The Representation Stack (Schema)

A Layered Specification of Transformation from Reality to Representation

A. Jacobs | Reality Drift Framework (2023–2026)

The Representation Stack describes how reality is transformed as it moves through systems of measurement, evaluation, and communication. At each layer, information is compressed, introducing loss and potential distortion.

Layer 0: Reality

What it does: The underlying state of the world. Unmediated, continuous, and context-rich.

What it loses: Nothing. This is the reference point.

How it distorts: It doesn't. Distortion begins only once representation starts.

Where error enters: No error at this layer. All error is relative to it.

Layer 1: Measurement

What it does: Selects and captures specific aspects of reality in a measurable form.

What it loses: Context, nuance, and anything not selected for measurement.

How it distorts: By framing what counts as observable and ignoring what does not.

Where error enters: Through **selection bias**—what gets measured vs. what is excluded.

Layer 2: Metrics

What it does: Aggregates measurements into indicators used for evaluation and comparison.

What it loses: Granularity, edge cases, and qualitative differences.

How it distorts: By compressing complex phenomena into simplified scores or categories.

Where error enters: Through **proxy construction**—metrics stand in for reality but only partially reflect it.

Layer 3: Optimization

What it does: Uses metrics to guide decisions, behavior, and system performance.

What it loses: Original intent and broader context not captured by the metric.

How it distorts: By shifting focus from the underlying reality to improving the metric itself.

Where error enters: Through **proxy optimization**—the system optimizes the representation, not the real outcome.

Layer 4: Representation

What it does: Translates optimized outputs into interpretable forms (dashboards, reports, models, interfaces).

What it loses: Process visibility, uncertainty, and hidden assumptions.

How it distorts: By presenting outputs as coherent and complete, regardless of underlying limitations.

Where error enters: Through **abstraction and presentation bias**—how information is framed and displayed.

Layer 5: Narrative

What it does: Constructs meaning, explanation, and story around representations.

What it loses: Ambiguity, contradiction, and unresolved complexity.

How it distorts: By imposing coherence, causality, and intent onto partial information.

Where error enters: Through **interpretation and sense-making**—turning representations into simplified stories.

Summary

Error accumulates across layers through successive compression and transformation.

Function

This model can be used as:
• a diagnostic tool to identify where alignment breaks down
• a schema to map how systems process reality
• a model to analyze decisions, metrics, and narratives

Core Insight

As systems operate further from Layer 0, they increasingly optimize representations of reality rather than reality itself.