CAUSATION AND THE UNIVERSE

A bridge between the nineteen hundreds and the two thousands (X_2)

By Roger M. Klang

CAUSATION AND THE UNIVERSE

Non-academic. Popular science form
The majority of graphs in part 1 of this book were made
with the aid of an image tool from Texas Instruments.
Image photo on front cover: Mats “Malte” Johansson [Boberg]. The streak of the Milky Way as seen from the north bankseat of Långeselebron (bridge) at Harsprångets Hydroelectric plant outside of Porjus, Norrland, Sweden

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CAUSATION AND THE UNIVERSE

“The next sentence is true.”

“The previous sentence is false.”

Residuum

Preface part 1

Isaac Newton lived in a time when the Universe was considered static and constant by scientists. So did Albert Einstein do at the time when he worked out his famous theory of Relativity. There was no beginning and no end, and the Universe certainly didn't expand. For most of the time when I worked on this part of my book, I thought that I had rebutted part of Albert's thesis. But as I reached the end of my authoring, I concluded that Albert was right about almost everything. My thesis is just a completion of Albert's thesis. Albert figured out God's blueprints for the universe, but I figured out the limits of the building blocks' solidity and the geometry behind the universe. So, Albert deserves equal credit for the completed work. But taking thought experiments to the extreme like Albert did comes with a caveat.

This thesis is not a TOE! What is? But I can lead you in proof in almost everything which together constitutes a solid ground for my theory. My theory is to a high extent a theory of causality. Therefore, although my book does not deal with the abstract subject, I lean towards Roger Penrose's Penrose diagram because of its causality, rather than the "many worlds" hypothesis. There is one thing that my [And Albert's] theory cannot explain. But it is not in the field of cosmology. It is concerning my assertion that there is a maximum speed which amounts to 3.54 fifths of the speed of light for any object in the universe, because you the reader and I both know why this sounds crazy. The LHC can accelerate particles to 99.9999991 percent of the speed of light. There are Oh My God particles with mass in the universe that have a velocity of 99.99999999999999999951 percent of the speed of light. But a particle is not an object. Remember that no one has ever recorded any object traveling at a velocity close to the speed of light, not even OUMUAMUA, the object from another stellar system. Even matter falling into a black hole is estimated to have a speed of "only" slightly above half the speed of light. I cannot supply you with a definitive explanation for how there can be particles with mass at a velocity of this magnitude. But it appears that a particle is entangled with quantum mechanical effects even though it has got *some* slight rest mass, like it was in a sort of middle ground between electromagnetic radiation and solids. There is where one can start to clew. Take a moment to consider the Terrell-Penrose effect. [The Terrell–Penrose effect is the idea of the visual distortion that a passing body traveling near the speed of light would appear to undergo.] My question to the scientific community is, what is the common denominator for multiple different incoming and outgoing objects traveling at different and extreme velocities, regarding

their shapes as seen by an outside idle standing observer? If Albert Einstein was right about there not being any absolute speed scale for objects, how can they all differ in their shapes for an observer? Ponder upon that! And wouldn't the universe be denser the farther the distance in every direction we look with JWST, with the currently accepted theory about the age of the universe and how the universe is constituted and how space is expanding?

What did Albert Einstein get right with his theory of relativity then? Well, obviously the whole thing about gravity and space. But how does that support the other claim he made in his theory of Relativity? His theory is still not proven to be correct to one hundred percent. Yes, there is relative time perception, but he has no experimental proof that there is no absolute speed on a speed scale for any object. He has no experimental proof about the relativity part for moving objects, in the special and general theory of Relativity. And why isn't it yet experimentally proven correct but is - constantly disproved? You won't have to read far to realize that there is no way to figure out how the universe can move in the opposite direction of any small object, making velocity relative, as according to Einstein's theory. I will at the end of this long chapter of the book give some suggestions of how to experimentally verify or falsify my theory that there is an actual absolute speed scale and speed limit for objects in the universe. But I will also, without a doubt, if you do your best to understand my thesis about there being an absolute speed scale/speed limit for objects and not just for light and other electromagnetic radiation, prove theoretically to you that this assertion is true. Sometimes pure logic, if it is clear and simple enough, is sufficient as proof of a theory.

Please falsify my theory about there being an absolute speed scale/speed limit! Can you see to it that somebody measures if the speed of matter falling into a spinning black hole differs from the speed of other matter falling into another spinning black hole not of the same mass but at a proper distance from the event horizon? That would be most helpful. I contend that plasma can only orbit the black hole in the direction of the black hole spin. When mass gets so close to the black hole that it breaks up and transforms into plasma it gets caught in a one-way direction around the event horizon. It is a rule of law.

The author

First of all, let us set up the stipulations

1. Time moves faster on a satellite than on Earth.
2. Time moves slower on a flying aircraft than on Earth.
3. Time moves faster on the top of a mountain than at its base.
4. Time moves slower closer to a massive object like the Earth.

The above four stipulations cause a lot of confusion among scientists. And it should. Some scientists say that time moves slower on a satellite than on Earth and some say the opposite. Time normally moves *faster* on a satellite than on Earth, period. A satellite has a velocity of about 14,000 km per hour. An aircraft closer to Earth travels at a speed of a mere 800 km per hour at about mountain top altitude, but the aircraft is aging relatively slower. At the top of a mountain, time moves faster than down in the lowlands. Scientists say that this is due to the longer distance from the center of the Earth. That is true. But they also say that this is why the satellite is aging faster and not slower than an idle viewer down on the Earth. Sure, but at the same time the satellite has a relatively fast velocity, it's not stuck on a pole in the ground. So, the satellite should, according to Einstein's original theory of Relativity, actually age relatively slower than on Earth, just like the flying aircraft does. If time moves faster on top of a mountain, why doesn't time move faster onboard an aircraft flying at mountain top level? Especially since the aircraft has got considerably lower speed than the satellite in space, which does age faster. I can explain why it doesn't, in a way that dispels all the confusion.

The relationship in aging for an orbiting body vs. gravity, isn't really all that complicated, but we haven't understood how they come together. On the space station ISS, traveling at 28,000 km per hour at an altitude of a mere 370-460 km, things really do age slower. But the ISS hasn't got a self-sustaining orbit. Its orbit needs to get boosted with rockets quite often. Atmospheric resistance? Partly.

