TOE: The universe can be explained without the constants c, h and G

Helmut Schmidt

Abstract

Newton's law of gravitation $F=Gm_1m_2/r^2$ gives very precise results for the radii r and velocities v of an orbit, but no indication of the diameter or mass of celestial bodies or elementary particles. The laws of nature can be described in terms of a single type of particle with a constant velocity, one dimension, the simplest possible law of energy $E=2^ni^t$ n, $t\in\mathbb{N}$ and the properties of a fractal. In contrast, our idea of the world is one with 3 isotropic dimensions x, y and z. The TOE requires a revision of the isotropic space. If one designates r as the large radius, xy as the small radius and z as the deviation, the resulting ratios are as follows: r/z=n/m xy/z=l/m and n>l>|m|>0 n, I, m with natural numbers. 2pi is the appropriate conversion factor from radius r to circumference and orbital period. The polynomial

 $r_{Objekt} = (r + (2pi)xy + (2pi)^2z)$ is the summary of the 3 dimensions of an object. With particle numbers and polar coordinates, simple relationships for space $N_B/r_B = N_1/r_1 = N_2/r_2$ and time

 $N_B/w_B = N_1/w_1 = N_2/w_2$ can be set up for two objects and one observer. This results in c , h and G.

$$c = r_{earth}^2 / m / day 2 / pi$$
 $h G c^5 s^8 m^{10} \sqrt{(pi^4 - pi^2 - pi^{-1} - pi^{-3})} = 1$

The best explanation for this is the following story. This requires more words and less calculations. The considerations must be in the context of the most important work in physics. Take it with humor and take it seriously.

Part 1:

We are at a symposium of the best scientists:

Newton: Hello, Mr. Gallilei, nice to see you in person.

Gallilei: Mr. Newton, I've been looking for you. By your laws, you quoted me. Very nice. But we have to discuss your law of gravity. My laws are so comprehensive that no special law is needed.

Newton: I understand your displeasure. My publication on the radii law of all celestial bodies is already on my desk. Unfortunately I've already died.

Gallilei: Then we probably have the same idea about it.

Newton: The law of gravity is only for rockets. There is no gravity on the ISS.

Gallilei: Exactly. My lever laws always apply: N1/r1 = N2/r2. Mr. Thomson, it's good that you stopped by. What do you mean?

Thomson: My discovered electrons fit this concept beautifully. You have to use the particle number N, not the mass. Then the law of the lever also applies to periods of rotation N1/w1 = N2/w2. That's very good. Hello Mr. Kepler, how are you.

Kepler: Not so good. I could not prove my conjecture about the closest packing of spheres. Probably centuries will pass before a proof. My paper Harmonice mundi on the solar system of platonic solids failed the review. But the concept is good. Between the platonic solids is a sphere.

N, G, T: All important. You have to keep that in mind! who's coming?

Gallilei: This is a friend of mine. Mr Roman. He observed the moons of Jupiter with my telescope. He found that the speed of light is not infinite. From this data, Huygens calculated the speed of light to be 212000 km/s.

Roemer: I'm proud of that too. In my publication it says extra that this only applies to observation. For nothing else.

Frenzel comes at the right time. He measured the speed of light using a large wheel with spikes and a mirror. A great experimental physicist.

Frenzel: That's a great group of physicists. I can only agree with what you said. For an experiment, the speed is twice the distance from the mirror to the wheel.

All: That's clear. Nobody knows what light is. By the time you watch it, it's already gone. You have to be very careful not to draw any wrong conclusions from it.

Gallilei: My laws must apply. That's obvious. I've already explained that to my children. With a seesaw. I am the father and stand in the middle. My son is on the left and my daughter is on the right. So you always need 3 for an experiment. And my laws only apply to a centroid between 2 objects, nothing else. Woe betide if someone tries to focus on an object. Then he made a major mistake. No one can measure a center of gravity in a mass. Inside is a crazy buzz.

All: It would be even worse to make a theory out of it. There you come into the forest. Who's coming out of the bin now? Is that Diogenes? No, that's Democritus. He is a materialist and the founder of atomism. You're just right for us. How did you come up with your idea? Purely by thinking. Chapeau.

Gallilei: But he only speaks Greek.

