

## The Physics of Time

This essay contains three sub-essays:

1. Science and Bad Sci-fi
2. Antimatter and Time
3. Special Relativity and Time

### **Science and Bad Sci-fi**

Dolby stereo

nuclear magnetic resonance

quantum computing

dark energy / zero-point energy / free energy

faster-than-light communications

warp drive / faster-than-light travel

wormhole technology

time travel

psychic phenomena

The history of Dolby technology is *absolutely fascinating*. Immediately I'm reminded of hexane and DNA – both structures required human inspiration to understand. NMR, nuclear magnetic resonance, has almost unbelievable developmental roots that remind me of Mozart and his incomprehensible genius. And quantum computing, just an idea a few years ago, has literally exploded in application areas which has no end in sight. The relative simplicity and application areas of Dolby compared to quantum computing is like a grain of sand compared to the Milky Way galaxy.

I am going to do my best to explain why the list of six items above is bad science fiction at best. Good sci-fi is possible; bad sci-fi is not:

1. The most powerful energy generation in *any* galaxy is a blue-giant star. Yes, it's true that when binary systems of black-holes / neutron stars collapse, they produce

tremendous energy measured in solar masses. This energy propagates spherically omni-directionally as gravitational waves. But this is merely energy *conversion* – not generation. Fusion is the most powerful natural / cosmic energy generation method available. If “dark energy” or any alternative equivalent “thing” existed, we would have **observable** astronomical evidence of such **NOT** used as conjecture to explain cosmic expansion rate etc etc. In other words, “dark energy” is used as a theoretical *crutch* to explain observed phenomena that we simply do not understand.

2 & 3. Both FTL, faster-than-light, communications and travel violate causality. Causality is a **basic fundamental quality** of our universe. Action-reaction, cause-effect, antecedent-consequent, pre-post, before-after,.. – all of these have in common **TIME**. Time is **NOT** the fourth dimension; space-time is not only a misnomer, it’s an oxymoron. Space is **NOT** elastic **NOR** does time have impedance. Please forgive the seeming arrogance but I suggest that I am the **ONLY** human on the planet that truly understands time.

4 & 5. Same as above.

6. Telepathy implies one of two things:  
a. FTL communications (disproved above)  
b. Our brains are somehow actual physical radio frequency transceivers. Remember that energy, whether audio / gravitational / solar, normally propagates spherically. Only when we deal with lasers or microwave transmission equipment can we beam those energies directionally through space. Imagine a “telepathic conversation” with a person on the other side of the planet. The RF energy required to actually communicate would burn holes through our skulls. Even if we could somehow beam the RF energy directionally, we’d still be burning holes through our skulls. “Hyper-dimensional communications” is another way to say FTL communications which was disproved above.

## Antimatter and Time

Antimatter has been conjectured to travel backwards in time. It's an interesting idea but has nothing to do with reality. In other articles, we've established the plausibility of two concepts: gravistrong and temporal elasticity. Gravistrong is the proposed low-energy non-bosonic unification between gravitation and the nuclear strong-force. Temporal elasticity is the non-bosonic mediator of both. In the process of development of these two concepts, we realize space-time is an oxymoron because they're absolutely disparate with completely distinct attributes: impedance and elasticity for space and time respectively.

One of the "fundamental problems" of cosmology is baryon asymmetry. We do not observe equal amounts of matter and antimatter astronomically:

"The Big Bang should have produced equal amounts of matter and antimatter. Since this does not seem to have been the case, it is likely some physical laws must have acted differently"

[https://en.wikipedia.org/wiki/Baryon\\_asymmetry](https://en.wikipedia.org/wiki/Baryon_asymmetry)

Idio-pedia answers their own question: physical laws must be different for antimatter. Ya think? The simplest way to understand this issue is by analogy: concave vs convex. Concave lenses focus light; convex lenses disperse light. Similarly, positive temporal curvature is associated with matter; negative temporal curvature is associated with antimatter. To get our intuitions to jive with reality, we must understand that positive temporal curvature equates with time slowing down; negative temporal curvature equates with time speeding up. A consequence is that antimatter does not attract inside a nucleus because **antiparticles have a repulsive strong-force**. This explains why we don't observe equal amounts of antimatter astronomically.

QED, sgm, 2018/JUN/11

## Special Relativity and Time

Before we launch into SR and time, we must review General Relativity and time. We will use the term "space-time" very loosely here with the stipulations in essays above.

According to GR, there are three mass-effects on space-time:

1. gravitation
2. gravitational time-dilation
3. Lense-Thirring

1 & 2 can actually be simplified and explained by the concept of temporal elasticity. Gravitation is normally appropriately visualized as 3-dimensional. The "force" acts in 3-dimensions. It has been proven by at least two scientists independently that a temporal gradient in 3D is both necessary and sufficient **ALONE** to explain gravitation in 3D. Gravitational time-dilation becomes a natural consequence of this temporal gradient. 3 appears impossible to explain superficially. It is a "purely geometric effect" of gravitation. But that is because we have spent decades thinking of space-time as an inseparable unit. Once we adjust our intuition to accommodate it is **NOT** – and – how a temporal gradient completely explains gravitation, Lense-Thirring also becomes visualizable within the framework just above; the "twisting" of space-time becomes a directional temporal gradient here.\*

With those notions in mind, we can easily attack Special Relativistic effects:

1. apparent mass increase
2. relativistic time-dilation
3. Lorentz length-contraction

1 in other essays, we have developed the non-bosonic theory of mass with core concepts: discrete "mass" is essentially "a frozen bubble of time" – and so – a relativistic mass equates with "pumping more air/energy" into that bubble. Here, kinetic energy **IS** relativistic energy. So, 2 becomes a natural consequence of 1. If you cannot comprehend this

argument, please actually **READ** and **INTERNALIZE** the paragraph above followed immediately by an asterisk. It took me **DECADES** of independent research to develop this framework; I have to assume it will take **just as long** for a conventionally trained mind **entrenched** in conventional dogma to **truly understand** it.

3 becomes understandable as the Special Relativistic version of Lense-Thirring along line-of-flight.

Many conventional readers will unfairly label this article as "gobbledy gook". But the framework is consistent, independently verified, and jives with reality. As stated above, I believe I may **currently** be the **ONLY** person on the **PLANET** who **correctly** understands time. Only **time** will tell..

sgm, 2018/JUN/12