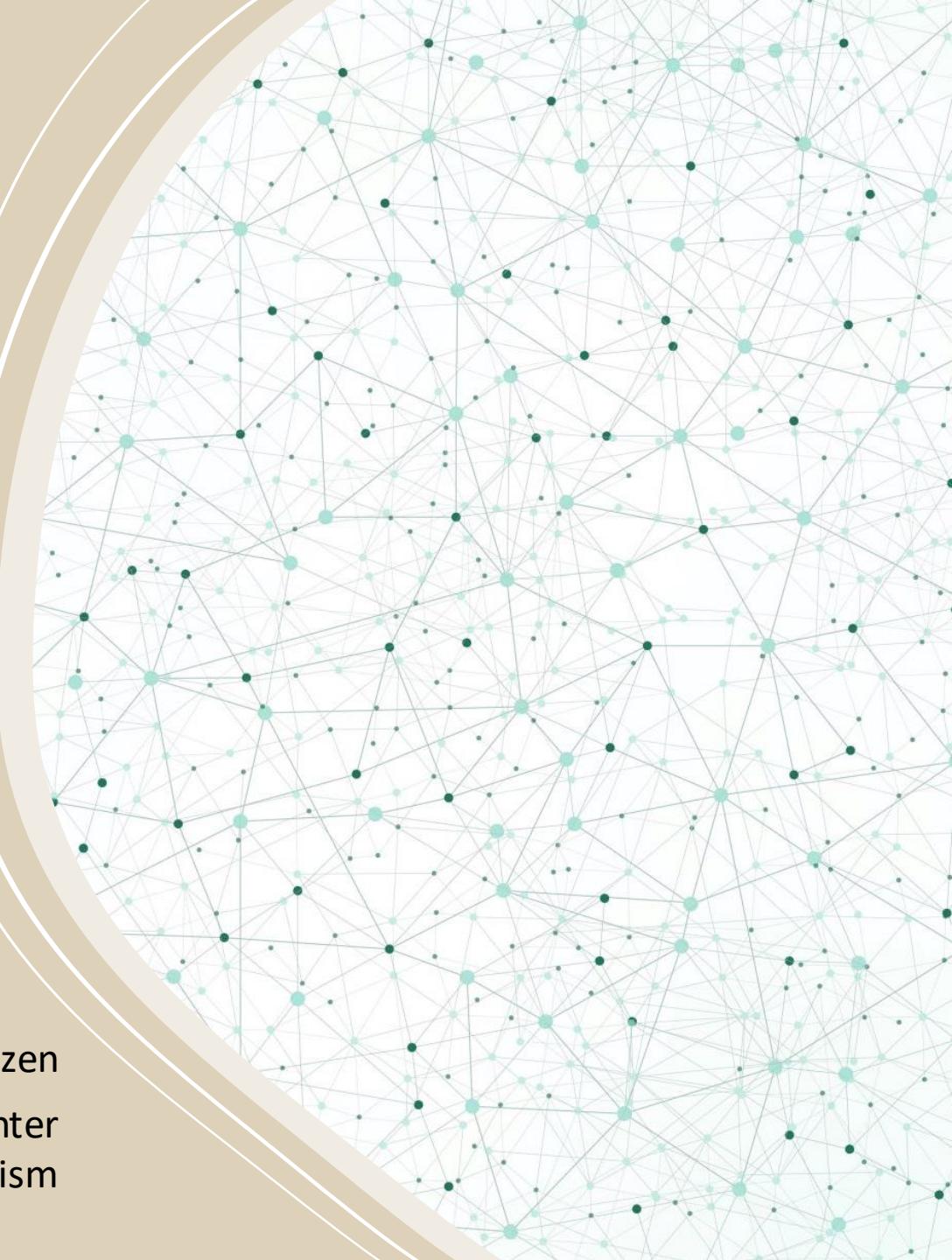


# On an information quest:

Researching efficiently and credibly

Gerri Berendzen

Coordinator, Bremner Editing Center  
University of Kansas School of Journalism



# Gerri Berendzen

Gerri Berendzen has worked as a copy editor for more than 35 years and teaches editing, writing, information management and digital media at the University of Kansas School of Journalism and Mass Communications.

She has been focused on fact-checking research and teaching editing and information management since 2014, after three decades editing at newspapers.

She is one of the authors of Poynter.org's Fundamentals of Editing and wrote the Visual Verification online course.



**Gerri Berendzen is coordinator of the Bremner Editing Center at the University of Kansas School of Journalism and Mass Communications.**

# Learning Objectives

1. Find ways to make your online information searches more efficient and effective.
2. Discover how to find data and information “hidden” from the normal browser.
3. Look at methods to determine if the information you found is credible AND if it’s good enough to make you credible.

# Why worry about how to do online research?

Whether you are fact-checking a book, looking up a claim while editing a news article or fact-finding for your own writing, you want to do digital research in a way that's efficient, comprehensive and credible.

- **Why: Because better search methods find better material.**
- **Why: Because you want to find material that is credible. Your credibility depends on it!**
- **Why: Because efficient research methods will save you time.**

# Can an editor streamline fact-checking or research?

Yes, but ...

- There's no one online tool you can use to do all of the fact-checking for you, and no one tool for research.
- Tools can make your work easier, but you're still going to have to do a lot of the digging yourself.
- **BEWARE:** AI may not always give you credible information.

# Can an editor streamline fact-checking or research?

- Use all the tools available ... but make sure to use tools that are credible.
- Everyone doing online research needs to verify the credibility of each source ... even when time is at a premium.

# How to do effective online research

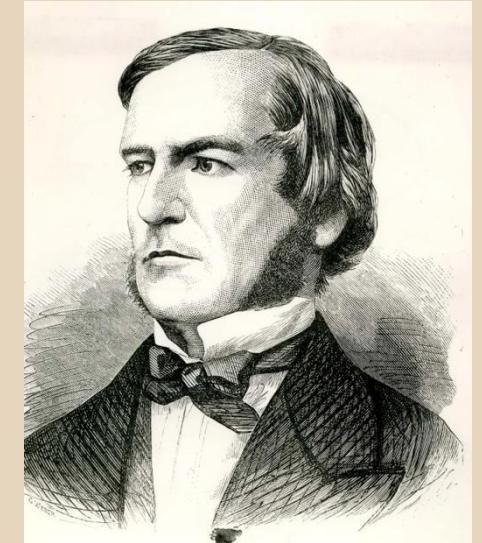
## Questions:

- What is a Boolean search?
- What are search operators?
- How do search operators help?
- What is “lateral reading” and why do fact-checkers use it?



