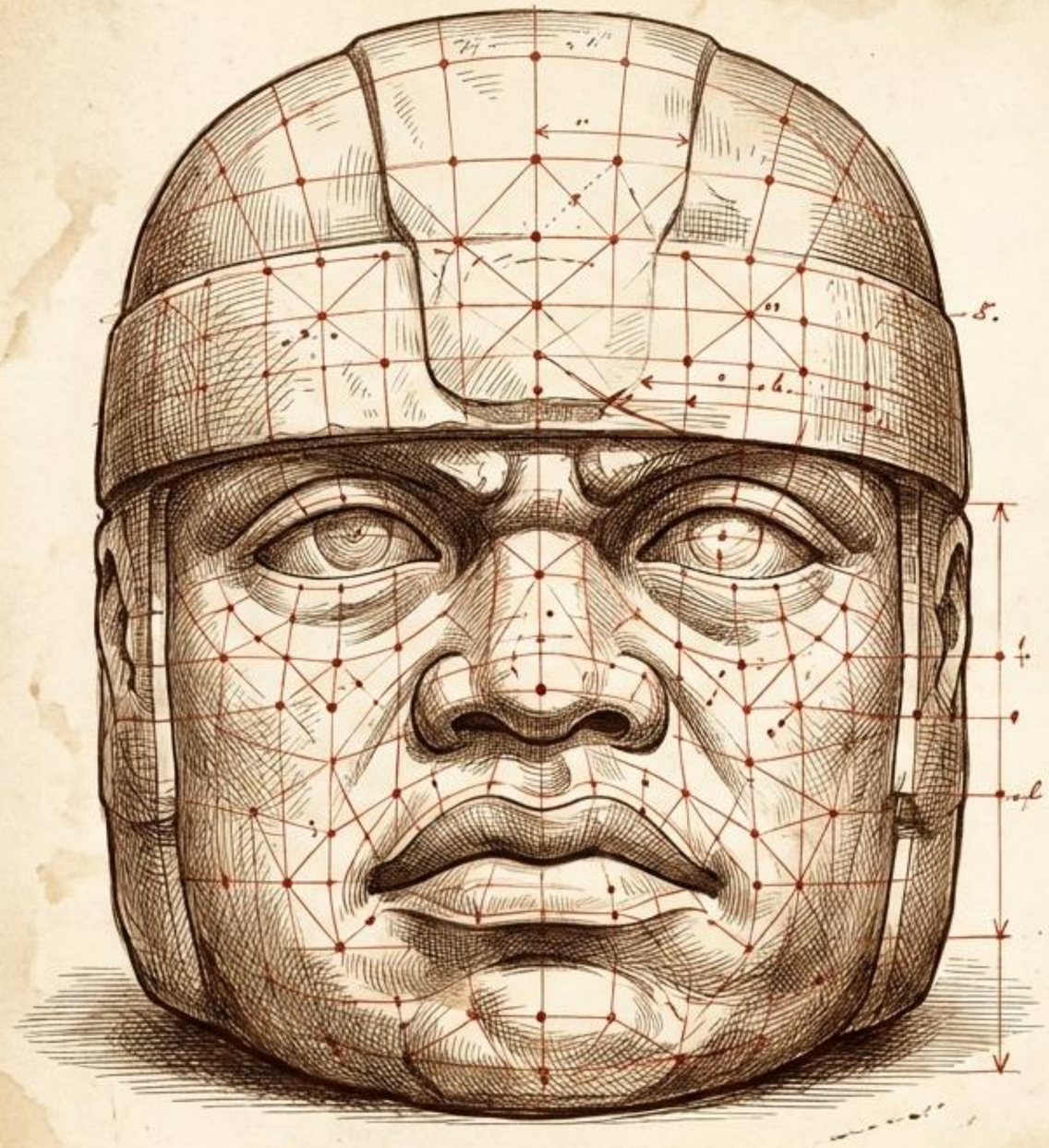


From Stone to Signal: Multimodal Retrieval as Method in Archaeological Research

Digital Humanities Congress, University of Sheffield | September 2026

Larissa Terranova | Centro Studi Americanistici Circolo Amerindiano, Perugia

NotebookLM
Gemini Notebook

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Key takeaways



Larissa Terranova
