# WHAT REMAINS?

## THE EVIDENCE, MEMORY & NARRATIVE FIELD GUIDE

*A practical companion to the interactive laboratory at sahiltayal.com/what-remains/.*

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## THE CENTRAL PUZZLE

A fact can remain true even when the records that once supported it disappear. But without surviving evidence, responsible people should become less certain about claims concerning that fact. This field guide studies that difference.

This publication uses invented examples, real research methods, and explicit distinctions among observation, inference and imagination. It is not an allegation about any real institution or historical event.

| EVENT | TRACE | CLAIM |
| --- | --- | --- |
| What happened | What can still be inspected | What we are justified in saying |

# 01 Three worlds that are easy to confuse

**Ontology** asks what exists or occurred. **Epistemology** asks what we can know and why. **Historiography** studies how accounts of the past are constructed and evaluated.

## The crucial separation

| Question | Better formulation |
| --- | --- |
| Did it happen? | A question about the world. |
| Can we demonstrate it? | A question about available traces and methods. |
| Why is this account familiar? | A question about preservation, repetition and selection. |

None of these questions automatically answers the others. A missing photo does not establish that an event never happened; a surviving photo does not establish every accompanying interpretation.

## Worked example: the lost notebook

A field biologist accurately sees a rare bird and writes it down. Years later the notebook is destroyed. The original observation is not retroactively reversed. A researcher examining the claim now, however, may lack enough evidence to verify it. Distinguish historical reality from present justifiability.

**Exercise:** Write three separate sentences about a lost record: (1) what may have happened, (2) what is known now, and (3) what evidence would help.

# 02 The evidence chain

An account passes through stages. Each stage can introduce error, while each additional independent path may reduce dependence on a single fragile source.

| Stage | Question | Risk |
|---|---|---|
| Observation | What did the instrument or person register? | Blind spots, noise |
| Capture | How was a trace recorded? | Missing data, transcription |
| Storage | What keeps the trace accessible? | Corruption, loss |
| Authentication | How is provenance checked? | Misattribution, alteration |
| Interpretation | What explanation is supported? | Confounding, overreach |

## Do not confuse quantity with independence

Five stories copied from one original post do not form five independent observations. A distinct sensor with separate data collection may be meaningfully independent, although it can still share systematic errors.

## Evidence audit worksheet

- What exactly is the claim?
- Which surviving materials bear directly on it?
- Are these sources genuinely independent?
- What is their provenance and possible failure mode?
- What prediction or observation could distinguish rival explanations?

# 03 The destruction experiment

Imagine a blue flash appears in a fictional room at 21:07. A detector logs a spike, a separate camera records the moment, an observer writes a note, and a colleague later repeats the story.

| Records accessible | What can be said responsibly |
|---|---|
| All four | Several channels agree about an event; check device and provenance before identifying cause. |
| Camera + notebook | Some corroboration remains; original numerical readings are missing. |
| Notebook + retelling | Accounts remain, but they may be dependent and subject to memory error. |
| None | The event might have happened, but the archive no longer demonstrates it. |

**Important:** This is not a quantitative confidence scale. Evidence quality depends on validity, error processes, correlation and the claim being tested; a count alone does not tell us probability.

## Case reflection

A historian cannot retrieve an old audio recording. Two witnesses describe incompatible details. Does disagreement prove there was no event? No. It changes what can be established about its features and suggests targeted investigation.

# 04 Why narratives survive

A story becomes widely repeated through ordinary processes: attention, comprehensibility, fit with existing concepts, discoverability, accessibility, preservation budgets and social memory. Some of these are benign; some can produce systematic blind spots.

## Four selection filters

• **Capture:** events that never produced documents are harder to reconstruct.

• **Retention:** records may disappear through decay, cost, migration or chance.

• **Retrieval:** a surviving item may remain effectively invisible without metadata and search.

• **Retelling:** simpler, more memorable formulations can outcompete complex ones.

None of these mechanisms proves purposeful manipulation. A claim about deliberate deletion or fabrication requires specific evidence about the alleged action.

## Reframe the question

Instead of asking "Who controls all reality?" ask "What were the selection criteria, what was lost, what remains available, and what alternative sources can be checked?" This turns a grand suspicion into testable subquestions.

# 05 Alternative explanations and uncertainty

In philosophy of science, **underdetermination** describes situations in which evidence is compatible with more than one theory. It does not follow that every possible theory deserves equal confidence. Consider prior evidence, explanatory scope, independent tests and new predictions.

