

## Appendices

### Appendix A. Core Variables and Essential Conceptual Notes

This appendix gathers the principal variables, mappings, and essential conceptual constraints used throughout Paper A-9. Its purpose is not to introduce new theory, but to stabilize terminology and prevent ontological drift across the layered framework developed in the main text.

The symbols listed below should be read as layer-bound terms. Their meaning depends on the specific ontological or epistemic layer to which they belong. The appendix therefore functions as a safeguard against the very category errors the paper is designed to resolve.

#### A. Core Layer Variables

##### **$R_0$ :**

Absolute Reality. The domain of existence itself, independent of observation, accessibility, record formation, or timeline construction. It denotes what exists regardless of whether it is ever measured or accessed.

##### **$R_m$ :**

Measurement Reality. The interface layer through which configurations in Absolute Reality become accessible. It is not observation and not awareness; it is the physical accessibility-layer established by measurement.

##### **$R_o$ :**

Observed Reality. The set of outcomes that have become accessible through measurement and are actually accessed by an observer or readout system.

##### **H:**

History Records. The set of stabilized records produced downstream of measurement. In CUWF, history is identified with records rather than with a pre-existing temporal block.

T:

Timeline. A derived ordering framework imposed on records. Timeline is not a primitive ontological constituent of the universe, but an ordering tool built from H under observer-dependent conditions.

M:

Measurement mapping. The interface operation that establishes accessibility from Absolute Reality into Measurement Reality.

O:

Observation mapping. The access operation through which what has become accessible in Measurement Reality enters Observed Reality.

R:

Record-formation mapping. The operation through which accessible outcomes become stabilized as records in H.

$G_i$ :

Access geometry of observer  $i$ . The set of constraints under which observer  $i$  accesses and orders accessible outcomes or records.

$R_0'$ :

A reconfigured state of Absolute Reality after a physical transformation such as collapse. It denotes that existence itself has changed configuration, not merely description.

C:

Collapse or reconfiguration operation. In Paper A-9, collapse is treated as an operation on existence rather than as an observer-generated event.

## B. Core Mappings Used in the Paper

$$M : R_0 \rightarrow R_m$$

Measurement establishes accessibility. It does not create existence, and it does not require observation.

$$O : R_m \rightarrow R_o$$

Observation accesses what measurement has already rendered accessible.

$$R : R_m \rightarrow H$$

Record formation preserves accessible outcomes as stabilized traces.

$$C : R_0 \rightarrow R_0'$$

Collapse or physical reconfiguration acts on existence itself, not merely on descriptions.

$$T = \text{Order}(H)$$

Timeline is a derived ordering operation acting on records.

$$T_i = \text{Order}(H \mid G_i)$$

Timeline construction depends on observer-dependent access geometry.

$$R_o^{(i)} = O_i(R_m \mid G_i)$$

Observed Reality for observer  $i$  depends on the observer's specific access geometry.

## C. Essential Dependency Rules

$$R_0 \rightarrow R_m \rightarrow R_o \rightarrow H \rightarrow T$$

$$O \Rightarrow M$$

$$M \not\Rightarrow O$$

$$R_o \subset R_m \subset R_0$$

The arrow structure denotes logical dependency, not temporal succession.

Observation presupposes measurement.

Measurement does not require observation in order to occur.

What is observed is always a subset of what is accessible, and what is accessible is always a subset of what exists.

#### D. Essential Conceptual Constraints

Existence is not identical with accessibility.

Accessibility is not identical with observation.

Observation is not identical with record formation.

History is not identical with timeline.

Timeline is not identical with ontology.

Differences in observation do not imply differences in existence.

Record reordering does not imply retroactive change in Absolute Reality.

#### E. Language Discipline Required by Paper A-9

Do not use the term “event” as a synonym for measurement.

Do not treat “history” as a completed ontological structure of the universe.

Do not treat “timeline” as an entity existing in Absolute Reality.

Do not allow “observation” to function as a creator of existence.

Always specify, explicitly or implicitly, which layer a term belongs to before using it in foundational argument.

#### Closing Note

The appendix should be read as a control mechanism for the rest of the paper. Its role is to ensure that the layered model is not later undermined by loose shifts in terminology. In Paper A-9, paradox does not arise because the universe is forced to contradict itself; it arises when layer-specific terms are allowed to drift across ontological boundaries without discipline.