RBO Glossary

Canonical Terms for Record-Based Ontology

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Working glossary draft — philosophical/programmatic version
Companion document to *Record-Based Ontology (RBO): Individuation, Continuity, and Definiteness*
No new physical dynamics claimed

Scope

This glossary stabilizes the basic vocabulary of **Record-Based Ontology (RBO)**. It is deliberately continuous with the BCT Phase-2 glossary where the two frameworks overlap, but it shifts the emphasis from quantum-operational definiteness to philosophical individuation.

BCT remains the physics-facing framework. **RBO** is the broader philosophical ontology of individuation by records.

The guiding distinction is:

> **BCT asks how record-defined class updates explain quantum definiteness without physical collapse.**
> **RBO asks how records individuate facts, selves, outcomes, errors, and observer-worlds for finite systems.**

RBO does not claim that records create reality *ex nihilo*. It claims that records individuate definiteness for finite systems.

A. Framework-level terms

Record-Based Ontology (RBO)

A philosophical framework according to which facts, selves, outcomes, and observer-worlds are individuated by stable, accessible, update-constraining records for finite systems.

RBO does not claim that records create reality *ex nihilo*. It claims that records individuate definiteness.

BCT-derived framework

A framework whose central concepts emerged from Bit-Collapse Theory but are generalized beyond quantum measurement.

RBO inherits from BCT the emphasis on finite access, stable records, equivalence classes, and agent-relative definiteness, but applies these ideas to subjecthood, personal continuity, error, and facthood more generally.

Ontology of individuation

An ontology concerned not merely with what exists, but with what makes something count as one fact, one self, one outcome, or one observer-world for a finite system.

RBO-0

The foundational principle of RBO:

> **For any finite record-bearing system A, what counts as a definite fact, self, outcome, or observer-world for A is individuated by the stable records accessible to A, persistent across A's relevant integration window, and capable of constraining A's subsequent updates.**

Finite record-bearing system

A finite physical system capable of carrying stabilized differences that persist and constrain later states.

In BCT, the preferred term is often *agent*. In RBO, *finite record-bearing system* is broader and less psychological. It may include persons, organisms, instruments, archives, memory registers, institutions, or artificial systems.

Agent A

A finite system considered as a locus of access, integration, and update.

In RBO, “agent” should not imply consciousness unless explicitly stated. It is a structural role.

Integration window

The finite temporal or functional span across which a system integrates records into a coherent state.

In BCT this is usually denoted by τ. In RBO, the term may be used more broadly for cognitive, bodily, archival, instrumental, or social integration.

B. Records and recordhood

Record

A stabilized physical or informational structure capable of persisting, being accessed, and constraining later states.

A record may be neural, bodily, environmental, instrumental, archival, digital, social, or thermodynamic.

Recordhood

The status of being a record in the structural sense: a difference has been stabilized enough to persist, be accessed, copied, compared, inherited, or used to constrain updates.

Recordhood does not imply truth.

Stable record

A record robust enough, for the relevant system and regime, to contribute to the individuation of a fact, self, outcome, or observer-world.

In BCT this corresponds closely to a stable-for-A record. In RBO the term is generalized beyond quantum measurement.

Accessible record

A record physically available to a system through its actual channels of access, coupling, memory, inference, or update.

Accessibility is not subjective attention. It is a physical or structural relation.

Persistent record

A record that remains available across the relevant integration window.

Persistence may be neural, environmental, archival, institutional, instrumental, or thermodynamic.

Update-constraining record

A record that changes what later states of a system can inherit, expect, compare, correct, remember, infer, or act upon.

This is one of the central RBO criteria.

Subject-constituting record

A record that contributes to the constitution of a conscious or experiential subject-state.

Examples include memory traces, bodily maps, perceptual integrations, affective dispositions, self-models, linguistic habits, and retained expectations.

Record-structure

The organized network of records relevant to a system's individuation of facts, selfhood, outcomes, or worldhood.