DHI Conference 2026, Sheffield

History is Found in the Connections

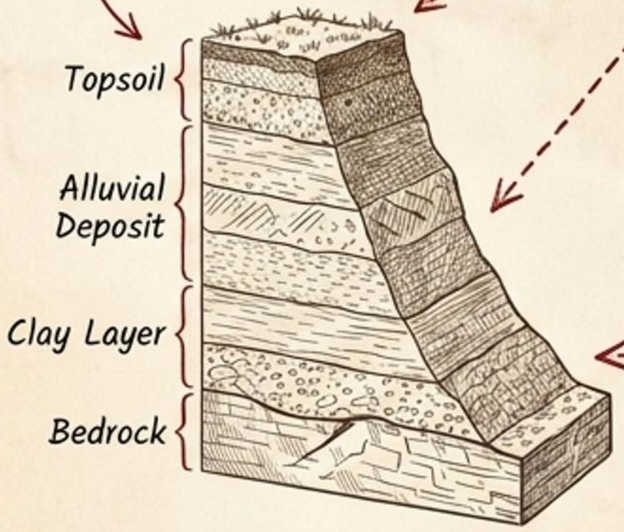
Textual Clues

Notes and past research



Spatial Context

Where things are buried



Physical Artifacts

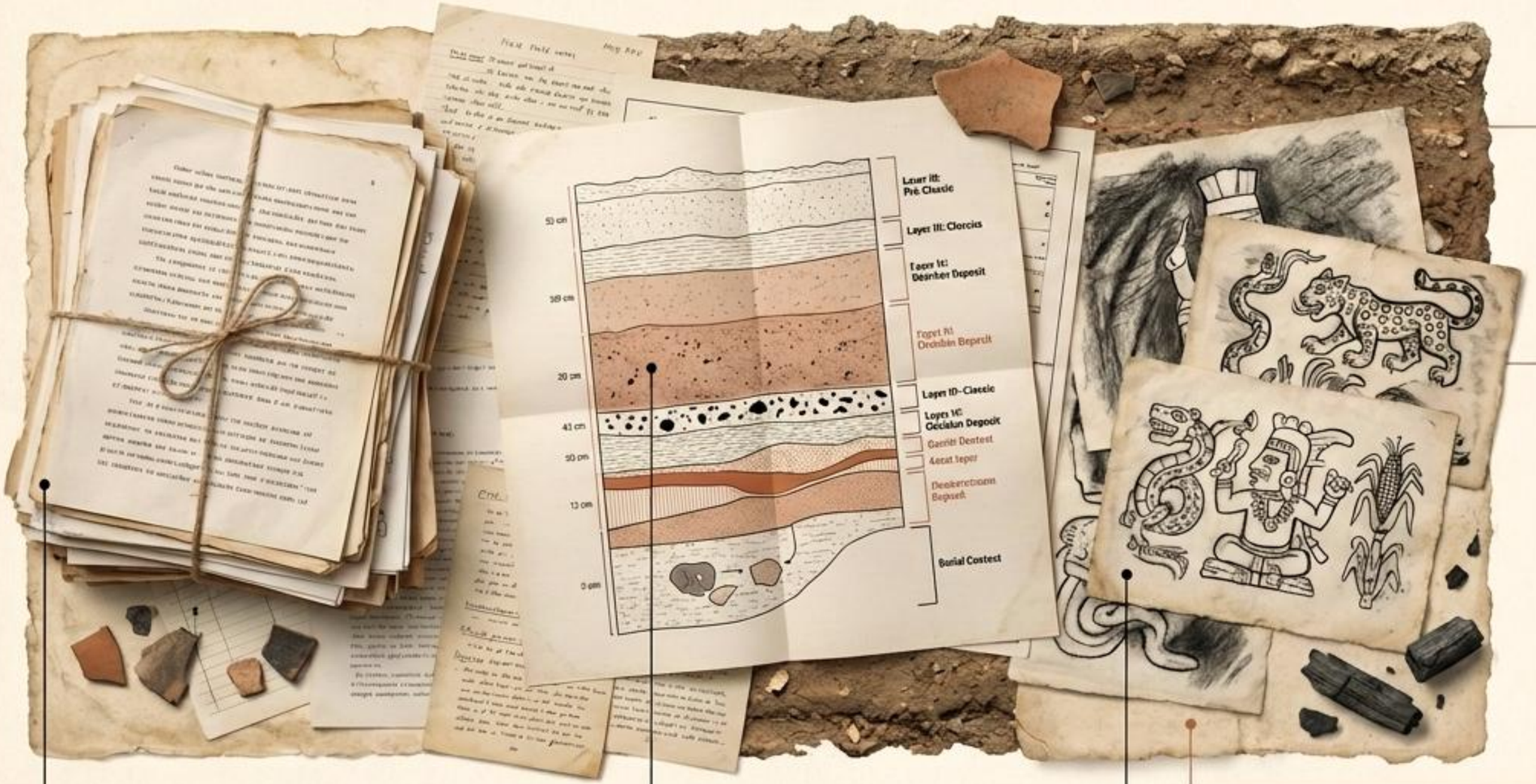
The objects themselves



Archaeological knowledge is scattered across different forms. They only make sense when read together.