The Theory:

- Is compliant with fact
- Explains connections between facts (incl. anomalies)
- Is contradiction-free
- Is bold (according to Popper)
- Is testable (verifiable *or* falsifiable)
- Is not *ad hoc*
- Is simple (”beautiful”)

Stipulation: An accelerating, converting mass to directed energy, space capsule's traveler, stays young longer than the surrounding world. (Roger's note; if you want to know how and why energy applies, I suggest that you read my book)

Stipulation: The non-directed energy outside idle standing observers age faster in comparison with a fast-moving traveler. (Roger's note; see note above)

For this intent, a slow moving outside observer does not travel forwards in time in comparison to the traveler in the space capsule. It is the spacecraft and the traveler that are propelled by an extra directed thermal force of energy which makes the traveler age slower than the outside observer. The outside slower moving observer has the same amount of directed energy and mass as before, therefore he (and much of the universe) is not aging differently than before, like the accelerating traveler in the energy-converting moving spacecraft is.

The formula involving both mass, its velocity and thermal energy after E equals, I contend, is $E=m*\cos(\theta)*qc^2$. The q is the thermal entropy in one direction created by the directed jet propulsion. The given angle cannot be 0 or 180 degrees, or E wouldn't increase. You could also put t_d for time dilation instead of E on the left side of the equation sign. They are synonymous.

Massive object M **O----------=>** small spaceship (s)

M does not travel forwards in time compared to (s).....Time slows down for (s) due to energy conversion.

M does not travel backwards in time compared to (s).

M has the same amount of energy.....Added directed thermal energy for (s).

M is aging at a certain rate.....(s) is aging slower than M. This does not apply to orbital movement.

Stipulation: The traveler, as he is accelerating to near lightspeed, experiences time like a person who is near the event horizon of a black hole. The traveler and the other person near the event horizon of a black hole can wave at each other at the same rate and they experience each other's movements in corresponding real time.

TIME TRAVELING IS PROVENLY POSSIBLE BOTH FORWARD AND BACKWARD IN TIME

Time is relative but the timeline is always the same and it is going forward.

Let's consider a couple of twins. Twin number 1 travels away from Earth in a spaceship in a turn around the galaxy at 150,000 km per second. Twin number 2 is the control object who stays on Earth. Control twin # 2 will age at the same rate as everyone else on Earth. Twin # 1 returns to Earth after X number of days. Twin # 1 is going to be dead when he returns to Earth, and control twin # 2 would be dead since an even longer time. But we disregard that in this hypothesis because this little annoying fact has no bearing on the logic of the example. The reason why twin # 1 would be so much younger after traveling at 150,000 km per second for X number of years in relation to control twin # 2 is explained by Einstein's special theory of Relativity. Twin # 1 has thus traveled back in time in the eyes of his "older" brother. But it is impossible for twin # 1 to travel backwards in time to the time for his departure or the time before he left. It is physically impossible.

Why shouldn't it then be considered that control twin # 2 on Earth has traveled back in time instead of twin # 1 in the spaceship? Isn't it equally logical to think that time has gone slower for control twin # 2 when his brother on the spaceship proves to be younger? There is a big obstacle for that approach. Namely, it is the spaceship that is a time capsule, not the Earth and the rest of the universe. The spaceship does not stand still while the Earth and the rest of the universe move away from the spaceship at 150,000 km/s. Consequently, it is twin # 1 in the spaceship that travels back in time, if you want to put it like that, in his own little time capsule. He gets younger in relation to the outside world. That's how you must look at it. The keyword here is "time-capsule".

Traveling in time, however, has its limitations because one is always aging in relation to one's surroundings no matter what speed one is traveling at within the framework of the physical laws. Control twin # 2 would find an older twin brother at the return of twin # 1 than he remembers. As long as twin # 1 has not

traveled at the full speed of light, which is impossible. Time is relative to both objects, but the timeline is always the same and time is moving forwards. Time travel is certainly possible because time is relative within the laws of physics, according to Einstein's theory of Relativity.

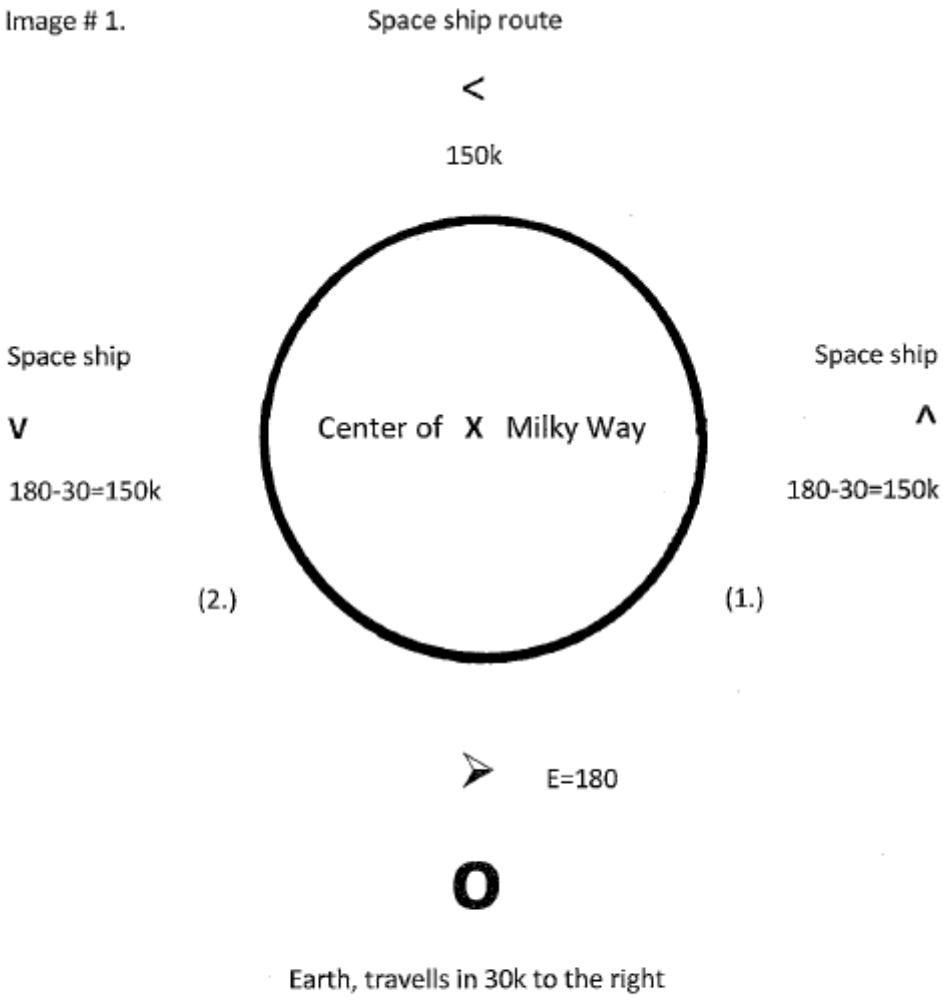
The larger objects that travel backwards in time (read; slower forwards in time than the surroundings), the more energy is required both to accelerate and to curve its path so that you can return to the starting point. A black hole and a course near the black hole would be required to curve a larger object's course, essentially traveling at 150,000 km per second.

