

Spend a Little Time Contemplating Time

Time. Got the time? (Look at your watch.) Do you have some time? (Please take a little from your precious store of time to read this column.) What is Time, when did it start, when will it end? In fact, did it ever start? Will it ever end? Scientists, philosophers, poets, nearly everyone — religious or not — has thought about time, what it means, and how to define or even describe it. Just consider some of the many ways we talk about Time:

until the end of time (it moves and has a finite span); since time immemorial (as far as we know it's been there forever); time on my hands or the Rolling Stones' Time is on my side (relative to us, Time is stationary); time marches on, time and tide wait for no man (it moves whether we like it or not); time flies, catch up with time, race against time (in fact Time outruns us); spend, waste, manage, budget time (we think Time is really something tangible, like drygoods).

The Aymara Indians of Bolivia and Peru think of Time as a something in space: The past is indicated by pointing forward, something we can see; the future by waving the hand over the shoulder, what we can't see. In Chinese, however, the past is thought of as “up,” the future as “down” — related, perhaps, to China's great rivers flowing from upstream to downstream, a flow going by us from the past to the future. But on the other hand, we say the New Year is “coming” and the old year has “gone by,” which means the flow of Time is from the future going down to the past. Both river images suggest we're standing still on shore while Time moves. But what if we're the ones moving (say on a train) and it's Time that stands still: We approach the station called

“The Best is Yet to Come” (future), and we leave the station called “The Worst is Behind Us” (the past). As Henry Dobson wrote, “Time goes, you say? Ah no! Alas, Time stays, we go.”

Einstein gave us much to consider about Time. In his formula, Time isn't a smoothly flowing one-speed stream seen by all. How fast our Time goes depends on how fast you and I move relative to each other, or how gravity affects us. Einstein showed that the faster I move relative to you, the slower my watch will seem to you. The more that gravity pulls on you than on me, the faster my watch will seem to you. Speed and gravity “dilate” Time, slow it down.

Of course, from my point of view, it's your watch that's off kilter, running fast or slow. It's weird. I still get a headache when I try to understand Einstein's Theory of General Relativity. By the way, “theory” in science means a coherent body of ideas that can be tested to be proved or disproved. Einstein's “theory” has passed every test experimenters have been able to throw at it. For instance, an exquisitely accurate atomic clock flying on an airplane “ticks” more slowly than one on the ground; an atomic clock on top of a high building, where the pull of the Earth is ever so slightly less, would tick faster than one on the ground.

What is the smallest unit of Time? Seconds, milliseconds, microseconds, even less? When Emily Dickinson wrote, “Forever — is composed of Nows — 'Tis not a different time” she had the insight to see that Time has a granularity. It may be that the smallest unit of time is the one within the smallest unit of space; perhaps that is where our universe began. Where there is no space, there is no Time.

So, what is this thing called Time? Perhaps, as physicist John Wheeler remarked, “the purpose of Time is to prevent everything from happening all at once.” In his poem using that quote as the title, X.J. Kennedy is glad it is so because we wouldn't want to be born and die all at once, although at the end it seems as if that is still the case: “Time takes its time unraveling, but still/ you'll wonder when your life ends: Huh? What happened?”

All mysteries aside, in our daily lives we finally come to understand what Elizabeth Bishop meant in her poem, “The Fishhouses,” where the sea is a metaphor for Time and its inevitability:

“... It is like what we imagine
knowledge to be:

dark, salt, clear, moving, utterly
free,

drawn from the cold hard mouth

of the world, derived from the
rocky breasts

forever, flowing and drawn, and
since

our knowledge is historical,
flowing, and flown.”

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