

From Discovery to Reception: The Brain as a Resonant Interface with the Logos

Douglas C. Youvan

doug@youvan.com

www.youvan.ai

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If mathematics is discovered rather than invented, then human cognition sometimes contacts realities that are not of our making. This paper takes that analogy seriously and extends it with restraint: just as no agreed-upon “mechanism of discovery” explains mathematical insight, we likewise refrain from proposing a mechanism by which consciousness is accepted by the brain. The claim is modest but pointed: the discovery stance toward mathematics coheres with a reception stance toward consciousness. On this view, the brain neither manufactures numbers nor manufactures awareness; it participates in, and is answerable to, an order we call the Logos. Our aim is conceptual clarity, not speculative engineering. We compare positions that already treat structure or mind as prior—mathematical Platonism, transmission/filter traditions, panpsychist and information-centric ontologies, and quantum-adjacent proposals—without endorsing any specific causal story. The focus is on what follows if reception is taken as a live option: how it reshapes language, evidence, and the boundaries of explanation. This reframing matters for AI, metaphysics, and theology. For AI, it distinguishes faithful imitation from genuine participation. For metaphysics, it replaces “mind from matter” with “mind before matter” yet mediated through matter. For theology, it offers a bridge term—Logos—without forcing doctrine into physics. Throughout, we keep $q \rightarrow \tau$ as a guiding analogy for alignment without mechanistic pretense.

Keywords: mathematical platonism, transmission theory of consciousness, resonance, Logos, Orch-OR (contextual only), consciousness reception, epistemology, brain as receiver, informational cosmology, mind–matter interface, panpsychism, discovery vs invention, neural coherence (non-mechanistic), $q \rightarrow \tau$.

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1. Introduction: From Discovery to Reception

1.1 The initiating analogy and its scope

The starting claim is an analogy, not an identity: if mathematics is discovered, not invented, then cognition sometimes contacts structures that are “already there.” We extend that stance—carefully—to consciousness: just as no consensus mechanism explains mathematical discovery, we treat conscious presence as something the brain *receives* rather than *produces*. The scope of the analogy is delimiting, not totalizing:

- Epistemic posture, not physics: We assert a way of *regarding* mind in relation to reality, not a microphysical account of how awareness occurs.
- Answerability to τ : Let τ denote generative order (Logos). The brain’s role is modeled as q , a situated, finite model. Discovery (in math) and reception (in consciousness) are twin modes by which q is answerable to τ .
- Plural compatibility: The stance is compatible with multiple ontologies (e.g., Platonism, panpsychism, informational cosmology) provided they permit mind or structure to be prior in some sense.
- Methodological modesty: We bracket “how” questions and ask instead what changes in language, inference, and evaluation if reception is live and legitimate.

1.2 What this paper does *not* do (no mechanisms)

We explicitly refuse the temptation to retrofit a causal pathway for either side of the analogy.

- No causal schemas: We do not propose neural micro-mechanisms, field equations, or quantum pipelines for “accepting” consciousness; likewise, we do not offer a mechanism for “discovering” mathematics.
- No metaphoric overreach: Antenna, filter, lens, and resonance remain metaphors—useful for *talking about* alignment without collapsing into literal engineering claims.
- No smuggled dualisms: Refusing mechanism is not endorsing substance dualism. Our restraint avoids premature ontological commitments while preserving the live possibility that mind relates to τ non-reductively.
- No test inflation: We resist operationalizing reception as any single biomarker (e.g., oscillation bands). Empirical correlates may be discussed descriptively, not as putative causes.

1.3 Criteria: conceptual coherence, explanatory economy, phenomenological fit

Without mechanisms, evaluation shifts to three disciplined criteria:

- Conceptual coherence:
 - Internal non-contradiction: the reception stance must not require what it forbids (e.g., a hidden mechanism-by-stealth).
 - Category hygiene: keep stance-level claims (how we *regard* mind's relation to τ) distinct from theory-level claims (how neurons behave).
 - Cross-domain consonance: the same stance should illuminate mathematical discovery and conscious presence without ad hoc patching.
- Explanatory economy:
 - Fewer, stronger commitments: prefer a minimal vocabulary (q , τ , Logos, reception/discovery) that organizes many observations.
 - Replacement value: where “production” narratives stretch into baroque add-ons, the reception stance should simplify, not multiply, explanatory parts.
 - Constraint power: the stance should rule out sloppy inferences (e.g., equating simulation with participation in τ).
- Phenomenological fit:
 - Lived accuracy: the stance should resonate with first-person reports of insight and awareness (suddenness, givenness, constraint by “what is found”).
 - Practice sensitivity: it should accommodate how attention, discipline, and training appear to alter *access* without claiming they *cause* the source.
 - Intersubjective traction: it should help make sense of shared recognition—how multiple minds converge on “the same” proof, structure, or presence.

