

Evolutionary Plagiarism:

Tracing Dissemination Pathways in Newspaper Reprints

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@mhbeals



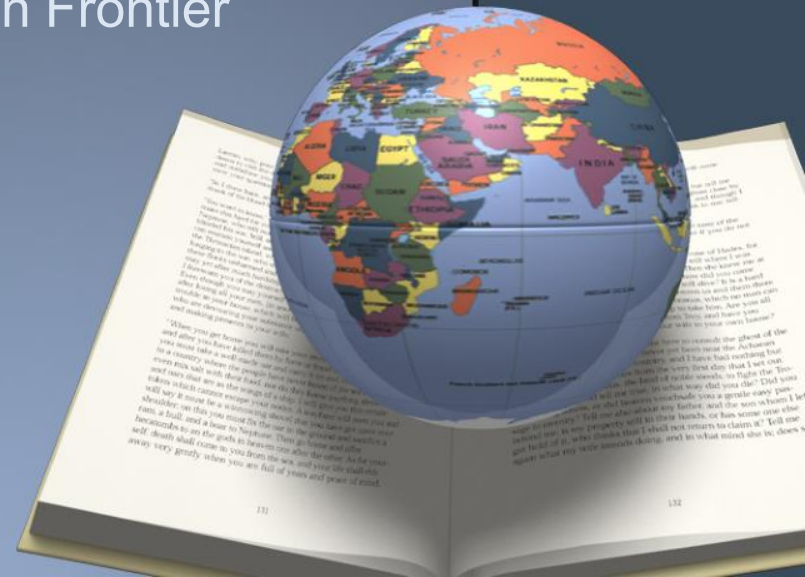
SLIDES

ABOUT ME



An Evolutionary Tale

- Scissors-and-Paste Journalism
- Human Error, Computer Error
- Constricted Pathways from Sydney to Scotland
- Irregular Pathways from the American Frontier
- A Case for Little Big Data

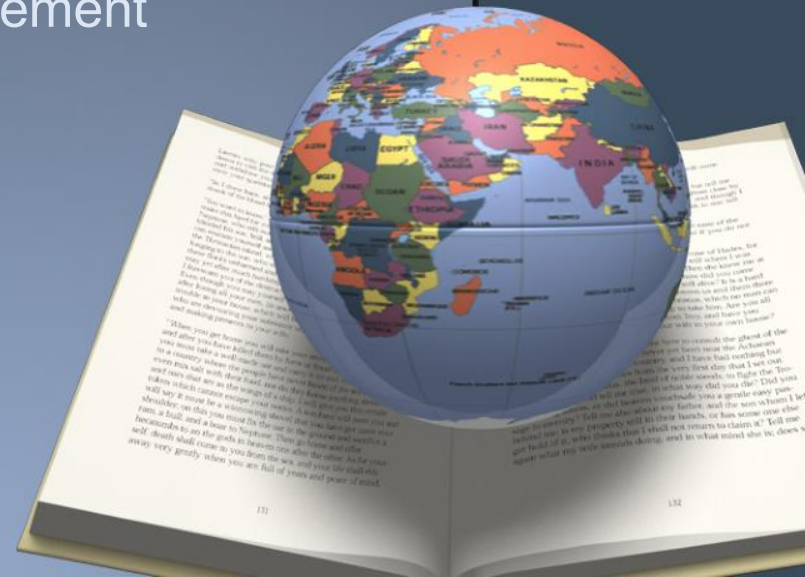




Scissors-and-Paste Journalism

Reprints in the 18th Century

- Copyright Law in the Atlantic World
- Range of Correspondence Networks
- Means of Transmission of News Content
- Acceptance, Appreciation, Encouragement

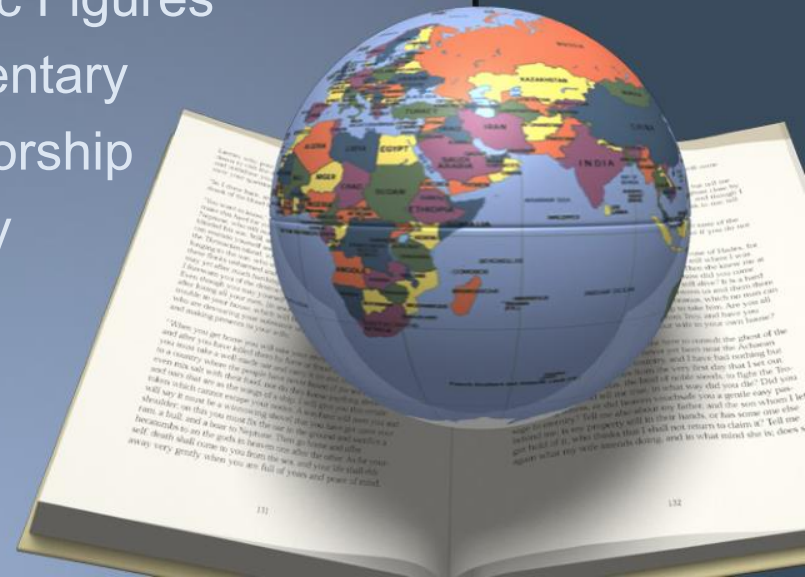




Human Error, Computer Error

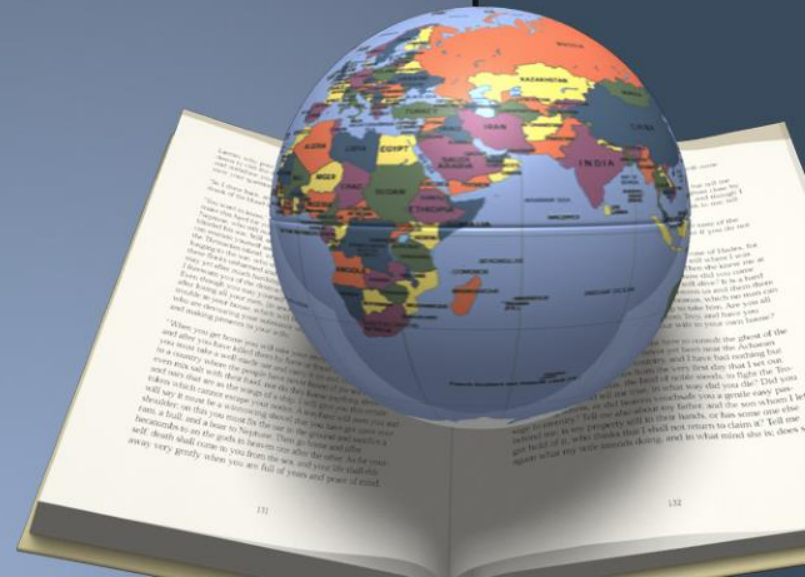
Anonymity...

- Structure of the Printing Trade
 - Brainy Working-Class Boys
 - Patronage and Formal Correspondence
 - Local Gossip and Personal Correspondence
- The By-Line a post-1850 Convention
 - Limited, Even (Especially) by Public Figures
 - Latinised Pseudonyms For Commentary
 - News Largely Detached from Authorship
 - Assured, but Anonymous, Authority



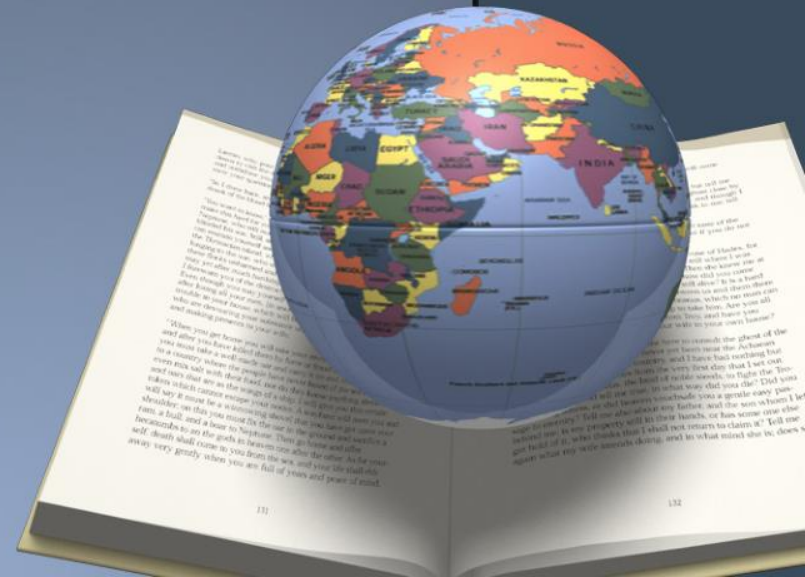
...and Historiography

- "Killer Quotations"
- Conflation of Editor, Author, and Location
- Limited Time and Resources
- Local Archives and Digital Archives
- Tua Culpa, Mea Culpa



...and the Digital Humanities

- 'Viral Texts' Project
- Inaccessible OCR Data: Solvable!
- Incompatible OCR Data: Solvable!
- Messy OCR Data: Solvable?



