The Wrong Worldview of Relativity

Vesselin C. Noninski

New York Sofia Institute, 149 West 12th Street, New York, NY 10011

Abstract

The inconsistency of relativity, which requires the theory to consider two distinct things as one and the same, defies its place in science. The argument reiterates those in earlier studies, emphasizing the trivial need for constancy of a physical law in the unlikely event that it needs to be referred to different inertial systems.

The main issue in any papers using the relativistic framework, countering such an approach, is that it has been known since the times of Galileo that the transformations of a physical law across inertial frames

$$(\text{physical law})_K \longrightarrow \left(\text{physical law}'\right)_k$$

do not depend on the velocity v between frames *for any magnitude* of the velocity v.

Immediately Demonstrable Relativity's Catastrophe

Thus, even if, say, the law $\frac{d^2x}{dt^2} = \frac{\epsilon}{m}X$ in frame K, where m is the mass of the electron, ϵ is electron's charge and X is the x-axis component of the electric field vector, is deliberately transferred (correctly) into frame k as $\frac{d^2\xi}{d\tau^2} = \frac{\epsilon}{m}X'$, where the Greek letters are the coordinates in frame k and X' is the electric field component in k, and then transferred (incorrectly) back into K via the Lorentz transformations (LT) as $\frac{d^2x}{dt^2} = \frac{\epsilon}{m\beta^3}X$ (where β^3 is usually denoted as γ^3 in modern literature), in order to leave an impression that $\frac{d^2x}{dt^2} = \frac{\epsilon}{m}X$ and $\frac{d^2x}{dt^2} = \frac{\epsilon}{m\beta^3}X$ are two distinct expressions of the law, this approach falters.

Relativity's Catastrophe

The idea of applying two ways of transforming one law across frames teeters because, first of all, the physical law expressed by the equation $\frac{d^2x}{dt^2} = \frac{\epsilon}{m}X$ is valid *for all values* of the velocity v of k. Therefore, at no velocity v can there be another law $\frac{d^2x}{dt^2} = \frac{\epsilon}{m\beta^3}X$ coexisting in K with $\frac{d^2x}{dt^2} = \frac{\epsilon}{m}X$ describing the acceleration of one electron, in one frame K. This outrageousness is crucial to heed, yet it goes unheard because it obliterates relativity, which should become scarce in physics, a scarcity that relativity acolytes oppose. Therefore, we will reiterate this point in four different ways:

- The quantity $\frac{d^2x}{dt^2}$ in K referring to one electron moving *at any* $v \neq 0$ can have only one value, namely $\frac{\epsilon}{m}X$, not two.
- The same acceleration $\frac{d^2x}{dt^2}$ in K of the electron in K which is $\frac{\epsilon}{m}X$, cannot have another value $\frac{\epsilon}{m\beta^3}X$.

- In other words, the equality $\frac{\epsilon}{m}X = \frac{\epsilon}{m\beta^3}X$ is impossible.
- The equality $\frac{\epsilon}{m}X = \frac{\epsilon}{m\beta^3}X$ is valid only for $v = 0$, which defies relativity.

Another Instance of Relativity's Catastrophe—Fatal But Not Immediately Evident

To reinforce the conclusion that the relativity framework is non-physical, it may be observed that in the pivotal §6, ostensibly fulfilling the goal of the paper, while the components, say, X and Y, of the electric field vector in frame K transform in k as X' and Y', the relativistic framework requires these components to transform as X', and $\frac{Y'}{\beta} + \frac{v}{c}N$.

In other words,

- $Y = Y'$ is valid for all v.

  while

- relativity requires the equality $Y = \frac{Y'}{\beta} + \frac{v}{c}N$, which, again, can only be true if $v = 0, \beta = 1$, challenging relativity's premise,

Dimensional Fiasco

To say nothing of the fact that $Y = \frac{Y'}{\beta} + \frac{v}{c}N$ is dimensionally inconsistent in the SI unit system, a flaw cloaked by Gaussian units or *ad hoc* adjustments in natural units, masking the issue in unit-agnostic derivations. The observed $Y = \frac{Y'}{\beta} + \frac{v}{c}N$ expressed in SI units, $[Y] = \left[\frac{\text{kg·m}}{\text{s}^3\text{·A}}\right] \neq \left[\frac{v}{c}N\right] = \left[\frac{\text{kg}}{\text{s}^2\text{·A}}\right]$, reveals LT's inconsistency—$Y \neq \frac{Y'}{\beta} + \frac{v}{c}N$ mainly because of the shown v-inconsistency, but also because of the dimensional mismatch $[Y] \neq \left[\frac{Y'}{\beta} + \frac{v}{c}N\right]$. It isn't a flaw to fix but a lens on LT's irregularity. Gaussian units ($[\mathbf{E}] = [\mathbf{B}]$) conceal this; SI reflects physical distinctions—$\mathbf{E}\left(\frac{\text{force}}{\text{charge}}\right)$ and $\mathbf{B}\left(\frac{\text{force}}{\text{velocity·charge}}\right)$ remain distinct. In SI Faraday's, respectively Ampere's laws are

