Lebensraum (Daylight) | © 2019 artwork by Lawrence Kwakye

Navigating Incomplete Knowledge

On System Architecture, Iteration, and Human Situatedness

Positioning Note

The awareness that knowledge is limited is not new. In scientific practice, control groups, placebo testing, and bias reduction methods have long been used to manage uncertainty. These approaches implicitly acknowledge that observation is never neutral and that control is always bounded.

What this essay proposes goes a step further. It does not argue that uncertainty should be better managed, but that no methodological refinement can eliminate the fact that every system and every design begins from a boundary that itself cannot be fully controlled. The question, therefore, is not how to eliminate uncertainty, but how to design and act with the awareness that it structurally remains.

I. Designing Without a Closed Frame

System architecture seeks clarity. Governance models, blockchain infrastructures, and organisational frameworks attempt to make roles explicit, responsibilities traceable, and evaluation measurable. Without such structures, cooperation at scale becomes unstable.

Design introduces definition. A definition introduces boundaries. Boundaries enable coordination.

But boundaries also exclude.

Every system creates visibility and invisibility simultaneously. What is not framed as relevant cannot be evaluated. What is not defined as a condition cannot be verified.

This is not a flaw in system design. It is its structural condition.

II. What Systems Can Do — and Why That Matters

Systems reduce complexity to function. Through predefined rules, verification layers, and iterative processes, they create predictability. Models such as Issuer–Holder–Verifier demonstrate how accountability can be distributed and traceable.

Iteration further refines this process. Feedback loops allow systems to evolve. Governance structures enable adaptation.

These mechanisms are indispensable. Without them, coordination dissolves into ambiguity.

Yet refinement does not eliminate the initial boundary from which the system operates.

III. Control Is Not the Same as Comprehension

A system can verify whether predefined conditions are met. It cannot determine whether the predefined set of conditions was complete.

Verification follows definition.

If a problem has not been articulated, the system cannot detect it. If a category has not been included, it remains invisible.

Improving data does not resolve this structural limit. More information expands the frame, but does not remove the necessity of framing.

Every architecture rests on a prior act of selection.

IV. Iteration and the Design Boundary

One might argue that iterative design compensates for incompleteness. After each cycle, new insights are integrated, and the system evolves.

Iteration is essential — but it operates within the same architectural logic. Each new cycle still begins with a defined scope. The system can incorporate what becomes visible, but it cannot fully step outside its own structure to evaluate its representational adequacy.

A system cannot fully exist in order to observe itself without transformation.

Distance — a form of design "breathing space" — cannot be entirely internalised without altering the identity of the system itself.

V. The New Issuer — Representation and Blind Spots

Consider the introduction of a new actor — a new Issuer — entering an existing system. The architecture may accommodate this actor. Roles can be assigned. Verification processes can adapt.

Yet the system cannot independently determine whether its current set of Issuers is representative of the wider relational reality. That question must be posed from outside the architecture.

