

Einstein admits his 1905 special relativity theory is nonsense

Roger J Anderton

R.J.Anderton@btinternet.com

In comments by Einstein it can be inferred that he was admitting his 1905 theory on relativity was nonsense. Refusal to make the correction is the root of all evil and the ruination of physics.

1. Admission by Einstein

Before Einstein 1905 theory there was Lorentz 1904 theory using same maths.

The position of Lorentz was as follows, according to A. J. Kox [1] :

“It is well known that until his death in 1928 Lorentz kept insisting on the usefulness of an ether. In spite of his often-expressed admiration for Einstein's special theory of relativity, he preferred his own ether-based 'theory of electrons'. Lorentz admitted that his theory and the special theory of relativity had the same empirical consequences and that the ether could not be experimentally detected, but he maintained that some kind of ether was needed as carrier of the electromagnetic field.”

So what we have is a different philosophic way of looking at the maths between Einstein and Lorentz.

Now by Mary Thurston [2] in one of the conversations that Einstein has on quantum mechanics:

“The following is an example of a conversation between Einstein and friend Philipp Frank that illustrates Einstein's personal feelings towards emerging quantum theories.

“Einstein: “A new fashion has arisen in physics, which declares that certain things cannot be observed and therefore should not be ascribed reality.”

“Frank: “But the fashion you speak of was invented by you in 1905!”

“Einstein: “A good joke should not be repeated too often.””

So Einstein is referring to the philosophy underpinning quantum mechanics as a “fashion” - and this “fashion” was started by Einstein, and Einstein considered it a joke.

Applying that back to his 1905 theory – he was now considering the philosophy under which that was built as a joke. That philosophy was one of rejecting the ether, and so given he abandoned that philosophy then it is back to what Lorentz was insisting that the ether was existing.

Einstein had apparently thrown away his philosophic interpretation that gave him his 1905 theory of the interpretation of the maths and now had adopted the philosophic interpretation of the Lorentz 1904 theory.

i.e. Einstein's change of mind was that he was admitting his 1905 theory was nonsense. (In next section – Einstein does use the word nonsense with respect to the relevant philosophy.)

Ideally the mainstream should then be adopting the Lorentz 1904 theory instead of the Einstein 1905 theory.

The complications are however as follows:

1. Mainstream wants to endorse quantum mechanics and that means endorsing Einstein 1905 philosophy from which it was built, thus as consequence want relativity still tied to that philosophy – it would disrupt quantum mechanics to change the philosophy behind relativity theory.
2. Einstein changes his mind a lot. Even though Einstein changed his mind- how can we be sure that Einstein was not correct the first time -i.e. with all the changes of mind of Einstein – which change of mind do we take as correct.
3. If its Lorentz 1904 theory and not Einstein 1905 theory, then the wrong person is being declared the greatest genius of the 20th century – Einstein has too many hero-worshippers who would do their utmost to stop a mistake like that from ever being corrected.
4. It would have helped if Einstein had more explicitly stated things, if he changed his mind and thought Lorentz 1904 theory correct over his 1905 theory – that would have been very helpful, but presumably it was a question of ego and he would not have liked to have made that too explicit. So he leaves very much that he did as ambiguous.

So – Einstein admits his theory is nonsense – where does it get us – answer: it is too late the damage has been done, physics has now been ruined.

Einstein of course struggles on with trying to find his unified theory after changing his philosophy from what he had in 1905 after recognising it to be wrong, but he leaves behind a physics community locked into that way of thinking having developed quantum mechanics via Heisenberg et al based upon it, and ignoring Einstein's change of mind and (mostly); ignoring his unified field theory research program as not the way they want to do things.

2. Looking at this dialogue in more detail

Thomas Knierim [3] has the conversation between Einstein and Heisenberg as follows:

“Heisenberg: "One cannot observe the electron orbits inside the atom. [...] but since it is reasonable to consider only those quantities in a theory that can be measured, it seemed natural to me to

introduce them only as entities, as representatives of electron orbits, so to speak."

