Androcles "mixem up his frades"

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- *From*: Uncle Ben <ben@xxxxxxxxxxx>
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John Parker, "Androcles",' has finally given us enough information to be able to diagnosis his ridiculous assertion −− that Einstein in his initial SR paper of 1905 derived a formula expressing the dilation of a rigid rod's length because of its motion.

The received wisdom of the century has been that what was shown was instead a contraction, the very phenomenon that Fitzgerald, Lorentz and others had hypothesized so as to explain the null result of the Michelson−Morley Experiment. John "observes" that the Einstein Dilation was derived by AE but was misunderstood as a contraction in spite of algebraic proof of a dilation.

In his gentle way, John excuses AE for the error on grounds of insanity.

In a message to our friend Glird today (US time) in the thread called "Linear",

news:
2a4f3d6e−82ec−44e6−9ee7−26be3d2ec17b@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

(I can't swear to the link. Google doesn't do links well.
Please advise me on a better news reader.)

John repeated his assertion, but this time he explained what his symbols mean. This was a first, to my knowledge. Here are his words:

> Note that Einstein doesn't know what a ratio is and gets his frades mixem up.

....

> xi = x'/ sqrt(1−v^2/c^2),
> xi is the length of the moving rod,
> sqrt(1−v^2/c^2) is less than one.
> When I went to school 2 = 1/0.5, the moving rod gets longer with increasing speed. i.e. the greater the value of v, the greater the lengthening.

John may be amazed to read that I agree with him that
xi > x ! But what is "xi"?

While we must agree with John's arithmetic, we should try to verify his assertion that
"xi is the length of the moving rod." Moving w.r.t. what?

Presumably, with respect to the frame L[aboratory] in which it is moving. (Otherwise, one immediately gets a contraction.)

Our conclusion will be to respectfully disagree. We will see that "xi" is the length of the moving rod with respect to the moving system S [phere], in which it is not moving at all but is at rest. So with the same algebra as JP, we will get the famous result by AE, instead of the novel one by JP.

−−−−−−−−
Einstein SR 1905:
http://tinyurl.com/mgcycf

The notation is taken from the above−mentioned paper by Einstein. I include the link here so that the student can examine the portion of the paper that deals with length in SR.

Look now if you will at the beginning of Section #4 if the paper, where the author sets up the problem of a sphere, perfectly spherical when at rest in coordinate system k, which I will call S, the "sphere system," but which is moving through space at speed v with respect to a frame of reference K, which I will call L the "laboratory system." Einstein asks what is the shape of this object with respect to this laboratory system. (It is no longer a sphere, we all agree.)

Before we go on, please answer the question, with what variables does the author write the condition defining the sphere? Greek (xi, eta, zeta) or Latin (x, y, z), and which frame uses those coordinates, the sphere system S or the lab system L?

This question is as difficult as the question "Is Queen Elizabeth II British?" So I need not give away the answer.

This is the key to Androcles's dramatic mistake. To confirm it,look again in the paper at the very end of Section #3, where the author has just derived the Lorentz Transformation equations. You see greek letters on the left and latin letters on the right. You see that the only time expressed is t, a latin letter.

You will note the expression (x − vt) on the right. This expresses that the x coordinate for a fixed point on the object is moving to the +x direction. Time t increases forever, but x increases also and the difference is constant, just like the coordinate on the left−− a point

on the resting sphere.

(The variable x' is a convenient shorthand for x−vt, as you will see in Section 3. To see the shape of the object in the lab frame, we take a snapshot at t=0, when x'=x.)

We conclude that "xi" is the coordinate of a point in S on the sphere at rest, not moving.

Case closed. Einstein is not "mixem up his frades." The culprit is his esteemed critic, John Parker, known to his ancient lion as Androcles.

Uncle Ben

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