

## **Double Detour, Straight To The Point!**

More than a month ago I started to rewrite an article on my website “cognum.org”, namely the one on randomness. This led to a detour to write a whole new general attack on Formalism which I called “Random Ramblings On Randomness”. It became the clearest exposition of my views not only on Formalism but the foundations of mathematics. But it’s still not finished. Yesterday I was going into my son’s room as I often do in-between writings, to relax for a few minutes and watch TV with him. Which he does on his own most of the time! A science documentary was on about Herschel, at the point where they showed schematics of his Newton Telescope without mentioning Newton’s name. Then they started to explain how Herschel used his telescope to measure the speed of light. I said to my son: Remember I told you about this but I thought it was Roemer who did it. At this moment they mentioned that Herschel was using an idea of Roemer as starting point. So, I didn’t continue to ask my son whether he remembered what my point was few years ago. It was to expose a frequently used false explanation in resolving the apparent alterations of the orbiting speeds of Io, one of Jupiter’s moons. The film exactly repeated that. It said that when we are on the same side of our orbit around the sun as Jupiter we are closer to it than half year later on opposite side of the sun and this distance difference means that the things we observe travel different times too as light signals. My real point back then was not this, rather the false explanations of tides and this was merely mentioned as an other example of empty popularizations. So I didn’t go into the details myself and didn’t even care how conscious and clear Roemer really could have been. I was happy to see that my son did remember the crucial point I made to him, that watching a clock from no matter what distance, the ticking of the second hand will be still exactly one second apart because they are all seen with the same delay, namely the time it takes the light or sound of the ticks to reach us. For the light this delay on earth is unmeasurably minute but for sound it can take seconds. Indeed, that’s why we see the lightening “instantly” but hear it later, so by counting between these two, we can tell how far the lightening was. He didn’t remember the other point I made, that if we travel towards the clock then even the in-between time of the ticking will change. A second will appear shorter because the next tick will have less delay. Indeed, we went closer to the clock under the “second”. So in fact not under a full second because we went ahead and cut off a bit by not waiting patiently for the next signal rather met it early. So, Daniel didn’t remember this passionate argument from years ago, but he himself said to the documentary: “That’s stupid. If this was so, then all things would appear altered in the universe even more”. It was very important that he said this. This critical attitude could be attributed to my influence since he was born to see the lies in the social messages in general, or the old explanations freed up something in his vision. In any case, this feeling of “makes no sense” was genuine for sure. Millions of people watched this TV garbage and thought they learnt something, while in fact they learnt only to block their God given abilities and become slaves to society even more. But the fact that the “speeding up of the seconds” argument was forgotten as explanation for the real measurement of the light speed, showed that I still failed. This whole detour starts with how wrong I was. I told my son thousand times the joke about the tutor who just can’t get the student understand something and finally after repeating it so many times he says: How can’t you understand it when now finally I see it clearly myself! So is there a final perfect understanding, or a next stubborn student will make the tutor even smarter. Sadly, his students go out into the world and forget everything anyway.

Is there a final didactical clarity, a true understanding, or we just get knowledge, more and more angles and facts? If this latter is the case then how do I dare attack the oversimplified popularizations of the Media and the indigestible abstractions of Academia. These are merely two ends in the road of “learning”. There is no evil conspiracy against understanding, the world is good as it is. I hope to convince you at the end that there is a lot to worry about!

There is an expression in Hungarian about knowing something so well that we know it even when awakened from our dreams. And an old Hungarian song says: Oh mother, the dreams never lie!

I thought that the above mentioned argument about approaching a ticking clock was crystal clear, but Daniel threw it out of his mind. My previous self doubting can be amplified by a Latin wisdom instead of my Hungarian ones. We all heard it “Repetition is the mother of learning”.

The bad tutor says “just learn it and you’ll see it later”. The Academia is creating a whole atmosphere of this “don’t ask stupid questions, you’ll see all in the end”. New foot soldiers of Formalism are trained this way because those who do see it, forget the pain and strengthen their egos. Just like in the real Military. The really good tutor not only admits that he got insight from the teaching but spends at least as much time afterwards to think about what happened. For the student, to think about what happened is much harder. The motivations of Academia are simple. To get into uni, to pass exams, to get better jobs, make more money or easier. Schools are doors to the world not windows to the universe. But lets be more concrete about things! If someone gets an insight about the universe through what he or she hears in school or on TV, why should this lead to a repetition and possible widening? Amazingly, people do explore things! Search for better deals, belong to clubs with special interests and most of all, collect cool and fashionable objects. Are these motivations totally opposite to repetitions of real learning? Yes they are! But they are also the cradle from which the true and pure motivation is born.

This pure motivation is first of all always negative! It’s a feeling of despair! Something is screwed up in my head! So it’s not a nice warm place to be and the natural tendency is to avoid this! The only reason the thinker is willing to face this mood is that he has been already there many times before. He knows that he can win!

