

Dissident at Oxford Relativity course I:

**Review of Einstein's book "Relativity:
The Special and General Theory"**

Roger J Anderton

R.J.Anderton@btinternet.com

1. Introduction

Recently I went on a course at Oxford University for Einstein's relativity. I introduced myself to the other students by telling them I was convinced Einstein was wrong.

A series of articles is now planned based upon my dissent.

Before starting the course, one had to write a review of Einstein's book on Relativity. What follows below is my review with tutor's comments.

2. Review on Einstein's book

Einstein's book is badly written and totally ambiguous. If we seek clarification by looking at the mathematics we find that its just nonsense. (See for example his Lorentz transformations appendix.) For a scientific book we expect something clearly written and defined, with references for further reading. Einstein gives no references to information sources he is using and just acts confused.

[Tutor's comment was that my use of the word "nonsense" was too strong.]

There are popular science books on Einstein's relativity, but they similarly provide no clarification, and often contradict themselves.

[Tutor's comment was that use of word "clarification" was again too strong. He went on to say: "I think you are not always seeing the point they are trying to make – but we need to discuss definite examples."]

[On the course – we went into the issue of examples.]

[His general comment to me was: "Roger, you won't be surprised that I disagree with some of your statements but that is not the main point. It is important that statements are backed up by evidence. You are very consistent about quoting evidence but some of it is incorrectly interpreted. I suggest you make this interpretation the focus of your next essay."]

[On the issue of references. I had provided some references at the end of my essay. But the limits on the size of this essay I was allowed to write limited me to what I was able to cram into this essay. Einstein's book was over a hundred pages, and I would have ripped all of it apart as being nonsense if I was allowed to write a long essay for my homework. On the other issue of misinterpretation – I thought I had made it clear that Einstein was ambiguous, above I had said 'Einstein's book is badly written and totally ambiguous.' So I was not misinterpreting him, instead I was highlighting his ambiguity. However, in discussion with the tutor he admitted to being a great fan of Einstein, and what Einstein had meant to say was clear to him. So we have the clash of two points of view- for the tutor he had a personal opinion on how Einstein should be interpreted, while I was pointing out there were different subjective interpretations of Einstein.]

On page 6 he starts off on what we would now call axiomatics; how from a set of axioms (or postulates) can derive their consequences.

But he is totally unclear as to how he gets Special Relativity from his postulates.

We have as starting point Newtonian physics – which already has principle of relativity then he adds constancy of light.

[Tutor comment on this: “He [Einstein] also extends the principle of relativity.” For this I would agree, but Einstein is completely ambiguous and vague when he extends the principle of relativity; which by the way means changes the principle of relativity from how Galileo was treating relativity. When Einstein tackles relativity he just is not clear on what he is doing. He adds principle of relativity to constancy of lightspeed but is he (a) keeping the original principle of relativity and making mistakes with it OR (b) changing it; if its (b) he is not being clear what changes he is making. I refer you to the main thesis of this article at its beginning: 'Einstein's book is badly written and totally ambiguous.']

He [Einstein] does not clearly explain what constancy of light is supposed to mean. (I will refer to from now on as “constancy of lightspeed” and it probably has provisos with it such as light has to be considered free of influences such as gravitational fields, which he does not state.) He changes the assumption of universal time that exists in Newtonian physics and then sets about other changes, such as changing the meaning of the Principle of relativity from the way it is used in Newtonian physics.

[Tutor comment was “yes”, he agreed on this bit.]

It does not make sense why he is making these changes.

[Tutor comments were: “This is all part of the relativistic approach in general- a kinematical solution rather than a dynamical one.” As far as I am concerned – Einstein does not make this clear as to what he is really doing and he is just a mess.]

If we add constancy of lightspeed to Newtonian physics then we do get certain consequences namely – it does not have same value for all observers, because if object emits light at c (calling c a constant) and moves as v then observe sees as $c+v$, why change from that?

