Did Newton "discover" or "invent" the law of gravity?

This question previously had details. They are now in a comment.

Michael Brenner
Studied Mechanical Engineering & Comparative Linguistics at Vienna University of Technology · 1y

The concept of *"Laws of Nature"* in itself is misguided and unfounded, yet it is maintained and kept alive on the highest levels: a *"law"* is something someone submits to, but nature does not submit to anything which would be outside her, nature IS, and the only thing we can do is trying to understand her ways. Watching an apple fall - or more recently, dropping a microphone and claim: *"that's gravity fore ya"* does not represent understanding, neither does equating [ma] with [Mm/r^2] without thorough investigation, an investigation which has never been done, certainly not by Newton. Here's a lecture by Richard Feynman about *"The law of Gravitation"* where in one of the first sentences pertaining to the topic at hand at 8:57 he says: *"....actually it was one of the first great laws to be discovered...."* and with this one sentence the whole lecture as well Mr. Feynman himself is doomed.

.... at 9:44 he doubles down on that misunderstanding of nature by saying: *"I'm interested... in the marble of nature who can obey such a simple law as this law of gravitation"*

Nature does not *"obey"* anything, nature is the way she is and it is rather the other way round, she doesn't let you who prides himself as having free will do what is against her ways.

And once more, at 9:57 he shows how ingrained this false idea of a law existing outside of nature to which *"nature pays attention"* is: *"...our main concentration will not be on how clever we are to have found it all out but on how clever she is to pay attention to it"*

This is typical of the Feynman witty smooth talk with which he bedazzled a whole generation while leading them out into the dark forest of ignorance.

Then at 10:12 he states: *"the law is that two bodies or bodies exert a force upon each other which is inversely as the square of the distance between them and varies directly as the product of their masses"*

Where does THAT come from? not even Newton claimed that, on the contrary, he called it the greatest absurdity no man with his wits intact can ever fall into, because in physical terms that would mean conveying *"negative momentum"*, something nature simply doesn't do.

Also *"square kilogram per square meter"* is not what a force is, and a constant with the contrived unit of *"inverse of density times square seconds"* is not a thing in nature either. So, calling gravity a force is dead borne from the start and certainly not part of a *"great law"*.

After this introduction he goes into the history of the *"discovery of the law"* and gets it wrong again from the get go:

11:45 *".....the ancients first observed the way the planets seemed to move about in the sky and concluded that they all went around along with the earth around the Sun this discovery was later conveyed independently by Copernicus"*

insisted that his model was a purely computational model which made no claim about the physical reality of the proposition, on the contrary he warned us from falling into this error and *"...depart as greater fools than when we entered it"*

Then, hidden in his witty joking way Feynman reveals - without mentioning it of course - what Newton actually thought about gravity: that it is pressure coming from the outside, and NOT a pulling force coming from the other body:

20:59 *"....so what the angels have to do is to beat their wings in toward the Sun all the time..."*

Newton of course did not think of angels, but of particles, but the idea is the same.

Next he reveals that the *"law of inertia"* is not known:

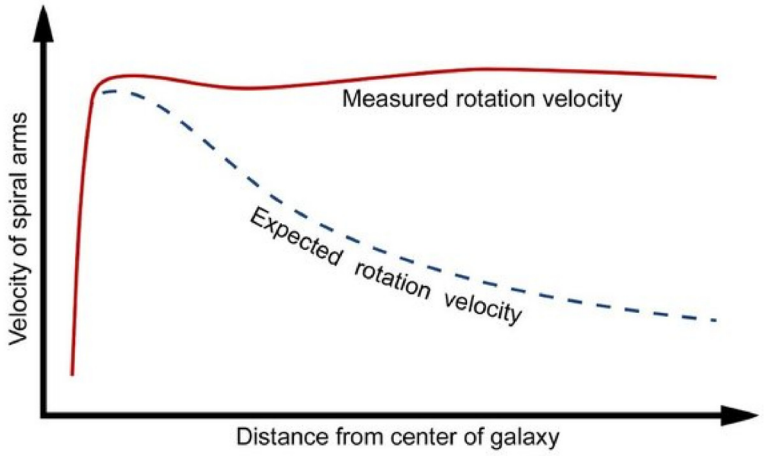
20:59 *"....the motion to keep it going in a straight line has no known reason, the reason why things coast forever has never been found out, the law of inertia has no known origin"*

He misses to say that Newton considered *"Inertia"* to be the only intrinsic property of mass, which means he considered gravity as not being a property of mass. So every time you hear on Quora or elsewhere that *"where there is mass there is gravity"* it is not representing Newton Gravity.

