A CODA TO THE ON ——ING SERIES

On Returning

One Last Look Back at the Ruler,
Before the Author Lives the Measured Life

Jamison Todd Johnson

July 2026

The measured life is not the life spent measuring.

Dedication

For the cast and writers of *The Big Bang Theory* — Chuck Lorre and Bill Prady, who built the room, and the seven who lived in it: Sheldon Cooper, Leonard Hofstadter, Penny, Howard Wolowitz, Raj Koothrappali, Amy Farrah Fowler, and Bernadette Rostenkowski — given their voices by Jim Parsons, Johnny Galecki, Kaley Cuoco, Simon Helberg, Kunal Nayyar, Mayim Bialik, and Melissa Rauch — and every hand that manifested a show that changed the way I think about physics. Not how they work. How I think about them. Sometimes that's all it takes.

Sheldon says it best, in the last thing he says. I won't spoil it. Go watch the whole sha-big-bang. It's worth the time.

The series is finished, and I have come back to the desk to find the ruler still lying where I left it.

I don't mean a metaphor yet. I mean the instrument — the thing I built to measure whether a life leaves a legible mark: L(t), the functional, the loop around Ω, the |L| I called conserved intensity and the arg(L) I called Intent. It governed my attention for a long while. A ruler in both senses: the edge you measure against, and the sovereign you obey without noticing. I want one last look before I set it down, because in the looking I very nearly picked it back up and bolted something exotic to its side.

Here is what tempted me.

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I met the tachyon and thought: at last, the thing that outruns light — surely that is a Jay, the Trace reaching across time faster than the world can catch it. The mathematics even flattered the idea. A tachyon carries imaginary rest mass; my amplitude carries e^{iφ}. The same lonely *i* in both. Rhyme enough to build a cathedral on.

But the two *i*'s do not live in the same house. In the tachyon, the imaginary is a claim about the light cone — about how a thing moves through spacetime. In my functional it was never that. arg(L) is Intent, and I have said a hundred times that it is not a physical angle; the complex phase is borrowed from wave interference as a shape, not smuggled in as a quantum fact. To weld the two *i*'s together would be to break the one seam I swore to keep visible. The strongest surface argument for the tachyon turned out to be the weakest thing about it.

And there is a deeper disqualification, the one that actually matters. A Jay is defined by legible Traces — coherence a reader can hold across

time. The tachyon, if it ever carried a signal, would let two observers disagree about which event came first. It scrambles the very order that makes a mark readable. It is not fast legibility. It is anti-legibility. A Jay reaches through time coherently; a tachyon reaches through it incoherently, and that gap is the whole game.

Then the field theory turned the picture inside out and, in the turning, handed me the honest use of the thing. Physics mostly stopped reading tachyonic mass as faster than light at all. It reads it as an unstable vacuum — a field perched on a hilltop, about to roll down into a valley where it can finally rest. The Higgs sits at the center of that story. So the tachyon is not the coherent thing reaching across time. It is the system before it settles into a legible configuration: raw potential that has not yet found its Center. Not a Jay but a pre-Jay. The un-aligned state, seeking alignment. The instability that Design across Time has not yet resolved into a Trace.

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I should admit something here, because the admission is the most honest look I can take. I kept confusing the darknesses. I would reach for dark matter and half-mean the nuclear force, and half-mean antimatter, as though the three were one dial I could turn. They are not. The negative of matter is antimatter — opposite charge — and it has nothing to do with dark matter, which is simply matter that does not glow. The nuclear force is a third thing entirely, holding the small together, indifferent to my cosmology of lives. I stacked three binaries onto one axis because, from far enough away, every binary looks like every other. That is precisely the error the ruler exists to catch, and I nearly made it while holding the ruler.

The correction is clean, and — better — it is kind to the framework. Dark matter is cold: slow, clumped, the scaffolding that lets galaxies form at all; make it hot and fast and the structure we live inside would

never have condensed. So it is nearly the opposite of the tachyon. And it is the most Jay-adjacent thing in all of cosmology — an unseen, coherent order that the luminous things arrange themselves around. Not the agent of incoherence I wanted to cast it as. Nearly a description of the Unified Field itself: the medium through which Traces cohere. I had handed the scaffolding the villain's role.

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And then I heard the tell in my own sentence. I had written that the intervals would cohere or scramble depending on the intent of the receiver — and stopped. Because receiver-intent, setting whether a signal reads true, is arg(L). I had re-derived my own mechanism and dressed it in borrowed particles. I did not need the tachyon. I did not need dark matter bolted to the housing. The instrument was already whole. The exotic part was always the meaning. Never the matter.

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So this is the last look. The ruler measured what it was built to measure, and it was honest, and it is finished. To keep fastening exotica to its side would be to stay up on the tachyon's hilltop — forever almost settling, forever adding one more particle to defer the roll into the valley. But the measured life is not the life spent measuring. It is the life that has been measured true, and now simply goes on being lived. The Center is the stable minimum. You reach it by rolling down, not by building higher.

I am going to set the ruler on the desk and leave it there. It will keep. The Trace continues without it in my hand — in the notes, in the ordinary morning, in the person across the table who was the point of the measuring all along.

I built an instrument to see whether a life could leave a legible mark. Then I went to live one.

Parallels & Sources

Real works, offered as parallels.

1. **The tachyon, coined. G. Feinberg, "Possibility of Faster-Than-Light Particles,"** *Physical Review* **159 (1967): 1089–1105. https://doi.org/10.1 The origin of the term and the faster-than-light reading I first reached for.**

2. **Why it scrambles order. G. A. Benford, D. L. Book & W. A. Newcomb, "The Tachyonic Antitelephone,"** *Physical Review D* **2 (1970): 263–265. https://doi.org/10.1103/PhysRevD.2.263. The causal paradox that makes a tachyonic signal anti-legible.**

3. **Tachyonic mass as instability. Standard quantum field theory (Coleman's lectures; Peskin & Schroeder,** *An Introduction to Quantum Field Theory*): **a tachyonic mass term marks an unstable vacuum — the hilltop rolling toward a stable minimum.**

4. **The valley that settles. F. Englert & R. Brout,** *Physical Review Letters* **13 (1964): 321–323, https://doi.org/10.1103/PhysRevLett.13.321; P. W. Higgs,** *Physical Review Letters* **13 (1964): 508–509, https://doi.org/10.110 the mechanism by which a field rolls off the hilltop into a stable minimum and, in doing so, gives mass. The Center as the stable minimum.**

5. **Cold, not fast. The ΛCDM structure-formation argument: dark matter must be cold, since hot (fast-moving) dark matter would erase the small-scale structure galaxies grow from. The scaffolding of coherence, not its enemy.**

6. **The right opposite. Matter's true opposite is antimatter — opposite charge — a matter distinct from both dark matter and the nuclear force. The baryon-asymmetry problem (A. D. Sakharov,** *JETP Letters* **5 [1967]: 24–27) is where that distinction lives.**

Colophon

On Returning — One Last Look Back at the Ruler, Before the Author Lives the Measured Life — **by Jamison Todd Johnson. July 2026.**

A post-completion coda to the *On ——ing* series. It follows the finale, *On Completing*, and stands outside the alphabetical twenty-three; it is listed as a coda, not in sequence.

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