

## Re: What causes time dilation?

**Source:** <http://sci.tech-archive.net/Archive/sci.physics/2004-09/4296.html>

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**Date:** 09/10/04

Date: 10 Sep 2004 02:39:13 -0700

"Androcles" <[androc1es@nospamblueyonder.co.uk](mailto:androc1es@nospamblueyonder.co.uk)> wrote in message  
news:<puX%c.3606\$YX.35873969@news-text.cableinet.net>...  
> "Alex Green" <[dralexgreen@yahoo.co.uk](mailto:dralexgreen@yahoo.co.uk)> wrote in message  
> news:42c8441.0409090117.1f2ba244@posting.google.com...  
> | "Androcles" <[androc1es@nospamblueyonder.co.uk](mailto:androc1es@nospamblueyonder.co.uk)> wrote in message  
> news:<Y4k%c.2274\$Nf5.24086599@news-text.cableinet.net>...  
> | > "Alex Green" <[dralexgreen@yahoo.co.uk](mailto:dralexgreen@yahoo.co.uk)> wrote in message  
> | > news:42c8441.0409070212.2d350af1@posting.google.com...  
> | [snip]  
> | > | Modern relativity theory does not have this foundation. It is based  
> | > | on invariance and symmetry. The geodesics are derived from the concept  
> | > | of a (3+1)D universe.  
> | > |  
> | > | See:  
> | > | <http://www.users.globalnet.co.uk/~lka/conz2b.htm>  
> | [snip]  
> | >  
> | > The third theory predicts that light from a moving source will have  
> | > the velocity of light added to the velocity of the source. This will  
> | > produce an apparent retrograde motion of a star in orbit, although  
> | > we don't have sufficiently powerful telescopes to observe this.  
> | > However, this apparent retrograde motion has another effect, that  
> | > of changing the intensity of the light as it reaches us.  
> | > In the empirical data below, the retrograde motion appears between  
> | > the two maxima.  
> | > <http://www.britastro.org/vss/gifc/00918-ck.gif>  
> | >  
> | [snip]  
> | In Galilean time the past is gone,  
> | Yes.  
> |  
> | The future does not exist,  
> | Correct.  
> |  
> | there is only the zero amount of time that is the frozen present.  
> |  
> | Incorrect. 'Now' is moving. It is not frozen.

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- > *Your model of time places 'now' as a moving point between yesterday*
- > *and tomorrow.*
- >
- > *yesterday (-) now (0) tomorrow (+)*
- > \_\_\_\_\_/\_\_\_\_\_
- >
- > *with tomorrow as fixed as yesterday. Predestination. How will you*
- > *change tomorrow? Why would you construct a safety device?*
- > *Just how illogical is the woman in the street who shrugs "When your*
- > *time is up..." for those that die, and then yells at the kids not to play*
- > *ball in the road?*
- >
- >
- > *My model of time places 'now' at the tip of a growing crystal*
- >
- > *yesterday (-) now (0) tomorrow (+)*
- > \_\_\_\_\_/-----
- >
- > *Tomorrow isn't fixed. We can change it.*

Time as a dimension would only fix the past. Other phenomena such as QM may leave the future open.

Your model does not concur with your previous statements where the past and future do not exist. This is your model:

yesterday (-) now (0) tomorrow (+)  
nothing | nothing

But the now has no duration either so is also nothing. There is no time in Galilean Relativity except that which is recorded in the magical transtemporal observer's notebook.

- >
- > /
- > / See: <http://www.mathpages.com/rr/s3-07/3-07.htm>
- >
- > *Why should I look at Zeno?*

Albro Swift points out that moving bodies differ depending on which observer views them because their coordinate systems are different. The problem of what distinguishes a moving from a non-moving system is therefore resolved, just look at the clocks.

- [snip]
- > /
- > / >
- > / > /
- > / > / *However, that said, I think a gifted mathematician could tack bits on*
- > / > / *to Newtonian physics to account for all the discoveries of the*
- > / > / *twentieth century.*

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- > / > *Well, thank you.*
- > / > *I'd rather strip off some ridiculous assertions, though, and quit*
- > *pretending*
- > / > *we know that which we do not.*
- > / > *The Seven Deadly Sins of Special Relativity.*
- > / >
- > / > *For quotations following, reference:*
- > / > <http://www.fourmilab.ch/etexts/einstein/specrel/www/>
- > / > *("On the Electrodynamics of Moving Bodies" by Albert Einstein)*
- > / >
- > / > *1) "light is always propagated in empty space with a definite velocity  $c$*
- > / > *which is independent of the state of motion of the emitting body",*
- > / > *a totally unproven assumption without any evidence to support it.*
- > /
- > / *Agreed, it is what might be called a temporary assumption. The speed*
- > / *of light is a hybrid variable composed of space and time so its*
- > / *constancy cannot, on its own, be a fundamental axiom. This is why the*
- > / *modern theory uses invariance and is actually a theory that proposes*
- > / *that the universe is a four dimensional manifold.*
- >
- > *I don't give a hoot what it proposes, if it is mathematically unsound it is*
- > *worthless nonsense. I'll assume bright green flying elephants*
- > *lay eggs in wormholes. Now I'll build a theory on that and arrive at*
- > *wormholes are actually the home of bright green flying elephants.*
- > *In other words, a load of nonsense.*
- > /
- > / *[snip of other excerpts from Einsteins early work]*
- >
- > *This is what the relativist does when he is unable to find any argument*
- > *against one that destroys his religion. Burying your head in the sand*
- > *isn't going to convince anyone that you are right, all it will do is*
- > *convince me that you have a belief that I do not share, and you cannot support*
- > *it. If you wish to debate, don't ignore the points I make.*
- > *[ Restore of other argument against the idiot Einstein, pushed under the*
- > *carpet*
- > *by Alex Green.]*
- >

But these points do not address modern Relativity Theory. What you are doing is like asking a modern molecular biologist to justify genetics on the basis of Darwin. The modern theory is based on symmetry and invariance in manifolds. Einstein had no idea of these things in 1904–5 although it was his work that inspired Minkowski to start the ball rolling.

