Relativity as a Sleight of Hand

The Mystical Shuffle of Equations

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Heads Up to Newton?

I couldn't make anything of Einstein's theories of relativity. Tensors? Lorentz equations? Why and how should they work with the equations as provided? Where did they come from?

By the end of this writing I hope you'll understand as much as I do, that it wasn't me, but the fact that we faced a process similar to sleight of hand in a magic show to make the unscientific stick. Most of it consists of displacing equations like cards in a cheap autumn card trick in downtown New York.

The key ingredient, relativity, is the difference between what is and what we witness. This is the foundation for the proper interpretation of relativity and as such this is how I should explain it. This should debunk a lot of mistaken notions on relativity.

Take Einstein for instance... If there were a shift in the perception of the stars around a solar eclipse perpendicular to the sun as in directed away from its core, I yet have to see it.

In hindsight my experience is quite frankly that if I don't get it after the teacher explained it, either the teacher didn't care to take the time to explain it properly, as in didn't catch my attention, or they didn't understand what they were doing. Most teachers don't know or don't care. I didn't know what to make of the theories of relativity.

What I do know is that when I check Lorentz's work, he made a couple of really basic mistakes. I hoped he just made a mistake and didn't see it. Now I've worked my way through some of it, I can actually point out the means employed to dazzle us, sticking to half truths with him probably not understanding why he got away with it.

Take a step back. Newton was right. Even Einstein said Newton was right for uniform motion. This means that according to Einstein, when something travels at half the speed of light without changing direction or speed, the changes in perception should then be explainable by Newtonian physics and Newtonian physics alone.

Maybe Einstein got in on the popular magical jive of science in order to sell his work, lying about quite a few things, the Lorentz equations suddenly being a part of his popular treatment of relativity for instance. And Lorentz? He based part of his work on Minkowski's new treatment of the spacetime continuum. I think we need to start with Minkowski.

Hypothesis. Instead of time itself, Minkowski added a fourth spatial dimension, the distance that light has traveled, light speed times identity time, multiplied by the imaginary $i = \sqrt{-1}$, because he in that way meant to feign integrating the time lag in perception in the witnessed coordinate system.

It sometimes to me looked like people started out with the best of intentions, but then got lost in the equations, forgetting about the meaning of what it was they did the math for. I was wrong. There were no good intentions.

With pseudo-science you need to make sure they look somewhere else, so you don't look at what it is they are really doing. This, if you aren't aware of their basic tricks and ploys, is highly invasive, disruptive, and dangerous. At first glance it may look like the authors may have been dazzling themselves, but they weren't. They only dazzled you and me.

I stick to the two founding pillars of science: (1) truth and (2) clarity. Either science is clear or you still know nothing at all. Science informs, so you no longer have to rely on someone else to instruct you. It sets you free.

Let's see whether I can bring relativity back to its original meaning. You're smart and should have the proper tools to work with.

Newton was clear on what the foundations of mathematics (geometry) and science were. He also stuck to clarity. What does clarity look like when we describe relativity proper?

1. All laws of relativity are a direct result of Newtonian physics.
2. The theory of relativity describes what we measure due to a time lag caused by the distance between us and the events that we witness in combination with how long it takes for light to reach us after the happening of the events.
3. Space isn't curved, but our perceptions are due to the dynamic time lag by light having to travel from different dynamic distances introduced by various curved motions.
4. The curvature can only be seen over large time spans with for instance stars passing in the sky.
5. Theories of relativity don't prove you can't reach the speed of light, but instead they show you don't get a measurement.
6. A hypothetical observer gaining speed close to, at, and past the speed of light intercepts more and more photons without a discernible origin.
7. Reality is simple, straightforward, and easy to comprehend in terms of its workings, but not its origins.

I have only barely started reading the translation of Newton's Latin text the *Principia*. Disregard the translator comments and interpret it for yourself. Newton's text was redirected to the back of the book. More than half of it, the front matter, deters you to read it through complex ideas of the translators. This to me signifies arrogance on their part, or at least of one of them.

According to the translators, Newton wrote things up as complicated as he does because he felt that only the brightest of minds initiated properly in the world of physics should be allowed to grasp what he said. Translators be translators and Latin is a pretty language. Maybe he just liked Latin? I can't ask him. Their writing was more complex than his.

I used high school physics combined with master level calculus and linear algebra, the mathematical grammar we have now that Newton lacked. University didn't really add to high school, it only displayed how they weren't able to make use of what high school taught.

Like with all pseudo-science, the way the general theory of relativity is written, as we know it from Minkowski, Lorentz, Einstein, and others, there is no understanding it when you read it. You have to do the math yourself. This shows what originated certain equations and how they were misplaced.

I wanted to believe the math may be right and the sales pitch was all wrong. The math turned out to be wrong. I'm guessing that was due to both a lack of understanding and a need for financing to sustain a comfortable lifestyle.

The original articles by Lorentz (Einstein et al., 1923) look like he didn't know what he had computed, getting lost in notions of "ether." He didn't use relativistic Newtonian laws. He supplied his equations without foundation, their origins lost.

They ignored cause and effect, the big "What if?" using the simplest explanation available.

