ANOTHER SIMPLE ARGUMENT AGAINST SPECIAL RELATIVITY

by

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Here is another very simple argument which proves that Special Relativity must be mathematically flawed, because it uses a set of equations — the Lorentz transformation equations — which cannot form part of mathematics as we know it.

[1] Let's say a train is moving at a velocity of magnitude **v** relative to the rails. Let's assume for the purposes of this argument that the rails are absolutely straight and in the un-primed frame: that is, the rails will be (arbitrarily) assumed by us to be stationary. Let's say that when the train is moving at speed **v** along the rails, the train's length is **L'** metres. And of course we all know that the Lorentz <*gamma*> factor, by which the train must have contracted due to its movement, is $\mathbf{\{1/\sqrt{[1-(v^2/c^2)]}\}}$.

[2] Now suppose the train comes to a stop at a terminus to allow passengers to embark and disembark; and during the stop, its length is carefully measured by the station master, who measures it to be exactly **L** metres in length. Then using the Lorentz <*gamma*> factor we calculate $\mathbf{L' = L/\{1/\sqrt{[1-(v^2/c^2)]}\}}$. Thus **L'** cannot be greater than **L** , but must be less (because $\mathbf{v^2/c^2}$ must be a positive number, and so $\mathbf{[1-(v^2/c^2)]}$ must be less than **1**, so the square root of $\mathbf{[1-(v^2/c^2)]}$ must also be less than **1**, which means that $\mathbf{\{1/\sqrt{[1-(v^2/c^2)]}\}}$ must be greater than **1**.)

[3] Now after the passengers have embarked and disembarked, the train moves back *towards the place it came from* — that is, going in the *opposite* direction to its original direction of motion — till it again reaches a velocity of magnitude **v** relative to the rails. That is, the train is now moving in the *opposite* direction to the direction it was moving in [1] above. So now its velocity, taking into account not just the *magnitude* but also the *direction* of its movement, is **-v** (*i.e.,* minus **v**) relative to the rails.

[4] Now what should the train's *length* be, as calculated using the Lorentz <*gamma*> factor? Suppose the train's length in [3] is **L"** metres. Then should **L"** be exactly *equal* to **L'** , or *not?*

[5] If it *is,* then the relative velocity of the train in [1] *as compared to its velocity in* [3] must have been zero! That's because according to Relativity, the *same* object cannot have the *same* length in *two* different situations unless it was travelling at

the *same* velocity in both situations — that is to say, unless the *relative* velocity of its movement in the two different situations, comparing the one situation with the other, was zero. Or in other words, we'd have to say that **+v = -v** . That obviously can't be the case *mathematically* speaking (whatever it might be in Zen!)

[6] On the other hand, if **L'** *isn't* equal to **L"** , then the Lorentz <*gamma*> factor — which is indispensable in Relativity — can't have been applied in calculating **L"** , for $(+v)^2$ is *exactly* equal to $(-v)^2$, and thus $\{1/\sqrt{[1-(v^2/c^2)]}\}$ must be exactly equal to $\{1/\sqrt{[1-((-v)^2/c^2)]}\}$!

[7] So whichever way you squirm, the answer's bound to be wrong — proving that the Lorentz <*gamma*> factor — which is used in Special Relativity for the Lorentz transformation equations — must be self-contradictory. (And in mathematics, any set of equations in which a self-contradictory formula is used must itself be self-contradictory, and therefore cannot be a part of mathematics as we know it!)

Any comments? e-mail me.