

Invariant Definition: Random

Status

Ontological invariant (Vorticity Space-consistent)

Definition

Random denotes a condition of *maximal local indeterminacy under global structural constraint* within a closed, relational system.

An event, transition, or differentiation is random **if and only if**: - Multiple continuations are structurally admissible, - No internal relation locally privileges one continuation over another, - Global coherence and closure are preserved across the ensemble of continuations.

Non-Claims

Random does **not** imply: - Absence of structure - Absence of constraint - Ontological primitivity - External causation or noise - Mere ignorance of hidden determinism

Structural Characteristics

- **Relational:** Randomness arises only within relational contexts.
- **Asymmetric:** It presupposes non-uniform constraint distribution.
- **Observer-relative:** It is encountered from within the system, not from an external frame.
- **Closure-preserving:** It never violates systemic coherence.

Ontological Placement

Randomness is not a foundational feature of reality but an *emergent invariant* of circulation within Vorticity Space. It reflects indeterminacy of path, not indeterminacy of structure.

Invariant Statement

In any coherent, closed system, randomness is the persistence of multiple admissible relational trajectories in the absence of a locally resolving distinction.

Notes

This definition is invariant across formal grammars and calculi that faithfully express relational primacy, asymmetry, and closure. It is compatible with UNS, UNS-C, CGP, and downstream operational interpretations, without being dependent on them.