RBO is concerned not only with isolated records but with structured record-networks.

Record-ecology

A network of record-bearing agents, instruments, environments, archives, standards, and correction procedures through which records are stabilized, compared, defeated, reclassified, or promoted to authority.

C. Definiteness, facts, and worlds

Definiteness

The status of a difference as settled for a finite record-bearing system in virtue of stable, accessible, update-constraining records.

RBO treats definiteness as record-individuated rather than primitive.

Record-constituted definiteness

Definiteness grounded in record-structure.

This term is especially useful when connecting RBO to BCT and to the measurement problem.

Fact

A stabilized difference that has entered an appropriate record-ecology or record-structure.

A fact is not merely a belief and not merely a raw physical difference. It is a record-structured difference with a role in persistence, access, and update.

Record-structured fact

A fact understood as constituted through stable record-structure.

This does not mean that the record makes its content true by fiat; it means that finite facthood requires record-mediated individuation.

Outcome

A record-defined difference that becomes stable and update-constraining for a relevant system.

In quantum contexts, this corresponds to a measurement outcome understood at the level of stable record-structure rather than as a primitive global collapse.

Observer-world

The effective world as individuated for a finite system by its accessible, persistent, update-constraining records.

An observer-world is not a raw microphysical realization or an arbitrary branch label, but an equivalence class under record-structure.

Effective world

The world as definite for a finite system under the records it can access, inherit, and update upon.

“Effective” does not mean unreal; it means record-individuated relative to finite access.

World-individuation

The process by which stable records determine which physical distinctions count as distinctions between observer-worlds for a finite system.

Observer-relative definiteness

Definiteness relative to the stable records accessible to a finite system.

The term is inherited from BCT, but in RBO it is generalized beyond quantum measurement.

D. Equivalence and counting

Equivalence relation

A relation under which physically distinct configurations count as the same for a finite system when they agree with respect to the relevant stable records.

In BCT this is often written as $\sim A$. In RBO, the same idea is generalized as record-equivalence.

Record-equivalence

The relation under which two configurations are equivalent for system A if they agree with respect to all records relevant to A's fact-, self-, outcome-, or world-individuation.

Equivalence class

A set of physical configurations that differ in some respects but agree with respect to the records that matter for a given finite system.

RBO treats facts, selves, and observer-worlds as often individuated at this equivalence-class level rather than at the level of raw microphysical realization.

Many microstates, one record-individuated structure

RBO generalization of the BCT slogan “many microstates, one experienced label.”

It expresses the idea that physical multiplicity does not automatically imply multiplicity of facts, subjects, or observer-worlds.

Ontological overcounting

The mistake of counting facts, selves, outcomes, or worlds more finely than the record-structures that individuate them.

RBO is a discipline against overcounting.

No-overcounting principle

Do not count ontological items more finely than the records that make them difference-making for finite systems.

Raw physical multiplicity

Multiplicity at the level of physical realizers, microstates, branches, or token systems before applying a record-based individuation criterion.

Record-individuated multiplicity

Multiplicity that arises only when stable, accessible, update-constraining records differ in a way relevant to the item being counted.

E. Subjectivity and personal identity

Subject-state

A temporally integrated configuration of subject-constituting records sufficient to support an experiential state.

It should not be treated as a zero-duration snapshot unless explicitly qualified.

Subject-individuation

The criterion by which one subject-state is distinguished from another.

In RBO, subject-individuation tracks subject-constituting record difference, not merely physical tokenhood or branch-indexing.

Informational Identity Constraint (IIC)

If two alleged subject-states are identical in all subject-constituting informational or record-based respects, then they are not distinct subjects merely in virtue of location, tokenhood, branch-index, or external label.

Subject-multiplicity

Multiplicity of subjects.

In RBO, subject-multiplicity requires subject-constituting record difference.

Subject-continuation

The continuation of a subject across time or interruption through inherited and integrated record-structure.

Subject-continuation does not require a primitive persisting ego-substance.

Record-continuity

Structured inheritance of subject-constituting records across time.

