An Alternative to Light's Limiting Speed

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Abstract

Another perplexing dilemma in special relativity has recently emerged. Under ordinary conditions, multiple objects/reference frames with different relative motion would cause an unresolvable conflict in their motion-created mass. This article elaborates on the finding, suggesting an explanation for the disparity while providing a realistic resolution.

Keywords: relativity, light's invariance, mass-energy relation, equivalency, gravitation

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Introduction

In his 2026-03-12 viXra submission, "Why Mass Doesn't Increase with Velocity," David Bower recognizes that if a body's mass actually does increase with motion due to light's limiting speed as legislated by special relativity then two (or more) observers in different reference frames with different relative motion would simultaneously record the mass of a third differently. Bower reasons (paraphrasing) that since it's impossible for the third reference frame to have multiple masses at the same time then another explanation for light speed as a limiting speed must be found [1].

The problem is, no alternative explanation other than light's invariance can be rationally formulated for why its speed should be a limiting speed. Its invariance is its limiting speed. They are analytically inseparable.

Given that this conflict in mass is unresolvable and a product of light's invariance then invariance has to be conceptually impossible. But it's relativity's founding premise. So if it's false then relativity and every other theory that's also predicated on it, like the Lorentz transformation, has to be false as well.

Discussion

As the basis for special relativity, Einstein originally adopts light's invariance as a premise while assuming it to be and designating it an immutable law of nature. "In short, let us assume that the simple law of the constancy of the velocity of light *c* (in vacuum) is justifiably believed by [every] child at school [2]." This is the orthodoxy we too have all been taught, ascribe to, and now abide by.

He continues... "From this we conclude that in the theory of relativity the velocity *c* plays the part of a limiting velocity, which can neither be reached nor exceeded by any real body [3]." Light's limiting velocity as an inherent aspect of its inferred invariance is what theoretically, mathematically, forces mass (the amount of material a body contains [4]), along with time dilation and length contraction, to increase with increasing velocity as prescribed by the Lorentz transformation [5][6].

But the truth is, none of this actually works in our real world. Light's invariance is not physically/conceptually possible. It only works theoretically in the one abstract dimension of linear motion and only in one direction at a time. This is an intrinsic aspect of the Lorentz transformation. Its one-dimensional, one-directional limitation is an acknowledged prerequisite of its application.

Einstein explains that the Lorentz transformation is how *c* is maintained, "for the space-time magnitudes of an event when changing over from one body of reference to another [7]." From one body to another is one-directional. One-directional only occurs linearly in one dimension. The Lorentz transformation can't work in three (or theoretically in two) dimensions. (Although, some seem to legitimately argue that it doesn't work at all, even in one direction [8].)

In our real, three-dimensional environment (or theoretically in two), light's necessary contraction in the forward direction, that's required to maintain its constancy for objects/reference frames with (subjectively isolated) motion, would always be in conflict with its normal, noncontracted condition to its sides in the perpendicular direction, or at any angle including with its required expansion to the rear. This is the source of the paradox(s) that Bower cites.

When two reference frames are connected to or sharing a third through the Lorentz transformation, this sets up X & Y axes that define a two-dimensional environment. When three (or more) are selected and sharing a fourth, this establishes X, Y, & Z axes that define a three-dimensional environment.

The increasing mass created by light's constancy in the forward direction of (subjectively decided) motion will always be in conflict with any static mass for the motionless light in the perpendicular direction. It will also always be in conflict with the even higher (2X) mass created in objects to the rear [9][10].

With just a little objective reflection, it quickly becomes apparent that light's speed can never be fixed. Conceptually, it can only compound with the motion(s) of its source [A]. (See **Figure 1: LIGHT'S COMPOUNDED VELOCITY** on the next page. The diagram is adapted from *The Reality of Relativity* [B].)

