



Rendering Nature Legible

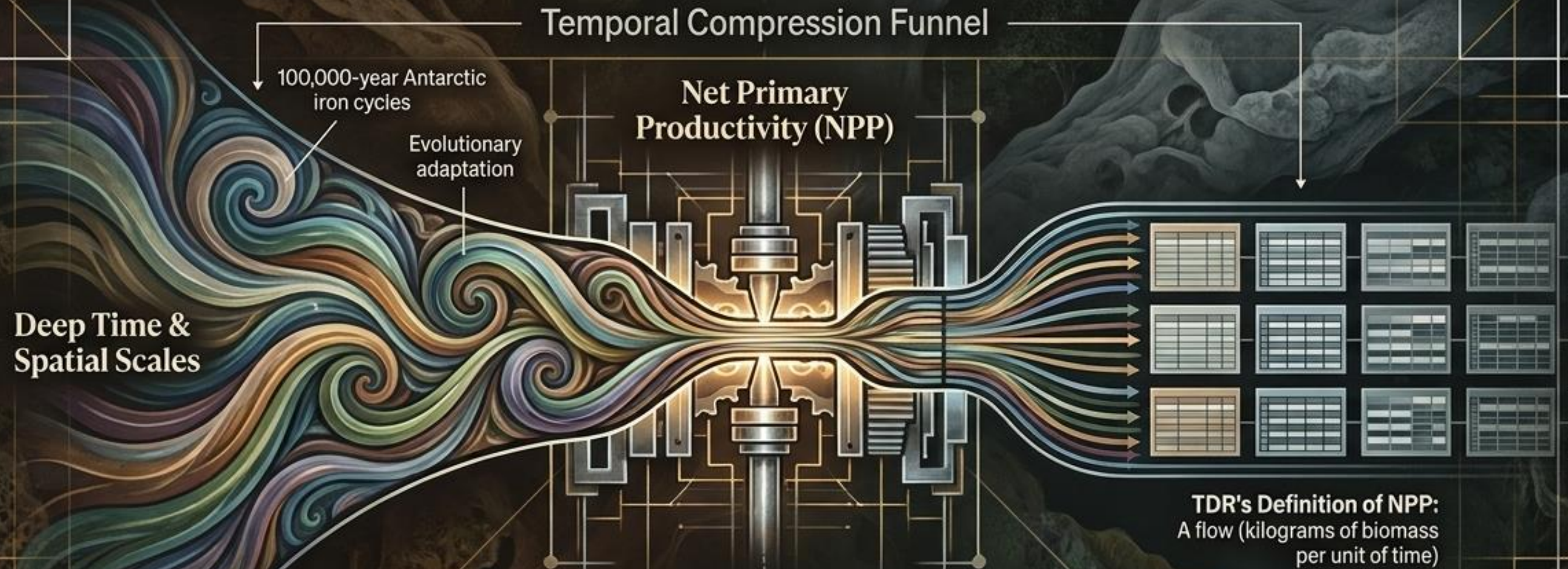
Legibility-Making, Ecological Excess, and the Rhetorical
Architecture of Biodiversity Governance

Gwendolyn Inocencio, Dissertation Defense

The Context: Biodiversity as Economic Product



Scalar Derangement and the Violence of the Metric



The Mechanism

Metrics like NPP measure only the net yield of biomass, deliberately erasing the gross production of multi-scalar communication.

The Consequence

Forcing planetary and geological timescales into quarterly reporting cycles commits scalar derangement—prioritizing human utility while silencing nonhuman environmental dissent.

The Structural Paradox of TDR



The Sophistic Operation: TDR maintains the appearance of open enquiry by naming ecological complexity, but immediately operationalizes that naming to justify further economic capture.

The Biosemiotic Limit: What Economic Legibility Erases

Panel A: Beaver Communities



Economic Lens: Flood Control Service

Above Surface

Below Surface

Biosemiotic Lens: Metabolic & affective labor;
multi-generational engineering.

Panel B: Antarctic Mountains



Economic Lens: Carbon Sequestration

Biosemiotic Lens: Inhuman semiosis; 100,000-year release
of iron establishing conditions for all communication.

The Gap: Economic metrics commit semicide by eliminating the conditions for meaning-making, reducing dynamic communication networks to mechanical service flows.

