Appendices

Appendix A. Symbols and Variables

This appendix collects the main symbols, variables, and structural labels used in Paper A-8. Because A-8 is less operator-heavy than A-7, the notation here is organized around conceptual function: shared informational wave, collapse, nodes, access order, sequence, timeline, and structural closure.

A.1 Core Event and Collapse Symbols

Symbol	Meaning	Role in A-8	Status
Ψ_e	Shared informational wave of an event	Unified event-configuration containing relational structure before or at collapse	Core
$C[\Psi_e]$	Collapse of event configuration	Structural resolution of the event	Core
Ψ_e'	Resolved event-configuration after collapse	Closed post-collapse structure	Core
C^{-1}	Inverse collapse operator	Used only to state that such an operator is forbidden in CUWF	Forbidden / diagnostic
Ω	Generic operation on state space	Used when testing whether a completed event could be reopened	Context-dependent

E	Event	Compact label for an already-defined event-structure	Core / shorthand

A.2 Node and Wave-Line Symbols

Symbol	Meaning	Role in A-8	Status
Γ	Single relational wave line	Common wave line within which cause and effect labels occupy different nodes	Core
n_i, n_j, n_k	Distinct nodes on the same wave line	Different local positions inside one unified event-structure	Core
R_{ij}	Relational constraint between nodes i and j	Encodes structural linkage inside Ψ_e	Core
n_i', n_j'	Resolved node states after collapse	Post-collapse node values inside the completed event	Core
{A, B, C}	Informational components within Ψ_e	Used to illustrate access reordering without changing event structure	Illustrative / core
{A′, B′, C′}	Resolved components after collapse	Completed informational set available to observers	Core / illustrative

		under different access routes	

A.3 Access, Sequence, and Observer-Level Symbols

Symbol	Meaning	Role in A-8	Status
A	Observer access operator	Maps components or nodes into the order in which they become accessible	Core / observer-level
$A(n_i)$	Accessibility of node i	Used to define observer-order relations	Core / observer-level
A_1, A_2	Different observer access maps	Show how distinct observers may reconstruct different apparent orders	Context-dependent
$A(n_i) < A(n_j)$	Access-order inequality	Means node i is encountered before node j by a given observer	Core / observer-level
Sequence	Structural ordering relation	Constraint on how completed information can be unpacked	Conceptual / core
Timeline	Human narrative line of before–after	Cognitive scaffold imposed on completed structure	Conceptual / non-fundamental

A.4 Structural and Interpretive Labels

Symbol / Term	Meaning	Role in A-8	Status
Cause-label	Node or component later interpreted as the cause	Observer-level naming applied after collapse	Interpretive
Effect-label	Node or component later interpreted as the effect	Observer-level naming applied after collapse	Interpretive
Structural closure	Completed event-resolution	Defines why the past is not reopenable	Core concept
Access order	Order of information arrival to an observer	Explains perceived sequence without ontological sequence	Core concept
Event order	The order observers assume the event itself had	Critiqued throughout A-8 as often conflated with access order	Critiqued concept
Retrocausality	Apparent backward influence	Reinterpreted as an illusion of reordered access to completed structure	Diagnostic concept

Appendix B. Equation and Argument Reading Guide

A-8 uses fewer equations than A-7, but the equations it does use are structurally decisive. This guide explains how to read them correctly. The key warning is that many expressions in A-8 are not ordinary time-evolution equations. They are closure statements, access-order relations, or anti-reversibility statements.

B.1 Main Equation Types in A-8

Equation Type	Main Function	How to Read It	Typical Sections
Collapse statement	Defines event completion	Read as structural resolution, not a process unfolding in narrative time	5, 7, 8
Containment statement	Shows nodes/components belong to one shared wave	Read as ontological unity of the event	5, 8
Access-order relation	Shows observer-level ordering	Read as perception/order of arrival, not event-generation order	3, 8
Anti-inverse statement	Forbids reopening completed collapse	Read as structural closure of the past	7

Contrast formula	Separates sequence from timeline	Read as conceptual distinction, not physical dualism	6

B.2 The Most Important Equations in A-8

1) Shared event-collapse

$$\Psi_e \longrightarrow C[\Psi_e]$$

Read this as: the event is resolved through collapse of a shared informational configuration. Do not read it as: one cause starts a chain that later becomes an effect.

2) Completed event structure

$$C[\Psi_e] = \Psi_e'$$

Read this as: after collapse, the event exists as a resolved structural state. The important point is closure, not chronological sequence.

3) No reopening of the past

$$\nexists \text{ operation } \Omega \text{ such that } \Omega(\Psi_e') \longrightarrow \Psi_e$$

Read this as: there is no physically allowed operation that reopens a completed event into its pre-collapse state. This is the formal backbone of A-8's rejection of editable pasts and sci-fi time travel.

4) Same wave, different nodes

$$n_i \neq n_j \quad \text{but} \quad n_i, n_j \in \Gamma$$

Read this as: what human beings later label cause and effect are distinct local nodes inside the same event-wave, not separate events on separate timelines.

5) Access order is observer-level

$$A(n_i) < A(n_j)$$

Read this as: node i becomes accessible before node j for a given observer. This does not prove that node i generated node j through time.

B.3 Core Distinction to Keep in Mind

- Collapse order is not the same thing as observer access order.
- Access order is not the same thing as event-generation order.
- Sequence can be real without timeline being fundamental.
- Cause and effect can be useful labels without being ontological engines.

B.4 Common Misreadings to Avoid

- Do not read every arrow as a time arrow. In A-8, arrows usually indicate structural resolution or observer-ordering, not timeline flow.
- Do not assume that because two labels are different, they must belong to two separate events. A-8 repeatedly argues the opposite.
- Do not treat sci-fi reversibility as a physics possibility unless collapse closure can also be reversed; A-8 says it cannot.
- Do not confuse a reconstructed narrative with the event's generative structure.

B.5 Practical Reader Shortcut

For fast reading, keep one short formula in mind: the event is one collapse, the observer meets it in pieces. Nearly every major claim in A-8 is an unpacking of that distinction.

Appendix C. Minimal Notation Cautions

- Ψ_e, Γ, and $\{n_i, n_j\}$ belong to the event-structure level.
- $A(\cdot)$ belongs to the observer-access level.
- Cause and effect in A-8 are mostly labels, not primitive variables.
- Timeline is used as a human representational concept, not as a fundamental physical parameter.