



Chayut Universe Wave Function

Paper A-10 : The Arrow of Time in the CUWF Framework
Arrow of Time is not Time, Collapse Directionality, History
Creation, and the Structural Origin of Irreversibility

Title: Chayut Universe Wave Function (CUWF) Paper A-10 The Arrow of Time in the CUWF Framework : Arrow of Time is not Time, Collapse Directionality, History Creation, and the Structural Origin of Irreversibility

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Abstract

The arrow of time is among the most pervasive yet unresolved structures in theoretical physics. Irreversibility appears across quantum measurement, thermodynamics, and cosmology, while the underlying dynamical laws often remain time-reversal symmetric. Standard explanations typically treat time as primitive and attempt to derive directionality from entropy growth, cosmological initial conditions, or psychological asymmetry. This paper argues that such approaches mislocate the source of the arrow. Within the Chayut Universe Wave Function (CUWF) framework, time is not fundamental. The arrow of time is instead reconstructed as the structural consequence of collapse-driven realization under entropic asymmetry. Definite outcomes are selected from structured possibility, persistent records are created, and realized history accumulates under non-invertible constraint. On this basis, the paper distinguishes realization from evolution, entropy bias from directionality, and temporal indexing from the ontological source of irreversibility. It argues that quantum measurement, thermodynamic irreversibility, and cosmic-scale directionality are not separate arrows, but three domain-level expressions of one structural arrow. The paper further shows that many familiar confusions—including time-reversal paradoxes, retrocausal narratives, entropy–time identity claims,

and psychological reductions—dissolve once temporal direction is reassigned from time itself to history creation. The final conclusion is that the arrow of time is not a property of flowing time, but the structural signature of reality becoming definite.

Keywords

Arrow of Time; Irreversibility; CUWF; Collapse; Realization; History Creation; Entropic Asymmetry; Quantum Measurement; Thermodynamic Arrow; Cosmic Arrow; Time-Reversal; Causality

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