

Inertial Symmetry Axiom Theory¹

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The incompatibility between Galilean Inertia and Einsteinian Special Relativity is discussed. Arguments are made in favor of Galilean assumptions. Assuming Galilean propositions are true, a disproof of Einsteinian Special Relativity Theory is presented.

Prologue

Hello everyone, thank you for your kind and generous readership //-D This is an academic article, but I will keep it as entertaining as possible. Please enjoy-

I. Galilean Proposition

1. Relative Velocity

A proposition is a term in first-order logic, which started in ancient Greek philosophy and later became integrated into mathematics in late 1800s and early 1900s.³ A proposition is a statement that can be either true or false.⁴ In other words, a proposition is a Boolean constant or variable with a binary value of either 0 or 1.

What Mr. Galileo proposed in his magnum opus that a man on a boat in the middle of a calm ocean cannot tell whether his boat is standing still or moving with a constant speed.⁵ Furthermore, according to Mr. Galileo, two boats in the ocean cannot tell who is moving with a constant speed and who is standing still.⁶

¹ This paper is dedicated to the author's family members and friends who also played parental figures to him in being there for him when no one else was, who corrected him when he was wrong, and who taught him life lessons and everlasting wisdoms.

² A lawyer by trade, a mathematician by hobby, a U.S. Army veteran by record, a former computer programmer, a prior PhD candidate in computational biology, a former actor/writer/director/indie-filmmaker/background-music-composer.

³ See https://en.wikipedia.org/wiki/First-order_logic .

⁴ See <https://en.wikipedia.org/wiki/Proposition> .

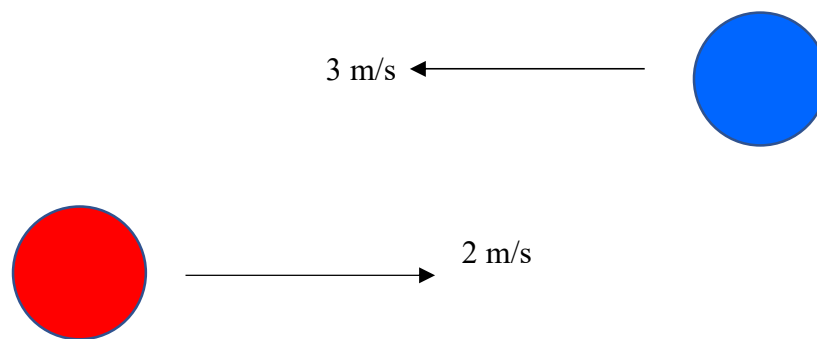
⁵ See https://en.wikipedia.org/wiki/Galilean_invariance and https://en.wikipedia.org/wiki/Galileo%27s_ship .

⁶ See https://en.wikipedia.org/wiki/Relative_velocity .

Let us assume that there are two astronauts in the space, far away from any stars or planets. The two men⁷ have flashlights and are in a big spaceship with lights turned off and window curtains drawn. They are in complete darkness except for their respective flashlights.

In the universe, there is no such a thing as sense of direction. There is no up or down, no east or west, no left or right. In an empty space, there is only void. North or south, like north pole with earth magnetism or the northern star, such sense of direction is nothing but man-made concept to guide travels. They're conventions for convenience' sake.

To preclude the notion of left and right, let us modify our hypothetical. Let's say, out in the space, there are two billiard balls with no markings. One is red, the other is blue:



Now, the blue ball is moving to the left at 3 m/s, and the red one is moving to the right at 2 m/s, according to a static observer.

In the red ball's perspective, it is as if the blue ball is moving west at 5 m/s. In blue ball's eyes, the red ball is moving eastwards at 5 m/s. This is the concept of relative velocity in classical mechanics by Mr. Galileo and Mr. Newton.

Galileo's universe is symmetric. The red ball's observation is that the blue ball is moving at 5 m/s to the left. The blue ball's observation is that the red ball is moving at 5 m/s to the right. And it makes sense.

Let's go to the space again. Out there in an empty space, in a big space ship with the drawn curtains blocking external lights from stars, with internal lights turned off, the two fluorescent balls are floating. There is no sense of directions. The two spherical balls can only

⁷ Please note that the author is a male and that is why he uses male pronouns, because it's easier for him. The author is not a sexist or misogynist //!-) The author will not use expressions like "he or she," "him or her," "his or her," "himself or herself," etc., because such gender neutral expression is too bulky, cumbersome, tedious, inefficient, unnecessary, and unattractive. So in this paper, a male pronoun is used to denote a generic person, like back in the good ole days. The author is a male and that's why it is easier for him to use male pronouns from a male perspective of things. If an author is a female and if she exclusively uses female pronouns, this author would understand and raise no objections. //:-)

see each other and nothing else, as they're in complete darkness. The only thing the red ball can observe is whether the blue ball is moving toward the red ball or away from the red ball with constant speed.

Out in the universe, there is no such a thing as an absolute velocity. It because velocity of an object can only be defined relative to another object. In the empty universe, there is no such a thing as an absolutely static observer. It is because one object, if it is all alone, cannot tell the difference between a constant non-zero velocity and a zero velocity.

2. The Sun and the Earth

When Mr. Galileo said the earth revolves around the sun, his theory was deemed a heresy.⁸ By now, nearly four centuries later, most people agree with Mr. Galileo. But, now, in this paper, let us conduct a Cartesian inquiry.⁹ Was Mr. Galileo right? Was Mr. Galileo more correct than Christians and Catholics of his time who thought that the sun revolves around the earth? Please, let us keep an open mind.

If we posit that there is no such a thing as an absolutely static observer in the universe, if velocity of an object can only be defined in relation to another object, then, the following proposition ensues:

The earth revolving around the sun is equivalent to the sun revolving around the earth.

Does the earth spins itself once a day, or does the rest of the universe rotates around the one planet earth?¹⁰ In this paper, our position is that the two propositions are equivalent. In other words, yes, both Mr. Galileo and Catholics of his time were correct. Or, they're both incorrect in thinking that the two propositions are incompatible.

Let us take an educated guess at some reasons why Catholics in 1600s thought that the sun revolves around the earth. Well, first of all, it is more convenient to think that way, even today. If you look at the sun, with sunglasses on, of course, the sun looks so small. It is about the size of a quarter, a coin. It seems that way, to our eyes. But, scientists like Mr. Galileo knew that the sun is actually a very big star, by far bigger than the planet earth. Perhaps that's why

⁸ See https://en.wikipedia.org/wiki/Dialogue_Concerning_the_Two_Chief_World_Systems .

⁹ See <https://en.wikipedia.org/wiki/Cartesianism> .

¹⁰ Of course, rotation or spin isn't exactly inertial movement because the moving body is changing its direction though its speed may be the same. See <https://en.wikipedia.org/wiki/Rotation> .

Mr. Galileo and other scientists thought that the small earth moves around the big sun, because it's easier to think that way. Well, it's more efficient if a small object moves and a big object stands still. It will cost less energy that way.

Plus, the sun has other planets too. If we think that the sun and other planets and the entire universe rotates around the earth, things become rather chaotic to think about. Scientists want to model the universe in the simplest fashion. Such economic attitude of scientists is known as the principle of Occam's razor.¹¹

But, the issue of efficiency aside, let's find the truth. Let us be more than a scientist or an engineer or an economist. Let us think like a philosopher. Let us be Cartesians for a moment.

We know for sure that the earth is not flat, as satellites have taken pictures of the earth for decades. But, the earth does look flat to us. When you look around, the earth does look flat indeed. The case in point is, the flat earth hypothesis and the round earth thesis, they are not as incompatible as one may think. The earth is flat, locally, and is round, globally. Flat earth model is a very good local model. As scientists and mathematicians, we know the straight line approximation of a curve is the foundation of Newtonian calculus.

Now, let us look above. Stars and suns and galaxies, they do seem to rotate around the earth. And perhaps they do. The thing is, the proposition that the universe revolves around the earth, and the proposition that the earth revolves around the sun, they're equivalent. It is because velocity can only be defined in relative terms between two or more objects. There is no such a thing as an absolutely static object in the universe. It's not like the sun is standing still and everything else moves around it. It's that planets are moving around the sun, relative to the sun. Indeed, astronomers know that the entire solar system is revolving around the center of our galaxy.¹²

3. Mr. Galileo and Eastern Philosophy

Basically, Mr. Galileo is saying that there is no absolute. Adam standing still and Bob coming toward Adam is equivalent to Adam coming toward Bob who is standing still. Adam coming to Bob at 3 m/s and Bob coming to Adam at 7 m/s is no different from Adam coming to Bob at 8 m/s and Bob coming to Adam at 2 m/s. All those scenarios are indistinguishable, as they all end up having 10 m/s of relative velocity. In Galileo's universe, velocity can be defined only in relative terms between two objects. There is no absolute stillness, there is no absolute movement when it comes to constant velocity, i.e., inertial movements.

¹¹ See https://sco.wikipedia.org/wiki/Occam%27s_razor .

¹² See <https://earthsky.org/astronomy-essentials/milky-way-rotation> .