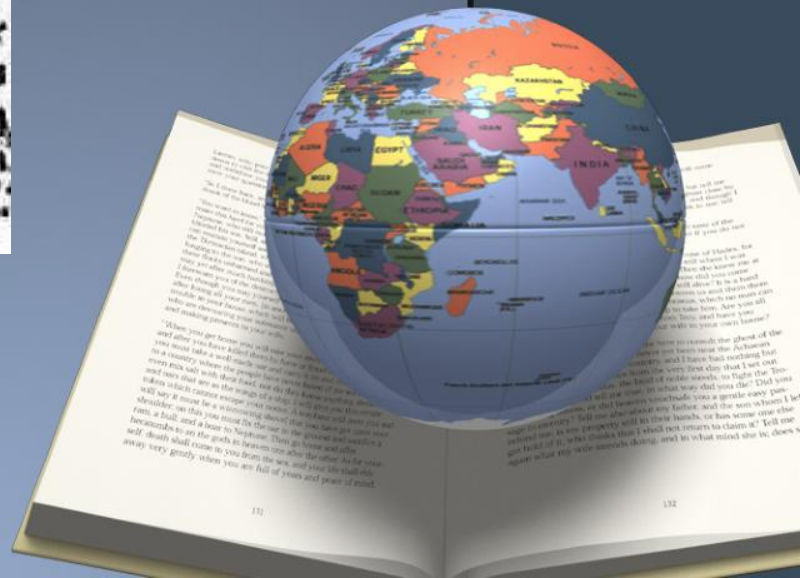


Constricted Pathways from Sydney to Scotland

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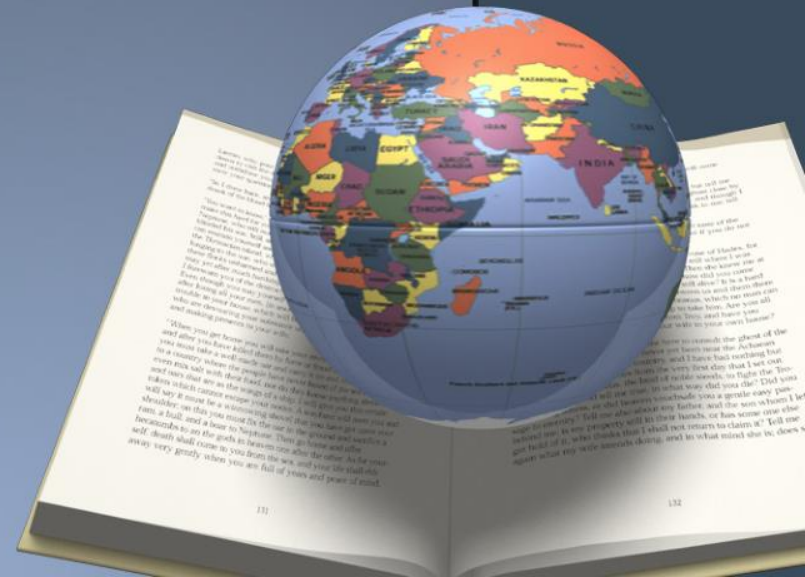
By the Governor Macquarie are arrived Capt. Fowler, and part of the crew of the India brig Matilda, which sailed from this Colony in Aug, 1813, bound on a voyage to the Derwent and Eastern Islands, and from thence to China, but was cut off and plundered on the night of the 10th of April last, while lying at anchor in Duff's Bay, at the Island of Rooapoah, one of the Marquesas, on a sandal-wood voyage.— Five of the crew (Poomootoo men) had previously deserted, and joining with some of the Rooapoah natives, took the opportunity of a dark night, and the wind blowing fresh right on the land, to cut the vessel adrift; by which means she drove ashore through a heavy surf, and was soon bilged and filled with water.— When the cannibal natives saw that it was impracticable to get the vessel afloat, they concurred universally in the design of putting the whole of her crew to death; which appears to have been a constant practise among the different Islanders towards one another, when their canoes happen by accident to fall upon a strange shore, through stress of weather, or from any other accident. Capt.

Sydney Gazette, 8 November 1815



Meme Identification on OCR

- Manual Keyword Searching
 - Multiple Terms
 - Multiple Databases
- Plagiarism Detection Software
- nGram and Edition Tracking
- Directionality Seemingly Impossible



