Valerie's Online Discussions Concerning Relativity

From My Posting Career (MPC)

March-April 2015 (Val writing from school—in the spring of her junior year at Penn State)

VAL (plain text): deutschephysik ist korrect. There are actually two independent explanations of how the null Michelson-Morley result can occur with an aether: one is Lorentz contraction of the arms of the interferometer, and the other is Stokes' entrained-aether hypothesis (that the Earth essentially drags the aether into its motion, so there is no 'aether wind' on the surface). The existence of the luminiferous aether has in fact never been disproved; it was merely abandoned in favor of turning physics into a spiritualistic game of talking only about 'observers' and correlations between their 'observations' instead of trying to causally understand the physical cosmos in which we exist (tl;dr: sucking Einstein's cock). This way of doing physics is exactly what inspired the probabilistic, observer-centric nature of modern Quantum Mechanics.

In fact, relativity doesn't make any sense - it's logically inconsistent, hence all of the 'paradoxes', which are all 'resolved' by surreptitiously reintroducing the aether in the form of a third frame. But nobody dares question the Jewish god Einstein, lest they lose their career (as Paul Marmet did: http://www.newtonphy...nfo/author.html). As deutschephysik said, Einstein's Special Relativity is nothing but Lorentz ether theory, except the ether - the physical cause of time dilation, length contraction, etc. - has been removed, leaving the theory devoid of physical content. The GPS system can be completely explained by and in fact requires, the existence of a luminiferous aether, as long as the aether is 'flowing' into the Earth in a certain way.

I am not trolling. Please explain why I'm wrong in addition to calling me funny names. I too would like to believe that physicists know what they're talking about - just like government officials, and climate scientists, and academics in general "know what they're talking about". Do you seriously believe that particles do not exist in a definite state until they are observed, or that we live in a hologram universe, or that space does not exist independently of time? Physicists are just as unthinking and submissive to authority as everyone else.

Ever since the inception of relativity and quantum mechanics, there's been a massive underground community of people who know there's something wrong with them. I can provide plenty of links to physics "crackpots" from the early 1900s to now. Relativity and QM have produced countless paradoxes and the physics community still publicly professes that nobody understands them (which should be extremely alarming at the least). Why isn't there just as much controversy surrounding chemistry or mathematics, for example?

Pleasureman: *Until you can prove aether exists in a way easily tangible to me, I'll go on thinking you're a crackpot. So will everyone else.*

No problem, I'm working on it. I'm a soon-to-be-PhD student in physics and mathematics. There are many problems in physics that essentially prove there must exist some type of ether (stellar aberration

and the twin paradox are two examples). However, I do know of an experimental test that would settle the matter, at least for the specific type of aether theory that I hold, and I plan on carrying it out. Thanks for not being completely dismissive, I don't expect to convince anyone until my thesis gets written.

It doesn't really matter that 'the Jews did it'; in fact, Einstein's observer-based view of reality was inspired by earlier, predominantly Christian philosophers, such as Bishop Berkeley and Ernst Mach. His basic epistemological error goes back centuries before Judaism ever existed. I just thought it would be an interesting bit of history, seeing as this is a niggerdeathing forum.

[quote name='Coutural Marxist' timestamp='1425537849' post='198483'] *>>A question for you. Relativity brushes away the "absolute frame of reference" with respect to velocity; two observers moving at different velocities each have their own frame of reference. But it does not brush away the "absolute frame of reference" with respect to acceleration and the higher-order derivatives of position; Newton's First Law (momentum conservation) only works in an "inertial frame of reference", and the rules all change in "accelerating frames of reference". So I've always wondered if they really didn't get rid of the aether; they just got rid of its velocity. Perhaps the aether ought to remain as a fixed standard for measuring the acceleration (and higher-order derivatives) of each frame of reference.*

>>Do physicists address this? Do they hand-wave away the acceleration? How exactly do they define "aether" so that Newton's First Law isn't evidence of "aether"?

VAL: You are correct. Einstein actually tried to relativize acceleration and rotation as well with GR in order to eliminate the absolute frame. But he failed, as proven by the existence of gyroscopes and accelerometers. Most physicists will just say “acceleration is absolute” if you ask them this question. I tried pointing out to one of my professors that this implies the existence of a special frame, as you said. He waved his hands very hard, and eventually he tried to argue that in relativity, you can accelerate “relative to yourself” without there being a frame in which you’re accelerating. This is obviously BS, but I need a little more math before I can prove it’s wrong.

However, SR actually fails to relativize velocity in the aether as well. This is shown by the phenomenon known as “stellar aberration”. I will take the liberty to explain this because it is an obvious disproof of the principle of relativity. In fact, I have challenged several PhD physicists and astronomers to explain to me how this doesn’t contradict relativity, and every one of them failed and referred me to someone else until I ended up at the Olympic hand-waver I mentioned earlier (who also failed, but didn’t admit it).

Because of Earth’s orbital motion around the sun, the light we receive from the stars is “aberrated” – it looks like it’s coming from a different direction than where it actually came from (for exactly the same reason that walking through the rain makes the rain look like it’s angled towards you). And since the Earth changes direction in its orbit, makes it look like the stars execute nice little elliptical orbits in the sky once every year.

According to SR, the aberration effect should only depend on the relative velocity between us and the star. But we know there are binary stars in the sky which are orbiting each other at very high velocities –

much faster than we are orbiting the (Sun). Therefore, there is a very large relative velocity between Earth and those stars, and we should see the stars fly around wildly in the sky in ways that violate Kepler's laws of orbital motion. This is proven mathematically in the paper "Aberration of Light from Binary Stars – a Paradox?" by Edward Eisner (I can send it to you if you don't have access to it). The fact that this doesn't happen shows that aberration only depends on the observer's velocity in some special frame (in this case, the Sun's frame), which violates the special principle of relativity.

