

Signing History

```
[
  {
    "folderId": "AsiW4UbBx1dzilK0xsRbm0",
    "timeUtc": "2026-03-02T21:28:22.669854Z",
    "actorEmail": "0thunknotter@proton.me",
    "event": "CREATED",
    "fromIp": "201.124.109.247"
  },
  {
    "folderId": "AsiW4UbBx1dzilK0xsRbm0",
    "timeUtc": "2026-03-02T21:28:26.186186Z",
    "actorEmail": "0thunknotter@proton.me",
    "event": "SIGNED",
    "fromIp": "201.124.109.247"
  }
]
```

Signer ID mapping

```
{
  "0thunknotter@proton.me (Sender)": 7058
}
```

Oth



Free Engagement. March 2, 2026.

*Open Letter to Curt Jaimungal in response to the published article **What is infinity exactly?** <https://curtjaimungal.substack.com/p/what-is-infinity-exactly>*

Dear Curt,

Your article is titled “*What is Infinity, Exactly?*” The question asks for an account of what infinity is. What you provide is an account of how mathematicians chose to formalize it.

That distinction is not cosmetic. It determines everything that follows.

You describe which axioms are adopted, which constructions are permitted, which bijections are definable, which hierarchies emerge, and how independence results arise. All of that is correct, careful, and historically informed. But at a certain point (early, and without explicit acknowledgment), you shift from formal permissibility to ontological assertion. You move from “this can be consistently defined” to “this is what there is.”

That move is the problem.

Cantor treated infinite collections as completed objects. You recount this as a bold and vindicated insight. But what was vindicated was the internal stability and generative power of the framework. The theorems hold. The paradoxes are contained. The structure is fertile. None of that establishes that the objects postulated by the framework exist independently of the framework that defines them.

A system’s consistency and productivity are properties of the system. They are not existence proofs.

Nowhere in your article do you pause to ask whether sets—particularly infinite sets—exist as anything other than formally stabilized constructs. The question is simply bypassed. The success of the mathematics is allowed to stand in for an answer to an ontological question the mathematics is not equipped to settle.

There is no physical instrument, no conceivable observation, no experiment whose outcome would differ depending on whether \aleph_0 exists as a completed object or whether it

Oth

Free Engagement. March 2, 2026.



is merely a rule permitting indefinite extension. The two positions make identical predictions about everything observable. Permanently, not contingently.

This alone does not force instrumentalism. Unobservable entities can do explanatory work. But completed infinite totalities do no explanatory work that disciplined procedural extension does not already accomplish. Every theorem you cite survives under that leaner interpretation. The additional ontological commitment changes nothing about mathematical practice, logical consequence, or physical prediction. It is idle.

When a posit is observationally inert and explanatorily redundant, asserting it as discovery rather than convention is not boldness. It is reification.

Your treatment of the Continuum Hypothesis illustrates this clearly. You present its independence from ZFC as philosophically thrilling; as evidence that something deep and strange lies beneath mathematical reality. But independence means precisely that the axioms do not determine the statement. And there is no external arbiter to which one could appeal, because the statement has no empirical or explanatory consequence outside the formal setting that generates it.

The undecidability is not mysterious. It is structurally inevitable once one treats formally defined totalities as if they were determinate objects with fixed external facts. Remove that expectation, and the awe dissipates. What remains is a feature of constraint systems: they do not answer questions they were not built to settle.

Kronecker is often dismissed as a reactionary figure who failed to grasp Cantor's brilliance. That is not accurate. His position was that mathematical objects should be constructible in finite terms and that existence claims should track what can be unambiguously generated. History demonstrated that Cantor's framework was more productive. It did not demonstrate that Kronecker was wrong about what exists. Productivity and ontology are distinct matters. Your article treats them as if the former resolved the latter.

The same conflation appears in your discussion of ZFC and later programs aimed at strengthening it. The axioms were selected because they avoid paradox, support the

Oth

Free Engagement. March 2, 2026.



mathematics we care about, and generate stable structure. Alternative systems exist. Some contradict ZFC. Some decide statements ZFC leaves open. This is evidence of framework selection, not evidence that we are converging on the laws of a pre-existing set-theoretic universe. Expanding an axiom system to settle additional questions increases power and cohesion. It does not transform internally defined entities into mind-independent objects.

You frame the shift from potential to actual infinity as a decisive turning point in intellectual history. Aristotle is cast as having been superseded. But Aristotle was making a claim about what exists. Cantor demonstrated that treating infinite collections as completed objects yields a consistent and extraordinarily rich formal theory. He did not show that such collections exist independently of that theory. The metaphysical question was set aside, not answered.

Consider the diagonal argument. It is a finite, checkable procedure. It shows that within a framework permitting infinite sets, no bijection exists between the natural numbers and the real numbers. That conclusion is rigorous and unimpeachable inside the framework. But when you say there are “strictly more” real numbers than natural numbers, the word “more” no longer carries its ordinary meaning. It denotes a precisely defined relation internal to the formal system. Outside that system (outside the presupposition of completed infinite totalities) the statement has no footing. The proof establishes a structural fact about definable relations. It does not establish the existence of a larger completed collection.

None of this diminishes the mathematics. The theory of infinite sets is one of the great intellectual constructions in history. It is disciplined, constrained, and generative in ways that far exceed casual formalism. But it remains a construction. Treating its internally defined entities as externally existing objects is an additional step. That step is neither forced by the theorems nor justified by their success.

Infinity, as it functions in every argument you describe, is the openness of extension; the fact that any finite stage admits a further one under a rule. Nothing in your exposition

Oth



Free Engagement. March 2, 2026.

requires a completed totality beyond that. The work is done by structured extension. The totality is assumed.

You wrote a compelling guide to how the formal machinery operates. You presented it as an answer to what infinity is. The machinery answers how to reason coherently about unbounded extension. It does not establish that completed infinite objects inhabit reality in any sense independent of the rules that define them.

If you believe the additional ontological step is warranted, then the burden is not to recount the power of the framework. It is to show what that extra commitment explains, predicts, or stabilizes that disciplined extension alone does not.

Where, precisely, does the ontology do work?

Signed by the paw of a cat.

The Zeroth Unknotter.

<https://Oth.info>

Electronic signature follows.