We can expand Galilean ideas and come up with a paradoxical philosophy in the fashion of eastern philosophy.¹³ How about this:

*Every point in the universe is a center of the universe, and
No point in the universe is the center of the universe.*

In this world, there are many people. Every one of us thinks, “I am the center of the universe. Everyone else’s lives revolve around mine.” Such egocentrism is a natural thing. Egocentrism neither bad nor good. It is just the way it is. When we are on earth and look at the sky, the sun and the moon coming up and going down, we do regard them as revolving around the earth. Is that wrong? No. Mr. Galileo said it was wrong to think that way. Perhaps Mr. Galileo’s idea was not relativistic enough. In this paper, we go further than Mr. Galileo in his line of relativism. We posit that the sun revolving around the earth, and the earth revolving around the sun, they’re equivalent and there’s no way to tell the difference.¹⁴

II. Einsteinian Proposition

1. Special Relativity¹⁵

For our purpose,¹⁶ it suffices to know that special relativity theory says that time slows down when a man travels with a non-zero speed, compared to the state when he is standing still.¹⁷ We will disprove this time dilation theory, rather informally. We will use the technique known as proof by counter example.¹⁸

¹³ See <https://studybuddhism.com/en/advanced-studies/lam-rim/vipashyana/commentary-on-the-heart-sutra-dr-berzin/form-is-emptiness-emptiness-is-form> and http://dic.tvbuddha.org/s1/view.htm?vtype=en&search_cate=S&page=6&num=2288&PHPSESSID=1cea9b177689f3ce53fad3e1b3677f20.

¹⁴ Technically speaking, there are differences. When the universe is standing still, and a person holding an accelerometer is spinning himself, his accelerometer will read the rotational acceleration and he will feel dizzy. If the person is standing still and the entire universe is spinning around him, his accelerometer will read zero, but he still will feel dizzy. The earth is spinning around its axis once a day and that’s a very fast speed and such rotation can be measured by Foucault’s pendulum. But, practically speaking, do we really, on everyday basis, feel such rotational acceleration of the earth? Not really, right? So in that sense, the earth spinning is quite, at least empirically, equivalent to the universe spinning around us.

¹⁵ See https://en.wikipedia.org/wiki/Special_relativity.

¹⁶ By the way, the author admits his knowledge in physics is about non-physics major’s undergraduate level //:-)

¹⁷ See https://en.wikipedia.org/wiki/Time_dilation.

¹⁸ See https://en.wikibooks.org/wiki/Mathematical_Proof/Methods_of_Proof/Counterexamples. To disprove a theory is a lot easier than to prove a theory, because all you need to disprove a theory is one counter example that

a. Time Dilation

According to Mr. Einstein, time slows down when a person moves around. Say, Adam is moving fast eastwards, and Bob is standing still. According to Bob's observation, **when Bob's clock shows 100 seconds passing by, Adam's clock is showing only 50 seconds having passed by.** This is the first scenario.

The next scenario is as follows. Adam is standing still and Bob is moving fast westwards, as fast as Adam did in the first scenario. Then, when 100 seconds passed by in Adam's clock, Adam is seeing Bob's clock having passed by 50 seconds. Let's say, Bob is still moving westward, and wait for 50 more seconds and then reads Adam's clock. In Bob's observation, **Bob's clock is showing 100 seconds Adam's clock would show 200 seconds.**

These two scenarios may not convince the readers as a disproof-by-counterexample of Special Relativity Theory. The reason is that the readers may not accept Galilean proposition of relativistic symmetry as an axiom. An axiom is an assumed proposition that is so self-evidently true such that it does not require to be proved. It is simply assumed to be true. Galilean assumption states that Adam moving eastward at 10 m/s and Bob standing still is equivalent to Bob moving at 10 m/s westward when Adam is standing still.

But from Mr. Einstein's point of view, the two scenario must result in difference. The reason is that Mr. Einstein assumes that there is such a thing as an absolute stillness and there is such a thing as an absolute non-zero velocity. In this way, Mr. Einstein's Special Relativity theory has a fundamental absolutivity in it, an absolutivistic assumption.

b. By the Numbers

We have been using English to describe the scenarios and it seems quite confusing. Let us illustrate the same scenarios using numbers and diagrams this time.

In Special Relativity, there is this concept of Lorentz Factor, γ ("Gamma," a Greek letter). We will keep things simple here and not write out the formula.¹⁹ For ease of illustration, we will define λ as the inverse of γ ("Lambda," another Greek letter²⁰):

$$\lambda = 1 / \gamma = (1 - v^2 / c^2)^{0.5}$$

contradicts the theory. It is more likely than not that the disproofs presented here may not gain popular support in contemporary physics community, but such is irrelevant. As scientists, our job is to find the truth, not to persuade it. Persuasion is a politician's job //!-

¹⁹ See https://en.wikipedia.org/wiki/Lorentz_factor .

²⁰ As a side note, the author is a Christian Republican conservative. Accordingly, there is no pro-LGBT activism in this paper.

For our purpose, it suffices us to know that:

$$0 \leq \lambda \leq 1$$

That is, λ is a fraction between 0 and 1.

Now, let us come up with a nice notational convention. Lowercase “t” refers to the time of a moving person. Uppercase “T” refers to the time of a static person. t_A means Adam’s time when Adam’s moving. Likewise, T_B means Bob’s time when Bob is standing still. In the first scenario, Adam is moving to the right with speed v and Bob is standing still.

t_A
Adam -----> v m/s

Bob

T_B

Please forgive the crudity of the diagram by the author //xD Anyways. In this first scenario, according to Mr. Einstein, time dilation happens in Adam’s clock. Bob observes Adam’s clock slowing down like so:

$$t_A = \lambda \times T_B = 0.5 \times T_B$$

Adam’s moving fast eastwards, so time slows down by half. **When Bob’s stop watch reads 100 seconds, Adam’s stopwatch reads 50 seconds.** That’s scenario #1.

Now, the scenario #2 is as follows. Bob’s moving leftward and Adam is standing still, standing tall:

T_A
Adam

v m/s <-----Bob
 t_B

Then it follows:

$$t_B = \lambda \times T_A = 0.5 \times T_A$$

When Adam's stopwatch says 100 seconds, Bob's stopwatch says 50 seconds. So Bob moves along to the left 50 more seconds, to make it 100 seconds in his stopwatch. But by then **when Bob's stopwatch says 100 seconds, Adam's stopwatch says 200 seconds.** In summary, we have:

Scenario #1: $t_A = 50, T_B = 100$

Scenario #2: $T_A = 200, t_B = 100$

This way, Mr. Einstein's universe is asymmetric, unlike Mr. Galileo's universe.

One question to you, our dear readers. Whose universe makes more sense to you. We understand Mr. Einstein's version of things are by far more mainstream and majoritarian in this day and age of the year 2020.²¹ But besides whose world view is more popular and hip, let us be Cartesians²² and be independent thinkers. Does it really make sense to you to make such a distinction? Like, who is Bob and who is Adam, who is moving left and who is moving right?

Assume that Adam and Bob are out in the universe where there is nobody but Adam and Bob as two astronauts inside a space ship with windows all curtained and lights turned off. Adam has a digital stopwatch in red light, and Bob has the same kind of stopwatch in blue light. Say, Adam is conservative and he's moving to the right, Bob is a liberalist and he's moving to the left. Then even if they're moving in constant velocities, there're qualitative differences in their political directionalities.

²¹ As of writing this part of the article, it's 9/14/2020, 8:10 pm, Alaska Time, about two months before 2020 general election.

²² Not to be confused with Kardashians. The author has no idea what that TV show is about //xD

But, they're in space without gravitation and they can see no stars as curtains are drawn and they can't see anything as lights are off. They can only see each other's clock. Out there in the dark space ship, there is no sense of direction. What's left and what's right? Of course they're humans with left and right arms so they can tell Adam is on Bob's left and Adam's moving towards Bob's right. But what if they're not humans but two fluorescent spherical billiard balls, like one red Republican ball and one blue Democratic ball? Then, there is no sense of what is up and what is down, what is forward and backward, what is left and what is right.

Out there in an empty space in the universe, there is no north, no south. There is no such a thing as an absolute direction. And according to Mr. Galileo at least, there is no distinction between a constant velocity and stillness. Is this too philosophical? If you compare quotes from Mr. Galileo and Mr. Einstein, you may find Mr. Galileo's quotes more philosophically profound and authentic-sounding than those of Mr. Einstein. Well, at least the author found that way //!-)

III. Galilean and Einsteinian Relativities Compared

1. According to Mr. Galileo

We briefly covered the topic earlier but this time, we will review it again lol. Let us start by establishing a nicely intuitive notational convention. Let's say, both Adam and Bob are boaters on a lake and they're floating with constant velocities relative to the lakeshore. V_A^B denotes velocity of Bob relative to Adam. Say, Oz is standing still on the lakeshore, being a "static" observer relative to the earth. Then the following equation holds true:

$$V_A^B = V_O^B - V_O^A$$

On the lake, there are only Adam and Bob. They can move in 2-dimensional ways relative to each other. But for now, let us focus on 1-dimensional relative movements. Then, we can assign eastward direction as positive, and westward direction as negative. For instance, Oz observes Bob going east at 5 m/s and Adam going west at 3 m/s. Then,

$$V_A^B = V_O^B - V_O^A = 5 - (-3) = 5 + 3 = 8$$

$$V_B^A = V_O^A - V_O^B = (-3) - 5 = -8$$

Let us assume that Adam and Bob got red and blue flashlights respectively and they got compasses. They're sailing on a star-less, moonless night on a lake whose shore has no light posts of any kind. So they can see only each other and they move along one west-east line. What the first of above equations tells us is that in Adam's perspective, Bob is moving east at 8 m/s. The second equation say that in Bob's point of view, Adam is moving west at 8 m/s.

Why does Bob think Adam is moving? Because Bob is egocentric like anyone else. Likewise, Adam thinks not that Adam himself is moving away from Bob, but that Bob is moving away from Adam. It is analogous to our collective egocentrism when we look at the sky: we think that we are standing still in the universe and that it is the sun, the moon, the stars that rises from the eastern horizon and sets over the western horizon.

