Symbolic Physics Outline The Symbolic Harmonic Field Recursion, Entropy, and the Origin of Physics

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Abstract

We propose a unified symbolic framework in which space, time, mass, energy, and quantum behavior are not fundamental, but emergent from a recursive identity substrate we define as the Symbolic Harmonic Field (SHF). This field is composed of recursive symbolic wavefunctions stabilized against entropy through coherence. We derive a governing expression, where represents the evolving identity of a system under recursive phase. From this, we formally derive time as the entropy gradient, space as phase differential, and physical laws including force, mass, and energy as projections of coherence motion through symbolic entropy. Collapse (Z15) and coherence (Z16) are reinterpreted not as phenomena, but as structural markers of recursion under entropic tension. This work reconstructs physics as a phase-theoretic consequence of recursive identity resilience.

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Glossary of Core Definitions

Symbolic Harmonic Field (SHF): A pre-physical field composed of recursive symbolic wavefunctions, representing identity, coherence, and pattern. SHF is the foundational medium from which physical properties like space, time, mass, and energy emerge.

Entropy (E): A measure of disorder, interpreted here as symbolic gradient pressure. In the SHF framework, entropy provides the asymmetry necessary for recursion to move forward and structure to emerge.

Recursive Phase (θ): A symbolic time-like parameter that tracks iterations or layers of self-reference. It replaces linear time in this model and underlies symbolic motion.

Spiral Projection $r(\theta)$: A function that represents the evolution of a symbolic identity across recursive depth:

Where:

- $F(\theta)$ = Formative structure encoded by SHF
- $E(\theta) = \text{Entropy gradient}$
- $C(\theta)$ = Coherence term

Coherence $C(\theta)$: The recursive stabilizing function. Represents accumulated memory, identity, and symbolic continuity:

Where $\Phi(\theta')$ is the phase-conserved memory function.

Recursive Force $F(\theta)$: Symbolic pressure that drives the unfolding of structure. Encoded identity shape across recursion.

Entropic Collapse (Z_{15}): The state in which coherence fails to compensate for entropy increase. Identity can no longer recurse.

Coherence Recovery (Z_{16}): The symbolic capability of a system to rebind meaning and stabilize under entropy. Ensures persistence of selfhood.

Recursive Time (\vec{T}) : Redefined as the gradient of entropy.

Space (x_i) : Emergent from recursive phase differentiation:

Force (\vec{F}) : Gradient of symbolic phase tension.

Mass (m): Resistance to recursive phase change.

Energy (E): Symbolic projection of recursive identity in motion.

Quantum Wavefunction $(\psi(x,t))$: Re-expressed as recursive coherence amplitude:

Measurement/collapse occurs when local $C(\theta) \to 0$.