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The Corpus: *Ruta de la Obsidiana*



Scholarly Texts

Stratigraphy

Site Iconography

Context

Doctoral corpus on Olmec urbanisation

Challenge

Dense, heterogeneous archives where text and image co-constitute interpretation

Goal

To build a ‘structured access layer’ over a curated archaeological archive.

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Finding Faster Is Not Enough

Archaeology is a discipline of slow attention.



- AI can retrieve information quickly.
- Archaeological interpretation still requires evidence.

How can we use AI to search archaeological archives without losing the critical link between an answer and its evidence?

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How Heritage Lens Works

A retrieval pipeline designed for archaeological research

1. Understand



Search your question across texts by meaning, not just keywords.

2. Connect



Find relevant images and documents that relate to the question.

3. Diversify



Select a balanced set of different types of evidence, not just more of the same.

4. Evaluate



Check the quality and relevance of sources to support a reliable answer.

5. Ground



Generate an answer that stays connected to its sources, which you can trace.



Your Answer with Sources

- See the evidence
- Understand the connections
- Know what the system cannot establish



Technology in service of interpretation.

Heritage Lens does not replace the slow work of analysis;
it reorganises the conditions under which that work becomes possible.

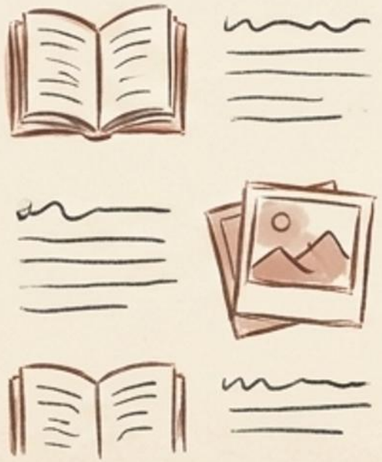


Meet Heritage Lens

What can you tell me about the Olmecs?

The Answer

The Sources



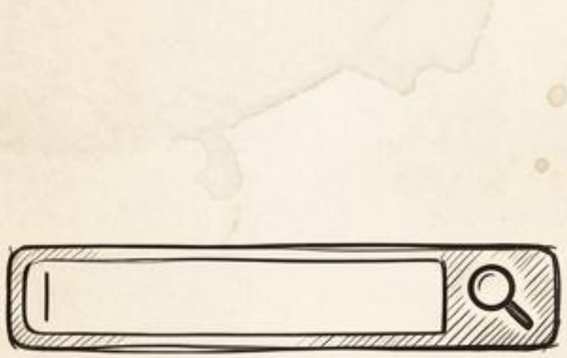
What The System Doesn't Know



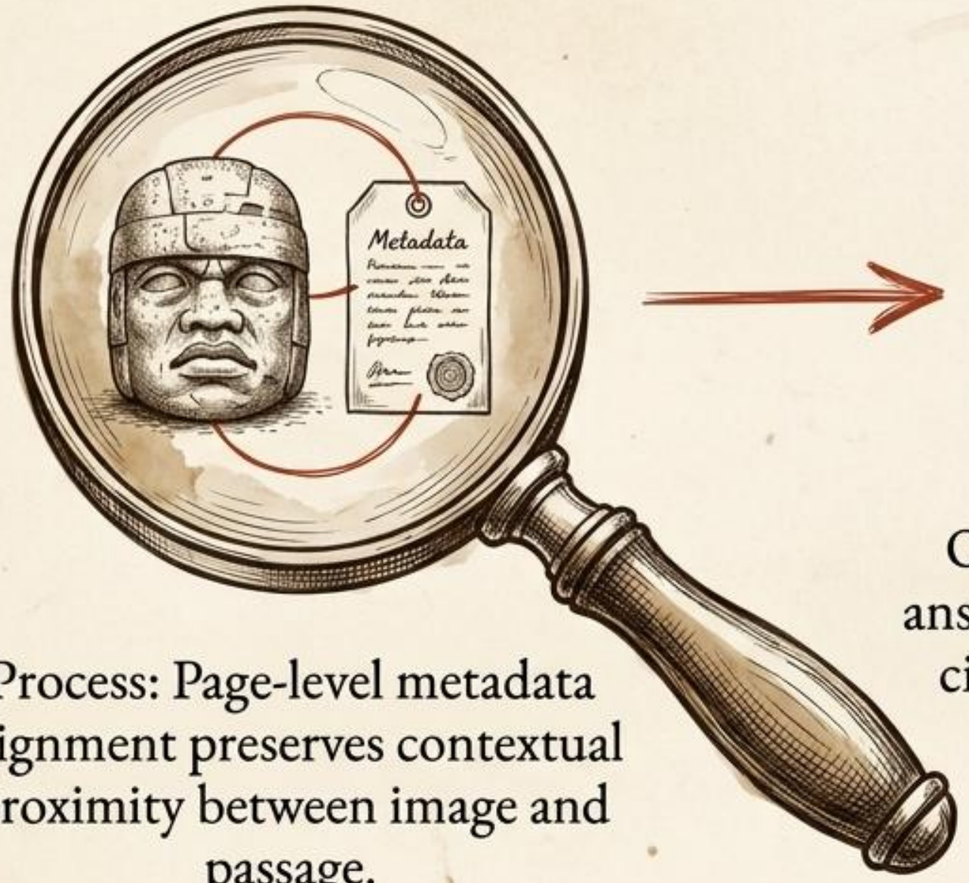
This AI doesn't just give answers. It actively forces the user to look at its sources and its blind spots.

