

Translation into English: [Chapter 2 - Catalogue of Errors for Both Theories of Relativity](#)

from the German documentation of G.O. Mueller

"On the Absolute Magnitude of the Special Theory of Relativity - A Documentary Thought Experiment on 95 Years of Criticism (1908-2003) with Proof of 3789 Critical Works" - Text Version 2.1 - June 2004  
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## Q: Methodology / Error No. 5

### The Lorentz transformations are the core of the STR and are thereby the cause of the STR's frailty

*Galeczki / Marquardt (1997, pp 50-51): "Kinematic questions [are] very readily turned into dynamic conclusions. The active role is attributed to the observer by the fatal Lorentz transformation." The authors all see the disaster in the formation of the transformations:*

- (1) *Woldemar Voigt has proposed equations for wave phenomena in which he has selected the Doppler effect as a variable of the local vector and the time, instead of the wave vector and the frequency.*
- (2) *Lorentz has transferred Voigt's equations for wave phenomena to space-time problems. Galeczki/Marquardt assess this transfer as "inadmissible".*
- (3) *"That was the historical starting point for Lorentz' misinterpretation of the Doppler- effect as an effect on rulers and clocks. The resulting Lorentz transformation has had an absolutely catastrophic effect on physical thinking. With its help the observer acquires the power to allow mass to increase, time to slow down and lengths to shorten. He can allow magnetic fields to come into being where there was previously only an electric field and he can - seen in the field of quantum mechanics - allow a wave to appear from a vibration phenomenon. The transformation permits him to amalgamate time and space coordinates to form an inextricable "space-time continuum" and thereby empowers him to exert a radical influence on every physical happening. When it disturbs him that clocks are running slower, then he can change his standpoint and they then run faster. And if such virtual changes make him unhappy, he can always choose a 'time of his own' in which he sits on the clock - and no longer needs to suffer any time-change any more." p. 51: "Only one thing is denied the observer in the STR: whatever he does, light reaches him at the notorious constant speed of c. It is as though the light knows its state of motion already b e f o r e it reaches him, after a long journey, adapting itself accordingly. [...] The special status of the light is prescribed in advance in the Lorentz transformation. And in this way this transformation becomes the magician's hat of relativistic kinematics ... The mathematics was more powerful than the physics."*

*p. 64: The missing group properties of the transformation theoretically leads, in the case of non-co-linear speeds, to a rotation, which has two errors: theoretical rotation violates the definition of the inertial system; and in a simple experiment by Phipps it could definitively not be verified.*

Other critics have derived the Lorentz transformations in various ways, even on the basis of purely classical assumptions. - Already Sommerfeldt had drawn attention at a very early stage to the absence of the group properties in the Lorentz transformations. - Some have drawn attention to the fact that the transformations represent no physical findings at all, because they merely recalculate already-found physical data and cannot create any new physical facts. - Lorentz himself had only represented them under the assumption of the hypothesis of the ether and he declared that he had attached no physical reality whatsoever to the measurements for space and time contained therein. - Pagels (1985) has shown that there were mathematical errors in the mathematical derivations of the transformations by Albert Einstein (cf. Error F 1).

Galeczki/Marquardt see the cause of the erroneousness of the transformations in Lorentz' misinterpretation of the Doppler-effect as an effect on rulers and clocks. From this, Lorentz must have developed the idea that in the Michelson-Morley experiment one of the interferometer arms had contracted, an ad-hoc, fictitious hypothesis that could be animated or supported by absolutely no other physical experience. Lorentz himself never advanced beyond the hypothetical nature of the issue and never endorsed Albert Einstein's step of declaring this hypothesis as reality. For this reason too he had also rejected each share in Albert Einstein's STR and had most sharply criticized this theory, which is something the authors of the world of relativity however carefully withhold from their readers, because they always want to see the famous Lorentz as a predecessor of the STR and as one of them.

Lorentz' critical 1910 lectures in Göttingen are still contained in two first editions of the anthology "Das Relativitätsprinzip. Lorentz / Einstein / Minkowski" of 1913 reprinted in 1915 (Das Relativitätsprinzip und seine Anwendung auf einige besondere physikalische Erscheinungen), but were thereafter tacitly removed, so that none of the users of the many subsequent editions should ever learn anything about Lorentz' criticism. In the English edition of the anthology (The principle of relativity. London,1923) Lorentz' lectures were never contained! So considerately have the relativists saved their public from doubters.

From the fact that the Lorentz transformations are only pure mathematical relationships between physical measurements, from which all supposed effects can be derived, the characterization of the STR as mathematics has made it seem more powerful than physics (Galeczki/Marquardt).

*Galeczki / Marquardt 1997.*