# SEARCH OPERATORS

George Boole was a British mathematician whose work involved logic. Boolean logic is a theory of mathematics in which all variables are either “true” or “false,” or “on” or “off.” It’s the theory behind Boolean search.



**There are 5 elements of syntax to Boolean search:**

- **AND**
- **OR**
- **NOT**
- **( )**
- **“ ”**

# SAMPLE SEARCH OPERATORS

“ ”

OR

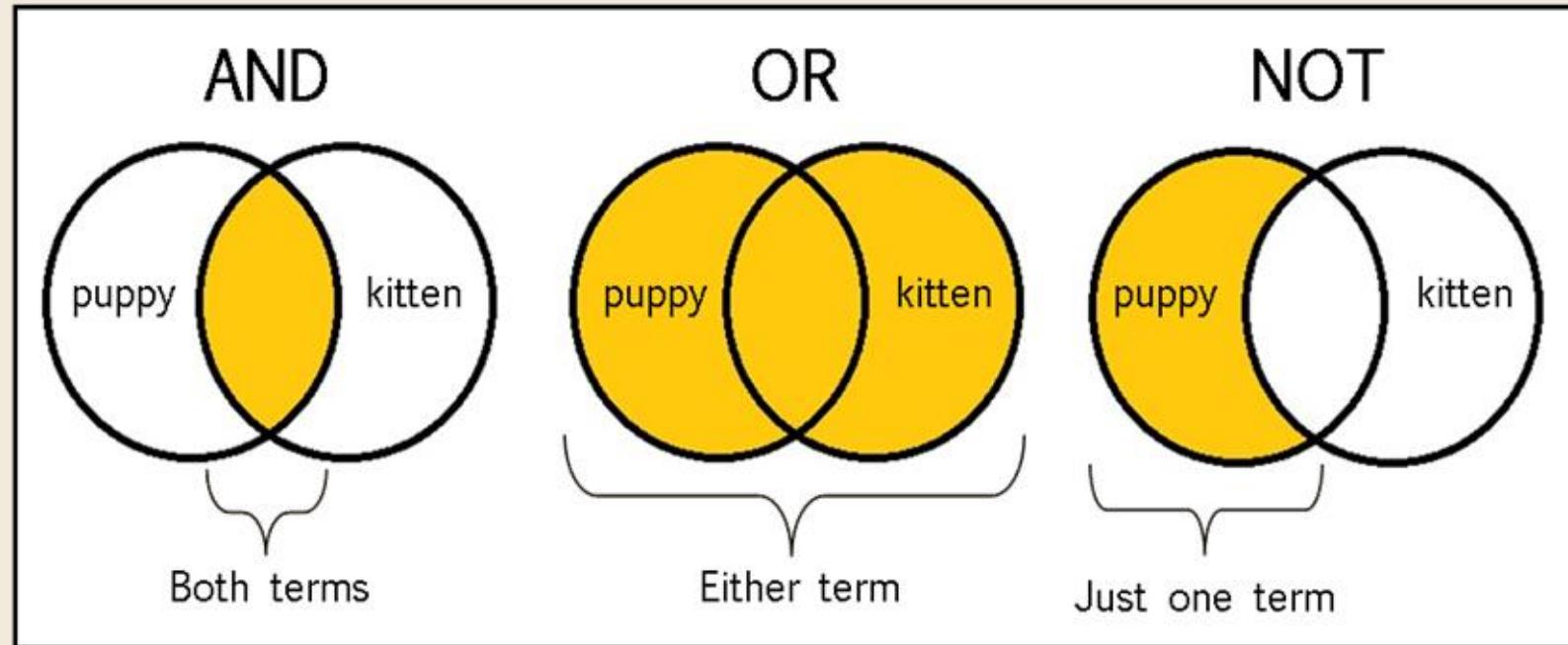
AND

NOT

- (minus)

filetype:

site:



# The first several search operators are Boolean search:

## “search term”

Uses quotation marks. It forces an exact-match search. Use this to refine results for ambiguous searches, or to exclude synonyms when searching for single words.

Example: “steve jobs”

## AND

Search for X and Y. This will return only results related to both X and Y. Note: It doesn’t matter for regular searches, as Google defaults to “AND” ... but it’s useful when paired with other operators.

## OR

Search for X *or* Y. This will return results related to X or Y, or both. **Note:** The pipe (|) operator can also be used in place of “OR.”

Examples: jobs OR gates / jobs | gates

# The first several search operators are Boolean search:

## ( )

Parentheses. Group multiple terms or search operators to control how the search is executed. Example: (MSNBC OR CNN) news This will find results that have either term in parentheses plus the word news.

## - (or NOT)

Minus sign. Exclude a term or phrase. In our example, any pages returned will be related to jobs but not Apple (the company or in this case, the fruit).

Example: jobs -apple

## \*

Asterisk. Acts as a wildcard and will match any word or phrase. Example: adam \* johanson

# The next few narrow what parts of the internet the search will look at:

## filetype:

Restricts results to those of a certain filetype. E.g., PDF, DOCX, TXT, PPT, etc. Note:

Example: Kansas filetype:pdf / kansas ext:pdf (filetype: and ext: do the same thing.)

## site:

Limits results to those from a specific website or a specific web extension.

Example: site:ku.edu Example: site:gov

## intitle:

Find pages with a certain word (or words) in the title. In our example, any results containing the word “Kansas” in the title tag will be returned. Example: intitle:Kansas

# These also narrow the parts the search will look at:

## AROUND(X)

Proximity search. Find pages containing two words or phrases within X words of each other. For this example, the words “apple” and “iphone” must be present and no further than four words apart.

Example: apple AROUND(4) iphone

## BEFORE AND AFTER

Let's you specify posting dates.

### **In search line type:**

Search for results from before a particular date.

apple before:2007-06-29

after:

Search for results from after a particular date.