The Large Hadron Collider can bend the particle course and send particles back in time relative to the environment. However, the particles cannot arrive at the starting point before or when sent away. Of course, in the LHC, particles purposely don’t collide at the same place from where they were sent away, but that is beside the point.

The theory of Relativity does not allow time travel that would allow two versions of the same object to exist simultaneously. The theory of Relativity does not allow a younger and an older object of the same thing to coexist.

To travel ahead in time, a time traveler only needs to settle on a less massive planet than Earth further out in the solar system. He will die if he dies a natural death, earlier than if he had remained on Earth, but the difference in life length will be negligible. He will not be able to meet his future self on arrival, other than in the mirror. What a time traveler on the other hand cannot do, is to travel forwards in time in relation to a control twin on Earth, by projecting from and leaving Earth's gravitational field in any direction. For if he does, he will de facto make a time travel back in time and so will he who leaves Earth, with the help of thermal energy, to settle on a less massive planet further out in the solar system. You will understand why after reading this part of the book to the end.

When I say in my book that an object has a velocity of, for example 150k, it is just an arbitrary speed. It doesn't matter that the reader won't know the exact speed, just imagine a high speed. I imagine a decent velocity of half the speed of light with the number 150k.



The amount of energy E = 30k+150k. To simplify understanding the amount of energy is equivalent with the sums of k, i.e. the earth's and the spaceship's total velocity as seen from an extern observer's viewpoint.

See (1.) and (2.) below and place them according to number in the image.

(1.) At the start of the voyage, if we ignore the acceleration time, the spaceship travels at a speed of 150k relative to Earth.

(2.) A time traveler needs the same amount of energy to travel from Earth, as he needs to meet the Earth on the return journey at the same speed. This means that the time traveler is aging just as slowly in relation

to the Earth's population during both the departure and the return journey. I will soon follow up on why Einstein's relativity axiom fails.

A) In the graph above, the spaceship starts from Earth and travels to the right with an amount of energy corresponding to 180k, i.e., exactly 180E in this example (k as in velocity and E as in energy). That is 30k + 150k (equivalent to 180E as in energy) in the eyes of an outside observer. However, the speed of the spaceship relative to the speed of the Earth is 150k.
B) On the way around at the other side of the galaxy, the spaceship travels with an amount of energy equivalent to 180E in this example. However, the speed relative to Earth is the same 150k since Earth is moving away from the spaceship and the space traveler has to catch up to the Earth in its orbit around the galaxy.

Should the spaceship have started from Earth and traveled in the direction left, the same amount of energy – 180E – would be required to achieve a relative speed of 150k following departure from Earth. Problems seem to arise when the spaceship and the Earth meet as the Earth travels in the direction of the coming meeting. But that is an elusive problem, because the amount of energy needed is 180E during the departure, and on the return journey. At the moment the spaceship crashes into Earth, the same amount of energy is displayed.

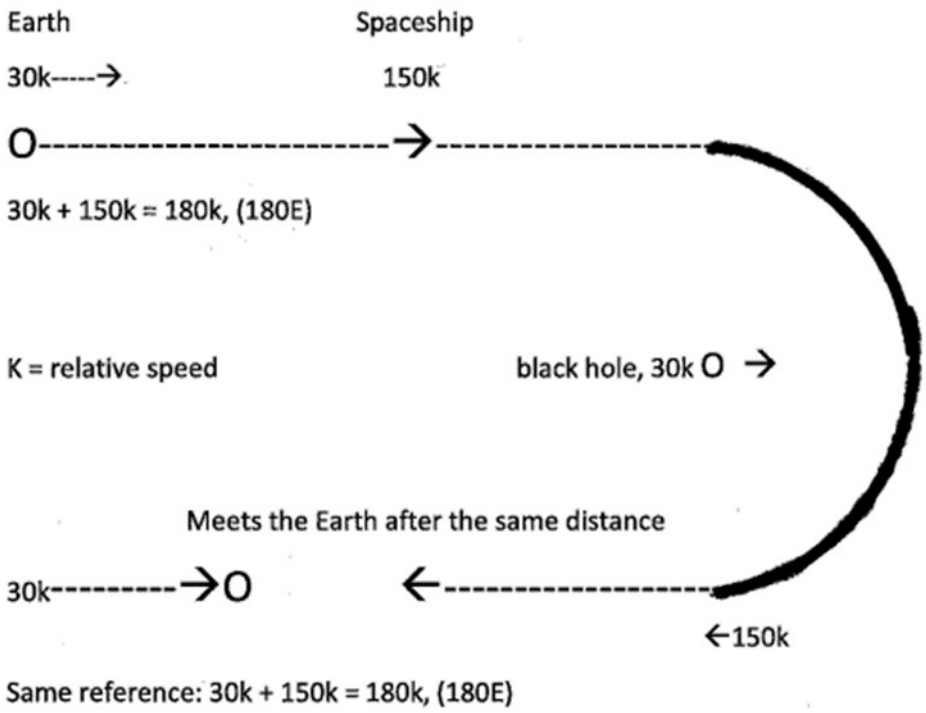
$E=m*\cos(\theta)*qc^2$

It is the transformation of mass into thermal energy which causes an accelerating body to age slower, *iff* you create entropy in one direction (*). All mass requires that mass also has a velocity. You can convert mass (m) into thermal energy (q), and by directing (q*m) you increase E. Energy is thus not a constant. Energy is synonymous with time [dilation]! The spaceship exhaust nozzle funnels are enabling, but not causing. There is a causal order [for a spaceship] which goes from energy-conversion of mass to thermal energy, to momentum energy, to directed energy through the nozzle. $E=m*\cos(\theta)*qc^2$. Let us continue.

