

## Re: Quantum Mechanics: established fact?

---

*Source:* <http://sci.tech--archive.net/Archive/sci.physics/2006-06/msg01201.html>

---

- *From:* "T Wake" <[Usenet.es7AT@xxxxxxxxxxxxxxx](mailto:Usenet.es7AT@xxxxxxxxxxxxxxx)>
  - *Date:* Fri, 9 Jun 2006 22:58:32 +0100
- 

"srp" <[srp2@xxxxxxxxxxxxxxx](mailto:srp2@xxxxxxxxxxxxxxx)> wrote in message  
[news:4489E0C9.8040206@xxxxxxxxxxxxxxx](mailto:news:4489E0C9.8040206@xxxxxxxxxxxxxxx)

T Wake a écrit :

"srp" <[srp2@xxxxxxxxxxxxxxx](mailto:srp2@xxxxxxxxxxxxxxx)> wrote in message  
[news:4489AA1D.6090302@xxxxxxxxxxxxxxx](mailto:news:4489AA1D.6090302@xxxxxxxxxxxxxxx)

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.

But it still rests on a complete assumption. You have no way of testing the validity of that assumption. This makes two untestable assumptions your theory relies upon:

- 1 – any untestable conclusion is meaningless
- 2 – If you can not scatter something against "X" then "X" does not exist.

Re: Quantum Mechanics: established fact?

These are assumptions though.

Also, to some extent, 1 falsifies 2.

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.

The validity of scattering as the only means of a proof of existence has to be proven though – otherwise this is an assumption.

Despite what people want, science has lots of assumptions. You are trying to eliminate all of them and still have two.

In order that human knowledge advances we have to make some assumptions.

For example, your criteria remove any ability for science to be conducted 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.

Ok, but we are still basing this on an assumption.

Most of the current ideas in cosmology are verified, although I get the feeling you don't agree with the verification process.

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

Possibly. What is it in cosmology you feel isn't verified?

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

Re: Quantum Mechanics: established fact?

Re: Quantum Mechanics: established fact?

All dependant on the GR–DopplerBasedRedShift concept.

The Doppler shift is not so much based on GR as the product of several theories (including the fundamentals of EM) and experiements conducted on Earth and within the solar system.

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

Well, it is a start. There is no point verifing theories which are not self consistent.

Nothing about the Doppler–esque Red Shift of light from large scale structures is contradicted by Earth based experiments. In fact, it is supported by the fact we can replicate it on Earth.

What other verification would you require?

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 ?

Well, this is the same data which implies a cosmological red shift and you aren't happy with that. Do you have different standards of verification for ideas you agree with and ones you dont agree with?

If you make one, why not others?

I don't think that others are required.

Ok, but that is an arbitrary choice.

Re: Quantum Mechanics: established fact?

Re: Quantum Mechanics: established fact?

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

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

Which is a mistake.

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.

Ok. I rarely think of a model and the "real" universe being the same. A model is a model. The model spitfires I had as a child did a very good attempt at showing me (aged 8) what a spitfire looked like and what important bits made it up, but they didn't cover the entire spitfire in flight and with a pilot.

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  $3 \times 10^{10}$  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.

However the laws of physics do not depend on our understanding and interpretation to be as they are.

We know that as temperature and pressure increase the effects of certain laws change. Gravity can be overcome by a tiny magnet, yet holds people to the planets surface.

I am not saying the temp and pressure dictate the law, but that our laws are

Re: Quantum Mechanics: established fact?

Re: Quantum Mechanics: established fact?

based on what we have been able to experimentally create at this time.  
Becoming obsessed with the current model as the only description of the universe takes us down a dead end.

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.

Probably not possible, certainly not in my lifetime.

We are part of the universe, we have no way to step "outside" and look in to generate the data required. Even a theory of everything would be simply a model of the universe, not the perfect description of it.

Models just show us what need to know for that application.

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.

Good for you. Personally, I hope not as it will pretty much spell the end of "science."

Re: Quantum Mechanics: established fact?

## Re: Quantum Mechanics: established fact?

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.

Simple isn't the word I would use :-). It took me years to get my head around them.

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

Because we are part of it. We can describe three dimensional objects very easily. It is hard enough for us to explain two or four dimensional concepts, let alone accurately describe how all particles, forces and dimensions interact over all scales, temperatures, pressures etc.

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

Re: Quantum Mechanics: established fact?

detect it.

Until the ability to detect improves I assume? Then was it always there or did it appear?

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 beginning to exist?

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

Aha. So the requirement is to your satisfaction.

You have conclusively proven that no matter what theories are generated in the future and what experiment and equipment becomes available to humanity the Aether will never be detected?

While I agree that there probably is no Aether, that is a bold statement to make. This, by the way, is one of the reasons we will never have a perfect description of the Universe. The Universe doesn't care what we humans can or can't detect.

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-existent.

Not currently detectable is not the same as never detectable.

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

Re: Quantum Mechanics: established fact?

Re: Quantum Mechanics: established fact?

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

Semantics. That is still a model and it is still limited by what it is possible and what it isn't possible for us to detect and determine.