Democritus: Imagine laying rope in the sand in a circle. Then you pull the rope together. Then there are 2 options. One thing is nonsense, I say continuously to that. If the rope is also wobbly, then nothing is left. Just nothing, zero. Therefore only the alternative remains. There are atoms or, in modern Greek, elementary particles.

All: That's logic. Look who's coming, on a chariot.

Egyptians: Brrr. What you are discussing is all old hat. We invented the wheel. Without us, you would still be knocking stones. I am a radosophist. We built the most amazing pyramids. With a wheel and a rope of 12 knots. Everything you can build with it, nice and right-angled.

All: Yes, right. That's math and the most important thing is, you always need 3 workers to hold the rope. Otherwise it won't work, whoo.

Kepler: Too bad he's gone again. I wanted to tell him something else about my ellipses.

Then someone taps him on the shoulder. He turns around.

Perge: I am Apollonios of Perge. I hear something about an ellipse. It is said that my geocentric world view has been replaced by the heliocentric one.

All: No, of course not. In the end it's all the same. This is for the layman only.

Perge: In my mind I already knew everything. And much better than an ellipse are 3 orthograde circles standing on top of each other. Anyone can use it to create a real solar system.

Newton: Well, that makes sense. But what strikes me as odd is that the 3 keeps popping up. I call it 3 dimensions.

Gallilei: Yes, and as a family man I say that my law only works with the 3.

Perge: May I introduce: This is Plato.

All: Ahh, ohh

Plato: Sense perceptions are not sufficient to obtain the truth, but only produce opinions. Even if an opinion is correct, it is of a fundamentally different nature and origin than insight. The soul can only access truth and thus knowledge through thinking that has emancipated itself as far as possible from sensory perception.

Everyone is calm.

Plato: Close your eyes. What do you see?

All: Nothing. No width, no length, no depth.

Newton: I heard there is a vacuum.

Gallilei: Well, there is no vacuum in my head. I'm sure. That would be outrageous. For me I exclude the vacuum. I'm a mathematician. The natural numbers are at least there. That's what Kronecker said too. And so there are also rational numbers and algebraic numbers.

Plato: Open your eyes again.

Kepler: I have an idea how I can still publish my Harmonice mundi. Pi is an incredible number. Total bullshit. There are no 3 natural numbers whose ratio is pi. I'm sure. Eventually this will be proven. The Egyptians and Apollonios of Perge said that the solar system is made up of 3 orthograde circles. That does mean that a sphere is a boundary between rational numbers.

All: But now you're completely wacky.

Kepler: But I see this more and more clearly. This is a barrier, a distinction between inside and outside.

Newton: But that doesn't work with my dimensions x, y, z

Gallilei: You're quiet now. With your kg and your gravitational constant you have already produced enough nonsense.

Newton: I'm calm. But for missiles, the law is great.

Kepler, Gallilei: Let's think this through further. So x, y, z we can forget.

Kepler, Perge: The matter is clear. We use the polar coordinates. Major semi-axis, minor semi-axis and deviation. There is no overlap there. This is the easiest way.

All without Newton: This will be a great publication. All elementary particles are equal. There are no collisions. None is lost. Only through time could particles come to it.

Demokrit, Perge: That's still not enough for a publication. We need to be able to predict the results of experiments.

Roemer: I already know an experiment about the light. Thomson, we're using your electrons. This is probably the elementary particle. According to our theory, there is always a partner.

Gallilei: I'll go with you. My children will be happy.

Roemer: One particle is on one side and the other is on the other side of the barrier. You can call that an electron and an anti-electron.

All without Newton: That's great. Then that would be the light. And when the light passes another particle, it could happen that the two get separated.

Gallilei: The most important things for me are my lever laws for space and for the rotation times $N_1/w_1 = N_2/w_2$

Plato: Very well. You did it just by thinking. This can even explain consciousness. Because in my head there is both inside and outside, matter and antimatter, in equal parts. Just like in the light. We are in time and at the center of the universe. What's left to do?

Newton: We need a real formula instead of my law of gravitation.

