Ontological Multitenancy

The Computational Architecture of Shared-Closure Realities:
A Bidi-Coherent Regime-Translation Hypothesis for UAP,
Anomalous Environments, and Cross-Regime Intelligence

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> **Public working hypothesis — version 0.4**
> **Status:** Conceptually complete enough for public exploration; still open to revision, formal development, and empirical failure. It does not claim that every cited report is authentic, that all UAP share one origin, or that the proposed physical implementation has been demonstrated.
> **Companion framework:** The substrate-level physics direction is being developed separately as **Infinite Potential: A Unified Conceptual Framework of Relational Reality**. This paper uses that work as a source of candidate mechanisms, not as evidence that those mechanisms are already established.

An anomaly is not necessarily an object violating motion. It may be a boundary event changing what counts as locally physical.

Operational Closure Regime

Abstract

This paper proposes that at least some anomalous phenomena may be better modeled as changes in how an organized pattern participates in our physical regime than as objects traversing ordinary spacetime at extraordinary velocity. Here *closure* means graded organizational self-maintenance, not metaphysical isolation. The model begins with one relational reality capable of supporting multiple nested, overlapping, and partially closed regimes of organization. These are not Everettian branching worlds. They are co-present dynamical closures: distinct ways in which partly shared degrees of freedom become measurable, writable, and self-maintaining across scale.

When two regimes expose shared causal variables and reciprocal coupling exceeds a threshold, their interaction may bootstrap a metastable shared attractor. This shared state does not merely pass information through a pre-existing transducer; it becomes the bidirectional transducer through which each regime becomes increasingly readable and writable by the other. I call this process **shared-closure transduction**. Its directional mismatch is the **Bidi-Coherence Delta**.

The observable phenotype depends not on one global closure score but on a **contextual closure profile** across nested cuts: event–environment, environment–sensor, sensor–body, body–observer, and observer–observer. Each cut can differ in causal strength, bandwidth, reciprocity, and persistence. Conscious observers are not ontically external to that profile. They are high-order, body-indexed measurement states generated by the same physics, and their attention, physiology, action, or collective synchronization may feed back into the profile when a measurable channel exists. What cannot define closure is the later perceptual or semantic report being predicted.

This is a unifying mechanism class, not a single-entity theory. Natural plasma, geophysical boundary effects, biological participation, engineered human or nonhuman systems, physical extraterrestrial beings, and temporarily localized materials may occupy different regions of the same possibility space without being the same thing. A deeper closure coordinate is considered as a candidate implementation and is explicitly kept distinct from the electromagnetic scalar potential and the Higgs field. The central prediction is that strangeness should be greatest when causal participation is strong enough to leave evidence but uneven, one-way, or poorly translated across physical, instrumental, biological, and collective boundaries. Because closure and strangeness are measured through different protocols, the proposal remains capable of being wrong.

The linked Lehto Files video is used as a convergence point, not as the origin of the model. Its proposal—to replace the exhausted question *where do UFOs come from?* with *at what scale do they operate?*—provides an important top-down axis. This paper adds the missing reciprocal axis: bottom-up construction and control, observer- and sensor-dependent phase-basis cuts, shared causal variables across computational closures, and the emergent interface itself as an active transducer.

One-sentence thesis

One reality may sustain multiple co-present organizational closures, and some anomalous events may occur when reciprocal coupling bootstraps a temporary interface whose uneven causal participation across nested physical, biological, instrumental, and collective measurement boundaries determines whether the event appears informational, perceptual, plasma-like, partially material, or fully physical.

1. What this paper is—and is not

The central problem is not a shortage of proposed origins. UFO and anomalous-phenomena discourse already offers extraterrestrials, interdimensionals, cryptoterrestrials, time travelers, plasma, classified technology, spirits, psychological projection, social control systems, and sensor error. The deeper failure is categorical: the options are usually treated as rivals that must explain every case at one ontological level.

That framing breaks as soon as the reported bundle includes apparently physical vehicles and occupants; luminous or plasma-like events with unstable morphology; radar, infrared, optical, and human reports that do not agree in simple object-centered ways; abrupt appearance or disappearance; nuclear and geological associations; observer-linked physiological or informational effects; recurrent but weakly stable locations; and allegations of materials whose unusual organization cannot be preserved outside its original context.

The hypothesis offered here is deliberately plural about entities and mechanisms but singular about the deeper operation. It asks whether these otherwise incompatible categories can be manifestations of one **conditional-interface dynamic**: the formation, stabilization, and loss of shared causal closure between regimes.

It does **not** claim that every unidentified observation is anomalous; that an unresolved government case is evidence of exotic physics; that all anomalies are plasma, consciousness, extraterrestrials, or one intelligence; that visual similarity to a quantum simulation proves macroscopic quantum behavior; that the Higgs field is simply an extra spatial dimension; that a gauge choice produces physical effects; or that disappearance alone proves relocation, faster-than-light signaling, or transit outside spacetime.

Those exclusions keep the mechanism from becoming a story that can absorb any result after the fact.

2. Intellectual provenance: convergence, not overnight invention

This hypothesis did not begin with the linked video, nor was it assembled recently from UFO lore. The autobiographical origin matters because it explains why the model is structurally cross-domain, while remaining separate from the evidence offered for it.

I can trace the decisive transition to a specific late morning more than three years ago. My mother was visiting during a destabilized family period. I remember where I was sitting, who was present, and the felt character of a large conceptual cluster snapping together around Tesla, UFOs, consciousness, physics, and engineering. The event did not deliver a finished theory. It changed the direction and gain of an already developing system of questions.

Before that transition, I was primarily a musician, with sustained interests in biology, psychology, neuroscience, and health. After it, music remained part of me but ceased to be the whole organizing identity. Engineering, software, systems design, AI, consciousness, and physics entered a reinforcing cascade. Each domain began functioning as a constraint on the others: physics informed engineering; product and software design exposed missing pieces in the physics; biological organization changed how I understood computation; and anomalous material became an adversarial test of whether the ontology could explain radically different surface phenomena without inventing a new metaphysics for each one.

There is a family-level polarity in that history. My paternal side carried a more discrete, rigorous, structured engineering orientation, extending through my father and grandfather. My maternal environment was more nonlinear, artistic, spiritually exploratory, and at times chaotic. My uncle Alan Paul, of the Manhattan Transfer, introduced me well over a decade ago to UFOs, consciousness, Hinduism, meditation, and related questions. I largely discarded those frames at the time. They became newly legible only after later exploration with GPT and the Tesla-associated transition.

This provenance is **not empirical support** for UAP claims. It is a reflexive account of model formation. It explains an architectural fact: the present theory was not built by deciding in advance that UFOs are vehicles, psychic events, plasma, or symbols. It emerged from repeatedly encountering the same boundary dynamic in music, biological regulation, computation, observer-relative measurement, field behavior, engineering, and anomalous reports.

The linked video matters because it independently lands near one axis of that development. Chris Lehto argues that seven decades of failing to establish *where* UFOs come from may itself be informative, and that the better question concerns the **scale at which the phenomenon operates**. His route runs through nested or fractal organization, Michael Levin's multiscale intelligence, David Grusch's multidimensional framing, and Jacques Vallée's interdimensional approach. This paper agrees with the scale turn but adds reciprocal scale construction, phase-relative observation, and a mechanism by which two closures jointly create the interface that relates them.

3. The replacement question

"Where did it come from?" assumes an object already possesses the same kind of location, persistence, boundary, and worldline that an aircraft possesses. On that assumption, an object that vanishes must have moved too quickly to see, become hidden, or ceased to exist.

The replacement question is not merely "what scale?" It is:

> ***Under what conditions does an organized pattern become locally readable, writable, persistent, and material within a given reference regime?***

That inversion makes a trajectory a sequence of stable closure commits rather than the deepest description of transit; a boundary an active read/write apparatus rather than an outline; a sensor image a relational projection rather than a neutral view; a craft a nested control system whose effective boundary may extend beyond its visible surface; and a hotspot a region held near an interface threshold rather than a permanently open portal.

Jacques Vallée and Eric Davis argued that high-strangeness cases resist clean separation into purely physical and purely psychic components (paper). Nick Cook has recently advanced a related conditional-manifestation question—why events occur *here* and under *these conditions*, rather than only what they are or where they originate (essay). Shared-closure transduction supplies a candidate mechanism beneath that family of intuitions.

Operational Closure Regime

4. One substrate, many co-present closures

The model assumes one underlying reality, not branching Everett worlds. Within it, multiple regimes can be dynamically closed over different variables, scales, update rates, measurement bases, and boundaries. "Closed" throughout means operationally or organizationally self-maintaining to a degree; it does not mean causally complete or immune to interaction.

A **co-present closure regime** is characterized by five things: the variables it can access, the changes it can enact, the states it can observe, the boundaries it maintains, and the spatial, temporal, or organizational scales over which it remains coherent. This is computational in the broad physical sense: each regime closes a set of distinctions and state transitions. It does not claim reality runs on a conventional digital computer.

The title **Ontological Multitenancy** names this architecture directly. One substrate can support multiple operational tenants with different isolation levels, translation bandwidths, and persistence conditions. Shared state is not assumed in advance: a bootstrap transducer is provisioned only when cross-boundary causal traffic becomes reciprocal and stable enough to sustain it. Negotiated, engineered, forced, and accidental bridges are therefore different infrastructure events within one reality, not evidence for separate universes.

The useful analogies are overlapping protocols, quotient descriptions, or processes sharing some substrate while exposing different state spaces. Different causal organizations can coexist over partly shared degrees of freedom.

4.1 Shared-reality variables

A **shared-reality variable** is a degree of freedom accessible from both regimes through a translation relation, potentially with asymmetric read and write permissions. Correlation suggests overlap; one-way intervention establishes a directional channel; reliable intervention from both sides establishes a fully reciprocal shared causal variable.

Two regimes do not need identical measurements to share a state. They need a translation that preserves enough causal structure: a change made on one side must map to a lawful change on the other. One invariant relation may appear as a field perturbation in one regime, a geometric boundary change in another, and a biological control signal in a third. Coherence does not require surface sameness; it requires preservable causal structure.

