COMMENTS ON MORALES
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Morales seems to labor under the common delusion that 'rod-shortening' and 'time-dilation' are derivable from the Lorentz transformation. It is, if anything, the other way around and, if one accepts inhomogeneous equations the Lorentz transformations are a prototypical example.

The time-dilation equation derives directly from the classical wave theory of light by way of the Lorentz contraction. Confining ourselves, as usual, to the x-axis, the to-and-fro duration of a light pulse between the two points on a continuous, material body is:

$$\Delta t = x/c(1 - (v/c)^2) \tag{1}$$

where Δt is the time interval; x the distance AB + BA; v is the velocity of the material body; c the velocity of light.

Applying the Lorentz definition of time:

$$t = x/c \tag{2}$$

we have

$$t' = t/(1 - (v/c)^2) \tag{3}$$

where t' is 'moving with v' and t is 'at rest'.

This we can call 'classical time-dilation'. If we now apply the Lorentz contraction function:

$$x' = x(1 - (v/c)^2)^{\frac{1}{2}} \tag{4}$$

we get

$$t' = t/(1 - (v/c)^2)^{\frac{1}{2}} \tag{5}$$

We must note most carefully that v has the same reference system as c, whatever that may be, and that it is not, in general, the mutual, i.e., relative velocity of the primed and unprimed systems.

Time-dilation is thus strictly defined, but it is only a redefinition of x and t. Morales should also observe that t is defined only in terms of a to-and-fro motion.

Editorial Remark: The author's rebuttal of this criticism will appear in a future issue of this publication, if he cares to make a reply.