[Tutor's comments on this: “This statements seem to contradict each other.” What I was referring to was a ballistic model of light within the context of Newtonian physics. The tutor – I think is so used to believing special relativity does not appreciate what the idea of constancy of lightspeed would mean in something other than a special relativity context.]

We get no answer from Einstein.

If we try to apply logic- adding the constancy of lightspeed to Newtonian physics he appears to get time as no longer universal; then by logic this in the context of Newtonian physics would mean whatever he meant by the constancy of lightspeed idea is false. He does not however take that option and instead just proceeds with making changes away from Newtonian physics. So he fails to be logical.

Einstein is supposed to come up with Special Relativity from a famous thought experiment of considering himself travelling on beam of light. But in the context of Newtonian Physics with Principle of Relativity, if in your frame travel at c with respect to another frame then you are at rest in your frame and the other frame moves at c .

[Tutor's comment: “No. You need a fundamental rewriting of kinematics – that's what Einstein supplies.” i.e. Einstein just abandons Newtonian physics, and as far as I am concerned it is just not clear what process is for doing that.]

If you emit an object with velocity v in your frame then in other frame you would say the other frame had it as $-c-v$. But Einstein does not do this, instead he makes numerous changes such as relativistic mass (which from it somehow claims an object with mass cannot travel at lightspeed c) and has

relativistic velocity addition and somehow that sets $-c-v$ as $-c$. Why he does that is not explained; but he then proceeds to replace universal time by relativistic time; none of it makes sense.

He totally loses “it” at page 14, up to that page he is talking about Newtonian physics; he explains inertia as : “inertia only deals with constant velocity motion,” and then talks of earth as such a frame.

[Tutor points to the word 'it' and points out: “Not an appropriate description in this context – more analysis needed.”]

But the earth rotates hence is changing velocity! He does not say that treating as idealisation of inertial frame or something like that to make sense of what he is saying; so immediately he is unclear and some sort of correction is needed to what he naively says.

[Tutor points out: “The Earth is approx inertial.” And I pointed out that Einstein’s treatment did not make that clear.]

As we proceed further into the book, the confusions just increase; and that makes it totally unreadable.

Einstein is supposedly the founder of modern physics, and there are numerous textbooks on Einstein's relativity; they are all seeking to make sense out of what Einstein is saying. We do not have adequate information as to whether Einstein agreed with this interpretations of his work, what Einstein gives us instead is cryptic comments such as he no longer understands relativity. [1] This is a totally flawed foundation for modern theoretical physics – the creator admits not understanding “it” and we have no evidence that those attempting to understand it have not misinterpreted it.

Einstein makes it just impossible to follow what he is talking about, he piles one ambiguity on top of another; some

correction is needed again and again, but not knowing what he really meant; its not possible to say what correction is needed at every step.

We look to his maths to make some sort of clarification, but we find that is nonsense.

He informs us:

A light-signal, which is proceeding along the positive axis of x , is transmitted according to the equation

$$x = ct$$

or

$$x - ct = 0 \dots (1).$$

Since the same light-signal has to be transmitted relative to K_1 with the velocity c , the propagation relative to the system K_1 will be represented by the analogous formula

$$x' - ct' = 0 \dots (2)$$

Those space-time points (events) which satisfy (1) must also satisfy (2). Obviously this will be the case when the relation

$$(x' - ct') = \lambda (x - ct) \dots (3).$$

[end of quote]

But all that it gives is: $0 = \lambda 0$

Proportionality between nothing and nothing is meaningless! i.e. his derivation of equations is meaningless.

He says though—

“... is fulfilled in general, where λ indicates a constant ; for, according to (3), the disappearance of $(x - ct)$ involves the disappearance of $(x' - ct')$.”

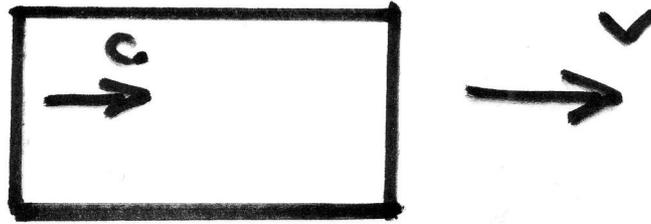
So he is thinking in terms of $x - ct$ not being zero in general and $x' - ct'$ not being zero in general, but he is going by lightspeed constancy it then means $x - ct = \text{some value } A$ then $x = ct + A$ i.e it a velocity greater than c , which contradicts his supposed theory!