- >
- > 2) *"In agreement with experience we further assume the quantity*
- >  $2AB/(t'A-tA) = c$  *to be a universal constant– the velocity of light in empty*
- > *space.",*
- > *an admitted assumption that is quite worthless when there is any*
- > *relative motion between A and B, yet essential to the derivation of the*

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> remainder of Einstein's nonsense.

The constancy of the speed of light for any observer can nowadays be considered to be a prediction of the theory of the universe as a (3+1)D manifold.

>

> 3) The equation

>  $\frac{1}{2}[\tau(0,0,0,t)+\tau(0,0,0,t+x'/(c-v)+x'/(c+v))] = \tau(x',0,0,t+x'/(c-v))$ ,

> the  $\frac{1}{2}$  of which is derived from 2) above and is tantamount to saying

>  $(1/3 + 2/3)/2 = 1/3$ .

>

> 4) The missing  $0'$  from that equation, since  $x' = x-vt$ , hence  $0' = 0-vt$ ,

> and the equation should be

>  $\frac{1}{2}[\tau(-vt,0,0,t)+\tau(-vt,0,0,t+x'/(c-v)+x'/(c+v))] = \tau(x',0,0,t+x'/(c-v))$

> at the very least.

>

> 5) The further assumption "IF we place  $x' = x-vt$  ... " without considering

> IF we place  $x' = x+vt$ , from which we derive (using Einstein's method)

>  $\tau = (t+xv/c^2)/\sqrt{1-v^2/c^2}$

>  $\tau' = (x + vt)/\sqrt{1-v^2/c^2}$ " -Paul B. Andersen

>

[snip]

As was pointed out above, Einstein's original work is no longer the basis for modern Relativity any more than Darwin's is the daily bible for genetic manipulation in molecular biology. In mathematical terms modern relativity is Pythagoras→Gauss → Riemann → Noether → Minkowski →Weyl etc. In physical terms Newton→Maxwell→Einstein. Your attack on Relativity based on original work a century ago seems strange, why not attack the modern basis?

>

> / >

> / > | All that is needed is an ever increasing library of

> / > | unrelated assumptions. Theories don't need to die, you can keep them

> / > | going well past their natural lifespan with enough mathematical TLC.

>

> / > Or enough paint stripper.

> /

> / I am in favour of people deriving other bases for physics. Modern

> / mathematicians are pretty good at their job

>

> Earlier mathematicians were good at their job also. Zeno, Pythagoras,

> Ptolemy, Newton to name but a few.

> Einstein, however, was not a mathematician.

>

This is why modern Relativity can be traced in mathematical terms as:

Pythagoras→Gauss → Riemann → Noether → Minkowski →Weyl etc.

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- >
- > | *and can build fairly*
- > | *foolproof structures out of sets of axioms.*
- >
- > | *However, it is the axioms*
- > | *themselves that contain the real physics.*
- >
- > *And what are the axioms?*
- > *The PoR that is so primitive and obvious that Einstein*
- > *could only give examples.*
- > *Einstein's manufactured "light speed is independent of the source"*
- > *Einstein's assumption  $2AB/(t'A - tA) = c$ .*
- > *And then the idiot has the audacity to change the PoR from*
- >  *$u+v$  to  $(u+v)/(1+uv/c^2)$ .*
- >
- > *And you want to call that a theory that is "fairly foolproof"?*

But Einstein's original paper's are only of historical interest. Lets discuss relativity on the basis of a good textbook or one of the better, modern online works such as:

<http://pancake.uchicago.edu/~carroll/notes/>

Otherwise we are going to be in a perpetual time warp where you are attacking ideas from a century ago.

- >
- > |
- > | *As a proponent of a new basis for physics your task, should you decide*
- > | *to accept it, is to predict a new effect or explain an unexplained*
- > | *effect.*
- >
- > *Done. Here is an unexplained effect.*
- > [http://www.androc1es.pwp.blueyonder.co.uk/actual\\_data.htm](http://www.androc1es.pwp.blueyonder.co.uk/actual_data.htm)

But there is an accepted explanation for this effect that has been known for a long time. Furthermore the cepheids are used as a basis for distance estimates in the universe and few effects have been checked and related to other effects as thoroughly.

<http://www.astro.wesleyan.edu/~anna/Astro211/0411a.html>

- > *Want more?*
- > *But it is an old basis for physics. I'm not pretending I can*
- > *use the PoR to change the PoR.*
- >
- > *Nuclear energy ( $e=mc^2$ ) put Einstein on the map with a bang.*
- >
- > *You've been conned.*
- > *J.G.Fox writes in the American Journal of Physics, Volume 33 #1 Jan '65.*
- > =====
- > *Another proof, more closely related to the present discussion, may be made*
- > *by the following modification of a demonstration due to Langevin.*
- [snip]

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As I pointed out above, any theory can be endlessly adjusted to match observations that have already been made. The true test of a theory is to predict effects such as black holes or quantum physics or hydrogen bombs.

Best Wishes

Alex Green