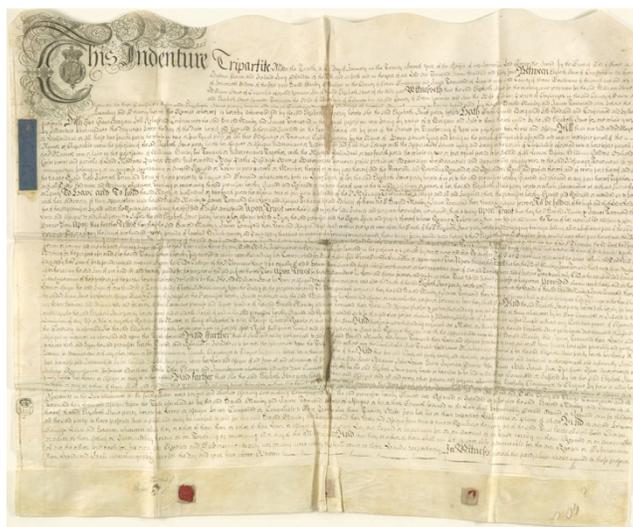

Fig. 7 British Indenture, 1754; the ruled lines were penned in red ink.

The second divergence between the British and American traditions concerns titling. British property deeds align the deed title with the left-hand margin, as in Figures 7 and 9. Some American deeds and credentials did use left-justified titling, but by the 1790s they often employed centered titling, as in Figure 8. The Sussex Declaration also employs centered titling.

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[32] Notable exceptions are documents produced on behalf of the Penn family by the Pennsylvania Land Office between 1760 and 1776. See Declaration Resources Project website (http://declaration.fas.harvard.edu/resources/) for images.

[33] Among the credentials for delegates, only the New York examples use red ink for the ruled parallel lines, and the ink appears to have been some sort of home-brewed substitute for the bright British scarlet ink. See Declaration Resources Project website (http://declaration.fas.harvard.edu/resources/).
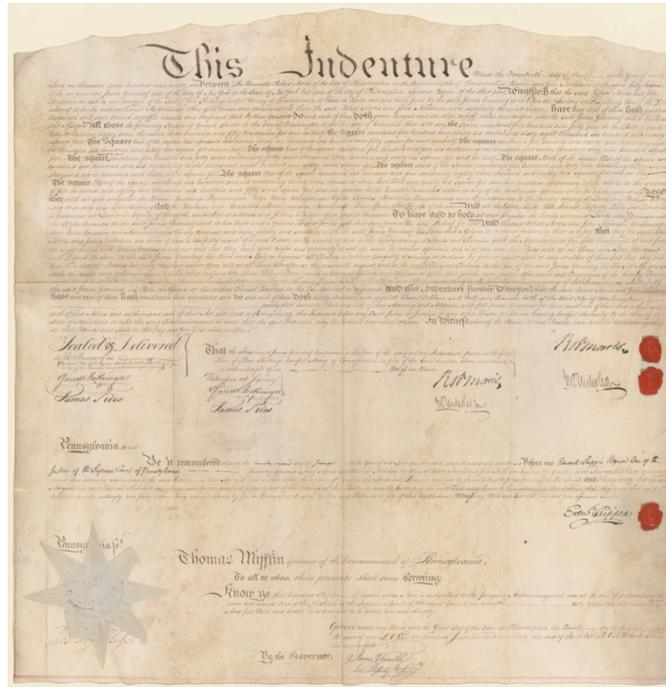
Fig. 8 American Indenture, 1796

The most important divergence, however, concerns the use of decorative penwork around the document title. British property deeds employ decorative penwork around the title from the 1760s. This stylistic feature does not, however, transfer into the American tradition of property indentures, which maintain plain titling throughout the 18th century. Congressional credentials do, however, adopt the practice of employing decorative penwork around the document title. The earliest American parchment document that we have found employing such penwork is John Jay's credential document for the Continental Congress in 1778. (See Figure 9.)[34] By comparing the highly decorated initial "T" of both the British indenture and the Jay document, one can see that the style of Jay's credentials imitates the decorative British titling. Despite the clear stylistic connection between Jay's credential document and the British property deeds, however, the two traditions, divided by the Atlantic and war, soon diverged. In the 1770s and 1780s, American penwork in these sorts of documents became less elaborate and tended more often to be symmetrical, while the British penwork continued to deploy asymmetry and a higher degree of

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[34] Massachusetts delegates' credentials from the 1780s also have this element of decorative titling, as do documents produced by the Bank of North America and by the North American Land Company.

elaboration.[35] The Sussex Declaration employs a simple, symmetrical style for its penwork (Figure 10).
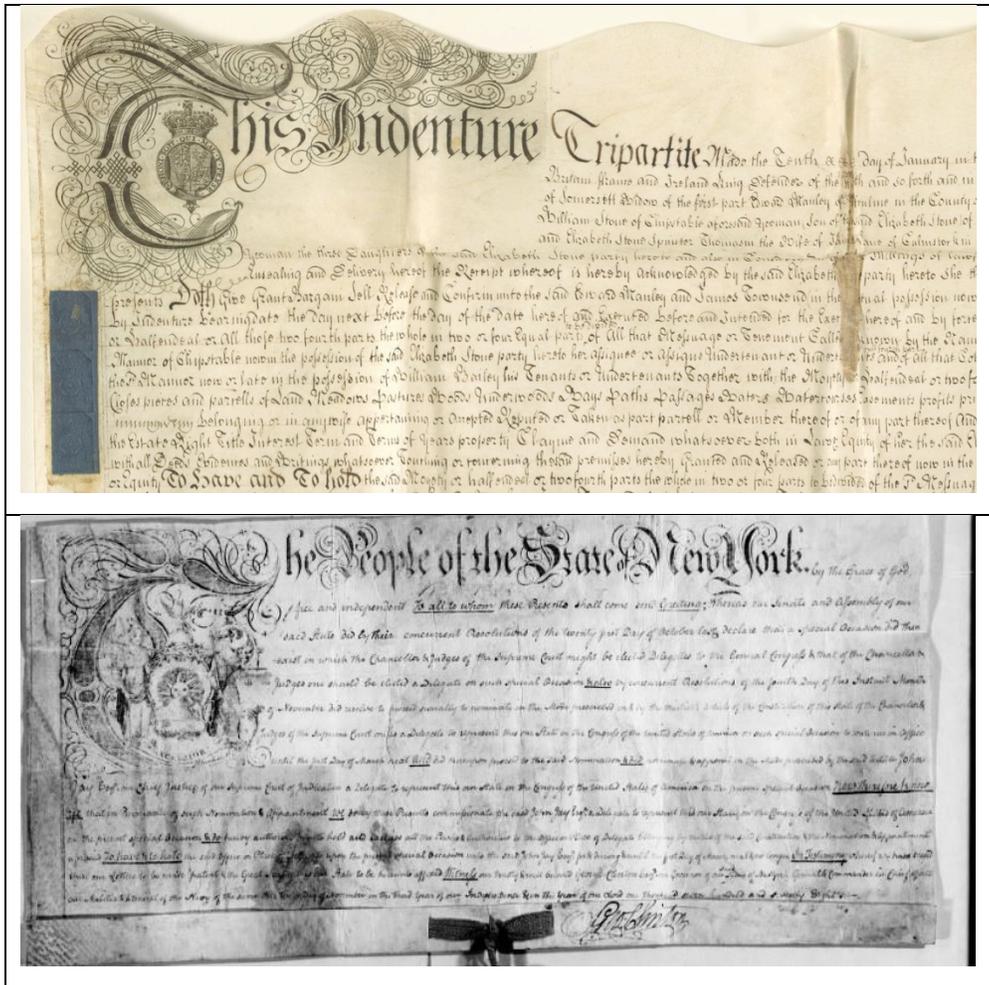
Fig. 9 Comparison of titling penwork between British Indenture, 1754 (see Figure 7) and Credentials of John Jay as a delegate, New York General Assembly, 1778

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[35] For images and examples, see Declaration Resources Project website (http://declaration.fas.harvard.edu/resources/).