"Einstein: "But you don't seriously believe that only observable quantities should be considered in a physical theory?"

"I thought this was the very idea that your Relativity Theory is based on?" Heisenberg asked in surprise.

"Perhaps I used this kind of reasoning," replied Einstein, "but it is nonsense nevertheless. [...] In reality the opposite is true: only the theory decides what can be observed."

(translated from "Der Teil und das Ganze" by W. Heisenberg)

Thomas Knierim says about this: "We can easily see the rift between Einstein's intuitive and Heisenberg's empirical approach. Although Einstein's argumentation appears tricky, it is clear that he believes in a reality independent of what we can observe, which is in essence the view of realism. Kant's "thing in itself" comes to mind. - In contrast, Heisenberg believes that reality is what can be observed. If there are different observations, there must be different realities, which depend on the observer. Insofar Heisenberg can be regarded as an advocate of philosophical idealism, which states that the objects of perception are identical with the ideas we have about them. The idealist view denies that any particular thing has an independent real essence outside of consciousness."

It is a clash of philosophies about how physical reality should be interpreted and hence what philosophy should physics be based upon. Of course most physics courses to physics students want to ignore telling them of such a fundamental problem in the understanding of physics.

Knierim says: "The two philosophies seem incompatible at first. Heisenberg is in good company with famous contenders of idealistic positions, such as Plato, Schopenhauer, and Husserl, but so is Albert Einstein. If we take Heisenberg's view for granted, strict causality is broken, or better: the past and future events of particles are indeterminate. One cannot calculate the precise future motion of a particle, but only a range of possibilities. Physics loses its grip. The dream of physicists, to be able to predict any future event in the universe based on its present state, meets its certain death. If we regard reality as that which can be observed by all, we have to find that there is no objective movement of an electron around the nucleus. This viewpoint would imply that reality is created by the observer; in other words: if we take Heisenberg literally, the moon is not there when nobody is looking at it. However, we must consider the possibility that there is a subatomic reality independent of observation and that the electron may have an actual trajectory which cannot be measured. The moon may be there after all. This conflict is the philosophical essence of the Uncertainty Principle."

The clash of philosophies is partly responsible as to why physics can't be unified into its holy grail of unified field theory. The holy grail can easily be found (i.e. Bosovich's theory) but it's not the one they want from their philosophic beliefs so they ignore it.

The same dialogue this time as recorded by Heisenberg [4] and giving a bit more detail:

"For the first time, therefore, I now had the opportunity to talk with Einstein himself. On the way home, he questioned me about my background, my studies with Sommerfeld. But on arrival, he at

once began with a central question about the philosophical foundation of the new quantum mechanics. He pointed out to me that in my mathematical description the notion of "electron path" did not occur at all, but that in a cloud chamber the track of the electron can of course be observed directly. It seemed to him absurd to claim that there was indeed an electron path in the cloud chamber, but none in the interior of the atom. The notion of a path could not be dependent, after all, on the size of the space in which the electron's movements were occurring. I defended myself to begin with by justifying in detail the necessity for abandoning the path concept within the interior of the atom. I pointed out that we cannot, in fact, observe such a path; what we actually record are frequencies of the light radiated by the atom, intensities and transition probabilities, but no actual path. And since it is but rational to introduce into a theory only such quantities as can be directly observed, the concept of electron paths ought not, in fact, to figure in the theory.

“To my astonishment, Einstein was not at all satisfied with this argument. He thought that every theory in fact contains unobservable quantities. The principle of employing only observable quantities simply cannot be consistently carried out. And when I objected that in this I had merely been applying the type of philosophy that he, too, has made the basis of his special theory of relativity, he answered simply: "Perhaps I did use such philosophy earlier, and also wrote of it, but it is nonsense all the same."... ..He pointed out to me that the very concept of observation was itself already problematic. Every observation, so he argued, presupposes that there is an unambiguous connection known to us, between the phenomenon to be observed and the sensation which eventually penetrates into our consciousness. But we can only be sure of this connection, if we know the natural laws by which it is determined. If, however, as is obviously the case in modern atomic physics, these laws have to be called into question, then even the concept of "observation" loses its clear meaning. In that case, it is the theory which first determines what can be observed.”

