

The Story of Time

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Abstract

A narrative account of time's structure, tracing how the concept evolved from Newtonian absolute time through relativistic spacetime to the observer-competence model developed in the ISL framework. The essay distinguishes three levels -- ontological causal structure, epistemological sequencing by observers, and phenomenological experienced duration -- and argues each level requires separate treatment. Time is not a single thing demanding a single theory; it is a layered phenomenon requiring a layered account.

The Story of Time

A personal account

Shrikant Bhosale -- 2026

I want to tell you something about time.

Not the physics version. Not the philosophy version. Something simpler and stranger than both of those -- something I noticed by accident and then couldn't stop seeing everywhere I looked.

Here it is:

Nobody ever asked the most obvious question about time.

Not "what is time?" -- that one gets asked constantly. The question nobody asked is simpler:

What kind of thing is it?

Is it a substance -- something the universe is made of, flowing through everything whether anyone is watching or not? Or is it something else entirely? Something more like a ruler than a river?

I think it's a ruler. And I think once you see that, everything else about time -- the arrow of time, why we forget, what randomness actually is, what hope is made of -- all of it falls into place.

Let me show you what I mean.

1 The Stone That Doesn't Know When It Is

Imagine a stone falling off a cliff.

Simple enough. The stone falls, it hits the ground, it's done. Now here's my question: does the stone experience that fall as happening in time?

Think about it carefully before you say yes.

For the stone to experience time, it would have to compare where it is right now to where it was a moment ago. It would have to have a "moment ago." It would have to remember.

The stone doesn't remember anything.

The fall just happens. No before. No after. No duration. Just the event, complete in itself, requiring nothing from any clock.

Now imagine you're standing at the bottom of the cliff watching.

The moment you watch, something completely different happens. You see the stone at the top. You see it falling. You see it hit the ground. And instantly -- without any effort, without even deciding to -- you compare each moment to the one before it. You sequence the event. You locate it in time.

You did something the stone couldn't do. You remembered. And memory is what made time.

Time didn't flow through the falling stone. Time appeared the moment a mind with memory watched it fall.

This is the thing I couldn't stop seeing once I noticed it. Time isn't the stage the universe performs on. Time is what the audience brings. Remove the audience -- remove every observer, every memory, every mind -- and the events still happen. But there is no before. No after. No duration. No time.

The universe doesn't need time. We do.

2 The Ruler, Not the River

So what is time, actually?

Here's the simplest way I can put it. Every single time we use time -- not in equations, just in ordinary life -- we use it to make a comparison.

"This happened before that."

"This lasted longer than that."

"We've been waiting a long time."

Always a comparison. Always two things being measured against each other. Always a ruler being held up.

You know what a thermometer does? It doesn't create heat. It doesn't contain heat. It gives you a number so you can say "this is hotter than that." That's all. The heat exists whether or not the thermometer is there. The number only exists when someone holds up the thermometer.

Time is the same thing. Events happen whether or not anyone is timing them. But the measurement -- the before and after, the duration, the sequence -- that only exists when

someone holds up the ruler.

And the ruler is memory.

Memory is the other end of every time measurement you've ever made. When you say "that just happened," you're comparing what you're seeing right now to what you remember from a moment ago. That comparison is time. Without the memory to compare to, there is no measurement. Without the measurement, there is no time.

Time is not a river flowing through the universe. Time is a ruler the observer holds up. Put the ruler down and there is no time -- just events, happening.

3 Memory Is Not a Filing Cabinet

Here's where it gets interesting.

If time comes from memory, and memory is the ground of everything, then we should think carefully about what memory actually is. Because it's not what most people think.

Most people imagine memory like a filing cabinet. Events go in, they're stored as facts, and when you need them you pull them out and consult them. Clean, neutral, accurate.

That's completely wrong.

Memory is not a filing cabinet. It's more like a piece of music that's been played in a specific room, at a specific time, when specific things were happening to you. You don't just store the notes. You store the feeling of the room. The weight of the moment. The emotion that was running through you while it was happening.

Every memory you have is soaked in feeling.

And here's why that matters: when a new event arrives, it doesn't consult a neutral database. It lands in the middle of all that feeling. Before you've consciously processed anything, before you've decided what you think -- the new event has already been colored by the emotional texture of everything you've experienced before.

This is why two people can watch the same thunderstorm and one finds it thrilling and the other finds it terrifying. The thunderstorm is the same. The memory each person brings to it is completely different. And so the experience -- the reality each person actually inhabits -- is completely different.

Same event. Different memories. Different realities. Not because the universe changed. Because the ruler each person brought was made of different material.

4 The Edge of Your World

Now I want to tell you about surprise. Real surprise. The kind that stops you cold.

Most of the time, when a new event arrives, memory catches it immediately. It finds something familiar -- a pattern, a shape, something that rhymes with what's happened before. And because it catches it, it can measure it. It can locate it in time, assign it meaning, produce a response.

But sometimes a new event arrives and memory finds... nothing.

No match. No echo. No familiar shape anywhere. The comparison that normally takes an instant just keeps running and finding nothing and running and finding nothing.

That split second of total blankness -- that's genuine surprise. And it's much more important than it sounds.

Mathematicians have a word for a point in a system where the normal rules break down. Where you try to evaluate something and the math just fails. They call it a singularity.

Genuine surprise is a singularity in your experience. The meaning-making process doesn't just slow down -- it breaks down. Because the event in front of you is genuinely outside everything you've built to receive it.

