

Speed/velocity addition in Einstein's relativity and the Principles of Logic

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Einstein's relativity has many problems, in this article I will look at the issue of the Logic in SR being applied inappropriately with reference to an anecdote attributed to Bertrand Russell.

A fairly well known anecdote that Bertrand Russell [1] (sometimes the story is credited to others [2]) was that he once asked in a lecture to prove from the premise $4 = 3$, that it followed that he was the Pope. – This was in the context of discussing the principle that, from a contradiction, anything follows.

Russell reportedly replied: "subtract 2 from both sides, and this gives us $2 = 1$; since the Pope and I are two, it follows that we are one" (or words to that effect).

It highlights from a false fact (contradiction) anything can be proven.

And of course – I wish to deal with explaining that Einstein's Special Relativity (SR) is contradictory.

Math is about working out the consequences of assumptions so if we work from contradictory assumptions anything can be proven

This is highly relevant to SR-- where SR starts from false assumptions (or rather confused assumptions) and the consequences of those false assumptions is anything can be

proven

There is thus no 'real' scientific merit in such a theory.

On the human issue -- humans try to interpret the assumptions differently and thus go down different false paths.

If we accept that by SR - relativistic addition of speeds gives us $c \pm v = c$ then this is a contradiction

(Of course not everyone interprets SR in the same way, so this is dealing with one interpretation of SR.)

$c+v = c-v = c$ supposedly for c and v non-zero

that is equivalent to $4=5$

so by SR you and I are the Pope

i.e. this interpretation of SR is a contradiction. If SR had been clearly defined then we might all agree that SR was defined this way with $c+v = c = c-v$. To many of us of course it looks defined that way, and so would ideally need a revision.

One protest to the claim that SR gives us $c+v = c = c-v$ is that SR Relativistic addition is not the same operation of addition that is learnt in grade school. So the belief is that confusion has arisen since the same symbol is used for two completely different things.

To deal with this issue, we need now to consider addition under Newtonian physics which I will define as $+(N)$ and addition in SR which I will define as $+(R)$, the subtractions associated with this as being $-(N)$ and $-(R)$ respectively.

When we have Newtonian physics and are dealing with velocity addition say add v_1 to v_2

When it's both these velocities in the same direction then it's straightforward $v_1 + v_2$

The idea gets extended in straightforward way with 3D vectors etc

$$(v_{a1}, v_{a2}, v_{a3}) + (v_{b1}, v_{b2}, v_{b3})$$

$$= (v_{a1} + v_{b1}, v_{a2} + v_{b2}, v_{a3} + v_{b3})$$

when we go to SR we have this straightforward easy "+" addition replaced by relativistic addition

so addition "+" is ok under Newton

when SR looks at "+" it replaces it by a nonsense rule.

so in Newtonian physics $c - v$ does not equal $c + v$ when c and v are non-zero

let us write as $-(N)$ and $+(N)$

so $c - (N) v$ does not equal $c + (N) v$ when c and v are non zero

SR replaces with $-(R)$ and $+(R)$

so we have $c - (R) v = c + (R) v$

a nonsense rule

SR version of addition/subtraction is nonsense

Newton has velocity, momentum etc all defined in a certain way

Einstein the genius (or idiot -- depending on your subjective experience) came along and changed all that

he replaced Newton mass by "relativistic mass"

replaced Newton momentum by "relativistic momentum"

Einstein looked at Newton addition and replaced it by "relativistic addition"

Einstein just made nonsense, according to him $c - (R) v = c + (R) v$ (for v and c non-zero).

And since v and c are non-zero we could easily substitute some numbers in them such that we obtained $4 = 5$, and then by Russell anecdote by $4 = 5$ you are the Pope.

Further - when we look at the way Einstein used "relativistic addition" --

his claim was when see $+(N)$ replace it by $+(R)$ but his construction of $+(R)$ has $+$ in it, so are we supposed to replace that $+(N)$ by $+(R)$? it is upon this ambiguity and nonsense that SR is built.

so in summary -

SRists and Einsteinians looked at rule for addition " $+$ "

when they saw $c+v$ for c and v non-zero

they decided this rule must be replaced because otherwise $c+v$ is bigger than c and they wanted to assume nothing bigger than c

so have "old rule" of " $+$ " and decided need "new rule" for " $+$ "

they then replaced the old rule for " $+$ " by nonsense

This Highlights the total inability of certain people to think Logically.

Either --- "they" are incapable of thinking Logically, or "they" think we are totally stupid and "they" can do whatever "they" like with impunity.---- Same with SR-belivers----- "they" are either totally stupid or think everyone else is totally stupid.

One challenge is to consider the following "algebra" as to whether it is also nonsense.

Let S be the set $\{0,1\}$, and define addition as follows:

$$0 + 0 = 0$$

$$0 + 1 = 1$$

$$1 + 0 = 1$$

$$1 + 1 = 0$$

Is this redefinition of addition nonsense? After all, we do have $0 + 0 = 1 + 1$ in this algebra.