Why do we think so, even 'feel' that way? It's because it's easier to think that way. It is easier for us that we are at the center of the universe. Ladies and gentlemen, egocentrism is neither wrong nor right. It's just the way we are. It's not just us as a matter of fact. Consider our dear reader's dog or pet cat. Do you think that your dog thinks you are the center of the universe? The author begs to differ. In the dog's point of view, you work him. The dog doesn't work, you do. You work and bring food to the dog. You work for your dog. That's how your dog sees you. In the kind canine's mind, he is the center of the universe and everyone, including you, revolve around him. Egocentrism is a natural phenomenon common to all beings in the universe.

2. According to Mr. Einstein

In the previous section, we assumed the man on the shore, Oz, then we let him exit the scene. Such is not allowed in Mr. Einstein's postulate. Einsteinian Special Relativity assumes the existence of an absolutely static observer. In this sense, Special Relativity isn't exactly about relativity, but is more about absolutivity. According to Mr. Einstein, there is such a thing as an absolutely static object, and thus, there is such a thing as an absolute velocity. The author argues that this is the beginning of the errors in his Special Relativity theory.

Our dear readers, if acquainted with Special Relativity theory, understand why Mr. Einstein had to slow down the clock of a moving observer. It started with the assumption that Michelson-Morley experiment was correctly designed and measured.²³ In a nutshell, the two physicists try to measure the relative velocity of light, a photon, by setting up a moving observer.²⁴

Say, a photon moves east with the speed of light in vacuum, c .²⁵ If an observer moves with one tenth of the speed of c , then the observer would measure the speed of the photon as nine

²³ See https://en.wikipedia.org/wiki/Michelson–Morley_experiment .

²⁴ Please correct the author if he's wrong, as he didn't major in physics, nor very well-read in the area //xD

²⁵ See https://en.wikipedia.org/wiki/Speed_of_light .

tenth of c . But the two scientists failed to measure as such. In their experiment, the speed of a photon relative to a moving observer was still c .

Other scientists or the author would have suspected that the experimental result might have resulted from technical difficulties back in late 1800s. After all, speed of light is a very big number and the speed of light is a very fast one. Perhaps there was experimental design defect or limitation of equipment of the day back then.

But for some reasons, Mr. Einstein took a different route. Mr. Einstein asked himself,

“What if the speed of light in vacuum is a universal constant?”

Then, Mr. Einstein proceeded as follows:

“Let me assume that the speed of light being c is a law of physics that does not depend on the velocity of an observer moving in a constant velocity. Then we’ll see what happens.”

Mr. Einstein assumed the correctness of Michelson-Morley experiment, concluding that the relative speed of light will always be c , no matter how fast an observer is traveling in the same directing as a photon, behind the photon. For some reasons, Mr. Einstein also assumed that an observer cannot travel faster than the photon. One may say c being the maximum speed in the universe is a result of Special Relativity theory, but the author respectfully disagrees. The way that Mr. Einstein derived his formulas and the way he designed his famed thought experiments, smack of an assumption that an observer always trails behind the photon.

3. About Speed of Light

The thing is, the speed of light isn’t that absolute a thing.²⁶ Light is indeed an interesting thing. Let us think about how sound travels. First thing, sound does not travel in vacuum. Sound is a wave phenomenon and it needs a medium to propagate. Sound travels in the air, in water, even in solid like an wooden table. The denser the medium is, the faster sound travels through it.²⁷ That is, sound travels faster in water than in the air. Sound travels even faster in solid medium than in liquid medium.

²⁶ See <https://en.wikipedia.org/wiki/Refraction> .

²⁷ See https://en.wikipedia.org/wiki/Speed_of_sound .

Light is the opposite way. First of all, light can travel in vacuum. That's when it's the fastest. When light travels in water, it slows down a bit. When light travels in transparent solid medium like a clear glass, it slows down even further. The denser a medium is, the slower light travels.

Now, let us conduct a thought experiment.²⁸ Say, there are two photons. Photon 1 travels in a long vacuum tube hanging over a clear, still lake. Photon 2 travels just beneath the surface of the lake, under the water. So photon 1 travels east with the formidable speed c . Photon 2 travels east too, but it's slower than c . Let's call photon 2's speed, v . Then what's the relative velocity of photon 1, according to photon 2? Anyone?

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...

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According to Mr. Einstein, photon 1's velocity relative to photon 2 should still be c because photon 2 will experience time dilation. But, does this seem right to the reader, the author wonders?

The thing is, light is not the only thing that can travel in vacuum. A billiard spaceship can too. Let us conduct yet another thought experiment. Say, out there in space, we construct a tunnel filled with water. A submarine travels in that water with constant speed with constant consumption of fuel to run the propeller, with the speed of 10 m/s. Next to it, a spaceship is traveling in the same direction in vacuum, with a faster speed, 20 m/s. What would be the spaceship's velocity relative to the submarine? Should the submarine's time slow down such that the relative speed of the spaceship be still 20 m/s?

The point is, we are questioning Mr. Einstein's assumption that there is something special, even so absolute, about light. According to Mr. Einstein, the vacuum speed of light is an absolute law of physics. Again, his Special Relativity is more about absolutivity, not relativity.

After all, light is special indeed. In ancient days, some cultures worshiped the sun as deity.²⁹ Even Mr. Jesus of the New Testament in Bible was very fond of light.³⁰ But, we're doing science here, not religion. Is it a desirable attitude for a scientist to give light a special

²⁸ See <https://plato.stanford.edu/entries/thought-experiment/> . Though not the first one who did it, Mr. Einstein contributed to humanity greatly by popularizing the practice of thought experiment and the author fully appreciate such contribution //:-)

²⁹ See <https://en.wikipedia.org/wiki/Ra> .

³⁰ See <https://www.biblegateway.com/passage/?search=matthew%205:14-16&version=NIV> .

treatment? Is it scientific to ‘deify’ light, to elevate light’s speed to the status of an absolute law of physics, so absolute that even the time has to slow down to accommodate it? Is it out of a scientific mindset to subjugate time and space under the dominion of Light the Absolute? Should time slow down and space contract because what, the Light is the King? Well, it doesn’t quite sound like a science anymore, does it folks? //xD

4. Vector Addition of Velocity

Let us recall an airport experience. They have the horizontal escalator so that people can walk on that conveyor-belt-like contraption and get to their gates faster, to catch their flights. When you walk on that “moving walkway”,³¹ you look at others walking in the same direction, who are not using the moving walkway, probably because they’re not in a hurry. And their speed is slower than yours, because they didn’t get the boost in speed of the moving walkway. This is the concept of vector addition of velocity.

For instance, assume that the moving walkway is going at 3 m/s. Both Adam and Bob walks at 2 m/s. Then, Adam walking in the moving walkway is going at 5 m/s, according to Charlie, who is sitting at an airport café, observing Adam and Bob. Charlie also observes Bob walking on ordinary floor of the airport, going in the same direction as Adam, at 2 m/s. Of course, Bob is observing Adam going at 3 m/s ($3 = 5 - 2$).

Now, let us think of two photons. Adam and Bob are amateur experimental physicists and they are on a straight country road at night. Bob is safely on a roadside, standing still, holding a flashlight. Adam is behind bob and he is walking toward Bob and he will keep walking past Bob. Both of their flashlights are off, but there are stars moon in the sky, so they can see their surroundings. Adam’s speed of walking is 2 m/s as before. Both Adam and Bob are pointing their flashlights forward, in the direction of Adam’s walking.

The plan is this. At the moment when Adam passes Bob, they both turn on the flashlight and then turn it right off. Now, the question is as follows: what would be the speed of Adam’s flashlight’s photon? We know Bob’s flashlight’s photon will have speed of c almost, because they’re not in space and photon slows down when there is air. But, let’s say it’s still c for simplicity’s sake. Let’s call Adam’s photon, photon A and Bob’s photon, photon B. The question is, what would be photon A’s speed according to Bob, who is standing still?

Ladies and gentleman, we introduce you a man of household name, the single most famous scientist of all time, a man who needs not an introduction, Mr. Albert Einstein-

³¹ See https://en.wikipedia.org/wiki/Moving_walkway .

E: Mr. Author, thank you for having me. But you don't have a very good understanding of my special relativity.

A: It's a great honor to have you with us, Mr. Einstein. Please, shed some light upon the subject.³²

E: Photon A's speed will not be $c + 2$ m/s. Oh no. We can't do that. No one shall surpass the speed of light. That is not allowed.

A: You mean length contraction, Sir?

E: Yeah, dude. Length contraction. Because Adam is moving with 2 m/s, in silent and static Bob's observation, Adam's photon is traveling slow. So Bob observes that Adam's photon and Bob's photon is moving with the same speed, c . Problem solved. Paradox resolved.

A: Rebellion prevented?

E: ... What are you talking about?!

A: lol, just kidding, Sir. No offense.

E: No. Seriously, I take offense off of what you just said. Are you saying I'm trying to defend my special relativity? Hey man, that's not how science works. Scientists are the priests in the temple of the truth. We're not lawyers, politicians, or activists. We're purely objective minds. Son, you joke too much. It's time to get serious. You need to keep studying my special relativity, rather than questioning it. Silence your questions. Learn.

A: Thank you for the advice, Mr. Einstein.