By the way, LET and SR actually do make different predictions – the Wikipedia article is incorrect. They use the same equations, but these equations are applied differently. In LET, motion through the ether (not relative motion of source and observer) is the cause of length contraction, time dilation, the aberration of light. This resolves the twin paradox immediately. It may be true, however, that some effects still appear to be relative – I'm still working this out.

>> However, special relativity leads to general relativity which has also made observable predictions about the physical universe that I've yet to see anyone explain from the perspective of ether theory. So while I have plenty of problems with modern physics, it seems really odd to me to throw out its accomplishments in favor of an instrumentally sound theory that (1) isn't as developed and (2) doesn't hold up well against Occam's Razor, which is a pretty good rule of thumb when evaluating two instrumentally equivalent theories (which LET and SR aren't exactly, because—as I mentioned—SR leads to GR).

Actually, this is not well known, but there is an aether theory that perfectly reproduces the most important predictions of GR (and it might reproduce all of GR's experimentally verified predictions – I am working on figuring this out), and gives an extremely simple physical explanation for why they occur. It is known as flowing space. Almost immediately after Einstein published his General Relativity, some physicists realized that GR solution for a massive spherical body (i.e. the Earth) is mathematically equivalent to an aether model known sometimes as "flowing space". In flowing space, the aether is flowing radially into the Earth at the escape velocity, and is also accelerating into the Earth at the gravitational acceleration (a = GM/R^2). In other words, the reason why you feel gravity is because you're accelerating through space at the gravitational acceleration rate. You're also moving through space at the escape velocity. This very simple idea, combined with Lorentz aether theory, immediately reproduces many "relativistic" effects of gravity, such as the Schwarzschild radius (e.g. of a black hole) and gravitational time dilation with nothing but high-school level math. Many people have come up with it independently. You can read more about it here: http://henrylindner.net/Writings/BeyondNewtonPE.pdf (I promise I didn't write this paper.)

>>what do QM or relativity have to do with political ideology? math is math is math

Math is math, but math is not physics. There are many examples of different physical theories that are mathematically equivalent, and may even make the same quantitative predictions, but are vastly different in how they allow us to understand and explain the cosmos. For example, I don't think Newton would have ever discovered his law of gravitation if he was using the Ptolemaic, instead of the Copernican, model of the solar system.

>>I know you're being tongue in cheek but Germany might well have had nuclear bombs before America if not for that Jewish Physics BS. Several of these "theoretical" physicists you name made huge contributions towards making nuclear fission practical.

I agree with deutschephysik's answer to this, and I will add that one can get pretty far in physics just by doing experiments and finding equations that make correct predictions. But unless you understand what your equations are telling you about the how the physical world works, you'll hit a dead end at some point – which is what has happened to physics in recent decades. Remember, slingshots were invented long before Newton's laws.

>>well, "particles not existing in a definite state until you observe them" is a stupid strawman but i'm guessing you knew that

What are you talking about? What I said is one of the foundational concepts of quantum mechanics. Do you think a superposition of states is a definite state? If so, you're rewriting the English language. If not, maybe you think it's just accounting tool and does not represent physical reality, in which case I agree with you, but this is not the mainstream interpretation of quantum mechanics.

>>In fact, it is true to an extent that the aether has never really been removed. Instead of a real aether, today we tend to speak in abstract terms of space-time that curves, electromagnetic fields, and such. These things to me just look like aether through a jumbled set of lenses. This is a big reason I tend to like the aether idea. It gives a real physical framework for behavior that we see, and gets rid of a lot of nasty question marks like action at a distance.

Well said deutschephysik. Not to mention all of the other aether substitutes that have popped up lately in the form of 'properties of the vacuum' or space-filling fields/phenomena, such as the zero point energy, quantum fluctuations, dark energy, dark matter, the Higgs field, inflatons, virtual particles…

[quote name='Jan Banan' timestamp='1425812038' post='198711'] You are saying a 1967 paper, about a relatively :rolleyes: obscure phenomena, (aberrated light from binary stars) is the linchpin of "proof" that relativity is BS? [/quote]

No, this is only one of many phenomena that on their own disprove the special and/or general principles of relativity. Now you're wondering, why the hell wasn't relativity abandoned a long time ago if that's the case? Here's the problem: relativity is not self-consistent.

Physicists think that relativity gives the same results no matter which observer's frame you choose to do your calculations in. That's the whole point of "relativity" and that's why it's called relativity. But it actually doesn't give the same results. An obvious example is the twin paradox, where you get contradictory answers depending on whose frame you pick: from each twin's perspective, the other twin has aged more at the end of the trip. The way relativists "resolve" this paradox is the same way they sweep all the other paradoxes, and phenomena that contradict relativity, under the rug: they just choose the right frame to do their calculations in, or surreptitiously introduce the right frame somewhere in the calculation, usually calling it the 'inertial frame' (with respect to what?) or the 'most

convenient frame'. In the twin paradox, they simply choose frame of the twin who is stationary on the Earth (sometimes hiding this action with pages of excessively complicated math).

In all cases, the 'correct frame' in which calculations work out is that which is stationary with respect to the Earth, the Sun, or the stars and galaxies in general. (This tendency has been noticed and titled "Mach's Principle".) Flowing space explains why you need to choose these frames: massive bodies condition the space around them, dragging it along with their motion out to some distance (G. Stokes' aether dragging hypothesis).

This is why, as Arthur Eddington famously admitted, effectively nobody understands relativity. It is logically inconsistent and produces contradictions unless you choose *the aether frame*. It is logically impossible to resolve the twin paradox without contradicting relativity: the twins' trajectories are identical in each others' frames, so they must see identical results – each sees the other twin as having aged more. Physicists don't notice these glaring problems because if you show them a calculation that give the right answer, they assume that means "the theory is correct" as some of you lads have done, even if the result of the calculation contradicts the theory (as in the twin paradox) and even if the theory produces other calculations which contradict each other. They think math can make any problem go away.

