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 http://www.ekkehard-friebe.de/kap2.pdf

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## M: The General Theory of Relativity / Error No. 1

## A relationship of transition exists between the STR and the GTR

The alleged transition between the STR and the GTR always claimed by the relativists was already refuted by the critics at a very early stage. In several significant points there are, instead of a gradual transition, fundamental differences:

(1) In the absolute constancy of the speed of light. A supposed absolute constancy misses, by definition, the flexibility for any sort of transition whatsoever. It has therefore no connection to the variable speed of light of the GTR (variable due to different gravitational fields).

(2) In the speed of light as a maximum speed. In the GTR there is no longer any limit speed, so that all considerations and conclusions based on this assumption are superfluous, and as Theimer (1977, p. 114) emphasizes: "the elegant mathematical formulae in favour of this are invalid".

(3) In the straightness of the spreading of radiation. This standpoint is abandoned in the GTR, thereby withdrawing the basis for the construction of Minkowski's world.

(4) In the straightness of the motion of measurable bodies as inertial systems. In the omnipresent gravitational field of the GTR, they are subject to curvatures, whereby the existence of inertial systems approaches zero.

(5) In the constancy of the motion of measurable bodies as inertial systems. With the curvature of motions in the GTR, the constancy of inertial motion becomes an absolute rarity, and the existence of inertial systems is banned from the macro world.

(6) In the rigid body with Euclidean geometry. It is mislaid in the GTR, and is replaced by Albert Einstein's "Bezugsmollusken" [reference molluscs].

When the new theory (the GTR) negates the foundations of the older theory (the STR), one can no longer speak of the relationship of a transition. - The question arises, as to what, in the opinion of the relativists themselves, remains of the STR. According to Theimer (1977, p. 114) Albert Einstein regarded it as being only valid to a limited degree, namely limited to gravity-free regions. Such can only be constructed as infinitesimal gravity-free regions (= points). These, however, cannot be added. In limited, larger regions the STR is now said to be only approximately valid. He takes over time dilation and length contraction in the GTR, though now with the justification of gravitation. Conclusion: "This is all that remains of the theory that recently shattered the world" (Theimer, p. 114).

The GTR has brilliantly confirmed almost all of the criticism expressed up to about 1914 (Sagnac experiment) as refutations of the STR and has revoked the refuted claims, and in particular, the completely untenable and nonsensical postulate of the absolute constancy of c. And all of this came from Albert Einstein's own hand: Max Abraham already acknowledged this with satisfaction in 1912. This says nothing about the quality of the new theory, the GTR.

Max Abraham, at a very early stage (1912), had already diagnosed from Albert Einstein's gradually developed concepts on the subsequent GTR, the official end of the STR. According to Abraham, Einstein had already, in 1911, assumed "an influence of the gravitational potential on the speed of light" and had

thereby "abandoned the postulate of the constancy of the speed of light that was so essential to his former theory" (p. 1056). Shortly before Einstein had also given up the invariance of the equations of motion for Lorentz transformations and had "thereby given the relative theory the coup de grâce". Abraham welcomed it "with satisfaction ..., that its author had persuaded himself of its untenable nature" (p. 1056). If gravitation influences the speed of light, then there are also two reference systems that are no longer equal, one of these being the system at rest in the gravitational field, and the other being the system in constant motion (p. 1057). The STR has had a fascinating effect "particularly on the youngest mathematical physicists" and has thereby impeded the progress of physics (p. 1056).

For the relativists the claim of a transition between two theories was of great strategic importance. The STR, which until 1920 had remained fully unconfirmed, should now profit from the media furore over the alleged and at that time propagated as sensational, experimental confirmation of the GTR. It should be carried along by the success of the GTR, as a step on the way there, something which had also already been achieved in that the media and many popular accounts no longer attached any value to distinguishing between two theories, speaking now solely of "the theory of relativity". The average member of the public had no chance of seeing through the underlying rebooking of the supposed success of the GTR onto the account of the STR.

Abraham, Max: Relativität und Gravitation; Erwiderung auf eine Bemerkung des Hrn. A. Einstein. In: Annalen der Physik. F. 4, Vol. 38 (=343). 1912, pp 1056-1058. Replies to a criticism of Einstein, pp 355 and 443. Followed by a statement by Einstein, p. 1059. - Einstein, Albert: Die Grundlage der allgemeinen Relativitätstheorie. In: Annalen der Physik. 49. 1916, pp 769-822. Reprinted in: Das RP. Lorentz / Einstein / Minkowski. 1923 and repeatedly, pp 81-124. - Theimer 1977, pp 111-145.