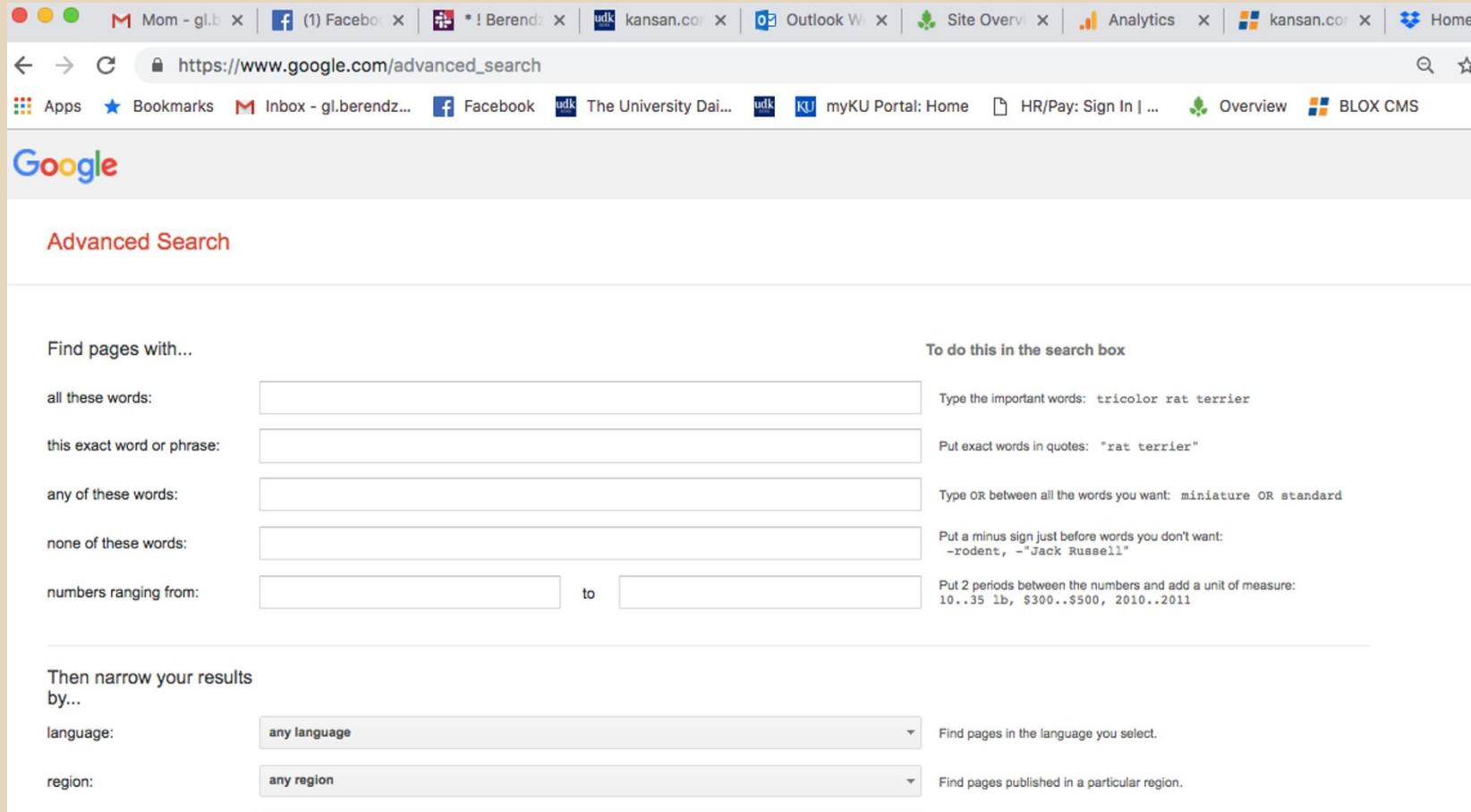
apple after:2007-06-29

# CAVEATS

- Search operators that are words have to be in all caps (AND NOT OR).
- You need to figure out if a search portal supports Boolean search; browsers do, but not all databases use Boolean search.
- Make good use of the asterisk (\*) to indicate a wild card. (Example, say you are searching for “Gerri Berendzen” but all the references to me include my middle initial. If you don’t know what it is, use the asterisk. (“Gerri Berendzen” won’t turn up any results. So try “Gerri \* Berendzen”).
- Manhthings on the web are misspelled. Those sites still may be helpful! So consider searching misspellings specifically.

# STILL NOT FINDING WHAT YOU WANT?

Try Google's advanced search page. Or look for an advanced search on your preferred browser.