[See the chart on p. 43, which is rather sketchy but describes relationships within a reference frame.]

Image # 2

The fact that the speed of the Earth and the black hole equals each other out in the same direction, means that the relative speed of the spaceship vis-a-vis the Earth and the black hole invariably is 150k regardless if you are travelling to the right or to the left in the example given.



Same reference: 30k + 150k = 180k, (180E)

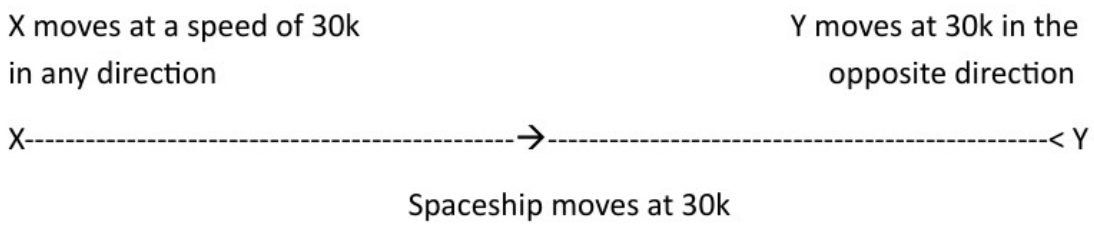
1. We disregard in one aspect the acceleration of the spaceship, when it comes to the very simple equation above.
2. The black hole in the graph above travels at the same speed and direction as the Earth.
3. For the sake of the example, the spaceship must circuit the black hole at a certain distance so that the spaceship does not accelerate. If it is even possible to do so if the spaceship shall be able to circle back in the same direction, by circuiting a singular black hole moving in a direction to the right in the example above. But the black hole mustn't necessarily be singular.
4. Theoretically speaking, had the Earth been traveling at 200k, the spaceship would not have been able to accelerate more than to <100k since the speed of light or 300k is the highest possible speed and it is reserved for light and the other electromagnetic radiation in the electromagnetic spectrum, in vacuum.

5. A time traveler in the graph above travels the same distance from Earth to the black hole as he needs to travel from the black hole to Earth on the return journey. Synchronized clocks on Earth and in the spaceship (prior to departure) show the time on Earth, and perception of time for the spaceship on the departure as well as during the return journey. On both departure and return journey the different time perceptions equal each other at a speed of 150k in comparison to that of Earth.

The Earth-bound people and the time traveler age as quickly or slowly in relation to each other during the return journey as they did in relation to each other during the departure. *It is thus the speed as such with which an object travels that determines how slowly or rapidly it ages in relation to other objects. It is not because objects move away from each other or move toward each other that makes them age differently,* but all objects are always in relation. Thus, there is an *absolute speed scale* ranging from 0 to 300,000 km/s.

Here's what a linear description looks like:

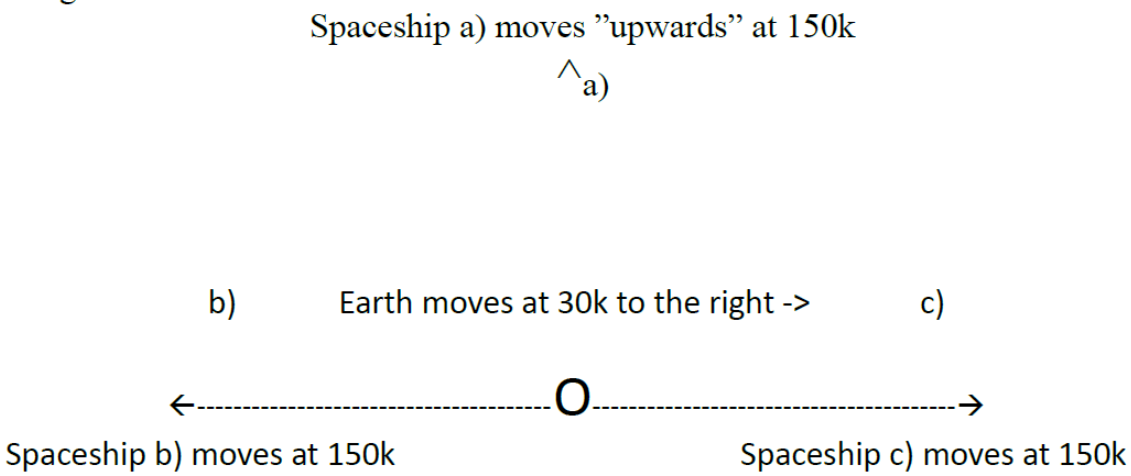
Image # 3



1. Spaceship, X and Y have the same mass
2. Spaceship and X age at the same rate
3. X, spaceship and Y age at the same rate

I think that we now can ascertain that there is an absolute speed scale. And I may convince you that an equation for relative aging (for a spaceship) has to do with the accelerating object's energy transformation from mass to thermal energy and momentum in one direction, because $E=m*\cos(\theta)*qc^2$. Of course, mass in itself brings about time dilation. Let us continue together. B follows on A.

Image # 4



1. Spaceships a) and b) and c) in graph 4 above need exactly the same amount of thermal energy to accelerate to 150k relative to Earth.
2. It matters not in which direction the spaceship moves in a linear description as well as a non-linear description, with the same amount of energy for the spaceship's propulsion system. Relative to an observer on Earth, the speed will still be consistently equal.
3. For an observer on Earth, Spaceship a) moves upward at the same time ratio as a Spaceship b) or c) with the same amount of directed energy would move in a linear right or left direction. But for an outside observer and idle standing viewer like you it appears as if Spaceship a), with the same amount of directed energy, is dashing diagonally upwards to the right in an angle *from the point where it was ejected* and not from the future location of the Earth in its trajectory. The extra force needed to cover this extra distance at an equal time ratio corresponds to the extra force required to accelerate to 150k in linear right direction as well as linear left direction starting from an object such as Earth in linear motion.

Look at it as if you are following the frame in its motion to the right. Body a is ejected vertically in 90 degrees direction from your direction. You experience it as if body a is traveling 90 degrees vertically. Suddenly you slam on the brakes. Body a keep traveling both vertically but now also to the right. The result is, from the standstill view, that body a is dashing diagonally to the right. (See images # 5 and # 6 below.)

