

Forward Propagating Zero — Core Summary

1. Neutrality Concepts

Weak Neutrality: A function $f(x)$ is neutral if it is neither odd nor even.

Strong Neutrality: A function is strongly neutral if it is both odd and even, implying $f(x) = 0$.

2. Balanced Zero

Balanced zero is defined by $\phi(0) = 0$.

Zero is a state of balance, not absence.

Optional stronger form: $\phi(0) = 0$ and $\phi'(0) = 0$.

3. Coupled Perturbation Model

$$y_e(x) = (f(x) + \phi(e)) / (g(x) + e)$$

4. Perturbational Neutrality

$$h(x) = f(x)/g(x)$$

$$h_e(x) = (f(x) + \phi(e)) / (g(x) + e)$$

For small e , boundedness and structural balance are preserved.

5. Structural Balance

Includes boundedness, stable oscillation, symmetry tendencies, and absence of singularities.

6. Conceptual Hierarchy

Zero -> Balanced Zero -> Perturbation System -> Perturbational Neutrality -> Weak Neutrality

7. Key Equations

$$\phi(0) = 0$$

$$y_e(x) = (f(x) + \phi(e)) / (g(x) + e)$$

$$h(x) = f(x)/g(x)$$

$$h_e(x) = (f(x) + \phi(e)) / (g(x) + e)$$

Manifesto Line

Zero is not absence, but balance; and a system is neutral when small disturbances from this balance do not destroy its structure.