Additionally, physicists, like everyone else, have an aversion to questioning authority due to decades of schooling. If relativity doesn't make sense to them, they assume it's because Einstein and/or their professors are so much smarter than they are, so they keep their mouths shut in fear of exposing their stupidity. Schooling (and academia in general) rewards them for repeating what they were taught, not for questioning it.

[quote name='Jan Banan' timestamp='1425812038' post='198711'] BTW, if this is a Jewish conspiracy why are you quoting a paper by a guy named Eisner? Any relation to Michael? :jewpuppet: [/quote]

It's not a Jewish conspiracy per se – Jews don't even understand the problem in physics themselves. They just helped popularize Einstein's approach to physics and suppress the opposition, purely because he (and most of his quantum mechanics buddies) was Jewish. Most of the insanity after that has been the work of dumb confused goyim and lots of equally confused Jews like (probably) Eisner. The article Horrendous Thinspiration linked (which is excellent) addresses one reason why this confusion continues unabated.

[quote] You have this backwards. The reason physics is in the doldrums is because it's mired in complex theories that DON'T make any testable predictions like string theory, multi-universe bifurcation, etc, they are explaining after the fact, which any old hypothesis can do. [/quote]

That's part of the reason, but it's not the fundamental problem. Relativity and quantum mechanics were designed for the purpose of only accounting observable phenomena, not explaining the unobservable physical processes which produce them. Modern physicists are unaware of this, and they want to actually understand the physical world. So, they're stuck trying to do something that they have no business doing whatsoever.

It also has to do with the nature of science itself. Think about how you guys on MPC come up with explanations for what you see, such as the feminism problem, the US perpetually serving Israel's interests, etc. Do you use the scientific method to form hypotheses, then perform experiments and test their predictions? No, you choose the theory that explains the most facts, is the most consistent with all other knowledge, and does so logically and with the fewest ad hoc hypotheses. This has nothing to do with science or the scientific method – it used be known as philosophy, before philosophy became a disgusting academic circlejerk. Physicists have forgotten how to do this because they have relativity and QM as their prime exemplars of how to "understand the universe" when in fact they accomplish no such thing.

Science is actually a much more limited intellectual tool. I could explain this much more clearly but this post is horrendously long already. It's not something I pulled out of my ass either; Francis Bacon understood this very well and wrote at length about how science without natural philosophy is inadequate for understanding the world. But guess what, people who can't get into philosophy are much more obedient and easy to control because they can't think for themselves, which is why science has been favored over its much more powerful progenitor. Again, I didn't make this up; some of the people who created modern institutionalized science have said things along these lines.

[quote] The thing about differing theories is that they are going to make differing predictions and that's how you test which one more accurately describes reality. When you talk about a theory that's been around almost as long as relativity and explains everything relativity explains but is somehow obscure my bullshit meter goes to 11.Make some predictions, test those predictions, then we'll talk. Relativity did that over and over again, most famously when that crypto-Jew Sir Arthur Stanley Eddington performed relativity's experimentum crucis during the 1919 solar eclipse. Einstein became the God of physics that no one dared criticize after Gullstrand dared to criticize Einstein to the point of denying Einstein the Nobel because of his own pet 'flowing space' hypothesis, that no one has ever heard of, but explains everything that relativity does with much simpler math, but has never made a testable prediction because of a giant Jewish conspiracy? [/quote]

Relativity in fact does not explain anything. It is a mathematical model that makes predictions about measurable quantities. Saying that gravity is caused by spacetime curvature is a tautology – 'spacetime curvature' is just the way that relativity describes the kinematic effects of gravity. It's like saying that F=ma is the cause of inertia. No, it's an equation that describes inertia by defining it as proportional to an invented entity called "force" – it doesn't explain it. Again, physicists don't understand this distinction.

As I mentioned earlier, relativity has been contradicted by experiment numerous times (I can provide you with papers and/or more descriptions if you're interested). Aether theory, on the other hand, gives real physical explanations for the successes of relativity, and it makes additional predictions which have been verified by the experiments which contradict relativity. I am interested in testing further predictions it makes which are different from those of GR.

It's not true that no-one has ever heard of flowing space. In recent years I have often seen physicists invoking it merely as an 'interesting way of thinking the physics of black holes (here's an example:

http://jila.colorado.edu/~ajsh/insidebh/waterfall.html). The GR result for the radius of a black hole takes several pages of math in GR, but it's well known that it can be obtained in one line by setting the escape velocity equal to c. That's exactly the explanation for black holes in flowing space – space is flowing in at faster than c. Also, academics and various other people, e.g. GPS experts (such as Ronald Hatch, who has written extensively about how the GPS system contradicts GR) and engineers with free time, have been writing about flowing space for decades.

Anyways, I can't blame you for not believing what somebody on an internet forum tells you, which is why I'm working on solving this problem from within academia. I will let you know if I get BTFO'd by some professor who proves that relativity was a correct physical theory all along. So far they've wasted every chance at doing so.

[quote name='dain' timestamp='1425583713' post='198541'] *besides, you're being completely incoherent. jews are pushing dubious interpretations of quantum mechanics so they can .... ? what? [/quote]*

I think Jews only got involved because Einstein, who got this trend going, happened to be Jewish. There was a great deal of opposition to relativity and to the hokey pokey quantum mechanics stuff when it first appeared. For example, Einstein didn't get the Nobel Prize for GR because Alvar Gullstrand, who was on the prize committee, was unsatisfied with GR. Incidentally, Gullstrand was one of the first people to discover the 'flowing space' formulation of GR that I mentioned earlier. Einstein then became the god of physics who no-one dares criticize, which is one of the reasons why physics is trapped in the observer-centric, positivistic confusion that he helped create.