Officially Einstein even said that an "old man" like Galileo Galilei was correct. So what are we doing? What is it that we mean to discuss when we talk about Einstein's relativity?

What he came up with, the general theory of relativity, was supposed to handle non-uniform motion, but by the looks of it, he failed to write it up as efficiently as possible.

I think he meant to write repeating patterns summarized as what he would call "tensors." He wanted to summarize the equations in matrices and vectors to simplify computational principles. It's unclear how his tensors describe anything in physics.

Physicists verify theories through experiments, but when apparatus contradicted or just not confirmed what they tried to measure, they asserted it as true anyway. I don't see Newton do anything like that in his book.

Newton used his own ways of explaining physics through his own system of mathematics, and he explained all of it. We got it. With modern day Calculus it's easily generalized for non-uniform motion.

Clarification typically leads to smooth talkers and con-artists saying, "No!" and "Nonsense!" and in Dutch the even stronger sounding translation, "*Onzin*!" They hi-jack science, philosophy, and sophism, and turn it into something it isn't. So what I propose to do is take it back to the source and illustrate clearly and readably what's really going on.

The way people explained it, I assumed it was impossible for mass to move at the speed of light or faster. That's not actually what the theory implies. It doesn't prove that.

I still feel the same way, because *from what I've heard*, all mass is built up out of bound light, but is this also scientifically correct? I *assume* it is. When you move at light speed, I *assume* that all energy be kinetic, meaning that the light can't exist in a bound form. That however is not up for discussion here. We're discussing mechanics of visible mass, *not quantum mechanics*.

I seek in a sense to reinvent the wheel in order to clarify its workings without being run over by it to find out the wrong way. I merely mean to put it on its axis and see how it rolls. As such, I write nothing new, in mathematical theory. The explanation was also already handed to us by Newton. All we have to do, is see it.

On Adding More Dimensions To Coordinate Systems

Minkowski introduced to us *his* four dimensional space. For reasons of clarity, at first I refrain from using x and instead will use s to reference a spacetime location in a coordinate system as Minkowski would (Einstein et al., 1923).

For every equation that uses Minkowski's spacetime coordinates as a foundation, I'm going to note it with an M. If it's the Newtonian, what I will prove as "proper," then I note it with an N. Newtonian as in proper physics than is what is and Minkian is what we were said to but not actually witness as described by Minkowski's relative spacetime notion.

1.1N $\quad \bar{s} = [s_0, s_1, s_2]$

1.1M $\quad \bar{s} = [s_0, s_1, s_2, s_3]$

Minkowski introduced a fourth spatial dimension s_3 : the imaginary $i = \sqrt{-1}$ multiplied by time and the speed of light. He seemed to relate to that we perceive time, space, and mass change through relative motion. The perception not only changes through *our* relative motion, but also through the delayed perception of light.

For clarity, another way of writing it which allows us to imagine it more easily is to use the common names for axes and time: *x*, *y*, *z*, and *t*. When constants like the speed of light *c* are included, I note them everywhere explicitly.

The reference system a.k.a. observer system α is referred to using an absolute zero reference system, meaning that the absolute zero is an absolute center and doesn't move. The perception of the α's relative absolute center from the absolute zero is only dependent on α. The spacetime coordinate $\bar{s}_\alpha$ refers to this system.

When I analyze everything and for the Minkowski spacetime continuum and Newton's, you shouldn't mix up the two ways of looking at things. They are distinct and the interpretation that you add the distance light has traveled as a fourth coordinate is interesting. It's also one-dimensional, whereas everything else is three dimensional.

Does this relate to the Lorentz equations? We'll soon see. First, more clearly...

1.3N $$\bar{s}_\alpha = \begin{bmatrix} x_\alpha \\ y_\alpha \\ z_\alpha \\ t_\alpha \end{bmatrix}$$

1.3M $$\bar{s}_\alpha = \begin{bmatrix} x_\alpha \\ y_\alpha \\ z_\alpha \\ i \cdot c \cdot t_\alpha \end{bmatrix}$$

The spacetime coordinate $\bar{s}_\beta$ refers to the reference system β in its absolute undistorted state, that will later be put relative to α. The perception by α of β is dependent on the relative motion of that of α. How α perceives β equals β_α with $\bar{s}_{\beta_\alpha}$

which isn't the same as the actual β. This doesn't mean that β has actually changed, it means it takes some time for α to see β, because light needs to cross space in order for it to reach β. When it reaches β is both dependent on α's and β's path.

When α moves toward β the light reflected off of β reaches α faster. The speed of perception is as short as the new closed distance to where β originally reflected light, divided by the speed of light. The perceived lag closing in on events becomes shorter.