Fig. 10 Detail from Sussex Declaration

In sum, the Sussex Declaration's styling belongs to the tradition of American legal and mercantile documents from the 1770s and 1780s. Like the New York credentials, the Sussex Declaration draws on the pre-existing tradition of British, colonial, and American property indentures for the formatting of the document in landscape orientation with ruled parallel lines to define the margins. The Sussex Declaration, however, in its use of relatively simple and symmetrical decorative penwork around the titling, belongs to the tradition of American state documents that developed in the 1770s and 1780s. For instance, the titling styling of the Sussex Declaration bears an especially strong resemblance to the titling for the Charter of the Bank of North America, produced in 1781 (See Figure 11). These formal, aesthetic details align with a dating from the use of the mercantile round hand to the late 18th century.
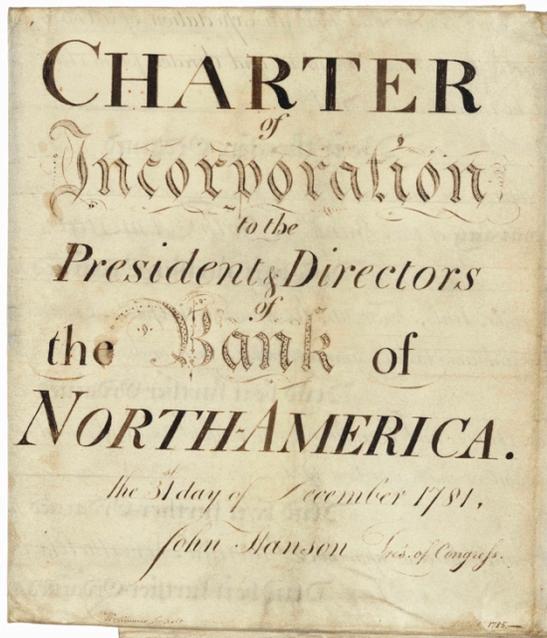

Fig. 11 Charter of the Bank of North America, 1781.

5. Treatment of the Signatories: The Key to Identifying the Source of the Parchment

The preparation of the parchment, including the nail holes; the clerk's hand; and the document styling all suggest a late 18th century date for the Sussex Declaration. It is the treatment of the names of signatories, however, that permits us to identify the source for the parchment. Three features of the names of the signatories are relevant: (1) several names are misspelled in errors that are plausible misreadings of the actual signatures or facsimiles of those signatures (as best seen now in the William Stone engraving); (2) the list of signatories includes Thomas McKean, who signed the Declaration sometime after January 1777, and whose name is not included on the printing that month by Baltimore printer Mary Katherine Goddard; and (3) the names have been re-ordered from their order on any possible source, and close examination reveals that the Matlack column order is the underlying source.

5.1. Misspelled Names

The first notable feature of the list of signatories is that eight of the names of signers (including signers from South Carolina, Virginia, North Carolina, Delaware, New York, and New Jersey) are misspelled. Three of these misspellings were alternative spellings (Pinn for Penn; Rutlidge for Rutledge; Hayward for Heyward), but the other five were plain errors (see Table 2). None of these five erroneous misspellings is the sorts of error that could have arisen from a printed list of correctly spelled names. Each is, however, a plausible misreading of an actual signature or facsimile of those signatures.

Name	Signatures on the Matlack Declaration, as represented by the William J. Stone engraving	Misspelled names on the Sussex Declaration
William Floyd		Wm. Floys
Benjamin Harrison		Benja. Harnson[36]
Thomas Heyward, Jr.		Thos. Hayward
Thomas McKean		Thos. M. Keap
John Penn		John Pinn
Edward Rutledge		Edward Rutlidge
Richard Stockton		Richd. Storkton
John Witherspoon		Jno. Witherspoare
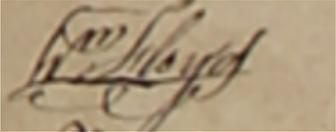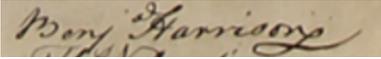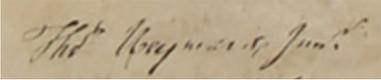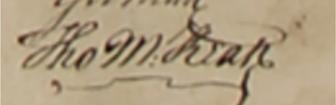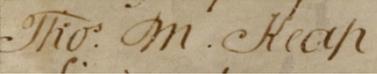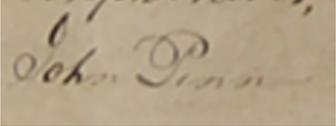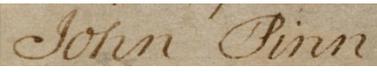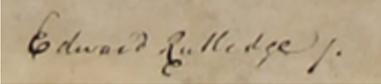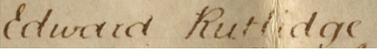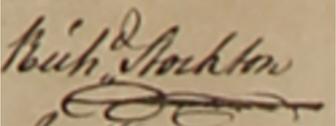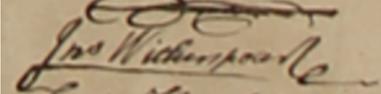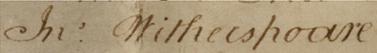
Table 2. Spelling Errors in the List of Signatories on the Sussex Declaration

These misspellings mean that the fair copy Sussex Declaration was produced not from a printed version of the list of signatories but from an error-plagued transcription of the actual signatures. Moreover, the presence of the misspellings is evidence that the transcribing and fair copy clerk for the Sussex Declaration worked without reference to a printed list of the signatories. Also, the transcribing and fair copy clerk must have been personally distant enough from Revolutionary events not to know all the names of the signatories. Since errors in the

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[36] "Harnson" for Harrison is not quite as straightforward an error as the other examples, but without the dot on the "i", and if Stone perhaps made the "rr" clearer than it might be seen on the engrossed parchment, then this too is a plausible misreading of the signature. With thanks to James McClure for this observation.

document's text were corrected as was an initial misspelling of "Roger" in "Roger Sherman's name, we have to assume that the failure to correct the signatures indicates the clerk's failure to have noticed the transcription errors. In other words, the clerk who produced the Sussex Declaration, first transcribing from a source and then generating the fair copy, worked with a deficit of knowledge about the original context of 1776. This deficit might have emerged from youth, an absence of training in the American political context, or lack of easy access to printed names of signatories.

While the Goddard printing did make the list of signatories available in 1777, her list was in printed form and would not have generated the sorts of errors that we see on the Matlack Declaration. The first facsimiles of the signatures were produced only in 1818, so in the late 18th century, the Matlack Declaration was the only available source that could explain errors of the kind that we see on the Sussex Declaration. Also, for first names, the Sussex Declaration uses precisely the abbreviations that were used on the Matlack Declaration, despite many possible variants for such abbreviations being available. These details on the list of signatories on the Sussex Declaration provide strong evidence that either the Matlack Declaration itself or a 19th century facsimile was the source for the Sussex Declaration. (We will address the issue of the 19th century facsimiles in section 6. At present, we are concerned mainly to show that in the 18th century, the Matlack parchment itself was the only possible source for the Sussex Declaration.)

Before we move on to the next feature of the treatment of the signatories, there is one further piece of evidence to be gleaned from the spelling errors themselves. The multiple spelling errors in the list of signatories on the Sussex Declaration strongly suggest that the parchment was prepared before the tradition of the names had been stabilized.

Between 1776 and 1810, we can identify four periods in the American print tradition for representing the signatories, each of which roughly coincides with a decade. From 1777 to 1779, there were only seven book, newspaper, or periodical printings of the Declaration that included the list of signatories. These included three reprints of the official journals of Congress. Among the seven texts, there were four errors in spellings of the surnames of signatories ("Shearman" for "Sherman", "Clarke" for "Clark," "Chace" for "Chase," and "Flood" for "Floyd"); three of these might be understood as alternative spellings. Beginning in 1780, however, as printings moved beyond the oversight of Congress, alternative spellings and more frequent error began to creep in. Between 1780 and 1802, eight acceptable, alternative spellings entered the tradition.