A Tripartite Methodological Synthesis



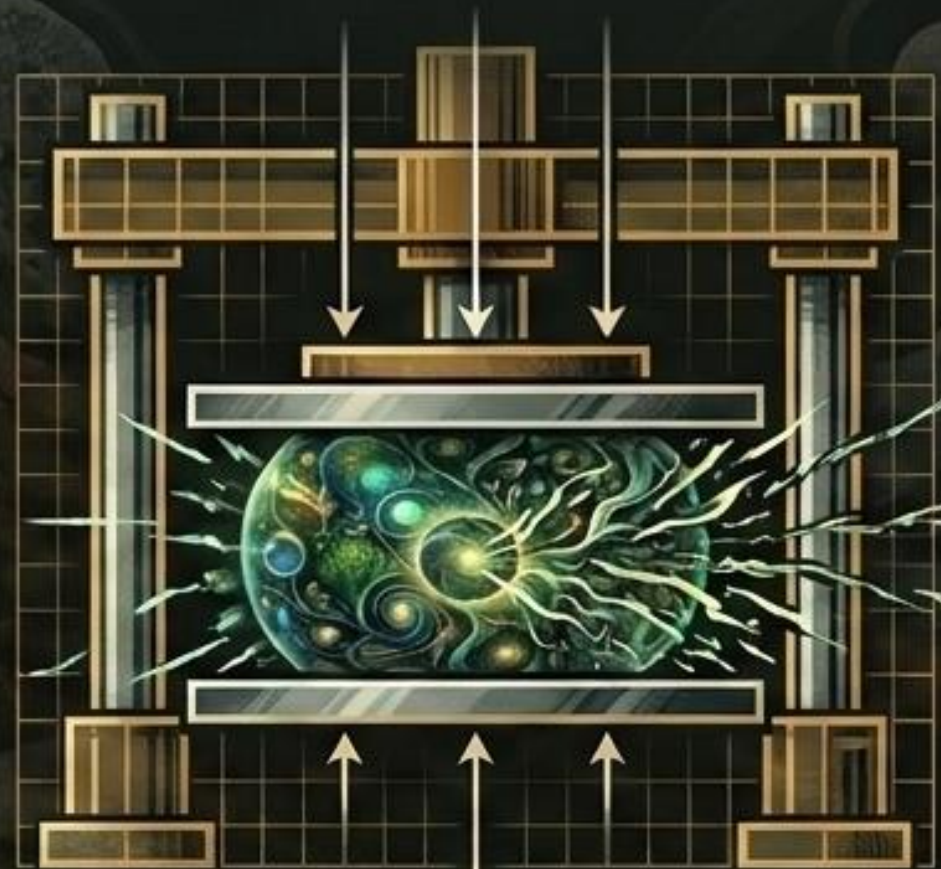
The Diagnostic Contribution: Reductive Resemiotization

The Architectural Foreclosure



Dynamic Object

Complex forests coordinating multiple umwelts across centuries.



Bureaucratic / Institutional Process

TDR, GDP, NPP calculations



Immediate Sign

Timber inventory, carbon metric

The Finding: Economic legibility does not merely misrepresent nature; it commits an **architectural** foreclosure. It strips dynamical ecological objects of their multi-scalar semiotic networks, flattening them into immediate, static signs for institutional consumption.

Reconstructive Resemiotization: Responsive Authorship

Discursive Scale

Case: PlantPaper.
Unmasking supply-chain invisibility and restoring ecological embeddedness to replace consumer alienation.

Material Scale

Case: Nuka Enterprise.
Utilizing Indigenous frameworks to replace temporal compression with multi-scalar, intergenerational communication.

Institutional Scale

Case: Te Mana o te Wai.
A national freshwater framework replacing mechanistic measurement with ecosemiotic assessment.

Implications for Governance: From Mastery to Justice

Economic Mastery	Scalar Justice
Closed Knowledge Systems	Open Rhetorical Enquiry
Scalar Derangement (Gulliver's Scaling)	Scalar Ontology (Ontologically distinct beings)
Reductive Resemiotization (Architectural foreclosure)	Reconstructive Resemiotization (Conditionality of semiosis)
Target Metric: Measures Net Yield (NPP)	Target Metric: Measures Communicative Capacity

Future Research as Praxis: The FLUENT Framework

Framework for Legible Unfolding of Ecological Networks and Territories

Phase 1: Academic Lab

- Focus: Operationalizing ecosemiotic metrics to replace reductive NPP measurements.

Phase 2: Applied Fieldwork

- Pilot the FLUENT protocol with environmental agency protecting biodiversity