

It's About Time: What You Don't Know But Should

You exist in it. You live by it. It measures your life. But what is time. Here's what you should know. Find more of author Bill Allin at <http://billallin.com>

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Humans invented the concept of time. It didn't exist, in the way we know time, before we came along. No other creatures on the planet have the same concept of time as we do. Or, if it did exist, who would know?

Is time real or imaginary? Einstein considered it real, counted it as a component of what he called the fourth dimension, space-time. Space-time figured prominently in projections based on his theory of relativity.

But so did gravity and some physicists (albeit far from a majority) wonder now if gravity is everything Einstein says it is. For example, where is all that Dark Matter that supposedly comprises far more of the universe than the matter we can detect? For that matter (excuse the pun, I couldn't resist), where is all the "real" matter that should exist but we're having difficulty finding since we became aware of the Big Bang and developed big telescopes? University of Maryland astronomer Stacy McGaugh's study shows that many galaxies have much less matter than should be there to account for their gravitational pull.

If gravity is not what Einstein said it is, then that messes up our concept of time. So does the average U.S. city commuter really lose 38 hours a year to traffic delays or is that just imagined? The answer (you're not going to like this, I didn't) is that most of what we believe about our lives is based on how we perceive it (what we imagine it to be) more than on reality. (Okay, I wouldn't have time to explain that even if I could.)

After nearly a century of using Daylight Saving Time (DST), we still aren't sure why we use it. Benjamin Franklin introduced it as a joke. He said that if we got up an hour earlier each morning we could get an hour's more work done in daylight and save candles in the evening. The U.K. adopted DST in 1917, most of the rest of the world followed. (Personally, I can't see sleeping through daylight in the early morning hours in summer when that's often the best time to work outside. The mosquitoes in our area agree.)

Daylight Saving Time accounts for a drop in electricity use. The U.S. Department of Energy claims power demand drops by 0.5 percent during DST, saving three million barrels of oil in the U.S. alone.

By the way, it's not Daylight Savings Time. It's Saving. Savings is an account you have at the bank. That is, you would if you had any money to keep in it.

One study watched how quickly bank tellers made change, pedestrians walked and mail clerks spoke and concluded that the fastest paced U.S. cities are Boston, Buffalo and New York. (As an aside, I have often wondered if rats are insulted when we refer to the fast paced life of humans in cities as the Rat Race. If so, they had better get over it because half the population of the world lives in cities today, most in big cities.)

The psychologist who did that study found the slowest paced cities were Shreveport, Sacramento and Los Angeles. (Nothing in the report about the pace of life of rats in those cities.)

Back in the old days one second used to be defined as 1/86,400 the length of a day. (We'll pause here while you fetch your calculator if you like.) A second can still be defined that way, but it will be a longer second. The friction of tides as a result of gravity by the sun and moon slow earth's travel, lengthening our day by three milliseconds each century. (Feel free to think of it as "mutual attraction" not gravity if my previous statements made you uncomfortable with that word.)

Let's put that into perspective. In the time of the dinosaurs the day was only 23 of our hours long. (You don't suppose they had a dinosaur version of Rodent Race that caused the dinos to die off.)

Speaking of things that slow earth's rotation, even the weather can do it. El Niño winds can cause earth's rotation to slow by a fraction of a millisecond over just 24 hours.

