Re: Quantum Mechanics: established fact?

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- *From*: srp <srp2@xxxxxxxxxxxxxxx>

- *Date*: Fri, 09 Jun 2006 20:56:22 GMT

T Wake a écrit :

> "srp" <srp2@xxxxxxxxxxxxxxxx> wrote in message
> news:4489AA1D.6090302@xxxxxxxxxxxxxxxxxx
>
> > T Wake a écrit :
> >
> > > In the loosest sense of the word proof, a theory which makes
> > > predictions about something untestable, but has follow on
> > > predictions about things testable is sound.
> >
> > In my book, any untestable conclusion is meaningless to start with.
>
> In itself though, that is an untestable conclusion.

I test it very easily. If something is there, I can scatter something else that also exists against it. If it is not there or does not exist,
then I can't.

Very simple.

> A goodly proportion of ideas and theories come, at some stage, to a point where an
> assumption has to be made.

No assumption other than universal extent need be made if the foundation
of a theory is only verifiable existence through scattering.

> In order that human knowledge advances we have to make some assumptions. For example,
> your criteria remove any ability for science to be conduced beyond the solar system and make
> anything further away than the orbit of the moon difficult.

I don't think so. Since from the start the fundamental assumption would be that the laws of nature are universal.

> > Without this extension to the "proof requirements" we would still be in a lot of quandries regarding the universe.
>
> Well, I disagree. If more focus had been put on _verifying_ what is verifiable, I have a view that we would have more verified data at our disposal.

> Most of the current ideas in cosmology are verified, although I get the feeling you dont agree with the verification process.

You got it. We don't attach the same meaning to verification, obviously.

> For example, the age of the universe has been determined by several methods − each independant of each other and each others underlying physics − and they agree (within error bars of course) to the same approximate age.

All dependant on the GR−DopplerBasedRedShift concept.

Self consistancy is not verification of physical reality in my view.

> > Also, the equivalence principle is something which has to be "assumed" as being true. We can not, ever, test all the laws of physics in every single part of an infinite universe.
>
> The only real assumption that need be made in my view is that the laws of physics are the same all through the real physical universe.

> It is still an untestable assumption.

If coherence of spectral data set is not confirmation, then what is ?

> If you make one, why not others?

I don't think that others are required.

> When you say "real physical universe," what else is there?

Theories and models that are often taken as being the real physical universe.

When I talk about the real physical universe, I am not referring to theories or models, but to the physically existing universe itself that all our models and theories have been attempts at describing.

> This
> is the assumption I made and it means that all fundamental physical laws can be tested locally.

Yes. This is what happens today. We assume that the laws of physics are the same 3x10^100 lightyears away as they are here.

This does not imply that they are the same under different temperatures / pressures though.

Temperatures and pressures can only be the result of the fundamental law of nature being what they are, whatever they are. They are a secondary effect. They can't determine the laws they depend on.

> The downfall of the idea itself appears as you approach t=0.

But it does appear at some point.

Yes. All theories have areas in which they cease to be valid.

The real physical universe doesn't. That's what we need to describe.

> If you go to a time before t=0 then as far as I know, there are no "scientific" theories which can even begin to answer this.
>
> It is almost certain that the models and theories *we* humans use to describe the universe as incomplete and inaccurate.

For now, with the currently integrated verified data, yes.

Tomorrow is another day.

Yes. However, there is no reason to assume humanity will *ever* be able to describe cosmological process in an exact manner.

I not only assume it. I am positive that we will do it.

> We are a part of the whole, tied into three dimensions of movement with time heading in a specific direction.
>
> I am not doubting that with each passing day our models will become more accurate and make better predictions, but this does not have the inbuilt implication that they describe the cosmos in better detail. They still talk about *our* interaction with the universe.

As far as I know, we are made of the same fundamental particles as the rest of the universe and that all obey the same very simple fundamental laws.

I see no reason why we could not eventually clearly understand the whole sheebang.

