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# Relativity does not require Spacetime curvature II

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The relevant issue is that if can do the math model in Euclidean geometry without need for curved spacetime, then there was no need for Einstein revolution, can just continue with Newton; and that indeed turns out to be the case.

As Silberstein (main critic of Einstein in early days) points out—the math of GR (General Relativity) is really the same as the math of Newtonian physics

Ref: The True Relation of Einstein's to Newton's Equations of Motion, Silberstein Nature, Dec 1, 1923 p 788

Whitehead was associated with Silberstein and pointed out Relativity could be dealt with in flat spacetime not the curved spacetime as used by Einsteinians.

i.e Whitehead's theory - was really Newtonian physics.

Eddington pointed out that Whitehead's theory of gravity was same formula as Einstein's.

Ref: A Comparison of Whitehead's and Einstein's Formula, **A. S. Eddington,** Nature **113**, 192-192 (09 February 1924)

But some I have talked to have been under the impression that Eddington made it seem that Einstein's theory had priority with Whitehead's coming second. And then since Einstein's version of interpretation was first that we should go by that.

This was in fact a reversal of what really happened: Whitehead's theory was Newtonian physics and hence had priority over Einstein's.

i.e. there was no reason for transition of interpreting things from Newtonian physics to interpreting things in the way of GR—A fact overlooked in the mess and confusion surrounding Einstein being made a celebrity.

What we have is no reason for interpreting things Einstein's way in GR.

SR (Special relativity) is an approximation of GR. And since math of GR is same as Newtonian physics, that means SR is an approximation of Newtonian physics just interpreted in a non-Newtonian way.

As pointed out by Whitehead in his book on Relativity "The Principle of Relativity with applications to Physical science" (1922) the equation ds^2 =0 as used in SR is only an approximation. So general case is really that ds^2 is non-zero and that means variable lightspeed contrary to SR.

No justification for GR in 1919 when the evidence is reviewed correctly and hence no evidence for SR also.

E=mc^2 and so forth can be derived from Newtonian physics as many have pointed out.

The worrying factor sqrt (1-v^2/c^2) is used to give relativistic time and relativistic length in SRT etc.

When investigated sqrt (1-v^2/c^2) = (1/c) sqrt(c^2 – v^2).

(c^2 –v^2) comes from considering two way speed of light, first it goes (c-v) then comes back as (c+v), we multipy these two things gives (c-v)(c+v) = (c^2 –v^2) square root this gives sqrt (c^2-v^2) if we call this a speed let us call it c_new. Thus c_new is the mean speed of light in Newtonian physics. According to Einstein- the speed of light is constant, so this factor has to be used to alter time and distance rather than the light speed being variable as it would be in Newtonian physics.

When it came to the formulation of SR – Einstein was said to have choice of altering Newtonian physics or Maxwell's theory. He chose to keep Maxwell unaltered.

Since GR math is same as Newtonian physics therefore the correct way is to alter Maxwell to fit Newton. Many have done it that way, and I think David Tombe has been one.

The mess is caused by the physics community not keeping careful track of the math modelling process. – That is not keeping careful note of the applicability of a math model.

Math modelling process is to update simple math model. But many people have got stuck with this process because they don't realise when to update. This has been due to Einstein (and others) giving us lack of information is given as to the applicability of the models.

GR math is really same as Newtonian physics math, except Einstein and Eddington wanted to interpret it differently.

By Whitehead we have math back into Newtonian setting as its interpretation.

Then since SR is approximation of GR, and hence an approximation of Newtonian physics therefore - SR has a very limited range of applicability.

I think the range of applicability is that SR can only really deal with case of v = 0 from the Newtonian physics perspective (from that perspective it is a bodge by Einstein to give us relativistic time et al to try to compensate for the approximation of taking ds^2=0.)

So in case of twins travelling at non-zero velocity v with respect to each other, this is beyond the range of applicability of SR and we need to get back to Newtonian physics which tells us twins age at same rate for non-zero v.

Paradoxes of SR occur when people try to use it outside its range of applicability (i.e. for value of v other than zero); that's when SR goes wrong because it's used wrong.

Things like Einstein synchronization et al are therefore just added mess to confuse the central issues.

A central issue is – whether lightspeed is variable.