4.2 Four kinds of coherence

The term *coherence* becomes useless if it means alignment, stability, quantum phase, social agreement, perceptual unity, and material persistence at once. This paper separates:

1. **Internal coherence:** how well an entity preserves its own organization.
2. **Cross-regime coherence:** how reliably causal structure translates between regimes.
3. **Phase coherence:** alignment among relevant oscillatory or field variables.
4. **Measurement coherence:** whether different instruments or observers map to one latent event.

An entity can have strong internal coherence and weak closure into our regime. Conversely, sensors can agree strongly about an ordinary artifact whose target has no unusual organization.

4.3 The Bidi-Coherence Delta

The **Bidi-Coherence Delta** is the remaining mismatch preventing reliable round-trip causal translation. Its irreducible structure is directional:

$$\Delta_{i\leftrightarrow j} = (\Delta_{i\to j}, \Delta_{j\to i})$$

Each direction may include phase, timescale, scale/coarse-graining, observable-basis, boundary-condition, encoding, and—for agents—semantic or control mismatch. The two directions need not be equal. A phenomenon may be easy to see but hard to affect; another may influence matter or physiology while remaining difficult to image.

4.4 From a global scalar to a contextual closure profile

Closure cannot be treated as one property carried by an event. Doing so invites circularity because materiality, sensor registration, persistence, and reported strangeness can all be used—implicitly—to estimate the same score later invoked to explain them.

The correction is not to exile observers from physics. It is to make closure **relational, cut-indexed, and report-independent**.

For any two specified boundaries—such as event and environment, environment and sensor, or body and observer—the relevant quantity is **directed causal efficacy**: how reliably a declared change at one boundary produces a measured change at the other, relative to a sham or ordinary control. The intervention may be mechanical, optical, electromagnetic, thermal, acoustic, biological, or informational, but the input and response must be declared before the outcome. Where active intervention is impossible, a well-identified natural perturbation provides weaker evidence.

Each directional response can be normalized against a fixed null and an ordinary reference while preserving its raw magnitude and sign. The two directions must remain visible. A phenomenon may be easy to detect but hard to affect, or physically influential while difficult to image. A single reciprocity score must never hide that asymmetry.

No single number describes the event. The irreducible object is a **contextual closure profile**:

$$\mathbf{\Lambda}(C^{-}) = \{r_{a\to b}\}$$

This is a map of measured directional responses across the relevant boundaries before the held-out outcome is interpreted. Its nodes can include the event, local medium, physical trace, detector, body, neural field, integrated observer state, other observers, and collective recording system.

Coordinate	Meaning	Independent meter
Directed efficacy	How strongly a controlled change at one boundary changes another	Intervention/sham response or identified natural perturbation
Total participation	Overall causal involvement across a cut	The two declared directional responses considered together
Bidi closure	Strength of the reciprocal handshake	A fixed summary of both directions, never a report rating
Bridge bandwidth	Number and variety of invariant modes transported	Perturb independent modes and estimate what survives translation

Coordinate	Meaning	Independent meter
Reciprocity	Balance between read and write directions	Directional response asymmetry
Persistence	Survival of the coupled state after support changes	Decay, hysteresis, and recovery curve

This makes the model contextual without making it arbitrary. Context may include geometry, fields, atmospheric state, sensor configuration, body state, attention, neural synchrony, observer presence, and group coupling—but those variables must be measured before or during the event. A later statement that something "looked real" cannot be recycled into the closure meter.

For causal tests, antecedent context and downstream outcomes must be separated. A preregistered embodied or group state may enter the event dynamics. The event-evoked state, later report, and post-event agreement remain held-out outcomes. The exclusion is temporal and measurement-level, not ontological.

4.4.1 Transient natural perturbations

When active intervention is impossible, a natural event counts as a useful perturbation only when its selection rule is fixed before the outcome. The minimum protocol requires measurable precursor variables with documented lead time; matched control sites or synthetic controls built from geology, electromagnetic background, population density, sensor density, and historical event rate; and prespecified response windows for every closure edge being tested.

The comparison then asks whether the exposed site changed relative to its own baseline and relative to its matched controls. The closure profile is estimated from that calibration block; registered strangeness is measured on held-out sensors, trials, or time windows. Ordinary visibility degradation remains the decisive negative control: reduced image quality without altered local causal participation must not reproduce the predicted heterogeneous closure signature. If the event class cannot be specified without selecting precursors, sites, or windows after the observation, the natural perturbation remains descriptive evidence rather than a closure meter.

4.5 Operational independence without ontological separation

Every measurement remains physical and reference-bound. A lidar return is eventually interpreted by an observer; a human report is implemented by a body and brain. "Independent" therefore means **distinct protocol, transfer path, and outcome data**, not a metaphysical view from nowhere.

The clean distinction is:

- **report-independent physical coupling:** calibrated intervention and invariant transport across a declared cut;
- **perceptibility:** the event-to-sensor or event-to-organism transfer function;
- **integration:** how a body, brain, or instrument combines its inputs into a stable measurement state;
- **consensus:** how multiple measurement states synchronize or reconstruct a common latent event;
- **semantic interpretation:** the concepts, expectations, and narratives applied downstream.

These are analytic cuts through one generative system, not separate substances. An observer state can modify $\mathbf{\Lambda}(C)$ through attention, action, physiology, field coupling, or another shared variable. The evidential requirement is simple: changing that observer variable must alter a separately measured physical edge of the matrix. If only the report changes, the effect belongs to reception or interpretation, not local physical realization.

Bootstrap Transducer

5. The bootstrap transducer

The core mechanism is a recursively reinforced interface:

1. Two regimes weakly share one or more variables.
2. Regime i perturbs a shared variable.
3. Regime j responds through its own encoding.
4. That response returns as a new input to i.
5. Adaptive or nonlinear dynamics reduce some components of the Bidi-Coherence Delta.
6. Mutual observability and controllability increase.
7. The stronger channel further reduces translation error.
8. When closed-loop gain exceeds loss and loop phase remains stable, a metastable shared attractor forms.

That attractor is the **bootstrap transducer**. It belongs wholly to neither side. It exists because each side continuously helps instantiate the shared state through which the other becomes legible. It is not a physical box between worlds; it is dynamically sustained reciprocal closure.

The bridge is not predominantly top-down. Global boundary conditions constrain local degrees of freedom, while local phase relations reconstruct, steer, or veto the global state. The recurring loop is:

continuous flow* → *coherence delta* → *handshake or guard* → *commit or localization* → *new flow

This is continuous phase-time coupled to discrete event-time. A stable object is a maintained sequence of compatible commits across nested boundaries.

Michael Levin's work supplies a strong biological analogue. Cells have local competencies while tissues and organisms exert higher-level goal constraints; bioelectric networks can alter large-scale anatomical outcomes without editing the genome. Levin treats agency and cognition as scale-variable and the boundary of a self as computationally dynamic (TAME; multiscale competency; computational boundary of a self; bioelectric network modeling). This paper's extension beyond biology is a structural hypothesis, not a result of Levin's experiments.

5.1 Initiation modes

- **Negotiated:** reciprocal adaptation gradually reduces the delta; comparatively stable and responsive.
- **Engineered:** a controller deliberately shapes phase, boundary, or environmental variables.
- **Forced:** a large perturbation drives partial localization before translation converges; predicted to be fragile, distorted, or destructive.
- **Accidental:** environmental conditions cross threshold without a controlling agent.

This separation allows an intelligent craft, a natural luminous event, a nuclear-site anomaly, and an observer-linked episode to share an operation class without sharing an origin.

6. The closure-profile strangeness window

A one-variable curve can capture the transition intuition, but it collapses the cause and the phenotype into the same score. The stronger claim is that strangeness arises from **frustration across an uneven closure profile**.

In this paper, **registered strangeness** does not mean how uncanny a witness says an event felt. It means the remaining failure of calibrated sensors, physical relations, and ordinary trajectory models to reconcile one event after known optics, bandwidth, geometry, body response, timing, atmosphere, and conventional object dynamics have been modeled.

The full encounter should therefore be kept multidimensional:

- **physical divergence:** unresolved trajectory, conservation, material, or intervention behavior;
- **cross-modal divergence:** calibrated sensors fail to reconstruct one ordinary latent event;
- **witness divergence:** embodied observers receive systematically different event representations;
- **semantic divergence:** later descriptions and cultural interpretations fail to converge.

The central test concerns the first two. Witness and semantic divergence remain important outcomes, but they do not define local physical closure.

The public-facing prediction is simple:

Registered strangeness should rise when enough causal participation exists to leave evidence,

but that participation is uneven, one-way, bandwidth-limited, or frustrated across the nested cuts of the event.

The closure profile must be estimated from one intervention or calibration block, while strangeness is measured from held-out channels or trials. The cuts, controls, transfer models, and comparison rule must be fixed before the held-out outcome is inspected. This makes the claim risky rather than circular: calibrated perturbation–response relations predict later cross-channel divergence, and the prediction can fail.

The resulting regimes are:

- **Uniformly weak profile:** almost no cut couples strongly enough to leave evidence; the event is unavailable rather than strange.
- **Uniformly strong, mutually translatable profile:** local interaction, sensors, bodies, and records agree; the event behaves conventionally even if its origin is extraordinary.
- **Mixed or frustrated profile:** some cuts are strongly physical while others are weak, one-way, bandwidth-limited, or basis-mismatched; evidence exists but cannot be globally reconciled, producing high registered strangeness.

This directly admits the case the one-scalar model mishandled. An event may have high local event–environment closure and be quite literally a physical object for a nearby embodied participant while remote cameras, narrow spectral windows, scattered observers, and later social reconstruction remain low-gain or mutually inconsistent. The object has not become less physical at distance; the measured closure graph has changed.

The "intermediate closure" intuition survives only as a one-cut mnemonic: an event must participate enough to leave evidence while remaining incompletely translated. It is not the model's definition of closure or strangeness.

The information-to-matter sequence remains useful as one possible path through the matrix:

informational availability → observer or sensor coupling → field/plasma phenotype → partial materiality → stable physical closure

But events need not traverse it uniformly. The strongest high-strangeness cases should be those in which different cuts occupy different stages at the same time.