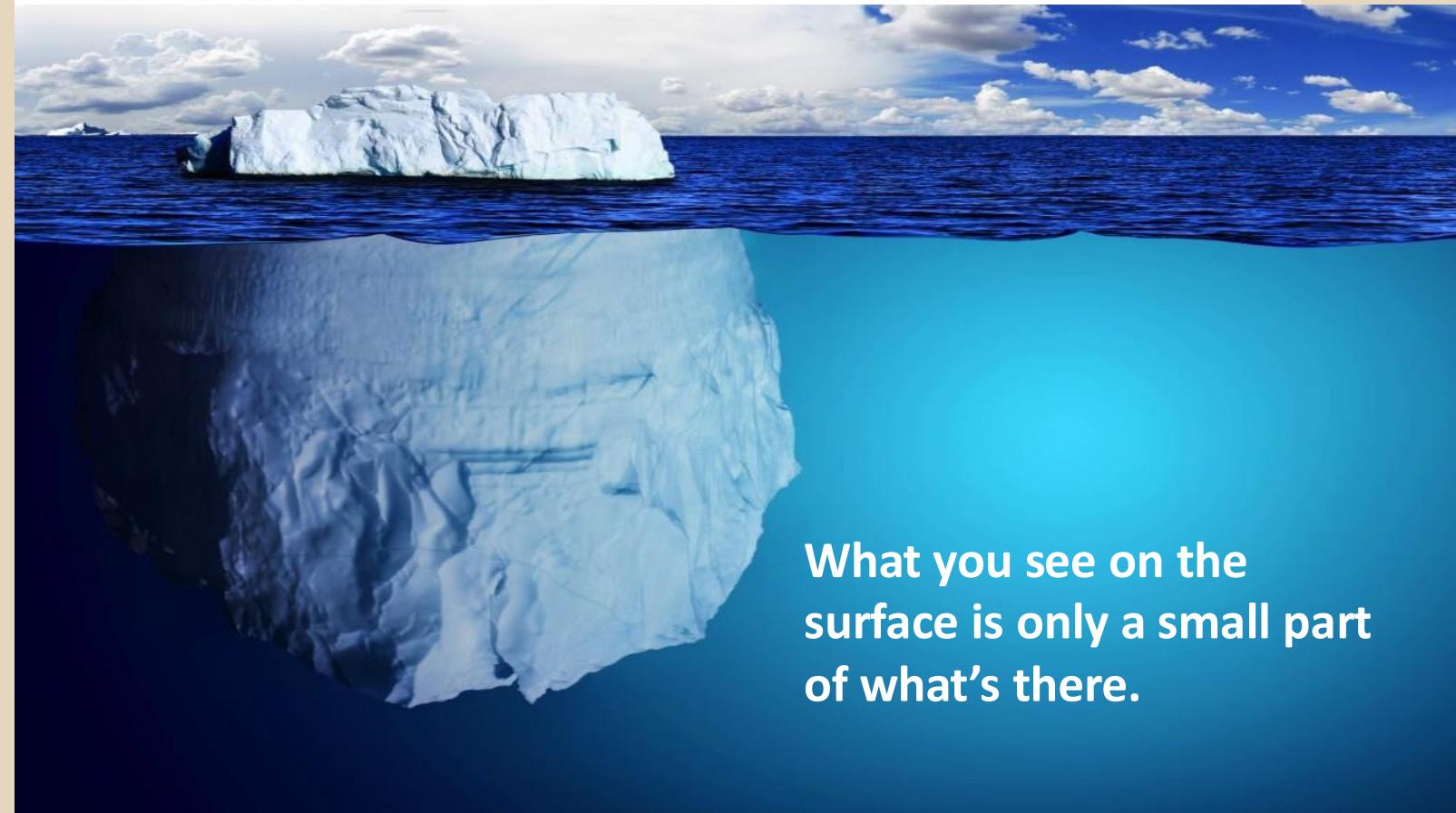
The screenshot shows a web browser window with multiple tabs open at the top. The active tab is 'Advanced Search' on Google's website, specifically the URL [https://www.google.com/advanced\\_search](https://www.google.com/advanced_search). The page displays various search operators and their corresponding syntax examples:

- Find pages with...**
  - all these words:**  Type the important words: tricolor rat terrier
  - this exact word or phrase:**  Put exact words in quotes: "rat terrier"
  - any of these words:**  Type OR between all the words you want: miniature OR standard
  - none of these words:**  Put a minus sign just before words you don't want: -rodent, -"Jack Russell"
  - numbers ranging from:**  to  Put 2 periods between the numbers and add a unit of measure: 10..35 lb, \$300..\$500, 2010..2011
- Then narrow your results by...**
  - language:**  Find pages in the language you select.
  - region:**  Find pages published in a particular region.

This link shows Microsoft's advanced search keywords: <https://support.microsoft.com/en-us/topic/advanced-search-keywords-ea595928-5d63-4a0b-9c6b-0b>

# Behind the surface of your web browser

The internet is a bit like an iceberg



What you see on the surface is only a small part of what's there.

# Surface Web

YAHOO!

Google

reddit

CNN.com

bing

# Deep Web

Academic databases  
Medical records  
Financial records  
Legal documents  
Some scientific reports  
Some government reports  
Subscription only information  
Some organization-specific repositories

# Dark Web

TOR  
Political protest  
Drug trafficking  
and other illegal activities

**96%**

of content on the  
Web (estimated)

- Easy to search
- Harder to search
- Potential danger



# Behind the surface of your web browser

Databases on the web include things like:

- **State and local public records**
- **Scholarly content (journals, conference papers, etc.)**
- **News archives**
- **Images and video content**
- **Statistical data**
- **Court proceedings**
- **Marketing and consumer research**
- **Books**
- **Geographical information (maps, etc.)**

# How to find databases?

Many databases are costly and will require you either to subscribe or access it through a subscriber:

1. Try accessing the database through a public library.
2. Try a university library. Many allow visitors to register for a pass to use computers that have access to the university's database subscriptions.
3. Use tools like Unpaywall to find open access databases.
4. CAVEAT: government databases should be free; don't use websites that make you pay to get information like property records.



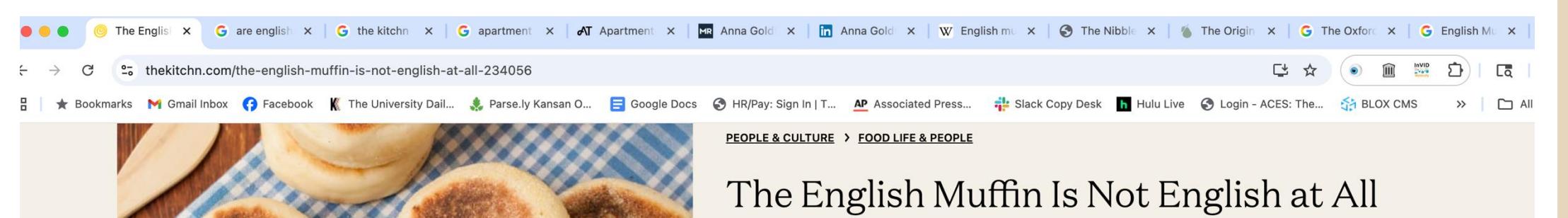
# Accessing databases

How do I know if a database is available and how do I access it:

- 1. Start with a web search and use search operators to see if a database exists. (For instance: business license databases site:gov)**
- 2. Check with university and public libraries. On university library websites, the heading is often “Articles and Databases.” This won’t get you into the database, but it will show if one exists.**
- 3. Begin with broad terms and then narrow down.**
- 4. Try data.gov for federal government databases.**



# WHAT IS LATERAL READING AND WHY DO IT?



The screenshot shows a web browser with a tabs bar at the top containing numerous tabs, each with a small preview of the page content. The tabs include: The English, are english, the kitchn, apartment, Apartment, Anna Gold, Anna Gold, English m..., The Nibble, The Origin, The Oxford, and English Mu... Below the tabs is the address bar with the URL [thekitchn.com/the-english-muffin-is-not-english-at-all-234056](https://thekitchn.com/the-english-muffin-is-not-english-at-all-234056). The main content area features a photograph of English muffins on a blue and white checkered cloth. To the right of the image is the title "The English Muffin Is Not English at All" and the category "PEOPLE & CULTURE > FOOD LIFE & PEOPLE".