Pathways Based On Dates

Sydney Gazette

Star

Courier

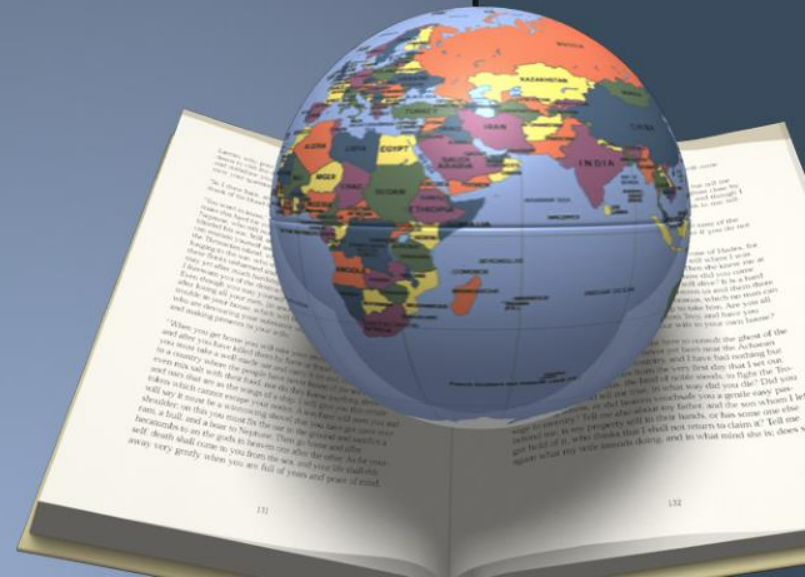
St. James Chronicle

Times

Morning Chronicle

Caledonian Mercury

Aberdeen Journal

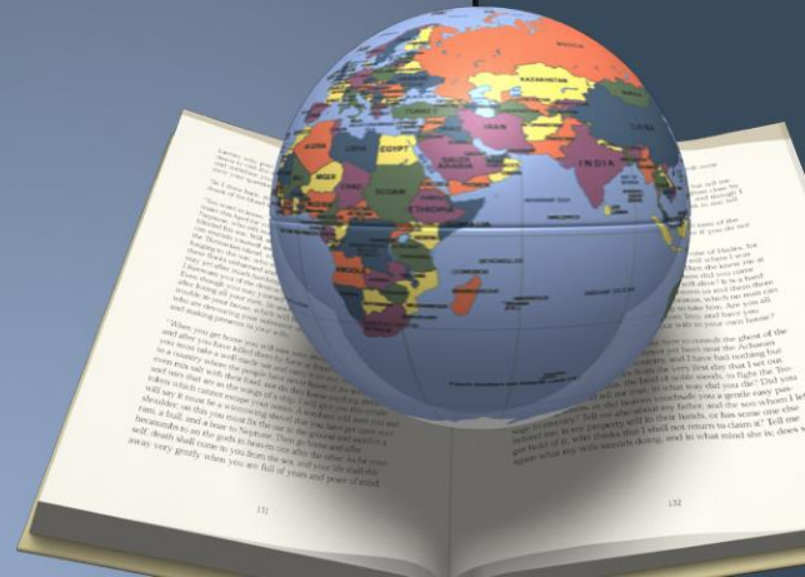


Perfect Match	Overall Match	View Both Files	File L	File R
853 (93% L, 68% R)	853 (93%) L; 853 (68%) R	Side-by-Side	358 1817 January 8 Aberdeen Journal.txt	357 1817 January 6 Caledonian Mercury.txt
1137 (92% L, 90% R)	1137 (92%) L; 1137 (90%) R	Side-by-Side	359 1815 November 8 Sydney Gazette.txt	357 1817 January 6 Caledonian Mercury.txt
831 (67% L, 90% R)	831 (67%) L; 831 (90%) R	Side-by-Side	359 1815 November 8 Sydney Gazette.txt	358 1817 January 8 Aberdeen Journal.txt
1154 (93% L, 92% R)	1154 (93%) L; 1154 (92%) R	Side-by-Side	360 1817 January 3 Morning Chronicle.txt	357 1817 January 6 Caledonian Mercury.txt
871 (70% L, 95% R)	871 (70%) L; 871 (95%) R	Side-by-Side	360 1817 January 3 Morning Chronicle.txt	358 1817 January 8 Aberdeen Journal.txt
1148 (92% L, 93% R)	1148 (92%) L; 1148 (93%) R	Side-by-Side	360 1817 January 3 Morning Chronicle.txt	359 1815 November 8 Sydney Gazette.txt
1146 (92% L, 91% R)	1146 (92%) L; 1146 (91%) R	Side-by-Side	361 1817 January 2 London Times.txt	357 1817 January 6 Caledonian Mercury.txt
876 (70% L, 95% R)	876 (70%) L; 876 (95%) R	Side-by-Side	361 1817 January 2 London Times.txt	358 1817 January 8 Aberdeen Journal.txt
1140 (91% L, 92% R)	1140 (91%) L; 1140 (92%) R	Side-by-Side	361 1817 January 2 London Times.txt	359 1815 November 8 Sydney Gazette.txt
1216 (98% L, 98% R)	1216 (98%) L; 1216 (98%) R	Side-by-Side	361 1817 January 2 London Times.txt	360 1817 January 3 Morning Chronicle.txt
1143 (92% L, 91% R)	1143 (92%) L; 1143 (91%) R	Side-by-Side	362 1817 January 1 London Star.txt	357 1817 January 6 Caledonian Mercury.txt
869 (70% L, 94% R)	869 (70%) L; 869 (94%) R	Side-by-Side	362 1817 January 1 London Star.txt	358 1817 January 8 Aberdeen Journal.txt
1145 (92% L, 93% R)	1145 (92%) L; 1145 (93%) R	Side-by-Side	362 1817 January 1 London Star.txt	359 1815 November 8 Sydney Gazette.txt
1208 (97% L, 97% R)	1208 (97%) L; 1208 (97%) R	Side-by-Side	362 1817 January 1 London Star.txt	360 1817 January 3 Morning Chronicle.txt
1216 (98% L, 98% R)	1216 (98%) L; 1216 (98%) R	Side-by-Side	362 1817 January 1 London Star.txt	361 1817 January 2 London Times.txt
1145 (92% L, 91% R)	1145 (92%) L; 1145 (91%) R	Side-by-Side	363 1817 January 2 London Courier.txt	357 1817 January 6 Caledonian Mercury.txt
873 (70% L, 95% R)	873 (70%) L; 873 (95%) R	Side-by-Side	363 1817 January 2 London Courier.txt	358 1817 January 8 Aberdeen Journal.txt
1145 (92% L, 93% R)	1145 (92%) L; 1145 (93%) R	Side-by-Side	362 1817 January 1 London Star.txt	359 1815 November 8 Sydney Gazette.txt
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873 (70% L, 95% R)	873 (70%) L; 873 (95%) R	Side-by-Side	363 1817 January 2 London Courier.txt	358 1817 January 8 Aberdeen Journal.txt
1134 (91% L, 92% R)	1134 (91%) L; 1134 (92%) R	Side-by-Side	363 1817 January 2 London Courier.txt	359 1815 November 8 Sydney Gazette.txt
1207 (97% L, 97% R)	1207 (97%) L; 1207 (97%) R	Side-by-Side	363 1817 January 2 London Courier.txt	360 1817 January 3 Morning Chronicle.txt
1213 (98% L, 97% R)	1213 (98%) L; 1213 (97%) R	Side-by-Side	363 1817 January 2 London Courier.txt	361 1817 January 2 London Times.txt
1216 (98% L, 98% R)	1216 (98%) L; 1216 (98%) R	Side-by-Side	363 1817 January 2 London Courier.txt	362 1817 January 1 London Star.txt

ANOTHER DREADFUL MASSACRE BY THE NATIVES OF THE MARQUESAS ISLANDS. [From the Sydney Gazette, November 8, 1815]By the Governor Macquarie are arrived Captain Fowler, and part of the crew of the India brig Matilda, which sailed from this colony in August, 1813, bound on a voyage to the Derwent and Eastern Islands, and from thence to China; but was cut off and plundered on the night of the 10th of April last, while lying at anchor in Duff's Bay, at the Island of Rooapoah, one of the Marquesas, on a sandal wood voyage. Five of the crew (Poomootoo men) had previously deserted, and joining with some of the Rooapoah natives, took the opportunity of a dark night, and the wind blowing fresh right on the land, to cut the vessel adrift; by which means she drove ashore through a heavy surf, and was soon bilged and filled with water. When the cannibal natives saw that it was impracticable to get the vessel afloat, they concurred universally in the design of putting the whole of her crew to death; which appears to have been a constant practise among the different natives towards one another, when their canoes happen to fall upon a strange shore, through stress of weather, or from any other accident. Captain Fowler had formed an intimacy with their Chief, or King, Nooahetu, who presided at the horrible tribunal that had devoted the unfortunate mariners to instant slaughter. He withheld his assent to the murder; but had no hesitation in permitting the plunder of the vessel. The crew were informed by such expressions as they could understand, as well as by gesticulations that accompanied their vehement debate on the occasion, that their lives were dependent on the issue; the good Chief was opposed by many other Chiefs, who, though somewhat inferior in rank, were very far superior in number, supported by the common usages of the island, from which the exhibition of clemency appeared an insufferable deviation. He was seated, with his son by his side, on a mat in his own dwelling; he had been called to the supremacy of the island by the general wish of the people, as it was not a hereditary right, but an elective dignity. His people pressed their solicitations earnestly, and at length peremptorily demanded his assent to the sacrifice; which he for a length of time opposed by the force of words; which not seeming likely to prevail, he adopted a method which silenced the whole in an instant, and saved the lives of Captain Fowler and his crew. Finding that all his expostulations were defeated upon the principle of undeviating custom, he deliberately took up two ropes that were near him, and fixing one round the neck of his son, and the other round his own, called to the Chief next in command, who immediately approached him. His conference was short and decisive; he first pointed to the cord that encircled the neck of his son, and then to the other which he had entwined around his own. "These strangers are doomed to death," said he, "by my chiefs and my people: and it is not fit that I, who am their King, should live to see so vile a deed per

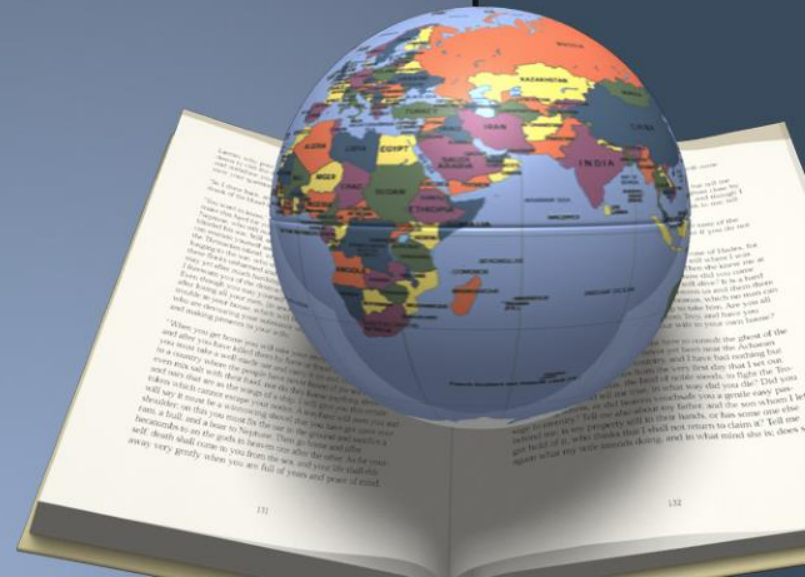
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- Addition of Headline
- Corrections to Grammar
- Simplification of Terminology
- Imposition of House Style