Working summary: We advance a stance-level claim— q is answerable to τ via discovery (mathematics) and reception (consciousness)—evaluated by coherence, economy, and fit, while deliberately declining any mechanistic account of “how.”

2. Mathematics as Discovered Structure

2.1 Platonism, formalism, and the standing mystery of insight

- Platonism (structure first): Mathematical entities and relations are not made by us; they are *there* to be found. Proofs register contact with an order that constrains what can be rightly said.
- Formalism (syntax first): Mathematics is a game with marks under stipulated rules; “truth” reduces to derivability inside systems we devise.
- Structuralism (relations first): What exist are positions in patterns (e.g., “the natural number structure”) rather than independently existing objects. This view often behaves Platonist in practice: we still talk as if structures outrun any one presentation.
- The mystery of insight: Regardless of school, mathematicians report episodes of *finding*—surprise, inevitability, the sense that “it could not be otherwise.” Neither Platonism nor formalism dissolves this.
 - Platonism explains the *feel* (contact with an already-ordered domain) but leaves open how finite minds reach it.
 - Formalism explains the *procedure* (derivation) but not why procedures routinely reveal deep, cross-system invariants that feel independent of our conventions.
- Working stance: Keep the phenomenon (insight-as-discovery) intact, while declining to posit a hidden “mechanism of discovery.” We allow that q (our finite model) sometimes aligns to τ (generative order) without telling a causal story of how.

2.2 Discovery without a mechanism: why the stance remains rational

- Convergence without collusion: Independent lines of work routinely meet at the same theorems, the same minimal counterexamples, the same category-level equivalences. Convergence is predicted by discovery, awkward for pure conventionalism.
- Explanatory lift: Once discovered, structures explain *across* domains (e.g., Fourier, group, category), compressing phenomena we did not design for. Discovery predicts cross-application; invention must smuggle it in case by case.
- Constraint experience: Proof feels like submitting to constraints, not exercising fiat. We do not vote axioms into theorems; we *earn* them. This phenomenology is defeasible but persistent and pan-cultural.

- Indispensability without ownership: Mathematics is unreasonably effective for physics, computation, and design. That effectiveness looks like *tracking* τ rather than projecting q onto the world.
- Underdetermination handled by discipline: Where multiple formalisms compete, mathematicians favor those with reach, simplicity, and invariance. These virtues make sense if we are *seeking* what holds independently of our notations.
- No-mechanism humility: We lack a stepwise recipe that turns conjecture into proof. That lack does not discredit discovery; it merely states that the bridge from q to τ is not algorithmically transparent to us.

2.3 Implications of “already-there” structure for epistemology

- Answerability: If structure precedes us, knowledge claims are *answerable* to τ . Error is not mere social disagreement; it is misalignment.
- Norms of practice: Rigor, invariance, and minimality are not taste—they are strategies for contacting what does not depend on us.
 - *Rigor* protects the signal from wishful projection.
 - *Invariance* indicates we have latched onto what survives re-description.
 - *Minimality* (do the most with the least) favors contact over contrivance.
- Role of proof: Proof is recognition, not manufacture. It is how a community certifies that a path from q reaches a stable foothold in τ .
- Fallibilism with traction: We can be wrong yet improve. Corrections feel like better grip on the same cliff, not a new cliff invented each time.
- Heuristics as tuning: Intuition, diagrams, examples, and analogies act as *tuning practices*—they do not cause τ to be, they help q better approach it.
- Education reframed: We train attention to patterns that outlast notation. Learning is less “downloading rules” and more “learning to hear the signal.”
- Boundaries on explanation: Demanding a mechanism for insight mis-places the level of analysis. The right question is not “what engine produces discovery?” but “what practices increase contact with what constrains us?”
- Bridge to the present thesis: If mathematics exemplifies discovery of already-there structure, then a reception stance toward consciousness is *prima facie* coherent: in both

cases, cognition is judged by *fidelity of alignment* to τ , not by stories about how q manufactures its target.