All: That's nice of you to join us. So the limit is ultimately a sphere. Pi is just a tool for distinguishing what is inside and what is outside. And with that, the 3 dimensions of our idea of space can simply be summarized. It is quite clear the formula for apoapsis and periapsis is a polynomial made up of 3 factors, each of $(2pi)^a$. For mathematicians this is not a problem at all. 3 dimensions can be represented by vectors like polynomial $2pi^n + 2pi^m$. The base is the circumference of an idealized electron. The most important thing is the idea. The formula secondary.

That's enough for now. All real physicists rambled on all the time. You spent nights arguing about particle-wave duality. Even Schrödinger was dissatisfied with his wave theory, as was Einstein.

The full story is attached

Part 2:

It's a story and we're at a symposium of the best scientists:

Galileo, Kepler, Newton, Apollonius of Perge, Roemer, Huygen, Thomson, Plato, Democritus. Now physicists keep coming. The symposium is a world congress.

GALILEO: So we already have the formula in our heads. Bonjour Monsieur Foucault. Is your pendulum still swinging?

Foucault: Of course. THE pendulum is always swinging. I overheard them formulating their theory. I am impressed. I'm just an experimental physicist. But I can add something to your theory.

GALILEO: That would be great.

Foucault: That's very simple. I can now calculate the speed of light without the sky.

Everyone: That's what we do in our heads: What do we need: The earth's circumference of 40,000 km and one day

Newton: For the calculation I use my Newton's law.

Gallilei: Oh, you braggart. That's just a copy of the law of the lever.

Perge: My circles are also important. Electron and anti-electron orbit each other. This will be a double helix. We Greeks are the most important of all. Electron comes from amber. Yes!

Gallilei: We think ahead. The small circle revolves around the large circle. This is a ratio of

40000000 / (2pi) m^2 per day. Perge get out your amber calculator.

Perge: The result is 469079553. That doesn't fit.

Foucault: Of course that fits. The result has to be multiplied by 2/pi. There are 2 elementary particles orbiting each other. That gives 298625318 m^2/s

Roemer: That's better. Take the radius of the equator, 6378137 m

All: Ahh. ohh 299746463 m^2/s . That's just an error of 0.99984.

Egyptians: And all this with my wheel and my rope.

All: After this wonderful result, let's go to lunch.

During lunch:

Newton to Gallilei: What irritates me is that the result is not exact. I can even calculate the periphelary rotation of Mercury 5.32" per day. Somebody has to do that for me first.

Gallilei to Newton: Don't think anything. Our result is great. In relation to the earth's diameter, the error is just 489 m. We don't even know in which laboratory the speed of light was measured. According to our theory, everything depends on the diameter of the earth. That's logical.

Newton to Gallilei: One just passed by. I find that impossible now. He stuck his tongue out at me. Does anybody know him?

Thomson: I know him. It's Einstein. Theoretical physicist. He made a great formula $E = m c^2$. This is so awesome because it's so easy. He got the Nobel Prize for the light effect. That's totally interesting. He didn't just retire when he was old. No, he was always thinking further, about the universe as a whole. The only formula of his that was really simple was $E = m c^2$. Everything else was formulas from 16 equations from x, y, z, v_x, v_y, v_z, kg. etc

Democritus: The lighting effect was also well thought out. Some physicists have studied his theory of relativity. There are very few who claim to have understood his theory. And they thought he would get a second Nobel Prize for it.

Foucault: I heard that too. But they got cold feet on the Nobel Prize committee. And I think that's a good thing. It is also clear that only 10 of his equations are independent. That needs to be worded better.

Newton: What I've read about his theory of relativity is that it's nothing.

All: Huh:

Newton: Because one of his first formulas in his paper is already a cheese:

$$x^2 + y^2 + z^2 - c^2 t^2 = x'^2 + y'^2 + z'^2 - c^2 t'^2$$

All: That's a self-reference, a tautology.

P: Forget that immediately. From this you can conclude everything or nothing.

Gallilei: I only say f.e.q

All: Where's Newton

Everyone is turning around.

Gallilei to Newton: Now you go into the corner. There you can see what you have done. All because of your gravity with mass and kg.

Foucault: I defend Mr. Newton. Everything is correct for rockets and for orbits. He already had the paper "Radii of the Celestial Bodies" in his drawer.

All: what do we do now?

Gallilei: The story with an inertial frame based on light is simply grotesque. After ART, my twins could no longer swing together. That would be paradoxical. A twin paradox.