Let’s jump back to where I started! The stupid documentary was over, Daniel went back to his computer and I came back to mine and googled Roemer. Why? Because a thin red line. A sense of reality contradicting with what I thought I see as reality. But I just call it something being “fishy”. When you have this feeling then the dry knowledge crumbles and all the rational arguments that you saw or expect to see are irrelevant. So, no matter that I knew the Doppler effect gives probably straight forwardly the time delay of Io, I felt that something deeper is there. Usually this feeling is a mixture of object and its history. In this case, the object problem was that the earth’s speed is disappearing in the end while at the root of the Doppler effect, it’s the most vital, but this in itself is not a contradiction and the joint historical problem was how could all this be viewed by Roemer that early? But this awakening suspicion of something being false in my “understanding” that is, admitting an oversimplification is only initiating action because I believe I can find out the truth. Not just by thinking but looking around again with a different eye now. So the repetition is indeed a widening. As usual, Wikipedia was the first in line and said nothing, blah blah blah. Either you don’t understand it or you already know it. Amazingly, still on the first page of the search I found a chat forum where a guy complained after he watched probably the same documentary as we and when tried to read more about it found that the explanation was false and mostly was asking how can such incompetence go on screen. Some stiff ass “educated” member repeated some formulas totally ignoring his whole question. The first interesting site on the first page was a so called “math pages” where two separate pictures were used. First the conventional false explanation of earth closest and furthest from Jupiter and then the one with the exactly opposite pairs of earth approaching and moving away with highest speeds. The real beautiful surprise was how simple the numbers come out from the first picture. The earth’s orbit diameter is three hundred million kilometres and the delay of Io between these closest and furthest points is thousand seconds. So, their ratio is the speed of light directly, three hundred thousand kilometres per second! My old favourite number coincidence is that the air is thousand times lighter than water and the atmosphere can be replaced by ten kilometre of normal ocean level air. Thus, the pressure on one square centimetre like our finger tip is the weight of a one square centimetre base and ten kilometre tall column of air. If we cut this into one meter long pieces we get ten thousand of such one meter columns and they fill up exactly a cubic meter. This air weighs the thousandth sized that is a one decimetre cube of water. This of course is a litre water, exactly defining a kilogram mass and kilopond weight. The second surprise to me from the simple direct calculation of the time delay was indicating that Roemer did not think about delays of speeds as clock alterations. Not even a hint or early sense of the Doppler effect. Purely jumping to final conclusions. He truly ignored the earth’s speed. This made my fishy feeling even more concrete. In the root of the Doppler effect, when we approach a clock, the speed of light is very disguised. In the final result it becomes the only important and the earth’s speed disappears. At the non approaching closest and furthest points the earth’s speed is irrelevant but the light’s too. It only