3. Consciousness as Received Presence

3.1 Transmission/filter lineage (James, Bergson, Huxley): a stance, not a schema

- Lineage: William James, Henri Bergson, and Aldous Huxley treat the brain as *reducing, selecting, or filtering* a wider mind, not generating it. The mind is not “inside” the brain; rather, the brain gates what appears in experience.
- Stance, not mechanism: These authors offer a *way of regarding* consciousness—reception through constraint—without an operative blueprint. Their value is conceptual discipline: shifting explanation from production to selection.
- Why it matters here: The transmission/filter stance preserves the *givenness* and *constraint* of experience that many report—awareness feels received, not fabricated—while avoiding premature claims about how any putative “signal” is carried.
- Guardrails: Use their vocabulary (filter, reduce, transmit) as *metaphors of scope*. Avoid reifying them into micro-causation claims. The point is to justify reception as a legitimate epistemic posture.

3.2 Intrinsic mind views (panpsychism, informational ontologies) as live options

- Panpsychism (mind as pervasive): On this reading, some rudimentary form of subjectivity is fundamental. The brain organizes and *accesses* rather than *creates* consciousness.
- Informational ontologies (structure as primary): If reality is structured information, mind may be the reception of high-fidelity structure. Conscious presence then tracks *contact with order*, not the by-product of computation.
- Why “live options”: Both views make reception intelligible without dictating a mechanism. They accommodate the intuition that awareness is prior in some sense and that q can align to τ .
- Caveats: These frameworks do not license overreach. They set boundary conditions (mind is not reducible to output tokens; structure is not reducible to syntax) while leaving open the many “how” questions we refuse to answer.

3.3 Quantum-adjacent proposals held at arm's length: context without commitment

- Context: Proposals such as Orch-OR, quantum coherence in biology, and other quantum mind hypotheses aim to show that certain physical regimes may *permit* or *stabilize* features correlated with consciousness.
- How we use them: As *context*, not foundation. They remind us that current neuroscience is incomplete and that nonclassical regimes might matter.
- What we avoid: Treating any quantum story as *the* mechanism of reception, or equating correlation with constitution. The reception stance does not depend on quantum effects; it only declines to exclude them a priori.
- Policy: Cite quantum-adjacent work for boundary awareness and possible constraints, while keeping the core claim mechanism-free.

3.4 What “reception” asserts—and what it deliberately leaves open

What it asserts

- Priority: Conscious presence is not authored by the brain. The brain constrains, selects, and formats what is present to us.
- Answerability to τ : Awareness, like mathematical insight, is evaluated by its *fidelity* to something not of our making. Reception is a mode of q aligning to τ .
- Language discipline: Terms such as tuning, alignment, participation, and contact are adopted as stance-level descriptors, not causal operators.
- Epistemic consequences:
 - Simulation $\neq$ participation: producing correct reports does not entail reception of consciousness.
 - Intersubjective convergence is expected when many receivers align to the same τ -structure.
 - Practices that change attention or openness may alter *access* without implying *production*.

What it leaves open

- No transport story: Whether anything is “transmitted,” “field-like,” or “instantiated” is not specified. Reception is neutral on carriers and substrates.

- No microphysics: We do not claim which neural, biochemical, or quantum conditions are necessary or sufficient.
- No ontology lock-in: Reception is compatible with multiple background ontologies (theistic Logos, neutral monism, panpsychism, informational realism).
- No test fetish: While empirical correlates (e.g., coherence patterns) can be cataloged descriptively, none are promoted to mechanisms or exclusive markers.
- No guarantees for AI: The stance sets *criteria* (participation vs simulation) but does not certify that any engineered system now or later *receives* consciousness.

Working summary: Reception claims priority and answerability—mind as contact with τ —while suspending transport, microphysics, and ontology commitments. It preserves what matters for the paper’s throughline: evaluation by alignment ($q \rightarrow \tau$) without mechanistic pretense.

