

Re: the basis of relativity

Source: <http://sci.tech--archive.net/Archive/sci.physics.relativity/2005-05/msg01969.html>

- *From:* "Ken S. Tucker" <google999@xxxxxxxxxxxxxxxxxx>
 - *Date:* 25 May 2005 15:42:11 -0700
-

Baugh wrote:

- > Let me clarify further. My analogy with regard to electrostatic
- > potential was aimed at the point of the relativity being broken by
- > fixing an aspect of the theory by convention. This was in response
- > to your claim that the theory contradicted itself in its practice.
- >
- > With regard to the theory of gravity as I described it. The
- > point is that the equivalence principle states that you
- > can either treat gravity as a "real" force or as a pseudo-force
- > or as a hybrid of the two. You can't distinguish between
- > a "real" gravitational force and a pseudo-force due to curvature.
- > (curving time coordinates is equivalent to accelerating the frame.)
- >
- > It is not completely correct to say gravity is "just geometry" rather
- > one should say gravity is indistinguishable from geometry.
- > It is a subtle but possibly important distinction.
- >
- > Take some solution to Einstein's equations, then perturb the geometry
- > but at the same time "add by hand" an additional field of forces in
- > such a way that the combination predicts particles
- > will follow the original paths. You have the same theory with
- > slightly changed metaphysical interpretation. Since it is redundant
- > it is just as well to only work with purely geometric form.
- > But it is by no means an affirmation of metaphysical facts.

Just a quick input James, been following your posts
and I think you're quite smart!

- > You can look at the perturbative analysis of gravity waves as an example
- > of a hybrid description of both geometric and dynamic components to the
- > gravitational field. You can also look at it as simply "all geometry"
- > but treated perturbatively which is the usual "interpretation".
- > The point is that neither "interpretation" is a true interpretation.
- > The true interpretation is that test particles will go "that-a-way"
- > in the presence of matter distributions as predicted by the theory.

S Weinberg's writes similiar to James about geometrization of

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gravitation, and I rarely disagree with SW. however, we have extreme experimental evidence that only 3 spatial dimensions (by testing freedom of movement) exist. Also, that movement requires a real time.

I respect James and SW's open mindness but I regard that as a dangerous philosophy. It is dismissive of operations in curved 4D, as being real. We've worked hard to define spacetime and we've measured carefully the effects of gravity on light, like deflection, Shapiro, Pound–Rebka, etc...where light defines our viewpoint.

For those reasons, there is no way I'll reconsider the idea of spacetime being an imaginary frame for solving physics problems, spacetime is real. Personally, I don't buy the idea of a slow divorce from reality to suck up some math, on the contrary I would have the logic of math confirmed by Nature, and not the other way around to fit our fantasies...keep that going and we're back to the idiot Catholics who decided creation happened in 4004 BC, and a lot more dummy poop the pope sells to flockies.

I meant that paragraph to be severe, because science must retain a firm foot in measureable reality. Everyone reading this post has access to a clock and ruler, and thus we all share spacetime, that non–negotiable.

Regards
Ken S. Tucker

PS: Once again I think Mr. Baugh posts well.

• *Follow-Ups:*

- ◆ ***Re: the basis of relativity***
◇ *From:* Baugh

• *References:*

- ◆ ***the basis of relativity***
◇ *From:* Neil G
- ◆ ***Re: the basis of relativity***
◇ *From:* Baugh
- ◆ ***Re: the basis of relativity***
◇ *From:* Neil G
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