causes a same delay of every second's start and finish. When we approach or retread, the earth's speed goes ahead or away of the next second. But of course this allows a tiny extra advance in the light itself too. Watching a clock in space without approach or retread we see it as it ticks. Going away or closer in any curve, would mean continually false rates. But not regarding these, only a new non moving position, why do we even have accumulated delay and in what sense? So finally I formulated the plausibility gap. There are two hidden or unemphasized conditions that truly define even the question of an accumulation. The first is that the rest views of the full Io orbit times were used continually as periods. This means copying the clock in space and make a synchronic one we carry. The other is to have fix point or locator in the clock. If it were merely a pulsating point then the start and end times were easy to watch for. For an orbiting or spinning object we need a visible location. On a real clock of course we can use all the numbers. For Io this would mean when it passes by some fix points of Jupiter. But since Jupiter is spinning and thus is a second clock itself, this is not usable. The eclipses are the easy locators in the clock. The real point is that by combining the two, that is the usage of a fix point of the clock and counting in full periods, the watching can be omitted and we can compare our two arbitrary observations. We don't have to watch the small continuous delays! They still add up as bigger and bigger shifts of the viewed fix point against our full cycle time flow. The fundamental law is that from one point to go on a journey and return, we'll have the same delayed view of the clock "and so" we shouldn't have accumulated extra or less delays. This also means that trips between two points are invariant and in particular our speeds are immaterial too. The accumulated extra delays are merely the signal speed accumulations. The quotation mark indicates that it was a fishy conclusion but even jumping over it, we can conclude a definite didactical point. The Doppler plausibility as meeting the signals prematurely or late is only used correctly if we draw attention to both our motion and the signal. In fact, we have to draw attention to deeper consequence of this. The relativity of motions is a fact we should explore before. It can not be resolved easily, just as it was not resolved by the medieval mind. So, instead of a stupid oversimplification of Galileo's "the earth still moves", we should listen to the other side too and teach Belarmino's letter to Galileo's friend. It shows that the relativity of motions was conscious to the church. They practically said that unless you wait for Einstein to clear things up you might as well regard the earth as fix. The sun merely being the bigger is not a justification to be the fix. By today we got all this on a silver platter because of our bigger pictures of galaxies, expanding universe and so on. So the problem in the relativity of motions is narrowed back to the question, where did the Big Bang happen? These shouldn't be taboos, unmentionable questions. They are dead ends to Formalism but not to understanding, that can accept unresolved contradictions. Most importantly, these fishy contradictions are a system of concepts interrelating. And here at the root of the Doppler plausibility we see it too. Is it only the relative speeds that matter in these signal delays or the absolute ones too? If so, then the Doppler effect is related to resolving or deepening the relativity problem. We don't have to proceed to unfold Relativity and amazingly, it unfolds by itself. Indeed, exactly the mentioned crucial argument of returning to a point of observation, itself offers a prelude to the "Twin Paradox". Returning to the best times of the year when we are on the same side of the sun as Jupiter and thus we can see Jupiter all night, the eclipses of Io are returning to normal in our time flow of Io orbits. But is this "normal" indeed trivial too? If a brother of the astronomer becomes an astronaut and doesn't stay on earth as "traveller" rather stays at the point closest to Jupiter, then next year when they meet again they can compare views. But in what sense? What they saw a year ago and what they see now is the same! It's only their calendar in Io orbits that could have changed. The assumption of this not happening is thus a tricky and very deep problem. This convertibility of an earth year to two hundred "something" Io orbits with exactly the same "something" part for the two twins, hides much more! It can easily be generalized to any round trips not just using the earth as spaceship. The year is irrelevant but if a fix flow of time for the brothers is assumed, it can be measured in Io periods too. So the above jump to conclude an elimination of the earth's speed from the Doppler effect was in fact the assumption of no Twin Paradox. But as such, it "necessitates" the whole problem of relative time intervals. I simply had to use this word "necessitate" which is the crucial in Hegel's dialectic. The sheer fact that the twenty year old Hegel dared to call his book "The Evolution Of The Spirit"

must make your heart stop for a second regardless if you are a self-confessed idealist, materialist or a confused in-between as I was when I started to read him. To go from Didactic to Dialectic and back and fourth, is the painful road any honest tutor will have to take.

Math and theoretical Physics are the only fields where Dialectic is showing itself as Didactical objectivity. But even writing a didactical manual for a DVD player is objective because it is math in disguise. The non didactical feature of society is a tendency. The DVD manufacturing company is merely lazy, they clearly would benefit from a better manual. But the patronizing and yet overcomplicated "TV Land" is very intentional. Only math and physics are where the failure of didactical correctness is coming from inside the subject and the social lie is a trivial extra layer.

Theoretical Physics is a narrow tunnel, while math is an open field. Einstein correctly identified as one of the biggest mysteries, the applicability of math to physics. But as a friend of Gödel he should have emphasized the second even bigger mystery, why only a tiny fraction of math is relevant to physics. Maybe he didn't want to reflect upon whether it is due to a primitiveness of physics or to a yet confused state of new math. But the fact itself was obviously known to him yet he remained silent, so he failed didactically. Which is not surprising because he didn't help to elucidate even Relativity.

There is a reappearing professor from New York University in the science documentaries. The last one I saw him in was one about Jupiter. They talked about everything! The weather on Jupiter, the moons, its magnetic field, except the amazing fact that it is the limit of conventional matter, that it might even contain non atomic matter in its centre. TV Land systematically avoids anything that leads to deeper thoughts. It has to "broaden your mind" with a reassurance of common sense in its lowest form of socially accepted black and whites. Contradictions are pushed away from common sense as mere choices in faith or humorous exaggerations. In short, no Dialectic is allowed! But without Dialectic there is no Didactic either. There is an other method of avoiding Dialectic, namely replace the details with easy analogies. This "metaphysical" method is only banned in some section of Academia together with faith and humour. Originally, "metaphysics" meant philosophy but today this word has this negative "blubbling" meaning. Of course some think the same about philosophy in general. The point is that this blubbling, useless philosophy, does exist as entity so we might as well call it metaphysics. Psychology, Sociology and Art departments are so deeply embedded with metaphysical content that it means a split in Academia. So we have a strange self verification of what I said about math and physics being special. Popular science sharply separates from academic only in these. But this itself is a mirage! Real science always boils down to math and physics. So for example, the cheap oversimplified documentaries on evolution could not be tolerated in scientific level. This whole thing is a Dialectic to allow a denial of evolution as faith. The real questioning of evolution, the problems with it, thus not appear in TV Land, creating the mentioned black and whites. The sticking to math and physics makes a criticism much easier. For example returning to this douche bag from New York University, in the program on  $E = mc^2$ , he was challenged by the interviewer and grinningly said you want me to explain it? And then followed his "explanation": "energy and matter are like two sides of a coin". Oh, so that's what Einstein discovered! Apple for Newton, coin for Einstein. Of course not! We can not explain the real thing to you! You are a stupid TV watching moron. Just worship Einstein and me a little bit too, from New York University. Or don't worship, just watch! I don't care, I am paid anyway! It's enough for you to know that we know how things are in detail.