There are several different ways of looking at this issue from Einstein's relativity. That is what makes Einstein relativists seem inconsistent and contradictory; because some say variable and some say not.

We have the clear formulation of lightspeed as variable in the relativity formulation of Whitehead

So this is where conflict occurs--

(1) those who follow the relativity formulation of Whitehead
(2) those who follow the vague Einstein version and mistakenly interpret it as lightspeed not variable (i.e they are wrong from Newtonian perspective)

So Einstein-Whitehead relativity on one side versus those who mistaken take Einstein relativity as lightspeed not variable.

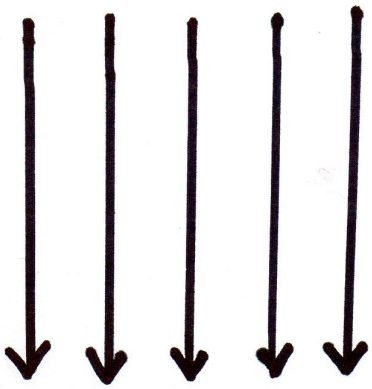
Unfortunately, the relativists have not fully realised that there is these two different versions of interpretation of GR math (and there are probably more interpretations). Those taking view (2) have tended interpret what would be variable lightspeed as viewed from view (1) as spacetime curvature, whereas in view (2) there is no spacetime curvature.

All of the supposed Einstein Revolution in Physics has been about building mistakes upon top of other mistakes.

The main critics such as Silberstein were pointing this out at the time. But because of the publicity campaign for Einstein, the physics got lost in the media circus.

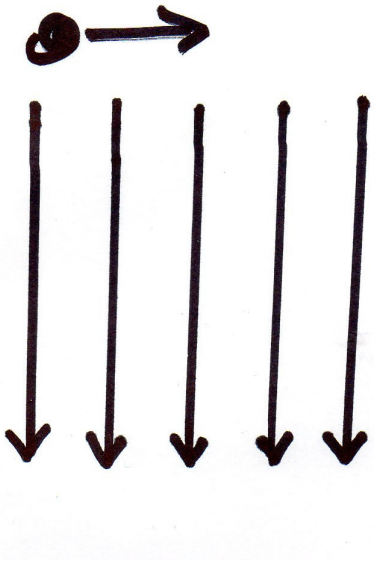
**Curved spacetime versus flat spacetime**

By Eddington he had flat spacetime as



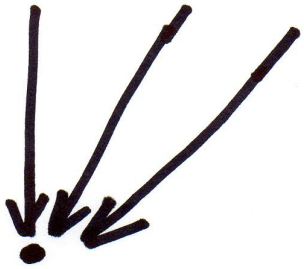
gravitational force all pointing parallel

then considered object going through this gravitational field

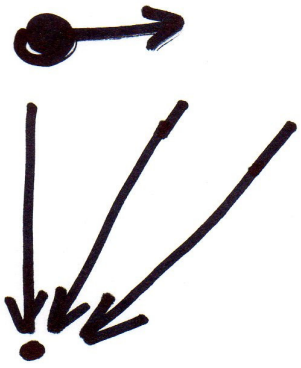


He found this was not sufficient bending.

He then had to talk about space being bent making these gravitational forces converge to a point.



But this what Newtonian physics really pictures it as anyway-- as object passes by sun, the sun's gravitational field is directed to point of sun's centre.



Space is flat in Newtonian physics, with the gravitational vectors directed at sun's centre.

Not -- flat space with gravitational vectors all parallel, and then needing to bend space to get the vectors directed to a point.

Since space and time interconnected by Einstein, with space being bent then bending space had to bend time; giving us curved spacetime.

All of it just a mistake coming from Eddington not drawing his gravitational vectors correctly - namely as directed to a point instead of as parallel.

Then by Whitehead and Silberstein-- math of Newtonian physics is same as GR!!

Dingle taught relativity by Whitehead. So when he looked at relativity later and found it being taught different to what he had been taught, he concluded it was wrong.

So at least two traditions of relativity-

Whitehead-Silberstein tradition versus Einstein-Eddington tradition.

And not being aware that there are these two different traditions, we have relativists saying things to contradict themselves from these two separate traditions.

Whitehead-Silberstein tradition = Newtonian tradition.

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Note: lightspeed here used to mean in vacuum