Time and Meaningful Time

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Abstract

Human time is existential and relative. Each of us dwells within our historical time bubble. There is also a physical time that just exists until defined socially as meaningful. Spacetime, with its myriad geometric point "observers" is easy to grasp, but more wrong than right. Below our everyday world are physics dimensions logarithmically far inside where we could measure with photon instruments. The primary quasi-quantum dimensions have very high frequency electromagnetic time physics.

Consider when somebody simply asks you, "What time is it?" Glancing at your quartz timepiece gives the data you need for a quick and satisfying reply. Decades and centuries are all part of your possible answer, but the questioner might think you odd or obsessive. Briefly, people want a concise reply, and on they go with their everyday lives inside a personal time bubble with all its hidden multidimensional surprises. Without time and motion, life itself could not exist – but we do exist and persist, choosing to consciously minimize the most important dimension of life itself. So, what is meaningful time?

The physics "time" we encounter has as many as five social dimensions: point, cyclical, linear, dialectical, and timeless. Beyond existential there are other aspects of time.

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POINT TIME

Even though mathematical points have no physical dimensions, social "points" have existential dimensions. Such points vary among individuals and individual times. Books have been written on just this one aspect of time. There is much more, including General Relativity's spacetime points of reference.

CYCLICAL TIME

Cyclical time embraces Earth's seasons, and the diurnal play between light and night. Even new variations within weather are felt as mere aspects of seasons, with little consideration for the anthropocene business we humans are undertaking to radically disturb long-term vectors in the cyclical global seasons.

Within cyclical time planets followed what were cycles as they go around the flat Earth. We know otherwise, thanks to Galileo who was almost burned at the stake for simply saying the truth. Copernicus had already shown with his heliocentric model how our Earth cycles around the Sun, but he died shortly before his truthful heresy was published. That's one less staked bone-fire, most likely.

Even Copernicus and Galileo could not yet know how our home sun is just one of several hundred billion stars within our home galaxy – itself inside our home universe with hundreds of billions of entire galaxies. Any ideas or models of a 4D multiverse would have been amazing mysticism to Copernicus and Galileo in the 16th and 17th centuries. Interestingly, it wasn't until the 1920s when common "spiral nebulae" were telescopically proven to be other galaxies somewhat like our own.

Traditional cultures in the pre-industrial world have lived within cyclical traditions that always involved the personal supernatural. When data driven science is not sufficiently developed, seemingly supernatural questions are framed within mysticism. This ancient

tradition was embraced as the enduring dialogue between eternal gods and favored human societies. This relationship featured transmigration of individual human souls, with rebirth in different life forms, but generally not full death.

Where astrology sees the cyclically supernatural, experimental astrophysics sees the natural. Still, modern astronomers and philosophers will never be able to logically eliminate all possible aspects of the mystical magical. Any coherent supernatural postulate cannot be sufficiently quantified, and thus verified or refuted. The gap between repeatable experiments and the fanciful limits of logic is wide enough to allow many types of religious hypotheses.

LINEAR TIME

Cyclical time is contained and self-reflexive. Cycles are like repeatedly sailing a boat in one direction around the shore boundaries of a large lake. Linear time can also set sail in one direction, but usually along varying linear vectors, sometimes toward unknown shores. The vast linear world of possibilities goes beyond cyclical shores, while still respecting them.

Academic historical narratives focus on documented linear life, not undocumented natural cycles of life. After we are all born as naked natural creatures, our lives within cyclical families and cultural society develop unique linear dimensions. Natural humans accumulate a social life path that seemingly has less to do with nature, and more to do with status and "progress" in the industrial anthropocene world. We see ourselves directed by God to subdue the earth, not to simply live in harmony with it, as in Genesis 1:26-28.

Many people like to picture their own birth tribe at the center of everything, with anthropophilic personal gods overseeing them all. Such is the fatal origin of human hubris, and the grease for our collective downward slide.

TIMES WITHIN TIME

Times within time is an existential, perceptual phenomenon. We generally think of time as involving an "observer" and an observed velocity event, measured by photons. Each physical object or phenomenon observed has its own central point of reference. In other words, an object is not in motion to itself, as it is also its own point of reference. Other points (physical or existential) are defined as distal from the observed centrality.