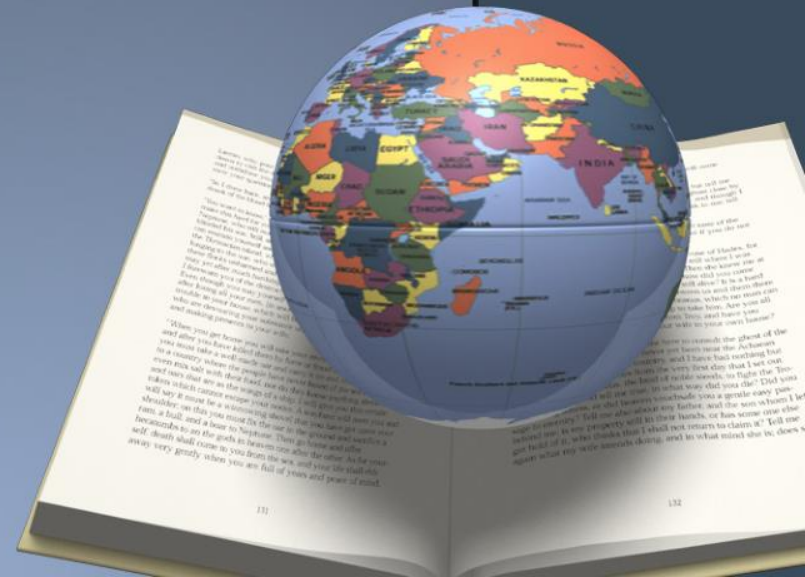
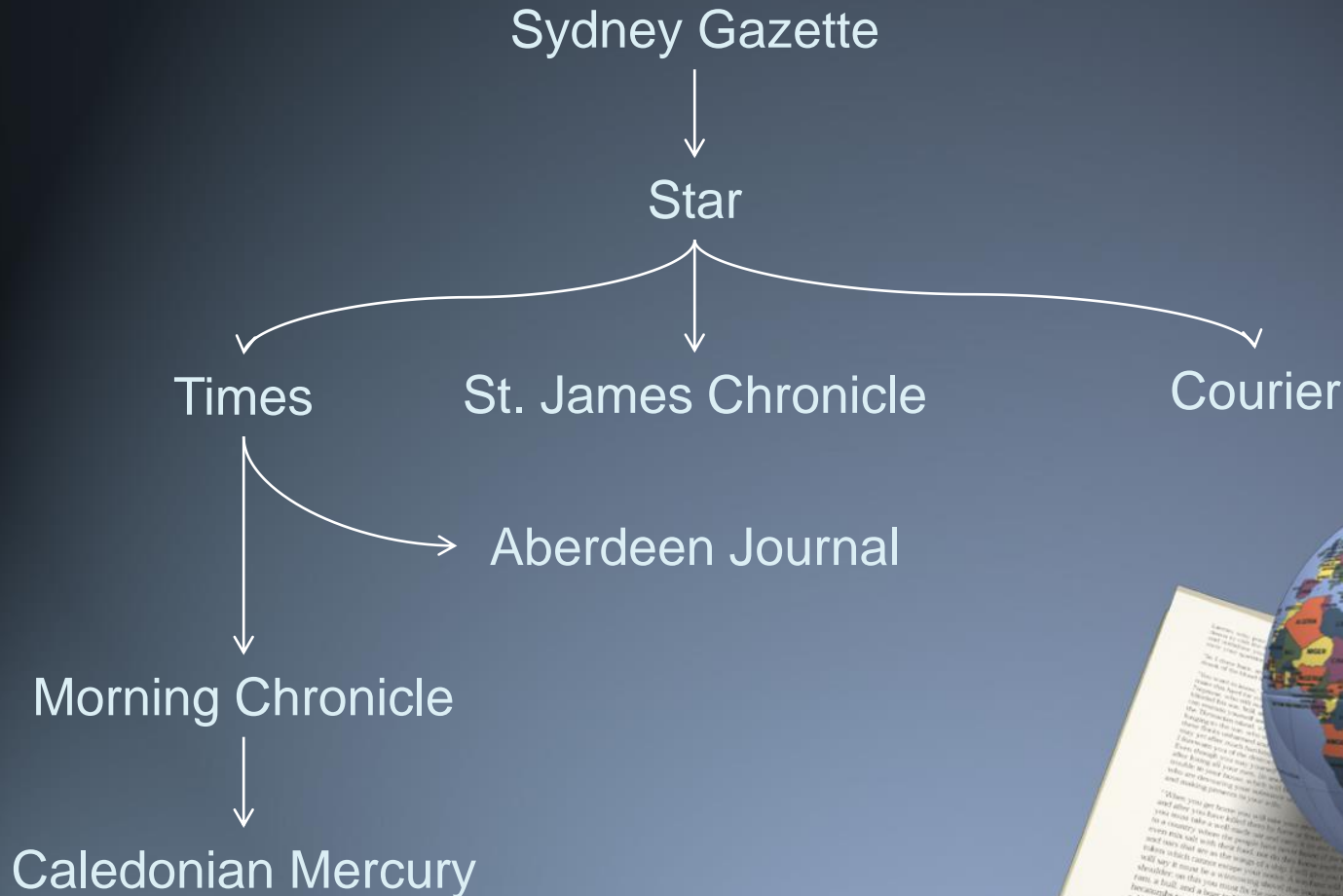


Based On Text Matching

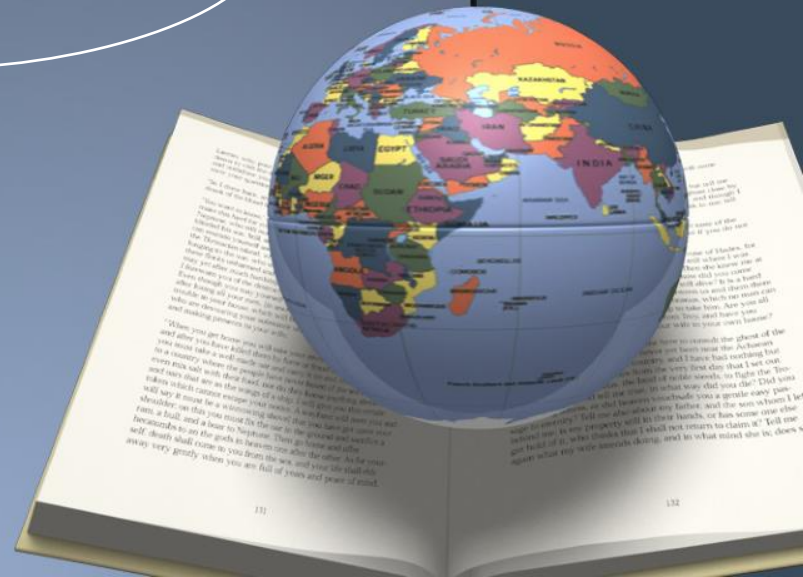
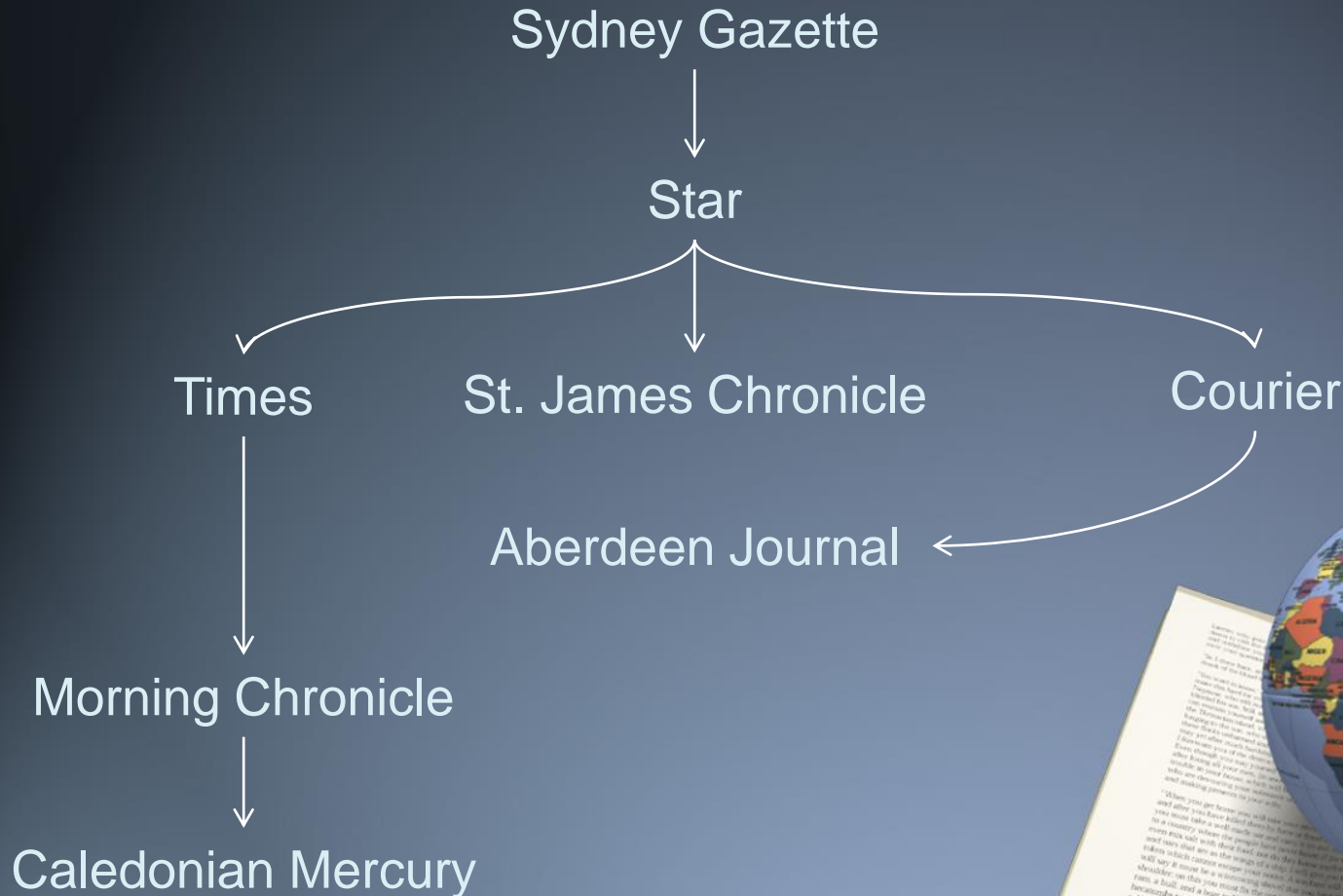
Sydney Gazette (1816)	London Star (1)	1145
	Morning Chronicle (3)	1146
London Star (1)	London Courier (2)	1216
	London Times (2)	1215
	London St James Chronicle (2)	1200
	Morning Chronicle (3)	1204
	Caledonian Mercury (6)	1143
	Aberdeen Journal (8)	869
London Courier (2)	Morning Chronicle (3)	1207
	Caledonian Mercury (6)	1145
	Aberdeen Journal (8)	873
London Times (2)	Morning Chronicle (3)	1216
	Aberdeen Journal (8)	876
London St James Chronicle (2)	Morning Chronicle (3)	1196
	Caledonian Mercury (6)	1134
	Aberdeen Journal (8)	863
Morning Chronicle (3)	Caledonian Mercury (6)	1154
	Aberdeen Journal (8)	871
Caledonian Mercury (6)	Aberdeen Journal (8)	853