Could a TV program explain Relativity, so that the viewer could understand every detail exactly as well as Einstein did? Or not? If it could, then there is a conspiracy without doubt. Not by the TV executives and hired morons from Academia but by society in general.

Didactical truth is objective! The laziness of kids, just as their parents addiction to consumption and entertainment is merely a good excuse to neglect the importance of Didactic in schools or in the media. In fact, the always reappearing "generation gap" is a sign of the innate need of the naïve new born for true understanding, in a continually lying world, and seek more honest "masters". It is the lack of Didactic too that the protest of "cool" becomes a new entertainment and later consumption.

Every thought is transferable!

I promised a long time ago to myself not to try and tell my dreams and suggested the same to others. In spite of receiving “wow” by the weird stories and situations we recollect, the outsider can never really understand why we wake up so shaken after some dreams. Especially after the ones with less story content. Feelings, emotions, are not a less important world than thoughts. But this non transferability has a reason. And so does the transferability of thoughts!

Once Einstein was listening to someone and after he remarked to his friend: I thought there were only five people who understood Relativity but apparently there are six. This reveals a lot.

Trying to reveal our thoughts is harder than to reveal our dreams.

The court asks you to tell the truth, the whole truth and nothing but the truth. But where does the “whole” end? This is the crucial point of revealing. In our mind we know exactly when we hold something back. There is more, but I can't explain it without questioning myself too, so the hell with it, I just stick with this now. Maybe later, when I solve everything, it will be a better time. But the time never comes! It didn't come for Einstein because he didn't solve the unified theory. So, only well sounding quotations were left for the outsiders. And the authority to be accepted by Academia. A full circle for a man who started by defying authority and Academia.

Just last week in the cinema I saw an ad containing the Einstein quote: Logic will take you from A to B, imagination will take you everywhere. If just one in every thousand who hears this and is motivated to learn more about him could find a book where Einstein reveals everything he believed in, the world would be a much better place. Most importantly, this is what decides where you go. Heaven or hell. Discovering Relativity doesn't take you to heaven only from A to B. And then you are judged by the rest you did. And he went straight to hell!

When you say something like this, you yourself know how it sounds, where it can put you in somebody else's mind. The non revealing and intentional smokes and mirror are the same sin. To be factual is always possible. So, no I am not religious and don't believe in that kind of hell but I know just as the facts of this world that time is surpassed after death and existence continues. So hell is much worse. And facts are equally important here and there! So the fact that Einstein forced his wife to give away their illegitimate daughter and she died as child in an unknown family was a multiple sin. Sin against the poor girl, sin against his poor wife who kept it secret and was labelled as a psycho and sin against the world to regard Einstein as a “great man”. Of course this is not the only fact that shows he wasn't a great man, but this is so violently appalling, so disgraceful that it had to be kept secret. Knowing it, the above make much more sense. Was he remorseful? No, he only felt guilty. The difference is exactly telling the truth, the full truth and nothing but the truth! So is he an extreme deception in history? Not at all! I could have picked on Newton or Gauss. The common thread is not merely how distorted pictures are fed to the public about these geniuses as “great men” but a hidden element. Didactical effort, trying to teach on the level of common sense was never pursued by these great men. They regarded it either impossible or worthless. So again it boils down to the question: Is it possible? The truth is not only that it is possible, but that it should be the most important effort, even if it is hopeless. The Academia will not change by itself, neither the Media. Only the accepted false idols can come out of their hiding and tell everybody that the emperor is naked!

But now that I made enemies on both side I want to continue with the daily events.

As I found out, from an other site “Numericana”, these “math pages” were created by Kevin Brown a kind of “mystery person”. Numericana was offering a whole range of free educational science articles too. It was very good feeling to see an army of people challenging the hegemony of Wikipedia. I was trying to find if anyone cleared up the Roemer contradiction the way I did above, but found nothing. Kevin Brown said in his article that his Relativity book tells more but it repeated the exact same content word by word. A few Numericana articles said even less. So I went towards the “official lines”. Not surprisingly they all lead to the ones given by Wiki.

C. H. Wörner's article was free but it only listed the usual false explanations in general without going in details. Wroblewski A. and Saito Y. wrote on Roemer's case but these are not available free. In my experience almost all important Wiki links want money. This completely defies the principle of Wiki and makes the pop-ups to beg for donations even more ridiculous.