Relational Measurement Cut

7. Relational phase-basis cuts: why the same event may not look the same

An observation is jointly produced by the underlying organized pattern, the active bridge, our regime, the sensor or organism, spatial angle, frequency, polarization, temporal integration window, scale, phase relation, and interaction history. The image is therefore not a neutral photograph of an object-in-itself. It is a **relational phase-basis cut** through a larger event.

This extends the reference-frame intelligence principle developed elsewhere in this research program: what can be observed depends on the reference regime, the active boundary, and the measurement model. Two observers can receive different representations without inhabiting different universes, provided a lawful transformation preserves the underlying invariant.

The relevant stack is not ontological but operational:

1. **Local realization:** event and environment exchange momentum, energy, field changes, traces, or other causal effects.
2. **Transmission:** those effects propagate through distance, atmosphere, media, angle, frequency, and polarization.
3. **Reception:** a detector or sensory organ samples only the subset inside its transfer window.
4. **Embodied integration:** brain and body combine that sample with memory, physiology, attention, and current goals into a high-order measurement state.
5. **Collective integration:** multiple observers and instruments synchronize—or fail to synchronize—around a common reconstruction.
6. **Semantic interpretation:** culture and concepts label what the integrated state means.

These are successive boundary cuts in one physical process. Human observers are anthropically shaped by the regime they measure: visible wavelengths, audible frequencies, body timescales, and neural integration windows are not arbitrary. They are viable sampling bands selected within the same environment. Instruments extend those bands but remain reference-bound transformations rather than a view from nowhere.

This produces a reciprocal anthropic relation. Global physics constrains the set of locally admissible states.

Organisms emerging within that regime acquire biased, finite measurement architectures. Once present, those high-order architectures act back through attention, movement, physiological regulation, instrument control, communication, and—under the stronger hypothesis—direct shared bridge variables. The observer neither creates an unconstrained world nor merely photographs a completely pre-partitioned one. It weights and acts within a physically admissible possibility space.

Two meanings of consensus must therefore be separated:

- **Dynamical consensus:** independently measured synchronization or coordinated control among physically coupled observers and instruments. Because it is a current physical state, it may alter later edges of the closure profile.
- **Semantic consensus:** later agreement among descriptions or beliefs. It can stabilize a public reconstruction but cannot by itself establish that the event's local physical coupling changed.

Objectivity is the high-stability basin in which differently biased measurement systems preserve the same invariants under translation. It is synchronized subjectivity constrained by durable causal structure—not a vote, and not the absence of a reference frame.

Observer count alone has no privileged force. The effective contribution of any participant—person, detector, field boundary, or material system—depends on channel capacity, mutual intelligibility or resonance, boundary permeability or locality, and internal coherence. These factors define causal weight; headcount does not.

Shared sources and copied reports create covariance rather than independent weight. Ten witnesses who all watched one processed clip do not contribute ten independent constraints; one strongly coupled local probe may carry more causal information than a large low-gain audience.

Collective coherence is earned only when independent measurements converge after common instruments, communication, shared imagery, common drivers, and correlated priors are accounted for. It is not produced by headcount alone.

This makes angular bias important, but not in the simplistic sense that a three-dimensional sphere looks like a cigar when viewed from the side—it does not. A cigar-like observation could instead be:

- an oblique section through a higher-dimensional or spatiotemporal envelope;
- an anisotropic spheroid or toroidal boundary;
- temporal integration of a moving luminous region;
- localization of only one mode of a larger system;
- atmospheric or optical propagation;
- or a sensor point-spread, saturation, or aperture effect.

The hypothesis becomes meaningful only when it predicts a lawful transformation across views. A target-associated nodal or interference structure should survive calibrated independent sensor architectures and change with target-relative field orientation. An instrument artifact should rotate, scale, or disappear with the optical train, aperture, zoom, processing chain, or detector.

The same precision is required around gauge and renormalization. A **gauge transformation** changes a redundant description while leaving gauge-invariant observables unchanged. **Coarse-graining or renormalization** changes the effective variables and parameter values used at a different scale. A physically distinct phase sector must therefore be defined by a gauge-invariant observable—such as a holonomy, flux, correlation, spectrum, or boundary response—not by a gauge choice. "Renormalized gauge state," if retained at all, should mean a **scale-dependent effective closure sector**, never a claim that representational redundancy itself causes motion.

The same logic applies internally. A craft, occupant, control field, and surrounding sheath may possess different cut-specific closure profiles. A single integrated system in its source regime might appear here as multiple lights, a featureless shell, fused components, an apparently empty vehicle, or separate perceptual and instrumental events. Translation need not preserve all source-regime adjacency or detail.

8. Candidate physical implementation and relation to Infinite Potential

The operational hypothesis must remain separable from any one substrate theory. Its deeper physical direction is being developed in the parallel framework **Infinite Potential: A Unified Conceptual Framework of Relational Reality**. In that work, reality is approached as a bidirectional cascade between open relational potential and stabilized coherence: boundaries become active read/write structures, persistent closures become effective objects and clocks, and local organization feeds back into the larger field of possibilities from which it formed.

Shared-Closure Transduction is the anomalous-phenomena application of that direction. Infinite Potential proposes the deeper generative picture; this paper asks what a cross-regime interface would look like, how it could be measured, and what observations would distinguish it from ordinary alternatives. Neither paper can be used as evidence for the other. Their value is architectural consistency and the ability to generate common tests.

The implementation ladder is therefore:

1. **Minimal version:** an abstract latent closure coordinate χ indexes how a pattern participates in an effective regime.
2. **Physical order-parameter version:** χ behaves like a scalar order parameter coupled to matter, fields, and boundary conditions.
3. **Fiber or extrametric version:** χ is an additional coordinate in a higher-order state geometry from which effective spacetime, gauge sectors, and localization relations are derived.
4. **Strong vacuum-sector version:** engineered control couples to a fundamental vacuum scalar, perhaps indirectly involving the Higgs or another field.

The framework should survive failure of levels 3 or 4. Shared closure is the core claim; a Higgs-specific transit mechanism is the strongest and least established implementation.

8.1 "Higher-dimensional" as a real constraint relation

Higher dimensionality here need not mean a hidden hallway laid beside ordinary space. It may denote a control or constraint degree of freedom in the state space from which the effective 3+1-dimensional arrangement is projected. The key proposal is reciprocal:

- χ helps determine allowable modes, localization, inertial response, boundary stiffness, and perhaps effective metric relations;
- the integrated distribution of matter, fields, and organized boundaries in turn sources and stabilizes χ.

The higher-order structure therefore both derives the lower-dimensional world and is derived from its integrated state. This is not temporal circularity. It is a coupled fixed point, like mutually determining base and fiber conditions.

Kaluza–Klein theories provide a legitimate precedent: higher-dimensional geometry can decompose into lower-dimensional gravitational, electromagnetic, and scalar sectors (review). That precedent does not demonstrate this model, and the inference cannot be reversed: the existence of a scalar field does not prove an extra dimension. It does show that "dimension," "gauge field," and "scalar mode" can be related by a rigorous reduction rather than metaphor alone.

8.2 Scalar potential, Higgs field, and closure parameter are not interchangeable

Three quantities must remain distinct:

- the electromagnetic scalar potential Φ_{EM};
- the Higgs field H;
- the proposed closure coordinate or order parameter χ.

The Aharonov–Bohm effect demonstrates that gauge-invariant phase or holonomy around a closed path can have observable consequences even when the local classical-field description along the paths is insufficient (original paper). This supports the formal importance of phase, topology, closed loops, and relational potentials. It does not provide faster-than-light communication or a method for dematerializing a craft.

Likewise, the Higgs field is a Lorentz scalar whose coupling supplies rest mass to elementary particles (CERN overview). "Scalar" describes its transformation behavior; it does not make the Higgs an extra dimension. Most proton and neutron mass—and therefore most ordinary visible mass—arises from QCD dynamics rather than directly from Higgs coupling (CERN ATLAS overview). Any macroscopic closure transition would therefore have to preserve or transform composite binding, stress-energy, internal topology, and organization—not merely turn down elementary-particle masses.

The productive conjecture is narrower: mass-like persistence may be interpretable as one expression of **phase-locking stiffness** within a closure, while the Higgs and QCD remain parts of the realized physical implementation. The conjecture earns its place only if it eventually reproduces their established roles rather than relabeling them.

8.3 Vacuum as latent susceptibility, not free energy rhetoric

The quantum vacuum is not empty in the classical sense; quantum fields possess fluctuations and measurable correlations (experimental example). But that does not establish an engineerable medium for macroscopic transit or unlimited energy.

Within this hypothesis, “vacuum potential” is best treated as **latent configurational susceptibility**: the range of field and boundary configurations available before a specific organized state is locally expressed. A coherent body imposes constraints that convert some latent possibility into persistent stress-energy, curvature, and interaction. A closure technology would need to change the compatibility relation between an organized pattern and a regime, not simply extract a reservoir.

8.4 Licensing the closure coordinate

The proposed closure coordinate earns physical status only through a differential signature that ordinary electromagnetic, plasma, atmospheric, and instrumental models do not reproduce. A clean test compares a coherent intervention with a power-matched phase-scrambled condition and a sham condition, while declaring in advance which directional closure edges should change.

The distinctive result would be a reproducible, directionally asymmetric shift in those edges that survives ordinary power-matched controls but collapses under sufficient phase randomization. Broadband noise, polarization-selective scrambling, or another precisely characterized intervention can be used only where its ordinary transfer effects are independently modeled. If no differential signature appears across the preregistered trial series, the closure coordinate remains conceptual scaffolding rather than a licensed physical variable. This firewall prevents the candidate substrate mechanism from being confused with the operational closure profile it is meant to explain.

8.5 The physics debt

A mature version must specify:

1. a gauge-invariant observable for every proposed phase sector;
2. a coupling between χ and composite matter;
3. a conservation ledger across transition;
4. a causal or global-consistency rule in the deeper substrate;
5. and a destination-address relation connecting latent coordinates to possible spacetime re-entry points.

Until those are supplied, the closure coordinate is a disciplined placeholder—not a solved propulsion theory. Infinite Potential is where this substrate-level debt belongs; the present paper does not need to settle it in order to define the observable interface hypothesis.