Then follow 7 minutes of painful watching a *"great of science"* get himself entangled in a net of uncontrolled spaghetti by completely ignoring the distinctly separated *"domains of validity"* which are Geometry - Kinematics - Dynamics, followed by more *"proofs"* of the law of gravity, until we get to

34:34 *"..... the next slide shows a typical galaxy and it's clear that this thing again is held together somehow and the only candidate that's reasonable is gravitation. But when we get to this can this size we have in any way any longer to check the inverse square law but there seems to be no doubt that these great agglomerations of stars and so these galaxies which are 50 to 100,000 light years across - the solar system is well from the earth to he Sun is only eight light minutes this is 100,000 light years that the gravity is extending even over these distances..."*

Here Feynman demonstrates his art of saying nothing while sounding informed and witty and on top of the game - while in fact hiding what he must have known: that Fritz Zwicky found out that gravity in fact does NOT explain how galaxies are hold together while rotating, and that spooky agents have to be invoked to make it work.

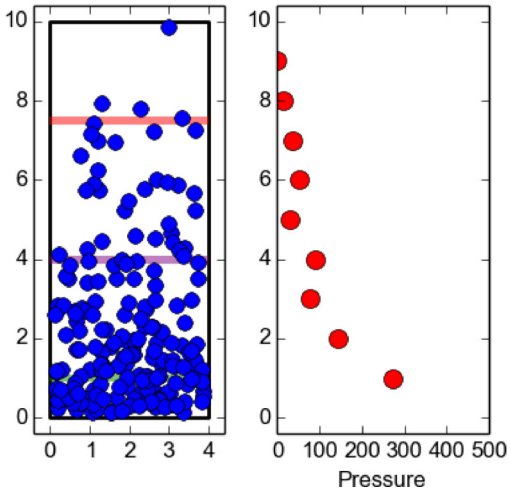


This should have been a central issue of a lecture about gravity, yet it is omitted to make Newton's *"law"* sound like the discovery of an aspect of nature, when in fact it is just an opinion, an explanatory model that breaks down when applied to the cosmos at large, which would mean first of all to take the *"universal"* out of Newton's *"Law of universal gravitation"*.

Next comes one of the greatest misconceptions in the wake of this explanatory model based on opinion rather than physical observations, and that is the idea of self compression: nothing can compress itself, no system can do work on itself, as that violates one of the core tenets of physics: the 2nd law of Thermodynamics. Feynman must have known Eddington saying this about the 2nd law: "*....if your theory is found to be against the second law of thermodynamics I can give you no hope, there is nothing for it but to collapse in deepest humiliation.*"

collected but the reason remained therefore of the phenomenon is that gravitation pulls up the cloud of gas closer and closer together so big mobs of gas and dust collect and form balls which as they fall still further ***the heat generated by the falling*** *lights them up and they become stars…"*

Feynman must also have known Boltzmann who showed that gravity cannot heat a system, that the thermodynamic state of a system is not affected by gravity: *"In an adiabatic column of air exposed to gravitation, a gradient of pressure and density arises such that the ratio of pressure and density remains constant."*



Because the ratio of pressure and density is an energy term, constant ratio means constant energy, i.e. constant temperature, so NO heating occurs in the process of falling Feynman refers to and thus stars cannot form following that process, this is humbug, no matter how much it is taught in schools.

Of course the Cavendish experiment cannot be missing in a lecture about gravity and sure enough, from 40:46 onwards we get a taste of it:

42:10 *".....the mass of the earth could be determined. So indirectly this experiment was the first determination of how heavy or how massive is the ball on which we stand. It's a kind of amazing achievement to find that out"*

It's just that Cavendish didn't find that out, as the measured density of the earth is 3g/cm^3 whereas according to him it is 5g/cm^3 wherefore there had to be an iron core invented to bump up the mass of the earth, a typical fudge factor like Darwin's *"deep time"* and cosmologist's *"dark energy"* and *"dark matter"*. Whenever model and observation collides, the model gets *"renormalised"*, something Feynman himself calls a *"dippy process"* at best.

"But no matter how clever the word, it is what I call a dippy process! Having to resort to such hocus pocus has prevented us from proving that the theory of quantum electrodynamics is mathematically self consistent. ... I suspect that ***renormalisation*** *is not mathematically legitimate."*

Feynman should also have known that the *"leaning tower experiment"* ascribed to Galileo is myth and that the real free fall experiment was done before Galileo in by deGroot and Stevin in Delft:

"In 1586, scientists Simon Stevin and Jan Cornets de Groot conducted an early scientific experiment on the effects of gravity. The experiment, which ***established that objects of identical size and different mass fall at the same speed****, was conducted by dropping lead balls from the Nieuwe Kerk in the Dutch city of Delft."*

The observed fact that all objects fall at the same rate is a clear indication that free fall is independent of mass and that earth is an anchored and stationary base, as the earth cannot fall in all directions at the same time, which she would need to do in order to satisfy the *"product law"* Mm/r^2 in all locations at the same time.