For instance, "Carrol" for "Carroll" appears ten times; "Gwinnet," "Gwinett," or "Gwinet" for "Gwinnett" also appears ten times. Alongside the use of alternative spellings, we also see occasional singleton errors, for instance, "Case" for "Chase" in a 1784 printing. In other words, the textual tradition of reproducing the list of signatories shows instability in the 1780s.[37]

In contrast, in the period following efforts to authenticate and stabilize the tradition, detailed below, we see some diminishment in the rate of error in the reproduction of the names of signatories. Of course, our sample size is small, so our evidence is at best suggestive. Nonetheless, the period of the 1790s does have a lower rate of variance than the decade before it or after it.[38] Moreover, the particular sorts of spelling errors that appear on the Sussex Declaration are all consistent with those that occur in the 1780s and are unlikely to have appeared after about 1800.[39] The evidence from the treatment of the signatories aligns with the evidence from the clerk's mercantile hand and from the formal features of the document to support a dating to the 1780s.

5.2. The Presence of Thomas McKean's Name

The second notable feature of the list of signatories as found on the Sussex Declaration is the presence of Thomas McKean's name. In January of 1777, Continental Congress, then in Baltimore, commissioned Mary Katherine Goddard, a printer in the city, to produce a broadside text of the Declaration and its list of signatories for the archives of each state. McKean's name is absent from this text and first appears in a print version of the Declaration in *The Acts of the*

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[37] In the 1780s, the thirteen printings yield five errors in spellings of the names and ten usages of alternative spellings; these errors or alternatives are present in seven of the printings, just more than half.

[38] After 1800, the total number of printings and reprintings increased, and with this variance increased as well.

[39] Where do the errors on the Sussex Declaration fit in relation to this pattern? Three of the errors on the Sussex Declaration count as alternative spellings (Pinn for Penn; Rutlidge for Rutledge; Hayward for Heyward). Alternative spellings for the first and third of this entered the tradition in the 1790s, with "Hayward" entering in 1794. The other five misspellings on the Sussex Declaration are all singletons: Floys, Harnson, Keap, Storkton, and Witherspoare. Floyd, Harrison, and Stockton are misspelled nowhere else. Witherspoon is misspelled in two other texts (as Wetherspoon and Wotherspoon in 1785 and 1802). After 1802, no one misspells Witherspoon. Finally, Keap is adopted as a street name in Brooklyn, alongside streets named after other signers of the Declaration, and appears with that name on maps in 1835. The 1835 Brooklyn street names also included the misspelled "Gwinette Street," named after Button Gwinnett, the singer whose name appeared most frequently in an alternative spelling. In sum, The Sussex Declaration belongs to a period when two things were true: first, it was still possible to misspell Witherspoon's distinctive name; and, second, it was possible for a relatively high rate of error to pass without correction. Both things were true only in the 1780s.

General Assembly of the Commonwealth of Pennsylvania, published by Francis Bailey in 1782.[40] It is therefore commonly assumed that Thomas McKean did not sign the Declaration of Independence in August 1776, and may have signed as late as 1781. The inclusion of McKean's name on the Sussex Declaration means that it dates after January 1777.

Interestingly, Bailey's 1782 printing did not stabilize the tradition for the representation in print of the names of the signers. This did not occur until 1791-93, watershed years. In 1791 Congress made its original "rolls" available to printers for consultation, Childs and Swaine printed a version with McKean's name in the correct order in 1791, indicating that they had checked the original rolls, and in 1793 John Dunlap, the Declaration's first printer in 1776, visited the State Department archives to determine once and for all what the list of signatories should be. He helpfully appended this note to his 1793 newspaper printing:

> In several former publications of the declaration of Independence, the list of names was taken from *the Journals of the House of Representatives of the Commonwealth of Pennsylvania Vol I.* wherein there appears to have been a material omission in the *list of names*, by leaving out that of *Thomas McKean*, our present Chief Justice of the State of Pennsylvania. In order to prevent any further misrepresentation on that head, we have searched for the *Original Instrument* in the office of the Secretary of State for the United States, and there found *Mr. McKean's* name amongst the signers to that great and glorious Record! We now give the list of names from the original parchment.

The confusion surrounding the list of signatories is important because it underscores that in the period from 1777 to 1793 the tradition for representing the Declaration of Independence, and in particular, the list of signatories, had not yet stabilized.

The inclusion of McKean's name on the Sussex Declaration is further evidence that the Sussex Declaration did not rely on the Goddard printing as its source for the list of signatories.

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[40] The Bailey publication cannot, however, serve as a date certain *ante quem* McKean must have signed because Bailey prints the Delaware names, which include McKean, in a different order from their ordering on the parchment. Bailey did not, in other words, check the parchment to determine the order of his printing. McKean was supervising Bailey's printing, and Bailey may merely have added McKean's name to his printing at McKean's say-so.

From the 18th century, the Matlack Declaration is the only plausible source for the Sussex Declaration.

5.3. The Ordering of the Names of the Signatories

The final notable feature of the list of signatories, and indeed the single most anomalous and most important feature of the Sussex Declaration, is the order in which the names of signatories appear. They are ordered differently than on the Matlack Declaration, the Goddard Declaration, or any other version of the text, with the exception of the miniature 1836 L. H. Bridgham engraving, which renders the text of the Declaration in a mere 3" x 3" and will be discussed below.

As Benjamin Irvin (2011) has argued, the early Americans who served in the Continental Congress gave significant attention to even the smallest details of procedure. This care carried all the way through to procedures for signing governmental documents, procedures that were invested with meaning. For instance, the Constitutional Convention closed with a debate, on September 15 and 17, 1787, about whether and how the participants in that Convention should sign the document they were about to submit to Congress.[41] The question raised by figures like Benjamin Franklin and the three men who did not sign the Constitution, George Mason, Elbridge Gerry, and Edmond Randolph, was whether the signatures would represent each signer's individual view, or only the view of his state delegation.

The importance to the textual tradition of how documents like the Declaration were signed has been overlooked by historians and textual scholars alike, but is of great significance. In the Revolutionary era, beginning with Congress' earliest resolutions and declarations, for instance the 1774 Articles of Association and the 1775 Olive Branch Petition, delegates to Congress signed resolutions as members of their colony/state delegations, proceeding geographically from north to south. Representatives from New Hampshire signed first; those from Georgia, last. They generally ordered those names either vertically (running from New Hampshire to Georgia) or horizontally, with the names running from left to right (New

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[41]Farrand, Volume 2, pp. 623-633. On Saturday September 15, Daniel Carroll of Maryland raised the question of how the Constitution should be presented to Congress and the people and asked whether there should, for instance, be an address given that "the people had been accustomed to such on great occasions, and would expect it on this."

Hampshire in the top left; Georgia in the bottom right). Clerks or delegates, depending on the document, also wrote out the name of the home state beside the group of names belonging to each delegation. Printers followed this procedure as well (a vertical or left-to-right order of the colonies/states, listed north to south, with state names labeled for each group of names).

Delegates made exceptions to this procedure on only four occasions, all of heightened political significance. Those exceptions were the signings of the 1775 Oath of Secrecy, the 1776 Declaration of Independence, the 1778 Articles of Confederation, and the 1787 United States Constitution. In all four of these cases, the delegates to Congress signed not left to right but right to left. Moreover, in two cases, the Oath of Secrecy and the Declaration of Independence, the signers omitted the use of state names. The visual effect, especially in the latter two cases, is to reduce the salience of the state groupings and place the emphasis on the individual names.