When α moves away from β the light has to travel longer, meaning that the witnessed time, not distance, will be as great as the actual new enlarged current distance divided by the speed of light. The time needed to perceive the event will be longer. The time t_β is the time not for α but for the observer at the zero reference point to witness β.

$$1.4\text{N} \quad \bar{s}_\beta = \begin{bmatrix} x_\beta \\ y_\beta \\ z_\beta \\ t_\beta \end{bmatrix}$$

$$1.4\text{M} \quad \bar{s}_\beta = \begin{bmatrix} x_\beta \\ y_\beta \\ z_\beta \\ i \cdot c \cdot t_\beta \end{bmatrix}$$

That's different than when we instead use the time for the light from β to travel to α, which is noted as t_{β_α}.

$$1.5\text{N} \quad \bar{s}_\beta = \begin{bmatrix} x_\beta \\ y_\beta \\ z_\beta \\ t_{\beta_\alpha} \end{bmatrix}$$

$$1.5\text{M} \quad \bar{s}_\beta = \begin{bmatrix} x_\beta \\ y_\beta \\ z_\beta \\ i \cdot c \cdot t_{\beta_\alpha} \end{bmatrix}$$

When you maneuver for instance a distant space craft like a satellite traveling through space, you can't make changes by looking at the satellite and the planet separately. They mean to interact through our actions.

For a satellite to fly past a planet at the right time and place, put yourself in the shoes of the satellite and make adjustments from there. From Earth it looks different. Make sure that when you send adjustments, that you also account for the delay of the adjustments reaching the satellite.

An object has a distance to an absolute zero. For any object γ with as a spatial (*sans* time) coordinate $\bar{s}_\gamma$ the distance can be determined by the first three arguments. These first three arguments are the distance vector and its length is the distance. We use the same notation for actual distance and observed distance.

$$1.6\text{N} \quad \forall\gamma : \exists\bar{s}_\gamma \rightarrow \bar{d}_\gamma = \begin{bmatrix} x_\gamma \\ y_\gamma \\ z_\gamma \end{bmatrix}$$

$$1.6\text{M} \quad \forall\gamma : \exists\bar{s}_\gamma \rightarrow \bar{d}_\gamma = \begin{bmatrix} x_\gamma \\ y_\gamma \\ z_\gamma \\ i \cdot c \cdot t_\gamma \end{bmatrix}$$

$$1.7\text{N} \quad \forall\gamma : \exists\bar{s}_\gamma \rightarrow d_\gamma = \sqrt{x_\gamma^2 + y_\gamma^2 + z_\gamma^2}$$

$$1.7\text{M*} \quad \forall\gamma : \exists\bar{s}_\gamma \rightarrow d_\gamma = \sqrt{x_\gamma^2 + y_\gamma^2 + z_\gamma^2 - c^2t^2}$$ *Possibly inappropriate!*

What it says here is that according to Newton's proper physics the object is at a distance d_γ.

(*) Relativity is the science of perception through *relative motion*, *not static positioning*. When you bluntly apply the Minkowski perception for a static object, it suggests that the further away it is, the closer by it will seem. This might be interpreted as that I, not Lorentz, misappropriated the formula and applied it in the wrong context, which would be ironic.

It doesn't change that you can't add a one dimensional imaginary construct to a three dimensional physical system.

Motion, Acceleration, and the Speed of Light

Physics isn't about what we think we know, but what we witness, yet we don't witness everything directly. What we witness isn't dependent on what we know, but on what we think *combined with* corroboration. Theory, experiment, result, and confirmation or refutation. In case of a refutation, the theory should either be discarded or amended.

Speed has direction and size. Its size when drawn parallels the moving object's path by a directed arrow drawn from the zero of an absolute zero coordinate system. Append it to the location of the object for clarity, otherwise you need two graphs for every motion.

Speed equals how position changes over time. If the point of reference doesn't move, it's at rest and the speed is zero. According to Minkian physics nothing has an absolute zero speed, except for light. Minkian physics dictates light is stationary in terms of absolute speed. That's interesting, because in a sense, the direction of rest then can change? Really?

$$\textbf{2.1N} \quad \forall\gamma : \exists\bar{s}_\gamma \rightarrow \bar{v}_\gamma = \frac{\delta\bar{s}_\gamma}{\delta t_\gamma} = \begin{bmatrix} \frac{\delta x_\gamma}{\delta t_\gamma} \\ \frac{\delta y_\gamma}{\delta t_\gamma} \\ \frac{\delta z_\gamma}{\delta t_\gamma} \end{bmatrix}$$

$$\textbf{2.1M} \quad \forall\gamma : \exists\bar{s}_\gamma \rightarrow \bar{v}_\gamma = \frac{\delta\bar{s}_\gamma}{\delta t_\gamma} = \begin{bmatrix} \frac{\delta x_\gamma}{\delta t_\gamma} \\ \frac{\delta y_\gamma}{\delta t_\gamma} \\ \frac{\delta z_\gamma}{\delta t_\gamma} \\ i \cdot c \end{bmatrix}$$

Note how the fourth coordinate of Minkian speed is an imaginary number.