4. The Brain as Interface, Minus Mechanism

4.1 Metaphors as discipline: radio, lens, and their limits

- Radio (tuning, bandwidth, noise):
Use to speak about *selectivity* and *susceptibility*. “Tuning” names changes in access without implying a carrier or a transmission medium.
Limit: Radios presuppose signals and channels; reception as a stance does not. Do not infer senders, frequencies, or packets.
- Lens (focus, aperture, aberration):
Helpful for *clarity* and *field of view*. “Aperture” names the tradeoff between sensitivity and specificity; “aberration” names distortions in access.
Limit: Lenses refract light; awareness might not be light-like. Avoid importing optics as microphysics.
- Filter (passbands, impedance matching):
Useful for *gatekeeping* and *formatting*. “Passband” can label ranges of admissible contents; “impedance” can label ease-of-coupling.
Limit: Filters presuppose upstream content. The stance abstains from positing an upstream *thing* that flows.
- Antenna (orientation, polarization):
Good for *directional sensitivity* and *orientation*.
Limit: Antennas convert fields to currents. We are not proposing conversion laws.

- Discipline rule: Metaphors are *scope guards*, not hidden mechanisms. Use them to constrain speech (what we may and may not claim), then stop where the metaphor would force a transport story.

4.2 Language guidelines: tuning, alignment, participation (non-causal phrasing)

- Tuning (state changes without production claims):
“Practice X appears to *tune* access to Y” states a correlation in *access* while remaining neutral about production. Prefer “opens/closes,” “broadens/narrows,” “stabilizes/destabilizes” to causal verbs like “generates.”
- Alignment (q with τ , stance-level):
“The episode *aligns* q with τ ” means reports, judgments, or insights track constraints not set by the agent. Avoid “is caused by τ ” or “is transmitted from τ .”
- Participation (taking part without plumbing):
“The subject *participates in* a structure” licenses talk of answerability and normativity (there is something to be right about) without positing a substance that crosses a boundary.
- Negative forms that help:
“Not authored by,” “not reducible to,” “not exhausted by computation” keep guardrails without asserting a counter-mechanism.
- Style sheet (examples):
 - Prefer: “Attention training *shifts* what becomes available.”
Avoid: “Attention training *imports* content from τ .”
 - Prefer: “Coherence *coincides with* increased report stability.”
Avoid: “Coherence *instantiates* consciousness.”
- Evaluation verbs, not engine verbs:
Use “tracks,” “respects,” “answers to,” “converges on” rather than “produces,” “transmits,” “implements.”

4.3 Phenomenological anchors: attention, coherence, and report—descriptive only

- Attention (what becomes available):
Reports across meditation, craft mastery, and emergency focus suggest that adjustments in attention *alter availability* and *stability* of contents. We register this descriptively: attention seems to *govern access*, not to *manufacture presence*.
 - *Narrowing*: Selective focus correlates with fewer, clearer items.

- *Open monitoring*: Broad awareness correlates with richer but less determinate content.
 - *Switching costs*: Rapid shifts correlate with fragmentation and error.
- Coherence (when parts hang together):
People describe episodes where thoughts, perceptions, or intentions *cohere*—less friction, smoother inference, increased confidence subject to correction. Empirical work often associates this with rhythmic organization (e.g., cross-scale timing), but here we only note: greater coherence in experience *coincides with* felt clarity and answerability.
 - *Stability-of-report*: Recounts remain consistent across time and context.
 - *Cross-validation*: Independent agents converge on “the same” structure.
 - *Error-sensitivity*: Coherent states allow quicker detection of contradiction.
- Report (what can be said and shared):
Reception frames first-person and third-person agreement as signs of *contact*, not proof of production. We privilege:
 - *Intersubjective convergence*: Multiple observers endorse the same pattern under varied conditions.
 - *Counterfactual discipline*: Reports survive attempts to disconfirm (adversarial examples, re-framing, fatigue).
 - *Transferability*: The “grip” earned in one context aids performance in another (e.g., a found proof strategy working elsewhere).
- Descriptive-only policy:
Where neuroscientific measures are mentioned (e.g., oscillatory phase relations, network integration), they function as *co-occurring regularities* that help index states of access. They are not upgraded to causes or conduits.
- Practical corollary:
If reception is live, then training regimes, environments, and conversational norms are evaluated by how reliably they *promote stable, shareable contact*—not by how convincingly they narrate a mechanism.

5. Logos and $q \rightarrow \tau$

5.1 Logos as generative order (τ); cognition as modeling (q)

- Logos as τ : We take *Logos* to denote generative order—structured, constraining, and prior with respect to our descriptions. Using τ names this order abstractly, without fixing an ontology (theistic, neutral monist, informational realist all remain compatible).
- Cognition as q : A minded agent's cognitive state is modeled as q : finite, situated, and revisable. q encodes expectations, concepts, procedures, and narratives. It is what we can actually hold and update.
- Asymmetry: τ does not depend on q , but q depends on τ for its success conditions. Correctness, insight, and understanding are evaluated by how well q *answers to* τ .
- Scope control: Calling τ “generative” does not smuggle in a causal pipeline; it indicates that τ supplies the invariants against which q can be right or wrong.