Everyone laughs: simply because he thought that light had to be a single particle.

Plato: We thought it would be much simpler. All elementary particles have the same speed.

Foucault: The c in his equation is simply pi from the velocities of the electrons and anti-electrons.

Gallilei, Newton: He found his formula $E = m c^2$ by guessing. He copied part of it from Lorentz. It's best if we leave everything as it is.

Newton: I'm not going to let that happen! Einstein must have noticed that this is not the philosopher's stone. He had an eclipse observed just because he thought he could do something to me. My calculations were all correct. And that because of the factor 2 of light deflection by the sun.

All: This factor also fits our theory.

Plato: Yours are so good. Just made with thought. And now I also know why the moon more or less fits into the sun during a solar eclipse. The soul can only access truth and thus knowledge through thinking that has emancipated itself as far as possible from sensory perception.

Part 3:

Galileo, Kepler, Newton, Apollonius of Perge, Roemer, Huygen, Thomson, Plato, Democritus. Gallilei and Newton talked about GRT. Einstein also goes directly to the group.

Einstein: What an illustrious circle. What an honor, Mr Newton.

Newton: We were talking about your ART. Mr. Einstein, I had no idea that you are so attached to the masses.

Einstein: I've spent my whole life trying to resolve the gap between QM and ART.

Gallilei: We'll go straight to media res. We have found a solution to your problem. Our theory is as follows. There is only one type of constant velocity particle, they are not divisible and do not collide. The laws of nature are made up of algebraic numbers. Measurements are only possible in a system if 2 objects and an observer have a common center of gravity. This means that classical physics applies with conservation of the torque. Mass with kg and the gravitational constant G is much too far-fetched for us. We make it easy for ourselves, hG is converted into kg and results in the unit. We relate everything to the number of particles.

Einstein: As I understand it, the speed of all particles is constant. I can live with that. If 2 or more particles orbit each other, a relative speed results from the difference in the speeds of the particles in space. Where do forces come from?

Gallilei: As we reasoned, centripetal force and centrifugal force are sufficient. A photon is made up of an electron and an anti-electron. In nature, both are immediately adjacent.

Einstein: I see the light. In 1935 I argued with Podolsky and Rosen that quantum theory must be incomplete. All physicists simply call this EPR. Podolsky and Rosen are also at this congress.

Gallilei: Entangled objects are now occupied umpteen times. The prerequisite for entangled objects is my lever law. Then nothing!

Thomson: I'll keep it short now. Electron and anti-electron spiral around your geodesic lines.

Einstein: I have to get that settled first. There could be something about it. I have to admit that the relativity in GTR is not 100% either. Rotational movements are not relative. With my elevator, gravity cannot be distinguished from up and down. But the rotation is still absolute.

Thomson: I'm already getting dizzy

Gallilei: You're about to get really dizzy. There are also consequences for QM.

Gallilei to Einstein: What really hits you is the idea of our beloved space! Nature works with algebraic numbers. Each object corresponds to a number. The barrier from one object to another object is a circle. Either the object is inside or outside, matter or antimatter, in the time before or in the time after. Exactly on the circle the energy would be zero. No matter how nested epicycles are, the barrier remains. We are 3-d humans every object is inside or outside of a polynomial from $2pi^n + 2pi^l + 2pi^m$. It doesn't matter at all whether scientists are struggling with 11 dimensions or tens of dimensions, that doesn't change the evil at all. The length of the polynomials is man-made, from our idea of space.

Einstein: I can follow you slowly. Also the idea that the 3-dimensional space has to be completely filled is nonsense. Based on algebraic numbers, there is no need and no vacuum.

Newton: So this gibberish is too high for me now. We have already calculated the speed of light c from the only data that we have reliably: $r = \sqrt{(pi/2 c Tag m)} = 6378626 m$ oder $c = 2/pi r^2 t/m$

Einstein: I understand that formula. The unit of the speed of light c is actually m^2/s . The speed of light can only ever be calculated relative to a distance, the distance between the object and the observer.

Gallilei: We must now keep a cool head. Besides c, we need to calculate the centrifugal force at a distance r. Who has a suggestion?

Egyptians: We must consider the radius R from the center!