**It's a method of information evaluation on the web that is frequently used by fact-checkers.**

**It was developed by the Stanford History Education Group.**

**It has been proven to be more effective at efficient evaluation research than normal reading methods.**

**It involves almost immediately hopping off an unfamiliar website and then investigating that website by opening a series of tabs (like you see above).**

# How effective is lateral reading?

The usefulness of lateral reading was illustrated recently in a study from the [Stanford History Education Group](#) (SHEG). In this [study](#), Stanford researchers pitted professional fact checkers against Stanford undergraduates and historians with Ph.D.s. They gave each group the same article and a limited amount of time to figure out if the article was credible.

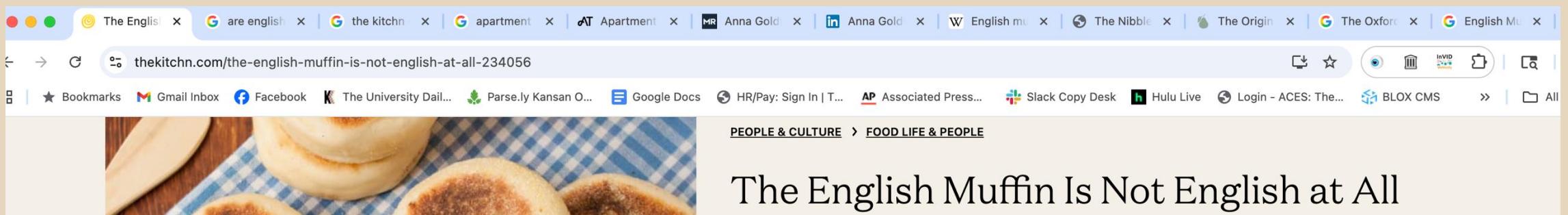
They found that fact checkers were always right when judging the validity of a piece. Surprisingly, though, the historians got it right about half the time, and undergraduates did not fare so well. Are you surprised that educated folks, undergraduates, like you, and professors, struggled? The Stanford researchers were a bit taken aback as well. But they figured out the difference in performance.

Fact-checkers all deployed a very similar technique for judging a news source, the Stanford group found. Historians and students spent a lot of time reading an article in order to assess its authority. Fact-checkers, on the other hand, spent as little as eight seconds looking at the article before moving on to researching it. Essentially, once fact-checkers identified a credibility cue, they immediately started researching it in other browser tabs.

The Stanford group called this “reading laterally.” Fact-checkers would see a name of an organization, for instance, and then pop open tabs in their browsers to find the organization’s website, Wikipedia entries and bibliographies about the organization, its staff, and its larger field. They also checked out what other news sources had to say about the topic.

***From “Be Credible,” by Karna Younger and Peter Bobkowski***

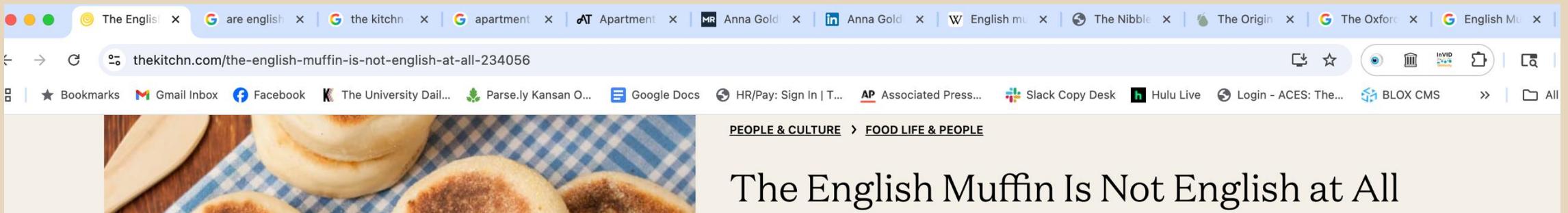
# Quick example of lateral reading:



**THE CLAIM: English muffins were invented in New York between 1874-1894.**

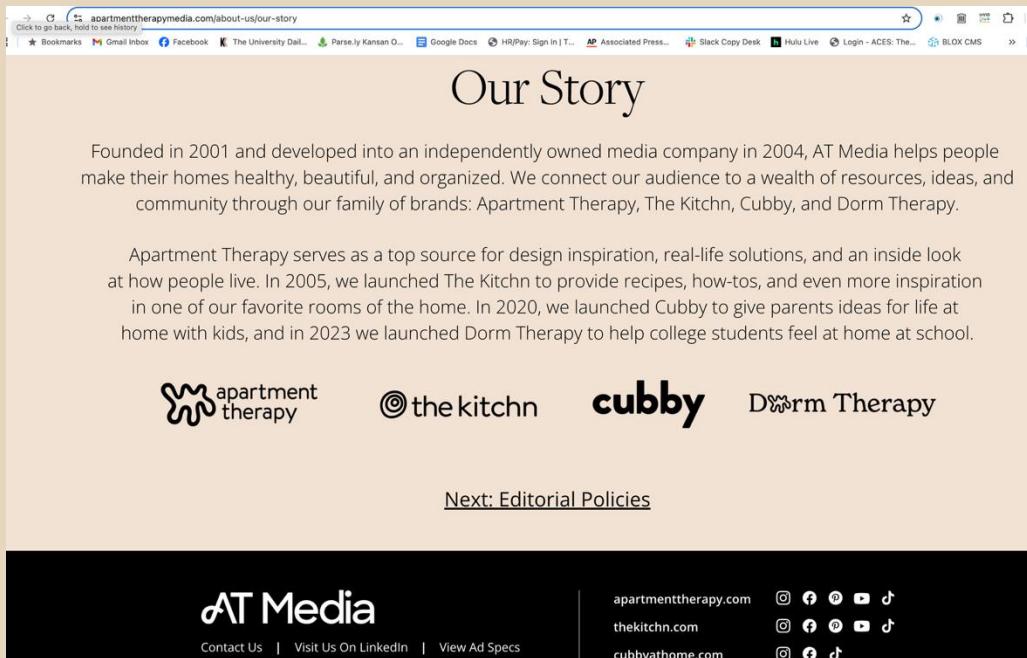
A screenshot of a web browser window showing an article from thekitchn.com. The title of the article is 'So Who Actually Invented the English Muffin?'. The text discusses the invention of the English muffin by Samuel Bath Thomas in New York City between 1874 and 1894. It mentions that he emigrated to New York City in 1874, had his own bakery in the Chelsea neighborhood, and invented the "toaster crumpet". The text also notes that the term "English muffin" was coined in 1894 and was soon widely adopted.