The rate of change of speed over time is called acceleration. If an object or point of reference is decelerated, the acceleration is negative. If it's at a constant speed, it's zero. In three dimensional space an object can decelerate in one direction and accelerate in another at every moment in time.

$$\textbf{2.2N} \quad \forall\gamma : \exists\bar{s}_\gamma \rightarrow \bar{a}_\gamma = \frac{\delta^2\bar{s}_\gamma}{\delta^2 t_\gamma} = \begin{bmatrix} \frac{\delta^2 x_\gamma}{\delta^2 t_\gamma} \\ \frac{\delta^2 y_\gamma}{\delta^2 t_\gamma} \\ \frac{\delta^2 z_\gamma}{\delta^2 t_\gamma} \end{bmatrix}$$

$$\textbf{2.2M} \quad \forall\gamma : \exists\bar{s}_\gamma \rightarrow \bar{a}_\gamma = \frac{\delta^2\bar{s}_\gamma}{\delta^2 t_\gamma} = \begin{bmatrix} \frac{\delta^2 x_\gamma}{\delta^2 t_\gamma} \\ \frac{\delta^2 y_\gamma}{\delta^2 t_\gamma} \\ \frac{\delta^2 z_\gamma}{\delta^2 t_\gamma} \\ 0 \end{bmatrix}$$

Interesting? Even in Minkian physics when we perceive the object with lag, we still perceive the acceleration at an earlier *imaginary* spacetime coordinate. Acceleration doesn't change for positions, real or imaginary, we witness an object be. This may make you believe in Minkowski, but one half-truth may only make us ignore all of the full-wrongs.

How Minkowski's Spacetime Continuum Fails

Minkowski's spacetime continuum speaks of wild imagination, but it's also completely imaginary in that we can't measure it, which contradicts its scientific validity. That's what I've had to conclude. Allow me to demonstrate.

$$\text{2.3N} \quad v_k = |\bar{v}_k| = \sqrt{\left(\frac{\delta x_\gamma}{\delta t_\gamma}\right)^2 + \left(\frac{\delta y_\gamma}{\delta t_\gamma}\right)^2 + \left(\frac{\delta z_\gamma}{\delta t_\gamma}\right)^2}$$

$$\text{2.3M} \quad v_k = |\bar{v}_k| = \sqrt{\left(\frac{\delta x_\gamma}{\delta t_\gamma}\right)^2 + \left(\frac{\delta y_\gamma}{\delta t_\gamma}\right)^2 + \left(\frac{\delta z_\gamma}{\delta t_\gamma}\right)^2 - c^2}$$

If we were to simplify this, setting the speed along the y and z-axis to zero, for uniform motion the perceived relative speed and the actual speed can be related using a to be determined constant factor λ. We first need to determine the speed v' as perceived according to Minkian relative perception, taking into consideration the actual speed.

Ex. 2.1a $$v' = \sqrt{v^2 - c^2}$$

This **honestly** isn't a real number but imaginary and as such fraud! The light speed is higher than the actual speed, meaning that the square root leads to an imaginary number. But let's carry on with the strange hypothesis, because now you are sure to accuse me of this not being what Lorentz stated! Three equations down, please...

Ex. 2.1b $$v = \lambda \cdot v'$$

What then is λ?

Ex. 2.1c $$v = \lambda \cdot \sqrt{v^2 - c^2}$$

Ex. 2.1d $$\lambda = \frac{v}{\sqrt{v^2 + c^2}} = \sqrt{\frac{v^2}{v^2 - c^2}} = \sqrt{\frac{1}{1 - \frac{v^2}{c^2}}} = \frac{1}{\sqrt{1 - \frac{v^2}{c^2}}}$$

And what is this? This is familiar! What we're looking at is the factor comparison of the actual speed, that you should divide it by to get the Minkowski spacetime continuum speed, or the factor that you should multiply the Minkowski spacetime continuum speed with in order to get the actual speed.

Either way, the result isn't a real number, but an imaginary number making use of the imaginary unit i as in $v = a + b \cdot i$ with both a and b real numbers and $i^2 = -1$.

> **Q.E.D.** Lorentz, Einstein, and others took Minkowski's unusable imaginary factor and took it out of context applying it to a real coordinate without the imaginary numbers instead of a mathematically imaginary coordinate system to dazzle us and make us question actual reality, replacing it with fraught pseudo-science.

Lorentz's Sleight of Hand

Interesting and it's a factor Lorentz said he derived. Some would ask whether Lorentz was right, deriving this factor in another way. To derive this factor that was then applied more broadly, Lorentz was said to follow steps as illustrated in Appendix 1 of Einstein (1961).

What was Lorentz looking at? He looked at two uniformly moving coordinate systems K and K' and one light signal, traveling at the speed of light, from the absolute zero origin. All move only and directly along the x-axis. At $t_0 = 0$ both K and K' are at $x_0 = 0$. The signal being light, it moves with the speed of light, c.

K perceives the signal at $x = c \cdot t$, which means that

(1) $$x - c \cdot t = 0$$

K' perceives the signal at $x' = c \cdot t'$, which means that

(2) $$x' - c \cdot t' = 0$$

You should conclude that

(3-right) $$x - c \cdot t = x' - c \cdot t' = 0$$

Since they are both equal to zero, what Lorentz does next is unimaginable. To thwart actual science, according to Einstein, **Lorentz** bluntly and <u>**erroneously**</u> notes

(3-wrong) $$x' - c \cdot t' = \lambda(x - c \cdot t)$$

and he disregards the zero factor, which doesn't render this untrue, but still:

(4) $0 = \lambda \cdot 0,$

what are we going to do with this?