At the end of the lecture Feynman gets closer to the truth of the matter when he suggests that maybe the inverse square law is related to electricity:

succeeded in making gravity and electricity different aspects of the same thing.

Well, again, that is not quite true, as electricity and gravity have been connected by Weber Ampere, and Heaviside for instance. It needs more insight into electricity than the schools offer today, and that is dielectricity and magnetism as the result of ether polarization.

Then Feynman says something that Lawrence Krauss echoes many years later, suggesting that no progress has been made since then:

46:24: "Today our theories of physics, the laws of physics are a multitude of different parts and pieces that don't fit together very well. We don't understand the one exactly in terms of the other, we don't have one structure from which all is deduced we have several pieces that don't quite fit exactly yet and that's the reason why in these lectures instead of having the ability to tell you what the law of physics is I asked to talk about the things that are common to the various laws because we don't know we don't understand the connection between them."

Lawrence Krauss: *"..... one of the key worries I have as a cosmologist right now is that we have these ideas and these parameters and every experiment is consistent with this picture ..... and yet nothing points to the fundamental physics beneath it."*

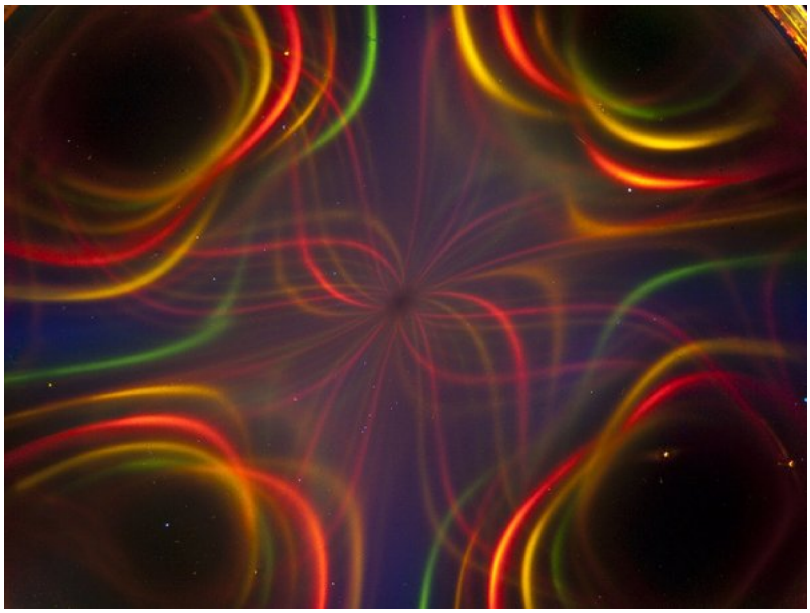
Then Feynman shows how little he understands magnetism, a fact he demonstrated in a famous interview about magnetism where is in his witty smooth talk frankly admits that he has no clue, but makes the interviewer responsible for that: I have analysed this interview in detail here:

How do magnets work?

https://www.quora.com/How-do-magnets-work

In this lecture here at 47:09: *"...people who want to make electricity and gravitation out of the same thing will find that electricity is so much more powerful than gravity, but it's hard to believe they could both have the same origin."*

Just take an unmagnetised lump of neodymium and you will find it is just like any other piece of matter with the same gravitational properties, but after magnetisation it has become enormously more powerful, despite the fact that nothing has changed quantitatively. The quality has changed, and that change of quality has to do with coherence. A piece of matter is an incoherent dielectric accelerator, whereas a magnet is a coherent dielectric accelerator. Forget the word magnet for *"attraction"* as the magnetic aspect has nothing to do with that, it is dielectric voidance, the erasure of force and space which objects follow which makes them look like attracting each other. In fact they both follow space collapsing into the incommensurable counter space opening up between them. This can be wonderfully seen under the ferrocell - and it echoes Newton who suspected that objects only *"look as if they attract each other"*



Quora

…radicts …ure is must be exact, otherwise it is not nature but your opinion about nature, which sure enough can be *"not exact"*.

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Connor Prewitt · 1y
"I dont understand what scientists mean by law, so let me go into a ridiculously long tirade against a random speaker, thatll give me credibility!"

Reply

Tony Emmerton · 11mo
Gravity cannot be both its own cause and effect.

No system can do work on itself, as that violates one of the core tenets of physics, and yet consensus gate keepers claim mass can attract itself to itself, this violates thermodynamic law.

Reply

Andre Hermanus I'm curious. How does it violate 'thermodynamic law'? Are you stating tha...

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About the Author

Michael Brenner

Studied Mechanical Engineering & Comparative Linguistics at Vienna University of Technology

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