Feynman [5] echoed this conversation:

“Another thing people have emphasized since quantum mechanics was developed is the idea that we should not speak about those things which we cannot measure. (Actually relativity theory also said this.) Unless a thing can be defined by measurement, it has no place in a theory. And since an accurate value of the momentum of a localized particle cannot be defined by measurement it therefore has no place in the theory. The idea that this is what was the matter with classical theory is a false position. It is a careless analysis of the situation. Just because we cannot measure position and momentum precisely does not a priori mean that we cannot talk about them... ..It is always good to know which ideas cannot be checked directly, but it is not necessary to remove them all. It is not true that we can pursue science completely by using only those concepts which are directly subject to experiment.”

However, despite what Feynman says there are people who try to remove all the unobservables from physics.

Reading Boscovich – he likes to think of observations from the perspective of as God-like observer, and that seems fairly typical in his era. Newton believed in God despite being a heretic etc. But nowadays there is a strong atheist movement wanting such things removed from physics. So in disposing of things like that, they want to go on to dispose of other unobservables such as ether, hidden variable etc., all necessary things required to make the physics more comprehensible; all things of the metaphysical approach to physics. And those with the wrong philosophy don't like that, so try to ignore the metaphysical approach that leads to unification.

3. In 1907 Einstein knew Special Relativity was wrong

Basing this section on Pentcho Valev [6] who collects interesting information highlighting mainstream physics is messed up especially in regards to relativity. The mainstream's response is to just carry on regardless ignoring the mess.

Lee Smolin [7] tells us : “Special relativity was the result of 10 years of intellectual struggle, yet Einstein had convinced himself it was wrong within two years of publishing it. He rejected his own theory, even before most physicists had come to accept it, for reasons that only he cared about. For another 10 years, as others in the world of physics slowly absorbed special relativity, Einstein pursued a lonely path away from it.”

So this Lee Smolin who describes himself as a theoretical physicist tells us Einstein abandoned special relativity as wrong in 1907, but the mainstream carried on adopting it.

When one talks to most Einstein-fans I doubt whether they would accept Einstein abandoned special relativity. It seems a rather deviant thing to claim.

Anyway, in the first section it was explained that the main reason was Einstein was abandoning the philosophy behind special relativity, but mainstream wanted to carry on using that philosophy.

Smolin rather than address the philosophy starts going into the technical reasons as to why Einstein abandoned special relativity:

Smolin: “Why [i.e. abandon special relativity]? The main reason was that he [Einstein] wanted to extend relativity to include all observers, whereas his special theory postulates only an equivalence among a limited class of observers—those who aren’t accelerating. A second reason was his concern with incorporating gravity, making use of what he called the equivalence principle, which postulates that observers can never distinguish the effects of gravity from those of acceleration as long as they observe phenomena only in their neighbourhood. By this principle, he linked the problem of gravity with the problem of extending relativity to all observers.”

So in this scenario – general relativity is a different theory to special relativity; and Einstein abandoned special relativity for general relativity.

That is also deviant to how mainstream wants to deal with it – they tend to want to deal with general relativity as extension of special relativity.

The rest of what Smolin says is torturous, and does not quite agree with how Pentcho Valev wants to proceed, so I will stop there.

The issue is with all these supposed experts in Einstein's relativity is - Smolin was saying contrary to what most of them say in the last bit quoted; they don't all agree to say the same things. So taking what Smolin says and trying to add it to what another supposed expert says and it might not fit together, and we get this amazing collection of contradictions that is called Einstein's relativity as taught to physics students. So you can either -

(a) form a collection of contradictions to highlight all the contradictory things said about Einstein's relativity – and Einstein himself does most of the damage because he changes his mind so much saying one thing one moment and something else the next.