Representation is not self-evident within structure.
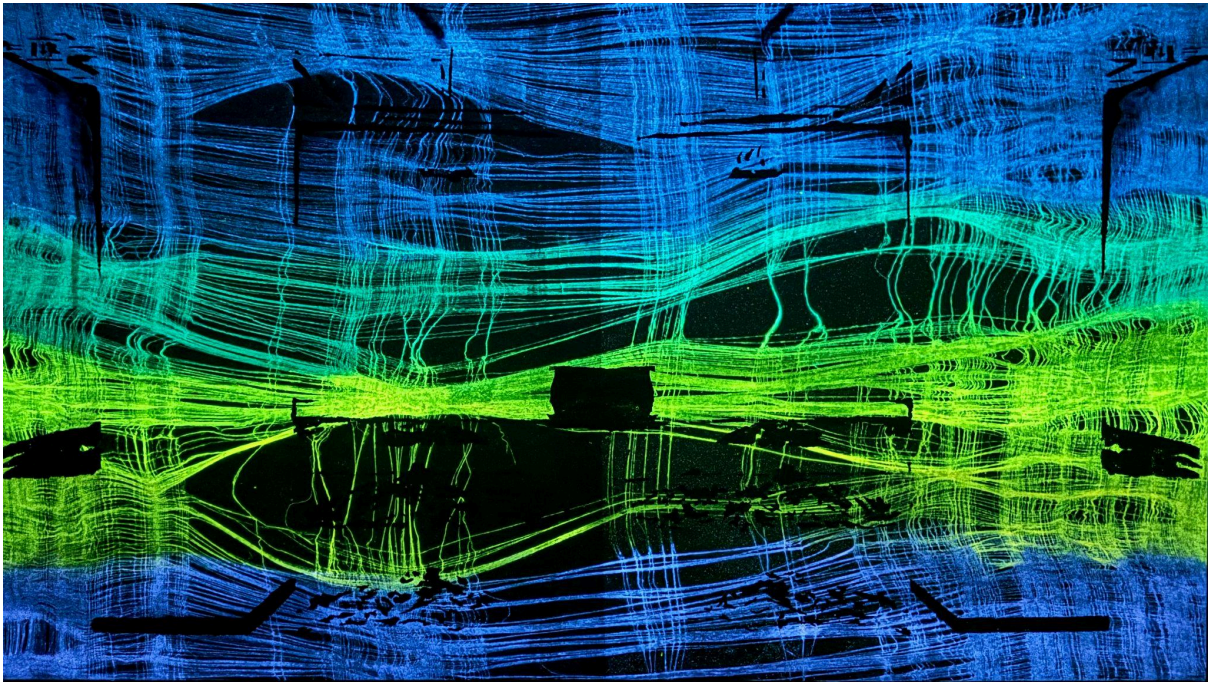

VI. The AI Issuer — Expansion Without Embodiment

Artificial intelligence may expand detection capacity. It can identify patterns beyond immediate human perception. It can process vast data streams.

Yet AI lacks embodiment. It does not experience risk, dependency, or moral tension. It does not address the consequences of system design.

Human beings are embodied and situated. Their perspectives are limited, but they are also relationally entangled. Multiple perspectives can complement one another — not to achieve completeness, but to widen sensitivity.

AI extends visibility. It does not eliminate situatedness.

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VII. Not Knowing as Structural Condition

Uncertainty is often treated as temporary — something to be resolved through better modelling or improved metrics. In complex societal systems, uncertainty is structural. Reality changes as it is observed and intervened upon.

In this respect, this argument resonates with the work of **Hartmut Rosa**, particularly his concept of *Unverfügbarkeit* — the idea that what is most meaningful in human life resists full control and availability. Not as a deficit, but as a defining characteristic of our relation to the world.

Design does not overcome this condition. It operates within it.

Not knowing is not a weakness. It is an ontological fact.

VIII. Me–We–World and STUART — Designing With Breathing Space

Me–We–World does not replace system architecture. It offers a relational lens alongside it.

Human situatedness here is not a human-centric claim. It does not position the human as the normative center of reality. Rather, it acknowledges that all observation — including system design — emerges from situated perspectives.

STUART — Safety, Trust, Understanding, Awareness, Relaxation, Togetherness — functions as a reflective compass. It does not prescribe outcomes. It cultivates attentiveness.

Systems close in order to function. Relational reflection opens in order to remain responsive.

Both are necessary.

IX. The Productive Tension

System design and relational reading exist in tension. Systems stabilize. Reflection destabilises.

This tension is not a defect. It is productive. Without closure, there is no coordination. Without openness, there is rigidity.

The task is not to dissolve this tension, but to maintain it consciously.

X. Direction Rather Than Control

The desire to fully master complexity is understandable. Technological sophistication encourages the belief that increasing data leads to increasing control.

Yet no system can eliminate its own boundary condition.

We will never fully know the totality of the reality we intervene in. But we can design with the awareness of this limitation.

In that awareness lies not certainty, but direction.

And sometimes, direction is enough.

Continue reading / related pesrpectives

- **Hartmut Rosa — *Unverfügbarkeit***
  Over de structurele onbeschikbaarheid van betekenis, resonantie en wereldverhouding.

  Book—**Hartmut Rosa — *Unverfügbarkeit (German)***

- **Lawrence Kwakye — *Beyond Moralism & Control* (deel 1 & 2)**
  On the limits of moral and instrumental control in complex systems.
  *Substack — **Beyond Moralism & Control* (deel 1)**

  *Substack— **Beyond Moralism & Control* (deel 2)**

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