> > This is because they are, simply put, models. Ascribing too much significance to the detail is, potentially, a dead end. For example, there may well be a cosmological ether, however none of our theories (which have an excellent track record for matching the experimental data) require it and no experiment has detected it. Therefore, with nods to Occam, it is not required for the model.
>
> And therefore, it is not there.
>
> Well. I for one see no reason to believe in an "Aether" (However cranks here choose to call it), however I am also aware of the fact that because something isn't required for a model doesn't mean it is not actually there.

No. What determines that it isn't there is that it is impossible to detect it.

> > That doesn't mean it doesn't "exist" though.
>
> In my book, it does mean exactly that.
>
> Either something exists and it can be verified to exist or else it simply doesn't exist. No Goedel middle ground in physical reality.
>
> Ok. But that is a philosophical conclusion to draw.

>

> If a new, better, theory of Quantum Gravity (for example) was introduced and verified, and found to have an Aether, would you ascribe it suddenly begining to exist?

No. I have verified to my satisfaction that there is no Aether.

> Or would it have always existed, yet not been needed for our models?

Same answer. File closed as far as I am concerned. Not detectable.
Not required. Not there. Non existant.

> A model is a model. It is not reality. It may be an excellent description of reality, but they are different.

Exactly my point. What I think is required is describing the only
physical reality that exists.

> > First off, what if "other stars" have a different composition to our reference stars (within the local group). This is possible (at the extreme of the range of possible things though) but if it is the case then we need to review pretty much all our current laws of physics.
>
> I don't think there is any need to. My view is that an electron here is identical to an electron 1 gazillion light years from here. Same for a proton, same for a hydrogen atom and all other more complex atoms.

> Ok, we agree on that then.

Good. Then we both agree that fundamental physical laws are universal.

> > As these laws function perfectly in all manner of situations on Earth we have no reason to believe the same does not hold true elsewhere.
>
> Absolutely. In fact, it would make no sense if it was otherwise. All spectral data from afar would be meaningless.

> > While there is no _proof_ that stars a million light years away are identical to our Sun, it would take proof for people to think otherwise.

> Then, consider only people who use common sense. That's what I do.

> Common sense is often a bad choice when it comes to looking for guidance in physics.

I don't think so. I think people should trust their common sense more.

> > Next weak point is the Doppler shift. We cant fly a billion light years away and shine a torch at Earth to see what happens but we can look at the physics involved and the equipment we have here. It is possible that the redshift from large scale structures _could_ be the result of little green men abducting the photons and experimenting on them. We don't know for sure. What we can do is experiment.
> >
> > We _know_ that light from the Sun to the Earth is Doppler shifted as the Earth rotates around the Sun.
>
> Yes.
>
> > We know we can create a Doppler shift in light between two locations on Earth and that you can still see the Doppler effect _after_ wavelengths have been absorbed by intervening materials.
>
> Yes.
>
> > What reason is there to think the red shift is anything other than down to the Doppler effect?
>
> The Hubble red shift could also be a mix of real Doppler shift depending on the _real_ relative velocities of each galaxy with respect to us plus some other effect.

> Yet, as we know what would cause the effect

Do we now! We sure think we do, from what you say.

> − and our models show this will make predictions which match the observed data − it seems that some serious proof would be required to include extra forces which are causing the redshift.

What extra forces do you think would be required ? I see no need for

any extra forces.

> In the absence of any reason to think it is something other than Doppler shift, why look for other reasons?

You see ! That's precisely the reason why I will let no one in the community have a say in whether or not my model will make it into the collective consciousness as fast as it possibly can.

I set the agenda on this one. No delays allowed. And already too late for any attempts at recuperation.

> > For example real loss of energy of incoming photons due to some other cause. This has already been considered, but always rejected out of hand because the Doppler idea no doubt was more appealing, particularly since it seemed in sync with GR and more simple to mathematically address.
>
> Well, earlier you discuss the requirements for testable proofs and experimental validity.

Yes.

> We can test, proove and validate the Doppler effect on photons here on Earth.