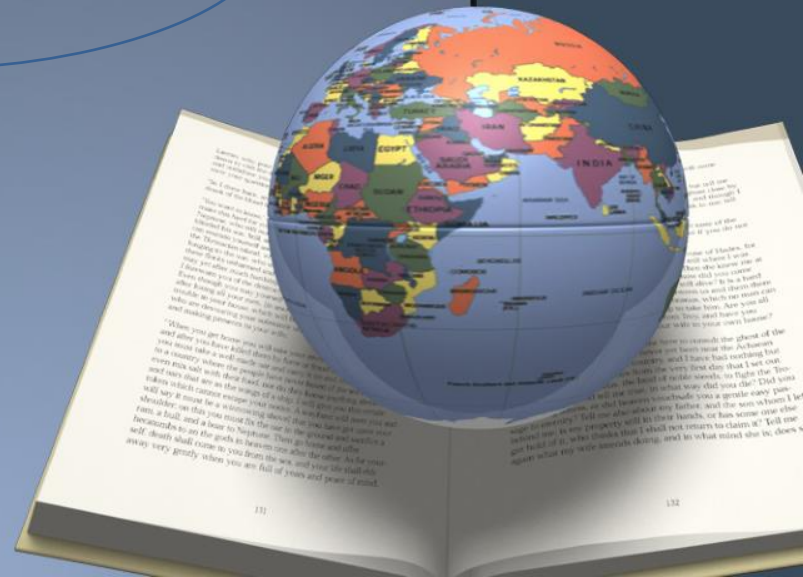
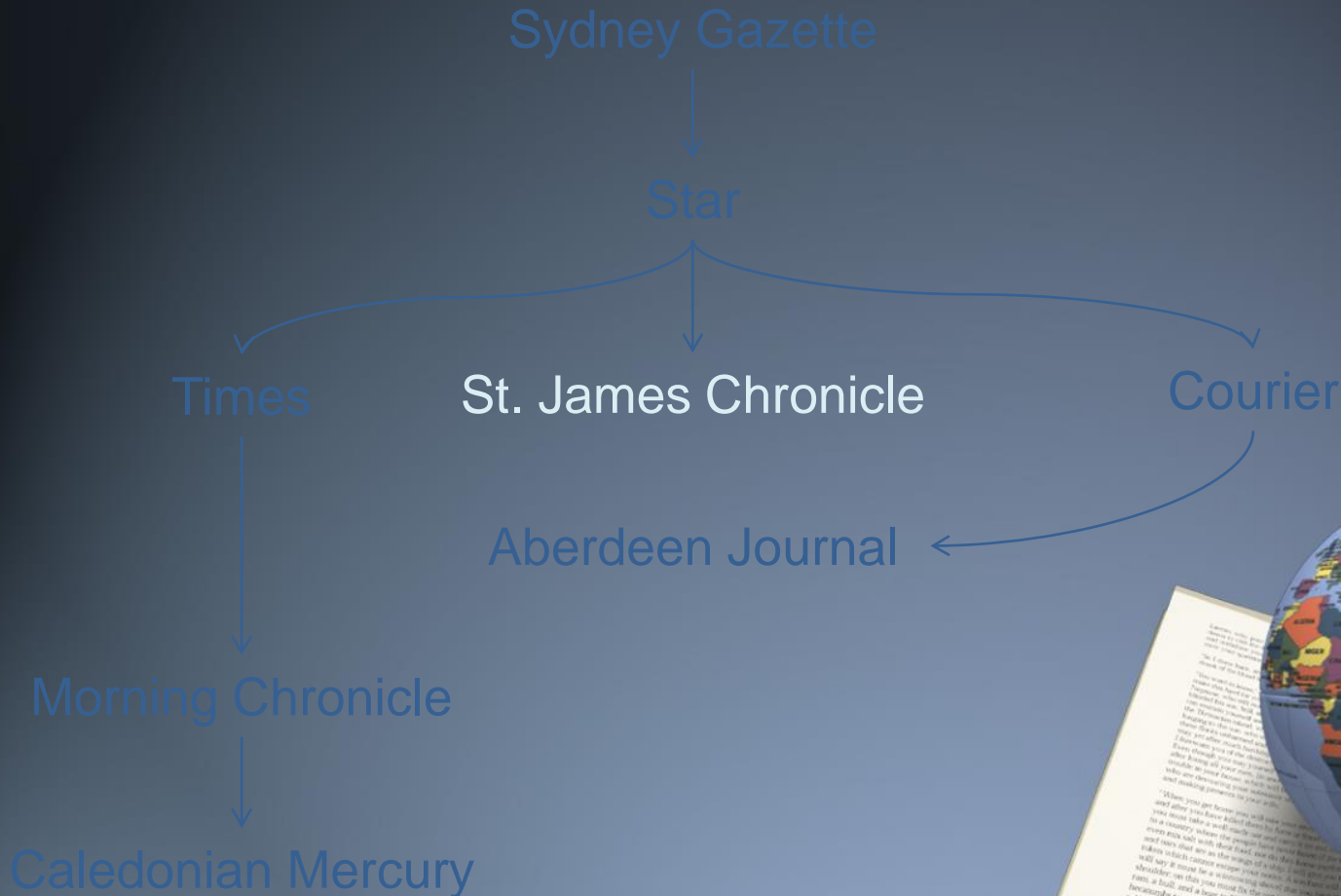
Based On Text Matching



Based On Close Reading



Based On Close Reading



Don't let the truth...

NEW SOUTH WALES.

ANOTHER DREADFUL MASSACRE BY THE NATIVES
OF THE MARQUESAS ISLANDS.

(From the Sydney Gazette, Nov. 8, 1815.)

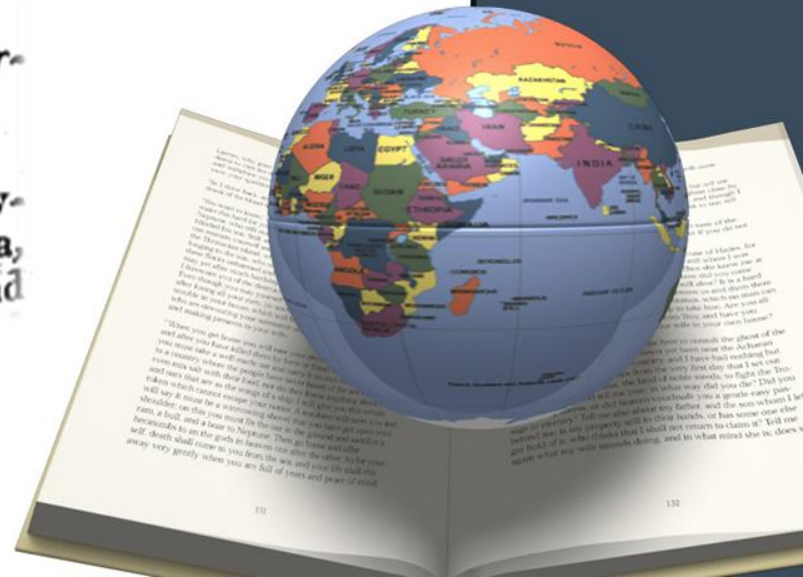
By the Governor Macquarrie are arrived Captain
Fowler, and part of the crew of the Indian brig *Matilda*,
which sailed from this Colony in August, 1814, bound

NEW SOUTH WALES.

