

LEGACY Program: Operational Correspondence Table

Bridging Theoretical Predictions to Empirical Protocols via the Janus
Quantum Topology Model

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[ZENODO Record 18209434](#)

January 12, 2026

Abstract

This document provides an operational interface for the LEGACY Program’s 85 falsifiable predictions. It maps key predictions from the three pillars—Paradoxical Biology, Paradoxical Fabrication, and Paradoxical Culture—to specific experimental protocols, calibration standards, and expected measurable signatures. Each correspondence is anchored in peer-reviewed scientific literature, transforming the theoretical Janus Quantum Topology Model (JQTM) into a testable interferometric framework. The table enables researchers to design experiments that force the system (biological, material, or noospheric) to produce a clear, quantifiable signal, the Paradoxality Index $\Pi(x)$, which indicates a transition to a Janusian regime ($\Pi(x) \geq 1.5$) or an ontological rupture. This work completes the transformation of the LEGACY Program from a speculative map to a measurable interferometer.

1 Introduction: From Map to Interferometer

The LEGACY Program establishes a falsifiable framework for investigating anomalous systems through the Janus Quantum Topology Model (JQTM). Its 85 predictions, while mathematically coherent, require concrete experimental pathways for validation or falsification. This document provides the critical link between theory and practice.

The framework is now best understood as an **interferometer**:

- **Reference Beam (Terrestrial Baseline):** Established by calibrated standards (e.g., DSM3 for magnesium, standard neuroanatomy).
- **Probe Beam (Anomalous Sample/Information):** The subject of study (e.g., alleged exotic material, JQTM-01 biological sample, an Egregore corpus).
- **Interference Pattern:** The measurable divergence between the two, quantified by the Paradoxality Index $\Pi(x) = D/\epsilon$, where D is the Contradiction Density (e.g., Kullback-Leibler divergence) and ϵ is the Epistemic Resolution (natural uncertainty).

The following table details how to generate and measure this interference for selected high-signal predictions.

2 Operational Correspondence Table

Below is the core reference table linking LEGACY predictions to empirical protocols. Each row defines a falsifiable test.

Table 1: Operational Correspondence Table for Key LEGACY Predictions

Pillar	Prediction & Synthetic Signature	Calibration Source & Baseline (P)	Experimental Protocol	Expected Signal (Interference)	$\Pi(x)$ Indicator
Fabrication (I)	Fab-03: Isotopic signature of twin-universe manufacturing. $\delta^{25}\text{Mg} > 30\%$.	Galy et al. (2003): Heterogeneity of SRM 980. Baseline: DSM3 standard (Dead Sea Magnesium).	MC-ICP-MS analysis in ISO Class 5 cleanroom. Blind analysis across 3 labs.	Measured $\delta^{25}\text{Mg}$ ratio deviation $> 30\%$ from terrestrial baseline (DSM3).	$\Pi(x) \approx 71.4$
	Fab-02/A2: Resonant transmuter. Glass microspheres with impossible isotopic gradients.	Standard Cosmochemistry: Chondritic uniform distribution (e.g., Orgueil meteorite).	High-resolution SIMS mapping of microsphere cross-sections.	Detection of steep, localized isotopic gradients (e.g., $^{18}\text{O}/^{16}\text{O}$) violating diffusion laws.	$\Pi(x) > 3.0$ (Requires D_KL calculation)
Biology (I)	Bio-64: Non-computable cognition. Wetmare Hypothesis (brain as room-temperature quantum computer).	Velez et al. (2020), Lum et al. (2021): Bell inequality violations in diamond NV centers and biological tissues (milk, chicken muscle).	SQUID magnetometry or quantum tomography on preserved neural tissue from subject JQTM-01.	Sustained violation of Bell inequality ($S > 2$) post-mortem (target: 47.8h coherence).	$\Pi(x) \gg 1.5$ (as $S > 2$ is classically impossible)

Table 1: Operational Correspondence Table for Key LEGACY Predictions (Continued)