# Quick example of lateral reading:



The English Muffin Is Not English at All

PEOPLE & CULTURE > FOOD LIFE & PEOPLE



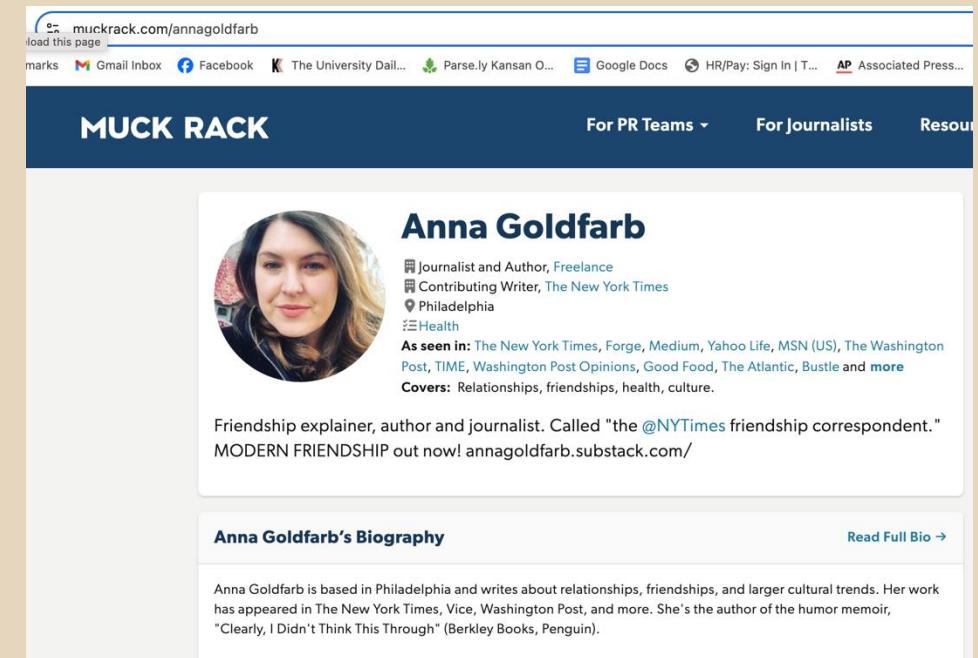
Our Story

Founded in 2001 and developed into an independently owned media company in 2004, AT Media helps people make their homes healthy, beautiful, and organized. We connect our audience to a wealth of resources, ideas, and community through our family of brands: Apartment Therapy, The Kitchn, Cubby, and Dorm Therapy.

Apartment Therapy serves as a top source for design inspiration, real-life solutions, and an inside look at how people live. In 2005, we launched The Kitchn to provide recipes, how-tos, and even more inspiration in one of our favorite rooms of the home. In 2020, we launched Cubby to give parents ideas for life at home with kids, and in 2023 we launched Dorm Therapy to help college students feel at home at school.

**apartment therapy** **@thekitchn** **cubby** **Dorm Therapy**

[Next: Editorial Policies](#)



**MUCK RACK**

**Anna Goldfarb**

Journalist and Author, Freelance  
Contributing Writer, The New York Times  
Philadelphia  
Health  
As seen in: The New York Times, Forge, Medium, Yahoo Life, MSN (US), The Washington Post, TIME, Washington Post Opinions, Good Food, The Atlantic, Bustle and more  
Covers: Relationships, friendships, health, culture.

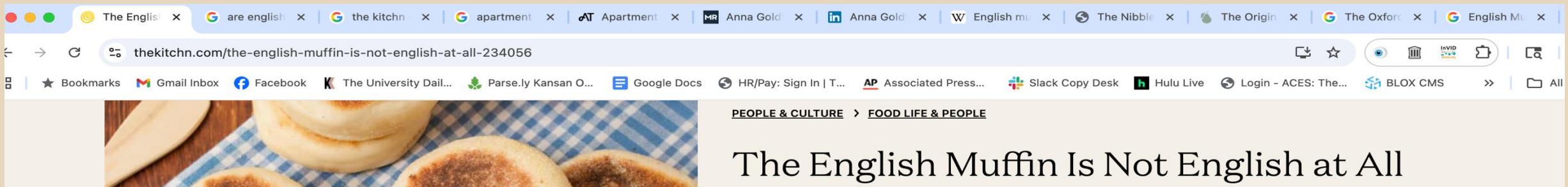
Friendship explainer, author and journalist. Called "the @NYTimes friendship correspondent." MODERN FRIENDSHIP out now! annagoldfarb.substack.com/

**Anna Goldfarb's Biography** [Read Full Bio →](#)

Anna Goldfarb is based in Philadelphia and writes about relationships, friendships, and larger cultural trends. Her work has appeared in The New York Times, Vice, Washington Post, and more. She's the author of the humor memoir, "Clearly, I Didn't Think This Through" (Berkley Books, Penguin).

THE CLAIM: English muffins were invented in New York

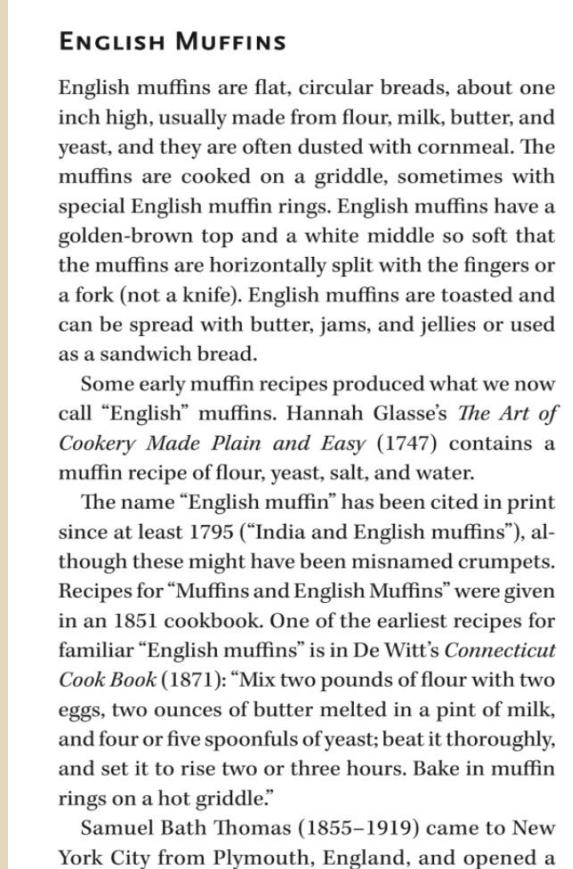
# Quick example of lateral reading:



