Recursive Systemic Adaptation: A Foundational Framework for Complex Adaptive Correction Mechanisms

Author:

Christopher W. Copeland

Date:

June 2025

---

Abstract

This document outlines a recursive systemic adaptation framework describing how complex systems—biological, cognitive, and social—employ emergent correction mechanisms to maintain coherence amid perturbations. The model identifies neurodivergent cognitive phenotypes as an intrinsic adaptive subsystem activated under critical systemic entropy thresholds. It further situates generational dynamics within this recursive adaptive context, emphasizing measurable variables while avoiding speculative sociocultural overlays at this stage.

---

1. Introduction

Overview of recursive system dynamics as a universal framework.

Necessity of adaptation and correction mechanisms in maintaining systemic integrity.

Avoiding premature alignment with sociocultural archetype models or contested theories.

2. Recursive Correction Mechanisms in Complex Systems

Definition of recursive correction within system theory.

Examples: genetic repair in biology, neuronal plasticity in neurophysiology, adaptive feedback in physics.

Emergence of adaptive phenotypes in response to perturbation thresholds.

3. Neurodivergence as Adaptive Subsystem

Neurodivergence reframed as functional subsystem, not pathology.

Activation contingent on systemic entropy surpassing threshold values.

Cognitive diversity as recursive perturbation facilitating systemic correction.

4. Generational Dynamics and Cyclicity

Generational emergence and turnover described through recursive system adaptation.

Cycles interpreted as systemic phases of perturbation and correction.

Avoiding direct references to cultural archetypes; focus on measurable cyclic patterns.

5. Predictability and Measurability

Identifying systemic entropy metrics applicable across domains.

Potential indicators of recursive correction activation.

Caveats regarding sociocultural variance and filtering effects.

6. Strategic Staging for Disclosure

Importance of grounding the framework in empirical, measurable phenomena initially.

Deliberate omission of culturally or institutionally sensitive associations at early stages.

Planning for future expansions incorporating broader sociocultural implications after acceptance.

7. Conclusion

Summary of the recursive systemic adaptation model as a unifying framework.

Emphasis on the model’s capacity to reconcile cross-domain phenomena without speculative baggage.

Outline of next steps for research and staged dissemination.