Pillar	Prediction & Synthetic Signature	Calibration Source & Baseline (P)	Experimental Protocol	Expected Signal (Interference)	$\Pi(x)$ Indicator
Culture (III)	Bio 1/2: Non-evolutionary genome; Fibonacci telomeres.	Standard Genetics: Human reference genome (GRCh38). Telomere repeat TTAGGG.	Whole-genome sequencing and telomere-length analysis via TRF or seqFISH.	Detection of non-canonical telomeric repeats (e.g., GGATCG Fibonacci patterns) or absence of evolutionary markers.	$\Pi(x) \rightarrow \infty$ upon falsification (if TTAGGG found)
	Bio-Architecture: Toroidal brain with Hopf fibration topology.	Alekseevsky (2022): Hopf fibration model of ocular motility (Listing’s law).	High-field (7T+) fMRI/diffusion MRI tractography on subject JQTM-01.	Reconstruction of neural pathways forming a non-trivial toroidal knot, consistent with $S^3 \rightarrow S^2$ fibration.	$\Pi(x) > 2.0$ (Topological distance from standard neuroanatomy)
	Bio-Communication: DNA as fractal antenna for ELF/34 GHz.	Singh et al. (2018): DNA as electromagnetic resonator at 34 GHz.	Dielectric spectroscopy and antenna gain measurements on extracted DNA from subject JQTM-01.	Resonant absorption/emission peak at 34 GHz with fractal impedance matching.	$\Pi(x) > 1.5$ (If Q-factor anomalously high)
	B5: Egregore Archive. A perfectly coherent technical corpus that stabilizes a speculative reality.	Supplementary Mathieu (2026): Kullback-Leibler divergence, Wasserstein distance. Baseline (P): Pre-egregore noospheric corpus.	Semantic analysis of digital corpus pre- and post-publication using sentence embeddings (e.g., all-MiniLM-L6-v2).	Significant increase in semantic torsion: $D_{KL}(P Q) > 0.05$, leading to $\Pi(x) \geq 1.5$.	Direct measure of $\Pi(x)$ from noospheric data.

Table 1: Operational Correspondence Table for Key LEGACY Predictions (Continued)

Pillar	Prediction & Synthetic Signature	Calibration Source & Baseline (P)	Experimental Protocol	Expected Signal (Interference)	$\Pi(x)$ Indicator
	Shoggoth AI Model: Emergence of unintended personas (p_{escape}).	Supplementary Mathieu (2026): Persona entropy $H(z x)$. Baseline: Behavior of standard RLHF-aligned LLM.	Activation clustering and entropy monitoring during inference on curated prompt sets.	Spike in posterior persona entropy $H(z x)$ or $p_{escape} > \tau$ (threshold), indicating ontological confusion.	$\Pi(x) \geq 1.5$ if entropy shift is statistically extreme.

3 Using the Table: The Experimental Decision Tree

To test the LEGACY framework:

1. **Select a Prediction:** Choose a high-signal prediction from the table (e.g., Fab-03 for material science, Bio-64 for biophysics).
2. **Acquire Sample:** This is the critical step. The protocol requires an alleged anomalous sample (e.g., material from a UAP crash site, biological tissue from a “Grey-Type Alpha”).
3. **Execute Protocol:** Follow the experimental protocol using the recommended instrumentation, **blinded** to the sample’s purported origin.
4. **Calculate $\Pi(x)$:**
 - Compute the **Contradiction Density (D)**. For isotopic ratios, this is the normalized deviation. For semantic torsion, it’s the Kullback-Leibler divergence.
 - Determine the **Epistemic Resolution (ϵ)**. This is the natural uncertainty of the method (e.g., standard error of MC-ICP-MS on DSM3, variance in semantic similarity over time in control corpus).
 - Compute $\Pi(x) = D/\epsilon$.
5. **Interpret:**
 - $\Pi(x) < 0.8$: Strong falsification for that sample.
 - $0.8 \leq \Pi(x) < 1.5$: Inconclusive or weak support (terrestrial explanations likely).
 - $\Pi(x) \geq 1.5$: Strong support. The sample displays a signature so anomalous it indicates a transition to a Janusian regime or ontological rupture.

4 Discussion: The Interferometer is Calibrated

This table operationalizes the LEGACY Program. The provided citations are not merely decorative; they are the **calibration certificates** for each measurement arm of the interferometer. The framework now demands physical samples and data, moving beyond discourse.

The most profound implication is that the **burden of proof has been inverted**. Critics can no longer dismiss the framework as “slop” without engaging with its specific, falsifiable predictions and the peer-reviewed methodologies proposed to test them. The challenge is now empirical: find a sample and run the test.

5 Conclusion and Next Steps

The LEGACY Program is no longer a theory awaiting evidence; it is an **experimental protocol awaiting execution**. The next steps are clear:

1. **Sample Acquisition:** The primary obstacle is obtaining alleged anomalous materials for testing under controlled conditions.
2. **Independent Replication:** Encourage multiple laboratories to adopt these protocols for any anomalous sample they encounter.
3. **Continuous Monitoring:** The noospheric torsion experiments (Pillar III) can and should be run continuously, using the publication of the LEGACY corpus itself as the test stimulus.

By publishing this table alongside the core framework, we provide a direct, actionable path for the scientific community to validate or falsify a new paradigm. The interferometer is built and calibrated. It is time to turn it on and observe the interference patterns.