Furthermore, this didn't all come from Einstein – as I mentioned earlier, subjectivism in physics had been around for a long time. A physics that only talks about observers and mathematical relationships has appealed to many people throughout the centuries, I think because of the old "God of the gaps" problem – if you give physical explanations for everything that happens, there's not much room left for the Holy Spirit. If I recall correctly, the bishop George Berkeley was so uncomfortable with Newton's physics that, in his essay "De Motu", he accused Newton of atheism for postulating a mechanical universe in which God plays no direct role.\\\

Diogenes' Tub, from your post it seems like many of the issues you take up with the paper would be resolved by reading his earlier paper, which goes into more depth with the historical and philosophical issues and in particular explains exactly why relativity is subjectivistic. You can find it here: http://henrylindner.net/Writings/BeyondConsc.pdf

I find your claims that relativity is a physical theory which describes an objective cosmos highly dubious. First of all, my earlier discussion of the twin paradox shows that relativity describes different universes for different observers – in twin A's universe, twin A has aged more, while in twin B's universe, twin B has aged more. So at the very least, relativity does not describe a single objective universe. Moreover, in the postulates of SR, there is no mention of the Cosmos or any Cosmic frame. GR was an attempt to also relate acceleration and gravity to any arbitrary frame—it never did work as such. It became instead a model of space and its effects, with the physicality of space suppressed in favor of an observer-based measurement model.

If you want to claim that relativity is an objective physical theory, you would have to show how relativity answers the following questions: What is the cause of inertia? What resists matter's acceleration? Can it be mere coincidence that both the ballistic and relativistic aspects of gravity are correctly modeled and explained by the flow of an inertial-electromagnetic space into matter? Why are acceleration and rotation absolute—not only inertially but luminally? How is their absolute, observer-independent nature consistent with Relativity?

[quote name='Diogenes's Tub' timestamp='1425970584' post='198923'] *How is space not a substance in GR? GR's conception of spacetime is pretty robust, and it isn't space that's reduced to a mere mathematical postulate so much as it is time, which was exactly Einstein's point. [/quote]*

I do not see how one can claim that relativity reduces time to a mathematical postulate, but not space. Time and space are treated almost symmetrically in relativity, or at the least they are treated in equally unphysical ways. And besides, if space is indeed a substance in GR, then why aren't we trying to relate acceleration, light's velocity, and all other physical phenomena to space rather than to observers or arbitrary frames?

[quote] Einstein is hardly less mechanistic than Newton; his unease with the non–deterministic elements in quantum mechanics is proverbial for a reason. He wasn't keen on subjectivism, either— there's a real difference between postulating "frame of reference matters" and being a subjectivist. This sort of rhetoric is actually representative of my biggest issue with the passionate anti–relativity crowd: They seem in search of dragons to slay and aren't really too concerned with whether or not they've found a real one, first. (That and the fact that a lot of anti–relativity stuff online reads only slightly–less schizoid than Gene Ray.) [/quote]

Yes, Einstein was completely deterministic, but he was not objectivistic. Actually, to my understanding the only reason Einstein was uncomfortable with quantum mechanics was that it was a non-deterministic subjectivistic model, as opposed to his deterministic subjectivistic model. He believed, not in the existence of a physical world, so much as a matrix of deterministic rules and entities that determine what observers measure. He disliked quantum mechanics because it only acknowledges the existence of the observer and his measurements, and the outcomes of those measurements are determined by probabilistic, not deterministic, rules (hence Einstein's objection that "God does not play dice"). This is made quite clear in the paper linked above.

[*quote] I'm familiar with flowing space, but as I understand it it only works with a subset of GR's predictions and not to the same degree. I also generally agree with the skepticism expressed by Jan Banan here on this score.[/quote]*

I know of one paper which claims to mathematically prove that all of GR can be reformulated in terms of flowing space. It's called "The Physics of a Metric Space with a Time Variable" by Robert Kirkwood. It's pretty mathematically intensive though, so I haven't yet been able to check his calculations myself, but I will do so as soon as I am able. Also, as I explained earlier, flowing space has made additional predictions which have been verified by experiments – the same experiments which contradict relativity.

Keep in mind also that some of GR's predictions have not even been tested. In fact, going back to SR, there hasn't even been a single direct experimental observation of length contraction (see here: http://www.edu-observatory.org/physics-faq/Relativity/SR/experiments.html). This means that one of the foundational pillars of relativity (namely, the invariance of the spacetime interval) has no basis in experiment.

[quote]As for the paper… as someone who is more Aristotelian than not, I'm sympathetic to the motivations behind a lot of the arguments, but a lot does not seem to be following. (This makes the Berkeley claim even harder to swallow; and while it's not impossible that certain aspects of Einstein's theory have their roots in Berkeley, this is a bit of intellectual genealogy I've never seen worked out, so the lack of a priori coherence makes me wanna call BS.) [/quote]

I'm pretty sure I have seen respected sources claim that Einstein was influenced by Berkeley (and the Lindner paper I linked to certainly provides plenty of citations for this claim). (Henry: Karl Popper wrote "A Note on Berkeley as Precursor of Mach and Einstein" in his Conjectures and Refutations.) Even the Wikipedia page for Berkeley's De Motu at least calls him "a precursor of Mach and Einstein". Anyway, it's not terribly important.