[Tutor comment: “No, this formulae are to be interpreted in terms of analytic geometry. They express relations between sets of lines described in different coordinates and hence relations between the coordinates. Themselves similar (but different) relations will arise in any theory of relativity.” When we met we discussed this issue. Tutor thinks in terms of coordinates, but even in that way – the coordinates represent distances and 'nonsense' arises in what Einstein is doing. I should have supplied a reference – such Aleksandar Vukelja “Mathematical Invalidity of the Lorentz Transformations in Relativity Theory” at:

<http://www.wbabin.net/physics/vukelja1.pdf>, where Vukelja goes into a lot more detail about Einstein's mathematical nonsense. In the case of the tutor he seems to prefer to believe in the nonsense and not accept it is nonsense, and then proceed to mess up about coordinates and distances. This is a fundamental disagreement between us. As to the value of “A” the tutor points out it is zero, but that is only from his subjective interpretation of special relativity as far as I am concerned. Surprisingly that is then the end of his comments.]

Professor Ohanian points out in his book “Einstein's Mistakes” [2] - that Einstein's maths is a mess. And as earlier noted Einstein did not understand what the mathematicians were doing in trying to correct his mistakes.[1] So some attempt at correction to Einstein is going on.

If we try to make sense of the maths then what we seem to have is:



Light bouncing between two ends of a box, first covering distance $(c - v)t$ as observed by someone looking at the box travelling at velocity v , then the light hits the side of the box and bounces back covering distance $(c+v)t$ this then gets multiplied together to give $(c-v)(c+v)t^2$ equated to $c'^2 t'^2$

$$c'^2 t'^2 = (c^2 - v^2)t^2 \quad (4)$$

Einstein seems to assume $c' = c$

then we have after dividing through by c^2

$$t'^2 = (1 - v^2/c^2)t^2$$

and square rooting gives time dilation equation

$$t' = \sqrt{1 - v^2/c^2} t$$

(Usually written the other way as $t = t' / \sqrt{1 - v^2/c^2}$.)

But by Newtonian physics (4) would be $t = t'$ instead of $c = c'$ then have

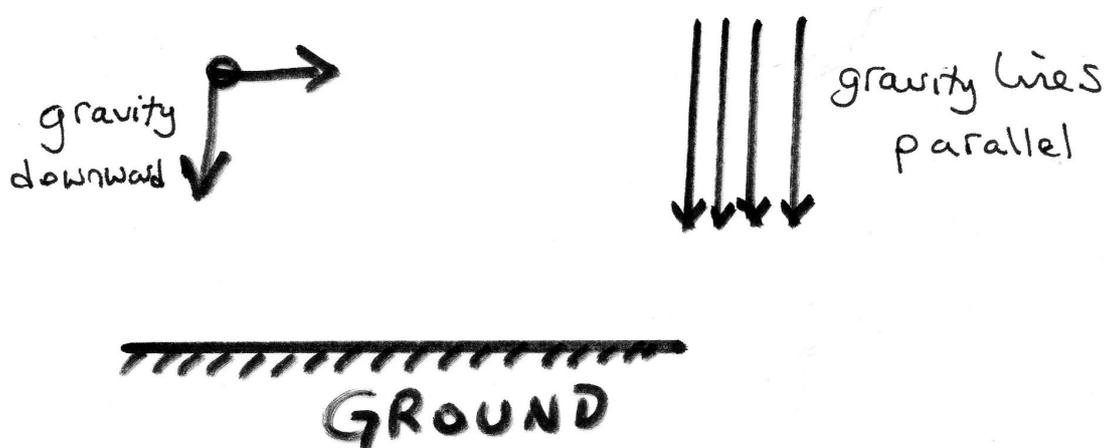
$$c' = \sqrt{c^2 - v^2}$$

Why Einstein decides to abandon universal time and hence how Newtonian physics deals with (4) is not clear, and it leads to all the paradoxes such as twin paradox when he hides variable lightspeed as variable time. Also in general Relativity he seems to bring back variable lightspeed anyway. So the