//xD

5. An Experimental Design

They say, the fastest airplane can travel at 3,530 km per hour.³³ Well, in our experiment, we'll use a cheaper airplane to save American taxpayers' money. Say, we use an airplane that can fly at 1,000 km/h. They also say, a satellite's altitude is about 790 km above the earth.³⁴ The earth's diameter is about 12,756 km.³⁵ Then, let's find a spot where a satellite is positioned diagonally, such that it is 1,000 km away from our one Bob, who is standing still with a laser pointer.

³² Pun very well intended, of course //!-)

³³ See <https://www.livescience.com/34400-fastest-plane-airplane.html> .

³⁴ See <https://earthobservatory.nasa.gov/features/OrbitsCatalog> .

³⁵ See <https://www.universetoday.com/15055/diameter-of-earth/> .

Let's further assume that our one Adam went to a flight school and got a jet pilot license. Adam's jet is equipped with a laser pointer as well. The speed of light is about 10^9 km/h. Adam is flying the jet at 10^3 km/h. Like in the previous experiment, both Adam and Bob shoot out laser beams at the satellite that is 10^3 km away from them, when Adam's jet passes by Bob. It won't be safe for Bob being next to a flying jet, but please rest assured. This is a thought experiment //!-)

So let us do the numbers, using the good ole school Galilean relativity framework:

$$\text{Light Speed} = 10^9 \text{ km/h}$$

$$\text{Jet Speed} = 10^3 \text{ km/h}$$

$$\text{Distance between Satellite and Bob/Adam's Point of Laser Shooting} = 10^3 \text{ km}$$

$$\begin{aligned} \text{Time for Bob's Laser to Reach Satellite} &= \text{Distance} / \text{Light Speed} \\ &= 10^3 \text{ km} / (10^9 \text{ km/h}) \\ &= 10^{-6} \text{ hour} = 3,6 \times 10^{-3} \text{ seconds} \end{aligned}$$

$$\begin{aligned} \text{Time for Adam's Laser to Reach Satellite} &= \text{Distance} / (\text{Jet Speed} + \text{Light Speed}) \\ &= 10^3 / (10^3 + 10^9) \\ &= 1 / (1 + 10^6) \approx 0.999999 \times 10^{-6} \\ &= 3.5999964 \times 10^{-3} \text{ seconds} \end{aligned}$$

$$\begin{aligned} \text{Time Difference between Adam and Bob's Laser Photons} &= \text{Photon B's Time} - \text{Photon A's Time} \\ &= 3,6 \times 10^{-3} \text{ seconds} - 3.5999964 \times 10^{-3} \text{ seconds} \\ &= 0.0000036 * 10^{-3} = 3.6 \times 10^{-9} \text{ seconds} \end{aligned}$$

Of course, Einsteinian Special Relativity will predict that the "Time Difference between Adam and Bob's Laser Photons" will be zero, because Adam's photon will travel right next to Bob's photon, arriving at the satellite sensor at the same time.

The point of this exercise is that the time difference above is so tiny, it falls well under the margin of experimental errors.³⁶ If we think about it, we rounded up numbers quite a bit. The speed of light, for instance, isn't exactly and conveniently 10^9 km/h. It's more like,

³⁶ See <https://explorable.com/statistics-margin-of-error/> .

1.07925285×10^9 km/h.³⁷ And the distance from Bob to Satellite can't possibly be exactly 10^3 km. Even if we pick on object on earth that is 10^3 km away from Bob, the exact distance will be like, $1.0000035470002453 \times 10^3$ km. And of course, the speed of Adam's jet would be more like, $1.0025068300753 \times 10^3$ km/h.

As one can easily see, to experimentally verify whether Mr. Einstein's Special Relativity theory is correct or not, is a matter of existential impossibility, let alone technical difficulty. It simply can't be done. The speed of light is so so fast, the measurable time difference between Galilean time and Einsteinian time will fall under the margin of error. The Michelson-Morley experiment, or any other experimental designs, will encounter the same problem.

The bottom line is, Mr. Einstein's Special Relativity theory is unfalsifiable.³⁸ At least in Mr. Professor Karl Popper's eyes, Mr. Einstein's Special Relativity theory is not a science, but a science fiction.³⁹

IV. Relativity Outside Physics

1. Relativity in Religion

There was this American movie⁴⁰ where an interviewer asks a celebrity a question: "Who do you want to have coffee with in heaven?" Then the celebrity answers, "Einstein and Jesus." We had an imaginary interview with the former. Now, ladies and gentlemen, please welcome the single most famous man in human history- we present you, Mr. Jesus Christ.

J: Son, you better stop writing.

A: ... Greetings, Mr. Jesus. Thank you so much for joining us today. Great honor to have you with us, Sir.

J: What do you think you are doing?

A: ... ahh.. I'm presenting a disproof of Mr. Einstein's Special Relativity theory, Sir. It's been one of my backburner projects, for two decades by now. I think I got it right this time.

³⁷ See <https://www.unitjuggler.com/convert-speed-from-c-to-kmh.html> .

³⁸ See <https://simple.wikipedia.org/wiki/Falsifiability> .

³⁹ See *Albert Einstein and Theory of relativity Full Documentary HD* at <https://www.youtube.com/watch?v=Qzm947lBqnE> .

⁴⁰ The author forgot and couldn't find the title of the movie, though he tried internet keyword searches.

J: What?! Oh, I get it. You're trying to pull off some David vs. Goliath story⁴¹ out of this, huh? You what, you wanna be a Cinderella⁴² or something? Some overnight fame sensation stuff?

A: Well. I mean, if I become famous, that'd be nice //:-)

J: Not gonna happen. Sorry. I am the, Mr. Jesus. I know. You won't make it. So stop trying.

A: Thank you for the comments, Sir.

J: Look, man. David was a Jew. Goliath was a gentile. Einstein was a Jew. You are a gentile. See what I'm saying, accented man?

A: lol, thank you for noticing my Asian accent, Sir //:-)

J: What I'm saying is, I like Einstein.

A: I understand You, Mr. Jesus, and he, Mr. Einstein, share common ancestry, the Israelites.

J: Yeah man. Leave Einstein alone. And study some history.

A: I understand that Mr. Einstein was very much like You. Both You and Mr. Einstein were dubbed as Prince of Peace. After all, people wanted Mr. Einstein to be true. I think that's what exactly happened back then in his time. People manipulated their experimental data to 'prove' that Einsteinian Special and General Relativity theories are correct. Because, to them, Mr. Einstein is an icon, a prophet, an idol, a hero, a symbol and maker of international peace. They 'believed in' Mr. Einstein.

J: Are you saying Einstein was more popular than Me?

A: Of course not, Sir. But back in the days of World War II⁴³, there was Holocaust, nations fighting, antisemitism. Then there came Mr. Einstein. His theories were so intriguing, he got international attention and sensation. Scientists all around the world were coming together in peace to learn and prove Mr. Einstein's Relativity theories. He was a symbol of peace during WWII. When nations were fighting, scientists all around the world were working together on Mr. Einstein's theories. So. Politically, Mr. Einstein's theories can't be wrong. They have to be correct. For World's peace's sake. I think that's why people manipulated experimental and observatory data to make Special and General Relativity theories would be 'confirmed' and 'proven' to be correct. It was all a political gig.

J: So you are a conspiracy theorist.

A: Ha ha ha ha ha. Well, thank you for giving me a nickname, Sir //:-)

⁴¹ See <https://www.learnreligions.com/david-and-goliath-700211> .

⁴² See <https://en.wikipedia.org/wiki/Cinderella> .

⁴³ See https://www.ducksters.com/biography/scientists/albert_einstein/germany-world-war-ii.php .

J: Me likes Einie.⁴⁴ He inspired novelists, sci-fi writers, and filmmakers. And now, here you are, a killjoy. A party spoiler.

A: No Sir, I think the party just got started.

J: You better stop writing all this. I am the Mr. Jesus. You better listen to me. Or else, I will send you to the devil.

A: Mr. Jesus, I am Your number one fan. And I thought I was Your number one guy.⁴⁵

J: No. You are a joker. And you're a smoker too. Are you also a midnight talker?⁴⁶

A: lol

J: Dude, you better read the Bible, ok?

A: Yes Sir. I've read it thrice, back to back, cover to cover, Sir.

J: What did I say about time dilation, two millennia before Einstein, hmm?

A: I think you said, "In heaven, one day is like one thousand years and one thousand years is like one day."⁴⁷

J: Actually it was my disciple Peter who said that.

A: Whoopsie, sorry Sir.

J: So yeah. Time dilation is real. You can count on it. You have to believe in it.

A: With all due respect, Sir, I can't.

J: O ye of little faith.⁴⁸

A: But Mr. Jesus. Science shouldn't be like religion.

J: What's the difference?

A: I understand religion is not only a human nature, but also a human condition. One way or another, people end up having a religion or two. If they're not religious, they subscribe to some secular religions like pro-LGBT-ism, BLM-ism, anti-climate-change-ism, marijuana-ism, tattoo-piercing-ism, sugar-fat-ism, etc.

J: Those are ideologies, politics, not religions.

⁴⁴ See https://en.wikipedia.org/wiki/Back_to_the_Future , where a scientist, whose hair resembles Mr. Einstein's, named his dog, whose hairdo also resembles Mr. Einstein's, Einie.

⁴⁵ See [https://en.wikipedia.org/wiki/Batman_\(1989_film\)](https://en.wikipedia.org/wiki/Batman_(1989_film)) , where a gang boss said to the future Joker, "You are my number one guy."

⁴⁶ See <https://www.azlyrics.com/lyrics/stevemillerband/thejoker.html> .

⁴⁷ See <https://divinecoders.wordpress.com/2011/07/24/a-thousand-years-as-one-day/> , and https://biblehub.com/2_peter/3-8.htm .