In reality, since they both witness it relative to their distance to zero and start off at a different speed from zero at the same time, this means that they witness the signal at time $t_0 = 0$, the time of their departure. This is also something we'll see further on up. Otherwise we would've seen equations taking different starting distances into account.

Einstein explains, he then goes on to imagine the light signal travels in the other direction, along the negative x-axis. K and K' also travel in the opposite direction, with their speeds inverted. He makes pretend they've made some kind of distance, which like in the first part of his concoction isn't true.

K now witnesses the signal at $x = -c \cdot t$ which means that

(5) $x - c \cdot t = 0$

K' witnesses the signal at $x' = -c \cdot t'$ which means that

(6) $x' + c \cdot t' = 0$

You should note that this means that

(7-right) $x + c \cdot t = x' + c \cdot t' = 0$

To thwarts actual science, according to Einstein **Lorentz** once again bluntly and **erroneously** notes that

(7-wrong) $x' + c \cdot t' = \mu(x + c \cdot t)$

again completely disregarding that it now reads $0 = \mu \cdot 0$.

He then in two separate calculations adds and subtracts the two directions, equaling the sum of the two left hand sides and to the sum of the two right hand sides. For 3-wrong added to 7-wrong, this leads to

(8a) $2 \cdot x' = \lambda(x - c \cdot t) + \mu(x + c \cdot t)$

which leads to

(8b) $2 \cdot x' = (\lambda + \mu) \cdot x + (\mu - \lambda) \cdot c \cdot t$ or $x' = \dfrac{\lambda + \mu}{2} \cdot x + \dfrac{\mu - \lambda}{2} c \cdot t$

Don't forget, both the left hand side and the right hand side of the equation still equal zero. This means that $x' = 0$. This means also that per the problem statement $t' = t = 0$ and $x = 0$. He also subtracts 7-wrong from 3-wrong, which leads to

$$(9a) \quad -2 \cdot c \cdot t' = \lambda(x - c \cdot t) - \mu(x + c \cdot t)$$

which leads to

$$(9b) \quad 2 \cdot c \cdot t' = (\mu - \lambda)x + (\lambda + \mu)c \cdot t \quad \text{or} \quad c \cdot t' = \frac{\mu - \lambda}{2}x + \frac{\lambda + \mu}{2}c \cdot t$$

The left hand side and the right hand side for both derivations still equal $0 = 0$. This means that even with all of his concoctions, we can't but conclude $x' = 0$, $c \cdot t' = 0$, and as such $t' = 0$. This also means that per the problem statement $t = 0$ and $x = x' = 0$. Lorentz continues to lead us to the Fata Morgana making us disregard the desert: continue to read...

Lorentz's Mastery of the Sleight of Hand

The basic reasoning already made obscure what it is Lorentz mean to do. The problem that ensues is that he continues to say that for K' the origin of the signal is zero and he states thus $x' = 0$, which probably means that he's laughing at us.

Note the fact that the equations were explained not to refer to the origin of the signal, but the point x' that K' was supposed to have traveled to, which implies $t' > 0$, when it perceives the signal that was sent from the origin zero, which isn't the same. The main problem is the signal is sent at the point of departure in both space and time, even though it should have been sent later in time.

If you ask how far the systems have traveled and your answer is zero, meaning they haven't, then that's a valid scientific question. When you say it *has* traveled, even though it *hasn't*, that's plain fraud.

Because due to Lorentz's sleight of hand as illustrated by Einstein, we disregard $t' = t = 0$, and we are fooled when he swindles us by pointing out that he most assuredly is right. We assume $t > 0$ and $t' > 0$ for K and K' and as such $|x| = c \cdot t > 0$ and $|x'| = c \cdot t' > 0$ when they witness the signal, but here it isn't. We are simply looking at a signal at the point of departure, to depart, but the way he phrased it in words, he **urged us to believe** we weren't.

As much as I would like to believe Lorentz and Einstein, the main problem once again is that due to the fact that the equations equaled zero, any value can in reality be picked for both λ and μ. It doesn't matter at what angle you look at the curtain, it will remain a cloak for something else until you realize the curtain in reality is all that's there.

The nature of what we witness and what I went along with is what magicians use for their shows. **Magicians make you look at one thing, even though you should be looking at something else.** There was no room to introduce these two constants λ and μ, because zero equals zero and an infinity times an absolute zero remains zero. That's the nature of the absolute zero, since we're not dealing with the limit to zero.

Is There Really no Way To Return to Minkowski?

I don't know what we're looking at when we regard Minkowski's principles. The absolute acceleration, also when an object or point of reference decelerates, is the absolute rate of change and as such is always positive. Like with speed, it's the rate of change combined in all directions. It's the sum of all of the squares of the rate of change of speed in all directions.

2.4 $$a_k = |\bar{a}_k| = \sqrt{\left(\frac{\delta^2 x_\gamma}{\delta^2 t_\gamma}\right)^2 + \left(\frac{\delta^2 y_\gamma}{\delta^2 t_\gamma}\right)^2 + \left(\frac{\delta^2 z_\gamma}{\delta^2 t_\gamma}\right)^2}$$ *for M and N!*

The speed of light isn't constant, as we perceive it, it's only constant in a vacuum. That we now know through experiment.