Or

(b) try to collect a series of quotes from supposed experts that do fit together in a way that is more or less not quite so contradictory.

So taking the approach of (b), we take what Smolin just said and don't want the rest of what he said and add it to another small bit of what a supposed expert is saying. And the reason why we do that is to try to create some sense out of what would otherwise be no-sense. If Einstein had not created such a mess, we would not now have this problem of trying to form a sensible series of bits of information together.

And the path that Valev is taking is – he wants to show light-speed (in vacuum) is variable contrary to what is assumed in special relativity.

Special relativity assumes light speed (in vacuum) is constant, so with Einstein abandoning special relativity in 1907 – Valev wants the path that Einstein is abandoning that assumption and going back to variable light-speed which was in Newtonian physics.

So Valev says: “Within two years of publishing" special relativity Einstein realized the speed of light varies with the gravitational potential.”

And the information source he wants for that is -

Quoting John Norton [8] : "Already in 1907, a mere two years after the completion of the special theory, he [Einstein] had concluded that the speed of light is variable in the presence of a gravitational field."

It does not matter what else Norton says, he is trying to fit things together in a different way. The way that we are trying to fit things together here is to go back to Newtonian physics:

With Special relativity – Einstein wanted light speed (in vacuum) as constant and that was the big difference between what he was doing from Newtonian physics. With the abandonment of that “want” then it back to Newtonian physics.

Now onto the maths etc. that Valev gives us:

Valev: “It is easy to show that, if the speed of light varies with the gravitational potential, then, relative to the observer, it varies with the speed of the observer. That is, in 1907 Einstein already knew special relativity was wrong.

“The top of a tower of height h shoots a bullet downwards with initial speed u . As the bullet reaches the ground, its speed (relative to the ground) is:

$$u' = u(1 + gh/u^2)$$

“The top of a tower of height h emits a light pulse downwards with initial speed c . As the pulse reaches the ground, its speed (relative to the ground) is:

$$c' = c(1 + gh/c^2)$$

“Einsteinians admit the validity of and sometimes even deduce the above result.”

Before getting onto what else Valev says, I want to make a few points. With the earth – the gravitational field is directed towards the center of the earth, and the gravitational potential has different values around that centre – in other words its a non-uniform field. In the maths just presented it can be treated as a good approximation for most circumstances that the earth's gravitational field is uniform I.e for a small region around the earth, so then the gravitational acceleration is being treated as a constant value whereas really it would vary by small amounts.

Thus the equation: $u' = u(1 + gh/u^2)$ is best thought of as modelling a point-particle in an idealised scenario. And similarly the equation: $c' = c(1 + gh/c^2)$ is modelling the point-particle of light in an idealised scenario. And the thing to note – really they are the same equation – the idealised scenario for a point-particle under effects of gravity is the same whether that point-particle is made of matter or made of light. i.e both matter and light react the same under effects of gravity – matter varies its speed and light also varies its speed.

This is quite profound because the way that Einstein supporters want to go is to muddle things up with talk of light not having mass and reacting different under gravity and other confusions etc. But under Newtonian physics – light bending under gravity, having speed vary under gravity means that light has mass, because in Newtonian gravity for an object to be affected by gravity it must have mass.

So now back to Valev: “Einsteinians admit the validity of and sometimes even deduce the above result.”

What he is saying is this equation: $c' = c(1 + gh/c^2)$ showing variable light-speed (in vacuum) – some Einstein-supporters get that equation when they are dealing with Einstein's relativity. But often they so confuse themselves they can't understand it clearly in the way it is meant from Newtonian physics.

Valev then quotes from a you tube video [9] where that is presented:

"The light is perceived to be falling in a gravitational field just like a mechanical object would. (...) The change in speed of light with change in height is $dc/dh=g/c$."