Compare (Figure 12) the signatures on the Articles of Association to those on the Declaration of Independence (Figure 13):

Fig. 12 Detail from Articles of Association, 1774
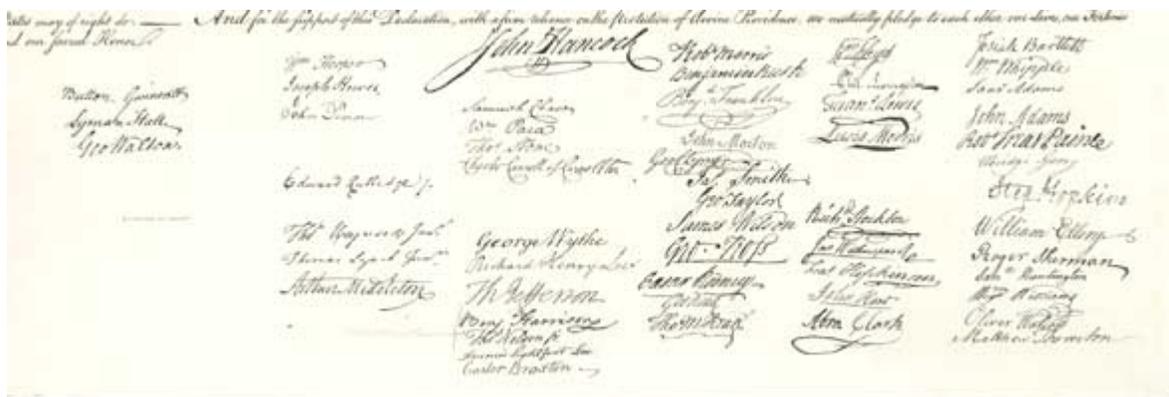
Fig. 13 Detail from William J. Stone engraving of Declaration of Independence, 1823

We can confirm that the unusual pattern used for signing the Declaration escaped the notice of its contemporary readers who were used to reading from left to right. As we have seen, the first publisher to reproduce the list of the Declaration's signatories was Mary Katherine Goddard. In printing the names for her 1777 broadside (see Section 5.1), she or an assistant read the signatures on the Matlack Declaration from left to right. The result was a signatory list with the state-groups in the following geographically non-contiguous order, from top left to bottom right: Georgia, North Carolina, South Carolina, Maryland, Virginia, Pennsylvania, Delaware, New York, New Jersey, New Hampshire, Massachusetts Bay, Rhode Island, Connecticut (see Figure 14; compare to Figure 13).[42] The signing order on the Matlack parchment was not transparent to Goddard or her assistant. As a result, and contrary to tradition, they jumbled the north to south order. This confirms that the signing method used on the Matlack Declaration served to unsettle the developing routinization of state-by-state thinking. Although Goddard misread the signing order of the Declaration, the practice of reading signatory lists as groups of states rather than as sets of individuals was sufficiently entrenched that, in her printing, she re-introduced the conventional state name labels that the Matlack Declaration had conspicuously left off. The Matlack signing order partially, but only partially, destabilized the state-by-state based signing practice.

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[42] Goddard's order was copied by printings in 1777 by John Carter, John Dunlap, and Frederick Green and in 1780 by Zechariah Fowle. Thereafter the tradition settled into the correct order, beginning with New Hampshire and ending with Georgia.
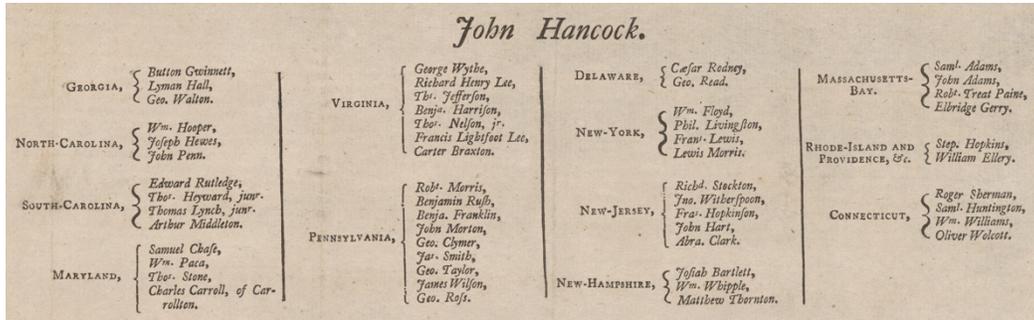
Fig. 14 Detail from Goddard broadside, showing mis-ordering of the Declaration's signatories and the re-introduction of the state labels

Against the backdrop of the standard signing conventions, and their modification on the Matlack Declaration, the most anomalous feature of the Sussex Declaration takes on great significance. In contrast to all of the other versions of the Declaration produced through 1836, in manuscript or print form, on which the names of signatories appear, only the Sussex Declaration and the 1836 miniature Bridgham engraving dispense entirely with state-by-state groupings of the signatories. On the Sussex Declaration (see Figure 15), the names are written on seven horizontal lines, rather than in columns, and the names of signatures are not grouped by state.


Fig. 15 Detail of List of Signatories from Sussex Declaration

What are we to make of this feature of the Sussex Declaration? At first glance, the names on the Sussex Declaration seem not to be ordered by any principle at all. They are not ordered alphabetically, by rank or status, by age or years of service, by wealth, by public prominence, or by role in Congress. Upon a closer examination, however, a hidden ordering principle reveals itself. To understand it, some background on the use of codes and ciphers in the Revolutionary period will be helpful.

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Throughout the Revolutionary War, members of Continental Congress and their clerks avidly employed ciphers and codes to thwart interception of their correspondence.[43] Indeed Congress passed a resolution recommending the practice. A correspondent would begin with the "plaintext," he wished to send and, using a cipher or code word list or key, he would "encipher" or "encode" it so that its meaning could not be discerned by anyone who did not have the key to the cipher or code. A cipher was an alternative alphabet used to scramble and obscure the words of a message whereas a code was a set of substitute words and names used in place of the intended word or name. John Jay was a prodigious producer of ciphers. An extremely simple one that he produced in 1780 was the following:

```
a b c d e f g h i j k l m n o p q r s t u v w x y z
L M N O P Q R S T U V W X Y Z A B C D E F G H I J K
```

With this cipher, the word, "apple," would be written "LAAWP," for instance. [44] Using such a key the recipient of an enciphered or encoded text would "decipher" or "decode" it to restore it to its plaintext state. While 18th century Americans used the term "cipher" to refer both to ciphers and to codes, the techniques are distinct. Both played a role during the American Revolution. While ciphers dominated throughout the 1780s, by the 1780s, codes largely transplanted them.

Ciphers could, of course, be more complex than the simple example presented above. Transposition was a common technique used to make the scrambling pattern harder to discern. For instance, Jay produced the following transposition ciphers in 1779 and 1781 respectively[45]:

```
a b c d e f g h i j k l m n o p q r s t u v w x y z
5 6 7 11 13 8 9 10 12 14 16 19 22 1 2 3 4 15 23 25 26 24 20 21 18 17
```

```
a b c d e f g h i j k l m n o p q r s t u v w x y z
N M L K I H F I E D C B A L Y V X T U R P W S Z O Y
```

[43] The material in this discussion of ciphers and codes in the American Revolution comes from Weber 2011 [1979].
[44] This cipher and the subsequent two examples are from Weber 2011 [1979], p. 37.
[45] Id.

In both these cases, Jay uses transposition to generate an alternative alphabet that is less closely related to the underlying, "plaintext" alphabet than is the case of the first, simple alternative alphabet presented above.

Another common method of building a code in this period was the use of "book codes," often a dictionary. Two correspondents would identify a book to which each had access, and then use page numbers, column numbers, and line numbers, which identified specific words, to encode those words in a given message. (In other words, the number for page, column, and line would replace the target plaintext word.) A common feature of using book codes involved taking the trouble to select words from different columns, again in order to increase the degree of scrambling from an original order. In other words, clerks were practiced in using techniques of transposition and of mixing words from different source columns as a basis for obscuring an underlying plaintext alphabet.

The use of ciphers and codes was not limited, of course, to common nouns but also used for proper nouns, including the names of states. Jay, once again, provides an interesting example. In order to obscure his reference to the names of specific states, he provided the following nomenclature[46]:

New Hampshire	XIV
Massachusetts	XVI
Rhode Island	XVIII
Connecticut	XIX
N York	XXII
N Jersey	XXIV
Pennsylvania	XXVI
Delaware	XXVIII
Maryland	XXX
Virginia	XXXII
N Carolina	XXXIV
S. Carolina	XXXVI
Georgia	XXXVIII

There were, famously, thirteen states, and so Jay's technique for obscuring the likelihood that numbers in his letters would be interpreted as the names of particular states is to begin his count

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[46] Weber 2011 [1979] p. 51.

from fourteen, and to proceed by twos. The traditional state "alphabet" (running from New Hampshire to Georgia, and from one to thirteen) does, however, persist in this code, insofar as Jay maintains an ordinal ranking of the states (from no. 14 to no. 38), as he proceeds from north to south.