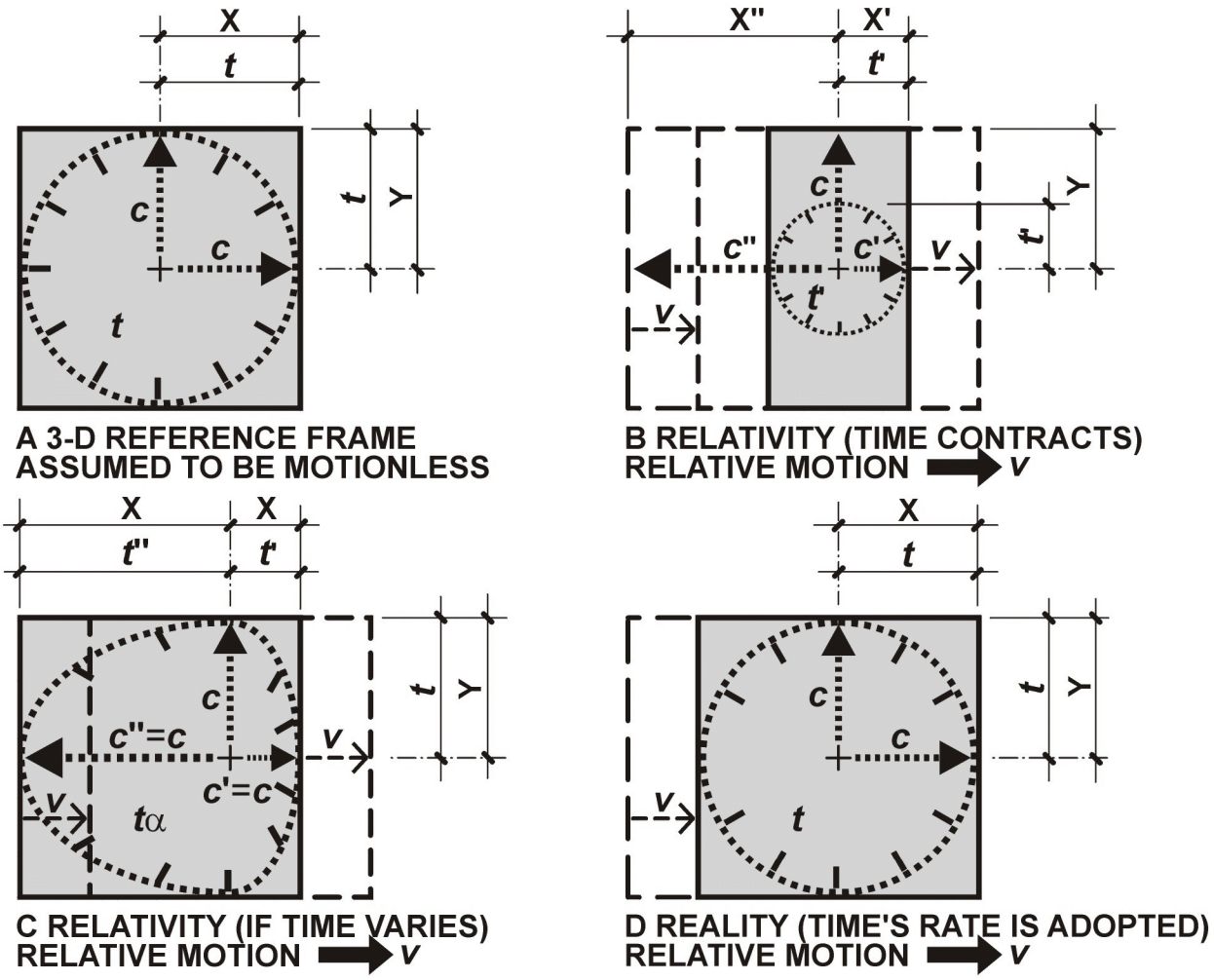

Figure 1: LIGHT'S COMPOUNDED VELOCITY

Diagram **A** represents a three-dimensional, cubical reference frame of any size shown two-dimensionally. It's theoretically assumed to be motionless, which is impossible. All objects have an endless number of relative motions. So this discussion is strictly theoretical from the outset. Light's velocity, ***c***, and time, ***t***, represented by the clock-like circle, and distance **X** & **Y** all remain proportional. **X** & **Y** are equal.