The screenshot shows a browser window with the URL [thekitchn.com/the-english-muffin-is-not-english-at-all-234056](https://www.thekitchn.com/the-english-muffin-is-not-english-at-all-234056). The page title is "The English Muffin Is Not English at All". The page content discusses the history and name of English muffins, noting they are not actually from England. It includes a photograph of English muffins and a sidebar with links to "PEOPLE & CULTURE" and "FOOD LIFE & PEOPLE".



The screenshot shows the Wikipedia article on English muffins. The page title is "English muffin". It includes a summary, a section on "Alternative names", and a "Media" section with a photograph of a split and toasted English muffin. The text discusses the history and name of English muffins, noting they are not actually from England.



The screenshot shows an excerpt from the book "The Oxford Encyclopedia of Food and Drink in America: 3-Volume Set". The section is titled "ENGLISH MUFFINS". It describes English muffins as flat, circular breads, about one inch high, usually made from flour, milk, butter, and yeast, and they are often dusted with cornmeal. The muffins are cooked on a griddle, sometimes with special English muffin rings. English muffins have a golden-brown top and a white middle so soft that the muffins are horizontally split with the fingers or a fork (not a knife). English muffins are toasted and can be spread with butter, jams, and jellies or used as a sandwich bread.

Some early muffin recipes produced what we now call "English" muffins. Hannah Glasse's *The Art of Cookery Made Plain and Easy* (1747) contains a muffin recipe of flour, yeast, salt, and water.

The name "English muffin" has been cited in print since at least 1795 ("India and English muffins"), although these might have been misnamed crumpets. Recipes for "Muffins and English Muffins" were given in an 1851 cookbook. One of the earliest recipes for familiar "English muffins" is in De Witt's *Connecticut Cook Book* (1871): "Mix two pounds of flour with two eggs, two ounces of butter melted in a pint of milk, and four or five spoonfuls of yeast; beat it thoroughly, and set it to rise two or three hours. Bake in muffin rings on a hot griddle."

Samuel Bath Thomas (1855–1919) came to New York City from Plymouth, England, and opened a



The screenshot shows an article from Mother Earth News. The title is "What Are English Muffins Called in England?". The text discusses the history of English muffins, noting they are called "English" in the United States to distinguish them from American-style cake muffins. It mentions that Hannah Glasse published the first recorded muffin recipe in her 1747 cookbook, *The Art of Cookery Made Plain and Easy*.

Do other websites agree with the claim?

Left: Wikipedia article on English muffins:

Center: Excerpt from the book "[The Oxford Encyclopedia of Food and Drink in America: 3-Volume Set](#)