These common techniques of ciphering explain what the clerk of the Sussex Declaration did to the list of signatories. The clerk began with a plaintext "state alphabet": a list of names presented in state groupings, north to south. To obscure the plaintext "state alphabet" used on the Matlack Declaration, he then used a combination of two techniques commonly used in ciphers: selection from alternating columns and transposition. Indeed, in obscuring the traditional "state alphabet" the clerk of the Sussex Declaration goes a step farther than Jay and eradicates the north-to-south ordinal ranking of the states. [47]

To produce this list of signatories, the clerk began, correctly, by copying names from the far right hand column of the Matlack Declaration, column six, containing the northernmost states.[48] He transcribes two names: William Williams from Rhode Island and Robert Treat Paine from Massachusetts. Then he transcribes one name from column four (George Read from Delaware), then Hancock's name (centered above all six columns on Matlack but geographically linked to column six), and then another name from column four (Robert Morris from Pennsylvania). Then he transcribes two more names from column six (John Adams from Massachusetts and Oliver Wolcott from Rhode Island). Then he takes a name each from columns two, five, and three. Then we get four more names from column six. In other words, the clerk is breaking up the geographically proximate names in column six by interspersing names from other columns. The result is small clusters of names from one column (namely, column six), separated by isolated names from other columns.

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[47] The Revolutionaries famously wrote in code to one another during the war; scrambling was one of the key elements of their cryptographic technique. Interestingly, among the intellectual elites working in Philadelphia in the late 18th century was a mathematician named Robert Patterson, who was appointed as Penn's first professor of mathematics in 1779, a position that he held until 1814. In 1801, while serving as the vice-president of the American Philosophical Society, he wrote to the Society's President, Thomas Jefferson, claiming to have invented an impenetrable code. He included a snippet of coded text. The code was indeed difficult, and was not cracked until another mathematician gave it a try two hundred years later. In 2009 Lawren Smithline decoded the text that had been secret for 200 years. He found that Patterson had sent Jefferson the first two paragraphs of the Declaration of Independence. See Smithline 2009.

[48] The long-standing convention has been to number the columns from left to right, even though the signers signed from right to left.

Starting correctly from the right-hand side of the Matlack signatory list, the clerk's method is to select one column as his main transcription source, but to intersperse isolated names from other columns to break up the state-by-state ordering, just as in using a book code, clerks selected from multiple columns to obscure the pattern of the plaintext. After using most of the names from column six (which contains New Hampshire, Massachusetts, and Connecticut), he switches to using column three (Maryland and Virginia) as his main source, an act of transposition, since he is putting this column ahead of the ones that come before it in the ordinal state alphabet. As he works his way through column three, he continues to use one, or at most two, names at a time from column four to break up the names from column three. Only after he's gotten through the names in columns six and three, does he turn to the names in column five, another act of transposition. As a result of this method, on this list of signatories, column six names from New Hampshire, Massachusetts, and Connecticut are as far away as possible from the geographically proximate names from column five (New York and New Jersey). The names from column one (Georgia) and column four (Pennsylvania and Delaware) are dispersed throughout. This is a clever technique for *re-ordering* the names to eradicate the state groupings *while* transcribing from a list that used state groupings all the while *without* losing track of any individual name. No state grouping remains intact, the north to south geography of the original list of signatories is thoroughly obscured, and no name is left out.

Thus, the signatory list on the Sussex Declaration reveals the following pattern, where the numbers represent the column number of the signature's placement on the Matlack parchment:

6, 6, 4, 3 (Hancock), 4, 6, 6, 2, 5, 3,
6, 6, 6, 6, 4, 4, 1, 3, 3
3, 3, 3, 4, 3, 4, 2, 2, 2,
5, 4, 3, 3, 5, 6, 6, 2, 6,
6, 3, 6, 2, 4, 2, 4, 4, 1,
5, 4, 3, 5, 5, 5 , 5, 4, 5
1

Table 1. The Names on the Sussex Declaration as Represented by the Number of the Column in which the Original Signatures Appear on the Matlack Declaration

Although on first glance, the list of the names of the signatories on the Sussex Declaration looks as if it lacked order, the list turns out to have an order that depends on the underlying order of the state groupings. Using the techniques of "ciphering," the clerk obscured this underlying order, erasing the "plaintext" of the North to South state order. Importantly, the particular pattern of the re-ordered names appears more likely to be the result of a conscious effort to separate certain state groups than would almost assuredly have resulted from a randomly generated order. To check our analysis, we sought advice from the mathematician, Gregory Call (Amherst College), who specializes in code-breaking. He concurred that the pattern of clustering that appears on the Sussex Declaration is unlikely to have resulted from a random process. Whoever commissioned or produced this parchment ensured that the right to left, north to south geographical groupings of the original list of signatures was carefully and deliberately destroyed through common techniques of ciphering to obscure an underlying order.

More importantly, the ciphering process turns out to depend on the specific six-column order of the original Matlack parchment.[49] When one compares the order on the Sussex Declaration to the four-column order on the Goddard Declaration, no key emerges to link the Sussex order to the original plaintext.[50] The discovery of the principle by which the names on the Sussex Declaration are ordered provides a basis for confirming that the clerk of the Sussex Declaration was working from a document employing the six-column Matlack Declaration column order.

As we have seen from the material evidence, including the nail holes, from the clerk's hand and from the document styling, the Sussex Declaration is most likely to date to the 18th century. If this dating is correct, the spelling errors in the Sussex Declaration's list of signatories, the presence of McKean's name, the order given to the list of signatories, obscuring the

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[49] One might ask whether the underlying source is not the Matlack itself but a 19th century engraving with facsimiles of the signatures placed in the same order as on the Matlack parchment. See above n. 21 and below Sec 6.1-2.

[50] It's challenging to render the analysis in words but if one renders the Sussex list as a distribution of Matlack column numbers and as a distribution of Goddard column numbers, and compares the results, one can see that the relationship to the Matlack parchment reflects intentional patterning whereas the relationship to the Goddard parchment does not. On the analysis that treats the Matlack parchment as the source, some columns have been treated differently than others. Some are "anchors" (columns six and five) and others provide pretty evenly dispersed "spacers" (columns 1 and 4) while columns 2 and 3 play a hybrid role. It's not possible to discern a pattern as distinct as that on an analysis that presumes Goddard as source.

underlying "state alphabet," mean that the source text must have been the Matlack Declaration itself.

Before we can settle on this conclusion, however, we must consider whether the Sussex Declaration might derive not from the 18th century Matlack parchment but from one of the 19th century facsimiles that rendered the signatures and re-produced the Matlack column order. The centerpiece of our examination must be the little known 1836 miniature Bridgham engraving, which reproduces its list of facsimile signatures in the same order as appears on the Sussex Declaration. Indeed, the Sussex and Bridgham share all of their most important anomalies, including not only the re-ordering of the names, but also the misspellings, an anomalous bit of punctuation (a period after "consent of the governed"), and the frequent use of emphasis for specific words. Could the Sussex Declaration derive from this 1836 miniature?
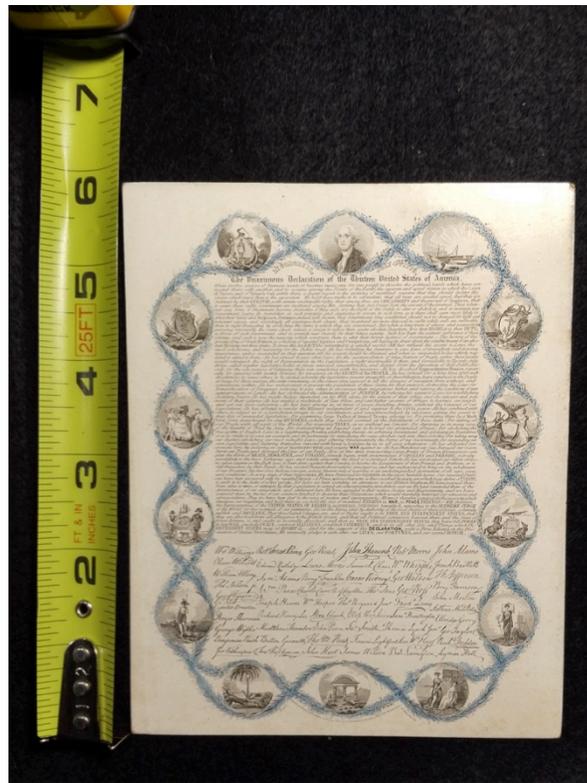

Fig. 16 L.H. Bridgham, Engraving of Declaration of Independence, 1836

6. The Relation between the Sussex Declaration and the 19th century Engravings: Establishing a Family Tree

To complete a study of the dating of the Sussex Declaration, we now need to turn to its relationship to the 19th century engravings. To understand the relationship between the Sussex Declaration and the Bridgham miniature, we must bring in a third text, the 1818 engraving by Benjamin Tyler (Figure 16). It too shares important features with the Sussex Declaration.

