

# Re: The horrible failure of science education

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**From:** Oriel36 (geraldkelleher\_at\_hotmail.com)

**Date:** 08/31/04

Date: 31 Aug 2004 04:10:38 -0700

reany@asu.edu (Patrick Reany) wrote in message  
news:<844a1b64.0408300917.4ada8a7d@posting.google.com>...  
> "Bill Hobba" <bhobba@rubbish.net.au> wrote in message  
news:<5ysYc.12675\$D7.9493@news-server.bigpond.net.au>...  
> > "Patrick Reany" <reany@asu.edu> wrote in message  
> > news:844a1b64.0408291335.98dc0bd@posting.google.com...  
> > > eleatis@yahoo.gr (Mike) wrote in message  
> > > news:<9c1b39be.0408272333.2d626c8@posting.google.com>...  
> > > > "Bill Hobba" <bhobba@rubbish.net.au> wrote in message  
> > > > news:<cfFXc.9844\$D7.4860@news-server.bigpond.net.au>...  
> > > > > "Mike" <eleatis@yahoo.gr> wrote in message  
> > > > > news:9c1b39be.0408270020.3a028ff7@posting.google.com...  
> > > > > > "Bill Hobba" <bhobba@rubbish.net.au> wrote in message  
> > > > > > news:<9muXc.9096\$D7.1255@news-server.bigpond.net.au>...  
> > > > > >  
> > > > > > [snip]  
> > > > > >  
> > > > > > I gave the answer in my reply and a link that discusses such –  
> > > > > >  
> > > > > > <http://math.ucr.edu/home/baez/physics/Relativity/SR/experiments.html>.  
> > > > > >  
> > > > > > Since when you're referencing cranks?  
> > > > > >  
> > > > > > The  
> > > > > > POR says the laws of nature are the same in all inertial reference  
> > > > > > frames.  
> > > > > >  
> > > > > > Which PoR are you talking about? If Newtonian you are correct. Not  
> > > > > > Einstein's though. This is the one we are talking about here. Red  
> > > > > > herring again?  
> > > > > >  
> > > > > > The POR stands for the Principle of Relativity which says the laws of  
> > > > > > physics are the same in all inertial reference frames. It is standard  
> > > > > > terminology.  
> > > > > >  
> > > > > >  
> > > > > >

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>>>>>> *Thus if we do an experiment in one frame and deduce a law of nature from that then do the same experiment in another frame the same law must apply.*

>>>>>> *You must first prove that these are indeed two different frames.*

>>>>>> *An inertial frame is defined as one in which free particles move with constant velocity. Obviously a frame moving at constant velocity wrt an inertial one also has free particles moving at constant velocity so is also inertial. That you would even formulate such an idiotic question indicates you lack grounding in basic physics.*

>>>>>> *Idiot, inertial frames is a math abstraction useful only in SR, which is an abstract kinematic theory lacking dynamical content.*

>>> *Proof of the horrible failure of science education! The guy doesn't even know that Newtonian mechanics is founded on the inertial-frame concept. How do you ever expect to get through to such a one? Either teach him Newtonian mechanics or just give up. Do what science education failed to do in the first place in its hurry to get to the equations: Stress the logical foundations to Newtonian mechanics.*

>>> *Patrick*

>> *With all due respect Patrick, and not wishing to imply he has had a proper science education, his problem, by his own self admission, is he gets his physics from what he terms 'higher sources' – books on philosophy. Now of course many competent philosophers understand relativity and physics, but this guys problem, IMHO, is trying to understand physics via surrogate ie via the writings of philosophers who analyze the philosophical basis of the physics, not the physics itself. To me it points to the necessity of understanding the physics before venturing into the philosophy.*

>> *Thanks*

>> *Bill*

> *There is no physics prior to philosophy. You have to have a formal point of view to set down the rules for doing even simple Newtonian mechanics, and there was no unique way for Newton to do it. He just did it his way, and it happened to work well. This doesn't require a philosophy book any more than learning how to put a quart of oil in your car's engine block requires a trained auto mechanic.*

> *Whatever sources he claims to use now, he clearly was not taught Newtonian mechanics correctly. That makes him easy prey to slick*

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- > *arguments which are designed to exploit naive misconceptions most*
- > *people have. That has been my point all along, in case you haven't*
- > *gotten the message. The reason there are so many cranks is because*
- > *these cranks were never inoculated with the truth about Newtonian*
- > *mechanics in the first place. And the responsibility for doing that*
- > *belongs to science education.*
- >

You are correct, the truth about Newton's mechanical agenda is not well known, go through the fog of definitions of time, space and motion and he did set things up his own way with some unauthorised maneuvers.

The reason the guys in the 1840's found themselves in so much trouble was as part of the gravitational agenda in attempting to explain Keplerian motion, Newton sets it all up with a mean circular orbital motion derived from Flamsteed. He patches in elliptical motion by appealing to Roemer's method for determining the anomalous motion of Io as it appears to speed up and slow down.

Basically he mixes Kepler with Roemer using Flamsteed's erroneous assumption for axial rotational/stellar circumpolar equivalency as a template.

<http://www.eumetsat.de/en/mtp/images/sidereal.gif>

<http://r2d2.stcloudstate.edu/~womack/astr/models/retropicmars.jpg>

<http://history.nasa.gov/SP-349/p6c.jpg>

"For to the earth they appear sometimes direct, sometimes stationary, nay, and sometimes retrograde. But from the sun they are always seen direct, and to proceed with a motion nearly uniform, that is to say, a little swifter in the perihelion and a little slower in the aphelion distances, so as to maintain an equality in the description of the areas. This a noted proposition among astronomers, and particularly demonstrable in Jupiter, from the eclipses of his satellites; by the help of which eclipses, as we have said, the heliocentric longitudes of that planet, and its distances from the sun, are determined."  
Principia"

<http://members.tripod.com/~gravitee/phaenomena.htm>

The poor guys in the mid 19th century were saddled with a Newtonian view which locks the insight on finite light distance into Keplerian motion notwithstanding that Keplerian motion could not be explained until the 1930's with the recognition of the solar system's rotation around the galactic axis and the influence on that motion on the dominant heliocentric orbital motion of planets.

Keplerian motion, pioneer 10, the perihelion advance and more importantly the Milankovitch cycle and indeed whatever other puzzle

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there is out there has now a wonderful 21st century setting by incorporating the motion of the solar system to an inner and outer galactic orbit by freeing up Newton's mangling Roemer's insight with Kepler's.

Your pathetic appeal is far from the dignified position that men held in the 1840's when they realised something was badly wrong but did not know what.

<http://www.bodley.ox.ac.uk/cgi-bin/ilej/image1.pl?item=page&seq=9&size=1&id=bm.1843.10.x.54.336.x.425>

Without you and your relativistic cronies and the absurd backdrop you provide, I probably would not appreciate Copernicus, Kepler and Roemer and thank you for that.

We shall not cease from exploration, and the end of all our exploring will be to arrive where we started and know the place for the first time.

T. S. Eliot

- >
- > *Teach the students right when they're still young and you give them a*
- > *fighting chance to see BS when it comes along. But, just try to cram a*
- > *bunch of unmotivated equations down their throats as the "correct*
- > *physics" and they are ever susceptible to the BS of the wrong way.*
- >
- > *The poster I replied to thinks that inertial reference frames are*
- > *foreign to Newtonian mechanics and introduced spuriously in SR. Until*
- > *you disabuse him of that misconception you are wasting your time*
- > *trying to get through to him on anything else.*
- >
- > *You're part of the problem, Bill. You're one of the equation pushers.*
- >
- > *Patrick*