GALILEO Where he is right, he is right. That is umpteen times better than an idealized point in a mass.

2 particles orbit each other at a distance of 2pi. Each particle would have to occupy a volume V in 3-d and this would be $V \propto (pi c)^3$. For now we don't care about the unit of c, whether m/s or m^2/s.

Einstein: That's very good! A free quantum, i.e. a photon, has an energy of in polynomial notation $Q = \sqrt{(1 \pm pi/f \pm pi^2)} (pic)^2$ One dimension is the propagation direction pi^2. The transversal expansion is described with pi/ f. The higher the frequency, the tighter the electric spiral rotates around the geodesic line. And the root is also correct. The conversion of energy, i.e. the surface, becomes radii.

Gallilei: So far everything fits together. But how do fermions come about?

Einstein: This is where my stats come in. Bosons are objects made up of an even number and fermions are made up of an odd number of elementary particles.

Gallilei: Ah. Then one could imagine a larger object composed of 2 photons.

Einstein: Correct! That is then a graviton.

Thomson to Gallilei: I already heard that from the lecture on QM. The graviton has a spin 2, twice that of the photon.

Gallilei: When 2 photons dance with a 3rd partner, the energy of the photons is emitted until they can no longer dance. This is called the ground state.

Einstein: Correct! Then is the ground state of a quantum $Q = \sqrt{(1 \pm pi^2)(pic)^2}$. Of course, this is only possible with a suitable partner. The factor of pi/f cancels out with the partner and becomes 0. Means an interaction energy < 0.

Newton: How do we tie everything together?

Einstein: For an observer of the graviton, a quantum Q1 is outside and the Q2 inside of its time. This is difficult to describe. Seen from the center of gravity of the graviton, Q1 is outside the barrier and Q1 is inside the barrier. So Q1 is farther from the center than Q2. The ratios of the two quanta with the polynomials P1 and P2 in the graviton G can be summarized as follows:

$$G = \sqrt{(P_1 - 1/P_2)}(pic)^2$$
.

Newton: I see the minus in the equation. The energy of a graviton results from a difference. But what does 1/P2 mean?

Einstein: That's the inverse. Just like with a circle, you can mirror the outside to the inside. This sums it all up:

$$G = \sqrt{(pi^2(1-pi^2)-pi^{-1}(1+pi^{-2}))} pi c^2 = \sqrt{(pi^4-pi^2-pi^{-1}-pi^{-3})} pi c^2$$

Newton: The minus sign gives the lowest possible energy. The volume of the graviton is exactly the counterpart of the outer volume $V = (pi c)^3$ and thus results:

$$G = h G \sqrt{(pi^4 - pi^2 - pi^{-1} - pi^{-3})} pi^4 c^5$$
.

Einstein: Now it gets tricky again. How do the units fit together, e.g. we have the unit for c with m^2/s or times with m/s. hG has the unit m^4/s^2

Kepler: I say the natural unit is m^2/s . There is not a single straight line in the universe. Everything is crooked. hGc^2 is so interconnected as a quantum. This unit cannot be divided apart. The counterpart is the whole universe:

Gallilei: All a consequence of my law of the lever.

Everyone heads on his shoulder.

Einstein: We're coming to the end now. The graviton has the unit m^{10}/s^8 . The Schrödinger cat bites its own tail. Everything cancels out. Everything is mathematics nothing else.

Newton to Perge: I want the result of $G = h G \sqrt{(pi^4 - pi^2 - pi^{-1} - pi^{-3})} pi^4 c^5$. Perge get your amber

calculator.

Perge: 97.40496. That's wrong.

Einstein: No. No. No. The result must be divided by pi^4 . Because of the 4 space-time dimensions.

Perge taps his right hand, then: For heaven's sake, that can't be. The result is

Perge turns pale: The result is 0.999957

Kepler: The measurement inaccuracy of the gravitational constant is $2,2\,10^{-5}$. So the result is equal to 1.

The universe brings together the macro world and the micro world. I just say H0.

Gallilei: H0 is the scale of my son's railway.

Einstein: Don't distract me. H0 is the extent of the universe.

Everyone is flabbergasted. Everyone stares at Perge's amber calculator.

Einstein is the first to pull himself together: I am now looking for Mr. Bohr. I argued with him for so long that my ears got hot. Where is Bohr?