*British Vessel plundered by the Natives of the Mar-
quesas Islands.*

[From the Sydney Gazette, Nov. 8, 1815.]

By the Governor Macquarrie are arrived Capt. Fow-
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which sailed from this colony in August 1813, bound





Irregular Pathways from the American Frontier

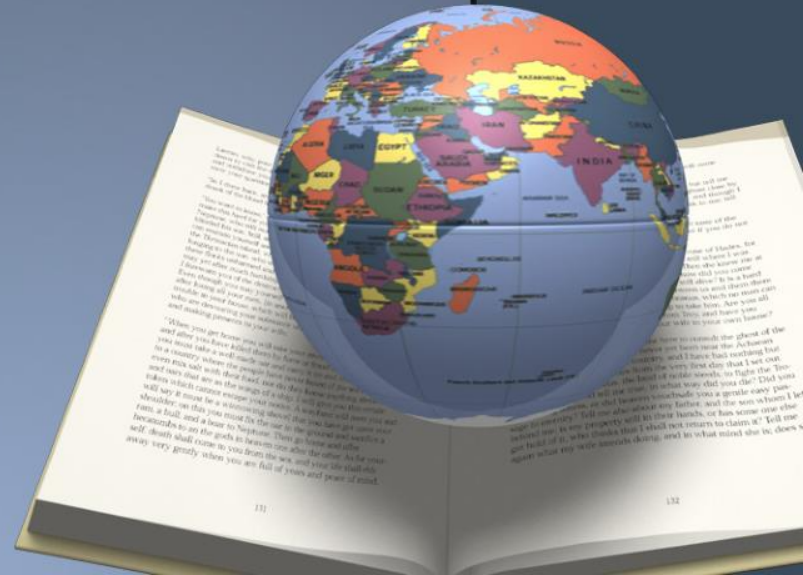
AMERICAN NEWS.

Richmond, Virginia, Dec. 1, 1790.

**Extract of a letter from a Gentleman at Kentucky,
to a Member of the General Assembly, dated,
Nov. 7, 1790.**

“I have been waiting with much impatience to obtain some certain account of our troops; many probable conjectures fill the minds of the people. A hand-bill just come to Bourbon, contains an extract of a letter from Governor St.

Glasgow Advertiser, 21 February 1791



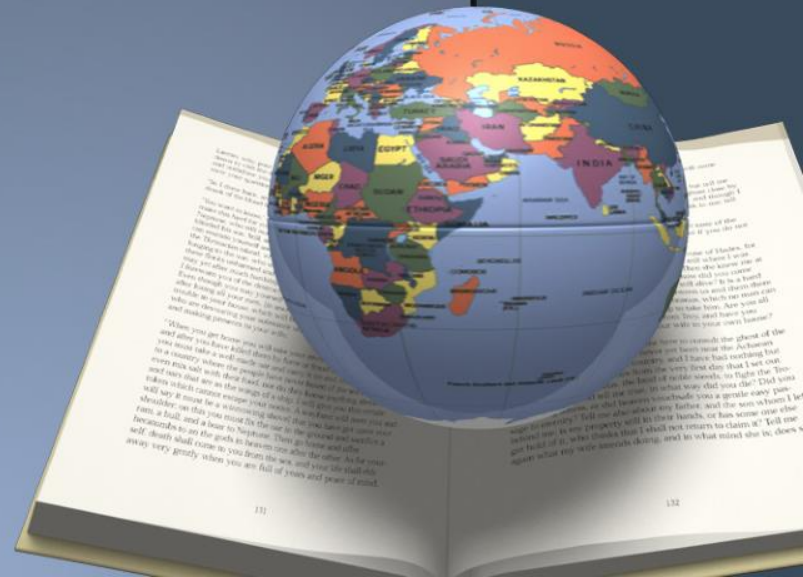
From the *BAHAMA GAZETTE*.

RICHMOND, December 1.

Extract of a Letter from a Gentleman in Kentucky,
to a Member of the General Assembly, dated No-
vember 5, 6, and 7, 1795.

"I have waited with expectation of giving you some certain account of our troops, but nothing certain—in my improbable conjectures fill the minds of the people. A hand-bill, it is come to Bourbon, contains an extract of a letter from Governor ST. CLAIR to General WELKINSON, which informs, that our army met with little or no opposition. The Miami villages were abandoned; from thence a detachment was sent up the St. Joseph's river, which fell in with a party of Indians, and had a severe engagement. General HARMAR made a shew of retreat, and marched about eight miles, from which he detached a strong party to the field of action, in hopes of finding the Indians on the ground—as they expected, so they found them, and an action commenced on the 2d of October. The

London Star, 17 February 1791



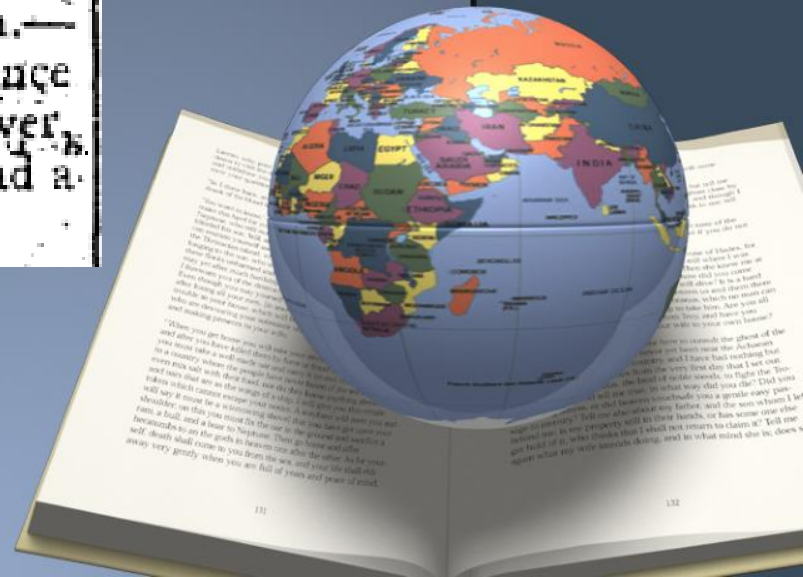
AMERICAN NEWS.

RICHMOND, VIRGINIA, Dec. 1, 1790.

Extract of a Letter from a Gentleman at Kentucky, to a Member of the General Assembly, dated, Nov. 7, 1790.

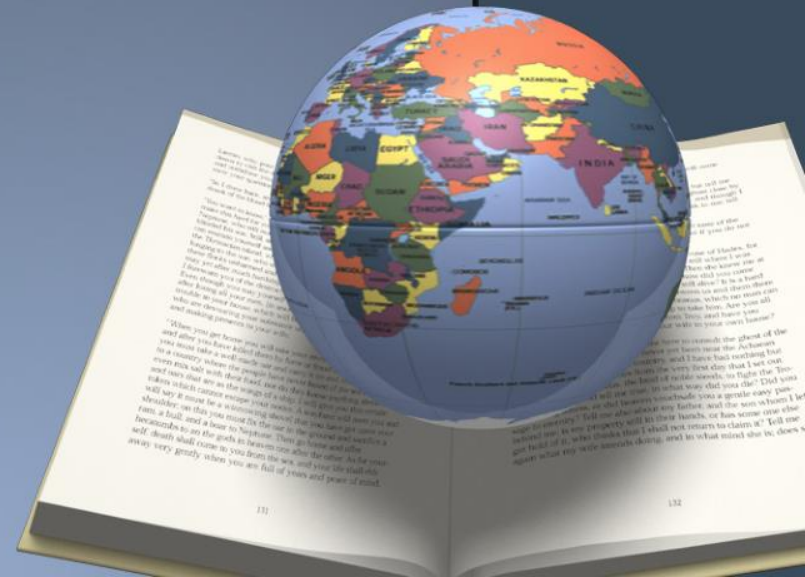
“ I have been waiting with much impatience to obtain some certain account of our troops ; many probable conjectures fill the minds of the people. A hand-bill just come to Bourbon, contains an extract of a letter from Governor St. Clair to Gen. Wilkinson, which mentions that our army had met with but little opposition.— The Miami villages were abandoned, from thence a detachment was sent up to St Joseph’s river, which fell in with a party of Indians, and had a severe engagement.