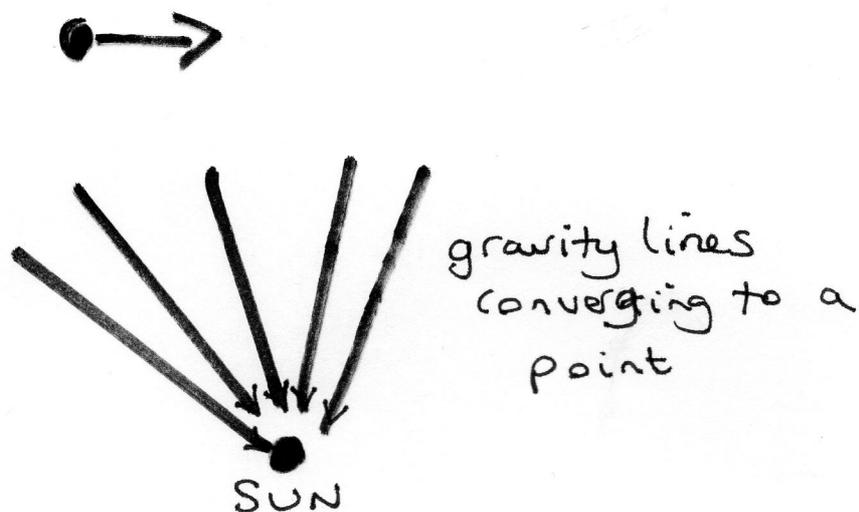
whole issue of constant lightspeed seems a diversion which he abandons.

When we go to the light-bending of 1919 that supposed proved Einstein's general relativity, we find that it can be accounted for by Newtonian physics.

An object travelling like this:



Gives certain angle of light bending. But when we have light passing by a point-source such as:



Then we get twice the bending.

So when Einstein says that Newtonian physics gives half the value of light-bending as it goes by the sun, his calculation is probably wrong as per the first set-up. He does not say how he gets his calculation from Newtonian physics, but it seems to be just another maths mistake by Einstein, because when I do the calculation – Newtonian physics gives full value of observed effect.

Einstein's works are incomprehensible and so should have been dismissed as nonsense. But as McCausland [3] notes the incomprehensibility had the opposite effect: “ the apparent incomprehensibility of the theory, which made those who claimed to understand the theory appear to be extremely clever.” And that leads us to numerous people who think they understand it and hence try to make sense of Einstein's incomprehensible works. (Such as those who think Special Relativity is just assumed because it appears to fit with Maxwell's theory. But that goes completely contrary to what Einstein is trying to do in books such as these where he seems to be trying to derive the theory instead; but being totally flawed.)

Einstein demonstrates an inability to think logically, an inadequate understanding of Newtonian physics and lack of mathematical skills. It appears therefore that Einstein's relativity is thus just one vast collection of mistakes. So I would like to know why is it still taught?

References

**[1] Einstein quote: "Since the mathematicians have invaded the theory of relativity, I do not understand it myself anymore."
<http://www.great-quotes.com/quote/16627>**

[2] Einstein's Mistakes: The Human Failings of Genius, Hans C Ohanian, Physics Professor.

[3] From from: Journal of Scientific. Exploration, Vol. 17, No. 4, pp. 715–732, 2003, The Einstein Mystique, Ian McCausland.

[Extra information on bending of starlight in Newtonian gravitational context is of course given in my previous articles at General Science. At the course I presented the evidence of Einstein being bad at math and other evidence from various people's articles. The tutor was dismissive of these, and as far as I was concerned him - being a fan of Einstein was influenced to be bad at math in a similar way.]

c.RJAnderton16-07-2011