Section 2. Why Causality Feels Like a Law of Nature

(Why This Intuition Becomes So Deeply Embedded)

The force of causal intuition does not come primarily from abstract argument. It comes from repeated success. Human beings trust causality so deeply because, within ordinary life, causal reasoning works extraordinarily well. Actions are followed by predictable outcomes. Similar conditions tend to produce similar results. The world at the scale human beings inhabit behaves with enough regularity that cause and effect appear not merely convenient, but unavoidable.

This practical success is far more powerful than philosophical persuasion. A belief reinforced by constant survival-level confirmation becomes difficult to treat as provisional. Causality is therefore not experienced first as a theory that might be revised. It is experienced as the most obvious way the world could possibly work.

Section 2 examines why this impression becomes so deeply embedded. Its aim is not to deny the success of causal reasoning, but to explain how that very success generates the first major conceptual misinterpretation. What works at the macroscopic scale is gradually mistaken for what must exist at the deepest structural level of reality.

2.1 The Success of Everyday Causality

At the macroscopic level, the physical world is comparatively stable. Objects persist long enough to be tracked. Structures endure long enough to be recognized. Patterns repeat often enough to be trusted. When similar actions are performed under similar conditions, similar outcomes are observed. This repeatability is the foundation of practical knowledge.

A cup released from the hand falls. Fire burns. Tools behave as expected. Social actions provoke familiar reactions. Crops grow or fail under recognizable conditions. Machines respond predictably to input. In all such cases, the world presents itself as sequential, ordered, and intelligible. The observer

acts, the world responds, and the relation between the two quickly settles into the form of causal expectation.

This is not a minor convenience. It is the operational basis of prediction, planning, and control. Human beings survive by learning reliable transitions from one state of affairs to another. Technology, agriculture, medicine, engineering, law, and social coordination all depend on the assumption that stable actions can produce stable effects. Without that assumption, deliberate action would collapse into uncertainty.

What matters here is not merely that causal reasoning works often, but that it works with overwhelming consistency in ordinary life. The macroscopic world rarely confronts us with obvious breakdowns of causal order. Events appear separated in time. Effects follow causes with enough delay for the mind to register a clean sequence. The structural coarseness of everyday reality makes sequence legible and response intelligible.

Because human life unfolds almost entirely inside this regime, causality begins to feel stronger than a method. It feels necessary. The mind does not merely say that causal reasoning is useful. It gradually comes to believe that reality itself must be built causally, because nothing in ordinary experience seems to suggest otherwise.

This is the real source of causal conviction. It is not that human beings first prove causality and then trust it. It is that the world, at ordinary scale, rewards causal expectation so consistently that trust becomes almost automatic. By the time formal thought begins, causality already feels like a law of nature.

2.2 The First Hint of Misinterpretation

Yet it is precisely at the point of maximum practical success that the first conceptual error arises. The reliability of causal reasoning in experience does not by itself prove that causality is fundamental. Practical effectiveness and ontological necessity are not the same claim.

This distinction is easy to overlook because human cognition is shaped by success. A framework that works repeatedly tends not to be treated as an approximation. It becomes invisible as a framework and begins to appear as reality itself. Causality is one of the clearest examples of this transition from usefulness to unquestioned metaphysical commitment.

The history of science offers many analogies. Intuitive models of motion, space, matter, and perception often served human purposes long before they were recognized as incomplete. Their success delayed deeper questioning. Only when inquiry extended beyond familiar scales or into anomalous regimes did the hidden assumptions behind them become visible. Causality occupies a similar position.

Its macroscopic success reflects the fact that large-scale systems are stable, coarse-grained, and temporally separable. Fluctuations are averaged out. Interactions are spread over scales that allow the mind to register sequence with apparent clarity. Collapse, disturbance, and response do not appear simultaneous or structurally closed; they appear as ordered steps. Under these conditions, causal language becomes an excellent approximation of how events present themselves to human observers.

But an excellent approximation is still an approximation. It describes how reality appears under a certain range of conditions. It does not automatically reveal how reality must be structured at all levels. The crucial mistake occurs when the success of causal reasoning in ordinary experience is mistaken for evidence that causality belongs to the deepest layer of physical law.

Once that mistake is made, causality ceases to be treated as a model of access and becomes a metaphysical assumption about reality itself. Because it continues to work so well in the regime that formed it, the assumption remains hidden. It is exposed only when extended into domains where sequence becomes ambiguous, simultaneity becomes structurally relevant, or event completion no longer matches human access order.

Paper A-8 begins from this overlooked distinction. Before causality can be challenged as a foundational principle, it must first be recognized for what it undeniably is: a highly successful human approximation shaped by the structure of experience. Only then can we ask whether the universe itself is truly causal in the way human intuition supposes, or whether causality is instead a powerful projection arising from the conditions under which human beings encounter completed events.