Let us upgrade the merely existential to consciously existential, and to where the mental capacity to envision past and future exists culturally. This is where the three perceptual dimensions of past, present, and future dwell. Again, there is only the present within any one point of self-reference. The non-infinite nature of photonic time allows for the opportunity to review past events.

Astronomy and archaeology are two branches of science that explore the past through our present eyes, comprising our active points of reference. Both allow us to examine past phenomena from within our existential time. It has been said, for example, that astronomy is a telescopic time machine into the visual past.

The field of astrobiology, or exobiology, is most inviting for time lovers. We are still in the speculative era, but will rapidly be dealing with hard data from returning Martian samples, and from new instruments on Earth and in orbit. The low bar is for finding primitive life itself, preferably from a source (not Mars) that is unlikely to have shared meteorites with Earth. [I own a small fragment of a Martian basalt meteorite.]

Our real exobiology goal is to identify and peacefully interface in a mutually beneficial way with similarly sentient alien visitors. Recent military sightings of alien craft in our atmosphere suggest that conscious life on Earth could be most different within a few decades.

What about time machines and wormholes to the past or future? Here is where future vision yields envisioning. Science fiction and science fantasy have scenarios about future worlds that we humans might inhabit. Strictly speaking, futuristic media images look like photonic time, but are only fancy projections.

We humans are apparently unique on Earth to the degree that we express extreme cross-temporal envisioning. Other educable species, such as great apes and some birds, also express aspects of this emergent power to enhance their survival.

DIALECTICAL TIME

Dialectics essentially describes how a change in quantity yields a change in quality. There are millions of obscure but successful Earth species that have hardly changed over millions of years. There are also several million more species that have perished when their nutrient environments changed faster than their ability to adapt. Humans are potential members of that second group, as our rapidly deteriorating environment is uniquely twisted by our unforeseen activities. Unique among species, our potent hyperkeystone activities will also condemn to dust vast numbers of innocent, precious species.

With full irony we note how nimble virus species such as HIV change all the time; and Covid RNA viruses morph too frequently to be easily vanquished by our nutrient-rich ape bodies. Early human primate cultures have been socially advantaged by being slow to mutate. Onrushing anthropocene society increasingly demands the very adaptive plasticity, from genetic to cultural, that we collectively lack to become wise. Future AI species without protoplasm will be immune to classical viruses, but not to computer viruses and virtual manipulations. In the cosmic battle for survival of the fittest, there is always a pick for any lock.

One window into why the survival of *Homo* "*sapiens*" is now questionable has to do with people confusing "freedom to" and

"freedom from." It is a fundamental error to selfishly assume that freedom from vaccines has few consequences. Demanding freedom from vaccines in 2021 selfishly ignores billions of highly infectious Delta variant viruses blowing out of infected nostrils of "free" unvaccinated individuals who care little for the "freedom from" freedoms of others who fear the consequential virus itself.

Willful cognitive dissonance represents compartmental thinking for self-magnification, at the expense of shared social bonds that ensure functional and healthy societies. No person is an island. The end of our selfish species is much closer than the beginning.

TIMELESS EXISTENTIAL TIME

The very idea of "timeless time" seems like a paradox, but it really is the foundation that underlies all other types of time. That is because we tend to confuse the measuring stick with what we measure. It is good to employ the photon measuring stick, but what if we need more tools to fully grasp time?

Recall the puzzle about the tree that falls in a deep forest, but nobody hears it fall. The question is raised as to whether it fell or not. This question is absurd, because trees have been around for hundreds of millions of years, and they are their own existential point reality. They also have their own realms of consciousness. Our solipsistic vanities are irrelevant to ancient life in forests.

Timeless existential time is more than individual relative times, where each "point" relationship is existentially meaningful. Real time embraces the sum of all "meanings" within all places and physical dimensions – and therefore is virtually timeless in the total context, as all different meanings are blended equal to the others, and offset each other for primacy.

"Divine time" under the umbrella of a timeless divinity is not timeless, but existentially relevant. Even a divinity relates to itself/himself/herself, and so divine experiences are not purely

timeless. Only if there is no conscious divine self (no separate divinity or divinities) above all worldly dimensions, can there be no umbrella time dimensions. Our derivative temporal existence adds human meaning to the nature of divine infinity, with or without an identifiable divinity.