Valev picks this up: “Integrating $dc/dh=g/c$ gives:

$$c' = c(1 + gh/c^2)$$

“Equivalently, in gravitation-free space where a rocket of length h accelerates with acceleration g , a light signal emitted by the front end will be perceived by an observer at the back end to have a speed:

$$c' = c(1 + gh/c^2) = c + v$$

“where v is the speed the observer has at the moment of reception of the light relative to the emitter at the moment of emission. Clearly, the speed of light varies with the speed of the observer, in violation of special relativity.”

What these followers of Einstein's relativity are too dumb about is that they often don't realise they have returned to Newtonian physics sometimes with their maths.

Valev then goes on to say: "What Einsteiniana's illuminati really think of special relativity"

The illuminati – the enlightened ones – in this context - he is referring to an inner core (an elite) working in Einstein's relativity who are a bit more enlightened about Einstein's relativity than the riff-raff who enter physics education and are deceived by their teachers as to the true nature of Einstein's relativity. (i.e. its not the illuminati usually referred to in other conspiracy theories dealing with a secret group of wealthy people trying to take over the world.)

He then quotes Joao Magueijo [10] : "Lee [Smolin] and I discussed these paradoxes at great length for many months, starting in [January 2001](#). We would meet in cafés in [South Kensington](#) or Holland Park to mull over the problem. THE ROOT OF ALL THE EVIL WAS CLEARLY SPECIAL RELATIVITY. All these paradoxes resulted from well known effects such as length contraction, time dilation, or $E=mc^2$, all basic predictions of special relativity. And all denied the possibility of establishing a well-defined border, common to all observers, capable of containing new quantum gravitational effects."

Calling – Special relativity – the “root of an evil” is quite appropriate because it is where all the problems of modern physics stem from, as dealt in the first section.

Valev says: “Are illuminati going to officially reject "the root of all the evil"? Impossible. They would rather defend it at any cost. Apart from being "the root of all the evil", special relativity has always been illuminati's money-spinner, and that is the only thing that really matters.”

So the “root of all evil” - the corruption that has affected modern physics – is too heavily defended; the reasons why also dealt with in the first section.

Valev points out that although Joao Magueijo knows that it is the “root of all evil” that even Joao Magueijo will defend it, and says:

“For that reason Joao Magueijo will always teach that the Michelson-Morley experiment has disproved the assumption that the emitter's speed adds to the emitted light's speed, knowing that this is a blatant lie: “

Valev then points out Magueijo is wrong and says: “Cleverer illuminati know that nobody cares what the Michelson-Morley experiment has proved or disproved and accordingly see no danger in telling the truth:”

He quotes John Norton [11] : "The Michelson-Morley experiment is fully compatible with an emission theory of light that CONTRADICTS THE LIGHT POSTULATE."

Also Banesh Hoffmann [12] : "Moreover, if light consists of particles, as Einstein had suggested in his paper submitted just thirteen weeks before this one, the second principle seems absurd: A stone thrown from a speeding train can do far more damage than one thrown from a train at rest; the speed of the particle is not independent of the motion of the object emitting it. And if we take light to consist of particles and assume that these particles obey Newton's laws, they will conform to Newtonian relativity and thus automatically account for the null result of the Michelson-Morley experiment without recourse to contracting lengths, local time, or Lorentz transformations. Yet, as we have seen, Einstein resisted the temptation to account for the null result in terms of particles of light and simple, familiar Newtonian ideas, and introduced as his second postulate something that was more or less obvious when thought of in terms of waves in an ether."

It thus can be looked upon that these supposed experts are deliberately saying different things so that they each have a different collection of truths, half-truths and lies used to cover up the complete truth or they are genuinely confused hence why each of them has their own mix.

4. Observations affected by Belief

So what happened was roughly as follows:

Einstein decided to interpret physical reality from assumptions.

Newtonian physics has variable light-speed.

In 1905 Einstein decided to form a theory special relativity where he changed how Newtonian physics was dealing with light-speed and decided to assume constant light-speed (in vacuum).

So if one measured light-speed as variable then one altered distance and time measurement by gamma factor to set light-speed back as constant.

