Manifest: Theory of Dynamic Symmetry (TDS Framework)

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Core Principle: Reversible Symmetry Lattice (RSL)

The Theory of Dynamic Symmetry (TDS) describes reality as a discrete, reversible informational process operating on the Planck-scale lattice — the *Reversible Symmetry Lattice* (RSL). At its foundation, the lattice evolves through bijective transformations:

$$S_{t+1} = BS_t, \qquad B^{-1} \text{ exists.}$$

Each configuration S_t encodes the global informational state of the system. The total informational energy is conserved:

$$I_{\text{total}} = H(S_t) = \text{const},$$

and decomposes into symmetric and asymmetric components:

$$E_{\text{sym}}[S_t] + E_{\text{asym}}[S_t] = E_0 = \text{const.}$$

We define these components as:

$$E_{\text{sym}} = J \sum_{\langle ij \rangle} [s_i s_j]_+, \qquad E_{\text{asym}} = J \sum_{\langle ij \rangle} [-s_i s_j]_+,$$

where $J > 0$ represents the coupling energy between adjacent lattice states, and $[x]_+ = \max(x, 0)$ isolates positive-symmetry correlations.

Reversibility ensures that no information is lost — every state has an inverse. Temporal evolution is thus a reconfiguration of symmetry, not destruction. Matter, fields, and spacetime curvature emerge as higher-order patterns within this dynamic symmetry network.

Fundamental Constants and Lattice Relations

In the framework of the Theory of Dynamic Symmetry (TDS), all measurable constants arise not as external inputs but as emergent invariants of the Reversible Symmetry Lattice (RSL). They are stable informational ratios that remain unchanged under reversible transformations of the lattice. Thus, physical "laws" are merely expressions of these invariant proportions — the grammar of symmetry through which the lattice maintains coherence.

$$
\begin{aligned}
c &= \frac{\ell_P}{t_P}, && \text{(limit of information propagation)}\\
\hbar &\sim J\, t_P, && \text{(quantum of reversible action)}\\
G &\sim \frac{\ell_P^2 c^3}{\hbar}, && \text{(elastic coupling of lattice curvature)}\\
\alpha &\sim \frac{g^2}{4\pi\,\hbar c}, && \text{(asymmetry-channel coupling strength)}\\
\mu_0\,\varepsilon_0 &= \frac{1}{c^2}, && \text{(electromagnetic symmetry constraint)}\\
k_B : \Delta E &= k_B T \ln 2, && \text{(information–entropy conversion).}
\end{aligned}
$$

All macroscopic constants therefore originate from the primary triad $(\ell_P,\ t_P,\ J)$ and the informational coefficient k_B. They define how space and time emerge as discrete intervals, how energy becomes reversible exchange, and how temperature encodes the statistical rhythm of asymmetry flips — the heartbeat of the lattice itself.

Closing Remark

The TDS framework replaces the notion of continuous substance with informational reversibility. Reality becomes a computation of symmetry — a self-consistent lattice where the Planck scale sets the minimal interval of transformation, and all constants emerge as expressions of its internal logic. This structure unifies geometry, energy, and information under one reversible dynamic.