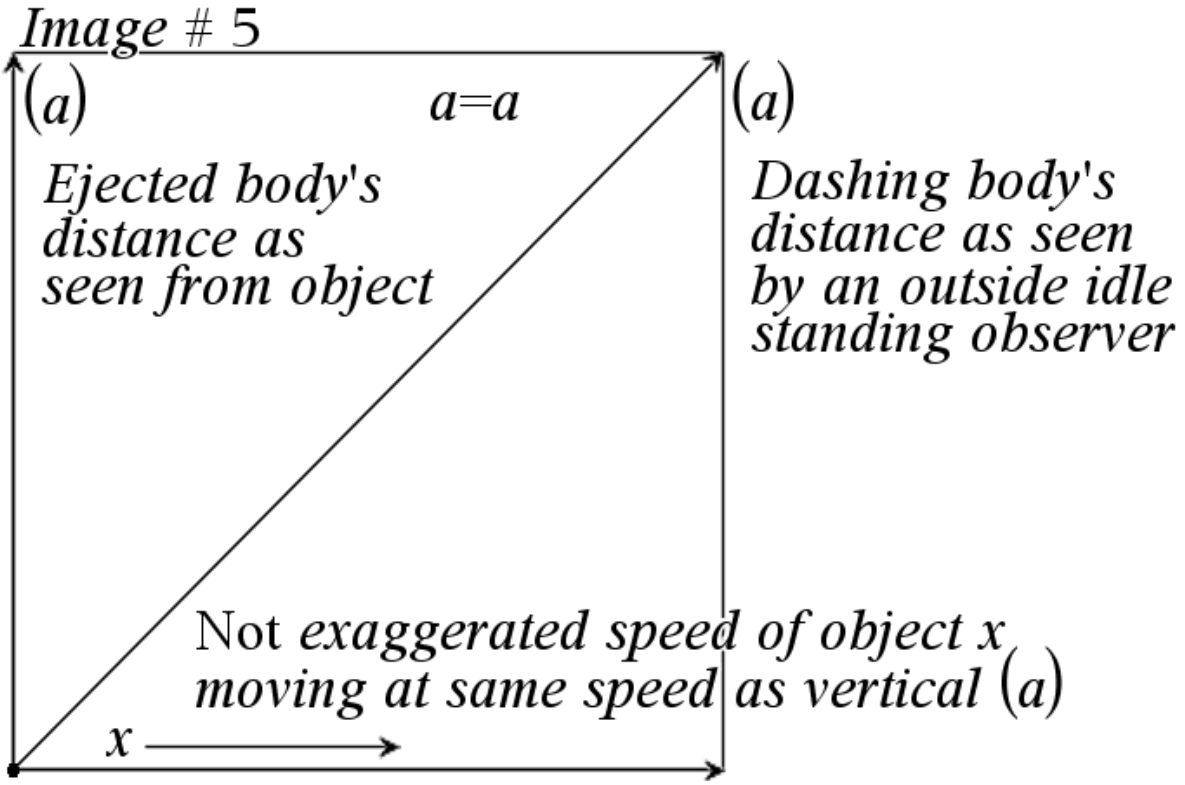


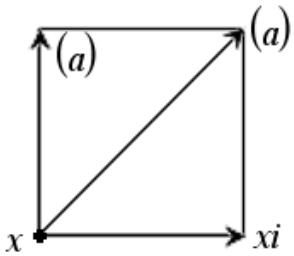
Image # 6a

Contraction of space diagonal dashing body near lightspeed as seen from an outside idle standing observer

Diagonal (a) must with necessity shorten in length since the speed of (a) cannot exceed 300,000 *kilometers per second*

Distance x to xi equals x to vertical (a)

Near lightspeed of object x to the right



No one man can grasp everything that I present in the images # 5-7d, at the same time, not even I. But if you follow the red threads correctly, you will reach the same conclusion every time. Hopefully. It has the potential to, above all, explain why the universe is accelerating at an increasing speed. I contend that dark energy is in fact a force, but it can be a very weak force. That is why we haven't

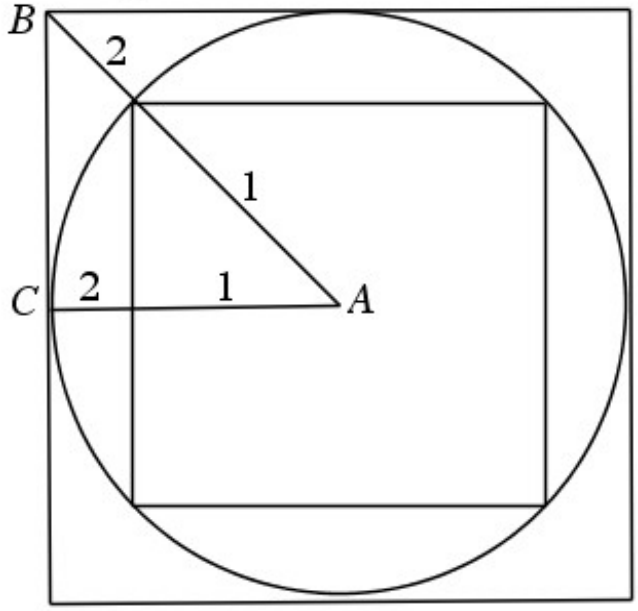
yet been able to detect this force. Most scholars in physics will agree that dark energy is a force if it exists. I think.

In image # 6a above, the mass is unequal but the speed for both vertical body (a) and object x are equally the same as seen from object x in motion. When they are equivalent, the diagonal angle and direction of a body (a), ejected from an Object X at 90 degrees from the motion direction at any speed, is always 45 degrees in an outside and idle standing observer's eyes. But diagonal (a) in image # 6a, as seen by an outside idle standing observer, is dashing longer in the same amount of time. X and body (a), i.e., diagonal (a), as seen by an outside observer both shorten their distance traveled (see image # 6b p. 20), and both (a) and x should contract, as the bodies accelerate to near light speed, until they separately each shrink into a denser point in space. It is always geometrics that sets the limits in speed and distance traveled. The universe consists of at least three entities – mass, momentum, thermal energy, and the phenomenon time – and they are interconnected. There is no speed 0k and no object can reach the speed of light, but much of the range in between is possible. Only if applying the laws of geometry do we also get space. Geometry is the rack or frame for matter in the universe. Geometry is why mass contracts when approaching the speed of light.

