Propertyness ($\mathcal{N}_p$) — Metric of Ontological Complexity

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1. Core Definition

$\mathcal{N}_p$ is a numerical measure of the "saturation" of an object or system with properties within the MPO-System. A higher $\mathcal{N}_p$ corresponds to a richer, more multifaceted reality of the object.

2. Conceptual Anchoring

- **Exemplary Values:**
  - Electron: $\mathcal{N}_p \approx 3$ (mass, charge, spin)
  - Human being: $\mathcal{N}_p \approx 10^9$ (biological, cognitive, social strata)
  - Table with a hole: $\mathcal{N}_p = 8$ (4 legs + tabletop + hole + its boundaries + function)

3. Key Characteristics

1. **Nonlinear Scaling**: $\mathcal{N}_p$ grows exponentially with the emergence of new organizational levels (e.g., neurons $\rightarrow$ consciousness).
2. **ChOR-Dependence**: An object manifests different $\mathcal{N}_p$ across distinct worlds (e.g., water in W_1 vs. W_2).
3. **Measurable via Thought Experiment**: Determined through analysis of connectivity (KSS) and paradoxical permeability (PPU).

4. Distinction from Classical Complexity Metrics

$\mathcal{N}_p$ incorporates not only physical parameters, but also:

- Semantics (the meaning of a "hole" for an observer),
- Dynamics (how properties transform under Γ-actualization),
- Hierarchies (e.g., $\mathcal{N}_p$ of a society $> \sum \mathcal{N}_p$ of its individuals).

5. Systemic Significance

$\mathcal{N}_p$ functions as the fundamental "currency" of the MPO-System, enabling:

- Cross-domain complexity comparison (from quarks to love),
- Prediction of significance thresholds ($\mathcal{T}_P$),
- Detection of novel ChOR emergence.

> "$\mathcal{N}_p$ is not merely a number—it is a measure of reality's depth. Like a microscope's resolution: the higher the $\mathcal{N}_p$, the more properties become discernible."

Implementation Note

This definition preserves the core operational principles of the MPO-System while maintaining terminological consistency with the broader Ontology Lab corpus. The formulation avoids speculative extension, grounding $\mathcal{N}_p$ in its diagnostic function as a comparator of ontological saturation across regimes.