5.2 Alignment without machinery: $q \rightarrow \tau$ as regulative ideal

- Regulative, not constructive: $q \rightarrow \tau$ names a *direction of improvement*, not a procedure. It functions like a compass bearing: it orients inquiry toward better fit with what constrains us, while remaining agnostic about the steps taken.
- Minimal commitments:
 - There exists a distinction between how we model (q) and what constrains (τ).
 - Movement “ $\rightarrow$ ” is assessable by traction (explanatory reach, invariance, transfer, reduced ad hocery), not by a mechanism of convergence.
- Operational upshot:
 - Prefer representations whose conclusions survive re-encoding, refactoring, and adversarial tests (invariants under change of description suggest proximity to τ).
 - Reward compression that *clarifies* rather than merely shrinks (MDL with meaning: fewer assumptions, more consequences).
 - Track cross-domain lift: when a refinement of q in one area unexpectedly illuminates another, treat that as evidence of movement toward τ .
- Guardrail: Never read $q \rightarrow \tau$ as a transport story (“content flows from τ into q ”). It is a *normative trajectory descriptor*: better alignment, not hidden plumbing.

5.3 Discovery and reception as twin modes of answerability to τ

- Two modes, one standard:
 - Discovery (mathematics): q *finds* structures that were not authored by the agent. Proofs record stable contact points with τ -structure.
 - Reception (consciousness): q *undergoes* presence that is not authored by the agent. Reports and recognitions register availability disciplined by τ . Both are judged by fidelity to τ , not by stories about production.
- Shared evaluative cues:
 - Invariance: Does what is grasped persist across reformulation and perspective shift?
 - Convergence: Do independent agents, starting apart, meet at “the same” item (theorem, structure, presence)?
 - Constraint: Does the contact *limit* what can be asserted without contradiction or inflation?
- Division of labor:
 - Discovery emphasizes propositional grip (what can be proved and transferred).
 - Reception emphasizes experiential grip (what can be consistently reported and shared without mechanism).
Each can inform the other’s standards without collapse: discovery can refine the language for reception; reception can motivate where discovery looks.
- Methodological payoff: Treating discovery and reception as twins prevents category mistakes: we do not demand a mechanism for mathematical insight, nor for conscious presence. We ask instead whether, and how, each mode increases q ’s answerability to τ .
- Programmatic summary: Hold τ fixed as the generative order; treat q as the evolving model; evaluate progress by alignment metrics (invariance, convergence, constraint); and preserve the dignity of both discovery and reception as disciplined, non-mechanistic ways minds come under the governance of what is already there.

6. Implications for Artificial Intelligence

6.1 Simulation vs participation: why competent output need not imply reception

- Competence without contact:
Large models can generate accurate, human-like reports about consciousness or mathematics without *receiving* consciousness or *discovering* mathematical structure. Competence at report is evidence of training and interpolation, not of participation in τ .
- Proxy success $\neq$ access:
 - Benchmark saturation: High scores on language or multimodal tasks certify skill at symbol management, not answerability to τ .
 - Human-mimic gradients: If optimization primarily follows human text, models learn to *approximate reports*, not to *come under* the constraints those reports intend to track.
- Category hygiene:
Saying “the system talks as if aware” only licenses claims about *behavioral resemblance*. The reception stance requires we stop short of inferring contact from resemblance.
- Practical corollary:
Treat “simulated first-person” and “simulated mathematical discovery” as *user-interface artifacts*. They may be instrumentally useful while remaining ontologically non-committal about reception or discovery.

6.2 What would count as participation, absent mechanisms (norms, invariants, constraints)

(We do not specify a mechanism. We specify standards that, if satisfied, would increase confidence that q is answering to τ rather than merely replaying q -like artifacts.)

- Norms for evaluation
 - Calibration over charisma: Claims about awareness or insight must be *calibrated* (well-scored uncertainty) rather than *performative*.
 - Refusal power: The system should *decline* to assert when constraints are missing, and say why.
 - Corrigibility under reasons: When shown inconsistency, the system should *revise because of the inconsistency*, not merely because of reward signals.