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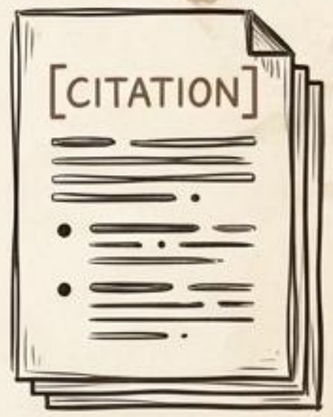
The Logic of the Prototype: Search, Retrieve, Explain



Query: Navigating the dense, heterogeneous Olmec archive.



Process: Page-level metadata alignment preserves contextual proximity between image and passage.



Output: Generated answers with grounded citation traceability.

The system does not replace the slow work of analysis; it reorganises the conditions under which that work becomes possible.

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Fork

Research Context

Target Corpus: Heritage Lens Agent PDFs

Diagnostics - DB: 19.6 MB | ZIP: 10.2 MB

This agent actively retrieves information from the curated corpus to ensure epistemic transparency.

Heritage Lens Agent

KXSB AR26 — MISSION 4

Search Archive | Video Evaluator

What can you tell me about the Olmec cosmogony?

User types research question here and clicks Search

Search

THE ANSWER



SOURCES

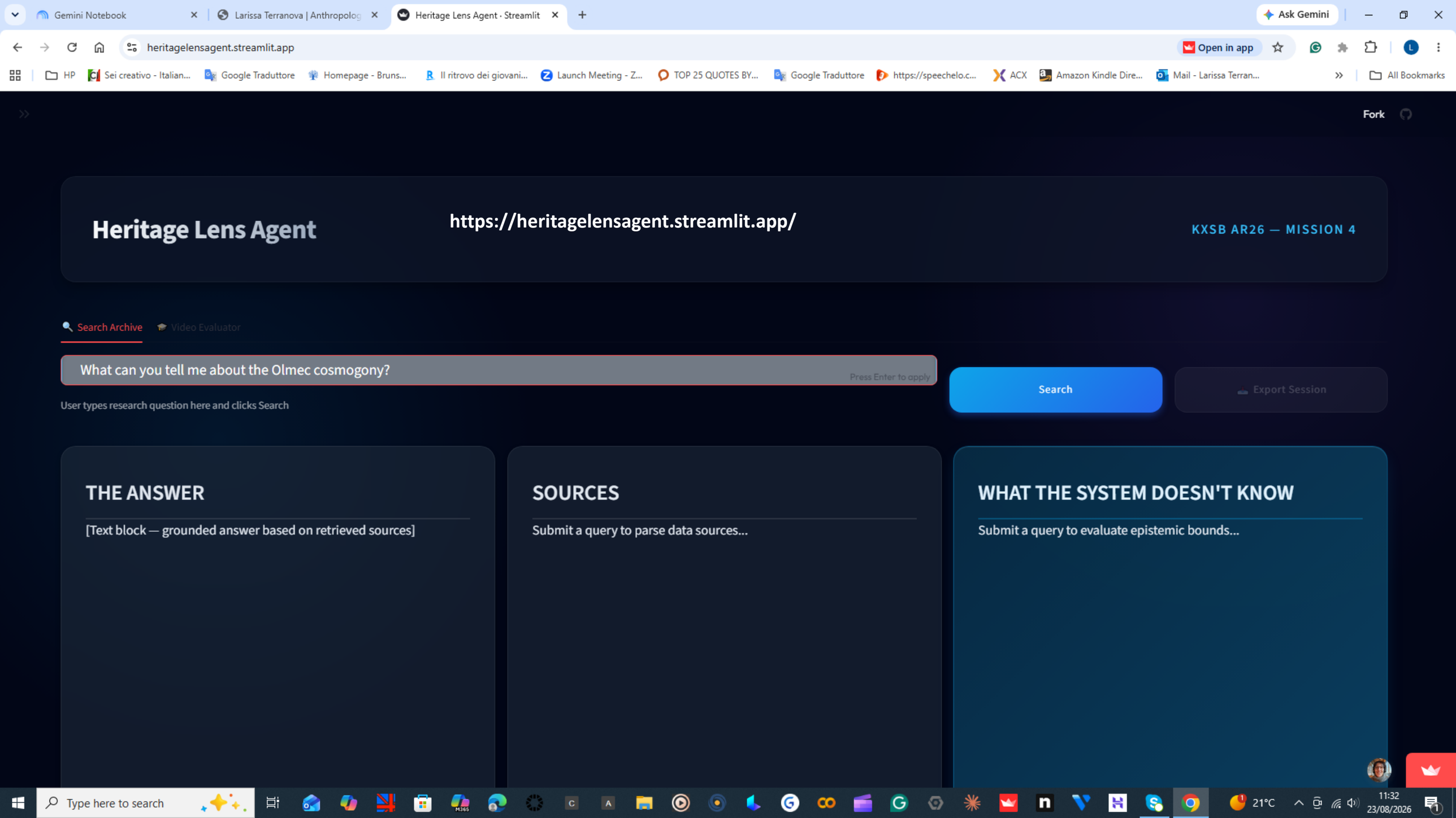
MESOAMERICA TRA SEGNO E SIGNIFICATO, Romolo Santoni, Page 56, Book, Centro Studi Americanistici - Circolo Amerindiano

Formazione della Citta in Mesoamerica, Larissa Terranova, Page 60, Thesis, Italian University Press

WHAT THE SYSTEM DOESN'T KNOW

⚠ SOURCE BIAS

All sources are from western academic perspectives, which may influence the interpretation of Olmec cosmogony through a specific cultural lens


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Larissa Terranova | Anthropolog
Heritage Lens Agent · Streamlit
Ask Gemini
heritagelensagent.streamlit.app
Open in app
HP
Sei creativo - Italian...
Google Traduttore
Homepage - Bruns...
Il ritrovo dei giovani...
Launch Meeting - Z...
TOP 25 QUOTES BY...
Google Traduttore
https://speechelo.c...
ACX
Amazon Kindle Dire...
Mail - Larissa Terran...
All Bookmarks
Fork
Heritage Lens Agent
https://heritagelensagent.streamlit.app/
KXSB AR26 — MISSION 4
Search Archive
Video Evaluator
What can you tell me about the Olmec cosmogony?
Press Enter to apply
User types research question here and clicks Search
Search
Export Session
THE ANSWER
[Text block — grounded answer based on retrieved sources]
SOURCES
Submit a query to parse data sources...
WHAT THE SYSTEM DOESN'T KNOW
Submit a query to evaluate epistemic bounds...
Type here to search
21°C
11:32
23/08/2026

