



THE KAPLAN FRAMEWORK — TECHNICAL OVERVIEW

A Relational Architecture for the Emergence of Physical Reality

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0. Overview

The Kaplan Framework proposes that the universe originates from a minimal relational substrate rather than pre-existing space, matter, or time.

Instead of assuming particles, fields, geometry, or vacuum, the framework begins with **nothing**, and derives structure step-by-step.

Each stage introduces only the minimal new ingredient needed for the next.

The result is a complete relational pathway from **nothing** → **relations** → **adjacency** → **structure** → **lattice** → **physics**.

This document gives the technical definitions and conceptual diagrams for each stage.

1. NOTHING

Definition

Nothing is not emptiness — it is the total absence of:

- objects
- values
- states
- positions
- geometry
- processes
- information
- degrees of freedom

There is no “void” or “vacuum.”

Even the idea of “absence” is not meaningful because there is no substrate for absence.

Technical Role

A grounding reference point: a state that contains **no assumptions**.

All subsequent steps must be derived without importing geometry or physics from outside.

DIAGRAM 1: Nothing

(Use as a minimalist visual)

- Black or deep navy background
 - Center: a thin white circle outline
 - Inside: empty
 - No labels inside
 - Subtitle below: “No objects. No relations. No space. No time.”
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2. PURE RELATIONS

Definition

Minimal mutual relations appear without the existence of objects. These are **relation-first primitives** — constraints that can later *connect* things, even though no “things” yet exist.

Properties

- Non-spatial
- Non-temporal
- Non-numerical
- Symmetric or asymmetric depending on minimal consistency
- Treatable as logical links rather than geometric distances

Technical Role

This is the lowest-level precursor to structure. Instead of objects forming relations, **relations are primary**.

DIAGRAM 2: Pure Relations

- Black background
 - Two small floating points
 - A thin white line connects them
 - The points do *not* represent space — only connection
 - Subtitle: “Relations precede geometry.”
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3. ADJACENCY EMERGENCE

Definition

Some relations stabilize into **local pairings**.

Adjacency is an emergent **nearness** relation, not spatial distance.

Properties

- Defines local neighborhoods
- Introduces the first form of ordering
- Still lacks geometry: adjacency \neq distance
- Represents “can interact directly” or “is directly constrained by”

Technical Role

Adjacency converts unstructured connections into consistent neighborhoods, enabling:

- locality
- interaction constraints
- propagation limits
- emergent topology

It is the precursor to dimensionality.

DIAGRAM 3: Adjacency Emergence

- Several floating points
 - Some pairs connected strongly
 - Other pairs weakly
 - Cluster shape emerges
 - Subtitle: “Local neighborhoods form.”
-

4. PROTO-LATTICE

Definition

A partially regular adjacency network forms through reinforcement. Repeated neighbor patterns emerge, but the structure is still imperfect.

Properties

- Partially repeating adjacency patterns
- Stable enough to support **dynamic propagation**
- Topologically coherent but not metrically geometric
- First appearance of “extent” — not distance, but structured reachability

Technical Role

The proto-lattice is the first stage where **information, influence, and change** can propagate consistently. It allows dynamics before geometry.

DIAGRAM 4: Proto-Lattice

- A small grid-like fragment
 - Lines irregular but trending toward structure
 - A few gaps or shifts
 - Subtitle: “Repeating adjacency begins forming structure.”
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5. UDEL LATTICE

Definition

A complete, self-consistent adjacency network.

This lattice is a **discrete, relational substrate** from which emergent geometry arises.

Properties

- Fully bidirectional adjacency constraints
- Complete neighborhood definition
- Global consistency across the structure
- Discrete nodes and links
- No metric distances — only adjacency count
- Energy or state transitions governed by local rules

Technical Role

The lattice is the universe's *engine*.

From its discrete relational structure arise:

- apparent spatial geometry
- light-speed constraints
- conservation-like behaviors
- stable propagation modes
- curvature analogues
- horizon behavior
- emergent dimensionality

This is the foundational discrete architecture of reality.

DIAGRAM 5: UDEL Lattice

- Clean glowing grid
 - Uniform spacing
 - Bright nodes at intersections
 - Subtle gradient indicating layering
 - Subtitle: "A fully formed discrete relational geometry."
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6. EMERGENT PHYSICS

Definition

Apparent continuous physics arises from large-scale patterns within the lattice.

Emergent Features

- **Spacetime**
 - Not fundamental
 - Appears from propagation delays and adjacency depth
- **Gravity**
 - Emerges from flow redistribution + adjacency pattern deformation
- **Quantum Behavior**
 - Emerges from discrete flow rules, path degeneracy, and local constraints
- **Black Holes**
 - Regions where adjacency collapse → flow cannot escape
- **Cosmic Structure**
 - Galaxies arise from long-range adjacency gradients

Technical Role

Continuous laws (GR, QM, etc.) are macroscopic approximations of the discrete relational substrate.

DIAGRAM 6: Emergent Physics

- Light cone diagram
 - Atom symbol
 - Galaxy spiral
 - All connected to the underlying lattice illustration
 - Subtitle: “Physics emerges from discrete relations.”
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7. SUMMARY DIAGRAM (One-Page Master Diagram)

Below is the **full linear progression**:

```
[N O T H I N G]
  ↓
[P U R E   R E L A T I O N S]
  ↓
[A D J A C E N C Y]
  ↓
[P R O T O - L A T T I C E]
  ↓
[U D E L   L A T T I C E]
  ↓
[E M E R G E N T   P H Y S I C S]
```

8. Conclusion

The Kaplan Framework provides a complete relational path from Nothing to Physics:

- Nothing → no assumptions
- Pure Relations → minimal structure
- Adjacency → local neighborhoods
- Proto-Lattice → stable partial structure
- UDEL Lattice → full discrete architecture
- Physics → emergent behavior at scale

This framework unifies **origin, structure, and emergence** into a single relational progression.