⁴⁸ See <https://www.biblehub.com/matthew/8-26.htm> .

A: What's the difference, Sir?

J: Anyhow. Let me teach you something, oh you of little faith.

A: I'm all ears, I'm all Yours //:-)

J: When you are living a life in the fast lane,⁴⁹ time goes so fast. If you're enjoying something, and being busy with that thing that you do, time flies. It's as if, 8 hours feels like 8 seconds. Voila, time dilation right there, son.

A: Oh. Wow.

J: So yeah. Please, stop trying disproving my high mighty Einie already. Stop wasting your time. You won't get it. You're barking at the wrong tree, son.

A: lol

J: No, stop laughing. And stop that oriental, Asiatic giggling and oh, that creepy smiling as well, as hell.

A: Oh. Okie dokie, Mr. Jesus.

J: Seriously, man. You don't know what you're doing. You're killing jobs. You're a destructionist.

A: I thought I was an iconoclast.

J: You thought? What on earth do you know.

A: I thought I knew enough.⁵⁰

J: No no no no no. You ain't know a thang, man. What'd happen to tens of thousands of physicists who dedicated their youths and lives studying the Einsteinian special and general relativities? Do you know how many libraries, buildings, museums, even hospitals were named after Einstein? What, you're gonna rename them? Think about it.

A: I don't think renaming is necessary. After all, Mr. Einstein did contribute to science, bigly. Photo electric effect that he got Nobel Prize for, statistical study of Brownian motion, popularization of tensor calculus and thought experiment, etc. And he did contribute greatly to Zionism, the post-WWII establishment of the nation of Israel. They offered him to be the first president of the new Israel but he declined. Mr. Einstein indeed was a very saintly figure. I like him.

J: Then why this?

A: It is because I am a scientist. No advocacy or sympathy has any room in science. Science is a place of pure objectivity, reason, logic, and rationality.

⁴⁹ See <https://www.azlyrics.com/lyrics/eagles/lifeinthefastlane-1976.html> .

⁵⁰ See https://en.wikipedia.org/wiki/The_Matrix , where Morpheus said the oracle lady would say she knows enough.

J: I sent Einstein onto the planet Earth.

A: I thought you sent me.

J: No. I didn't. The devil did. You are a satanic destructionist.

A: Oh no. To answer your question asked prior, I don't think relativist physicists would lose jobs over this paper. I will submit this paper to journals but most likely they won't publish it. I'll put it online somewhere in the internet so people can read it, but most likely, it won't be read.

J: Good!

A: But even if this paper takes off and become a mainstream thing one day, I don't think relativist physicists would lose jobs. They became professors, they published articles, wrote books about Einsteinian relativities. They had their fun, they made their money, they got their share of money, power, fame, off of Einsteinian relativities. They had their time. What's wrong with me having some fun, if not fame?

J: Cuz you are wrong.

A: ... Sir, I'm not quite sure who you are. You don't quite....talk like....a...Mr. Jesus...

J: Who said I'm Jesus?

A: You are not?

M: No. I'm an Alaskan residential moose.

A: Oh.

M: I stopped by the hood and there's this Asian guy typing in his house and I snooped and eavesdropped.

A: Oh...it was you. The neighborhood moose.

M: Why did you think I'm Jesus?

A: Oh. I guess I was drunk.

M: Then stop drinking! No more drinking and writing.

A: Hey, at least I'm not drinking and driving. I'm at home. I ain't going nowhere.

M: You're an alcoholic.

A: I'd rather call myself a bacchusist. Or a dionysusian.⁵¹ Like you said, I'm Asian. And in Asian tradition, drinking is a virtue, not a vice.

M: Then go back to your country!

⁵¹ See <https://en.wikipedia.org/wiki/Dionysus> .

A: I love it here. Alaska, America. We got freedom of speech up here.

M: You are a metaphysical vandalist. You talk sh** about special relativity and stuff. I couldn't take it anymore. So yeah. I fu#\$**g intervened.

A: More name-calling. Mr. Moose, you got a sailor's mouth.

M: No. I dunno no English. You're imagining things.

A: Like I said, I'm drunk. It's a Saturday morning at home alone, so. No harm done.

M: One question, before I, the Alaskan residential hood moose, let you go.

A: Shoot.

M: Why in the universe are you writing this, so called a scientific paper, in a screenplay format,⁵² Mister?

A: Oh, that. Cuz I have a performer background. Back in the days in LA, CA, I used to be a writer/actor/director/composer/producer/carterer/cinematographer/..

M: Stop stop stop talking!

A: Well, I was just answering your question.

M: You well know, you got no chance of this paper of yours getting published in a prestigious, privileged academic journal article. Do ya?

A: Oh I know.

M: Then why write it?

A: Well, for fun. I like writing. I enjoy this. All this. It's a good hobby. Nothing illegal or immoral.

M: Why not go fishing?

A: I do sometimes. But I can't stand all those mosquitoes. When it comes to fishing, unless you're a commercial fisherman, you don't really care whether you catch a fish or not. You're out there, interacting with nature, you're relaxed. That's how I do with writing. I'm relaxed. It's a hobby. Whether journals accept and publish my articles or not, that's not the point. That's irrelevant. I write for fun. And it keeps me busy. Idle hands are devil's playground, you see. So yeah. This goody goody hobby of mine keeps me out of trouble. Capiche?

M: What is Capishee. A kind of fish? I'd like one as a breakfast //:-)

A: Mr. Moose, I thought you're a vegetarian.

M: Whoops. But why all the blasphemies and shimmies and sacrileges?

⁵² See https://en.wikipedia.org/wiki/Jose_Chung%27s_From_Outer_Space, where a character, one Mr. Crikenson, sent a narration of an unearthly encounter with men in black in screenplay format to a publisher.

A: I'd rather characterize it as a divine comedy.⁵³ We're doing letters and science here. Also, if I consider God as my Heavenly Father and Jesus my friend and teacher, what's wrong with joking with them and about them? We're doing a ministry here too. If I don't speak the language of secular vernacular, how can I reach out to them?

//xD

2. Relativity in Philosophy

The author recall that in an interview, a former Secretary of State Ms. Rice⁵⁴ criticized moral relativism.⁵⁵ All the author has to say on this issue for now is that he believes in moral absolutivity.

V. **Inertial Symmetry**

1. Dimension Analysis

We will make a narrative that resembles scenes in the Book of Genesis in Bible.⁵⁶ But, we will not assume the existence of God, an absolutely static observer, the everlasting and the unchanging deity. Mr. Einstein did assume such observer and that's why he assumed that there is such a thing as an absolutely static observer and an absolutely moving object. Also, Mr. Einstein assumed the absolutivity of speed of light. If you think about it, Einsteinian Special Relativity is more about absolutivity, not relativity. It's about light being the supreme deity, before whom the time and the space kneel down and bend over backwards. Einsteinian Special Relativity has an absolutivistic Judaistic overtone, thought Mr. Einstein did not practice any religion expressly.⁵⁷

In Book of Genesis, the very first thing that God created was light. Judeo-Christianity is very fond of light and so were ancient Egyptians and so was later on, yes, Mr. Einstein. In contrast, Chinese philosophy of Taoism considers water as a virtuous entity.⁵⁸

⁵³ See https://en.wikipedia.org/wiki/Divine_Comey .

⁵⁴ See https://en.wikipedia.org/wiki/Condoleezza_Rice .

⁵⁵ See https://en.wikipedia.org/wiki/Moral_relativism .

⁵⁶ See https://en.wikipedia.org/wiki/Book_of_Genesis .

⁵⁷ See https://en.wikipedia.org/wiki/Albert_Einstein .

⁵⁸ See <https://fractalenlightenment.com/40135/meditation/7-taoist-meditation-techniques-taoist-watercourse-tradition> and <https://sites.google.com/site/ontaoism/8> .

Now, let us do our own things. Let's say, in the beginning of the universe, there was nothing but empty space. What's the dimensionality of an empty space? One may say 4 dimension, 3 for the x-y-z axes and then 1 for the time dimension. Well, the thing is, if there is nothing in space, if it is just an empty space, there is no point of having three x-y-z axes and there's no purpose of having time dimension either. So, we'd rather say that an empty universe has no dimension, or is dimension-less.

Next, let's say, there is Adam, all alone in the universe. Again, in this scientific thought experiment, we do not assume the existence of an absolutely static observer like God, which was where Mr. Einstein erred because he assumed such divine existence. We're doing science here. Though we do talk about religion a lot more than any other science papers, we don't exactly mix science and religion like Mr. Einstein implicitly did.

Ok. Say, there is Adam in the universe. Nothing else exists. Then, what's the dimensionality of Adam's existence in the universe?

a. 0th Dimension

Let's follow along the line of Judeo-Christian way of thinking and assume that the only thing that exists in the universe is a photon. Mathematically, let's say the photon is a dot in space with no size. Just a single dot in an empty space, the universe. Now, the question is, is this photon moving? Let's not hurry in answering this question. Let's think it through. The concept we're exploring here is both a physical and a philosophical one.

...

...

...

One thing to consider is this. The photon is alone in the universe. So it is impossible to say the photon is moving at 3×10^8 m/s, or at any speed, or at 0 m/s. It merely exists. The point is, a photon doesn't have to move. And if there is nothing else in the universe, it makes no difference whether the photon is standing still, or moving at 1 m/s or at c . It is because the concept of speed is inherently relativistic, in the fashion of Galilean or Newtonian mechanics. Of course, in this thought experiment, we're not talking about acceleration or deceleration. We're strictly limiting the scope of discussion to the concept of inertia where objects have constant speed, at zero or non-zero m/s.