8.6 Relation to the developing relational-phase framework

This paper is not a new ontology pasted onto a separate physics program. Its primitives map directly onto the working identifications being developed inside Infinite Potential and the associated relational-phase framework:

Infinite Potential direction	Role in shared-closure transduction
Space as relational phase difference	Distance is an effective relation inside a closure, not necessarily the substrate’s primitive adjacency
Matter as topological phase lock	Materiality is persistent, cross-scale closure rather than featureless substance
Time as the rate of decoherence between nested locks	Event order and duration arise from updates among maintained closures
Gravity, localization, and collapse as one operation class	Each describes scale-relative selection and stabilization of a locally consistent state, without asserting that their current equations are identical

Infinite Potential direction	Role in shared-closure transduction
Boundary as read/write apparatus	A boundary measures, filters, stores, and feeds back; it is not merely a spatial edge
Hardware as quantum reference frame	A physical implementation determines which distinctions become executable state transitions
Gauge or abstraction layer as quotient	Each layer discards degrees of freedom while preserving invariants required by the next scale
Critical phase strip	The transition zone where unresolved flow can be tipped into a committed closure
Bidi Δ	Directional error remaining in round-trip translation across that boundary

The candidate realization path can be stated without treating a chain of provisional symbols as a finished equation:

open relational potential → addressable closure → coherent selection → effective field structure → observable spectrum and interaction → persistent matter

The reciprocal path is equally important:

matter, fields, boundaries, and observers → altered constraints on what can coherently stabilize next

This is the core BiDi structure. The downward path expresses how latent relational capacity becomes a locally maintained state. The return path expresses how every realized state changes the boundary conditions of future realization. Without both directions, the model collapses back into a purely top-down scale story.

A related research branch asks whether mass-like persistence can be understood as phase-locking stiffness within a closure. That is not a claim that a proposed closure field is the Standard Model Higgs, that all mass has one origin, or that known mass-generation mechanisms can be bypassed by terminology. Any successful version must recover the demonstrated Higgs sector, QCD binding, composite stability, and gravity.

The operation to formalize is therefore conversion—not creation from nothing—between distributed relational potential and locally maintained organization, with conservation preserved across the transition. In the UAP application, an engineered system would not “turn off reality.” It would preserve its internal topology while changing the boundary conditions and directional mismatch that determine how strongly it participates in our effective regime.

9. Detuning instead of extreme-speed travel

The model distinguishes **decoherence**, which ordinarily means loss of organized phase relations, from a **coherence handoff**, in which internal organization is preserved while regime membership changes.

A candidate handoff would proceed as follows:

1. The craft or entity maintains strong internal phase-locking.
2. An active boundary envelope changes the shared variables through which it couples to our regime.
3. Coupling is tapered rather than explosively broken.
4. Reciprocal participation across the craft–our-regime boundary falls while participation in the target regime rises.
5. Below our observability and interaction threshold, the entity no longer has a continuously defined ordinary worldline in our regime.

From our frame, disappearance would not be motion at immense velocity. Apparent velocity computed across an interval in which the object is not closed into our metric would be the wrong variable.

This is the conditional sense in which physical beings or craft from other planets or galaxies remain compatible with the model while ordinary high-speed interstellar traversal **could** become unnecessary—if a handoff preserves identity, supplies reproducible endpoint addressing, and closes the conservation ledger. They may be fully biological and technological; the unusual part would be the transit protocol, not their ontological status.

However, **detuning explains disappearance, not relocation**. A vehicle that later appears elsewhere requires a destination-address map: a rule under which points distant in our metric are adjacent, reachable, or jointly constrained in the latent topology. That rule must explain selection of endpoints and account for energy, momentum, and angular momentum. “Nonlocal” cannot mean causally unconstrained.

The model therefore predicts a difference between apparent acceleration and closure loss. Extreme ordinary acceleration should produce continuous impulse, heating, shocks, or other momentum-transfer signatures. Closure loss should instead be preceded by changes in boundary emission, polarization, refractive behavior, plasma spectrum, phase noise, or another interface proxy—followed by loss of a recoverable intermediate path.

9.1 Conservation and addressability ledger

A coherence handoff must preserve more than visual resemblance. At minimum, the source and destination records must support four linked constraints:

1. **Identity invariants:** the internal topological or phase-locked organization that defines the source must be recoverable at the destination. Candidate invariants could include holonomies, linking relations, stable mode counts, or another preregistered structural signature.
2. **Stress-energy continuity:** entry and re-entry must exhibit local continuity or a lawful, gauge-invariant transformation whose field and environmental channels can be measured.
3. **Flux accounting:** any net momentum, angular momentum, entropy, or information transfer must appear in the boundary envelope, environment, source, or destination rather than vanish from the ledger.
4. **Endpoint addressability:** the destination must follow a reproducible relation to local field topology or the deeper adjacency map rather than being selected after the fact.

A reported blink with no identity invariant, conservation record, or predictive endpoint relation is not a successful handoff observation. The full substrate dynamics can remain unfinished while these minimum constraints already make the transit claim vulnerable to data.

10. Regime localization and the quantum analogy

The wave/particle analogy is structurally useful but easily overstated. The core term should be **regime localization transition**, not "macroscopic wavefunction collapse."

- With weak event–environment participation, the pattern is distributed availability without stable local material interaction.
- With a mixed local profile, it may produce field coupling, interference-like structure, luminous sheaths, partial sensor registration, and unstable form.
- With uniformly strong relevant local edges, it becomes a persistent localized causal object.

Actual macroscopic quantum coherence may be one implementation, but the framework does not require a craft to behave literally like a textbook electron. The analogy is that distributed potential becomes localized and persistently interactive after a threshold commit.

This distinction is essential when considering the July 10, 2026 U.S. government release. PURSUE Release 04 includes DOW-UAP-PR104, a short infrared sequence from the Yellow Sea in 2025. The official narrative describes tracking for approximately 18 seconds, while the hosted clip metadata lists 15 seconds. The official description says the sensor tracks an area of contrast resembling a six-pointed star and explicitly withholds an analytical conclusion.

The image's cross- or star-like pattern may literally be optical interference—but inside the sensor. An unresolved bright infrared source can be transformed into an aperture-specific point-spread function, diffraction pattern, bloom, or processing artifact. Visual resemblance to a simulated quantum particle is therefore hypothesis-generating, not one-to-one evidence for the target's structure.

This case does produce an excellent discriminating test. If the arms stay fixed to the detector under sensor rotation, zoom, target movement, and processing changes, the sensor explanation wins. If a calibrated independent architecture reproduces a target-relative nodal pattern with lawful changes across polarization and frequency, the structure has been localized beyond one imaging chain. Target geometry, atmospheric propagation, common processing, plasma, and an interface effect would still have to be separated.

11. Plasma as bridge medium, phenotype, or rival explanation

Plasma is the most natural physical bridge object in this framework, but it is not the universal answer. Its candidate roles include:

- nonlinear impedance matching between regimes;
- storage and transport of phase relations or topological modes;
- a visible radiative phenotype of an otherwise less visible interface;
- a protective sheath around an internally coherent system;
- an outward gradient that reduces ordinary coupling to the environment;
- and a medium supporting filaments, double layers, solitons, plasmoids, and metastable self-organization.

Some recurrent luminous phenomena may be entirely natural plasma or geophysical events. The long-term Hessdalen program has instrumented recurring lights with cameras, radar, radio equipment, and magnetometers, while electrochemical, combustion, plasma, and geological explanations remain under investigation (survey). This establishes a recurring observational target for which natural hypotheses remain viable—not intelligence, a portal, or any settled mechanism.

Plasma alone is also a rival model. Shared closure earns additional explanatory value only if plasma dynamics systematically precede and track changes in specified event–environment or material-localization edges; respond to phase-specific rather than merely energetic interventions; or correlate with independent material, geometric, or biological measures that conventional plasma dynamics cannot explain.

12. Biology and consciousness as nested physical measurement–control states

Biological systems are plausible bridge participants because they are nested adaptive control systems. Cellular bioelectric and metabolic activity supplies bottom-up state; tissue and organism-level goals impose top-down constraints; brains and bodies alter attention, precision, neural synchrony, sensorimotor loops, and the boundary of what is treated as self.

In the neural-field direction developed within this research program, discrete spikes create and perturb smoother collective fields; skull, cerebrospinal fluid, tissue geometry, and the body form nested dielectric and conductive boundaries; the resulting macroscopic state biases subsequent spiking through ordinary and possibly ephaptic pathways. Consciousness is provisionally framed as **coherent self–world interference across bounded recursive read/write loops**. This is BEC-isomorphic in organizational form, not a claim that the warm brain is literally a Bose–Einstein condensate.

The staged brain–body model can be stated as one recursive physical process:

discrete neural events → geometry-filtered brain–body field → integrated observer state → changed precision, gating, physiology, and action → new neural and environmental events

Tissue, extracellular medium, cerebrospinal fluid, skull, vascular structure, autonomic state, and whole-body geometry filter discrete activity into a smoother collective state. That state is integrated with body condition, memory, prior structure, and current goals into a body-indexed observer state. The observer state then feeds back by changing neural gating, motor action, autonomic output, instrument use, and the probability landscape of later events.

The observer is therefore **projected continuity over hidden non-identity**: a lossy but usable standing measurement state continuously rebuilt from lower-level events and continuously constraining what those events can do next. Top-down action requires no new force. The macrostate changes the boundary conditions and probability landscape of the same lower-level physics from which it emerged.

An encounter extends this identical loop rather than adding a second mechanism:

event ↔ local environment ↔ instrument and embodied boundary ↔ collective brain–body state ↔ integrated observer state → action → event and environment

A camera usually ends near reception and storage. A conscious organism continues through recursive integration, valuation, prediction, and adaptive action. Both are physical measurement boundaries; they differ in integration depth, bandwidth, memory, and control repertoire.

This is the precise correction to a purely observer-external baseline-closure scalar. The observer must be excluded from the **outcome used to estimate a baseline edge**, but it cannot be excluded from the evolving closure dynamics. A vivid report does not increase local event–environment closure. A preregistered observer state that is manipulated before the event and then lawfully changes a calibrated non-report physical response would demonstrate that the observer participates in joint closure.