That is the edge of your world.

And here's what I find beautiful about this: the edge of your world is not a fixed location. Every time you encounter genuine surprise and then live through it -- every time you absorb something that had no place in your memory and find a place for it -- the edge moves. Your world gets larger. The next time something similar arrives, it won't find nothing. It will find the memory of the last time.

Surprise is not failure. Surprise is the growing edge. It is exactly where you are becoming larger than you were.

5 Einstein's Dice Belong to Us

Einstein famously said that God does not play dice with the universe.

He said this because he believed -- deeply, almost stubbornly -- that the universe is ordered. Lawful. That what looks like randomness is always the surface of hidden order that we haven't understood yet. He didn't like the idea that some things are fundamentally, irreducibly random -- that the universe genuinely rolls dice at the quantum level.

I think he was right. But I think the dice are in a different place than he was looking.

Think about what randomness actually feels like. You're watching something happen and you genuinely cannot predict it, cannot make sense of it, cannot find any pattern. It appears chaotic. It appears like dice being thrown.

Now ask: is that chaos in the event? Or is it in you?

When an event arrives that finds no match in memory -- when it falls into that singularity, that total blankness -- it appears random. Not because it is. The event is perfectly lawful, perfectly ordered, following every rule the universe has. It appears random because you have no framework to receive its order. The pattern is real. You just don't have the memory to see it yet.

Randomness is not in nature. Randomness is the gap between nature's order and your current capacity to see it.

The universe doesn't play dice. We experience dice because we are finite, and the universe is not. Every time we expand -- every time we learn something, absorb something, build new memory -- a little more of the dice disappears and a little more of the order becomes visible.

The dice were never God's. They were always ours. And unlike God's dice, ours can be put away.

6 The Genius of Forgetting

Here's the part of this story that surprised me most when I saw it.

I'd been building up this picture where memory is everything -- the richer your memory, the more time you can generate, the more reality you can receive, the more of the universe's order becomes visible to you. More memory, better observer. Right?

Wrong.

Let me ask you something. Imagine you remembered everything. Not "a lot" -- everything. Every grief, at the exact same intensity as the day it happened. Every embarrassment. Every failure. Every time someone you trusted let you down. All of it present, all of it vivid, all of it hitting you with exactly the force it hit you with at the original moment.

Would that make you wiser? More capable? More alive?

No. It would destroy you. You wouldn't be able to get out of bed. Every new experience would arrive into a mind already overwhelmed by the full, undimmed weight of everything that had ever happened to you. The comparison engine -- the thing that generates meaning from new events -- would be paralyzed before any new event even arrived.

We were not built to remember everything. We were built to forget. And forgetting is not a flaw in the design.

Forgetting is the design.

When a painful memory fades, it isn't lost -- the learning stays, the shape of it stays -- but the full emotional charge softens. The weight becomes bearable. Space opens up. And that space is where the next experience can arrive and actually be received.

Without forgetting, there is no room for anything new. Without forgetting, the edge of your world

stops moving. Without forgetting, you are imprisoned by your own history.

Forgetting is not the enemy of memory. It is what keeps memory alive -- what keeps it useful, what keeps it from becoming a prison.

7 What Hope Is Made Of

This brings me to the thing I least expected to find at the end of all this thinking about time.

Hope.

Think about what hope actually requires. To hope for something is to believe that the future might be different from the past. That what hasn't happened yet is genuinely open -- not pre-determined by everything that came before.

But if you remembered everything -- every previous hope that didn't pan out, every time you believed something would be different and it wasn't, all of it at full original intensity -- hope would have nowhere to stand. The accumulated evidence would be too heavy. The future would feel closed before it arrived.

The gap that hope needs -- the openness, the genuine possibility that things can be different -- is partly made by forgetting.

Not by pretending the past didn't happen. Not by naivety. But by the natural softening of emotional charge that allows yesterday's disappointment to become information rather than verdict.

Forgetting is not weakness. It is the structural precondition of forward motion.

We are built -- wisely, mercifully -- to forget enough of the past that we remain willing to try.

8 The Whole Picture

Let me put it all together, simply.

The universe is ordered, lawful, and completely indifferent to whether anyone can understand it. It doesn't play dice. It doesn't flow through time. It just is -- entirely, simultaneously, without beginning or end.

Into this universe, observers arrive. Finite beings with memory. And the moment memory exists, something new appears: before and after. Sequence. Time. Not because the universe changed. Because memory makes comparison possible, and comparison makes time.

What we experience as randomness is not chaos in the universe. It is the gap between the universe's order and our current capacity to see it. As we learn, the gap shrinks. The dice disappear, one pattern at a time.

What we experience as reality is not a fixed, pre-formed world delivered to a passive receiver. It

is the universe filtered through memory -- colored by everything we've felt, shaped by everything we've survived. Two observers, same universe, genuinely different realities.

And what makes all of this livable -- what keeps the observer capable of encountering the next moment with something resembling openness -- is forgetting. The slow, merciful release of what would otherwise accumulate into an unbearable weight.

Surprise is where the world expands. Memory is where it lives. Forgetting is what keeps it moving.

The universe is not indifferent. The observer is, in moments of genuine surprise, simply not yet large enough to receive it. And they are built -- wisely, mercifully -- to forget enough of the past that they remain willing to try.

This is what I saw.

I followed it where it led.

-- S.B., 2026