

Re: Is temporal sign ambiguity inherent in Einstein's general relativistic field equation?

we have no complete consistent model incorporating gr and qt there must be some false assumptions somewhere?

Your comment also contains the implied assumption that we have something to gain by adopting your beliefs, as opposed to vice versa. That assumption can be objectively tested by asking the following questions:

1) Does your understanding contain anything new (i.e. unpublished)?

Yes. Although at the basis of it was stated by Von Neumann has already stated the fundamentals, that quantum logic is a language which tells us what information can be derived from experiment, and Descartes pointed out that position is a relative quantity, I think I have fleshed out that position a bit, and I have certainly made derivations which have not been published. The teleconnection is entirely new, and it is this which leads to most of the verifiable predictions.

2) If so, do those new components allow you to make original predictions?

Yes.

3) If so, have a plurality of those predictions subsequently been independently verified by experiment and/or astronomical observation?

The only problem I have here is with the word subsequent. I have made a number of predictions for which experiments are expected to be carried out within the next few years. Otherwise, in view that predictions have only been made very recently, starting from last year, I mostly have to be satisfied with results from observations which actually predated the prediction, even if I did not know about those observations at the time of the prediction. For example I have predicted that galaxy profiles predicted from lensing would be inconsistent with those from galaxy rotation curves and both would be inconsistent with galaxy evolutionary models. I subsequently searched the literature and found that this is already known to be true. I have predicted that galaxies at high red shift are already much more mature than the standard model would have us believe. I subsequently found that galaxies had been observed at much higher redshifts than I knew, and that the prediction had again been supported.

Otherwise we will have to wait a few years for more observations. It is true that I knew about Pioneer and MOND before making the derivations. But I have predictions that MOND will be violated within the Milky way

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when we are able to accurately plot the speeds and positions of stars at different angles from the earth and the galactic center. We will have to wait until the launch of Gaia in 2011 to confirm that. I have predictions about the pioneer shift which JPL are intending to measure in future tests.

Otoh I am not immune from mistakes. Since putting the teleconnection paper on arxiv I found I had miscalculated the magnitude redshift relation. When I recalculated the relation I had a prediction which I was then able to test against data and I found a better fit than standard. I have not yet replaced the paper, as much of this is ongoing research, so if you do look at it, ask me to email you an up to date copy. The prediction cannot be satisfactorily tested without a number of observations of supernova at redshifts >1.5 ; we don't have yet enough observations to say.

Relational Quantum Mechanics holds that this simple fact is built into the mathematical quantum formalism of quantum theory at a fundamental level.

In that case I reserve judgement, since the philosophy can equally well be applied to excuse sloppy logic, in situations where all observers can't agree.

Indeed. Although I am not sure what you mean by "sloppy logic". I assume you accept that crisp, or two valued logic, does not apply to all sentences in language. But I am not sure that I would say that fuzzy logic is "sloppy", since it is formal mathematical structure. Even more so, I do not think either probability theory (treated formally as a many valued logic) nor quantum logic can be described as "sloppy" since they yield precise verifiable predictions, albeit statistical ones.

The obvious question "How do you know that the events are the same if the accounts are different?" may be with us for some time.

In a sense that is not a question in RQM. I assume that there is a physical universe which is as it is.

That appears to be a classical principle which became untenable when it was realised that the classical 'impartial observer' had to be replaced

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with the modern 'active participant'

The observer is still a part of a universe which is as it is. The point of RQM is that when the fact that the observer is treated as a part of the universe, not as somehow impartially outside of it, then the fundamental principle can be restored.

What an observer can say about it depends on his observations, however.

Nope, It depends on the combined effect of his observations and actions (which amount to the same thing at the QM level). This I can confirm in everyday life, as well as in QM labs.

That sounds like a distinction without a difference to me.

While Rovelli has the merit of pinpointing the issue, a related idea surfaced at around the same time in Hawking's QG work (see [2] and cf. [3] for an instructive example example by John Baez). One might claim that RQM harks back to Kierkegaard's notion of subjective truth, that reportedly influenced Bohr. Among s.p.r. posters, Charles Francis and Thomas Larsson have found RQM inspiring for their QG work.

My own version of RQM is actually based on a principle first clearly stated by Descartes, that we cannot say where something is unless we say where it is relative to other matter,

Of course. This statement closely follows the philosophy expounded by Einstein in the fifth appendix of his popular exposition (1954).

My work is concerned with showing that this philosophy actually accounts for qm as well as gtr. The teleconnection arises from using it to compare remote coordinate systems, following reasoning in many ways very similar to Einstein's arguments about defining the time remotely from a clock. Einstein himself was trying to replace the affine connection, which contains an unwarranted assumption about the behaviour of light.

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together with a recognition that measurement of position is somehow more fundamental than other measurement, since all measurements can be reduced to a measurement of position (e.g. the position of a pointer).

You are doing it again. This latter assertion is extremely tenuous when applied to concepts such as colour, taste,

Even those can be reduced to the position of the relevant sensor in the nervous system.

temperature, and

which is typically measured by the position of the end of a column of mercury or some such.

intelligence.

And how can we measure intelligence without measuring the actions of an intelligent being, for example in terms of the position of the marks he makes on paper in response to an IQ test?

You are therefore in danger of losing more than you gain by reducing reality universally to such a banal level.

It is not my original observation. I believe De Broglie is one of a number of great scientists who have put this forward. Unfortunately I have never had time to research the history of the idea, however so I can't cite references.

Regards

—

Charles Francis
substitute charles for NotI to email

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