

Re: Twin paradox revisited II

Source: <http://sci.tech-archive.net/Archive/sci.physics.relativity/2007-07/msg02500.html>

- *From:* "Jeckyl" <noone@xxxxxxxxxxxx>
 - *Date:* Mon, 23 Jul 2007 09:50:02 +1000
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"bill" <cosmosco@xxxxxxxxxxxxxxxx> wrote in message
<news:1185068056.733116.36880@xx>

On Jul 21, 10:27 am, "Jeckyl" <no...@xxxxxxxxxxxx> wrote:

"bill" <cosmo...@xxxxxxxxxxxxxxxx> wrote in message

<news:1184975348.416557.318470@xx>

Bill

When the traveller is in inertial motion he is fully justified in suggesting that he is stationary and the Earth is moving.

Having experienced the force of acceleration as he blasts off from the planet and is now in free fall he may be justified in idly musing about the fact that it appears that the planet is moving away from him but is this philosophical solipsist notion reality?

Yes .. if you are moving away from me, then I am moving away from you

I wasn't speeding officer! *You* were moving away from *me* at a velocity exceeding the posted speed limit.

Yeup

Has the planet, and the rest of the universe, undergone acceleration

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thereby creating this motion.?

Noone is claiming that. We are talking about the situation AFTER the acceleration. The acceleration is finished .. in that past. Lets say that the traveller was unconscious during launch and just woke up. he would simply note that the planet is moving away from him (and other planets moving closer) .. and that he is stationary.

It is not just that 'other planets are moving closer'! One 'half' of the *universe* is 'moving closer' and the rest of the universe is 'moving away' from him.

Yeup .. just as it was when he was on the planet. . just a different sections of the universe moving closer and away. There is no absolute rest. You are at rest in your iFoR whenever you are not accelerating .. everything else that is not at rest in that iFoR is moving.

[snip unrelated nonsense about the psychology of the astronaut and metaphysics]

He is not accelerating to turn around.

Yes .. he is .. you cannot change velocity without acceleration. acceleration IS change in velocity.

Isn't it *negative* acceleration or deceleration prior to turn around – not acceleration?

Acceleration is a change in velocity. Whether you regard it as positive or negative depends only on your arbitrary choice of measurement axis. Deceleration is not really a term of physics

In accordance with your comment that acceleration is not relative then, as he accelerates away from the planet, he is not allowed to conclude that it is the earth that is accelerating away from him

Yeup .. but at any instant, the earth is moving away from him and him away from the earth

[snip more psychological nonsense .. that is NOT physics]

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Again .. you're bringing psychology into it. What he thinks doesn't matter

You are missing the point of the original posting which was that the traveler *sees* his twin apparently aging at a faster rate than he is and on the basis that 'observation creates reality' as detailed above he concludes that his twin is physically aging at a faster rate. In other words – what he 'thinks' *does* matter *as presented in that posting*.

No .. it doesn't

A see B as having aged less, and B sees A as having aged more .. both are equivalent. There is no point in distinguishing between them.

.. he IS moving away from the earth AND the earth IS moving away from him.

Both are true. How he cares to think about it makes no difference.

See above.

See above

On the basis of the relativity insistence – along with Einstein's 1918 explanation – that it is the traveler's clock, having experienced the force of acceleration, that is ticking over at a slower rate than the inertial twin's clock how can the inertial twin be of the opinion that the traveler's clock is ticking over at a faster rate than his own clock?

It is the relative motion that makes it slower .. after accelerating, the traveller's clock is slower in the iFoR of the earth AND the earth's clock is slower in the iFoR of the traveller.

So we are still stuck with the original clock paradox and the eventual twin paradox with no attempt being made to solve that paradox.

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There is NO PARADOX.

Einstein's attempted solution, that it is **only** the clock (i.e. the traveler's clock) that has experienced the force of acceleration which is the one that **physically** ticks over at the slower rate **not** the other clock (i.e. the earth clock).

You are insisting that **both** clocks are **physically** ticking over at slower rates than each other.

Yes .. when not accelerating.

You previously wrote "What someone might calculate or conclude is not relevant to the physics .. that's just psychology."

Yeup

and "Again .. you're bringing psychology into it. What he thinks doesn't matter."

Yeup

I assume that when you refer to "in the iFoR of the earth" and "in the iFoR of the traveller." you are referring to the point of view of **people** in those reference frames **not** the reference frames per se? How can an inanimate reference frame have a point of view?

It has nothing to do with people as conscious entities. They are just objects in space measurements are made relative to their position

The subject on hand is not special relativity per se but the idea that the inertial twin determines that the traveler physically ages at faster or slower rates than himself depending on the traveler's direction of travel.

The traveller ages less (because less time has elapsed) .. there is no faster OR slower.

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Once again, the concept of 'faster or slower' is directly related to the original posting.

There is no faster or slower aging. There is simply less time elapsed for the twin. So the traveller is younger than the stay at home twin .. and the stay at home twin is older than the traveller. Both are true .. arguing about which is true is pedantic nonsense.

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