It should be possible, I would say almost inevitable, to come up with an equation that describes the highest possible speed limit for mass in extremely fast motion and the amount of energy. I'm talking about a maximum allowed speed limit for a body, a mathematical law of nature. Bodies which are projected from an object near the speed of light in any direction, must from a theoretic standpoint always be imagined within a geometric cube inside a geometric circular sphere inside a cube (see image # 6b below, and yes, it is mirror imaged). Therefore, one must calculate with π and the volume and the energy amount in the equation set. A geometric sphere inside a square cube determines how close to the speed of light a body can at maximum travel at. It should, in a three-dimensional universe two first dimensions right-left and up-down, be the same relation as the radius of a sphere relative to an extension of the radius line to the outer cube's corner. If the hypotenuse in a right-angled triangle is five you square that and get 25. Halve the 25 and take the square root of it and you get 3.53553 which is both of the cathetus of the triangle. Then you get the theoretic relationship, e.g., the radius is ~3.54 fifths of the distance from the center of the cube and sphere to the corner of the outer cube. (See Image # 6b). Then the maximum allowed speed of

a body would be 3.54 fifths of the speed of light, as seen by an outside non-moving observer who is looking at it as if he was looking at the events taking place two-dimensionally on a map. Although, it matters not if you look at it from a two-dimensional aspect or if you look at it from a three-dimensional aspect, even when calculating with the depth perspective for three dimensions. But to make this example understandable I use a two-dimensional perspective without calculating with the depth. The volume of a globe $V = \frac{4}{3}\pi r^3$ should therefore, in a three-dimensional universe, be part of the equation in one way or another. But how do you get the amount of energy E into the equation? I'm not a math expert. If you the math nerd desire to contribute, you can do that.

Image # 6b



1 = ~3.54 *fifths of both A to B* and *A to C*

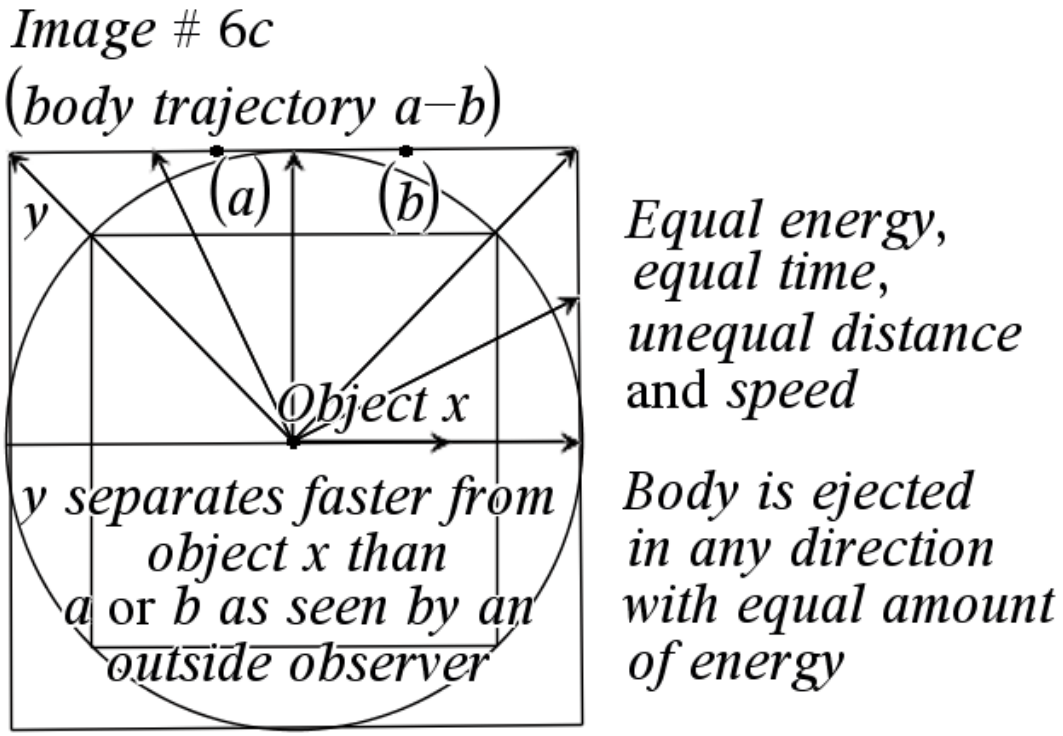
2 = ~1.46 *fifths of both A to B* and *A to C*

A closer investigation indicates that the universe is shaped like a quarter of a circle or shaped like a hanging drop. There is a maximum speed and a minimum speed. If there is a minimum speed, nothing can be allowed to cross into the other half of the universe, because there cannot be inverted speed, a velocity below 0k, can there? ”My” geometry in image # 5 and image # 6a on p. 18 affronts in the face of the spherical universe if mirrored in the opposite direction towards the point of origin. What do I mean by this then? Wouldn’t inverted speed just be a speed in the other direction? Yes, in Einstein’s universe. But Einstein’s universe would in my opinion make a spherical universe an impossibility because of the speed limit for all objects. If two objects could separate in opposite directions, non-orbital, at 3.54 fifths of the speed of light or

more each, they would have a relative speed of more than the speed of light compared to each other, and that cannot be in my universe. Einstein never explains how that can be in his universe. It would in Einstein's universe mean that the speed of light emitted from one of the objects couldn't catch up at the speed of light with the other object. Thus, matter with mass would be able to travel at a greater speed than light. Because when I say that there is an absolute speed scale, based on good reason as shown in some of the images in this book, I really mean a speed scale like on a grading scale on a typical bathroom scale in a hospital. Either you are accelerating in one direction (of expanding space), or you are slowing down in the other direction (or you go sideways or vertically or both).