Since how different frequency bands are redirected when you don't have a vacuum is very specific, this means that when light is surrounded by mass, mass influences it through attraction. Atoms don't reflect the light, haphazardly redirecting it. This means fluctuating light particles have mass.

Per definition, force equals mass times acceleration, as such without mass, you can't exert force on anything, let alone block or reflect it.

We assume the maximum speed anything can obtain is the speed of light in a vacuum as noted by the constant c.

2.5 $$c = |\bar{v}_{light,vacuum}|$$

Vector notation further illustrates, but doesn't prove but per our experimental proof asserts, that the maximum speed, the speed of light in a vacuum, is that speed in all directions. The maximum speed obtainable for mass by our assumption encounters a horizontal limit in math that is the maximum speed of the speed of light.

It's an assumption based on the idea that at the speed of light, light particles other than their own individual mass and as such potential energy only have kinetic energy and their mass isn't further divisible. Otherwise there would be other entities smaller and faster than light.

2.6 $$\forall v_k : k \neq (light, vacuum) \bullet v_k < c$$

All relative perception actually being the result of Newtonian physics, two light particles traveling in opposite directions actually have a speed difference of $\Delta v = 2 \cdot c$, which means **there's no return to Minkowski!**

Two people witness each other flash a flashlight at the exact same time. They see the other's flash at the same time after the flashlights were lit up at the exact same pre-synchronized moment, equal to the distance between them divided by the speed of light. The two lights passing each other, space, and time won't complain.

Newton's Relativity

Special relativity describes the perception of motion and events with the relative reference systems being in uniform motion. This means they have a constant speed without any kind of changes of direction. They also don't spin around their axes.

When we say uniform motion, the two reference frames, observer and perceived, don't have to travel in the same direction. They only have to have their own constant speed.

Time at the beginning equals $T_\alpha = t_0$ and what we now would like to analyze is: at what time does α perceive β as it was at t_0 and what distance has β traveled in the time from t_0 to the time α sees β as it was at t_0? This time we note as Δt_0.

The distance between α and β at t_0 is a fixed factor and so is the relative speed.

3.1 $\bar{d}_0 = \bar{d}_\beta - \bar{d}_\alpha \text{ at } T_\alpha = t_0$

3.2 $\bar{v}_0 = \bar{v}_\beta - \bar{v}_\alpha \text{ at } T_\alpha = t_0$

Since these vectors are constants, including the relative speed, you might be tempted to use the absolute values, as if you could draw a straight line between α and β with α maintaining an absolute zero point, but as figure 1 illustrates, this isn't always possible.

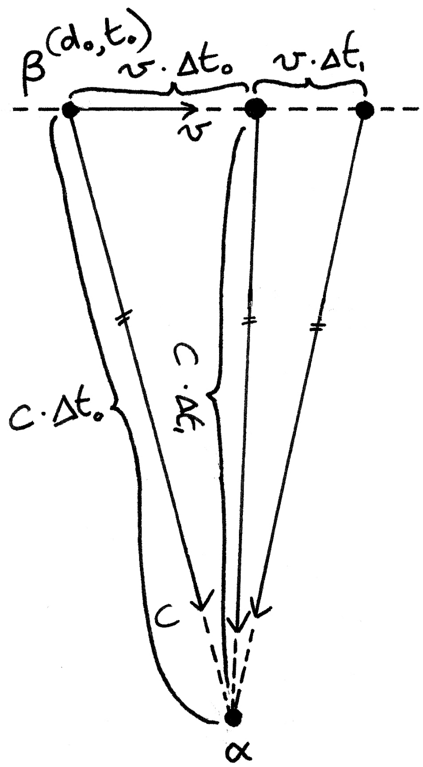

Figure 1 – Motion and its relative perception at a distance

The two reference frames don't always meet. They might at first get closer to each other, then reach a point where they are closest to each other and then pass each other by, distancing again. They individually move on a straight line and although α resides and remains in the absolute zero point, it actually watches β as it passes by on a straight line if it doesn't pass through this absolute zero point.

The time it will now cost the light to get from β at $T_\alpha = t_0$ to α at $T_\alpha = t_0 + \Delta t_0$ is fully dependent on the speed of light.

3.3 $$d_0 = |\bar{d}_0| \text{ and } \Delta t_0 = \frac{d_0}{c} \rightarrow T_\alpha = t_0 + \frac{d_0}{c}$$

At the time of α perceiving β, β will have moved on. Since the motion is uniform, changing with a separate constant rate for each of the axes, the actual new relative location $\bar{d}_1$ isn't difficult to determine.