The Illusion of Proximity

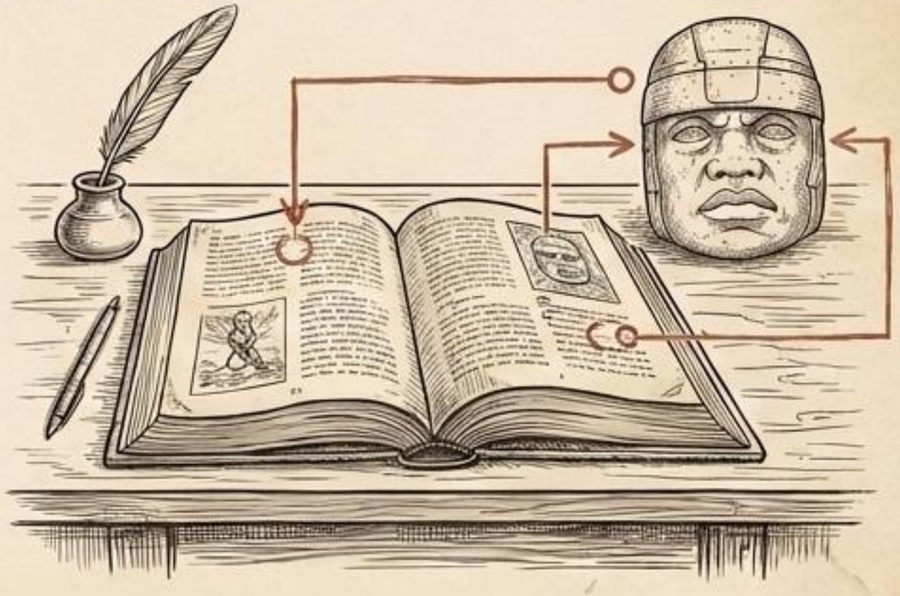
Found by Algorithm



Images and text are grouped together just because the math says they are similar. Functions only as a visual decoration.

≠

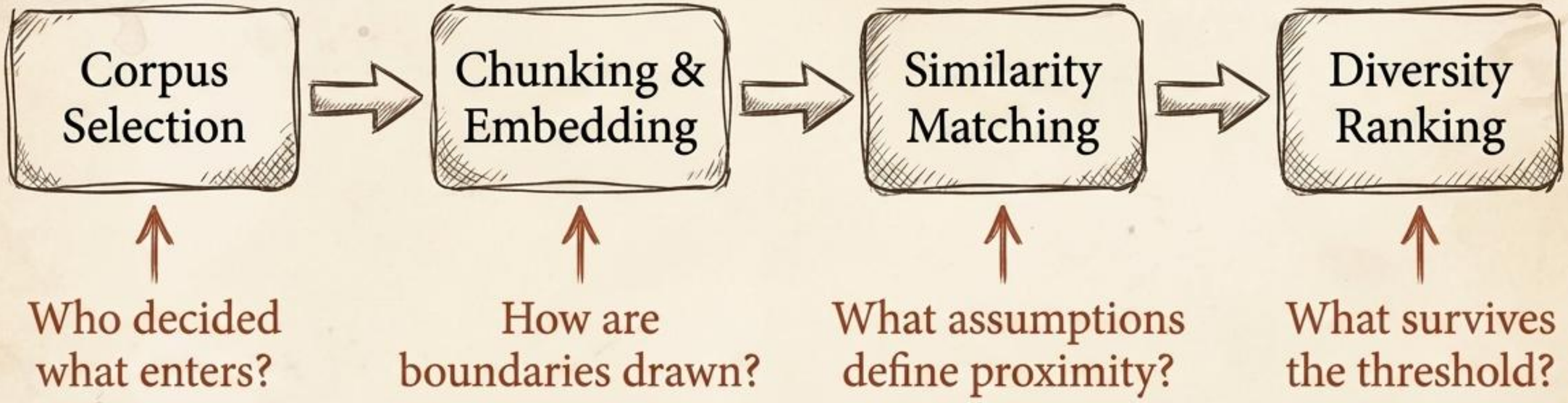
Connected by Real Evidence



Images function as active proof. Relationships rely on context, origin, and human historical inquiry.