[quote] • He mentions Newton's speculation that gravity was caused by the flow of space into bodies, which is generally seen as a pretty good description of GR in the terms of Newtonian mechanics. He manages to write a sentence like the following soon after: "Einstein's principle of equivalence thus directly implies that Newton's space is not an absolute solid but a fluid that accelerates towards matter." Do we only take metaphor seriously when we don't like who is using it? [/quote]

Not sure what you mean by that. All he's saying is that, if we postulate that acceleration has physical effects only when it is acceleration relative to space, then there is an obvious physical explanation for why Einstein's principle of inertial and gravitational acceleration works: in gravity, we are accelerating relative to space.

[quote] • There seems to be a conflation of the theoretical entities necessary for the working out of the theory with the actual claims of the theory (or set of potential claims). This is kind of like confusing a thought experiment for an actual description of the universe. [/quote]

So what would you say is Einstein's "actual description of the universe" and what is Lindner confusing it with?

[quote] • "…however, LET is philosophically superior because it is an objective model of space and motion." The author never explains why SR is non–objective; it seems like the reader is just expected to conflate relativity with subjectivity, which is a basic misconception. [/quote]

He explains why SR is non-objective in the first paper (which I linked at the top of this post). Indeed, SR is quite obviously subjectivistic. The fundamental entity in relativity is spacetime (or, more precisely, spacetime intervals between events, since positions and angles in spacetime are actually different for every observer). Spacetime is empirically defined in terms of space and time, which we can measure. Where does Einstein define space as anything other than marks on an observer's ruler? Where does he

define time as anything other than ticks on an observer's clock? Are length contraction and time dilation "real", or are they illusions?

You seem to think (as most physicists do) that even though relativity begins by talking only about observers and their measurements, it somehow ends up with a theory of the physical cosmos that creates those effects. But this is logically impossible; it requires the input of additional hypotheses about the objective physical world (which can never be directly observed) and how it produces the observer's measurements. Relativity does not attempt to incorporate such hypotheses.

[quote] • "How did Einstein impute the correct velocity to space without recognizing it as such?" What? "Certainly he could not think about space as a substance to which motion was uniquely related without abandoning the relativity program." Why? [/quote]

Because the whole point of relativity is that there is no "space", no special frame relative to which motion is absolute, and that physical effects only depend on the relative velocity between frames – otherwise it wouldn't be called Relativity. If we instead relate motion to particular Cosmic frames—like the Sun-star frame or the non-rotating Earth-centered frame, we are not doing Relativity but are engaging in aether theory. We should start thinking about what space is and why its qualities are determined by the distribution of matter.

[quote] • "The curvature of space-time is just a description of gravity's effects on the observer's measurements, not a theory of the cause." I won't draw the implications because I don't understand why the claims of the theory were limited in the fashion that they were. [/quote]

Can you actually refute that sentence from the paper? Everything I know about relativity indicates that it is 100% accurate.

[quote] • The grandiosity of the conclusion screams crank. It's a short, scattered paper that doesn't even explain a lot of its assumptions and then it flies off with lines like "Space theory has the potential to revolutionize our understanding of the cosmos and of ourselves in ways that we cannot anticipate." Crankish behavior alone isn't reason to dismiss an idea, but it's reason to suspect it. [/quote]

And "crank" means what? Contrary to accepted opinion in more than a superficial way? Unacceptable to those who cannot imagine an alternative to the current orthodoxy? If you cannot disprove this simple theory that actually explains what Newtonian Mechanics and GR merely describe, is it proper to resort to name-calling?

[quote] That said, it doesn't seem very convincing to me to look at the mess modern theoretical physics is in and turn the pages back to the last crisis; it feels hopeless in a particularly Republican sort of way. [/quote]

Of course – the ether theorists of the 20th century must have been missing some pieces of the puzzle, otherwise there would've been no need for Einstein's theories. However, flowing space didn't have time to develop or receive a lot of attention before Einstein's models became dominant. And since then, there have been very few people working on extending it due to the mathematical expertise required

(and most of the people with that expertise are academics, who don't want to have their funding retracted). So it is still a new frontier in physics.

[quote] The problem is more fundamental than physics, which the author of that paper seems to understand (but he runs off to go to bat for flowing space on largely rhetorical grounds, rather than addressing more fundamental issues— there's room for that, but it's not where the breakthroughs are liable to be made.) [/quote]

What do you understand the fundamental issues/problems to be? I'd be very interested in hearing your take on it. Perhaps we agree. I also don't understand your objection that he is arguing on "largely rhetorical grounds" (which is what we're doing right now, isn't it?). Don't we need words, linguistic arguments, to discover the nature and causes of things?

[quote] Lastly: I'm not shocked to discover that the author is an MD with a number of other seriously odd views. Like intelligent design, the best proponents of anti–relativity seems to be educated non–specialists (primarily doctors and engineers— there's an overlap in mindset between the disciplines) with just enough knowledge to sound plausible. [/quote]

This is probably because, unlike physicists, doctors and engineers actually have to solve problems with physical systems in the real world, rather than publishing papers that merely appear to solve problems. It's also not surprising because most conceptual breakthroughs in each field of science have come from outsiders (often doctors!), or at least non-academics. Examples: Aristotle learned medicine from his physician-father; Copernicus was a physician, priest and a political consultant who studied astronomy in his spare time; Galileo studied medicine; Darwin was a student of medicine, not biology; Tesla dropped out of college after three semesters; Thomas Young, Julius von Mayer and Hermann von Helmholtz were all physicians; Faraday had almost no formal education of any sort… the list goes on. It is very hard for persons who are trained within a particular paradigm to look at reality in any other way.

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[quote name='Diogenes's Tub' timestamp='1425970584' post='198923'] How is space not a substance in GR? GR's conception of spacetime is pretty robust, and it isn't space that's reduced to a mere mathematical postulate so much as it is time, which was exactly Einstein's point.

