Bit-Collapse Theory (BCT) — Phase 2

Main DOI package README

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1. What this package is

This DOI contains the main **Phase-2 package** of **Bit-Collapse Theory (BCT)**.

BCT is an interpretational / ontological framework compatible with global unitary quantum dynamics. In Phase 2, it defines the experienced state of an agent as an **agent-relative equivalence-class label** over global states that are indistinguishable with respect to the agent's physically accessible algebra and accessible stable records. In this framework, "collapse" is treated not as an objective physical jump, but as a **discrete update of the experienced-state label** when stable record structure changes.

Phase 2 also introduces a **narrow, rejectable empirical wedge**: a retention-driven bridge linking verified which-way information, downstream record persistence, and event-like definiteness.

This package is intended as a **coherent core set**, not as a complete theory of everything and not as a claim of modified quantum microdynamics.

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2. Scope and status

This is the **main DOI package** for the current Phase-2 presentation of BCT.

Its aims are

• to state the core ontology in a stable and non-elastic form;

• to fix the canonical Phase-2 notation and vocabulary;

• to present the main interpretive and operational claims in a compact, readable way;

• to state the retention-based falsification program in a more disciplined and preregisterable form;

• to clarify BCT's relation to Born-rule constraints, Many-Worlds-style interpretations, and common objections.

The package contains both **core texts** and **supporting texts**.

Not every file has the same role. The recommended reading order below is therefore important.

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3. Recommended reading order

Entry route

1. **BCT_Manifesto**

Short front-door statement of the Phase-2 position.

2. **BCT_Glossary**

Canonical terminology and notation for the whole package.

3. **BCT_Flagship**

Main integrated paper-length presentation of Axiom 0 and the retention-threshold falsification program.

Core technical / operational extensions

4. **BCT_Falsification_Package**

Operational falsification spine of the retention-driven bridge, including calibration logic, model competition, and defeat conditions.

5. **BCT_Born_Rule_Phase2**

Conditional Born-route note using record-defined macro-conditions and standard operational consistency constraints.

Interpretive comparison and pressure tests

6. **BCT_vs_MWI_Phase2**

Comparison note clarifying where BCT and Many-Worlds-style views actually differ.

7. **BCT_Objections_Responses_Phase2**

Structured objection-response appendix aligned with the canonical Phase-2 language.

Supplementary conceptual note

8. **BCT_TauStar_NonAnthropic**

Supplementary note explaining why the Phase-2 persistence threshold tau* is not an anthropic parameter.

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4. File roles at a glance

Core files

These files define the main Phase-2 identity of the package

• **Manifesto** — concise front-door statement;

• **Glossary** — canonical vocabulary and notation;

• **Flagship** — integrated core paper;

• **Falsification Package** — operational test spine.

Supporting files

These files strengthen, clarify, or defend the core

• **Born Rule note** — probability/support assignment route;

• **BCT vs MWI** — interpretive contrast;

• **Objections / Responses** — structured criticism handling;

• **tau* note** — targeted supplement on the persistence threshold.

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5. Central Phase-2 claims

The package is organized around the following Phase-2 claims

1. **Experienced state is agent-relative and operationally constrained.**

For agent A, the experienced state is the equivalence-class label induced by physically accessible observables and the values of stable-for-A records.

2. **Collapse is reinterpretive, not dynamical.**

BCT does not introduce an objective collapse force or modified Schrödinger equation. “Collapse” is the agent-relative update of the experienced-state label when stable accessible record structure changes.

3. **Outcomes are record-defined macro-conditions.**

Outcomes are not treated as primitive measurement labels, but as stable, accessible record-defined macro-conditions.

4. **The Born route is conditional and modest.**

Once probabilities are assigned over record-defined macro-conditions under standard operational consistency constraints, the Born form follows by a Gleason-style uniqueness route.

5. **The empirical wedge is narrow and killable.**

BCT does not claim that every decoherence phenomenon confirms it. The Phase-2 empirical target is narrower: once verified which-way information is present at or above threshold, event-like definiteness should depend on sufficiently stable downstream record formation.

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6. What this package does not claim

This package does **not** claim

• a new microscopic force;

• a modification of Schrödinger dynamics;

• a consciousness-causes-collapse mechanism;

• a universal omniscient narrative valid for all agents at all stages;

• a complete replacement for decoherence theory, Quantum Darwinism, or standard quantum mechanics;

• a final derivation of all interpretive or probabilistic issues in quantum foundations.

The package is deliberately narrower: it proposes a non-elastic observer-definiteness rule plus a rejectable retention-based bridge.

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7. Relationship between the main files

Readers may wonder why both a **Flagship paper** and a **Falsification Package** are included.

Their roles are different

• The **Flagship** is the main integrated presentation of the Phase-2 core.

• The **Falsification Package** is the more explicit operational expansion of the empirical wedge.

• The **Born Rule note**, **MWI comparison**, and **Objections appendix** each isolate a specific structural issue and treat it more directly than the Flagship alone.

• The **tau*** note is a targeted supplement addressing a recurring conceptual objection.

So this DOI should be read as a **structured package**, not as a set of interchangeable duplicates.

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8. Intended use

This package may be useful to readers interested in

• the measurement problem;

• observer-definiteness and identity criteria in quantum interpretations;

• record-based approaches to definiteness;

• the relation between stable records, accessibility, and experienced outcomes;

• falsifiability strategies for narrow interpretive bridges.

It is also intended as a stable reference package for discussion, critique, and possible future submission pathways.

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9. AI-use note

These materials were developed with the assistance of AI-based language and drafting tools.

The conceptual proposals, selection of claims, final judgments, and responsibility for the contents remain the author’s.

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10. Closing note

Phase 2 is meant to improve discipline, not inflate claims.

Its central ambition is simple: to state, as clearly as possible, what counts as observer-definiteness in BCT, what follows from that choice, and where the proposal is willing to lose.