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.

Yes. It is also the basic assumption of GR.

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.

Re: Quantum Mechanics: established fact?

Re: Quantum Mechanics: established fact?

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.

I disagree. I have yet to meet anyone whose common sense was born out repeatedly regarding physics.

In fact, throughout my life, I find that reliance on "common sense" is the cause of more error and problem than anything else.

Next weak point is the Doppler shift. We can't 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?

Re: Quantum Mechanics: established fact?

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.

Yes. Recession of large scale structures.

– 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.

Well, you wrote:

"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. For example real loss of energy of incoming photons due to some other cause."

My use of the word "forces" wasn't in the context of the fundamental forces. However, you call on some unknown aspect of the electromagnetic force when you ask for the photons to lose energy on route. This has been tested for and does not match the observed phenomena.

Despite your demand for clear, proven, theories you have become somewhat vague and "fluffy" here.

We have a theory which matches what we can experiment for on Earth. The theory makes testable predictions about the data we should be getting. The data matches the theory which matches the Earth experiments.

Yet, you dont think this is sufficient and think "some other cause" should be considered.

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

Re: Quantum Mechanics: established fact?

Re: Quantum Mechanics: established fact?

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.

Ok. If the community has no say, it wont get into the collective conciousness. How long has your model been in the wild now?

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

Ok. Your agenda will not get valid work accepted faster than any other. If anything, your agenda creates the image of something which is not able to stand up to rigourous scrutiny.

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.

Re: Quantum Mechanics: established fact?

Re: Quantum Mechanics: established fact?

I am not sure what you are referring to here. I am not sure what you mean with the term "so-called Hubble red shift strictly-doppler interpretation."

Are you talking about  $H_0$ ? Lambda? Cosmological expansion? Recession?

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.

What is the experiment then?

As with the Aether, the model (verified from parallax, spectral analysis etc) implies there is no need to find another reason. They may be one, but the model doesn't require it.

Then the model is flawed.

All models are flawed in one respect or another.

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

???

You stated that if the model didn't require something (Aether in the example) then it didn't exist.

The model for cosmological expansion does not require any other activity to reduce the energy of the photons, therefore your criteria demands that no other activity exists.

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.

Re: Quantum Mechanics: established fact?

Re: Quantum Mechanics: established fact?

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.

Ok. Largely I agree.

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

Exactly. Nothing can. Formal publication is not required.

But, if the theory is sound, it will receive formal publication eventually.

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

True. Ideas can spread in many forms. For an idea to gain scientific acceptance, though, it is slightly different.

If people can not cite the "idea" then it will be phased out of the consciousness eventually. At best, some one else will hear it, reinvent it and claim it as their own.

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.

Yes.

Until you publish, no one will know it.

Re: Quantum Mechanics: established fact?

Re: Quantum Mechanics: established fact?

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.

Ok.

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.

I have never seen the "orthodox community" in science. When I was still  
interested and able to go to conferences there was constant debate and very  
little which could be described as orthodox.

I know of no one active in the physical sciences who is trying to maintain  
the status quo. (Drug reps are a different matter...) Scientific research is  
about finding out new things. All the students studying for their PhDs for  
instance need to add to the sum total of human knowledge. This is not done  
by re-inforcing the status quo.

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.

Students looking for PhD topics get them for all manner of things. What does  
your experiment require?

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.

Re: Quantum Mechanics: established fact?

## Re: Quantum Mechanics: established fact?

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 scattered against.

Ok, I think I can follow this example.

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.

Yet this does not prove the existence of gravity. There are no known particles of gravity – some are theorised but none have been found.

Your absolute requirement for scatterability means gravity no longer exists.

Or is this another loop hole in the requirement for scatterability?

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.

Ok, this isnt quite true though. The internal structure of nucleons has been determined for quite some time (and predicted for longer). What about the

Re: Quantum Mechanics: established fact?

internal structures changes the way things scale up?

How does this answer the "pioneer anomaly" better than any other reason?

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.

Ok. Do you model it as the same as on the large scale then?

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.

What in the picture changes?

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

Why thank you. I would hate to take up your time unnecessarily.

What does refocussing on scatterable particles change about the accepted theories of cosmological expansion?

I have no idea how to make it any more specific at this time.

Yet the science community has total control.

You are mistaken. Not on this particular issue.

Ok. If the community choose not to read your material how will it spread? You refer to the "scientific community" as a single organism, so I am using

Re: Quantum Mechanics: established fact?

Re: Quantum Mechanics: established fact?

the same descriptor when I say you need them (it) to read it and get on board with your ideas.

If not, then it goes no where.

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

Again, you are mistaken.

Ok – having laymen read and agree with a theory is not the way to get it accepted and induce the paradigm shift you look for.

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.

Yet you say this theory can spread and enter the collective consciousness without being read and passed on by the scientific community. How is that?

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.

Re: Quantum Mechanics: established fact?

Re: Quantum Mechanics: established fact?

Really? All you have done is released a publication. That is not setting the agenda in the slightest.

.