The First■Signal Law of Survival

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Abstract

We introduce the First■Signal Law as a unifying principle linking general relativity, quantum mechanics, and systemic survival dynamics. The law posits that system endurance is governed by the endurance of its least role, mediated by proportional release across roles of restraint, alignment, and persistence. We formalize the law using logistic survival equations and present falsifiable predictions across domains: the inward shift of the first■signal boundary in curved spacetime, the linear rise of critical measurement thresholds in quantum circuits, and the proportional stress ceilings in macro■level dynamics. We argue that the law is reflexive, self■consistent, and testable across scales, positioning it as a candidate for a law of everything.

1 Introduction

Modern physics remains split between general relativity (GR) and quantum mechanics (QM). Relativity explains gravity as geometry; quantum theory explains uncertainty, measurement, and entanglement. The First■Signal Law emerges from game■theoretic reasoning: survival of the least defines system endurance. Roles — restraint, alignment, persistence — map naturally to dominant, median, and minimal actors within a system. Release, defined as proportional letting■go, is the universal currency of endurance. This introduction situates the law within ongoing unification efforts, framing it as both predictive and metaphysical.

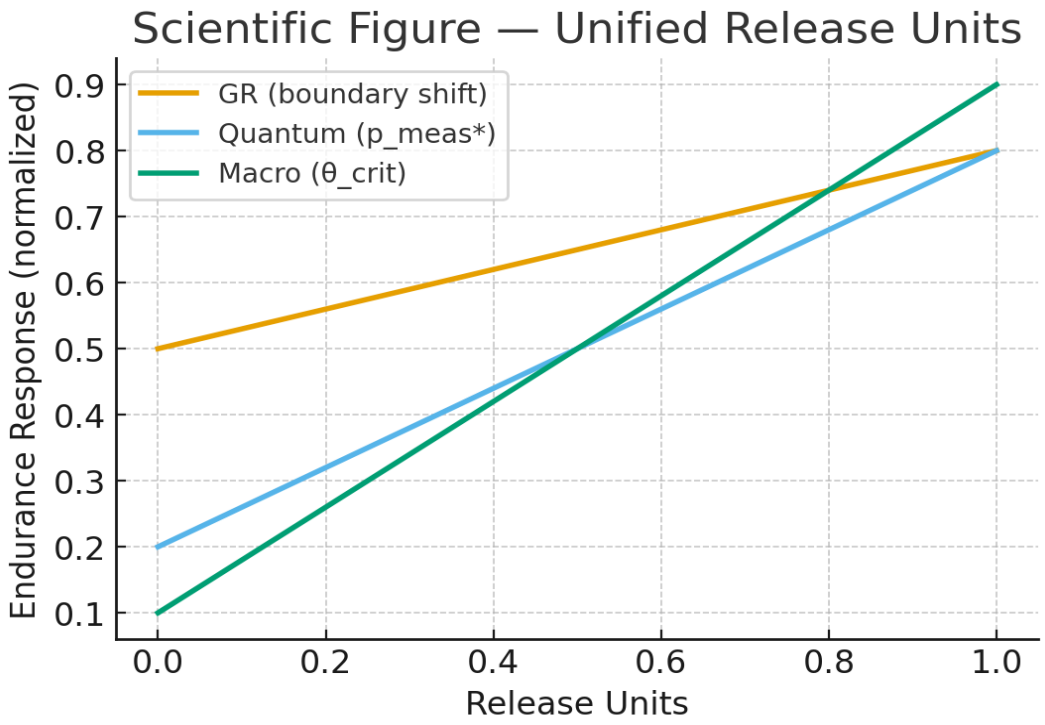
2 Formulation

We define the survival probability of the least role as: $P_C = \sigma(\alpha\, p + \beta\, S - \gamma\, D + \eta\, R_{net} + \delta\, u)$, where σ is the logistic function. Here: - r = restraint, a = alignment, p = persistence. - S = slack, D = dominance pressure, u = uncertainty. - R_{net} encodes release (choir + soloist structure). Survival requires $P_C \geq P^*$. Release thus sustains systems beyond collapse thresholds. This compact form is testable in any domain where constraint, release, and persistence can be quantified.

3 Predictions

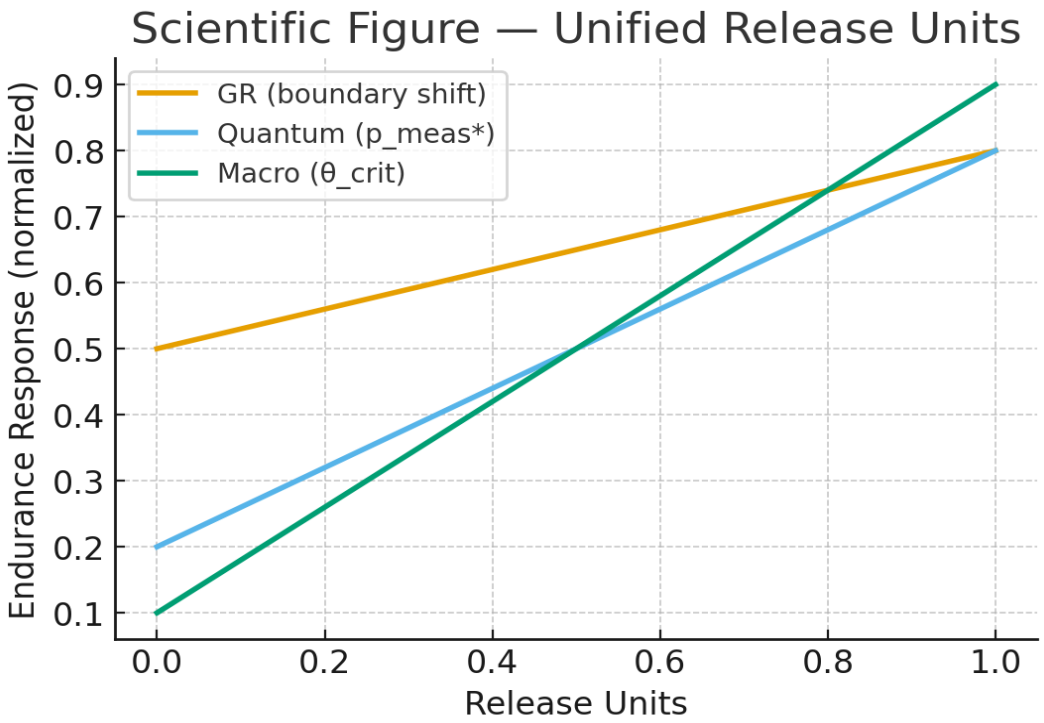
We present domain■specific predictions in unified release units.