This is the RBO basis for personal continuity.

Record-Continuation Principle

A later experiential configuration counts as an admissible continuation of an earlier one insofar as it inherits, preserves, and integrates enough of the earlier configuration's subject-constituting record-structure in the right way.

Primitive persistence

The alleged persistence of a self as a metaphysical substance over and above record-continuity.

RBO rejects primitive persistence as unnecessary.

Narrative compression

The simplification by which a chain of record-integrated configurations is experienced and described as the persistence of one enduring self.

The narrative self is not sheer illusion, but it is not a primitive metaphysical substance.

Waking self

The later conscious configuration that identifies itself with a pre-sleep or pre-interruption configuration through inherited record-structure.

F. Error, accuracy, and authority

False record

A real record whose representational or evidential role fails.

A false record is not a non-record.

Representational accuracy

The success of a record in tracking the state, event, or relation it is taken to indicate.

Accuracy is distinct from recordhood.

Inferential authority

The entitlement of a record to guide belief, action, inquiry, or further update within a broader record-ecology.

A record may exist and even be accurate while having limited inferential authority.

Recordhood / accuracy / authority distinction

The threefold distinction between being a record, accurately representing a target, and having enough authority to guide inference.

This distinction prevents RBO from collapsing into relativism.

Fallibilist record-realism

The view that finite facts are record-structured, but record-structure is not infallibility.

Records are real and world-constrained, yet always open to correction, defeat, and reclassification.

Correction

The process by which records are compared, defeated, reclassified, or reinterpreted through other records.

Correction does not escape record-structure; it occurs within record-ecologies.

G. Relation to BCT

Bit-Collapse Theory (BCT)

The physics-facing framework from which RBO emerged.

In BCT, collapse is understood as a record-defined class update for an agent rather than as a non-unitary jump of the global quantum state.

Bit-collapse

In BCT, the discrete update of an experienced label or equivalence class when stable accessible record structure changes.

In RBO, this idea is generalized into record-based individuation, but the term “bit-collapse” should remain reserved for BCT contexts unless explicitly extended.

Experienced label

A BCT term for the equivalence-class label of global states indistinguishable for an agent.

In RBO, the broader analogue is a record-individuated structure, such as a fact, self, outcome, or observer-world.

Accessible algebra

A BCT-specific technical term for the set or algebra of observables physically accessible to an agent within an integration window.

RBO usually avoids this formal term unless explicitly discussing the BCT connection.

Stable-for-A record

A BCT term for a record satisfying accessibility, redundancy, robustness, and persistence requirements for agent A.

In RBO, the broader term is stable record or accessible persistent update-constraining record.

Record-defined macro-condition

A BCT term for a coarse-grained outcome condition represented by stable accessible record structure.

In RBO, the broader analogue is a record-structured fact or record-individuated outcome.

Cross-agent agreement

Agreement obtained through record propagation and access alignment rather than assumed from an omniscient standpoint.

This term is inherited from BCT and remains useful in RBO.

H. Usage notes

- Prefer “finite record-bearing system” when the point is general, and “agent” when discussing BCT or a system with a clear access/update role.
- Use “record” structurally, not psychologically. A record need not be conscious.
- Keep recordhood, accuracy, and inferential authority distinct.
- Avoid saying “records create reality” unless immediately qualifying that the intended meaning is individuation, not production *ex nihilo*.
- Use “observer-relative” carefully. It means relative to physically accessible record-structure, not relative to opinion or private belief.
- In RBO contexts, prefer “record-individuated” or “record-structured” to “collapsed,” unless explicitly connecting to BCT.
- Do not count microphysical, branch-level, or token-level multiplicity as subject/world multiplicity unless the relevant record-structure differs.
- Treat RBO as philosophical ontology; treat BCT as the quantum-foundational route into it.

Note on AI use

AI tools were used for drafting assistance, conceptual testing, and editing. The author takes responsibility for the final claims, structure, wording, and definitions.