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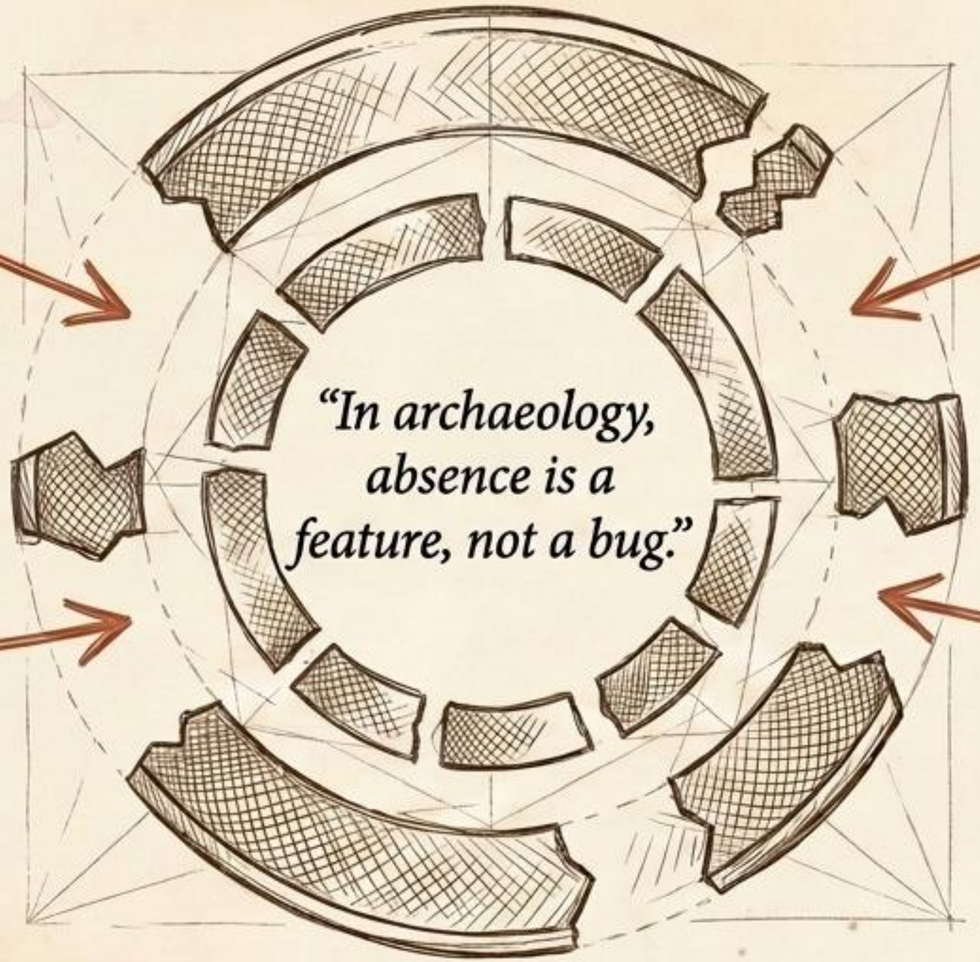
Retrieval is a Methodological Act



Retrieval is not neutral. It actively participates in constructing