The causal ordering is equally important:

antecedent observer state → biased coherent weighting → current closure profile → physical outcome → updated observer state and report → next causal cycle

The same observer is an upstream physical constraint and a downstream receiver at different moments. **Biased coherent weighting** is not one microscopic force term. It is the context-dependent way an integrated macrostate changes precision, gain, boundary permeability, action selection, and the transition landscape among many lower-order variables. Bias here means a finite reference-frame cut, not error or arbitrary preference.

In active-inference language, this macrostate performs **active precision weighting**: it changes which incoming differences are amplified, which predictions dominate action, and which sensorimotor loops remain open long enough to stabilize a shared state. A preregistered manipulation of attention, neural synchrony, or group coordination therefore counts as a change to the coupling graph only if it alters a held-out event–environment or event–instrument response after ordinary movement, heat, sound, electromagnetic emission, and instrument-control pathways are modeled. The claim is not that consciousness collapses reality; it is that an embodied control state may change a measurable read/write relation when a physical channel exists.

This gives a concrete admission rule for high-order causation. An observer macrostate counts as a causal variable only if it precedes the response, survives changes in its microscopic realization, predicts held-out non-report effects, and adds intervention or prediction beyond lower-level energy, motion, heat, ordinary EM emission, and instrument use. Otherwise the general embodied-feedback loop may remain true while a direct consciousness-specific bridge is rejected.

This yields three distinct biological claims:

- **C0 — embodied receiver:** event-to-organism transfer and report change, but no independently measured event-side edge changes.
- **C1 — participatory closure:** a preregistered embodied macrostate changes an independently measured event–environment or event–instrument coupling after ordinary action pathways are modeled.
- **C2 — direct latent read/write:** organisms exchange target-specific information through shared variables unavailable to ordinary spatial channels.

Physical craft do not require C2. Telepathy, downloads, or nonlocal information reports do. C2 must demonstrate blinded, target-specific information transfer; correlation alone is not a communication mechanism.

The framework's advantage is that it does not need a magical "consciousness collapses reality" force. Attention and adaptive physiology may help close a reciprocal loop, just as an active receiver can lock to a weak carrier. A passive detector may register less because it does not adapt; alternatively, an instrument may register more because biological interpretation adds noise. Both possibilities are testable.

Historical and contemporary claims belong on an evidence ladder. *The Telepathy Tapes* and alleged "download" testimony are Level-C prompts for controlled study, not established channels. The methodological vulnerability attaches to facilitator-mediated FC, RPM, letterboarding, and Spelling to Communicate—not to nonspeaking people or independent augmentative and alternative communication.

Jacobo Grinberg-Zylberbaum and colleagues reported "transferred potentials" between separated participants in a small 1994 study (original paper); the methods have been criticized and no robust independent replication is established in the public evidence summarized here. His unexplained disappearance in 1994 does not increase the result's evidentiary weight (historical account). The "God Helmet" was the work of Michael Persinger and Stanley Koren, not Grinberg; a double-blind replication found experiences tracked suggestibility rather than field exposure (study). Claims involving nonspeaking autistic people deserve respect for participants' competence and interiority while requiring methods that establish independent authorship; ASHA's position statement addresses facilitator-mediated rapid prompting, letterboarding, and Spelling to Communicate (statement).

These cases should not be erased, and they should not be treated as established nonlocal channels. They define experiments the model must be able to pass.

13. Geophysical bridge susceptibility and recurrent zones

A local **bridge-susceptibility state** is the degree to which measured environmental conditions hold a location near a cross-regime threshold.

Possible contributors include quartz-rich or other piezoelectric mineral networks, fault stress and charge separation, conductivity contrasts, groundwater, geomagnetic topology, atmospheric ionization, aperiodic or quasicrystalline structures with dense reciprocal-space modes, and layered cavities capable of resonant behavior.

Such geology could act as a passive phase-matching or localization lattice. The predicted site is not permanently "open." It is weakly stable and intermittent because local conditions hover near threshold. Before events, prospective instruments should observe some combination of critical slowing, path dependence, hysteresis, mode locking, unusual noise structure, or repeatable precursor phase changes.

Claims about Skinwalker Ranch and Bradshaw Ranch can be placed here without granting their conclusions. They are candidate field locations requiring prospective controls. AARO confirms that a government contractor investigated an unnamed Utah property widely identified as Skinwalker Ranch for UAP, remote viewing, consciousness anomalies, and interdimensional ideas, but reports that several paranormal lines were not specifically authorized and that the resulting papers lacked thorough peer review (AARO historical report). At Bradshaw Ranch, the cited Northern Arizona University research is ecological and climate-oriented; this review located no public, independently replicated geophysical-anomaly dataset (local report).

The sites are therefore not proof of weak-coherence zones. They are places where this hypothesis can be made vulnerable to measurement.

Latitude, longitude, and poles enter the model only through measured field and geological topology. Coordinate coincidence alone is not a mechanism.

14. The nuclear association: four nonexclusive hypotheses

Nuclear associations are repeatedly alleged and appear in some institutional records, but enrichment over matched base rates remains unquantified. The "nuclear connection" therefore deserves explicit modeling without becoming one undifferentiated claim.

1. **Strategic monitoring:** physical intelligences are interested in weapons, reactors, or civilizational risk.
2. **Beacon or detectability:** radiation, infrastructure, security systems, or unusual emissions make sites easier to identify across regimes.
3. **Closure forcing:** time-varying binding-energy changes, ionization, radiation, or electromagnetic transients perturb bridge susceptibility and drive latent organization toward our closure. Static storage alone does not supply this mechanism without a specified varying coupling.
4. **Selection and surveillance:** nuclear facilities have more sensors, security personnel, restricted airspace, and reporting pathways.

The third version most directly fits the present mechanism. It resembles high-amplitude injection locking: a pattern that was weakly or differently coherent is compelled into our regime before a negotiated translation stabilizes. It predicts damaged or low-bandwidth localization, smooth shells, unstable behavior, and short-lived material properties.

Release 04 contributes two useful primary records. A 2015 Pantex incident report documents radar and multiple security witnesses at a nuclear-weapons facility; the reported silent, slow-moving object changed direction, but the described speed and altitude leave a balloon or debris as a serious alternative. A 1949 Los Alamos conference record establishes high-level concern over green fireballs, not exotic origin.

The Fukushima detail also needs correction. The Iino UFO Museum exists in Fukushima Prefecture, but it opened in 1992, nineteen years before the Daiichi disaster, and is tied to older Mount Senganmori lore (official tourism page). Its existence does not establish a fallout–UAP link.

The discriminating study is prospective and matched: compare nuclear weapons sites, reactors, conventional high-energy facilities, nonnuclear military installations, and ordinary controls while accounting for sensor density, population, publicity, air traffic, radiation, EM spectra, atmospheric state, and geology. Strategic monitoring predicts anticipatory or goal-directed timing. Physical forcing predicts onset after measurable perturbation. Surveillance bias predicts event counts that scale with coverage rather than nuclear variables.

15. Craft, beings, smooth eggs, and support-dependent materials

Actual extraterrestrial or otherwise nonhuman beings and craft are not excluded. They are one high-closure branch. A translated craft should be modeled as a nested bundle:

- occupant or controller;
- internal vehicle organization;
- active boundary envelope;
- surrounding medium or plasma sheath;
- and target-regime interface.

At partial closure, only coarse global invariants may cross. Fine-grained surface and interior detail may remain untranslated. The result is a **low-pass projection**: smooth spheres, eggs, shells, or luminous boundaries rather than seams, rivets, windows, and conventional control surfaces.

Two alleged material categories must be distinguished:

1. ordinary matter whose unusual properties require active field support;
2. partially translated organization whose physical integrity itself requires the bridge.

After removal from the sustaining envelope, phase drift could produce a measurable **coherence half-life**: loss of unusual properties, structural degradation, fragmentation, or apparent disintegration. The decisive result would not be a story that a sample "turned to dust." It would be a reproducible environmental decay curve and, ideally, reversible stabilization when the relevant field, phase, pressure, temperature, or boundary condition is restored.

Claims by Richard Banduric and others about materials that reconfigure or disintegrate remain attributed testimony. Banduric is connected to a real 2024 USAF Phase I SBIR propulsion award (record); the award and applicant abstract do not independently validate either performance or his separate material claims. In an unrelated magnesium–bismuth specimen case, ORNL observed repeating lead- and bismuth-rich layers but found terrestrial isotopes and no support for the proposed pure, monocrystalline-bismuth terahertz-waveguide condition (AARO historical report). Jake Barber's egg-craft account likewise remains testimony without a publicly inspectable craft, verified chain of custody, decisive public imagery, or completed finding.

These claims are valuable to the hypothesis as **risk-bearing predictions**. If a legitimate sample appears, support-dependent materiality says exactly what to monitor. Ordinary oxidation, contamination, mishandling, or fraud predict no phase-selective restoration.

16. A nonexclusive taxonomy

The framework should never assign every case the same ontology. Each event is classified independently along three axes.

Axis	Values
Origin	ordinary terrestrial; natural intraregime; natural interregime; engineered human; engineered nonhuman; unknown
Dominant manifestation phenotype	informational; subjective-perceptual; field/plasma; partially material; fully material; unstable residue
Bridge initiation	accidental; environmentally stabilized; negotiated; engineered; externally forced

A fourth axis records directional asymmetry: whether the event is easier for us to read than write, easier to write than read, or reciprocally coupled.

This accommodates a real extraterrestrial organism using engineered coherence handoff, a naturally self-organized luminous plasma, an observer-amplified perceptual event, a classified vehicle, and an ordinary sensor artifact. The theory is not that these are secretly one thing. It is that the genuinely anomalous residual may be organized by one deeper variable: **how an otherwise coherent pattern acquires, maintains, and loses local causal closure**.

17. Evidence architecture: inventory, inference, implementation

The right evidential structure is a ladder, not a pile. Ten retellings that descend from one witness are one chain, not ten confirmations. At the same time, convergence across genuinely independent witness, sensor, environmental, and material channels deserves more weight than any channel alone.

