Repeating the Millett Experiment on the Digitized Canvas

A pre-registered, blinded replication of the 1895 Spanish-Armada reproduction test — the first full-circle trial of Dr. Orville Owen's Word Cipher in 130 years · Walter H. Wilkinson, New Gorhambury (gorhambury.org) · August 2026

Background. In 1895 the Boston publisher J. B. Millett visited Dr. Owen's Detroit workshop and tested the cipher wheel: given only the key-word for the Spanish Armada story, he copied about one hundred lines “from various parts of the wheel following the key-words,” assembled them — and the result matched, nearly exactly, a typescript Owen had prepared in advance, the only differences being Millett's own copying slips. If accurate, this demonstrates a rare property: a **deterministic, operator-independent procedure**. Its one weakness was that the advance typescript's independence could not be verified. The protocol below reproduces the experiment on the digitized canvas under modern controls that cure that weakness: pre-registration, blinding, multiple independent operators, and quantitative scoring.

Precondition. Digital scan of the canvas completed (non-contact), images stitched, and the fragment catalog built (Phase 0 below). Nothing in this protocol touches the physical artifact.

0 Catalog requirements (inputs from the scan)

Every glued fragment on the canvas is recorded with five fields:

- **Wheel coordinate** — its linear position along the ~1,000-ft canvas (the physical order; the decisive field).
- **Source identification** — work, edition, page/line (AI-assisted matching against the first-edition reference corpus already assembled).
- **Transcription** of the fragment text.
- **Complete colour record** — every pencil mark: colour, form (circle, underline, bracket), and exactly what text it encloses.
- **Marginalia** in Owen's hand, if any.

1 The virtual wheel

A viewer presents the canvas as one continuous, searchable strip in exact physical order — a digital twin of cranking the drums. Operators interact with this and nothing else. Image hashes and full operator activity logs preserve chain of custody.

2 Fixed key materials — published in advance

- The nine Armada key-words (Owen, Vol. III): *Ocean, Sea, Vessel, Carract, Galley, Storm, Tempest, Armado, Spain*.
- The four guide words (*Fortune, Nature, Honour, Reputation*) and the documented procedure: pencil around every sentence containing the operative word; head each extracted page with its key; *like must be joined to like*; each passage used once and retired.
- **Pre-registration:** this protocol and its scoring thresholds are posted publicly (gorhambury.org and an independent registry) before the first run.

3 Blind operator runs

Operators must never have read Owen's published Armada narrative (Vols. II–III) — the modern equivalent of Owen's untrained assistants. Each works independently, without communication. Three arms:

Arm A — procedure only (colour-blind). The wheel is served with all pencil marks digitally suppressed. The operator traverses in wheel order, flags every sentence containing an Armada key-word, transcribes in order of encounter, and joins per the like-to-like rule. Output: an assembled Armada text.

Arm B — colour-guided. Identical, but the pencil marks are visible and are to be followed. The A vs B difference isolates what the colours contribute — the first empirical decoding of the six-colour system.

Arm C — AI operator. A language model given the identical materials and rules; a bias-free replication of each arm.

Minimum three human operators per arm, for inter-operator agreement.

4 Scoring against Owen's published text (pre-registered)

Measure	Definition
Selection agreement	Precision/recall of fragments chosen vs the fragments underlying Owen's published Armada text.
Sequence agreement	Kendall tau between the operator's fragment order and Owen's published order.
Inter-operator agreement	Convergence of independent operators on each other.

Outcome	Interpretation

High selection recall **and** high tau	**Mechanism confirmed deterministic**; Millett vindicated; sequencing identified (wheel order / colours).
High selection, tau ≈ 0	Selection is mechanical; **the sequence was editorial**.
Arm B » Arm A	The ordering information lives in the **pencil colours**.
Low agreement everywhere	The documented procedure does not reproduce Owen; his practice included undocumented judgment.

5 The computational wheel-order test (run first; no operators needed)

> Map the fragments of Owen's *published* Armada text to their canvas coordinates and test whether published order correlates with physical canvas order (rank correlation, threshold pre-registered). This single computation — available the day the catalog exists — may answer the sequencing question outright.

6 Controls

- **Foreign-key control:** run Arm A with an invented nine-word key-set. If an equally coherent narrative assembles, coherence is a property of the method, not of a hidden message.
- **Millett's own pair:** decode his 1895 *Baconiana* embedded statement with the same pipeline — the one surviving known-plaintext test case.
- **Second-story replication:** repeat the full design on a second Owen story (e.g., the Homeric material and its key-list) to demonstrate generalization.

> **Why every outcome matters.** Each branch of the decision table is a publishable result: confirmation identifies the sequencing mechanism at last; refutation localizes the composition to the decipherer; the colour arm reads the canvas's most enigmatic feature. There is no outcome in which the digitization was wasted — and no other object on earth can answer these questions.

New Gorhambury · gorhambury.org · Research by Walter H. Wilkinson · Protocol drafted August 2026. Companion documents: the bespoke non-contact scanner design package; the Source-Document Catalog specification; the first-edition reference corpus (29 works, EEBO-TCP). Primary sources: J. B. Millett, Baconiana (April 1895); Owen, Sir Francis Bacon's Cipher Story, Vols. I–V.