3.4 $$\bar{d}_1 = \bar{d}_0 + \bar{v}_0 \cdot \Delta t_0 = \begin{bmatrix} x_0 + \frac{\delta x}{\delta t}\Delta t_0 \\ y_0 + \frac{\delta y}{\delta t}\Delta t_0 \\ z_0 + \frac{\delta z}{\delta t}\Delta t_0 \end{bmatrix}$$

The time it will cost for the light to reach α and as such for α to actually perceive β's new location once again is "easy" to determine as seen in 3.5. As you can see, the resulting equation is pretty long.

$$3.5 \qquad d_1 = |\bar{d}_1| = \sqrt{\left(x_0 + \frac{\delta x}{\delta t}\Delta t_0\right)^2 + \left(y_0 + \frac{\delta y}{\delta t}\Delta t_0\right)^2 + \left(z_0 + \frac{\delta z}{\delta t}\Delta t_0\right)^2}$$

You don't want to continue to write all the squares out for analysis as will become clear soon. First I need to point out a basic mistake you might make, when you apply formula 5.1 to an absolute zero starting point also in terms of distance, meaning that the two reference frames start at the absolute zero.

You should note that when you consider β starting in and moving away from the origin of a stationary α, then mathematically you end up in a loop pointing at the origin. This means that if $d_0 = 0$ then $\forall n : d_{n+1} = 0$ with $n \geq 0$.

The proper interpretation? When you start at the origin, it wil repeat that the light doesn't have to travel to reach you. That means that you have to have a distance not equal to zero as a basis reference point for all of this to work, otherwise your equations will remain stuck in the origin.

Also, if an object ever passes through the origin, if one of the steps shows how it reaches the origin, every following step will recursively point back to it.

Assume that we chose a non-zero starting point. The object β being observed by α now has moved on. The time it will cost α to perceive β at $\bar{d}_1$ after having seen it at $\bar{d}_0$ is once again the absolute distance, divided by the speed of light.

$$3.6 \qquad \Delta t_1 = \frac{d_1}{c} = \left|\frac{\bar{d}_1}{c}\right| \text{ and } T_\alpha = t_0 + \Delta t_0 + \Delta t_1$$

Now we can also determine the difference in time perception, dividing the time β was perceived to need to travel by the time β really needed to travel from $\bar{d}_0$ to $\bar{d}_1$.

$$3.7a \qquad \lambda = \frac{\Delta t_1 - \Delta t_0}{\Delta t_0} = \frac{\Delta t_1}{\Delta t_0} - 1 = \frac{d_1}{d_0} - 1$$

$$3.7b \qquad \lambda = \frac{\sqrt{\left(x_0 + \frac{\delta x}{\delta t}\Delta t_0\right)^2 + \left(y_0 + \frac{\delta y}{\delta t}\Delta t_0\right)^2 + \left(z_0 + \frac{\delta z}{\delta t}\Delta t_0\right)^2}}{\sqrt{x_0^2 + y_0^2 + z_0^2}} - 1$$

Simplification: One Axis

The resulting equation 3.7b is relatively complex, so how do we know it holds up? You only know it holds up by checking the math again.

To get a sense of how and that it works, why not simplify the movement by determining λ for a uniform motion strictly along the x-axis as λ_x? We only look at the x-axis, so $d_0 = x_0$. This allows us to greatly simplify 3.7b. Work out the equation above the divider, than divide. This leads to 3.8a.

$$3.8a \quad \lambda_x = \frac{\sqrt{\left(x_0 + \frac{\delta x}{\delta t}\Delta t_0\right)^2}}{\sqrt{x_0^2}} - 1 = \sqrt{1 + 2\left(\frac{\delta x}{\delta t}\frac{\Delta t_0}{x_0}\right) + \left(\frac{\delta x}{\delta t}\frac{\Delta t_0}{x_0}\right)^2} - 1$$

Work it out for yourself. Now apply equation 3.3, the distance x_0 divided by the speed of light equalling the time lag in perception, leads to...

$$3.8b \quad \lambda_x = \sqrt{1 + 2\left(\frac{\delta x}{\delta t}\frac{1}{c}\right) + \left(\frac{\delta x}{\delta t}\frac{1}{c}\right)^2} - 1 = \sqrt{1 + 2\frac{v}{c} + \frac{v^2}{c^2}} - 1$$

Using high school math we get the first part of the equation of 3.8c and then we can eliminate the square with the square root leading to its conclusion.

$$3.8c \quad \lambda_x = \sqrt{\left(1 + \frac{v}{c}\right)^2} - 1 = 1 + \frac{v}{c} - 1 = \frac{v}{c}$$

Q.E.D. The Lorentz equation known as the **Jackson number** has really been misappropriated from the actual factor relating the lag to a joint mutual zero for an observer system to witness an object, later seemingly substituting the Minkian factor for it to further dazzle us and make way for pseudo-scientific relativistic notions.

Due to me using the same Greek letter, confusingly the Jackson number is also noted as β. It isn't the reference system I refer to, but an equation.

Is my math right? What did I set out to determine and how does this result apply to that? I just determined as was given in the beginning that when my reference system β moved a distance of $v \cdot \Delta t_0$ that the light traveled $c \cdot \Delta t_0$. It was given and the equations also reduce to the basic assumption, meaning they hold for this one example.

When I read Einstein (1961) for the first time, at some point in time I felt he was laughing at me, but I thought it was due to people starting to think about time travel. I didn't get that everything he wrote was based on a hustle, scientific sleight of hand, marvel, and dazzle, concealing the fact the whole theory is false.