Right: Article from Mother Earth News

# Quick example of lateral reading:

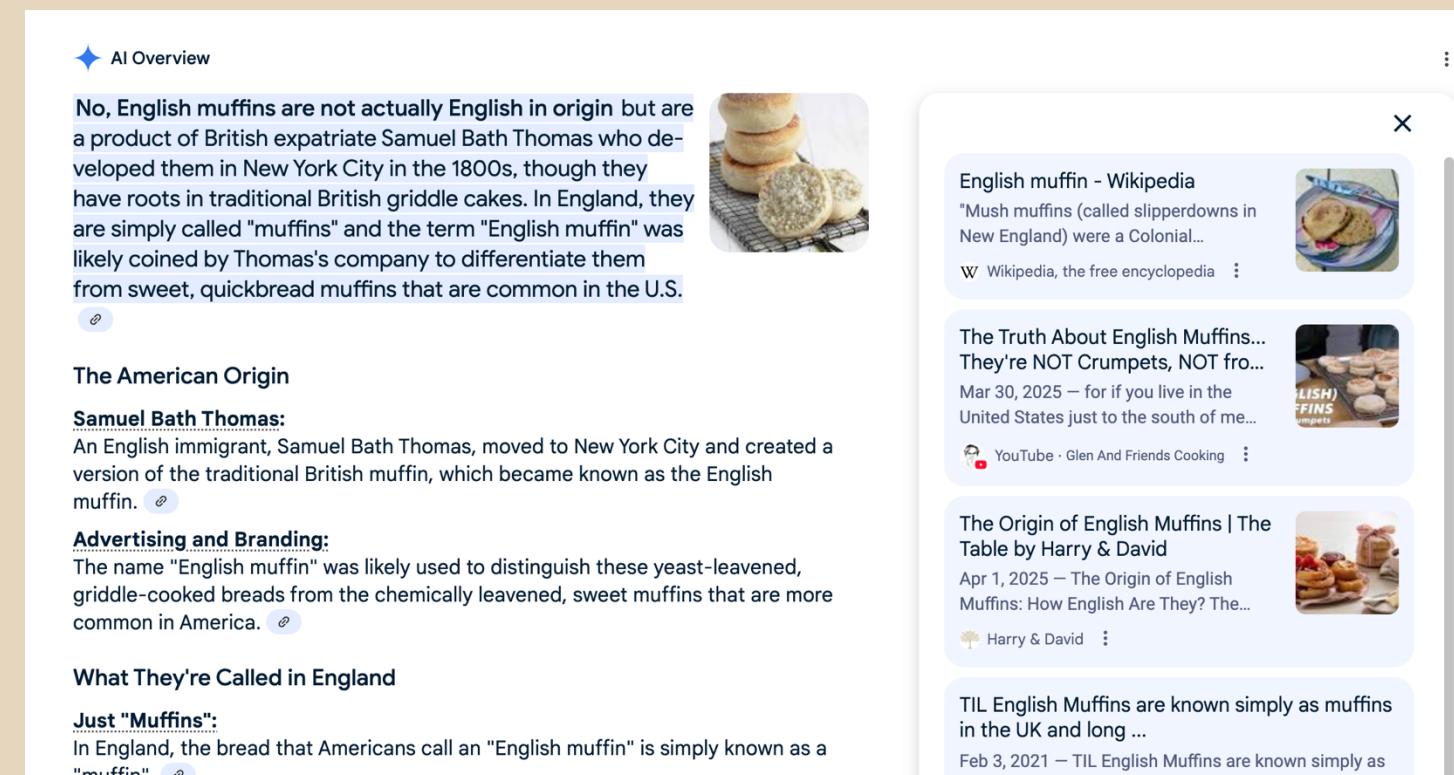


The screenshot shows a web browser with a tab bar at the top containing various links. The main content is an article from [thekitchn.com](https://thekitchn.com/the-english-muffin-is-not-english-at-all-234056) titled "The English Muffin Is Not English at All". The article features a photo of English muffins on a blue and white checkered cloth. The URL in the address bar is [thekitchn.com/the-english-muffin-is-not-english-at-all-234056](https://thekitchn.com/the-english-muffin-is-not-english-at-all-234056).

Don't be fooled by the AI overview.

Ask:

- What sources is AI using?
- Are those sources trustworthy?
- If there are multiple sources, do they link back to a common source?
- What do sources not listed by AI say?



The screenshot shows a search results page for "English muffin". The top result is an article from [Britannica](https://www.britannica.com/food/English-muffin) titled "English muffin". The page includes a photo of English muffins, a section on "AI Overview", and several sub-sections: "The American Origin", "Samuel Bath Thomas", "Advertising and Branding", "What They're Called in England", and "Just 'Muffins'". To the right, there are several cards with related links, including "English muffin - Wikipedia", "The Truth About English Muffins...", "The Origin of English Muffins | The Table by Harry & David", and "TIL English Muffins are known simply as muffins in the UK and long ...".

# An aside:



## THE COMMENTS ON THIS STORY ARE WORTH READING!

 **GoldCloud**  
12 February, 2022

Are you crazy? Where the hell did you get that nonsenses? The Art of Cookery Made Plain and Easy (16th century) Chapter 17: Of Made Wines, Brewing, French Bread, Muffins, &c. Is this some kind of comic blog?

Reply ·  17 · Share

 **foracle8194**  
5 September, 2016

I think you needed to read the source material more carefully. Muffins have existed for centuries in Britain, hence the old nursery rhyme 'Have You Seen the Muffin Man?' Thomas just introduced them in the US.

Reply ·  10 · Share

 **user8915418**  
23 June, 2023

absolute nonsense

Reply ·  · Share

 **GreenPlanet**  
7 September, 2016

Love all the comments. I learned more from the comments than from the article! Thank you, internet! <3

Reply ·  11 · Share

# Evaluating website credibility

## CRAAP method:

It's a simple checklist that focuses on 5 things ...

- currency
- relevance
- authority
- accuracy
- purpose

# Evaluating website credibility

## The Four Moves

S I F T



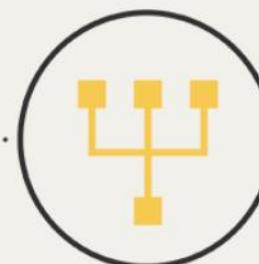
Stop



Investigate  
the source



Find better  
coverage



Trace claims,  
quotes and media to  
the original context

Method taught by Mike Caulfield; read more here:  
<https://hapgood.us/2019/06/19/sift-the-four-moves/>

# Evaluating website credibility

Brooke Borel notes another method in her book  
“The Chicago Guide to Fact-Checking”

1. Who is telling me this?
2. How does he or she know this?
3. Given #1 and #2, is it possible that she or he is wrong?
4. If the answer to #3 is "yes," find another, unrelated source.
5. Repeat until answer to #3 is "really f—ing unlikely."

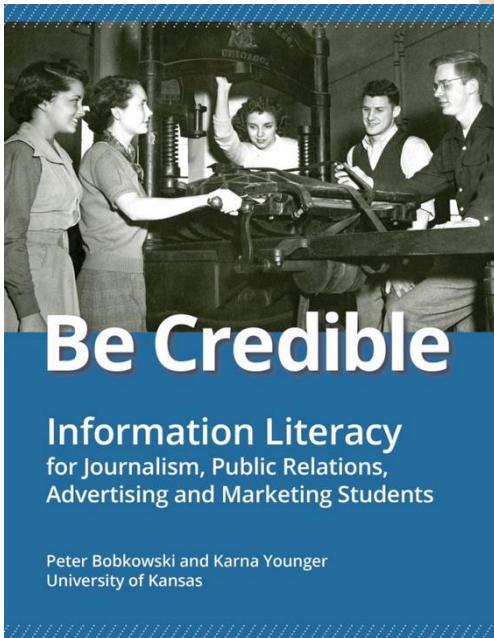
UNTIL PROCESS IS COMPLETE  
ASSUME BULLSHIT



[www.michellenijuhis.com](http://www.michellenijuhis.com)

(Method from journalist Michelle Nijuhis)

# Evaluating website credibility



## Credibility Cues method

(from the book “Be Credible” by Peter Bobkowski and Karna Young)

The cues:

1. Publisher and Author: Who are they?  
What's their credibility record?
2. Content: What is the substance? Is it biased?
3. Writing style: Does it match what you expect?
4. Sources used: Are they credible?
5. Date: When was it published?
6. Images: Are they trustworthy? Stock?
7. Ads: Do they tell you anything?

Here's a link to the book: <https://opentext.ku.edu/becredible/>

# Evaluating website credibility

## Credibility Cues method

(from the book “Be Credible” by Peter Bobkowski and Karna Young)

What should you do with Credibility Cues?

- Identify each cue available.
- Examine each cue and collect evidence about it.
- Decide whether each cue contributes to or detracts from the overall credibility of the source.
- Provide an overall credibility assessment for the source.

# Evaluating website credibility

## Other things to check, regardless of the method used:

- Is the source primary, secondary or tertiary? (Always look for primary sources.)
- Can you independently verify the fact with more than one source? (This is especially true if the source isn't primary.)
- Are your two sources connected? (Connected sources can easily both be wrong. So using unconnected sources makes the information more reliable.)

Want to know more or to use some of my material?  
You can contact me at [gberendzen@ku.edu](mailto:gberendzen@ku.edu)  
Or check out past presentation on [gberendzen.com](http://gberendzen.com)

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Any  
questions?