As we will see, the relations among these three texts make clear that the Sussex Declaration does not derive from one of the 19th century engravings with facsimile signatures. Instead, it, or another copy of the Sussex Declaration, served as a source for the Tyler and Bridgham engravings. Thanks to the relationships among the Sussex Declaration, the Tyler engraving, and the Bridgham engraving, we can rule out the possibility that the Sussex Declaration was produced from one of the 19th century engravings and finally confirm that its source was the Matlack parchment itself.

6.1 The Sussex Declaration and the Tyler Engraving

The near destruction of the Declaration of Independence during the War of 1812 inspired 19th century Americans to produce facsimiles of their founding instrument. Between 1818 and 1823, five engravers tried their hand at this: Benjamin Owen Tyler (1818); William Woodruff (1819); John Binns (1819); Eleazer Huntington (1820), and William J. Stone (1823). All five produced facsimiles of the signatures[51], and for the first time reproductions of the signatures of the men who had signed the Declaration were now available for view outside the office of the Secretary of State. Importantly, although all four engravers sought to reproduce the signatures accurately, they did not all choose to reproduce Matlack's column order. Only Tyler and Stone

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[51] John Binns began work on his engraving in 1816, but it took three years to actually produce. Just months before the engraving was complete, William Woodruff published a similar engraving, with the names of the signers in roundhand rather than facsimile signatures; Woodruff's roundhand differs from that of the Sussex Declaration. Binns filed a lawsuit against Woodruff for stealing his design, though the court ruled in Woodruff's favor, and he subsequently reissued his broadside with facsimile signatures.

did so.[52] In principle, the Sussex Declaration, which depends on that column order, might be related to either of those engravings. But an important feature of the 1818 Tyler engraving links the Sussex Declaration to it, specifically, and therefore not to the later Stone engraving from 1823.

Benjamin Owen Tyler sought to produce an accurate and authenticated copy of the original signed Declaration of Independence, including facsimiles of the signatures. He was the first engraver to produce these and wrote about his efforts extensively in his subscription book and in a pamphlet war with competing engraver, John Binns. To prepare his engraving, he sought out the original document in the Department of State, and asked Secretary of State Richard Rush[53] to review his transcription and facsimile signatures for accuracy.[54] Rush authenticated his engraving, providing a statement to the effect that Tyler's copy "has been colated [sic] with the original instrument and found correct." Rush himself reviewed only the signatures. On the latter point, he wrote: "I have myself examined the signatures to each. Those executed by Mr. Tyler are curiously exact imitations." We do not know who reviewed the transcript, but it was perhaps Josias King, the official with responsibility for tending to the document who first showed Tyler the "original instrument."

There is, however, an important, heretofore overlooked detail in Tyler's account of how he worked with the original sources. This detail complicates the picture of what his sources were. In the pamphlet defending his work, Tyler wrote: "Mine is the same size as the original, and does not vary in a point or capital letter: and the only difference from the original is, that the emphatical words are written in a more ornamental hand…"[55] Emphatical words are those called out with larger fonts, capitalization, or bolding. The oddity of this formulation is that the Matlack Declaration had, in fact, very few "emphatical words" that might be given treatment in a "more ornamental hand." Indeed, Matlack provided "emphatical" treatment only in the final paragraph of the document, and only to the words "We, therefore," "United States of America" and "Free

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[52] Thus, neither the Binns, nor Woodruff, nor Huntington engravings could have been a source for the Sussex Declaration.
[53] Interestingly, Rush was the son of Declaration of Independence signer Benjamin Rush, and grandson of signer Richard Stockton.
[54] Tyler 1818, p. 12-13.
[55] Tyler 1818, p. 6.

and Independent States." The Matlack Declaration makes use of only twelve emphaticals,[56] but Tyler employs fifty.[57] The Tyler engraving goes well beyond any use of emphaticals in the Matlack.[58] It would appear that Tyler was using an additional source text or texts, in addition to the Matlack Declaration, when he chose to render the "emphaticals" in a more ornamental hand.

In contrast to the Matlack Declaration, the Sussex Declaration employs nearly as many emphaticals as the Tyler engraving. The Sussex Declaration has forty-eight emphatical words. Tyler has fifty. Notably, there is considerable overlap among the words to which the two documents give emphatical treatment. Thirty-three of the words given emphasis on the Sussex Declaration are also emphasized in the Tyler engraving. The two texts are therefore clearly related to each other, but which was the source and which the descendant?

Stylistic details provide the first relevant body of evidence. By 1818, the mercantile round hand of the Sussex Declaration was headed out of fashion. Also, a greater degree of ornamentation for publications of the Declaration was becoming the norm. In 1819 both John Binns and William Woodruff produced engravings with images and ornaments surrounding the text, and for Tyler, who had not done so, this was a competitive threat. Moreover, interest in reproducing the Declaration now fully blended patriotic and commercial purposes, so that publishers pursued techniques of reproduction that permitted producing hundreds of saleable copies, not singleton ornamental copies, nor texts whose mode of production would limit their maximal number, in all likelihood, to little more than a handful of copies, if that. The aesthetic trajectory of these years was from the relative simplicity of the Sussex Declaration to a more ornamental style. The motivational trajectory was from the political to the commercial. The latter motivation pulled publishers toward techniques amenable to mass production, not toward the production of labor-intensive parchment manuscripts.

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[56] On the Matlack parchment, the following words and phrases are rendered in Germanic style: When; We, therefore; United States of America; Free and Independent States. The following words and phrases are rendered in larger lettering than the rest of the text: He [1st grievance]; He [14th grievance]; Representatives; in General Congress; publish; declare; Independent; And .

[57] Creator; Life; Liberty; HE; Representative houses; Rights; People; Justice; Murders; Protection; War; plundered; Burnt; Cruelty; Perfidy; Arms; Brethren; Oppressions; Redress; Petitions; Tyrant; Free; Separation; Enemies; War; Peace; Friends; We; United States of America; General congress assembled; Supreme judge; Right; Free and independent states (twice); Power; War; Peace; Alliances; Commerce; Acts; Things; Independent States; Right; And; Declaration; Divine providence; We; Lives; Fortunes; Honor

[58] Tyler's use of emphaticals also goes well beyond Goddard's treatment of the text in her 1777 broadside, another official version of the Declaration that may have been available to Tyler as he undertook his work. We know he took time to look at the "journals of the Old Congress (Tyler 1818, p. 19).
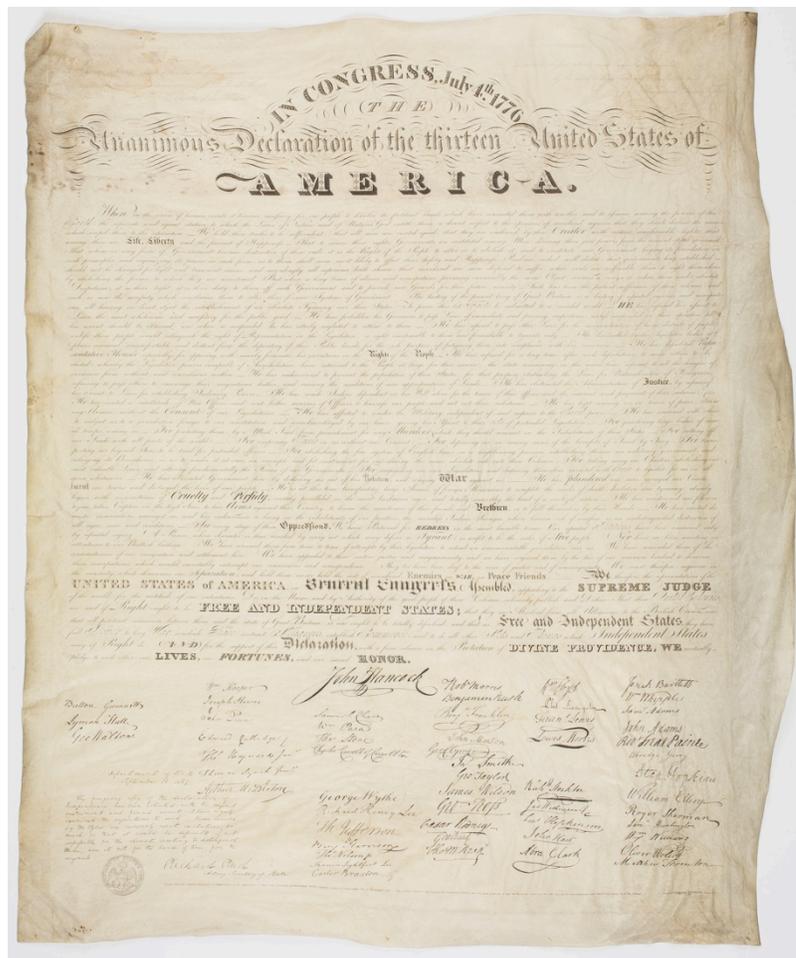
Fig. 17 Benjamin Owen Tyler, Engraving of Declaration of Independence, 1818