Much like most critical thinkers, the first person I always seek to criticize is myself. When you peer review someone else's work, sometimes you actually need to let go, even when vast amounts of people tell you that what the original author said is just how it works. Sometimes you shouldn't question yourself but them.

Always actually: you should question *both* yourself and them. And if they turn out to be right, through verification you establish they are. When they are wrong, you need to prove it. The fact that someone wrote something doesn't make it true.

What you learn isn't what you get, unless you've verified it. Verification and questioning whether authority be maintained or refuted should be taught as soon as in elementary school. We need to teach people to be critical.

The matter at hand is that Lorentz used a kind of sleight of hand, veiling origins of equations and substituting them in places where they have no place.

It gets worse. He also didn't make use of uniform motion, but of a continuous motion flux, which sounds complicated, but isn't. Don't be scared, read the next section. It isn't that difficult. It shows how he was wrong about every last thing I hadn't covered yet.

Lorentz's Error on the Ether and Nice Photos

Lorentz investigated the Michelson-Morley experiment. It used an object β suspended on an arm, a pencil, to make measurements. The idea was that the arm could be placed in the direction of the motion of the Earth or perpendicular to it by rotating it 90°. The displacement should introduce a variance in perception due to the hypothesized to exist ether being stationary and us moving.

When it's directed in the direction of the rotation, the speed of the rotation introduces a variance to the perception of the pencil. When you move in the direction of the oncoming light, it closes the distance, increasing the speed of perception. When you move away from the light, the light needs a little longer to catch up with us.

He stated that when the arm with the pencil was placed perpendicular to the rotation of the Earth, the hypothesized ether shouldn't have influence, because we didn't move through it, but in a sense it still moved between the pencil and the observer, which means that that hypothesis also was wrong, even if there were such a thing as an ether. You should see a sideways flux if there were an ether.

The experiment stated that first it was directed in the direction of the motion of the Earth, meaning that we move toward the light as we witness the pencil. The Earth is an orb and since it has a rotating speed v, Lorentz figured he could use this as a constant, since the speed of rotation is constant. He assumed the speed of the Earth to be uniform, which was a mistake.

The speed of the Earth's rotation may be constant in size, but not in direction, meaning that it isn't a uniform motion. I'm curious whether the variance of direction would be of influence on the experiment, since the Earth is quite sizable and as such its rotation speedy.

I don't know why he included this reference to the hypothesized ether in his work on relativity and I can't really make out what he means with his equation, whether we were to pretend the movement measured was flat or whether the fact that the Earth is an orb to him was included, which seems unlikely, because then its radius would have to be noted as well. The angular change with a constant rotation speed is dependent on the radius.

All of the equations in all of these general relativity papers provide no hypothesis, no arguments, and no foundation.

The pictures taken of the stars also don't prove anything. The longer shutter time shows the path of the stars along our night sky, but nothing more than that. When Lorentz, Einstein, and their colleagues provided these pictures as evidence, they lied, because they showed nothing. People weren't used to photographic principles as much, so they probably didn't really understand what they were seeing.

All that remains to me is Newton's mathematical principals on the philosophy of nature a.k.a. his Principia.

I really checked everything, but what's the worth of this man's word without evidence? In order to determine what it was Lorentz measured, I returned to Lorentz (1895) and so should you. Lorentz and the whole experiments are fraught with mistakes. Prove that my word is to both be commended and to not break with sound scientific principles, checked anyway.

You might think like I did that if you regard it from the point of view of uniform motion with the Earth rotating, the observer would have to accommodate the Earth's motion to begin with, by actually closing in on the pencil with the same and opposite speed, in order for there to be that motion, but then the hypothesized to exist ether would stand still, so this is also wrong. They just needed to accommodate the rotation of the Earth and with it its radius.

Even when you take into account that you move with the Earth, that means your point of view is stationary, so you can turn the pencil in any direction you want, but the pencil still wouldn't follow a straight path of uniform motion.

Ether and Dark Matter a Different Construct?

I didn't realize it immediately, because I heard that we did away with the notion of an ether. That was what the whole Michelson-Morley experiment was about: not relativity, but the confirmation or refutal of the principal of an ether. It completely failed to show any kind of aberration, but light is also thus fast that you can't imagine it would show anything.

What was the ether? It was supposed to be something that we don't see, but that connects everything. The substance that space is made of and what connects all matter in some way. It was supposed to be the one thing that would allow us to detect a set limit to what dimensions space in itself would occupy.

The principal of dark matter is effectively the same. There is no difference, it's another undefined unwitnessed hypothetical that will finance pseudo-science for decades to come and as soon as we do away with it, they will introduce a new principle that will once again be the unobservable human wrought construct of a principle we have no reason for to assume it exists: the principle of the ether, of dark matter, but by a different name.

It's the religion of science that keeps sparking this debate, which means that it isn't scientific at all. It isn't based on what we witness. I find it unfortunate and we should counter it, but it as it is now, it just be. Is there a way out?

Yes, we need to stick to what we observe and try to explain that. We also need to seek to counteract effects of things that we observe are bad. Other than that, when it's a hypothetical construct that is in no way related to anything we observe, we as scientists shouldn't be involved in it.

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