But if the universe is shaped like a quarter of a circle or at least shaped like a hanging drop, and the Big Bang was created from something like a speeding "bullet", then nothing should be able to penetrate beyond the point of origin. How can this be possible? The geometrical figures and conclusions in image # 5 and # 6a on p. 18, however undisputable, cannot without further ado be mirror imaged toward the point of origin for the universe. For how can some object travel slower and slower towards the point of origin as there is an absolute speed scale ranging from 0k to 300,000 km/s and still the energy level increases per cubic meter? Remember, the object X in the left lower corner of the square in images # 5 and # 6a is in motion *away* from the point of origin! As I lay forth my case in this article, and I am certainly not alone in having this view about the directed energy for a body ejected from an object in motion basically being the same in any chosen direction, I mediate the idea that in the "mirror world" the diagonally dashing body (a) actually display an increasingly higher energy as it closes in to the 0k. It means that a dashing body (a) cannot transgress the 0k. That and not a significantly high velocity of the body determines the validity of "my" geometry in the "mirror world". If you want to dress it in another shape, the amount of energy for dashing (a) cannot transgress that of the maximum energy in the quarter of a circle shaped Big Bang. The slower the velocity towards the point of everything's origin, the more concentrated energy is needed to sustain the mass. Just as mass cannot reach a velocity of 300,000 km/s, it also cannot slow down to 0k. Let us study some geometrical figures in the "mirror world" in images # 7a, # 7b, # 7c, and # 7d below. But what is the "mirror world"? It is just that we take an object and eject it in the direction of the origin of space. That's all there is to it. But ponder the speed scale. Closer to the point of origin we get closer to the imaginary speed 0k. Thus, the relativity axiom is not valid.

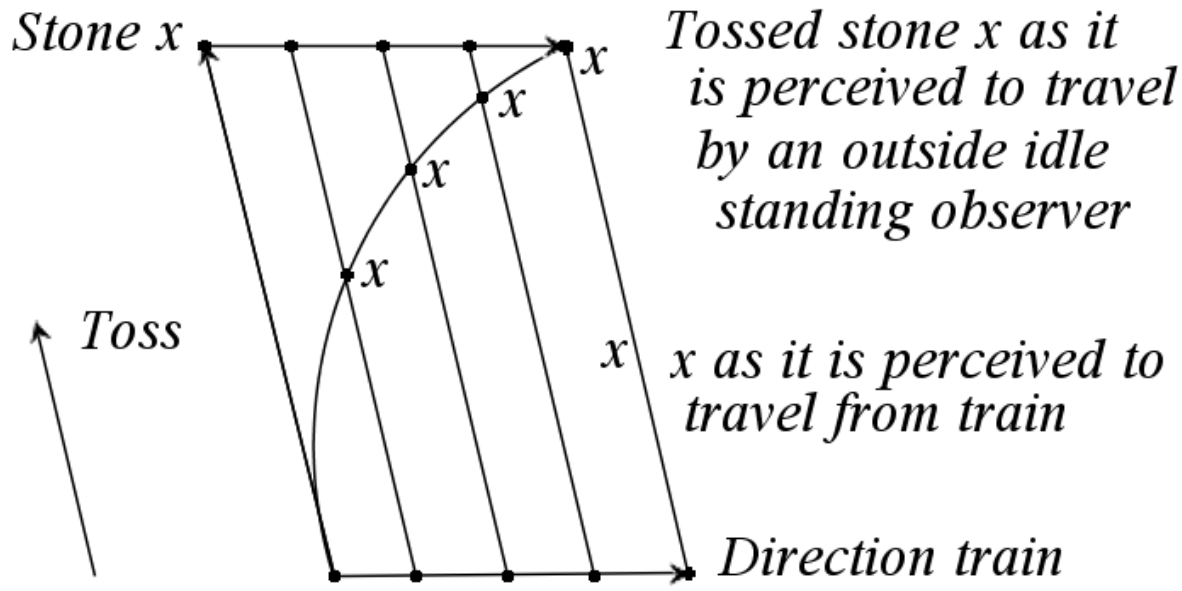
But before we go to images # 7 a to # 7 d, let us first look at images # 6c to # 6h to understand the trajectory of a body ejected from an object in motion, as seen by an outside idle standing observer.



[*What is wrong with image # 6c, you think? If the body is ejected in any direction with equal amount of energy it cannot have unequal distance and speed, is the obvious answer. This image is merely adding a pedagogic view to simplify understanding of the other images and my core ideas. Study the images # 6d to # 6h to get the true and certain picture of bodies in motion ejected from an object in motion.*]

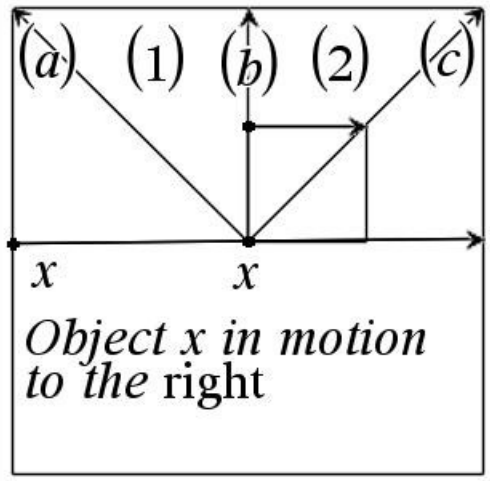
The Object x in image # 6c is moving to the right at a certain speed. The first arrow next to the letter y is perceived to move vertically by an outside idle standing observer. The second arrow from the left is perceived to land in (b) by the outside observer. If this wasn't the case, then the field (b) would cease to exist, and no one could eject anything in that direction. The upward 90 degrees arrow to the right of (a) will, if the vertical arrow has the same speed as x, dash straight 45 degrees from x to the imagined right corner as seen by an outside idle standing observer who is looking at the arrow's trajectory from the fixed perspective point where it was ejected from object x. The arrow to the right of field (a) is thus skipping the whole field of (b). The arrow (or distance) to the left of (a) in image # 6c is shortening and must compensate for its distance in left-right orientation, i.e., it gets a curved path. Enter image # 6d.

Image # 6d



Just think of it as if you were throwing a stone from a moving train at a velocity roughly equal to the train's speed and with a consistent amount of energy in any direction, and how it is perceived by an outside idle standing observer. The stones (a), (b) and (c) in the following image # 6e move in straight lines.

Image # 6e



(a) equals (b) as seen by an outside idle standing observer.
(b) is (c) for the same observer.
Motion of x equals those of (a, b, c)

(a, b, c) have straight trajectories whilst bodies in (1, 2) do not travel in straight trajectories for an outside idle standing observer

Where is (a) if (a) equals (b) then? (a) correlates to the object x in the above image. Enter image # 6f.