The second important piece of evidence is Tyler's own testimony. As he put it in his pamphlet, in his engraving "the emphatical words are written in a more ornamental hand…," more ornamental than, presumably, the styling applied to emphaticals on his source text. But as we have seen, the Matlack Declaration has few emphatically treated words. Tyler's testimony does not make sense as a commentary upon the Matlack parchment. He is not making its emphaticals more ornamental; he's greatly increasing the number of emphaticals beyond those used on the Matlack Declaration. In his comments, Tyler seems instead to be describing reliance on an additional source that gave emphatical treatment to many of the Declaration's words.[59] In

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[59] Although he says that his text does not vary in a point or capital from the original, this is not the case. For instance, he renders Matlack's "free System of English Laws in a neighboring Province" as "free system of English

other words, in addition to the Matlack Declaration, Tyler must have also relied on another document. The Sussex Declaration is not merely a plausible candidate. It is the only candidate we have. It is the one of only five texts that can reasonably be dated to earlier than 1818 that makes extensive use of emphaticals, and it is the only one to use precisely the emphaticals that we find on the Tyler Declaration.[60] To remind, thirty-three of the forty-eight emphaticals employed on the Sussex Declaration are also employed on the Tyler engraving, where the total number of emphaticals reaches fifty.

Tyler's decision to increase the degree of ornamentation used for the emphatical words conveys the aesthetic difference between the late 18th and early 19th centuries. The Sussex Declaration uses emphases in the tradition of the genre of legal documents that provided the context for its styling. The point was simply emphasis, not ornament. Tyler's use of a "more ornamental hand," in contrast, is decorative, not legal. Indeed, his style helps initiate a transition away from the legal aesthetic of the Sussex Declaration and to the ornamental aesthetic of the mid-19th century. When printed materials began to use bolded typefaces, as they did, only in the middle of the 19th century,[61] they do so for aesthetic and rhetorical purposes, not legal ones. The second engraving that is closely connected to the Sussex Declaration, the Bridgham engraving, similarly extends the trajectory toward greater ornamentation.

6.2 The Sussex Declaration and the Bridgham Engraving

L. H. Bridgham produced his engraving of the Declaration in 1836 in Boston. His stands out within the tradition because it is a miniature. The engraving's full dimensions measure 5 ¾"

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laws in a neighboring province." Nor has he perfectly replicated the Matlack punctuation, using a period, for instance, and subsequent capitalization after "consent of the governed," instead of a comma. In several of such instances, his choice follows the Sussex. Three engravings that follow Tyler chronologically—the Binns, Woodruff, and Huntington—all include the period after the consent of the governed. That period had not previously entered the print tradition.

[60] The 1780 printing by Zechariah Fowle (in *Acts and Laws of the State of New Hampshire*) does make use of emphaticals (53 instances), but he chooses to emphasize different words from those emphasized on the Sussex Declaration and Tyler engraving. Elisha Babcock's July 5, 1804, edition of *The American Mercury* italicizes multiple sentences throughout the text of the Declaration. The same is true of the texts published by Worsley and Overton in the Lexington Monitor on July 2, 1808 and July 4, 1812. The patterns of italicization do not align with the emphases on the Sussex Declaration and the Tyler engraving.

[61] Clayton 2013, p. 232.

x 4 ½"; and the actual text of the Declaration is rendered in a square of 3" x 3" (Figure 16).[62] The text and facsimile signatures are barely legible to the naked eye. The Bridgham engraving also stands out within the tradition because it alone shares a set of key features with the text of the Sussex Declaration: the anomalous ordering of the signatories, the misspellings, and the period after "consent of the governed." Indeed, the Bridgham engraving is the only printed text to share all of these features with the Sussex Declaration.[63] Also, the Bridgham engraving includes sentence internal punctuation that is missing from the Sussex Declaration.

Was the Sussex Declaration the source for the Bridgham engraving or vice versa? One must have been the source for the other. There are a few problems with suggesting that the Bridgham engraving was the source for the Sussex Declaration. It's very hard to ascertain a motive for engrossing a singleton parchment manuscript from an engraved miniature in 1836 or thereafter, when hundreds of copies of the large form Stone engraving were already in circulation. The task would have required a portable magnifier of some kind, yet book format versions of the Declaration, with lists of signatories, were plentifully available by then. Moreover, if we were to take the Bridgham as the source for the Sussex Declaration, we would be left without a source for the emphaticals in the 1818 Tyler engraving. Similarly, we would be projecting a family tree that proceeds—from Tyler to Bridgham—with an increase in the decorative details that characterized the 19th century print tradition, only to turn in a radical break to a manuscript whose style suits the 18th century. Whereas the Sussex Declaration uses forty-eight and the Tyler engraving fifty emphaticals, the Bridgham engraving has sixty-one, as well as a decorative border around the text.

If we hypothesize that the relationship goes the other way, and that the Sussex Declaration was the source for the Bridgham miniature, we have only one problem to solve: why the Bridgham miniature restored the sentence internal punctuation that is missing from the

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[62] In the case of the Sussex Declaration and Bridgham engraving, there can be no real question about the direction of influence. The idea that in 1836 anyone would choose a miniature as the source for developing a large ceremonial parchment beggars the imagination. By 1836, engraved facsimile ceremonial parchments were plentifully available for purchase. Moreover, if one simply wished to produce a manuscript copy, any number of printed texts were available from which to copy out the text of the Declaration. John Bidwell, who drew our attention to the Bridgham engraving, concurs with our assessment of the difficulty of copying from it.
[63] A close look at the Bridgham reveals that he has modified the facsimile signatures (otherwise adopted from Tyler) so that their readings are no longer ambiguous but read in the misspelled variants that we find on the Sussex Declaration.

Sussex Declaration. This, however, admits of a simple solution. The additions of the punctuation would have been the conventional corrections of a copy-editor.

Happily, a small detail on the Bridgham miniature permits us to confirm conclusively that it is a descendant of the Sussex Declaration and not the other way around. Once again, we have to pay close attention to the treatment of the signatories. In addition to miniaturizing the text of the Declaration and the list of signatories, Bridgham made another design choice that sets his text apart from the Sussex Declaration. Whereas the Sussex Declaration is oriented horizontally, the Bridgham miniature is oriented vertically. This detail permits us to ascertain which came first. A close look at the Bridgham list of signatories shows that his vertical preparation results in the placement of some of the names of signatories above and below the horizontal writing lines. The placements make it unlikely that someone copying from this text would, in fact, have ordered the names correctly. We'll have to look at this in some detail to see the point.