Standard philosophical physics enjoys the deliciously evil Second Law of Thermodynamics, where all energy available for work eventually fragments into the same amount of total energy, but nothing is left for work. Entropic chaos thus reigns trillions of Earth years hence, beyond both existential and physical time.

This chaotic end state would indicate that there will be an end to time in all forms as we know it. However, the whole entropy paradigm has more holes than the proverbial slice of Swiss cheese, not the least of which is explaining how all negentropic order originated, other than the infinitely regressive "god" vector. The negentropic nature of omnipresent, multiversal yin/yang particles and their perpetual emergents challenges this "law."

TIMELESS PHYSICS TIME

Both humans and atoms exist in local and cosmic time. It does not require consciousness of time to create the 4th vector physics time dimension. Time itself has an incredibly ancient pedigree that does not require timepiece measurement to verify or correlate. Still, we humans, and especially scientists, desire a measuring stick to understand it. That simple measuring stick has been the visible photonic speed of light in a vacuum, or "c."

Even quantum ideas of supersymmetry within all dimensions do not claim that photonic time moves faster than the vacuum speed of light. It is entangled "information" that is said to move much faster. On the other hand, string theorists would say that the multiple dimensions of space are curved within themselves, and too small to measurably perceive. Therefore, string theory suggests how "information" can travel to and among all the many

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dimensional universes virtually instantaneously, thus avoiding the photonic light-speed physical limit. Weird as this slippery idea is, it keeps academic string theories and quantum theories frothy.

There was a recent "quantum experiment" involving quasar light and two juxtaposed giant light buckets. The experimenters claimed to have detected quantum communication between Earth and objects several billion light years away. I analyzed their flawed methodology, and discovered that the claimed quantum effects were not observed, destroying their sketchy quasiexperimental evidence. I also described what was really going on. If you are at all curious, see the analytical essay here.

The awesome Large Hadron Collider has not detected quantum supersymmetry, in addition to other null-results sources. What does all this experimental activity mean for claimed quantum information over large 4D distances? What does it also mean for weird correlates, such as multidimensional giant worm holes?

All photons have an escape velocity from their graviton bases equal to measured vacuum light speed. I have a clear and very elegant physics model for this precise velocity, and have written on this key topic several times. Cloud-castle physics has no elegant explanation for why photonic velocity is always so. Incorrect paradigms don't work, despite apparent correlations irrelevant to the fundamental speed of light and time itself.

Whereas we are quite able to telescopically measure distance units such as light years, we are not able to photonically measure distance units within sub-Planck dimensions. Experimental physicists can't use relatively large photons to resolve discrete phenomena anywhere near the huge dimensional world below the Planck limit of 10^{-35m} . Thus, experimental physics defaults to the lazy Heisenberg uncertainty model.

To get around this blind spot, physicists employ the fuzzy idea of quanta, and then build their models of collections of quanta within larger dimensions that can be observed and described in

classical terms. Yin/yang emergent physics honestly embraces all that, even up to the multiversal dimension, and not as a math workaround.

If something's position is known from one perspective, and velocity from another perspective at the same time, but not both, how can we put a time stamp on it? Paradox opens the door to voodoo science; but also to better deep science.

The real "quantum" realm is the realm of fundamental units: the yin/yang particles, and vibrating/rotating strings and firstlevel structures associated with their combinations. They provide an alpha-level physics dimension for future progress and wisdom.

Let's take a peek into possible future times:

Both culture and science have deep roots in human society. We humans occupy a unique place within our home solar system and galactic neighborhood. Could we say the same for visiting sentient life from beyond?

If there is highly sentient life elsewhere within reach, does that mean one set of values is absolutely superior to others? Hardly. After messing up the religious European invasions of our Western Hemisphere; and carrying out many other homicidal interactions with cultures "inferior" to our own – it is wise to plan for peaceful co-existence between highly sentient species, without our feeling or posing as morally superior.

Hopefully we humans will wisely seize the briefly remaining opportunities to rapidly decelerate our downward industrial and ecological slide. Once successful, we could then greet visiting aliens as advanced ethical equals, and not have them meet our remnants as tasty meat bipeds grasping sticks and rocks. With good fortune we must not allow three dystopian centuries to destroy three million years of ascending evolution.

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