

The Ultimate Secrets of the Universe

Fundamentals Series

7: Time Travel & Space Travel.

Everything in the universe, including ourselves, is continually 'traveling' through the 4-dimensions of spacetime at the speed of light in a vacuum, c . If we have no spatial velocity we are 'traveling' just through time at c , but if we have some *actual* spatial velocity our velocity through time is slowed so our total spacetime velocity always remains equal to c .

And as explained in part 3 on *Computing a Relativistic Universe*, as we continually 'travel' through the 4 dimensions of spacetime at c , we continually exist in the current present moment common to the entire universe. This *universal present moment is the identical distance everything in the universe has 'traveled' through the 4 dimensions of spacetime* since everything travels at the same identical velocity of light, c .

This is the fundamental fact of the universe and is the result of the universal processor continually recomputing the information state of the universe to create the current universal present moment within which everything, including ourselves, exists. The current universal present moment is the only actual moment of existence of the entire universe. Everything that exists, exists within the current universal present moment as it's continually recomputed.

So when it comes to 'time travel' we have to understand that the only moment that actually exists is the current universal present moment. There simply is NO *actually existing* past or future to travel to. Time travel in that sense is simply impossible. Every moment of the past is gone forever, and every moment of the future has yet to be computed.

So time travel in the usual sense of going to another actual past or future is simply impossible. Sadly, no going back to view dinosaurs, and paradoxes like going back to kill your mom before you were born are also impossible. This also definitively rules out time warps, wormholes and exiting black hole singularities into other times or universes. A logically consistent computational universe like ours can never compute a logical contradiction because it would rip the universe apart and destroy it.

However, we all are time travelers in the sense that we all, like everything in the universe, continually advance through time at our local clock rate, and our local clock rate depends on our actual spatial velocity. So as our actual spatial velocity increases or decreases that slows or speeds up our local clock rate so the vector sum of our velocities through space and time always remains equal to c .

This means if we slow our local clock rate by traveling through space we can travel relatively slower through time as we all remain in the current universal present moment. So if we took a space trip with relativistic spatial velocity we could return to Earth when it had progressed into the far distant future not much older than when we left. But we and the Earth would have always remained in the current present moment of the entire universe, us just traveling through time at a much slower rate than the Earth.

So it is also theoretically possible for a space alien to arrive from the past with videos of ancient times, and it's theoretically possible for us to embark on a relativistic space trip and arrive back on Earth in the far future. These are the only senses in which time travel is possible because they are the only cases in which everyone remains in the same current universal present moment at all times, even as they travel through time at different rates.

This is the only sense in which time travel is possible. We can never escape the current universal present moment because it's all that actually exists but travel through clock time at *different rates* within the universal current present moment is possible depending on an object's actual spatial velocity.

And of course if time travel to the past was possible there should be extensive evidence of it since both the past and hopefully the future are so enormously expansive, but of course there is no credible evidence at all.

The same constraints theoretically allow space travel across the galaxy and even the visible universe within a human lifetime with just a constant acceleration of $1g$, that of the Earth's gravitational attraction. See *Wikipedia: Space travel under constant acceleration* for details.

This concludes the YouTube *Fundamentals Series* on the *Ultimate Secrets of the Universe*. In it we present a revolutionary new model of a computational universe and how it automatically computes an observable universe that is simultaneously quantum and relativistic. Be sure to like, share and subscribe and to view the other videos in the *Cosmology and Existence, Consciousness & Realization* series. Hope you enjoyed and many thanks! Direct questions and comments to EdgarLOwen@icloud.com

YouTube Fundamentals series:

1. Everything is Information
2. The Computational Universe
3. Computing a Relativistic Universe
4. Computing General Relativity
5. Computing a Quantum Universe
6. Unifying Quantum Theory & Relativity
7. Time Travel & Space Travel

See also:

The Complete Theory of
Everything at EdgarLOWen.info