Level	Contents	What can be said
A — established anchors	official records; calibrated sensor physics; phase and holonomy; known scalar fields; multiscale bioelectric control; natural plasma organization	State directly within their demonstrated domain
B — documented but ambiguous events	institutional records, some multisensor cases, credentialed first-person encounters, recurring luminous phenomena	They require attribution; they do not select this mechanism by themselves
C — testimonial or weakly controlled clusters	hotspot lore, alleged downloads or telepathy, recovered-craft and material stories, whistleblower accounts without public raw evidence	Attribute precisely and turn into prospective tests
D — structural hypothesis	overlapping closures, Bidi-Coherence Delta, bootstrap transducer, strangeness window	Judge by compression, discriminating predictions, and intervention
E — candidate implementation	closure scalar, extrametric topology, engineered handoff, support-dependent matter	Highest inference burden; modular and replaceable

The courtroom analogy is useful at the case level: independent testimony, documents, instruments, chain of custody, motive, and alternative explanations can form a cumulative case. The physics level asks an additional question: can the proposed mechanism predict a result that its rivals do not? Both forms of proof matter, but they answer different questions.

17.1 What the official public record establishes

The 2021 ODNI preliminary assessment counted 144 reports, including 80 involving multiple sensors and a smaller group reporting unusual movement. It also emphasized unresolved sensor error, spoofing, and misperception. NASA's independent study report identified missing range, metadata, calibration, and systematic collection as major barriers; its treatment of apparent speed shows why parallax and geometry must be recovered before inferring extraordinary kinematics.

AARO's official imagery catalogue contains physical objects with unremarkable behavior, resolved balloons, birds and aircraft, and data-poor cases in which a target cannot be cleanly separated from thermal or display effects. "Unresolved" means no definitive determination from available data, not "exotic."

David Fravor's sworn statement is important direct testimony for the 2004 Tic Tac encounter. Fravor reports visual disappearance, followed by an air controller's report that USS *Princeton* radar had reacquired an object at the distant combat-air-patrol point. The public infrared clip came from a later aircrew and does not show that interval; the relevant radar stream is not public. The proper datum is therefore **a reported disappearance followed by a reported radar reacquisition whose identity continuity is unverified**, not demonstrated teleportation.

David Grusch's sworn statement establishes his credentials, investigative role, and serious allegations. The central recovery claims are publicly secondhand: information he says was conveyed by others. They belong in the source-attribution layer, not the established-physics layer.

17.2 The current infrared case as a model of disciplined analogy

PR104 is particularly useful because it captures the exact tension this framework must handle. The visual pattern is strikingly compatible with the language of interference, nodal structure, and phase. Yet the strongest first explanation is also an interference phenomenon—the imaging system's point-spread function (technical explanation).

Thus the image should remain in the paper, but as a methodological hinge:

Pattern resemblance proposes the measurement; cross-platform invariance decides whether the pattern belongs to the target, the interface, or the instrument.

That is not a retreat from the hunch. It converts the hunch into a decisive experiment.

18. Phenomenology mapped to the mechanism

Reported feature	Shared-closure reading	Leading alternatives	Discriminating observation
Abrupt disappearance	craft–environment or craft–sensor edge falls below interaction threshold	occlusion, contrast loss, sensor track break, acceleration	synchronized range-resolved sensors plus interface precursor
Distant reappearance	coherence handoff through latent adjacency	separate object, bad timing, radar reassociation	identity invariant and correlated entry/exit conservation signature
Cigar, sphere, disc, or multiple lights	different phase-basis cuts or partial localization	ordinary geometry, exposure smear, diffraction	lawful transform across angle, polarization, band, and sensor architecture
Luminous/plasma sheath	bridge phenotype or impedance layer	ordinary plasma, combustion, atmospheric optics	spectroscopy plus causal tracking of localization transition
Observer responsiveness	antecedent embodied macrostate modifies a later closure edge	expectancy, memory, action, social contagion	blinded manipulation separating report change from held-out event-side physical change
Nuclear association	monitoring, beacon, forcing, or surveillance bias	traffic and reporting selection	matched prospective facilities and temporal ordering
Recurrent ranch or geological zone	local bridge susceptibility held near threshold	folklore, tourism, intermittent ordinary sources	prospective matched controls and environmental precursors
Smooth egg or shell	low-pass projection of nested craft/interface	balloon, conventional aerospace, poor resolution	range, parallax, multispectral surface and aerodynamic data
Decaying anomalous material	support-dependent organization	oxidation, contamination, hoax	chain of custody, environmental decay curve, reversible phase-specific stabilization
Telepathy or “download”	C2 direct latent read/write	cueing, sensory leakage, statistics, facilitator influence	preregistered target-specific transfer with automated blinding

The table expresses the paper’s central methodological commitment: every exotic interpretation is paired with the ordinary mechanism most capable of producing the same surface appearance.

19. Predictions that can fail

19.1 Closure-profile heterogeneity prediction

After directed causal efficacy is estimated from intervention or identified perturbation, registered strangeness should rise with heterogeneity and directional frustration across the closure profile, provided enough calibrated evidence exists to estimate a residual. Uniformly absent coupling yields no event; uniformly strong and mutually translatable coupling yields conventional physicality; mixed local, sensor, biological, and collective closure yields the strongest divergence. No such relationship—or one fully explained by known transfer functions—rejects the flagship prediction.

The test must separate calibration from evaluation: estimate the closure profile from one randomized intervention block, then measure registered strangeness on held-out channels or trials. Fix the normalizations, boundary weights, context variables, transfer models, and predicted relationship before inspecting the held-out result. An ordinary object viewed through progressively worse visibility is the decisive negative control: its local closure remains high while passive gain falls, and calibrated residual strangeness should remain low.

19.2 Structured sensor and witness-population disagreement

Radar, infrared, optical, magnetic, acoustic, and biological readouts may differ, but the differences should be transformable as projections of one latent event. Within one encounter, report and sensor divergence should vary lawfully with distance, angle, spectral window, channel gain, body state, and integration state—not randomly. A locally high-closure event may therefore produce structured nearby reports and weak remote reconstructions. If calibrated transfer functions and ordinary artifacts fully explain the spread, no cross-regime mechanism is needed.

19.3 Threshold and hysteresis

Onset and disappearance should occur abruptly at different control values while an environmental driver is increased and decreased. Hysteresis, path dependence, mode locking, or critical slowing should precede some events. A purely narrative threshold invented after each observation fails this prediction.

19.4 Phase over power — phase-mediated implementation

A coherent field configuration should alter event probability or bridge behavior more than an equal-energy phase-scrambled control. This is one of the cleanest distinctions between the theory and generic “high energy causes anomalies” reasoning.

19.5 Boundary precursor

Before disappearance, calibrated instruments should record a change in polarization, spectrum, refractive behavior, field topology, phase noise, sheath dynamics, or another boundary proxy—rather than only the impulse and heating expected from ordinary acceleration.

19.6 No hidden continuous path

Multiple range-resolved stations should fail to recover an ordinary trajectory during a genuine blink interval while still recording coordinated entrance and exit transitions. Loss by one camera is irrelevant; loss across independent, appropriately placed systems is the test.

19.7 Relational projection law

Apparent forms should change systematically with viewing basis, frequency, polarization, exposure, and phase. An object-fixed geometry explains a stable craft; a camera-fixed pattern explains an artifact. Only target- or interface-relative transformations support this mechanism.

19.8 Information–field–matter ordering — graded-localization implementation

When bridge strength is gradually increased, low-bandwidth correlations should precede field manifestations, which should precede stable material effects. The reverse or random ordering would require revision.

The first computational test is a deliberately small two-layer oscillator network: each layer maintains internal phase relations while adaptive cross-layer edges reduce directional mismatch. Slow reciprocal ramping, sudden forcing, and phase scrambling should be compared. The ordering gains explanatory weight only if low-bandwidth cross-layer correlation reliably precedes stable local amplitude, the shared state exhibits threshold and hysteresis, and scrambling destroys the bridge without merely reproducing ordinary energy loss.

19.9 Directional asymmetry

Read and write thresholds should differ, consistent with $\Delta_{i\to j} \neq \Delta_{j\to i}$. A phenomenon may be detectable before it is perturbable, or physically influential before it is imageable. The direction should be stable enough to measure.

19.10 Geophysical susceptibility

Instrumented combinations of mineralogy, fault stress, conductivity, groundwater, ionization, and field topology should outperform matched sites after controlling for population, folklore, tourism, and surveillance. If not, the geological bridge claim loses support.

19.11 Nuclear discrimination

Any nuclear-specific association must survive comparison with matched nonnuclear military and equal-power industrial facilities. Timing should distinguish strategic monitoring from physical forcing and detection bias.

19.12 Support-dependent materiality — material-closure implementation

Exceptional properties should decay on a reproducible curve as environmental support is changed and should be slowed or restored by a specific boundary condition. Anecdotal disintegration with no sample history fails.

19.13 Bidirectional perturbability

Interventions from our side should alter the event in reproducible, state-dependent ways. A genuine transducer cannot remain a label applied only after spontaneous observations.

19.14 Observer-state test

If C1 or C2 is real, effect size should track a preregistered biological state or dynamical-synchrony measure more strongly than belief, demand characteristics, or facilitator knowledge. The decisive test has two outcomes: does manipulating the observer state change only perception or report, or does it also change a separately measured event–environment or event–instrument edge of the closure profile after ordinary behavioral paths are controlled? Report-only effects support reception or interpretation; repeatable changes in non-report physical coupling support participatory closure. Failure leaves C0 intact while rejecting the stronger versions.

19.15 Conservation residual

Momentum, energy, and angular momentum not expressed in ordinary motion must appear in a boundary, field, scalar, or environmental channel. Persistent unaccounted disappearance is not a success; it is a failure of the model.

19.16 Destination addressing

Re-entry locations must follow a reproducible topological or phase relation. “It went somewhere else” is insufficient. Without a second side of the handoff, the theory explains only disappearance.

20. A concrete research program

Program A — calibrated angular and modal tomography

Deploy synchronized visible, MWIR, SWIR, polarimetric, spectroscopic, radar, magnetometric, acoustic, and range instruments at separated stations. Preserve raw data, sensor pose, optics, processing versions, weather, and calibration frames. Rotate or exchange sensor architectures where safe.

The goal is not merely more video. It is to infer whether observed structure is object-fixed, target-field-fixed, atmosphere-fixed, or instrument-fixed. PR104’s star is an ideal example of the distinction.