Evening Mail, 14 February 1791



Whence?

- Minor Changes at Start and End:
 - "dated November 5, 6, and 7" vs "dated Nov. 7"
 - "expectation" vs "impatience"
 - "whole truth of the matter" vs "further particulars"



RICHMOND, December 1.

The Honourable BEVERLEY RAN. DOLPH, Esquire, is re-elected Governor of this Commonwealth for the ensuing year.

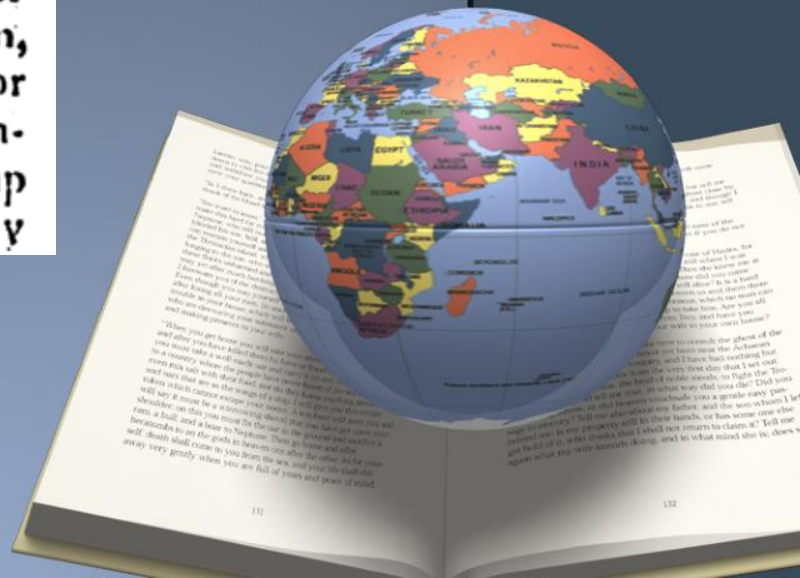
HARDIN BURNLEY, JOHN STEELE, and MILES SELDEN, Esquires, are chosen Members of the Honourable Privy Council of this State.

Extract of a letter from a Gentleman in Kentucky, to a Member of the General Assembly, dated November 5, 6, and 7, 1790.

“ I have waited with expectation of giving you some certain account of our troops, but nothing certain—many improbable conjectures fill the minds of the people.—A hand-bill just come to Bourbon, contains an extract of a letter from Governor St. Clair, to General Wilkinson, which informs, that our army met with little or no opposition. The Miami villages were abandoned; from thence a detachment was sent up the St. Joseph's river, which fell in with a party

Virginia Gazette and Alexandria Advertiser

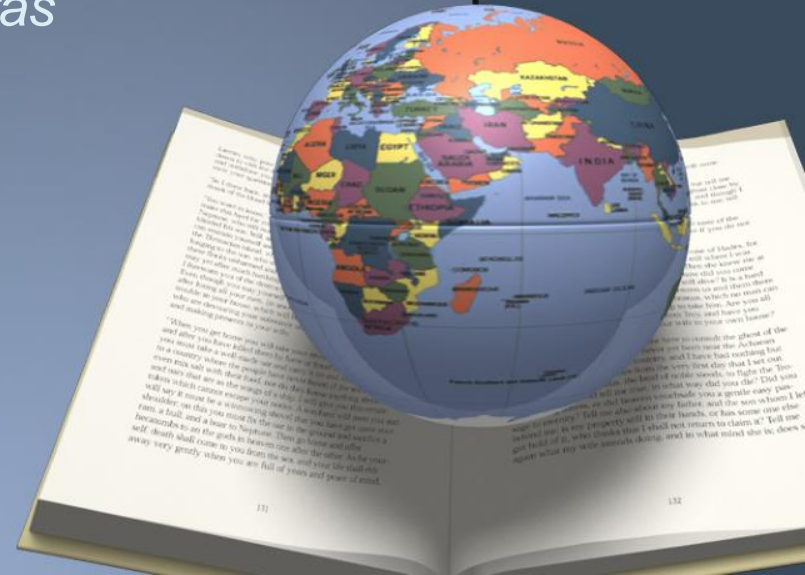
9 December 1790



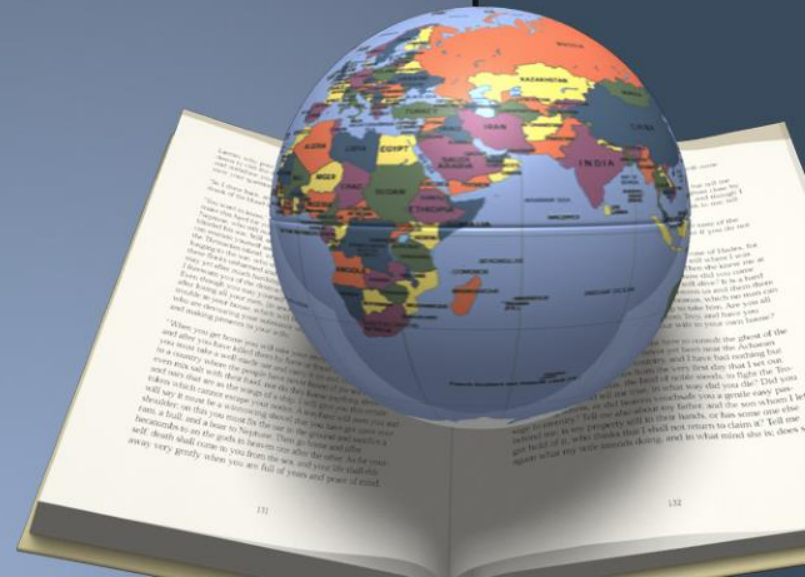
Whence?

- Many Versions of this Story in the Atlantic
- Textual Integrity Extremely High
- Look to Para-textual Material

A Stabbing in Honduras



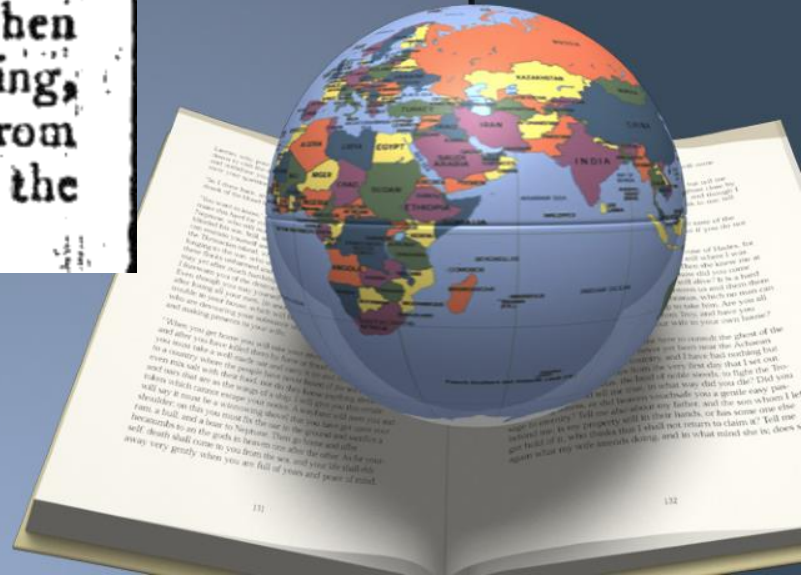
Whence?



MUSQUITO SUGAR.

Intelligence has been received, that in some trivial dispute with a native Indian, a Spaniard had stabbed him to the heart with a filetto, and then fled. The nation to whom the Indian belonged, being made acquainted with the murder, sent a deputation to the Governor, demanding that five Spaniards should be instantly delivered up as an attonement. This was peremptorily refused, as being more than commensurate to the offence, but the murderer was offered as a satisfaction; the Indians would not accept him singly, and departed, vowing the severest revenge: a few days afterwards intelligence was received that they had surpris'd and massacred sixteen men, who had been at work in the woods; and when the vessel departed, the Spaniards were flying, with the utmost precipitation and terror, from all parts of the country, seeking shelter in the forts.