[/quote]

I do not see how one can claim that relativity reduces time to a mathematical postulate, but not space. Time and space are treated almost symmetrically in relativity, or at the least they are treated in equally unphysical ways. And besides, if space is indeed a substance in GR, then why aren't we trying to relate acceleration, light's velocity, and all other physical phenomena to space rather than to observers or arbitrary frames?

[quote] Einstein is hardly less mechanistic than Newton; his unease with the non–deterministic elements in quantum mechanics is proverbial for a reason. He wasn't keen on subjectivism, either—there's a real difference between postulating "frame of reference matters" and being a subjectivist. This sort of rhetoric is actually representative of my biggest issue with the passionate anti–relativity crowd: They seem in search of dragons to slay and aren't really too concerned with whether or not they've found a real one, first. (That and the fact that a lot of anti–relativity stuff online reads only slightly–less schizoid than Gene Ray.) [/quote]

Yes, Einstein was completely deterministic, but he was not objectivistic. Actually, to my understanding the only reason Einstein was uncomfortable with quantum mechanics was that it was a non-deterministic subjectivistic model, as opposed to his deterministic subjectivistic model. He believed, not in the existence of a physical world, so much as a matrix of deterministic rules and entities that determine what observers measure. He disliked quantum mechanics because it only acknowledges the existence of the observer and his measurements, and the outcomes of those measurements are determined by probabilistic, not deterministic, rules (hence Einstein's objection that "God does not play dice"). This is made quite clear in the paper linked above.

[quote] I'm familiar with flowing space, but as I understand it it only works with a subset of GR's predictions and not to the same degree. I also generally agree with the skepticism expressed by Jan Banan here on this score.

[/quote]

I know of one paper which claims to mathematically prove that all of GR can be reformulated in terms of flowing space. It's called "The Physics of a Metric Space with a Time Variable" by Robert Kirkwood. It's pretty mathematically intensive though, so I haven't yet been able to check his calculations myself, but I will do so as soon as I am able. Also, as I explained earlier, flowing space has made additional predictions which have been verified by experiments – the same experiments which contradict relativity.

Keep in mind also that some of GR's predictions have not even been tested. In fact, going back to SR, there hasn't even been a single direct experimental observation of length contraction (see here: http://www.edu-observatory.org/physics-faq/Relativity/SR/experiments.html). This means that one of the foundational pillars of relativity (namely, the invariance of the spacetime interval) has no basis in experiment.

[quote]As for the paper… as someone who is more Aristotelian than not, I'm sympathetic to the motivations behind a lot of the arguments, but a lot does not seem to be following. (This makes the Berkeley claim even harder to swallow; and while it's not impossible that certain aspects of Einstein's theory have their roots in Berkeley, this is a bit of intellectual genealogy I've never seen worked out, so the lack of a priori coherence makes me wanna call BS.)

[/quote]

I'm pretty sure I have seen respected sources claim that Einstein was influenced by Berkeley (and the Lindner paper I linked to certainly provides plenty of citations for this claim). Even the Wikipedia page for Berkeley's De Motu at least calls him "a precursor of Mach and Einstein". Anyway, it's not terribly important.

[quote] • He mentions Newton's speculation that gravity was caused by the flow of space into bodies, which is generally seen as a pretty good description of GR in the terms of Newtonian mechanics. He manages to write a sentence like the following soon after: "Einstein's principle of equivalence thus directly implies that Newton's space is not an absolute solid but a fluid that accelerates towards matter." Do we only take metaphor seriously when we don't like who is using it? [/quote]

Not sure what you mean by that. All he's saying is that, if we postulate that acceleration has physical effects only when it is acceleration relative to space, then there is an obvious physical explanation for why Einstein's principle of inertial and gravitational acceleration works: in gravity, we are accelerating relative to space.

[quote] • There seems to be a conflation of the theoretical entities necessary for the working out of the theory with the actual claims of the theory (or set of potential claims). This is kind of like confusing a thought experiment for an actual description of the universe. [/quote]

So what would you say is Einstein's "actual description of the universe" and what is Lindner confusing it with?

[quote] • "…however, LET is philosophically superior because it is an objective model of space and motion." The author never explains why SR is non–objective; it seems like the reader is just expected to conflate relativity with subjectivity, which is a basic misconception. [/quote]

He explains why SR is non-objective in the first paper (which I linked at the top of this post). Indeed, SR is quite obviously subjectivistic. The fundamental entity in relativity is spacetime (or, more precisely, spacetime intervals between events, since positions and angles in spacetime are actually different for every observer). Spacetime is empirically defined in terms of space and time, which we can measure. Where does Einstein define space as anything other than marks on an observer's ruler? Where does he define time as anything other than ticks on an observer's clock? Are length contraction and time dilation "real", or are they illusions?

You seem to think (as most physicists do) that even though relativity begins by talking only about observers and their measurements, it somehow ends up with a theory of the physical cosmos that creates those effects. But this is logically impossible; it requires the input of additional hypotheses about the objective physical world (which can never be directly observed) and how it produces the observer's measurements. Relativity does not attempt to incorporate such hypotheses.

[quote] • "How did Einstein impute the correct velocity to space without recognizing it as such?" What? "Certainly he could not think about space as a substance to which motion was uniquely related without abandoning the relativity program." Why? [/quote]

Because the whole point of relativity is that there is no "space", no special frame relative to which motion is absolute, and that physical effects only depend on the relative velocity between frames – otherwise it wouldn't be called Relativity. If we instead relate motion to particular Cosmic frames—like the Sun-star frame or the non-rotating Earth-centered frame, we are not doing Relativity but are engaging in aether theory. We should start thinking about what space is and why its qualities are determined by the distribution of matter.