Diagram **B** shows relativity's interpretation for the reference frame when light's speed, ***c***, is assumed invariant. For light to remain fixed in the direction of motion with velocity ***v***, it has to contract by velocity ***v*** to ***c'***, while time and distance are required to contract correspondingly to ***t'*** and **X'**. ***c'*** then reads 186,000m/s for those in the reference frame.

The predicament is, without motion in the perpendicular direction and opposite motion to the rear, ***c*** in the perpendicular along with the distance **Y** don't contract. While ***c*** and **X** to the rear expand to ***c"*** (***c***+***v***) and **X"**. All remain in conflict with one another. And when ***c'*** is 186,000m/s due to ***t'*** & **X'** 's contraction then ***c*** and ***c"*** exceed 186,000m/s by ***v*** and 2***v***.

The only way to resolve the conflict is to have time vary in all directions at once, as portrayed in **C**. ***c'*** and ***c"*** would then both equal ***c*** with the reference frame compressing to ***t'*** & **X'** in the forward direction while expanding to the rear to ***t"*** & **X"**. But it's conceptually impossible for a single reference frame to have multiple or an infinite number of rates of time, one in every direction, that is if time actually existed, which it doesn't.

Like space, "time" is not an inherent property of the universe. We decide its rate by adopting objects with periodic motion to use as a reference. The Earth's rotation and orbit or the pendulum of a clock are common examples. Time's factual nonexistence subverts the whole concept as well.

D depicts reality. Light simply compounds with all relative motion. It cannot not compound. An observer outside the reference frame will always record ***c*** +/- all relative motion(s), ***v***. While observers within it will always record ***c*** as 186,000m/s regardless of any velocity, ***v***.

Light's innate compounding is explicitly demonstrated by all of the Michelson-Morley and Sagnac type experiments. They show that light always leaves its source at the same (varying) rate in all directions at the same time regardless of the observer's reference frame or the experiments' motions: the Earth's rotation, its orbit, our solar system's motion through our galaxy, and our galaxy's motion through the universe. But this compounding is misinterpreted as invariance [11].

In our tangible, nontheoretical reality, light's true relative speed is unrestricted. It can, and factually does, propagate at any speed up to instantaneous in all directions simultaneously. What practical rebuttal exists that can refute this fact?

Without the limiting velocity of light's (presumed) invariance, an object's mass cannot change. It is unable to (theoretically/mathematically) increase with increasing velocity, nor can time dilation and length contraction. Any physical object/person is free to travel at whatever speed they choose without (mathematically) becoming infinitely large at 186,000m/s.

Moreover, when divested of invariance, the rest of relativity is just as untenable. It completely collapses as well. But Einstein himself has already invalidated his own theory, in its entirety.

Beginning in 1907, a couple of years after assuming and adopting light's constancy for special relativity, he began to correctly assert light's variability in gravity fields [12]. It's the reason why the light from distant objects is displaced around massive bodies as he predicted for a star's light around the Sun that was first verified by Author Eddington (English astrophysicist and mathematician, 1882-1944), and others, in the now famous 1919 solar eclipse. But it's conceptually impossible for light's velocity to be both fixed and variable [13].

After recognizing this invalidating contradiction, he rationalized that its invariance is still feasible but only outside of gravity fields, or if they're disregarded altogether [14]. Both of which are also conceptually impossible. There is no outside of a gravity field. And they can't be ignored. They're always present except theoretically in the abstract [C].

Gravity fields, "[where] the velocity of propagation of light varies with position [15]," extend indefinitely. And every physical body, particle or galaxy, has its own self-gravity, even the entire universe (that is if you believe it's finite [D][E]).

