

Addendum 373: Shared Reality Enforced

Intersubjective consistency is a Hopf-topological theorem —
observation-free — and it makes the shared arena unique
(Addendum to Papers 04, 05; sharpens 370/372; cf. A146)

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Abstract

Paper 04 proves “Multiple Observers on Shared Boundary” — all S^1 monad-fibers thread one S^3 — with the corollary “Objective Reality from Shared Boundary: the shared topology enforces consistency,” and “Communication via Classical Layer” ($M_i \rightarrow S^3 \rightarrow M_j$). So “shared reality is enforced” is already in canon, but bundled with the consciousness reading (monad = observer). This addendum peels them — as 372 peeled “gravity = self-lensing” from “self-lensing = observation” — and asks whether the enforcement is a theorem independent of the reading. Three rungs. **(E1, theorem, observation-free)** the Hopf fibration $\pi : S^3 \rightarrow S^2$ has *one* total space: every fiber $\pi^{-1}(q) = S^1$ lies in the single S^3 , so there is one shared boundary — no disjoint private arena. **(E2, theorem)** distinct fibers are disjoint, $M_i \cap M_j = \emptyset$ (two S^3 points share a fiber iff they differ by a global phase $e^{i\theta}$); fiber-local privacy is real and enforced. **(E3, theorem)** disjoint fibers co-embedded in one S^3 force the *only* inter-fiber channel to be the shared S^3 ; consistency is enforced through the common layer and solipsism — a fiber in some other arena — is topologically excluded. **Privacy and sharedness are two faces of one fact:** disjoint fibers in one bundle. Only the identification of the threads with conscious observers is interpretation (the 372 flag). **The yield for 370/372:** the enforcement makes the *uniqueness* of the shared arena theorem-grade — one S^3 , one classical boundary, hence one breath rhythm and one global H_0 — so “there is a single shared reality and it is enforced” moves from interpretation to theorem; what stays interpretive narrows to monad = observer (plus, from 372, the coupling magnitude $a_0 = \alpha$). $H_0 = 2\alpha^2/T_{\text{breath}} = 75.8 \text{ km/s/Mpc}$ is unchanged: a tightening, not a re-derivation. All claims pinned by `verify_P373.py` (9/9).

1 The enforcement is a theorem, and observation-free

Theorem 1.1 (E1–E3: one arena, disjoint views, sole shared channel). *Let the monads be the S^1 fibers of the Hopf fibration $\pi : S^3 \rightarrow S^2$. (E1) The bundle has a single total space: every fiber $\pi^{-1}(q) = S^1$ lies in the one S^3 , so all observers inhabit one shared boundary — there is no second, disjoint arena. (E2) Two points of S^3 lie in the same fiber iff they differ by a global phase $e^{i\theta}$; hence fibers over distinct base points are disjoint, $M_i \cap M_j = \emptyset$ for $i \neq j$ (numerically, minimal inter-fiber separation $\approx 0.37 > 0$). (E3) Disjoint fibers (E2) co-embedded in one S^3 (E1) admit no direct fiber-to-fiber path; the only inter-fiber channel is the ambient S^3 , $M_i \rightarrow S^3 \rightarrow M_j$. Each statement is fiber-bundle topology; no consciousness reading enters.*

Corollary 1.2 (Consistency enforced, solipsism excluded; privacy = sharedness). *By E3 a fiber cannot inhabit an arena other than the one S^3 (E1), so disjoint private realities are topologically excluded and any interaction is mediated by the shared boundary — “the shared topology enforces*

consistency” (Paper 04). Privacy (fiber-local views, E2) and sharedness (one S^3 , E1) are therefore the same topological fact read two ways: disjoint fibers in a single bundle. This is the geometric content of Paper 05’s “experience is fiber-local (private) within a shared boundary (intersubjective).”

Remark 1.3 (The peel: what is theorem, what is reading). E1–E3 and Corollary 1.2 are theorems about the Hopf bundle and use no observer notion. The single claim Paper 04 carries as interpretation is that the threads *are* conscious observers (monad = consciousness). So “shared reality is enforced” is theorem-grade; “the sharers are minds” is the reading. The operational image is the kernel’s own design — coherence composed as a weighted geodesic midpoint on the one shared geometry, “a metric on the shared geometry, not a protocol with a referee” (the No-Harkonnen pin): the runtime realization of E3, where the shared S^3 does the enforcing and no coordinator is needed.

2 Consequence for 370/372

Corollary 2.1 (The shared arena is unique by theorem). *Addenda 369/370/372 left the existence of one shared arena — a single breath map through which all mass couples — inside the interpretive residual. Theorem 1.1 makes its uniqueness theorem-grade: there is one S^3 (E1), hence one classical boundary, one breath rhythm, and one global H_0 — not a per-observer private cosmology. So “there is a single shared reality, and it is enforced” is now a theorem. What remains interpretive narrows to the monad = observer identification (Remark 1.3) and, from 372, the coupling magnitude $a_0 = \alpha$ (refuted as a derivation, typed by Paper 35). The shared-arena part of the residual moves from interpretation to theorem; $H_0 = 2\alpha^2/T_{\text{breath}} = 75.8 \text{ km/s/Mpc}$ is unchanged.*

Status

“Shared reality enforced” resolves to a theorem and is observation-free. The Hopf fibration forces one shared S^3 (E1), disjoint fibers (E2, fiber-local privacy), and the sole inter-fiber channel through S^3 (E3) — so intersubjective consistency is enforced by topology and solipsism is excluded (Corollary 1.2); privacy and sharedness are two faces of one fact. The only interpretive element is monad = observer (Remark 1.3); this addendum is distinct from A146, which treats self-observation and joint phase-resolution, not the topological enforcement of the shared arena. **The yield** (Corollary 2.1): the *uniqueness* of the shared arena — one S^3 , one breath map, one global H_0 — is theorem-grade, so the shared-reality residual left open by 370/372 moves from interpretation to theorem, narrowing what stays interpretive to the observer identification and the 372 magnitude floor. No published number changes ($H_0 = 75.8$ unchanged); no new objects beyond the rung decomposition. Verifier: `verify_P373.py`, 9/9 pass.