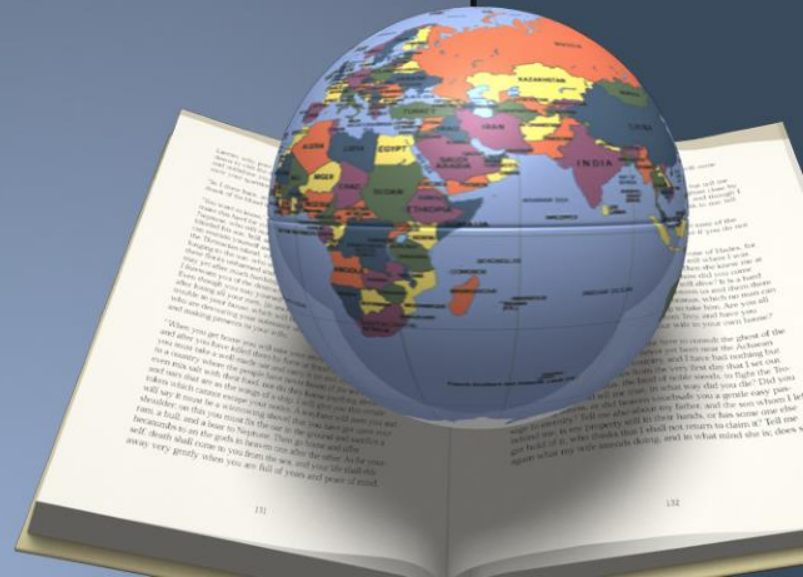
Glasgow Advertiser, 21 February 1791



KINGSTON, (*Jamaica*) Nov. 27.

Accounts from the Mulquito shore say, that in some trivial dispute with a native Indian, a Spaniard flabbed him to the heart with a stiletto, and then fled.—The nation to whom the Indian belonged, being made acquainted with the murder, sent a deputation to the governor, demanding that five Spaniards should be instantly delivered up as an atonement. This was peremptorily refused, as being more than equivalent to the offence; but the murderer was offered as a satisfaction: The Indians would not accept him singly, and went off, vowing the severest revenge.—A few days afterwards intelligence was received, that the Indians had surpris'd and massacred sixteen men, who had been at work in the woods; and when the vessel departed, the Spaniards were flying with the utmost precipitation and terror from all parts of the country, and seeking shelter in the forts.

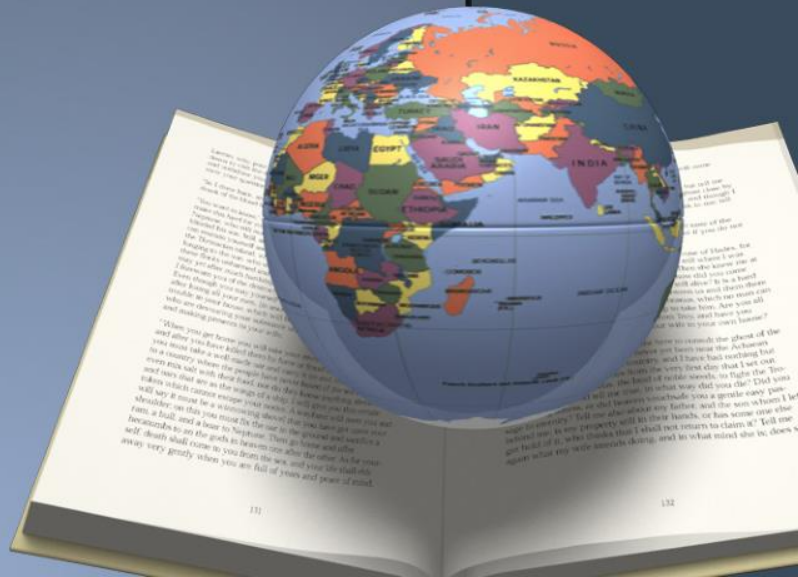
New York Daily Advertiser, 14 December 1790



Extract of a letter from a gentleman in Kentucky, to a member of the General Assembly, dated November 5, 6, and 7, 1790.

" I have waited with expectation of giving you some certain account of our troops, but nothing certain—many improbable conjectures fill the minds of the people. A hand bill, just come to Bourbon, contains an extract of a letter from Governor St. Clair, to General Wilkinson, which informs, that our army met with little or no opposition. The Miami villages were abandoned ; from thence a detachment was sent up the St. Joseph's river, which fell in with a party of Indians, and had a severe engage-

New York Daily Advertiser, 14 December 1790



Based On Close Reading

Jamaican Paper
27 November 1790

Virginia Gazette
1 December 1790



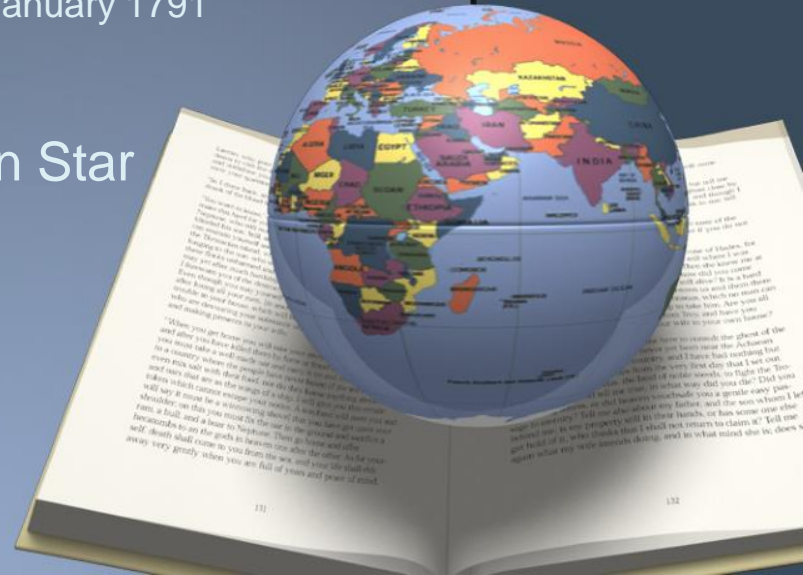
New York Paper
December / January 1791

Bahama Gazette
December / January 1791

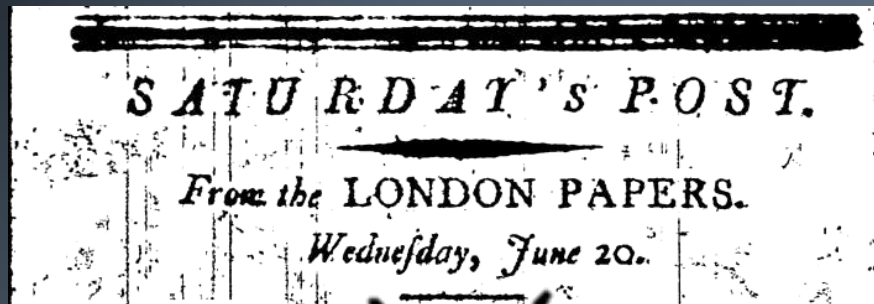
Evening Mail

London Star

Glasgow Advertiser



The Paratext Paradox



The Offline Penumbra



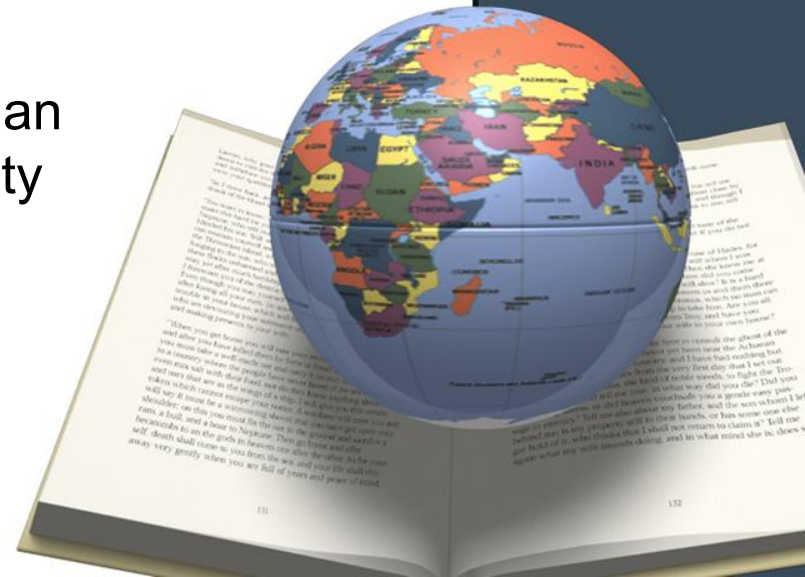
Conclusions

The development of automatic OCR correction and text-matching tools promises the creation of meme caches within newspaper databases

Once memes are identified, highly detailed transcriptions are (currently) necessary to determine directionality and branching

Applying the theory of doubt between man and machine leads to greater certainty

How we deal with spatial problems, on and off the page, will determine our full success



Evolutionary Plagiarism:

Tracing Dissemination Pathways in Newspaper Reprints

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SLIDES



ABOUT ME