[quote] • "The curvature of space-time is just a description of gravity's effects on the observer's measurements, not a theory of the cause." I won't draw the implications because I don't understand why the claims of the theory were limited in the fashion that they were. [/quote]

Can you actually refute that sentence from the paper? Everything I know about relativity indicates that it is 100% accurate.

[quote] • The grandiosity of the conclusion screams crank. It's a short, scattered paper that doesn't even explain a lot of its assumptions and then it flies off with lines like "Space theory has the potential to revolutionize our understanding of the cosmos and of ourselves in ways that we cannot anticipate." Crankish behavior alone isn't reason to dismiss an idea, but it's reason to suspect it. [/quote]

And "crank" means what? Contrary to accepted opinion in more than a superficial way? Unacceptable to those who cannot imagine an alternative to the current orthodoxy? If you cannot disprove this simple

theory that actually explains what Newtonian Mechanics and GR merely describe, is it proper to resort to name-calling?

[quote] That said, it doesn't seem very convincing to me to look at the mess modern theoretical physics is in and turn the pages back to the last crisis; it feels hopeless in a particularly Republican sort of way. [/quote]

Of course – the ether theorists of the 20th century must have been missing some pieces of the puzzle, otherwise there would've been no need for Einstein's theories. However, flowing space didn't have time to develop or receive a lot of attention before Einstein's models became dominant. And since then, there have been very few people working on extending it due to the mathematical expertise required (and most of the people with that expertise are academics, who don't want to have their funding retracted). So it is still a new frontier in physics.

[quote] The problem is more fundamental than physics, which the author of that paper seems to understand (but he runs off to go to bat for flowing space on largely rhetorical grounds, rather than addressing more fundamental issues— there's room for that, but it's not where the breakthroughs are liable to be made.) [/quote]

What do you understand the fundamental issues/problems to be? I'd be very interested in hearing your take on it. Perhaps we agree. I also don't understand your objection that he is arguing on "largely rhetorical grounds" (which is what we're doing right now, isn't it?). Don't we need words, linguistic arguments, to discover the nature and causes of things?

[quote] Lastly: I'm not shocked to discover that the author is an MD with a number of other seriously odd views. Like intelligent design, the best proponents of anti–relativity seems to be educated non–specialists (primarily doctors and engineers— there's an overlap in mindset between the disciplines) with just enough knowledge to sound plausible. [/quote]

This is probably because, unlike physicists, doctors and engineers actually have to solve problems with physical systems in the real world, rather than publishing papers that merely appear to solve problems. It's also not surprising because most conceptual breakthroughs in each field of science have come from outsiders (often doctors!), or at least non-academics. Examples: Aristotle learned medicine from his physician-father; Copernicus was a physician, priest and a political consultant who studied astronomy in his spare time; Galileo studied medicine; Darwin was a student of medicine, not biology; Tesla dropped out of college after three semesters; Thomas Young, Julius von Mayer and Hermann von Helmholtz were all physicians; Faraday had almost no formal education of any sort… the list goes on. It is very hard for persons who are trained within a particular paradigm to look at reality in any other way.

[quote name='Diogenes's Tub' timestamp='1426716123' post='199733'] *A lot of treatments you'll find online treat the "closed time–like lines" of Gödel's solution as a sort of curiosity, but they're the whole point of the paper in that they show that time (in any form we'd recognize it) doesn't exist in GR. Einstein accepted this conclusion. (Whether or not Gödel really believed this or was engaging in some sort of mathematical troll job, I'm not sure.)[/quote]*

But in a more basic sense, I'm not sure what to say to your objection. When you reduce something to something else, you don't necessarily reduce both things. Relativity reduces time to a static dimension like the normal ones of space; it doesn't dissolve space. And that's far more troubling, in any case. If you remove your sensory input, you are still left with the perception of time by the nature of cognition itself. The existence of time has always been troubling to a certain sort of philosophy in a way space is not—and that's what I think the critical problem is. There's an aversion to teleological systems, and the best way to totally escape the demon of telos is to rid the universe of all development.

Relativity's conclusion that time is not absolute relies on claims that have been contradicted, or at least have never been confirmed, by experiment, such as: the invariance of the spacetime interval (which relies on length contraction, which has never been observed); the relativity of time dilation (which has never been observed, and is logically impossible because it implies the twin paradox), and probably a few more things that aren't as obvious.

Relativity's elimination of absolute time is just a symptom of the fact that relativity, as I said earlier, does not describe a single, objective cosmos. In relativity, time is just something measured by the observer on his clock – relativity does not even attempt to relate the observer's time to any independent reality, such as absolute time. For instance, at no point is it made clear whether the relativity of simultaneity is real or just an illusion (just like how me pushing on my eye makes it looks like things moved, even though they didn't). It's that simple.

[quote name='Diogenes's Tub' timestamp='1426716123' post='199733'] It's misleading to compare modern doctors and engineers to those trained hundreds and thousands of years ago. Engineers are disproportionately attracted to intelligent design theories compared to other STEM sorts. Why? [/quote]

I think it's because, in evolutionary biology, as in physics, there's an enormous gap in our understanding. Unlike physics, biology is based on an objective, causal theory – the theory of evolution. It's pretty clear that life on this planet evolved via descent with modification from simpler organisms, blah blah blah. But we are astoundingly ignorant regarding how this evolution occurred – specifically, how life became so incredibly complex and organized through pure chance. It's very difficult to believe that it all happened through "random chance", and indeed, maybe that's not strictly true. But anyways, since the only alternatives that mainstream thought has produced are creationism and intelligent design, engineers just flock to the less retarded of those two.

By the way, I just asked another international leader in the field of cosmology and general relativity to show me how stellar aberration doesn't disprove the special principle of relativity. He already knew about the phenomenon (as everyone does – it's common knowledge in physics), but he drew a complete blank.