Yes.

> It seems you are suggesting we search for some "unexplained phenomonon," which we can not create here on Earth, because you dont like the implications of the Doppler shift.

Oh, I do like the implications of the Doppler shift. They are perfectly kosher. What is in question is the so−called Hubble red shift strictly−doppler interpretation.

And I am not suggesting we search for some unexplained phenomenon that we cannot create here on Earth. I suggested verifying a perfectly and very easily explainable phenomenon that can be clarified only by a very simple experiment being carried out in deep space.

Very simple 2nd thermodynamics law application.

> As with the Aether, the model (verified from paralax, spectral analysis etc) implies there is no need to find another reason. They may be one, but the model doesnt require it.

Then the model is flawed.

> By your own assertion, this means there is no other reason.

???

> > Ok. Publish them on a website and wait for a scientist in need of a PhD subject to read them, agree with them, and take it up.
>
> Not likely. Waste of time.

> Why? What is the rush?

There is no rush. It simply is useless and only serves as focal point for futile controversy. Website publication is simply not the way that real knowledge is spread.

> > > I hate red tape.
> >
> > Same here. Wasnt much when I was in academia. (I was still pants though)
>
> > > Second hurdle: there is no way this will be subjected to the whim of insufficiently knowledgeable reviewers.
> >
> > Well this is a problem.
> >
> > In science, if you come up with a groundbreaking new idea you have two choices.
> >
> > 1 − submit it for the review of people who dont understand it as well as you do.
>
> No way.

> > > 2 − keep it a secret and take it to your grave.

> No way either.
>
> The stuff is safely out of the box and safely impossible to repress by anybody. It simply is not yet within reach of the physics community.

Well, generally speaking, very little in science actually gets "repressed."

Exactly. Nothing can. Formal publication is not required.

What formal publication allows is the formal community discussing the issue. Not required either for spreading the ideas.

> If something new and groundbreaking is found then it gets publically debated − despite the best wishes of those who disagree. If a theory is sound, it will survive anything its detractors throw at it. (For example the H. florensis debate)
>
> If it is not sound, no one will be interested.

Exactly. The future will tell.

> > Until you publish, no one will know it.
>
> It is in print. And already fairly widely, however thinly, distributed in institutions all over the big ball.

> That is enough. It will be peer reviewed though, in that your peers (people who are also interested in / studying cosmology) will read it and pass judgement on it. If they like it and agree with what it says, then it will grow.

Absolutely. I simply have no control over the timeframe, nor do I care much. I did what I had to do. The rest is not my baby.

> > Publishing requires peer review otherwise every nutcase would change science every ten minutes.
>
> Well, no peer has nor will review this particular nut case before it eventually climbs the metaphorical leg of the physics community on its own.

> Ok. It is being peer reviewed though, just in a different manner than required for formal publication.

It can be seen like that.

> Despite peoples fears, the peer review process is not as "nasty" as some think. Most people chosen to review a document look forward to learning new things. Let them read it, if they learn and agree your document is sound. If you cant convince them, then you need to rewrite it.

I know the drill. The answer is no. Not this time around.

> As I said, it will be reviewed. When it gets used as a citation you know you have suceeded in getting it accepted.

If and when it gets used as a citation, the orthodox community will have been defeated in maintaining the status quo. And real research will then resume. If I am still around, I will deeply enjoy.

> You can start by describing the experiments you feel would support your ideas.

I have. Exhaustively.

> Ok. Are they feasible? Can they be conducted easily?

> Yes very easy to conduct. The problem is, no one will any time soon, since it based on a model that won't be considered any time soon.

> Well, you would be surprised what people are willing to do as experiments.
>
> Surely the experiment required to validate the model does not require acceptance of the model prior to the experiment though?

I should think not. But I am positive that the community would require such prior acceptance. Grants are not allowed that easily.

> Generally speaking, there are hordes of scientists who would bite your arms off for a head start in re−writing cosmology. The fame and kudos that would attach to

> > such a person are
> > phenomenal.
>
> No doubt. All they need to do as I did:
> isolate the verified data and
> reconsider.