## An ordinary case

A houseplant droops. Hypothesis A: insufficient water. Hypothesis B: root damage. Hypothesis C: excessive heat. A photograph is consistent with all three. Soil moisture, root inspection and temperature history can differentiate them.

| Overconfident | Calibrated |
| --- | --- |
| The photo proves thirst. | The photo shows drooping; cause remains to be tested. |
| Nobody can know anything. | We can gather observations with higher diagnostic value. |

**Try it:** For any claim, write your leading explanation, two plausible alternatives, and the single observation most likely to distinguish them.

# 06 Preservation is an epistemic practice

Evidence must remain intelligible and intact, not merely copied. Good archival practice involves redundant storage, provenance, metadata, version history and periodic integrity checks.

## A simple preservation protocol

• Keep multiple copies, including at least one offsite or on a separately managed system.

• Record the date, creator, format, software requirements and source context.

• Create and retain cryptographic checksums to detect later file changes.

• Verify backups by actually opening and inspecting sampled files.

• Preserve original data separately from derived or edited versions.

• Document migrations and changes so readers can track the chain.

A checksum helps establish *fixity*: whether bits changed relative to a stored reference. It cannot, on its own, establish that the contents were truthful when captured.

Library of Congress guidance emphasizes backups, versioning, descriptive metadata and fixity monitoring; its glossary distinguishes integrity concerns from format migration.

# 07 Reproducibility, replicability, and honest doubt

The National Academies (2019) distinguishes **reproducibility**, repeating computations using the same data and methods, from **replicability**, collecting new data to address the same scientific question. Both help evaluate claims, but they answer different questions.

## Six virtues of responsible inquiry

• Make a claim precise enough to be tested.

• Record methods and assumptions before interpreting outcomes.

• Preserve negative and null results when informative.

• Report uncertainty rather than disguising it.

• Invite independent challenges, not just agreement.

• Update conclusions when stronger evidence arrives.

**Practice:** Think of a claim you hold strongly. Write what would change your mind. If nothing could, you may be protecting an identity or preference rather than testing a proposition.

# 08 The narrative revision clinic

Fictional input: "A blue light was observed during the experiment." Rewrite the same information three ways, then assess what each adds beyond the observations.

| Framing | Sentence | Potential issue |
|---|---|---|
| Cautious | A blue light was observed; its source is uncertain. | Less dramatic, more calibrated |
| Excited | An extraordinary phenomenon transformed the lab. | Adds an unsupported evaluation |
| Skeptical | Equipment error and external light remain alternatives. | Useful possibilities, not proven conclusions |

## Revision worksheet

• Underline each observation-based phrase.

• Circle each inference or causal claim.

• Mark any emotionally loaded adjective.

• Add one sentence describing the most important uncertainty.

• Identify what new evidence could justify a stronger headline.

Being readable and being careful are not opposites. Good narrative craft can make uncertainty itself engaging.

# 09 A pocket toolkit for claims

| Move | Ask yourself |
| --- | --- |
| Clarify | What precisely is being asserted? |
| Trace | Where is the earliest accessible record? |
| Authenticate | What establishes its source and integrity? |
| Triangulate | Do independent pathways converge? |
| Compare | What else explains these observations? |
| Preserve | What would a later investigator need? |
| Qualify | What remains unknown? |
| Revise | What would change the conclusion? |

## A one-minute decision rule

If records are strong, speak clearly. If they are mixed, speak conditionally. If they are missing, describe the limits rather than filling the gap with a preferred story. In every case, separate absence of proof from proof of absence.

# 10 Closing: a method, not a mythology

The philosophical anxiety is real: archives are fragile, explanations compete, and no observer can capture the whole world. The practical response is neither to trust every official-looking document nor to conclude that anything can be invented. It is to build transparent, criticisable methods for learning.

We cannot demand that memory be perfect. We can demand that inquiry make room for correction.

## Read further / verified references

**Stanford Encyclopedia of Philosophy, "Underdetermination of Scientific Theory" (revised 2023).**
https://plato.stanford.edu/entries/scientific-underdetermination/

**National Academies of Sciences, Engineering, and Medicine (2019), "Reproducibility and Replicability in Science."**
https://nap.nationalacademies.org/skim.php?chap=1-4&record_id=25303

**Library of Congress, "Digital Collections Management Glossary."**
https://www.loc.gov/programs/digital-collections-management/glossary/

**Library of Congress, "Digital Preservation Practices."**
https://guides.loc.gov/music-notation-preferred-preservation-formats-for-digital-scores/digital-preservation-practices

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