So there is no place where light's velocity can ever be fixed. It has to be variable everywhere. Einstein realized that, "as a consequence of this [potential finding, which would have to also include its variability from its factual compounding], the special theory of relativity and with it the whole theory of relativity would be laid in the dust [16]." [F]

Observations

A key aspect of relativity is that all motion is relative. It's intrinsic to its thesis, the "principle(s) of relativity," hence the name. It's also determined subjectively. Which objects/reference frames are in motion and the rate of that motion is an independent choice made subjectively at the whim of each observer [17].

Obviously, we know this isn't true. For instance, we'd never reason, as Einstein seems to do, that the Sun (and the rest of the universe) could just as well revolve around the Earth. Their motion is ultimately always relative, mathematically.

But let's take a moment to imagine the havoc that would be wrought with just gravitation if special relativity's effects were true and actually did exist. If each individual observer really was subjectively deciding an object's motion, they'd not only be making choices that conflicted with each other but those conflicting choices of motion would also be deciding the object's mass (along with its rate of time and length), which would in turn be deciding its gravity.

As an object's infall velocity naturally increased from its normal gravitational coalescing, it'd be acquiring more mass. That additional mass would be increasing gravity's effect, accelerating its coalescing and its infall velocity that would in turn be creating even more mass that'd be creating even more coalescing/acceleration, and so on. The result being an ever-increasing snowball effect perpetuated by relativity's theoretically created, artificial mass. Of course, this is entirely unworkable. But there's more.

Einstein also asserts a "principle of equivalence" that has acceleration/braking and rotation creating real gravity that's equivalent to both each other and natural, mass-created gravity. He arrives at this conclusion despite that acceleration/braking's reaction is one-dimensional, uniform, is dependent on (subjectively decided) motion, and doesn't coalesce. While rotation's centrifugal reaction is two-dimensional, nonuniform, is also dependent on (subjectively decided) motion, and doesn't coalesce either but acts outward, becoming stronger with distance as it disperses objects, the opposite of coalescing. Both of which are mechanical reactions that act instantaneously, not at the speed of light by a force analogous to electromagnetism as Einstein also contradictory contends for gravity [18].

Real, natural, mass-created gravity, on the other hand, does coalesce objects. It acts inward. It's three-dimensional. It's nonuniform. And it becomes weaker with distance. It is not dependent on any motion (subjectively decided or not). It is only dependent on the existence of mass. It also acts mechanically, not at the speed of light.

What all this would mean is that any physical body (subjectively) decided to be accelerating and rotating at the same time would have three conflicting types of gravity: natural, mass-created gravity that acts inward spherically, three-dimensionally; acceleration-created gravity that acts opposite the direction of (subjectively decided) motion, one-dimensionally; and rotation-created, centrifugal gravity that acts outward perpendicular to the axis of (subjectively decided) rotation, two-dimensionally.

As if all this wasn't implausible enough, each of these gravities would also have to be affected by their (subjectively decided) motion's increasing mass. Try sorting all that out [G].

It should be plainly obvious, even to relativity's most ardent supporters, that in our real, physical, nontheoretical world light's (presumed) invariance and its ensuing relativistic effects are completely untenable, which should be the takeaway from Bower's work as well.

Conclusion

With light's factual variability, as Einstein contends, that factually compounds with all relative motion, there are no and can be no relativistic effects. There is no increasing mass with (subjectively decided) motion. Nor is there any time dilation or length contraction. They, and their nullifying inconsistencies, all simply vanish along with the rest of relativity including its general theory, as Einstein reluctantly concedes would have to be the case.

Yet, here we are, as Bower also intimates, more than 120 years later still grappling with these obvious, irrefutable, invalidating contradictions, unable apparently to cope with the consequences of their reality. Why is that?

Declarations

The author declares no conflict of interest. The author also certifies that he did not receive any funding, grants, or any type of support from any individual, institution, or organization in the connection with the study or preparation of this work. The author further certifies that he does not have any financial or competing interests in connection with this work or ties of any kind to any individual or organization that might. The author also affirms that no artificial intelligence was used in any way to create the text or images or any other aspect of this work.

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