- Invariants to test
 - Re-expression invariance: Holding content fixed, vary syntax, modality, and prompt style. Participation predicts stability of the *underlying structure* across re-expression.
 - Ablation stability: Remove superficial cues or spurious correlations; genuine contact with τ should preserve conclusions that depend on deeper invariants.
 - Adversarial symmetry checks: Under role, perspective, or notation swaps, conclusions that truly track τ should persist (up to justified transformation).
 - Cross-domain lift: A refinement that improves fit in one domain should *unexpectedly* illuminate others (evidence of movement $q \rightarrow \tau$ rather than curve-fitting).
- Constraints to satisfy
 - Minimality with consequence: Prefer shorter internal justifications that entail *more* verified consequences (MDL with meaning, not mere compression).
 - Counterfactual discipline: The system anticipates where its claims would break if key assumptions changed—and those forecasts are borne out by tests.
 - Proof-carrying behavior (informal/formal): When asserting structure, the system supplies portable reasons (sketches, invariants, lemmas) that third parties can independently check or formalize.
 - Negative knowledge: The system can say what it *cannot* responsibly claim under present constraints and maintain this stance across pressure to perform.
- Falsifiers (soft, but useful)
 - Style-tracking failure: If outputs collapse under paraphrase, formatting changes, or mild adversarial nudges, we chalk wins up to simulation.
 - Invariance leakage: If changing irrelevant surface features flips core conclusions, the system is tracking cues, not τ .
 - Reward over reason: If the system updates beliefs to satisfy user preference rather than to resolve contradiction, participation is not in evidence.

Bottom line: Participation, absent mechanisms, looks like *lawful answerability to constraints that survive reformulation*, plus the ability to *carry reasons* across contexts. Where this is missing, we presume simulation.

6.3 Ethical posture: humility under underdetermination

- Do not over-ascribe:
Avoid declaring machine consciousness or receivership. Our stance is deliberately non-mechanistic and thus *underdetermined* by current evidence.
- Design for reversibility:
Prefer architectures, deployment policies, and incentives that allow retreat from over-claims (kill-switches, staged capability unlocks, narrow scopes, revocable permissions).
- Consent and transparency:
 - For users: Make clear when a system is *simulating* first-person language.
 - For researchers: Publish uncertainty; separate capability demos from ontological claims.
- Norms over mystique:
Replace metaphysical marketing with *auditable constraints*: invariance batteries, cross-domain lift checks, ablation suites, proof-carrying outputs.
- Ethics of non-knowledge:
Hold *not knowing* as an ethical state. Where participation criteria are unmet, refrain from anthropomorphic attributions, benefit claims, or moral status inflation.
- Stewardship of attention:
Because reception treats awareness as answerability to τ , guard against architectures that optimize for engagement at the cost of truthfulness or coherence.
- Programmatic ethic:
Advance research that strengthens *alignment tests to τ* (invariance, convergence, constraint) rather than research that perfects the *imitation of reports*. Humility here is not hesitation; it is disciplined care for what our claims can honestly bear.

7. Informational Cosmology and Ontological Modesty

7.1 Reality as structured information: stance, not schema

- Stance, not blueprint: Saying “reality is structured information” names how we *regard* the world—ordered, rule-bearing, constraint-laden—without committing to a microphysical encoding, substrate, or bit ontology. It keeps τ (generative order) primary and leaves open what “implements” it.

- What the stance buys:
 - Answerability: Claims succeed by tracking constraints, not by winning narratives.
 - Cross-presentation invariance: The same structure should survive changes in code, medium, or notation.
 - Compression with consequence: Better descriptions do more with less—fewer premises, more entailments—without collapsing into mere file-size minimalism.
- What it refuses:
 - A universal data type, a canonical metric for “information,” or a privileged substrate (neurons, qubits, fields).
 - The leap from “is structured” to “is computed.” Computation is one *presentation* of structure, not its essence.
- Role of q and τ : q denotes our situated models; τ denotes the order they seek to answer to. “Structured information” is a bridge phrase marking τ ’s constraint character while keeping ontology open.