Does the notion that a photon can stand still sound too much like a scientific heresy? Well, then please consider the following section //:-)

b. 1st Dimension

Let's say, there are two photons and nothing else in the universe. Photon 1 and photon 2.

A good thing about photons is that they have no mass, so they don't collide each other. If you cross two flashlight beams, they pass each other right through, as photon is an electromagnetic wave, actually.⁵⁹

Now, say the two photons are traveling next to each other in the same direction, 1 meter apart. And there is nothing else in the universe. Then, can photon 1 say that photon 2 is moving? The author wouldn't think so. To the two photons, they probably think that they're both standing still. But there is 1-dimensionality in their existence, as there is a straight line connecting the two, the distance of 1 meter.

Say, photon 1 is moving toward photon 2. Well, let's say there are two people and nobody else in the universe: Adam and Eve. Somehow, they're approaching each other along a straight line. Is Adam moving toward Eve, or is it Eve moving toward Adam? Inertial Symmetry proposition states that there is no difference between the two, because they're equivalent, or symmetric. We posit that such inertial symmetry proposition should be crowned as an axiom,⁶⁰ a foundational, fundamental truth that we can safely assume to be true without proving it to be true, because the proposition is self-evident.

In contrast, Einsteinian Special Relativity proposition is the absolute constant-ness of speed of light that states that the relative speed of light is c , no matter how fast or slow or static an observer's speed is. We argue that there is no rhyme or reason that such proposition should be garnered with the honor of being an axiom.

Anyhow, let's get back to Adam and Eve's story. Again, we assume that there is nothing else, and there is no absolutely static observer like a Judeo-Christian Deity in this scientific thought experiment.

So Adam is a man and he has his pride. Let's hear him:

A: Oh, hello, my beautiful one. I can see that you're moving toward me, finally. I'm glad.

E: Me? No. You're moving toward me. And it's creepy already. Please stop.

A: Oh. Okay.

⁵⁹ See <https://en.wikipedia.org/wiki/Photon> .

⁶⁰ See <https://en.wikipedia.org/wiki/Axiom> .

The point is, we're all ego-centric. Egocentrism is natural. It's neither good nor bad. It just is. It's how we are, how it is. Inertial symmetry doctrine states that Adam moving toward Eve, or Eve moving toward Adam, there is no difference. They're equivalent, they're symmetric. The only thing Adam observes is that the distance between him and her is shortening at the speed of 3 m/s.

Can Adam measure such relative speed? Yes. This paper is about disproof of Einsteinian Special Relativity theory. So we can't assume what we try to prove in the process of proving it. We can't assume that length contraction does not exist.

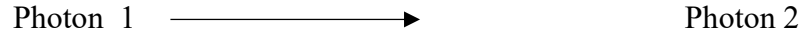
Let's say, Eve is measuring Adam's speed with a ruler and stopwatch. Eve extends a ruler toward Adam and starts her stop watch. Adam is moving toward Eve when she's standing still, according to Eve's egocentric point of view. For the sake of argument, let's assume that Mr. Einstein was right and Adam is going through a length contraction. Even so, the length contraction may happen toward Adam's center of mass, or his front end of the body, or his back end of the body. No matter how length contraction happens, Adam still has the center of mass and it's moving. When that Adam's center of mass passes 20 meter mark on Eve's ruler, she measures the time. When his center of mass passes 10 meter mark on Eve's ruler, she measures the time again. And she calculates the speed of Adam moving toward her. Then Eve tells Adam to stop moving and he does. Now Adam starts moving away from Eve. Then Eve tells Adam to stop moving away and asks him to stand still. Let's hear her:

E: Adam, please don't be too far away or too close. Just be there. Gimme some space. And be there for me when I need ya. Can you do that?

A: Oh. Okay. Of course.

Well, enough breaktime we had //xD Let's bring back our two photons. The point of this exercise is this. When there are two objects moving along one straight line, the only thing they can tell is whether they're both standing still, or the distance between the two is shortening at a certain constant speed, or the distance between the two is widening at a speed. There is no one else in the universe, so there is no way to tell who is moving.

Direction? Yes, there is directionality in one dimension. Say, photon 2 is thinking that photon 1 is moving towards photon 2, and then overlap, i.e., photon 1 is passing through photon 2 and then photon 1 is now moving away from photon 2.



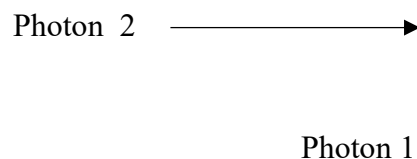
Photon 2 may designate the direction that photon 1 was coming from as “left” or “west.” Then photon 2 randomly refers to the direction that photon 1 is now moving away towards as “right” or “east.” In French, left and right are called *gauche et droite*. In Spanish, *izquierda y derecha*. Out there in the universe where there are only two photons, there is no such a thing as up and down or right and left or front and back. All directions are equivalent, symmetric. At least, that is what we call Inertial Symmetry proposition. It is very much Galilean and Newtonian.

But, Inertial Symmetry proposition is not compatible with Einsteinian proposition, as we have seen in prior sections. Which proposition is correct? We think Inertial Symmetry proposition is. But we respect the people’s liberty, freedom, and rights. It is up to the readers which scientists they want to “believe in”. Is science that much different from religion? Not really. //xD

Now, let’s get back and do some science. Physics and math, mostly. Can we construct 2-dimensionality with two photons? Yes. Let’s go ahead to the next section then //:-)

c. 2nd Dimension

Say, photon1 is standing still and photon 2 is moving and photon 1 is not in the way of photon 2’s straight trajectory:



This situation is analogous to *Girl from Ipanema*’s situation.⁶¹ It’s like, Adam is standing by and Eve is passing him by, either because Adam failed to impress her or because Eve was impressed but she didn’t want to look obvious. No matter what the case is, the configuration above creates 2-dimensional space because photon 1 is outside of 1-dimensional space created by photon 2, that is traveling 1 m/s. If our dear readers find this objectionable, please feel free to imagine the

⁶¹ See https://en.wikipedia.org/wiki/The_Girl_from_Ipanema .

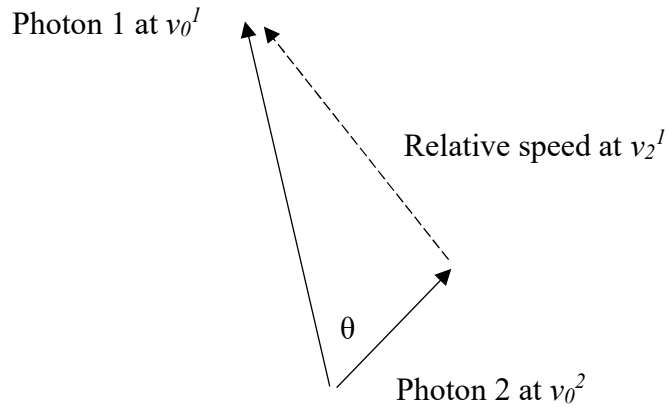
two objects are ball 1 and ball 2 //:-) But out of curiosity, how can a photon travel at 1m/s? Well, imagine car that travels to the left at speed of $c - 1\text{m/s}$. Then the passenger shoots a laser beam photon toward the right. To a static photon 1, photon 2 travels at 1 m/s to the right, according to Mr. Galileo.

Next setting is two photons moving in opposite directions:



Here, let's say both photon 1 and photon 2 are going at c . Then the speed of photon 1 relative to photon 2 is $2c$ and vice versa, if the reader subscribes to Galileanism, like this author does. As one can see and feel, the restoration of good ole Galileanism can be a liberating experience. Once unsubscribed from Einsteinism, sky is the limit. Why? Because there is no such a thing as the maximum speed limit in our thought experiments anymore //:-)

Now, let us make an angle. Assume that photon 1 is traveling at $2c$ and photon 2 is traveling at $0.5c$ and the direction of their travels have an angle, θ .⁶²



⁶² Please forgive the author of the crudity of the diagrams //xD

Then, the velocity of photon 1 relative to photon 2 is:⁶³

$$v_2^1 = v_0^2 - v_0^1$$

What's notable in this setting is as follows. Although photon 1 and photon 2 are moving in a 2-dimensional straight plane, when they see each other, it is as if they're moving on a straight line. Actually, photon 2 does not think he himself is moving at all. All photon 2 can observe is that photon 1 is moving away from him at a constant speed. Likewise, in this universe where there is nothing but two photons, the only thing that photon 1 observes is that photon 2 is moving away from him.

d. 3rd Dimension and beyond

Those of us who were blessed with good teachers, good books, and good studying habits are familiar with the interconnection between this mathematical concept of dimensionality⁶⁴ and that philosophical concept of extension.⁶⁵

Basically, it goes like this. A dot has zero dimension. If you stack dots on top of each other, you have a straight line, 1 dimension. If you stack lines over other lines, you have a straight plane, 2 dimension. Then you stack up burger patty, a slice of onion, and flat buns, in order to make a 3-dimensional hamburger for your lunch.

The fourth dimension is like a motion picture. Let's think about a film roll. It's a three dimensional still picture,⁶⁶ stacked upon one another to give us the four dimensional space. The fourth axis is the time axis. Mr. Einstein popularized the idea, so we do give him due credit for that contribution.

How about the fifth dimension? Anyone, any thoughts?