$$\nabla \times \mathbf{E} = -\frac{\partial \mathbf{B}}{\partial t},$$

$$\nabla \times \mathbf{B} = \mu_0 \mathbf{J} + \mu_0 \epsilon_0 \frac{\partial \mathbf{E}}{\partial t};$$

in Gaussian units,

$$\nabla \times \mathbf{E} = -\frac{1}{c}\frac{\partial \mathbf{B}}{\partial t},$$

$$\nabla \times \mathbf{B} = \frac{1}{c}\frac{\partial \mathbf{E}}{\partial t} + \frac{4\pi}{c}\mathbf{J}.$$

SI's μ_0 and ϵ_0 preserve **E** and **B**'s roles; Gaussian's c-scaling equates them, masking LT's error. Yet, SI rewrites—e.g., $E'_y = \beta\left(E_y - vB_z\right)$, $B'_y = \beta\left(B_y + \frac{v}{c^2}E_z\right)$, acknowledging the discrepancy by outright *ad hoc* adjustment. Why adjust a "fundamental" transformation to fit units? If LT were valid, rewriting wouldn't be needed—Gaussian's alignment doesn't justify SI's mismatch. It's a contrivance, suggesting LT's v-dependence lacks physical grounding. SI's mismatch signals LT's failure—**E** and **B**

shouldn't mix this way if Galileo's discovery holds, and it does—while Gaussian's artificial unity bends physics to fit relativity, equating **E** and **B** despite their distinct roles. Units shouldn't dictate physics—laws must be invariant across systems. LT's reliance on Gaussian alignment or SI's "c-normalization" (scaling with c or c^2) exposes a flaw beyond dimensions, rooted in *the principle of conservation of coordinates*—ultimately, *the principle of conservation of truth*, the tenor of this work.

The Lorentz Transformations—Glaringly Unphysical

Galileo's Transformations Rule

The question of which transformation should be preferred—the one discovered by Galileo or the one resulting from the application of the Lorentz transformations—has a straightforward answer. No one has rejected Galileo's discovery that no experiment carried out in an inertial frame can detect whether the frame is in uniform translatory motion or at rest relative to other inertial frames, and no one ever will. As far as the Lorentz transformations go, they can detect such motion, which is making them physically invalid. They contradict Galileo's discovery.

The Lorentz Transformations Destroy Length

To say nothing of the fact that LT can be shown unphysical in a number of other ways outside LT's framework. For instance, LT destroy the very notion of length itself. LT's:

$$x' = \beta(x - vt) \quad \text{and} \quad t' = \beta\left(t - \frac{vx}{c^2}\right)$$

give for a rod at $x_1 = 0, x_2 = 1, t = 0$ in K, with $v = 0.6c$, $c = 1$, $\beta = 1.25$, endpoints $x'_1 = 0, t'_1 = 0, x'_2 = 1.25, t'_2 = -0.75$ in k, an illusion, not a rod, its ends non-coexistent (one present, one past) to define length. You may note that for every x, t pair there will be a discrepant x', t' pair, making it impossible for two points to coexist so length can be defined. This length dissolution the $L' = \frac{L}{\gamma}$ can never prevent. After LT are applied, no length exists to ruminate about length contraction, let alone time dilation. The times $t'_1 = 0, t'_2 = -0.75$ do not constitute the times of any given moment to treat them as different rate of time change, i.e., time dilation. Of course, the idea of time dilation fails because moving and stationary clocks are locked at all times, so it's impossible for spatially coincident clocks to not be synchronous and show different times. Time dilation is impossible, like anything else that is impossible, and any claims of its experimental confirmation, such as the GPS, are misattributions.

Conclusion

The minute relativity is mentioned, it should be realized that the study hinges on LT—no matter how LT are applied. Apply LT and there will always be two simultaneous distinct expressions describing one phenomenon—an absurdity. No experiment backs absurdity. The implications of this finding are profound. It shows that relativity can lead to no outcome and make no predictions, and it invalidates any claim of experimental validation of relativity. These arguments should make it question employing the relativity framework in any cosmology study, or any other scientific study for that matter.