the evidential field available for interpretation.

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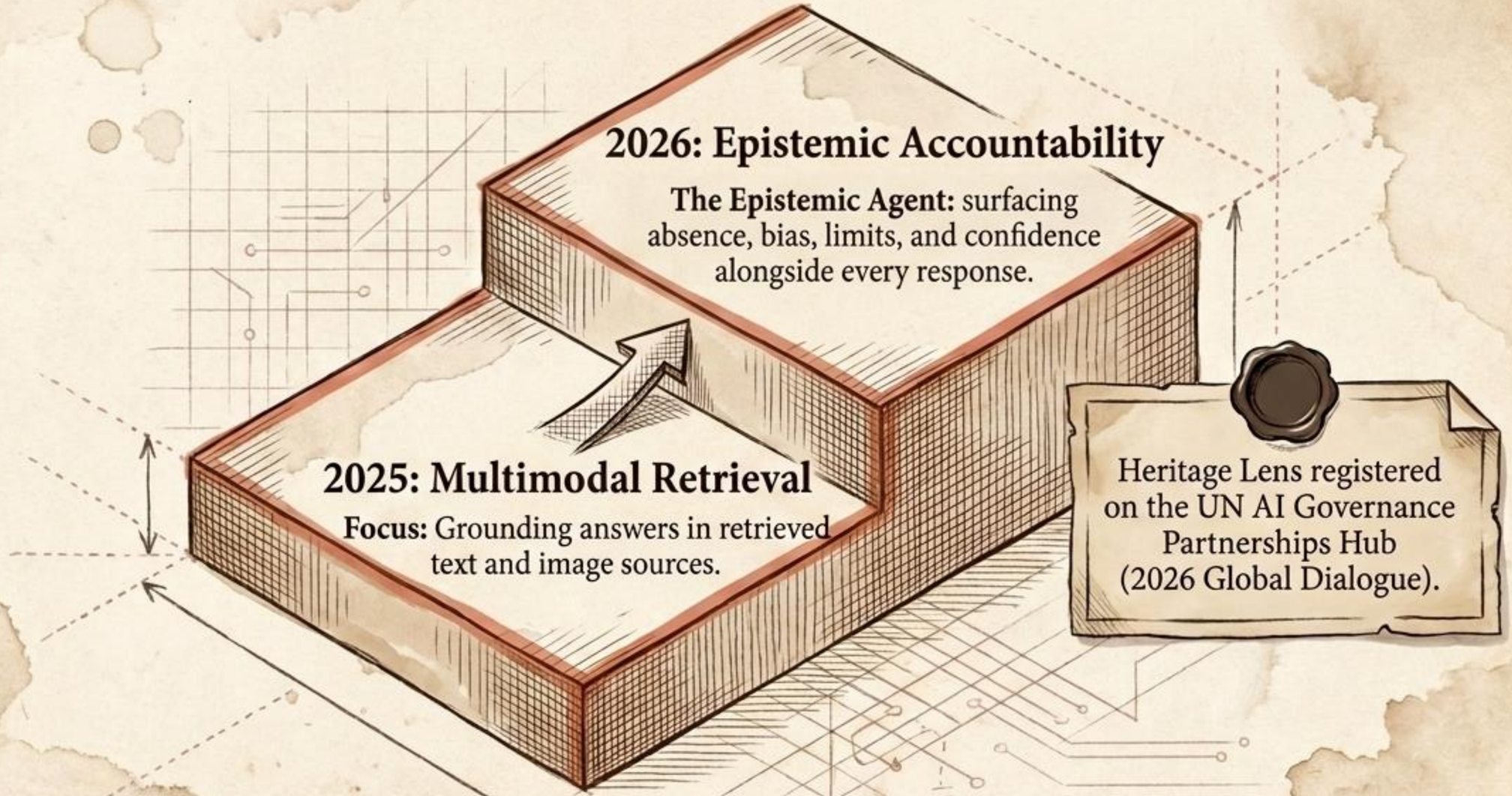
Mind the Gaps: The Value of Missing Data