On the Sussex Declaration the names of the signatories are given a purely horizontal organization. There is no column structure within the list of names (Figure 15). The Sussex Declaration employs seven rows of names, where the first row contains ten names, the next four rows all contain nine, and then a final row has a surname from a name begun in the previous row and one additional full name. At first glance, the Bridgham engraving also appears to employ a horizontal organization for the names. It has what initially look like nine rows of six names each, but a closer look reveals that the names are actually organized in columns and rows simultaneously.
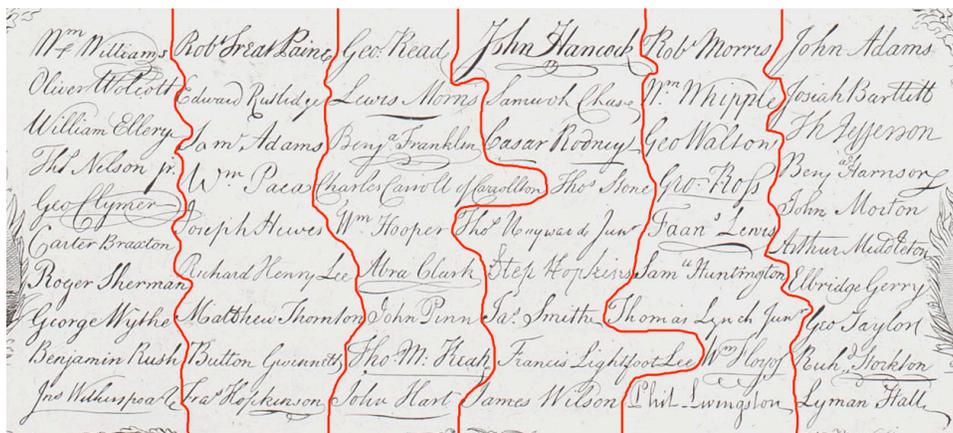
Figure 18. The Columnar Organization of Bridgham's List of Signatories

The left and right hand columns have ten names each. Each of the four internal columns has nine names, to give us the total of 56 signatories. The result of this arrangement is that, if one reads across the line, one will get quite confused in the middle of the document about the order in which to read the names.
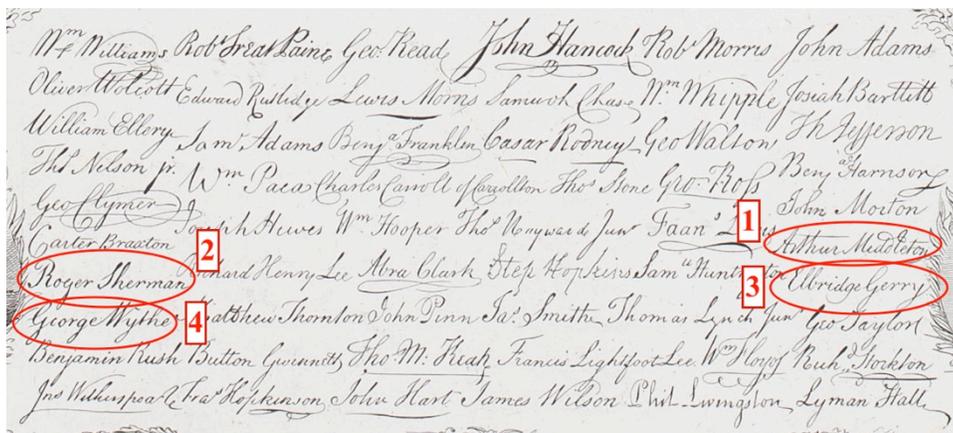

Figure 19. Signatories from Bridgham's engraving.

Indeed, in order to read the names so that they result in the order that appears on the Sussex Declaration, one has to break a conventional left-to-right reading pattern and jump back and forth between the left-most and right-most columns. To obtain the order of names as they appear on the Sussex Declaration one would have to read from Middleton to Sherman and then to Gerry and then back to Wythe, in the order indicated in Figure 20, before proceeding with Matthew Thornton.

In short, it is implausible to think that the order of the signatories, as we find it on the Sussex Declaration, could have been created by copying from the list of signatories on the Bridgham miniature. These facsimiles are remarkably small, necessitating the use of a magnifier to render them. Even more significantly, however, an effort to copy this list of signatories would have resulted in a different order of names on the Sussex Declaration than we have. We would have expected to see Roger Sherman's name followed by Richard Henry Lee, for instance. In contrast, the hypothesis that the Sussex Declaration was the source for the Bridgham miniature explains Bridgham's placements of these names. He has devised an elegant solution to harmonize the horizontal plan on the Sussex Declaration with a vertical preparation. Once again,

a close look at the signatories permits us to ascertain the order among these texts. The Sussex Declaration is the source for the Bridgham miniature, just as it is the source for the Tyler engraving.

Scholars have long noted the link between the Bridgham and the Tyler engravings.[64] Now we can deepen our understanding of that link. Both the 1818 Tyler engraving and the 1836 Bridgham engraving should be seen as descendants of the Sussex Declaration. Since the Tyler engraving was the first text to produce facsimiles of the signatures themselves, and since the Sussex Declaration precedes this text, we can now rule out the possibility that any of the 19th century engravings was the source for the Sussex Declaration. The Sussex Declaration was the source for the Tyler and the Bridgham and its own source, at an earlier point, was the Matlack Declaration.

7. Conclusion

The Sussex Declaration was produced from the Matlack Declaration and it (or a copy) was available as a source text for the 1818 Tyler engraving. Given its stylistic features, the Sussex Declaration appears to have been produced in the final quarter of the 18th century. Because Thomas McKean's name appears on the Sussex Declaration, we know that it was produced after January 1777. Because of the misspellings and alternative spellings in the list of signatories, we can reasonably assume that it was produced before the period of stabilization in the 1790s, led by John Dunlap's efforts in 1793. Given a dating of the Sussex Declaration between 1777 and, roughly, 1793, and given that it was necessarily produced from the Matlack Declaration, we can also identify the location of its origin.

Between 1777 and 1783, when the American Revolution ended, the source text, the Matlack Declaration, was in Baltimore, Philadelphia, Lancaster (PA), and York (PA). From 1783 to 1789, the Matlack Declaration resided in Princeton, Trenton, and then mainly New York. Throughout this time it was in the custody of Charles Thomson, Secretary of Congress. After 1789, custody of the Matlack Declaration was transferred to the Department of State and then-

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[64] See, for instance, Bidwell 1988.

Secretary of State Thomas Jefferson in New York before returning to Philadelphia in 1790. The Matlack Declaration moved with the federal government to Washington D.C. in 1800.

Given the mobility of Congress, and general inaccessibility of its records, during the war years from 1777 to 1783, and the need for McKean to have signed the Matlack parchment by the time the Sussex Declaration was produced, the transcription work from the Matlack is most likely to have been carried out in the years between 1783 and 1790, most likely in New York City, though possibly in Philadelphia.

Finally, we can also establish a stemma for three important texts in the tradition of reproductions of the Declaration of Independence. The Sussex Declaration descended from the Matlack Declaration, and it (or a copy) served, before disappearing from view, as a source text for both the 1818 Tyler engraving and the 1836 Bridgham engraving.[65]

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[65] The question of when the Sussex Declaration made its journey to England will be critical to understanding whether the parchment, now housed in the WSRO, was itself the actual source for these engravings, or whether a twin might also have existed. We pursue that question in a separate paper.

Figure 12. Articles of Association, 1774, detail of page 3. Articles of Association; Miscellaneous Papers of the Continental Congress, 1774-1789; Records of the Continental Congresses and the Constitutional Convention, 1765-1821, RG 360; National Archives Building, Washington, D.C. [online version available through the Archival Research Catalog (ARC identifier 6277397) at www.archives.gov; January 27, 2017].

Figure 13. William J. Stone, Engraving of Declaration of Independence, 1823, detail. Stone Engraving Image; NARA – America's Founding Documents. [Online version, https://www.archives.gov/founding-docs/downloads, National Archives and Records Administration, January 27, 2017.]

Figure 14. Mary Katharine Goddard, Broadside of Declaration of Independence, 1777, detail. Manuscripts and Archives Division, The New York Public Library. "Declaration of Independence" New York Public Library Digital Collections. Accessed January 27, 2017. http://digitalcollections.nypl.org/items/8c698e60-3afb-0133-586f-00505686d14e.

Figure 15. "Sussex Declaration", detail. West Sussex Record Office Add Mss 8981.

Figure 16. L.H. Bridgham, Miniature Engraving of Declaration of Independence, 1836. Courtesy Danielle Allen.

Figure 17. Benjamin Owen Tyler, Engraving of Declaration of Independence, 1818. Courtesy, American Antiquarian Society.

Figure 18. The Columnar Organization of Bridgham's List of Signatories

Figure 19. Signatories from Bridgham's engraving.

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