Program B — matched hotspot observatories

Instrument claimed hotspots and matched controls with identical equipment. Record geology, mineralogy, conductivity, groundwater, radon, seismic activity, VLF/ELF/RF spectra, ionization, meteorology, optical sky state, aircraft and satellite traffic, and human activity. Predefine event classifiers and compare out-of-sample periods.

If a site is a near-critical bridge-susceptibility zone, the event rate should depend on a repeatable multivariate state, not its name or mythology.

Program C — nuclear and high-energy comparison

Construct matched groups: weapons facilities, reactors, conventional power plants, high-energy laboratories, restricted nonnuclear military sites, and ordinary industrial controls. Normalize for surveillance density, reporting culture, airspace, population, and strategic importance. Test lagged associations with radiation, load changes, maintenance, critical transitions, and EM transients.

Program D — safe reciprocal perturbation

At sites with a prospectively established event rate, test low-energy, approved changes in phase, polarization, modulation, and boundary geometry against equal-power scrambled and sham conditions. Stop conditions must be predefined. The crucial outcome is a repeatable response curve with hysteresis, not a dramatic one-off event.

This is also the licensing test for a proposed closure coordinate. The coherent, power-matched scrambled, and sham blocks must predict different directional edges before data collection. A repeatable phase-specific shift licenses further physical modeling; a null result leaves the operational closure framework intact while withholding physical status from the candidate coordinate.

Program E — observer/instrument matrix

Cross blinded and unblinded observers with active and sham environmental conditions and present or absent instruments. Measure body, neural, attentional, and group-synchrony variables before the response window. Use one randomized block of calibrated, non-report channels to estimate the relevant closure edges and a held-out block of instruments and reports to estimate registered divergence. This separation prevents the same phenotype from constructing both axes.

Manipulate attention, participant presence, or dynamical coordination while holding exposure, equipment, geometry, and ordinary behavioral pathways fixed. If only percepts and reports change, the result belongs to reception or semantics. If a separately calibrated event-side or environment-side response changes reproducibly, the result supports participatory closure. Replace participants with passive recorders and use ordinary objects under degraded visibility as decisive controls: worse visibility must not be mislabeled reduced local physical closure.

A particularly sharp design compares identical unattended recording, live embodied observation, and delayed viewing of the same feed, then crosses synchronized and unsynchronized groups at matched headcount, physical activity, heat, sound, and apparatus. Local physical closure is scored before anyone reports an experience. Observer count predicts nothing by itself; only a measured change in the antecedent coupling graph is relevant.

For direct-information claims, automate random target generation; ensure the receiver, facilitator, experimenter, and analyst cannot know the target; use independent eye tracking or untouched response surfaces; publish all timestamps and trials; and require replication by an adversarial laboratory.

Program F — material coherence half-life

For any sample with credible provenance, establish continuous chain of custody; split samples across blinded independent laboratories; characterize isotope ratios, microstructure, composition, thermal response, conductivity, magnetism, dielectric behavior, and mechanical properties. Continuously log mass, radiation, EM emissions, temperature, pressure, and structural change under inert, vacuum, shielded, and controlled-field conditions.

Support-dependent materiality predicts a context-sensitive, reproducible decay or recovery relation. An extraordinary origin story without exceptional, replicated behavior is not the predicted result.

Program G — handoff and destination topology

Build geographically distributed stations with common clocks and continuous range coverage. Search for correlated boundary precursors at disappearance and reappearance points, conserved identity markers, and a stable mapping between local field topology and endpoint selection. This is the most difficult program and the one that turns "detuning" into an actual transit theory.

Program H — minimal shared-attractor simulation

Build the smallest two-layer network capable of representing two internally coherent regimes and an adaptive reciprocal interface. A coupled-oscillator or Kuramoto-like lattice is sufficient for the first pass. Cross-layer coupling should adapt only through a declared rule that reduces directional mismatch; a separate operator should scramble phase without changing total input power.

Run three conditions: gradual reciprocal ramp-up and ramp-down, sudden forced coupling, and phase scrambling after a shared state forms. Measure onset threshold, hysteresis, read/write asymmetry, lifetime after support is removed, and whether low-bandwidth correlation precedes stable local amplitude. Publish the minimal parameter set and the failure cases. If the ordering appears only after adding an unmotivated mechanism, it remains descriptive rather than derived.

21. Rival models and decisive discriminators

Shared-closure transduction should compete against, not swallow, the following:

- **Sensor point-spread, saturation, and processing:** morphology follows the instrument and vanishes across independent architectures.
- **Misidentification or atmospheric propagation:** recovered continuous trajectories and meteorology remove the need for cross-regime closure.
- **Conventional plasma or geophysics:** spectroscopy and ordinary nonlinear dynamics explain the event without a material localization transition.
- **Electronic warfare or spoofing:** sensor anomalies occur without independent optical, environmental, material, or biological correlates.
- **Classified human propulsion:** continuous conservation signatures and an engineering development trail should exist, even if inaccessible publicly.
- **Psychological contagion and memory:** target-specific information and blinded instrumental effects fail.
- **Ordinary extraterrestrial vehicle:** a fully material craft follows a continuous worldline while using advanced but intraregime propulsion.
- **Wormhole or metric engineering:** geometric transit occurs without multiple computational closures or participatory biology.
- **Unknown dark or scalar sector:** physical effects appear without negotiated shared states.
- **Strategic nuclear monitoring:** agency and timing explain nuclear proximity without physical nuclear forcing.
- **Ordinary chemical degradation:** alleged material shelf-life has no phase-selective stabilization or restoration.

The model wins only if it predicts relationships among verified residuals that these alternatives do not. Its strength would be cross-domain compression with fewer independent assumptions—not the ability to rename every mystery "partial coherence."

22. What the Lehto video supplies—and what this model adds

The source video, **"We've Been Asking the Wrong Question About UFOs This Whole Time,"** was published July 9, 2026 and is a 21:16 argument by Chris Lehto. Its declared hypothesis is that the longstanding failure to identify where UFOs come from may indicate that origin is the wrong variable; the more productive variable is the scale at which the phenomenon operates. Its chapter structure moves from the origin mystery, through existing interdimensional theories, to a nested fractal universe, the question of what the phenomenon wants, and civilizational course correction. Lehto explicitly frames the proposal as a hypothesis, not a conclusion, and connects it to Michael Levin, David Grusch, Jacques Vallée, and his own *Our Fractal Universe* direction.

Source chapter	Starting point	Function in the argument
Origin Mystery	0:00	Reframes persistent failure to locate a conventional origin as evidence that the question may be mis-specified
Existing Theories — Interdimensional Beings	5:11	Places the scale hypothesis relative to established interdimensional interpretations

Source chapter	Starting point	Function in the argument
A Nested, Fractal Universe	10:35	Develops the central picture of intelligence and organization across nested scales
What Does the Phenomenon Want?	14:44	Shifts from static taxonomy toward agency, goals, and interaction
Course-Correcting as a Civilization	19:54	Draws the social and epistemic implication of adopting the scale lens

The video's internal progression is more specific than "higher scale" alone. Lehto first compares three incomplete families: nuts-and-bolts craft explain physical traces but not all high strangeness; psychosocial or consciousness-centered models address experience but not the hardest physical claims; and interdimensional language accommodates adjacency while risking an explanation so elastic that it means nothing. Scale is offered as the missing axis across those categories.

The bacterium–person thought experiment is the central intuition. Two intelligences can occupy the same space while remaining mutually inaccessible because their organized boundaries and actionable variables exist at different scales. Vaccination, chemotherapy, and CRISPR then supply the stronger causal analogy: a person-level intervention changes a cell's operating conditions even though no cell-level model contains the agent or goal that produced it.

Levin's contribution enters as alignment. Intelligence resides in coordinated goal pursuit across parts, not in one privileged substrate. Cancer becomes the image of a capable subsystem whose effective self-boundary has contracted: it still computes and acts, but no longer reads the organism-level field. Lehto extrapolates that UAP might be less like visitors entering from outside and more like interventions or regulatory machinery of a larger organized system. He explicitly leaves that as speculation and closes by acknowledging unresolved physical materials, ground traces, secrecy, programs, and origin.

The video provides four valuable moves:

1. **Failure as data:** seventy years of an unproductive origin question may indicate a category error.
2. **Scale-relative agency:** intelligence and coherent goals may exist above and below familiar human scale.
3. **Nested organization:** a phenomenon can act through levels that are not visible from the level at which we observe it.
4. **Nonexclusive physicality:** dimensional or scale-relative interpretation need not deny physical manifestations.

Shared-closure transduction adds six further moves:

1. **Computational, not Everettian plurality:** multiple closures are co-present organizations of one substrate, not duplicated universes.
2. **Bottom-up reciprocity:** lower-scale phase relations build and constrain the higher-order state while top-down boundaries organize local degrees of freedom.
3. **Directional translation:** the Bidi-Coherence Delta distinguishes read from write and perception from control.
4. **The interface as entity:** the negotiated shared state is itself the transducer, not a passive channel between pre-existing objects.
5. **Relational phase-basis cuts:** morphology and observability arise jointly from event, bridge, observer, and sensor.
6. **A physical handoff program:** higher dimensionality, scalar dynamics, plasma, biology, geology, nuclear forcing, and materials become modular mechanisms with explicit tests.

The video is therefore not "proof" of the present view. It is an independent convergence on the top-down scale spine that makes the reciprocal extension newly easy to state.

23. The model's hard requirements

The next stage must satisfy eleven debts:

1. Recover the directional closure profile from preregistered interventions or prespecified natural perturbations, nulls, matched ordinary references, and appropriate control sites.
2. Measure registered strangeness on held-out cross-channel and ordinary-model residuals, never by reusing the outcome to construct its predictor.
3. Define an operational meter for each component of the Bidi-Coherence Delta.
4. Specify a gauge-invariant phase observable for every phase-mediated claim.
5. License any proposed closure coordinate through a reproducible phase-specific differential signature, then explain how it couples to composite matter and binding energy without being confused with the operational closure meter.
6. Provide a destination-address rule.
7. Account for energy, momentum, angular momentum, entropy, and information across a handoff.
8. State the substrate-level causal order or global-consistency condition.
9. Distinguish negotiated, engineered, forced, and accidental bridges dynamically.
10. Derive closure-profile heterogeneity and information–field–matter ordering from an explicit minimal model—beginning with the two-layer shared-attractor simulation—rather than a verbal curve.
11. Correct for shared sensors, communicated priors, and linked reports so dependent evidence is not overcounted.