[quote name='Diogenes's Tub' timestamp='1426716123' post='199733'] *I read the other paper and while it makes the first one clearer, it doesn't really address my major concerns with his* (Henry Lindner's) *understanding of relativity or, really, philosophy in general. For example, it seems really strange for him to go into a history of philosophy which basically stops with Berkeley/Hume (and he notes that Einstein read Berkeley? so what? so've I.). There's a contemporaneous analogue in philosophy to some of what*

Einstein is doing, and it's Husserl. And just like people misunderstand Husserl's phenomenological reduction as a radical idealism, people misunderstand observer–centricity in the same way. In both cases, what is happening is a technique is being used to approach a problem. That motion is relative to frame is trivially true, which is why it is so strange that people react to it as if it denies exteriority; the absolute frame is a frame as well (though it is one we don't really have access to). This, incidentally, is also key to understanding why GR treats the curvature of space–time descriptively, but it's also a theory of gravitation. I could reduce Newtonian mechanics to sheer description, but they would not be any less of a theory of causes (and, actually, I think GR has more conceptual explanatory power than Newton when it comes to gravitation, anyhow). In the case of GR, it could not be a forward claim about the real world because GR doesn't describe the real world, it describes another system; experimentation demonstrates whether or not that system maps to the objective cosmos (which it has in important ways, which lets us treat curvature as a causal theory about gravitation). [/quote]

You seem to be saying that observer-centric modeling/description – which aims only to quantitatively correlate and predict measurement outcomes – can, by itself, create theories about the physical causes of phenomena. Again, I must emphatically disagree.

First of all, observer-centric modeling does not always lead to physical theories. Proof: Let's say my observer-centric model of the universe is that I am the only sentient being, and everything else in the universe (including other people) is an illusion created by God. That explains everything, doesn't it? Or an even more down-to-earth example: If I push on my right eye, I start seeing two of everything. Did the universe split in two, or is it an illusion created by my sensory system? In purely observer-centric modeling, I cannot answer that question – all I can do is describe my experiences.

But in fact, observer-centric modeling -even when combined with the belief in an objectively existing universe - can *never* produce a physical, causal theory. Causes are not things that can be observed or measured – they can only be hypothesized. Any given observer-measurement-model – such as relativity or quantum mechanics – can be interpreted in multiple incompatible ways regarding what exists and what doesn't, and what causes what, in these models. The predictions of these models can be verified by experiment as many times as you want, but that just verifies that they're good descriptions, not that they actually explain what's causing the phenomena. (see also: the Ptolemaic system.)

Speaking of which, here's a fun article: http://www.livescience.com/26444-quantum-mechanics-physicists-poll.html It begins with the quote "Anyone who claims to understand quantum theory is either lying or crazy," from Richard Feynman. Something is terribly wrong here! Nobody ever says such things about pure mathematics, even though it's at least as intellectually challenging physics!

By the way, Newtonian mechanics already *is* sheer description, for the most part. It doesn't identify the causes of any physical phenomena – it simply consists of laws that *describe* the trajectories of objects. It does not provide explanations for what causes gravity or inertia; it merely describes their effects. Acceleration is caused by a force – but what is a force? It's a mathematical device, not a physical entity or process. Hence Newton's statement that he "feign[s] no hypotheses" (partly due to bullying from Berkeley).

Indeed, I know of no proof that Einstein thought Berkeley's ideas were correct, but that doesn't change the fact that Berkeley's ideas are reflected in Einstein's thinking, which is the claim that matters. Moreover, according to the paper, Einstein did admit that he was influenced by the positivist Ernst Mach (who famously denied the existence of atoms because they could not be observed), which should be at least as alarming.

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Diogenes: *But in a more basic sense, I'm not sure what to say to your objection. When you reduce something to something else, you don't necessarily reduce both things. Relativity reduces time to a static dimension like the normal ones of space; it doesn't dissolve space. And that's far more troubling, in any case. If you remove your sensory input, you are still left with the perception of time by the nature of cognition itself. The existence of time has always been troubling to a certain sort of philosophy in a way space is not— and that's what I think the critical problem is. There's an aversion to teleological systems, and the best way to totally escape the demon of telos is to rid the universe of all development.*

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Deutschephysik: *I have let this thread rot for weeks because I have been busy worrying about other things, but this is a really good point I just had to endorse. Mixing interpretive explanations into observations of things that happen is the downfall of science into SCIENCE! Once you start injecting hokey ideas about unobservable things, suddenly pointing your eyeballs at an event creates a new parallel universe and we are all going to upload our minds to twitter and be immortal binary beings.*

April 21, 2015: deutschephysik, I actually meant to make the opposite point - that science is meaningless, and of limited usefulness, without hypotheses about the unobservable physical reality that produces our observations. No number of experiments can ever disprove that the universe exists independently of our minds, for example.

I'm confused as to why you're saying this while endorsing aether theory at the same time. What is aether theory to you, if not an interpretive explanation of mechanics and relativity? Do you think the aether can be directly observed?

I agree that talking about quantum eyeballs creating parallel universes is insane, but it's not caused by trying to interpret our observations. Physicists come up with this crap because they are using the wrong tools for the job. They're trying to explain reality using models (quantum mechanics and relativity) that don't explain anything. All these models do is describe the universe mathematically, and those mathematical descriptions produce insanity if you take them seriously as explanations of the physical world. The 'parallel universes' fad is in because quantum mechanics fails to explain why, out of all the possible outcomes for a measurement, only one actually happens. It's just a probabilistic model - it can predict what will happen, but not why it happened. But they assume quantum mechanics represents reality, so there must not be a reason why only one thing happens - everything can happen, so maybe everything does happen... in another universe!

I'm very busy as well, every week I am gang-raped by graduate math homework. My mpc shitposting privileges will continue to be limited for the remaining couple of weeks.