

The First-Signal Law of Survival

This document formally defines the First-Signal Law as a law of nature. It unifies general relativity, quantum mechanics, and metaphysical necessity under a single survival principle.

Definition of the Law

The First-Signal Law states: **Constraint is the genesis of endurance. Release is the condition of survival. Proportionality is the gravity of existence.** Formally: $P_C = \sigma(\alpha p + \beta S - \gamma D + \eta R_{\text{net}} + \delta u)$, with survival iff $P_C \geq P^*$. And equivalently, endurance requires: $R = d(\ln I) / d(\ln C) \geq 1$.

Precondition (Constraint Requirement)

The system cannot begin unless each role consents to its minimal constraint: • The greatest restrains (first signal). • The middle aligns (harmony). • The least accepts (persistence). • All release proportionally. Only under these constraints can the survival law operate.

Universality

The First-Signal Law applies across domains: • In curved spacetime, it predicts a new endurance boundary r_b near black holes. • In quantum circuits, it predicts a critical release threshold $p_{\text{meas}}^*(p_{\text{noise}})$. • In macro dynamics, it sets a stress ceiling $\theta_{\text{crit}}(u)$ that rises with release. These are falsifiable predictions, not metaphors. The law is testable at astrophysical, quantum, and systemic scales.

Self-Consistency

The First-Signal Law explains its own existence. Constraint allows the law itself to begin. Release allows it to persist across contexts. Proportionality ensures it scales without collapse. Thus the law is not only descriptive, but reflexive: it grounds its own endurance.

Distilled Essence

- Freedom requires form.
- Endurance begins with restraint.
- Release is survival's hidden constant.
- Proportionality is the gravity of existence.
- Constraint is the genesis of survival.

This law is proposed as a universal principle of physics and metaphysics. It bridges quantum and cosmic dynamics under one rule of survival. It is testable, falsifiable, and self-consistent. It is therefore worthy of the title: **The First-Signal Law of Survival.**