The first target is not a grand unified equation. It is a minimal model that produces threshold, hysteresis, asymmetric observability, metastability, observer-state feedback through explicit channels, and collapse of the bridge under phase scrambling. Infinite Potential carries the deeper obligation to connect that model to established field theory, matter, gravity, and relativistic causal structure. This paper carries the nearer obligation to define the observable relationships cleanly enough to test.

24. Implications

24.1 For UAP research

The basic unit of analysis becomes the **event–environment–observer–instrument system**, not the luminous shape alone. Case databases should record boundary conditions, platform state, sensor basis, observer physiology where appropriate, and changes before and after visibility. Classification by shape is secondary to classification by closure dynamics.

24.2 For intelligence

Intelligence is not restricted to a familiar body plan. It is the capacity of a bounded system to preserve goals, model relevant variables, and act across a problem space. A craft and occupant may be one nested agent. A plasma structure may exhibit limited competency without personhood. A civilization-scale or ecosystem-scale process may be intelligent in a way poorly sampled by human conversational expectations. This preserves Levin's multiscale direction without declaring every organized pattern conscious.

At the minimum boundary of this definition, the transducer itself can exhibit intelligence-like behavior when it actively maintains the shared attractor across the Bidi-Coherence Delta. The measurable question is not first whether the maintainer is biological, machine, plasma, vehicle, or collective. It is which closure profile is being stabilized, what disturbances it corrects, and what maintenance cost is borne by each participating regime. Richer personhood requires more; adaptive transducer maintenance is the smallest common operational core.

24.3 For biology and AI

If biological observers are active boundaries, the missing ingredient in artificial systems may not be electromagnetism by itself. It may be intrinsic bounded self-maintenance: a system whose predictions, field states, actions, and failures have valenced consequences for its continued organization. The same architecture that makes an organism a potential interface participant may distinguish lived agency from disembodied symbol manipulation.

24.4 For physics and engineering

The engineering target shifts from "generate enough thrust to cross distance quickly" to "control the variables that establish metric participation, boundary localization, and invariant transport." This is not yet a blueprint. It is a change in what a blueprint would need to control.

24.5 For social ontology

The framework reconciles two traditions that have usually spoken past each other. The physical approach is right to demand objects, energy, instruments, and materials. The Vallée-style approach is right that observer effects, symbolism, discontinuity, and social consequences may belong to the phenomenon rather than merely contaminate it. If an encounter is a negotiated shared closure, physical and interpretive effects are expected to co-occur because observer, environment, and interface participate in one event at different bandwidths.

Consensus can become a large-scale coherence state, but not a vote that creates physics. When embodied as synchronized attention, coordinated sensing, action, apparatus, or another measurable coupling, dynamical consensus can become an antecedent boundary condition in the next causal cycle. Later semantic agreement stabilizes a public reconstruction but cannot retroactively prove physical influence. Social systems determine which observations can be preserved, compared, funded, and treated as real; the research task is to distinguish that epistemic stabilization from any demonstrated event-side feedback.

25. Conclusion

The hypothesis can be stated without the surrounding terminology:

Reality may contain organized regimes that are co-present but not fully mutually observable. When two such regimes begin to share causal variables, their reciprocal responses can create a new, temporary interface. The interface is not merely a doorway. It is a jointly maintained state that translates what each side can count as signal, boundary, matter, and action.

When the entire closure profile is weak, the relation may be unavailable. When relevant cuts are uniformly strong and mutually translatable, it may look like an ordinary physical craft, organism, or material. It should look strangest when the profile is mixed: locally solid but remotely ambiguous; physically effective but hard to image; perceptually vivid but instrumentally sparse; or strongly readable in one direction and nearly unwritable in the other. Natural phenomena and engineered vehicles can occupy this parameter space without sharing an origin. Actual beings from elsewhere remain possible; what changes is the assumption that they must reach us by moving extremely fast through every intervening point of our spacetime.

The physical conjecture is that phase-relative boundary control, perhaps mediated by a scalar or extrametric closure coordinate and expressed through plasma or other nonlinear media, can change regime localization while preserving internal organization. The biological conjecture is that adaptive organisms can participate in the bridge as active read/write boundaries. The geophysical and nuclear conjectures are that particular environments can tune, stabilize, reveal, or forcibly localize such interactions.

None of those implementation claims is presently established. But together they form a coherent research program because they converge on the same measurable operation: **a change in cross-boundary causal closure**.

The theory's legitimacy will not come from matching the maximum number of stories. It will come from the opposite achievement: exposing the proposal to calibrated sensors, matched environments, phase-scrambled controls, conservation accounting, material chain of custody, blinded information tests, and explicit rival models—and finding that the same small set of variables predicts the residual across domains.

The deepest claim is therefore modest in form, even if radical in consequence:

> ***What appears to be impossible motion may sometimes be a change in participation. What appears to be an object may sometimes be the temporarily stabilized boundary through which two regimes become real to one another.***

Appendix A — transcript-derived map of the source video

The following map was produced from the complete source audio. The creator's five chapter markers are exact; internal times are approximate to a few seconds. This is a research summary, not an official creator transcript.

Time	Transcript-derived argument
0:00–1:22	Introduces the origin puzzle. David Grusch's multidimensional language is cited alongside other well-informed figures who still do not name a definite origin. Persistent non-answer is treated as a clue.

Time	Transcript-derived argument
1:22–2:00	Makes the abductive turn: the correct category may not be on the usual list of locations or entities.
2:00–2:59	Replaces spatial origin with operating scale and introduces Lehto's nested/fractal thesis.
2:59–4:00	Tests the nuts-and-bolts model. It fits radar, alleged retrievals, and physical performance, but not the whole high-strangeness bundle.
4:00–5:08	Tests psychosocial and consciousness-centered models. They fit perception and unusual experience but not the strongest alleged traces and encounters.
5:08–6:12	Tests interdimensional and ultraterrestrial accounts. They fit adjacency but remain location answers and can become too indefinite to discriminate.
6:12–7:13	Offers scale as a dimension of accessibility: something can share our space without being organized at a scale we can perceive or address.
7:13–9:31	Uses bacterium/person and popular-culture analogies to separate spatial co-location from organizational access, then marks larger-than-human intelligence as speculation.
9:31–10:35	Restates nested organization as the empirical base and continued meaningful organization above humans as the extrapolation.
10:35–12:32	Uses vaccines, chemotherapy, and CRISPR to show how higher-scale intention changes lower-scale conditions while appearing causeless or rule-breaking from below.
12:35–13:43	Introduces Levin's system-level intelligence: parts coordinate toward goals that none of the parts individually represents.
13:43–14:44	Uses cancer as boundary contraction or loss of larger-scale alignment rather than simple loss of local capability.
14:44–16:30	Reframes "what does it want?" as "what is the larger system organized toward?" and proposes alignment across scales as a candidate goal.
16:30–18:00	Speculates that UAP may be higher-scale regulatory machinery or intervention rather than an external visitor, while not excluding physical cases.
18:00–19:54	Extends the alignment/misalignment pattern from cancer to extractive growth, nations, and ecological overshoot.
19:54–21:16	Frames civilizational disruption as possible reorganization and ends with open debts: materials, traces, secrecy, programs, and origin remain unexplained.

Named sources and examples include David Grusch, Hal Puthoff, Leslie Kean, George Knapp, Jacques Vallée, Michael Levin, Roswell, Rendlesham Forest, the Tic Tac encounter, vaccination, chemotherapy, CRISPR, and cancer. The video does **not** discuss the Higgs field, scalar potentials, quantum-vacuum engineering, phase-basis cuts, plasma, nuclear or geological coupling, transient materials, or a physical detuning mechanism. Those are extensions developed in this paper and should not be attributed to Lehto.

Terminology index

- **Ontological multitenancy:** one relational substrate supporting multiple co-present operational closures with different access, isolation, translation bandwidth, and persistence conditions.
- **Bidi-Coherence Delta:** directional mismatch preventing reliable round-trip causal translation.
- **Bootstrap transducer:** the shared attractor recursively created by the two regimes it connects.
- **Bridge bandwidth:** number and variety of translated modes.
- **Closure coordinate:** candidate latent substrate or control degree of freedom that may modulate closure dynamics; not the operational closure meter.
- **Closure profile:** context-indexed map of calibrated directional causal responses across declared boundaries.
- **Bidi closure:** reciprocity-sensitive summary of directional causal efficacy across one declared boundary; never inferred from reported strangeness or material appearance.
- **Closure-profile heterogeneity:** unevenness and directional frustration across nested physical, instrumental, biological, and collective cuts.
- **Coherence handoff:** reduction of closure in one regime while internal coherence and target-regime coupling are preserved.
- **Coherence half-life:** persistence of translated properties after bridge support is removed.
- **Co-present closure regime:** graded operationally self-maintaining organization within one substrate, not metaphysical causal completeness or another Everett branch.
- **Geophysical bridge susceptibility:** environmental proximity to interface threshold.
- **Dynamical consensus:** physically measured synchronization or coordinated control that may enter later closure dynamics through an explicit channel.
- **Semantic consensus:** agreement among later descriptions; a reconstruction outcome, not evidence by itself of physical feedback.
- **Registered strangeness:** held-out residual among calibrated channel reconstructions, ordinary trajectory models, and physical relations.
- **Regime localization:** transition from distributed availability to persistent local interaction.
- **Relational phase-basis cut:** observer- and sensor-conditioned projection of an event.
- **Shared causal variable:** degree of freedom accessible across regimes with measured directional read/write permissions; fully reciprocal only when intervention works both ways.
- **Support-dependent materiality:** material organization whose persistence requires specific boundary support.

Source note

The linked video's argument has been paraphrased from the complete source audio and creator-supplied chapter metadata; no long verbatim transcript is reproduced. Official cases are treated according to their source language, with "unresolved" never used as a synonym for "exotic." Named testimony is retained as testimony. Established physics and biology are used as constraints and precedents, not retroactive proof of the anomalous mechanism.