> Ah, this is often not the case. Isolating data is sometimes the
> road to madness. What person A may feel is sufficiently
> isolated may not match person B's opinion.

Who said that B had to agree. You define your own validity criteria.

> Well, this is the problem with trying to "isolate" data from other peoples works. Some one
> may come up with an almost random conclusion.

Not if the criteria are clear and simple.

For example, if you take "scatterability" as an absolute condition
for granting the status of "physically existing" to a particle,
what random conclusion could there be other than "physically
existing" or "not physically existing" for any given particle?

At some point in any sufficient number of attempts, you know
whether or not a given particle can be scatterered against.

> Mine is, if something can be scattered against, it is physically
> there and you can study it, otherwise, it is not there (it does not
> exist, so no need to waste time considering whether or not it may
> exist while not being verifiable.).

> Well, I dont have any problem with this, I think. It depends on your use of terminology being
> the same as mine. Can you scatter against gravity? Can you scatter against the weak force?

No, but I can scatter against the particles that are interacting. The
interaction can then be studied and ascertained. It has been long ago.

> > Not to mention, in Cosmology most of the verified data
> > relies on other theories to support the verification process.
> > We have never had ANY actual contact with anything
> > outside our solar system, so almost all verification is by third
> > party means.
>
> This is not what I call verification. I call verification, verification
> of physical (scatterable) existence. I found that this can occur only

> at the particle level.

> Interesting, yet you miss the fact we verify the particle interactions and scale that up to produce the cosmological data used day in and day out.

I don't think the "scaling" has been done correctly. No re−scaling has been done, for example, since we have found out the internal structure of nucleons. The Pioneer so−called "anomalous" acceleration is directly tied to that faulty scaling, in my view.

> How do you verify gravity exists? On the particle level it is very different to what happens on the big scales.

This is the general view. My model reveals a different picture. Discussed in some other thread lately, mainly with Freddifizzx and also Ken.

> > Every day, in universities across the globe, there are young scientists who are trying to re−write the books on cosmology and the big bang theory. The reason none (so far) have succeeded is that the data supporting the idea is actually quite robust.
>
> My view is that it is because they have been relying on _supposedly_ verified data and on unverified and often unverifiable assumptions.

> Often they haven't. There are a lot − especially undergraduates − who try to recreate from first principles as it were.
>
> The data supporting the theories remains robust though. What is there you dont agree with?

I have no specific point of disagreement. I simply refocused everything on a scatterable only particles basis. I observe the new picture. I do not systematically try to find specific faults in the existing models.

If you have a specific question on some point and if it makes sense to me, I will give you my opinion.

> > Seriously, if you are confident about your ideas then you will find a scientist who will look into it.

> > Well, I have no doubt that this will happen
> > some time in the future.
> > With 3000 copies of my book already
> > flaoting about, this is unavoicable.
>
> Excellent.
>
> > But as I said, I have no control over the
> > timescale.
>
> That is a secondary consideration.
>
> > Yes. The real important consideration in my view is that the community
> > has no control over its spreading either.
>
> Yet the science community has total control.

You are mistaken. Not on this particular issue.

> Without getting scientists "on side" a theory is dead in the water.

Again, you are mistaken.

> Scientists can be recruited to a theory based on successful (reproducible) experimental data,
> or a very sound mathematical model.

Sure.

> If they are not recruited, then how does the theory grow and gain acceptance?

The only requirement is that the new ideas be spread and enter the
collective consciousness. Time will do the rest.

Once an idea has been had, there is no way it can be un−had.

> Despite what is often alluded to on USENET, there is not a conspiracy to keep scientific
> advances hidden

I don't think there is.

> (no, the stone cutters don't exist :−)) − when a new, good, theory appears it spreads. This is despite the best efforts of its opponents (Evolution for example).

That's right. But as I said, I set the agenda on this one.

André Michaud
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