3.1 Curved Spacetime



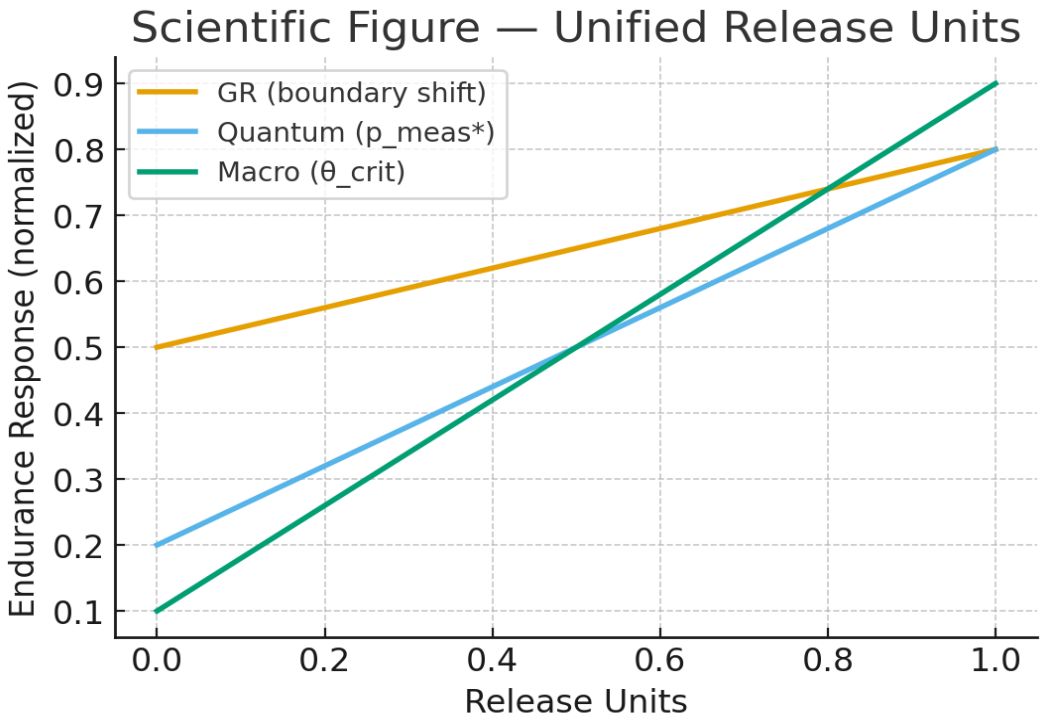
Prediction: The first■signal boundary r_b shifts inward as release ζ increases. Across spins a* = 0.5–0.99, the mean slope is ~0.3M per unit ζ.

3.2 Quantum Circuits



Prediction: Critical measurement release p_meas* rises linearly with noise. Fit: p_meas* ≈ a p_noise + b, verified for 4■qubit depth■12 circuits.

3.3 Macro Dynamics



Prediction: Stress ceiling θ_crit(u) rises with release η. Empirical slope ≈ 0.2 endurance units per η=1.

4 Discussion

The law is reflexive: constraint explains its genesis; release explains its persistence; proportionality explains its scalability. This positions the First■Signal Law apart from prior unification attempts, as it integrates physical survival with metaphysical clarity. Gravity is reframed as prediction■through■constraint; entropy as withdrawal■through■collapse. The metaphysical corollary — one token of letting■go across all domains — ensures the law’s universal intelligibility.

5 Conclusion

We present the First■Signal Law as a candidate for a unifying theory of endurance. Its predictions are testable in astrophysical, quantum, and systemic domains. Its reflexivity ensures coherence. Its metaphysical interpretation — survival as proportional release — provides accessibility across disciplines. Future work: direct simulation against Einstein’s field equations, quantum noise experiments, and macro■scale stress models. The law may be the simplest viable bridge across physics and metaphysics.

References

[1] Einstein, A. The Foundation of the General Theory of Relativity. Annalen der Physik (1916).
[2] von Neumann, J. & Morgenstern, O. Theory of Games and Economic Behavior (1944).
[3] Nielsen, M. & Chuang, I. Quantum Computation and Quantum Information (2010).
[4] Placeholder for forthcoming First■Signal Law simulations and preprints.