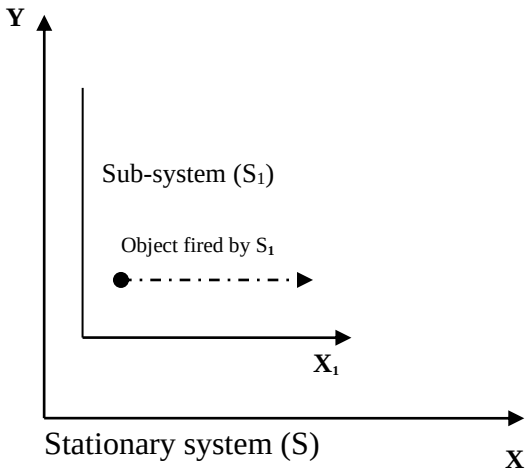
NULLIFICATION OF RELATIVITY THEORY VIA THE SUFFICIENCY OF THE GALILEAN VELOCITY TRANSFORMATION

S = Stationary system
S_1 = Sub-system moving to the right within S
u = velocity of S_1 relative to S
v_1 = velocity of object relative to S_1
v = velocity of object relative to S



Galilean Velocity Transformation

$v = v_1 + u$

The Relativist

Light always travels at c, therefore if the object fired by S_1 is light, the equation becomes:

$c = c_1 + u$

The speed of light is *always* c, therefore because $u > 0$, the time scale of c_1 must be different to the time scale of c:

$c = \Delta x/\Delta t$
$c_1 = \Delta x_1/\Delta t_1$

NULLIFICATION OF RELATIVITY THEORY VIA THE SUFFICIENCY OF THE GALILEAN VELOCITY TRANSFORMATION (CONT.)

The Realist

Light always travels at c, therefore if the object fired by S_1 is light, the equation becomes:

$c = c_1 + u$

The speed of light is *always* c, therefore:

$c_1 = c$

Therefore we derive that $u = 0$ and that S_1 must be is redundant.

This accords with the fact that the speed at which light travels is unaffected by the speed of its source.

Conclusion

Although the Galilean transformation was devised for objects with mass, it can cater for a massless object such as light by means of its special case where the speed of its sub-system is 0.

What if S is itself a sub-system? Then it becomes S_1 in a new S, and is also redundant, and so on *ad infinitum*: light's speed is never affected by the speed of its source: its frame of reference is distance alone.

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