Thomson: Mr. Bohr is not at this convention. He wrote to me that he already knows everything and that it is no longer worth worrying about the microcosm. He told his students to simply copy his formulas and use them to calculate everything and that's it.

One hears bongo drums:

Thomson: Hello Mr Feynman. You've traveled a long way.

Feynman: I overheard your discussion. I am impressed. Up until now I have always told my students that nobody knows what a photon is. At least I have an idea now. My calculations give the same results as yours. With polar coordinates and the relationship $e^{(r \ln(2pi))} := 2pi^r$, most of Schrodinger's wave equation follows from itself $E = (2pi)^r i^t$

Plato: As I already wrote: The soul can only access truth and thus knowledge through thinking, which has emancipated itself as far as possible from sensory perception.

Egyptians: And all with my wheel and a rope!

Examples:

Ratio of sun radius/Mercury radius

$$\begin{array}{c} 696342 / ((2 \mathrm{pi})^3 + (2 \mathrm{pi})^2 + (2 \mathrm{pi})) (1 + 1 / (2 \mathrm{pi})^2 + 1 / (2 \mathrm{pi})^3) (1 + 1 / (2 \mathrm{pi})^6 + 1 / (2 \mathrm{pi})^7) = 2439.66 \\ \textbf{Sun} & \textbf{Orbit} & \textbf{Mercury} \end{array}$$

Measured: Sun 696342km Mercury 2439.7km

Calculation of the orbit of Mercury

$$\begin{split} R_{OrbitMerkur} &= 696342 \, km \, (2 \mathrm{pi})^{(3/2)} / \, 2 \, \sqrt{(1 - (2 \mathrm{pi}) (1/4 + \cos(2 \mathrm{pi} \, t)) + (2 \mathrm{pi})^2 (3 - \cos(2 \mathrm{pi} \, t)))} \\ Apoapsis &= 696342 \, (2 \mathrm{pi})^{(3/2)} / \, 2 \, \sqrt{(1 - pi/2 - 2 \mathrm{pi} \, (1) + 3 \, (2 \mathrm{pi})^2 - (2 \mathrm{pi})^2 (1))} = 46562750 \, km \\ Periapsis &= 696342 \, (2 \mathrm{pi})^{(3/2)} / \, 2 \, \sqrt{(1 - pi/2 - 2 \mathrm{pi} \, (-1) + 3 \, (2 \mathrm{pi})^2 - (2 \mathrm{pi})^2 (-1))} = 70143693 \, km \end{split}$$

Ratio moon radius / earth radius

Moon with sphere of equal volume with 3474.2 km : 4/pi 12713,50/(12713,50+3474,2)=0.99997 Calculated: Moon radius = 6356.75 km (4/pi -1) = 1736.9 km related to the pole diameters

Lunar orbit

The distances between celestial bodies can also be the result of the expansion of the entire universe.

$$d/dt \, distance \, (moon) = 38,2 \, mm/384400 \, km/1 \, year = 3.15 \, 10^{-18}/s \qquad H0 = 2.19 \, 10^{-18}/s \, (1-1/pi)3.15 \, 10^{-18}/s \approx H0$$
 .

Proton mass =

$$(2 \mathrm{pi})^4 + (2 \mathrm{pi})^3 + (2 \mathrm{pi})^2 - (2 \mathrm{pi})^1 - 2 - 1 - 2 / pi - 2 / pi^6 (1 - 2 / pi^2 - 2 / pi^4 - 2 / pi^6 (1 + 1 / pi^2 (2 \mathrm{pi} - 1 / 4)))$$
 Theoriy: 1836.15267343 m Measurement 1836,15267343(11) m_e

Theory of everything - The geometric mean as an alternative to Newton's law of gravitation https://vixra.org/abs/2112.0141

Theory of everything - The Coriolis force explains quantum theory http://viXra.org/abs/2112.0007?ref=13104262

Simulation of the Planetary System based on a Theory of Everything

http://viXra.org/abs/2202.0142

Theory of Everything Reference to Relativity and Quantum Theory

https://vixra.org/abs/2112.0133

Dr. Helmut Schmidt Grasbrunn, 15.3.2022 www.toe-photon.de