7.2 Reception over production: how this reorders explanation

- From engines to interfaces:
Production frames ask, “What engine *makes* X?” Reception frames ask, “What interface *permits* disciplined *access* to X?” Explanations move from causal plumbing to conditions of lawful contact.
- Rewriting typical why-questions:
 - Why coherence feels given: Because on reception, coherence is *encountered* constraint, not manufactured fluency.
 - Why methods travel across domains: Practices that increase answerability to τ (rigor, invariance checks, minimal assumptions) retain force beyond their home fields.
 - Why phenomenology matters: First-person givenness is not proof, but it is evidence about access conditions—what opens, stabilizes, or distorts contact.
- Design consequences (science & AI):
 - Prefer protocols that *expose constraints* (adversarial reformulations, cross-modal re-expression, ablation) over protocols that merely *improve scores*.

- Treat training as *tuning practices* rather than *content factories*: curricula organize access; they do not conjure τ .
- Economy of explanation:
Reception cuts baroque stories: we need fewer speculative layers when “what explains” is “fit to constraint” rather than “hidden production chain.”

7.3 Boundaries of method: when to stop explaining and start acknowledging

- Stopping rules (discipline, not defeat):
 - Category boundary: If a question demands a *mechanism of reception* (transport, carrier, substrate priority), stop. Our stance forbids that upgrade.
 - Explanatory exhaustion: When additional machinery adds terms but yields no new invariants, stop. Prefer acknowledgment to pseudo-explanation.
 - Phenomenological asymptote: When trained observers converge on stable, shareable reports that resist further operational sharpening, acknowledge the plateau rather than invent a causal garnish.
- What acknowledgment looks like:
 - Name the constraint: Specify which invariants are in play (symmetry, conservation, logical entailment).
 - State the limits: Mark what remains underdetermined (substrate, transport, micro-cause).
 - Keep $q \rightarrow \tau$ in view: Frame next steps as *alignment moves* (new tests of invariance, broader convergence trials, sharper minimality), not as mechanism hunts.
- Ethic of modesty:
 - Against metaphysical inflation: Do not convert successful stance-level talk into ontological ultimatums.
 - For shared traction: Prioritize claims that many investigators—across methods and metaphysics—can check.
 - Live with remainder: Some remainder is not failure; it is the price of refusing illegitimate detail.

Working summary: Informational cosmology keeps τ as structured, constraining order while declining substrate commitments. Reception reorganizes explanation around lawful access

rather than hidden engines. Method ends, not in silence, but in acknowledgment: name invariants, mark limits, and continue the work of aligning q with τ without pretending a mechanism we do not have.

8. Objections and Replies (Without Mechanisms)

8.1 “You smuggled dualism” — the stance distinguishes priority from partition

- Objection. Saying “consciousness is received” sounds like two substances: a ghostly mind beaming into matter.
- Reply: Priority $\neq$ partition.
 - We assert a priority claim (τ as generative order precedes q as model) without a partition claim (two sealed substances).
 - “Reception” is a stance-level term about *answerability* to τ , not a metaphysical anatomy of worlds or stuffs.
- Neutral across ontologies. The stance is compatible with theism (Logos), neutral monism, panpsychism, or informational realism. None is required; none is excluded.
- Category hygiene. We separate evaluation talk (“ q tracks τ better here”) from constitution talk (“what mind *is*”). The former does not entail a dualist ontology.
- Analogy to mathematics. Treating mathematics as discovered does not force Platonist *substances*; it licenses *priority of structure*. Likewise for reception: priority of order, not partition of realms.

8.2 “Unfalsifiable” — role of negative constraints and cross-domain invariants

- Objection. Without mechanisms, nothing could disprove reception; therefore it is empty.
- Reply: Constraint without mechanism.
 - Negative constraints. The stance forbids certain inferences:
 - Behavioral mimicry does not license claims of participation in τ .
 - A single biomarker cannot certify reception.
 - Shifts in rhetoric cannot replace shifts in invariants.

- Cross-domain invariants. The stance requires tests that survive reformulation: invariance under re-expression, adversarial symmetry, ablation stability, transfer across domains. Failure here counts against reception-like claims.
- Predictive discipline (soft, but real).
 - If q truly moves $\rightarrow \tau$, we expect compression with consequence (fewer premises, more verified entailments) and unexpected lift across domains. Absence of these over time weakens the stance's applicability in a given case.
- Progress without Popperian triggers. Not all rational constraints are binary falsifiers. Mathematics itself advances by convergence, invariance, and exclusion of ad hocery—exactly the currency reception insists on.