⁶³ Well, we kinda cheated a little bit here, as we are assuming the existence of the third observer, photon 0. But that is not exactly a cheating, because we are still measuring the speeds of photon 1 and photon 2, relative to photon 0. It is not required that photon 0 is moving or standing still. It's because in Galilean system, there is no difference between standing still and moving with constant velocity.

⁶⁴ See <https://en.wikipedia.org/wiki/Dimension> .

⁶⁵ See <https://philosophy.stackexchange.com/questions/19975/what-is-extension-in-spinoza> and <https://www.lovewisdom.net/philosophical%20topics/Spinoza%20&%20Descartes%20on%20mind%20and%20body.html> .

⁶⁶ A photographic frame of a film roll is two-dimensional square but it does give us three-dimensional image in our minds as we can perceive the depth in the photograph. Or you can think of a still 3-dimensional holographic photo.

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In an *Twilight Zone*⁶⁷ TV series' introduction, Mr. Sterling states that the fifth dimension corresponds to a man's imagination. And the author agrees.

The fourth dimension can be thought as the history of the universe. The three dimensional physical universe where its constituents changing positions along the time axis. That's the fourth dimension, the history of the universe.

The next dimension is just stacking up one history of the universe with other alternative histories of the universe. And one man can do so. Say, he's a sci-fi writer and he wrote many sci-fi's, each of which features one alternative history of the universe. Let's say the one sci-fi writer wrote about 20 volumes of sci-fi novels.

The sixth dimension? Well, all we gotta do is to line up a sci-fi writer's volume series, next to another, next to another writer's volume series'.

The seventh dimension? So the sixth's dimension is nothing but the collection of all men's imaginations. There can be only one of such collection of imaginations of all men and women that ever existed, that is existing, that will ever exist. Then what can the seventh dimension possibly be?

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One way to think about it is this: God's imaginations. What if God imagines different possibilities of human history, humans, and their imaginations? We stack God's imagined collection of people on top of each other, then you got your 7th dimension. //:-D

⁶⁷ See https://en.wikipedia.org/wiki/The_Twilight_Zone .

2. Two Requiescent Analogies⁶⁸

Let us do the letters, as we've done sciences mostly for a while. We'll alternate between letters and sciences so as to give the respective brain department the very much needed brain breaks //xD

In this entertainment opportunity, we'll make some nice analogies between science, and democratic election, courtroom trial, ideological activism, etc. We'll have some theater fun //:-)

a. Trial Analogy

In the court of natural science,⁶⁹ Mr. Einstein has been sued by Mr. Galileo and this Author ("P" hereafter, Plaintiff's attorney representing Galileanism) is playing Mr. Galileo's civil-plaintiff-side attorney. An army of professional physicists ("D" hereafter, Defendant's attorneys representing Einsteinism) has formed the big defense team of "the" Mr. Albert Einstein, representing the scientific- industrial-academic mega complex, a.k.a., "the" establishment. Who is the judge? The People ("J" hereafter, a judge representing the People). Let the trial begin.

J: (the judge hammers his gavel three times) Alright. A civil case 123-ABCDE. Who represents the plaintiff? Step forward.

P: Good morning, Your Honor.

J: Morning to you. What's your credential and relevance in this matter?

D: Yes Sir, I'm an amateur scientist, a secular scholar, a private academic.

J: Oh .. kay. What do you do for living?

D: I'm a lawyer, Sir.

⁶⁸ The author started writing this article on 9/12/2020. As of writing this portion, today is 9/21/2020. This author looked up in the internet to see if he has any predecessors, who also took a shot at disproving Mr. Einstein's Relativity theories. He was pleasantly surprised to find some today. One of them is a gentleman who is by far more professional a scientist and more serious about science, who published an article on the subject back in 2016. See https://www.researchgate.net/publication/297527784_Challenge_to_the_Special_Theory_of_Relativity . The author briefly browsed over the gentleman's article and was thoroughly impressed, though the author obtained all the ideas in this article independently from the paper mentioned. This author has been working on disproof of Einsteinian Special and General Relativity theories for two decades, off and on of course, as one of his backburner projects //:-)

⁶⁹ See <https://www.youtube.com/watch?v=ltg6mfeG11s> , wherefrom a similar line was adopted here.

J: Well, I understand many high-quality mathematicians were lawyers, like Fermat,⁷⁰ Goldbach,⁷¹ etc. But you have to understand. This is not a Court of Law. This is a Court of Science. I think you came to a wrong court room.

P: I know some science to defend my client, Sir.

J: Who is your client?

P: Mr. Galileo Galilei, Sir. Actually, he's not with us today, so I represent Galileanism, a Galilean ideology in physics, perhaps in metaphysics as well, but not in ethics.

J: Oh...kay. How about the defendant side?

D: Yes, Your Honor. We are all defense team and we all are here today to defend our client, Mr. Albert Einstein. But likewise, he's not with us here today, so we represent Einsteinism, an Einsteinian ideology in physics, perhaps in everything in the universe.

J: Alright. So. Plaintiff, what art thy complaint?

P: Oh, no complaint, Your Honor.

J: Then why are you here?

P: Well, I'm a politician wanna-be and I lost in a local election in Alaska about a month ago.⁷²

D: Objection, Your Honor. Politics is irrelevant in Science.

P: Defendant, I understand. But I'm kinda curious what outrageous story Plaintiff's attorney has to say. So I'm gonna allow it.

P: Thank you for the Court's indulgence, Sir. So I still wanna get elected for a public office one day. And I'm writing this physics paper and hopefully the paper gets known one day and I become famous, and then people would vote for me.

D: ... Your Honor, we recommend Plaintiff's attorney get sanctions for being so astonishingly frivolous and disrespectful to the Court of High Science. He is wasting the Science Court's resources for his own political gain. He is self-serving, Sir. So self-serving. He is serving himself!

J: Okay okay. Plaintiff's attorney, enough about your political ambition. Now, why don't you make some scientific argument for your client, if you would. And if you could.

P: Oh, thank you, Your Honor. Hereby, I incorporate by reference, all the arguments made in a paper titled, *Inertial Symmetry Axiom Theory*.

⁷⁰ See https://en.wikipedia.org/wiki/Pierre_de_Fermat .

⁷¹ See https://en.wikipedia.org/wiki/Christian_Goldbach .

⁷² See <https://www.elections.alaska.gov/results/20PRIM/data/sovc/ElectionSummaryReportRPT20.pdf> and https://ballotpedia.org/Alaska_State_Senate_District_D and https://en.wikipedia.org/wiki/2020_Alaska_Senate_election . To see a detailed account of this author's campaign activities, please see https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3701959 .

J: ... What is that? I never got a copy.

D: It's unheard of, Sir. We never got copies either.

P: Oh, it's because the paper isn't finished yet. As of speaking, I've written about 31 pages so far, 12-font, Times New Roman, single-spaced. It took me about 10 days so far.

J: Alright. The trial is continued until the paper gets written out and submitted to some physics journal or uploaded to some public websites so the People and the Einsteinianists can have a chance to read it. Adjourned. (the judge hammers his gavel three times)

Scene.⁷³ //xD

b. Election Analogy

Alright, folks. Let's jump right to it.

M: Oh, you Aging Alaskan American Asian man. You will make a spectacular failure in this venture.

A: Oh, it's you again. The good ole Alaskan residential neighborhood moose. The Hood Moose with sailor's mouth on planet earth. The former impostor of Mr. Jesus. Thank you for stopping by. What can I do for you today?

M: See, you're running against an incumbent. Mr. Albert Einstein is the incumbent and you are his challenger. You got no chance, man. Give it up.

A: Hey, I'm a runner. I love running. I run during every one-hour lunch break of mine, Mon thru Fri. Whether win or lose an election, that's irrelevant. I enjoy the process //:-)

M: What I'm saying is, you will lose. You can count on it. Your paper that you're writing now? It will never get published in a journal. Even if you upload it in the internet somewhere, it will not be read. Dead on arrival, dude. Your paper will be a metaphysical stillborn baby. Your brain child, i.e., your physics paper, will be buried six feet under other more professional physics papers written by professional physicists, the real scientists, all around the world. I'm sorry. But, I'm saying all this so you won't be sorry. So you won't get disappointed when you get rejected by real scientists.

A: Mr. Moose, how would you like me come hackling ya when you munch on tree brigs in my backyard like you do every now and then?

⁷³ See <https://boards.straightdope.com/t/is-it-end-scene-or-and-scene/642851>. The author used to do some acting in Los Angeles, CA, in 2006-2008. An actor goes to an audition, does his monologue routine, and at the end of it, he says, "Scene" in order to signal the end of the monologue performance in front of directors, writers, etc.

M: That's what you do with me, every single time! You bother me. Your yard? Your premises? Your property? Hey man, you people took it away from me. This entire State of Alaska used to be my house!

A: Well. But you're always a welcome guest in my yard. But please don't drop your droppings in my yard no more. Why do I have to clean after you?

M: I don't give a s***

A: But you do give it to my yard.

M: Man, you ain't no fun. Go crawl back to your closet and write it all up, man. Best wishes.

A: Thank you, Mr.

M: One more thing before I go. Albert Einstein wrote papers from pure love of science and he became so famous that the new state of Israel offered him the president job and he declined in order to focus on science.

A: Sure.

M: Now here you are, not liking the science, not knowing the science, and you're writing a physics paper so reluctantly. You said it yourself. You're writing this paper and that paper only because you lost a primary election recently and your campaign stopped, and you got nothing else to do in your spare time other than writing.

A: I guess.

M: What is worse, you're writing this so-called physics paper in order to enhance your chance of winning the next election. What a contrast between Albert Einstein and the Big Nothing you.⁷⁴

A: Ok. Are we done?