But actually this "algebra" forgot what might be called the "remainder", so that its really -

$$0 + 0 = 0 \text{ remainder } 0$$

$$0 + 1 = 1 \text{ remainder } 0$$

$$1 + 0 = 1 \text{ remainder } 0$$

$$1 + 1 = 0 \text{ remainder } 1$$

If you built a computer system without the remainder then it would be nonsense. [3]

If you are aware that there is really a remainder when you ignore the remainder then you have an idealised scenario which then needs update for an extra effect.

Method is math modelling -- set up idealised model add extra to it for extra effects.

If you are not aware that is what you are doing then you have nonsense.

When we do the addition in this system such that $1 + 1 = 0$ remainder 1, if we forgot the remainder "one" everytime this happened in computer then the computer would start being nonsense; but the way we do the computers is we don't forget the remainder "one" and pass it on for further processing

As regards addition in SR -

where SR addition defined as $c + (R) v = c - (R) v$ for c and v non-zero there should also be some correction factor to prevent this from being nonsense; where is it? answer--- it has been omitted. Whereas math for binary has been done properly and the correction to $1+1 = 0$ is not omitted, SRists choose to be stupid.

Math modelling method in action -

example 1- Idealised case of Maxwell dealing with just vacuum scenario, update required to deal with non-vacuum

example 2 -- SR dealing with case for relativist addition $+(R)$ and $-(R)$ such that $c + (R) v = c - (R) v$ this is nonsense if you are unaware its needs an update; and update is that $c + (N) v$ does not equal $c - (N) v$

In conversation this issue of "remainder" in the binary case was still not clear, so I will try to clarify further-

For "0" standing for any even number, and "1" standing for any odd number, then my system makes perfect sense. No remainder is necessary is necessary in such a system. But that system is only looking at whether a number is even or odd, and any other information is being ignored.

if the property you were interested in was whether a number was even or odd, then it would be ok to ignore the remainder.

However, if you were using that system and were not aware of the ignoring the remainder, and then went onto apply the system to issue dealing with whether a certain number was larger than another number then it would lead to error for example $f(1)=f(3)=f(5) = f(7) = 1$ in your system $f(2)=f(4) = f(6) = 0$ if you thought "0" greater than "1" it would be true for $f(1)$, $f(2)$ but not for $f(2)$, $f(3)$ case.

So the general issue is still the same, if you were not aware you were ignoring the remainder, and then want to extend beyond use of the system A (where ignoring the remainder) was ok to a system B (which needed to take into account the remainder) then you would have nonsense.

So in summary – there is a remainder being ignored, and ignoring it makes a nonsense of the math, if you are unaware that is what you are doing.

Looking at just whether a number is even or odd is ignoring the other information; the other properties of those numbers; the remaining information of those numbers (the remainder).

"Greater than" and "less than" are meaningless and irrelevant in the "algebra" looking at just whether a number was even or odd, because that information was being ignored. If you were then to extend the system to an area where it was nonapplicable with still ignoring the remainder then it would be nonsense.

One has to be aware of the range of applicability of a math system; and extending its use to areas where it is not applicable is the issue with this "remainder" (i.e the information being ignored or discarded). By math modelling process we model by simple math model which ignores or discards information, and when necessary this information is returned to the math model to make it more complicated.

Thus the range of applicability of SR addition $+$ (R) is very limited and ideally it should be extended to Newtonian addition $+$ (N). i.e the math model of SR has very limited range of applicability, its addition $+$ (R) should be updated to Newtonian addition $+$ (N) as quickly as possible because it has a wider range of applicability.

This analysis has been another way of saying that the equating of lightspeed c_0 with kinematic lightspeed c_M was a mistake. The kinematic lightspeed c_M can have values $c_0 - v$ and $c_0 + v$ for c_0 and v non-zero, thus be greater than c_0 or less than c_0 .

References

[1] <http://www.openthemagazine.com/article/science/bertrand-russell-superstar>

says it happened.

[2] I have been told that the story is also credited to G.H. Hardy - 'The nature of probability'. Centen. Rev. 2 (1958): 261–274. and 'Scientific Inference' Harold Jeffreys (CUP 1931, 1957, p.18). And the idea of proving that one is the Pope has a longer history - in Lewis Carroll's poem ('The mad gardener's song', from Sylvie and Bruno, 1889).

[3] The **binary numeral system, or base-2 number system** represents numeric values using two symbols, 0 and 1. More specifically, the usual base-2 system is a positional notation with a radix of 2. Owing to its straightforward implementation in digital electronic circuitry using logic gates, the binary system is used internally by all modern computers.

http://en.wikipedia.org/wiki/Binary_numeral_system#Counting_in_binary at 2010-03-16

[4] it is these revisions that make it difficult for everyone to clearly define SR. Different people have spotted different mistakes in SR and given different revisions; hence there are different versions of SR out there. In this article example dealing with speed/velocity addition causes problems in SR presenting a need for revision to SR.

Based on email conversations March2010

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