

The Relativity of Time and the Postulates of Relativity

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Part II

More than year has passed since I wrote on this subject¹. During this time I not once discussed the paper with physicists since it is evident that nobody understands what it is about. The position of the supporters of the theory of relativity is clear, - they do not want to hear any criticism of it. But what surprises me is that my work is unclear to the opponents of relativity as well. When I wrote the paper, it seemed obvious that the proofs stated in it were necessary and sufficient to state that "relativity" as a scientific theory did not exist. There appeared to be no reason to criticize it for this reason. It is absolutely unessential to restate the set of the logic contradictions, in the theory to prove its inaccuracy. There is enough mathematical proof of inaccuracy in its postulates. I assumed that an account of them was sufficient for disproof of the theory. I was mistaken. I shall try once again - more slowly.

Not to lose the logical sequence, I wish to remind readers, that all transformations and formulas in Einstein's work "The Electrodynamics of Moving Bodies" proceed from expression:

$$\frac{1}{2}(\tau_0 + \tau_2) = \tau_1 \tag{1}$$

In my above-mentioned work it was established that formula (1), written with respect to speed, is meaningful only at $v = 0$. (I remind the reader, that in Einstein's work, v is the speed of movement of a certain system of coordinates). There is no necessity to quote all of that paper, and shall use only some fragments from it (by the way, most of the criticism I have heard was from those who in general never read this work of Einstein's).

In § 3 Einstein writes: ... *From this it is found that, the formulas of transformation are as follows.*

$$\tau = \beta \left(t - \frac{v}{V^2} x \right),$$

$$\xi = \beta(x - vt),$$

$$\eta = y, \zeta = z,$$

где

$$\beta = \frac{1}{\sqrt{1 - (v/V)^2}} \dots$$

The quoted formulas basically are not questioned, but behind them was a very important fact that was overlooked. The meaning of speed v is not specified in these formulas. It is as though it is self-evident, that the speed of movement of a system of coordinates can be anything, or more correctly,

$$0 < v < V.$$

In it is a mistake of Einstein's and of the followers of the theory.

In my work, it is convincingly proven, that the speed of movement of a system of coordinates v can be equal only to 0, and at other speeds equation (1) will not be correct. If we substitute in the formulas deduced from formula (1), other values of speed v , we would create equations of the kind, $2 + 2 = 5$, $2 + 3 = 4$ etc. It is bad mathematics and can not have the right to existence. The promotion of theories based on wrong mathematical expressions, can result in beautiful conclusions, but, unfortunately, these conclusions will not have anything in common with the real world.

The correctly designated meaning of speed $v = 0$ allows to place all in the places. Let's substitute $v = 0$ in Einstein's formulas:

$$\beta = \frac{1}{\sqrt{1 - (v/V)^2}} = \frac{1}{\sqrt{1 - (0/V)^2}} = 1$$

$$\xi = \beta(x - vt) = 1(x - 0t) = x$$

$$\tau = \beta\left(t - \frac{v}{V^2}x\right) = 1\left(t - \frac{0}{V^2}x\right) = t$$

Further comments are not necessary ...

Let's continue. In § 4 Einstein writes:

... Let's consider a sphere of radius R , at rest in system k , with the centre of the sphere coincident with the beginning of the coordinates of system k . The equation of the surface of this sphere is,

$$\xi^2 + \eta^2 + \zeta^2 = R^2$$

The equation of this surface expressed through x, y, z , at time $t = 0$ will be

$$\frac{x^2}{(\sqrt{1 - (v/V)^2})^2} + y^2 + z^2 = R^2$$

Hence, a rigid body, which at rest has the form of a sphere, in motion as appearing from a fixed system-takes the form of an ellipsoid of rotation with axes,

$$R\sqrt{1 - (v/V)^2}, R, R$$

While the sizes of the sphere (and consequently, and any other fixed body of any form) on axes Y and Z do not change due to movement, axis X is reduced in the ratio,

$$1: \sqrt{1 - (v/V)^2},$$

The ratio increases with v . At $v = V$ all objects in motion observable from the fixed system, turn to flat figures. For speeds exceeding speed of light, our reasoning loses sense; however, from further reasoning it will be obvious that the speed of light in our theory physically plays the role of an infinitely large speed. It is clear, that the same results apply for bodies which are at rest as observed from the moving systems.

We have demonstrated one of the basic postulates of the theory of relativity, in which is declared that with the movement of observable objects there is a change in their linear sizes depending on speed. Let's substitute in the formulas the true meaning of speed $v = 0$ and we will get,

$$R \sqrt{1 - (v / V)^2} = R \sqrt{1 - (0 / V)^2} = R$$

The moving body will have the form of a sphere with axes, R , R , R .

Change in linear sizes is not observed. We quote further from the same paragraph.

... If at point A are two synchronous clocks and we relocate one of them on a closed curve moving with constant speed. After arrival in A, the moving clock will lag behind in comparison with the one remaining motionless by,

$$\frac{1}{2}t(v^2 / V^2) \text{ Sec ...}$$

It is another postulate of the theory of relativity, in which it is affirmed, that with movement occurs a change of time.

Let's substitute in this formula meaning of speed $v = 0$ and we shall receive,

$$\frac{1}{2}t(v^2 / V^2) = \frac{1}{2}t(0^2 / V^2) = 0 \text{ Sec.}$$

Slowing of time is not observed; the theory is not correct.

In § 5 " the Theory of addition of speeds " Einstein Writes:

... It is wonderful, that v and w enter symmetrically into the expression for resulting speed. If w too is in the direction of axis X (axis Ξ), That the formula for U accepts the following arguments:

$$U = \frac{v + w}{1 + \frac{vw}{V^2}}$$

From this equation follows, that the resulting speed which results from the addition of two speeds, which are less than V , are always is less than V . Having put $v = V - \chi$, $w = V - \lambda$, Where χ and λ Both are positive and less than V , we have:

$$U = V \frac{2V - \chi - \lambda}{2V - \chi - \lambda + \frac{\chi\lambda}{V}} < V$$

It further follows, that the speed of light V from addition of speeds, which is less than the speed of light, can not be changed. For this case it turns out

$$U = \frac{V + w}{1 + \frac{w}{V}} = V \dots$$

By the best evaluation, it is impossible ... We shall write down:

$$U = \frac{v+w}{1+\frac{vw}{V^2}} = \frac{0+w}{1+\frac{0w}{V^2}} = w$$

The equation $U = \frac{V+w}{1+\frac{w}{V}} = V$ has no sense in it. Instead of v is substituted V .

That can not be since. $v = 0$, and $V \neq 0 \Rightarrow V \neq v$. Hence, the theorem of addition of speeds is not correct.

Any equation Einstein, uses in his paper should be viewed and as system of two equations, in one of which, $v = 0$. In this case the equations will represent proper mathematics.

Probably, one who criticizes the theory of relativity, is wasting his time. It is not meaningful to criticize what does not exist in nature. It is a scientific theory that does not exist. It is only an old mathematical mistake.

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¹ See <http://wbabin.net/mitkovsky/mitkovsky.htm>