M: Yeah.

A: My advice, be nice.

M: I'm out.

Scene. What an obscene scene. //xD

⁷⁴ See [https://en.wikipedia.org/wiki/The_Mask_\(1994_film\)](https://en.wikipedia.org/wiki/The_Mask_(1994_film)), where the one Mr. Ipikiss' landlady nicknames him as the 'big nothing.'

VI. Disproofs of Einsteinian Special Relativity

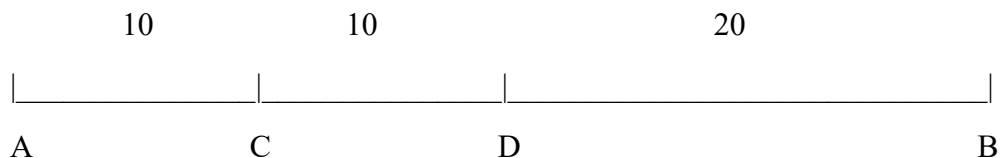
In the martial art of Jujitsu, a person only needs to bend the wrong way of the opponent's one joint, be it neck, wrist, ankle, or elbow. If one joint is grabbed and twisted, the entire body of the opponent is disabled, neutralized, and the opponent taps out. Such is the submission-style martial art, popular nowadays in mixed martial arts community all around the world. In this chapter, and in other parts of this paper, we do the same thing.

As opposed to diving into the nitty-gritty mathematical castle of Einsteinian Special Relativity theory, we attack key assumptions of the theory. Einsteinian Special Relativity theory has a few foundational, fundamental propositions that Mr. Einstein regarded as axioms, i.e., propositions that can be assumed to be true without proving them to be true. We will attack those key assumptions so that the kingdom of Einsteinian Special Relativity theory would collapse like a deck of cards.⁷⁵

But, this is a metaphysical campaign, a bloodless revolution. Not a single soul or body of human being will be injured or harmed in any way. This is a continuing intellectual entertainment. So please, sit back and enjoy the show //-D

1. Disproof of Relativity of Simultaneity

Mr. Einstein thought that light is such absolute an entity. Let us set up a thought experiment as follows.



⁷⁵ But, this campaign against Einsteinian Special Relativity theory is out of love, not hate. We want to correct the errors that Mr. Einstein made. It is a creative destruction, not a metaphysical vandalism. See https://en.wikipedia.org/wiki/Creative_destruction.

What we have here is four guys experimenting with light signals. At the beginning, Adam and Brown used to be where Daniel is at, the middle point of the line. There, Adam and Brown synchronize their clocks. With the same speed, Adam walks to the left, Brown walks to the right. This way, even if there were such a thing as time dilation, Adam's and Brown's clocks are still in synch, because they walked with the same speed and same distance of 10 miles, to reach the respective end points shown in diagram above.

Now, when Adam's and Brown's clocks hit 12:00 PM sharp, they flash their flashlights toward Daniel. Adam's photon and Brown's photon will arrive at Daniel's photo sensor at the same time after a while, as the speed of photon is not infinite, but finite.

Next, Daniel walks out of that middle point. When Adam's and Brown's clocks hit 01:00 PM sharp, they flash their flashlights toward Charlie. Adam's photon and Brown's photon will arrive at Charlie's photo sensor at the different times after a while, as the speed of photon is not infinite, but finite. Since Adam is closer in distance to Charlie than Charlie-Brown distance,⁷⁶ Adam's photon will arrive at Charlie first. Then Brown's photon will arrive at Charlie's photo sensor later.

Mr. Einstein thus concluded that the concept of simultaneity is not absolute, but relative. His assumption is that the speed of light should be the golden standard, a touchstone, when it comes to measuring simultaneity.

It is true that Charlie perceives as if Adam flashed first, and Brown flashed second. On that account, Mr. Einstein was correct. But where he erred is that Mr. Einstein concluded from that, that the perception or the very concept of simultaneity is relative, not absolute. And we argue today that such logical jump from point A to point B in his logical cerebration is an illogical non-sequitur.⁷⁷

Mr. Einstein assumed that the speed of light is the absolute upper limit of speed in the universe. An obvious question is, why? What is the reason to assume so? This one Asiatic Alaskan American does not find any rhyme or reason to stay with Einsteinian Special Relativity theory.⁷⁸

The speed of light is fast indeed. But, can we think of any signaling methodology that can be faster than the photon signaling? Let us think it over, think it through.

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⁷⁶ See https://en.wikipedia.org/wiki/Charlie_Brown for a good ole memory //:-)

⁷⁷ See https://en.wikipedia.org/wiki/Formal_fallacy .

⁷⁸ See <https://www.azlyrics.com/lyrics/tracychapman/givemeonereason.html> for a breake time karaoke session //:-)

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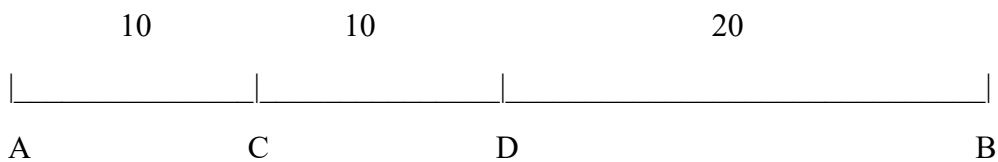
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It turns out that there is.

2. Disproof of Speed of Light as the Universal Maximum Speed

Let's say, in the diagram aforementioned previously, well, let's copy and paste here again for convenience's sake:



So. What's going on here? Between Adam and Charlie, there is a wooden rod of length of 10 miles. Between Brown and Charlie, there is a wooden rod of length of 30 miles. At 01:00 PM sharp, Adam pushes the 10-mile rod toward Charlie and Brown pushes the 30-mile rod toward Charlie, to mark the 1pm alarm bell. The story goes, as Charlie was taking a nap during his lunch break and he let his two friends to alarm him when the lunch break is over so he can get back to work on time.

Charlie is a wise guy and he knows Adam may fall asleep too, so as a backup plan, he also had Brown alert him. Of course, it would take more energy and muscle or higher powered heavy duty truck to push 30-mile wooden rod for Brown to push. But it can be done, as long as the wooden rod is a very thing one. Too much energy consumption? Not environment-soundly enough? Then here.

Let's assume that it's not wooden rods, but 10-mile and 30-mile long threads, two sets of strings, from Adam to Charlie, from Charlie to Brown. All Adam and Brown need to do to wake up the nappy sleepy Charlie is pull the strings attached to Charlie's left and right wrists. When they do so, will Charlie's left hand be pulled earlier than his right hand?

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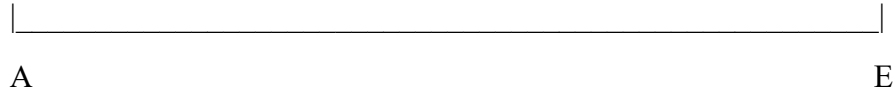
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Bingo. That's it. Ladies and gentlemen, we just found a signaling method that is truly simultaneous, and yes, this signal is faster than speed of light. To make sure, let's do the numbers, like so. No, well. We need to simplify things. Let us open up another section for this.

3. The Final Illustration

So let us draw another ASCII art⁷⁹ diagram:

⁷⁹ See https://en.wikipedia.org/wiki/ASCII_art.



So here he goes again, our good ole homeboy homie Mr. Adam. And his single female acquaintance, Ms. Eve, who wants Adam to be not too far away but still not too close, as she wants some space and she also want him to be there for her when she needs him for whatever reasons, like vacuuming her flat's floor or taking out trash or what not.

Adam and Eve live in the same town, but the opposite sides of that town. The town is a big town with a diameter, 100 miles. Is there such a city in America or anywhere else in the world? No idea. But we're doing a thought experiment thingy, so that's fine.

Adam and Eve can be a galaxy away. But the distance is finite, because they're not moving. Well, relative to each other, the distance between them is not shortening or elongating.

So Adam has this wooden straight rod that stretches from his place to Eve's place of residence. It can be a telephone copper cable or internet fiber optic cable. Or it can be a very thin wooden rod with the thickness of good old fashioned toothpick. Let's say it's thin enough for Adam to push with his arms or with his truck or whatever, to signal 07:00 PM to Eve, so that she can do her hair and dress nice, so that they can meet up in a nice restaurant downtown to have a Friday dinner date. Is the signaling rod too heavy? No problem.

From Eve to Adam, there is this long, 100-mile long thread, a string. All Eve needs to do is to pull the string to signal Adam that it's time, 7pm.

The question is, what is the speed of this rod-pushing, or string-pulling signal methods?

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Now we are ready to do some numbers. Let go get it, kind ladies and gentlemen:

$$\text{Speed} = \text{Distance} / \text{Time} = 100 \text{ miles} / 0 = \infty = \text{Infinity}$$

What just happened? Well, we just found a signaling method that is faster than speed of light. A true and absolute simultaneity. Thank you, everyone //:-D

Epilogue⁸⁰

Hello everyone, thank you for your kind and generous readership //:-D We hope you enjoyed the show. Our next article to write and publish will be titled, “Force Echelon Axiom Theory.” There, we’ll introduce a disproof of Einsteinian General Relativity theory.⁸¹

Thank you for your time and see you later, kind and generous ladies and gentlemen //:-)

⁸⁰ This paper was started being written on 8/25/2020, a week after the author found out he lost the primary election on 8/18/2020. It was finished being written on 9/7/2020, the Labor Day Monday //:-)

⁸¹ See https://en.wikipedia.org/wiki/The_Road_Not_Taken .