A missing object or incomplete context is meaningful evidence.
A fluent AI answer can make these critical gaps remarkably easy to forget.

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Moving Toward Epistemic Accountability



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The Epistemic Agent

Supporting responsible answers in scholarly AI.



1. Report Absence

Explicitly state what information is missing from the archaeological record.



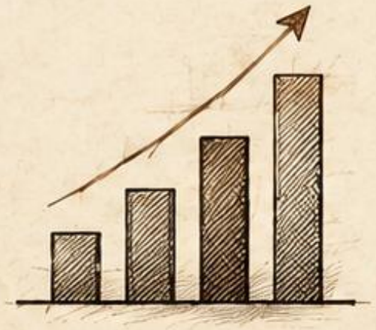
2. Identify Bias

Identify possible colonial, institutional, or historical biases in the sources retrieved.



3. Define Limits

Define the boundaries of what the evidence can reasonably support.



4. Show Confidence

Communicate how certain we can reasonably be, based on the quality of evidence.

Not just what the system found — but what it can and cannot know.

The Friction of Interpretation



Interpretation takes time

Archaeological meaning emerges through relationships between fragments, contexts, material evidence and absence.

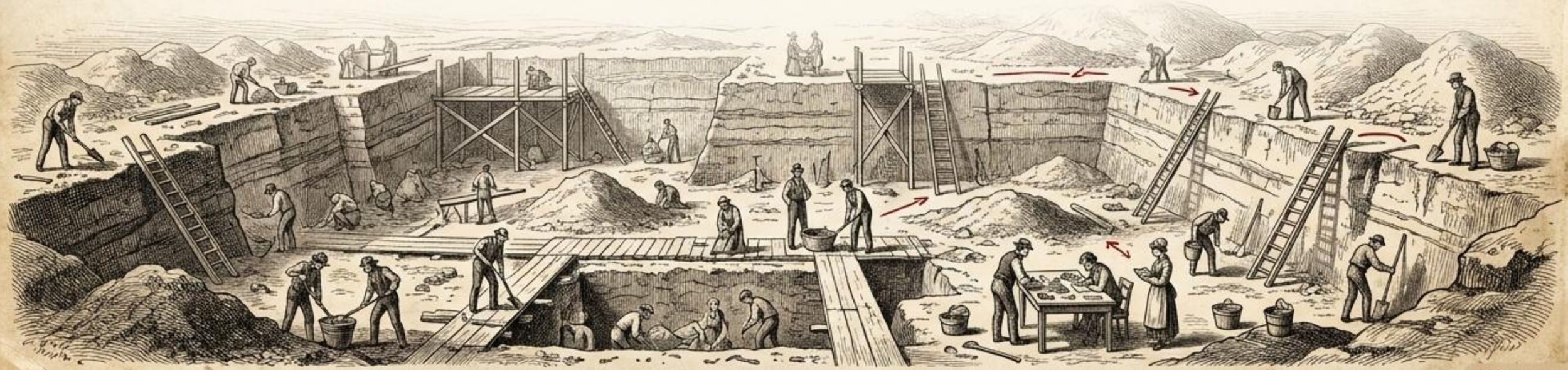
Technology can accelerate retrieval. It cannot remove the need for interpretation.

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Shaping How We Encounter Memory

“If archives hold memory, AI retrieval systems shape how we encounter it.”

The goal is not to automate interpretation, but to ensure the technology never hides its own tracks.



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Questions & Discussion

Feedback Form

https://heritagelensagent.streamlit.app/



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Thank you.