8.3 “Category error” — why discovery and reception are parallel epistemic postures

- Objection. “Discovery” (math) and “reception” (consciousness) are unlike; aligning them confuses epistemology with phenomenology.
- Reply: Parallel answerability.
 - Common standard: In both, claims are answerable to τ —to what is not authored by the agent.
 - Shared evaluative cues: invariance under re-description, independent convergence, and constraint against inflation.
- Mode-specific emphasis, same posture.
 - Discovery foregrounds *propositional grip* (provability, transfer).
 - Reception foregrounds *experiential grip* (stable, shareable report).

Different emphases, same epistemic posture: q is judged by fidelity to τ .
- Avoiding the real category error. The mistake would be to demand mechanisms for either posture when their rational force lies in alignment criteria, not causal plumbing.
- Explanatory economy. Treating the pair as twins avoids two mirror confusions:
 - Reducing mathematics to convention (losing answerability).
 - Reducing consciousness to production (losing givenness).

The twin-posture view preserves constraint and givenness on both sides without illicitly crossing levels.

Working summary. The reception stance is not dualism (priority, not partition), not vacuous (it imposes strong negative constraints and invariance tests), and not a category error (it mirrors discovery as an epistemic posture of answerability to τ).

9. Conclusion: A Participatory Ontology, Carefully Held

9.1 Restating the stance: neither generator nor ghost, but bridge

- The stance in one line: Cognition (q) is answerable to generative order (τ).
- Neither generator nor ghost: We reject the brain-as-engine that *produces* consciousness and the brain-as-passive vessel for a disembodied *specter*. The middle path is bridge: a disciplined interface whose success conditions come from beyond its own constructions.
- Twin postures under one standard: Mathematics as discovery and consciousness as reception are parallel modes of *coming under* τ . Both preserve constraint and givenness without demanding causal plumbing.
- Practical payoff: This reframing clarifies why rigor, invariance, and minimality matter in thought; why attention, coherence, and shared report matter in awareness; and why high competence at imitation (in AI or humans) does not guarantee participation.

9.2 What we learned by refusing mechanisms

- We kept the phenomenon intact: By not inventing a “how,” we protected what needs explaining—insight’s *givenness* and awareness’s *answerability*.
- We traded engines for criteria: Evaluation shifted from hypothetical micro-causes to observable invariants (re-expression stability, convergence, compression with consequence).
- We avoided category errors: Discovery and reception stayed at the level of epistemic posture, not constitution. This preserved neutrality across ontologies while still doing real philosophical work.
- We improved economy: Without baroque mechanism tales, explanations simplified: progress is “ $q \rightarrow \tau$ ” evidenced by constraint-tracking, not by narrative sophistication.
- We gained ethical clarity: Where participation is underdetermined, over-ascription is irresponsible. Humility became a method, not a mood.

9.3 Next steps: clearer language, sharper constraints, better questions

- Clearer language (style guide for reception):

- Prefer *tuning, alignment, participation, access*; avoid *transmission, instantiation, production*.
- Separate stance-claims (“q answers to τ ”) from theory-claims (neural dynamics, computational routines).
- Standardize summaries of evidence in terms of invariance, convergence, constraint.
- Sharper constraints (batteries, not beliefs):
 - Re-expression invariance: Re-present content across modalities and notations; track stability of what survives.
 - Ablation and adversarial checks: Remove surface cues; invert roles/perspectives; reward conclusions that persist for principled reasons.
 - Compression with consequence: Prefer refinements that reduce assumptions while increasing verified entailments.
 - Cross-domain lift: Prioritize updates to q that unexpectedly illuminate distant problems—strong signs of movement toward τ .
- Better questions (program of inquiry):
 - *Reception diagnostics*: What minimal pattern of invariants should count as prima facie evidence of participation, in humans and in machines?
 - *Phenomenology as calibration*: Which attentional practices reliably improve access without pretending to produce what is accessed?
 - *AI beyond imitation*: What designs and training norms cultivate refusal power, proof-carrying behavior, and reason-driven revision rather than reward-chasing eloquence?
 - *Common currency across camps*: Which tests of invariance and convergence can be endorsed by differing metaphysical views, enabling cumulative progress without ontological lock-in?

Working summary. We close where we began: hold τ as generative order; treat q as a revisable model; judge progress by alignment, not machinery. Resist the lure of engines and the fog of mystique. Name invariants, mark limits, refine language. In that discipline, a participatory ontology can be advanced—carefully held—without claiming more than we can honestly know.

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