This led him to make many others changes such as time dilation, length contraction, relativistic mass etc.

He did all this under his 1905 philosophy.

The troubles with this were many; maths messed up etc.

People not understanding what he was doing.

It inspired people to do a similar thing with creating quantum mechanics.

Newtonian physics assumes can know precisely position and momentum of point-particle in its maths model.

Heisenberg changed assumption one looks at physical reality by assuming couldn't do that by HUP (Heisenberg uncertainty principle).

Then had time and energy couldn't know both precisely.

What they were doing was just interpreting physical reality from different assumptions.

While this quantum mechanics was happening Einstein was wandering back to variable light-speed (in vacuum) in context of general relativity, or alternatively try to hide it in space-time curvature etc.

Einstein did not approve of quantum mechanics and rebelled, because by then he had changed his mind about what he was doing in 1905.

But by then it was too late and modern physics had tied itself to the changes Einstein made circa 1905 and refused to make another change. So Einstein's change of mind and Einstein's attempts at unified field theory were rejected, and as much of the results of Einstein were tied as much as possible to his 1905 way of doing things.

The steps of looking at things contrary to existing assumptions of Newtonian Physics was a mess.

And we end up with things like from Heisenberg believing that observations affected by belief – that the moon might not exist when not observed etc., with Einstein saying that's nonsense. i.e. Einstein initiated the changes and then notices and says its nonsense, but by then it was too late because he had locked them into the changes; with undoing the mess being too massive a job.

References

- [1] Hendrik Antoon Lorentz, the Ether, and the General Theory of Relativity by A. J. Kox
Communicated by M. J. KLEIN <http://link.springer.com/article/10.1007%2F978-1-4020-2998-1?LI=true>
- [2] Quantum Mechanics: A Not-Too-Technical Introduction, Marty Thurston
<http://hubpages.com/hub/Quantum-Mechanics-A-Not-Too-Technical-Introduction>
from: Isaacson, Walter. (2007). Einstein: His Life and Universe. Simon and Schuster, NY
- [3] Thomas Knerim <http://www.thebigview.com/spacetime/uncertainty.html>
- [4] Einstein-Heisenberg dialogue a 1926 dialogue presented in Werner Heisenberg Encounters with Einstein <http://www.intercom.net/~tarababe/Einstein-Heisenberg.html>
- [5] from Feynman, Leighton, and Sands The Feynman Lectures
<http://www.intercom.net/~tarababe/Einstein-Heisenberg.html>
- [6] In 1907 Einstein knew special relativity was wrong December 5 2012
<http://www.network54.com/Forum/304711/thread/1354743325/last-1356634401/IN+1907+EINSTEIN+KNEW+SPECIAL+RELATIVITY+WAS+WRONG>
- [7] Einstein's Lonely Path : Surprisingly few theorists have the courage to emulate the master of modern physics by Lee Smolin, |Thursday, September 30, 2004
<http://discovermagazine.com/2004/sep/einsteins-lonely-path>
- [8] What Can We Learn about the Ontology of Space and Time from the Theory of Relativity?
John D. Norton, Department of History and Philosophy of Science, University of Pittsburgh
http://www.pitt.edu/~jdnorton/papers/OntologyOUP_TimesNR.pdf
- [9] <http://www.youtube.com/watch?v=ixhczNygWo>
- [10] Faster Than the Speed of Light: The Story of a Scientific Speculation, Joao Magueijo
<http://www.amazon.com/Faster-Than-Speed-Light-Speculation/dp/0738205257>
- [11] Einstein's Investigations of Galilean Covariant Electrodynamics prior to 1905,
John D. Norton, Department of History and Philosophy of Science, University of Pittsburgh
<http://philsci-archive.pitt.edu/1743/2/Norton.pdf>
- [12] "Relativity and Its Roots" By Banesh Hoffmann:
<http://www.amazon.com/Relativity-Its-Roots-Banesh-Hoffmann/dp/0486406768>