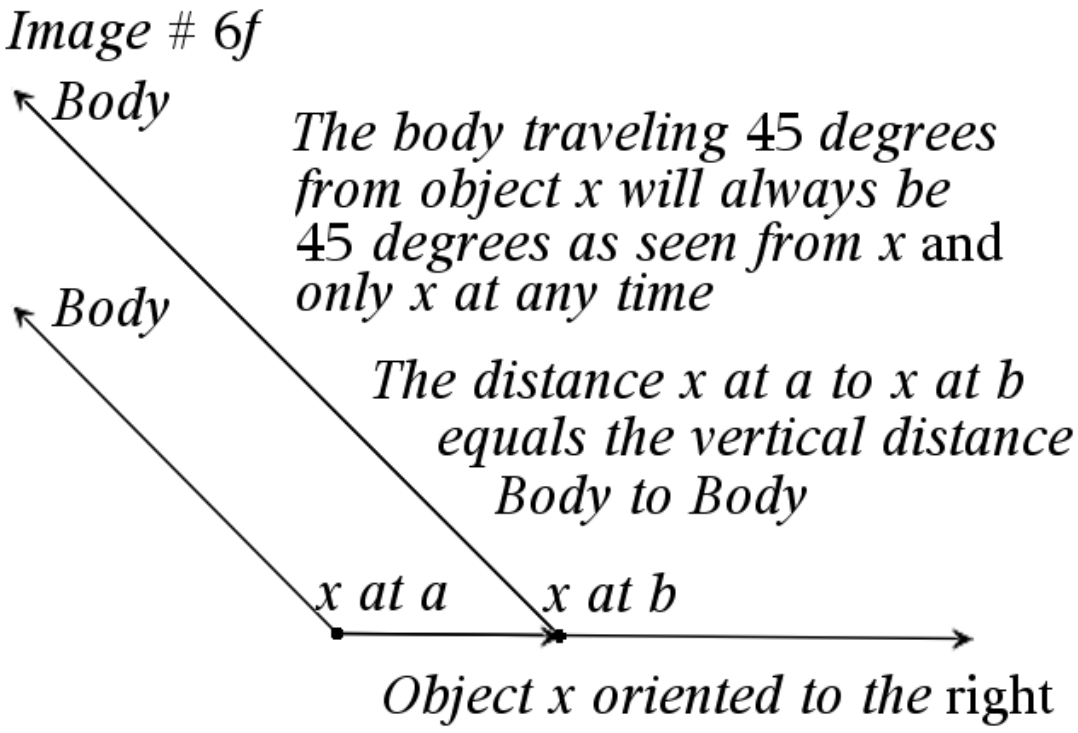


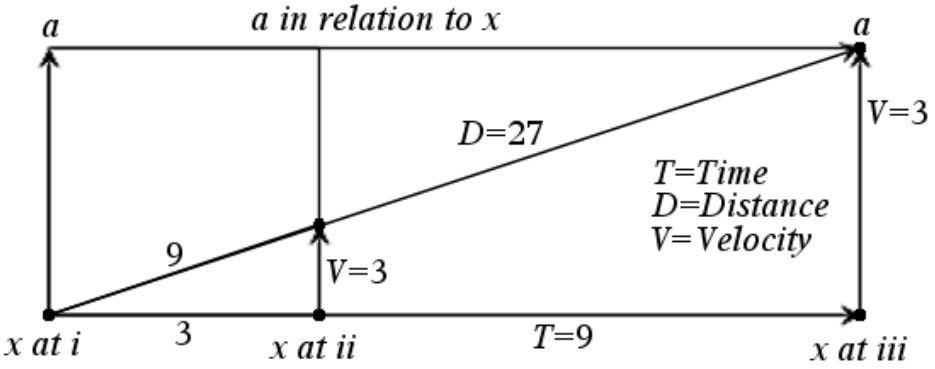
Image # 6g and image # 6h below shows body a ejected 90 degrees from object x and the trajectory direction of object x, because if it had not it would have seemed for a person residing on the moving object x as if the ejected body a would have traveled in another direction than the 90 degrees it was ejected from on object x in motion. Empirical evidence here on Earth shows that it cannot. But for the outside observer, body a is dashing at an angle to the right as seen from the spot where body a was ejected. Look at it as if you are following the frame in its motion to the right. Body a is ejected vertically in 90 degrees to your direction. You experience it as if body a is traveling 90 degrees vertically. Suddenly you slam on the brakes. Body a keep traveling both vertically but now also to the right. The result is, from the standstill view, that body a is dashing diagonally to the right.

The numbers in image # 6g and # 6h below cannot be used for the Pythagorean theorem since Time, Distance and Velocity are measured very differently. The Pythagorean theorem is $a^2+b^2=c^2$.

Image # 6g

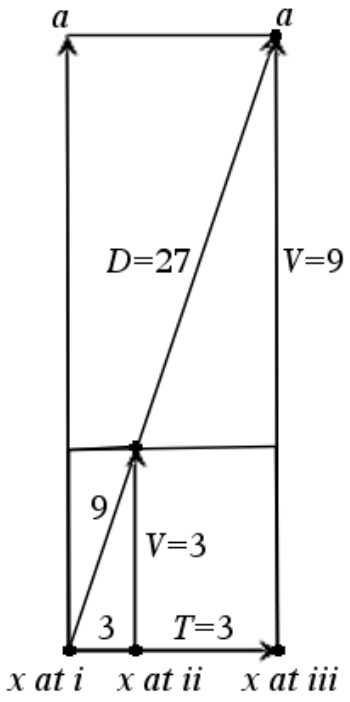
Example on trajectory when *a body is ejected from object x in* 90 *degrees* and *in motion to the* right, *but with less added energy* for *body a*

$$T=\frac{D}{V}$$



Body a is dashing diagonally to the right for *an outside idle standing observer*

Image # 6h



T=Time
D=Distance
V=Velocity

$$T=\frac{D}{V}$$

In this image, T is inverted with V so that T is the constant. In image # 6g, it was V that was constantly the same low number

Observe, this cannot be used for *Pythagoras theorem since we are dealing with three different entities – time, distance* and *Velocity*

Image # 6h basically shows us that x, or T in [T=D/V] can never be zero. You only must get a feeling for what geometry and therefore the universe cannot do, with this graph. That is the graph's other purpose. The higher the velocity, the longer the distance within the same amount of time according to the math lineup T=D/V.

Image # 7a

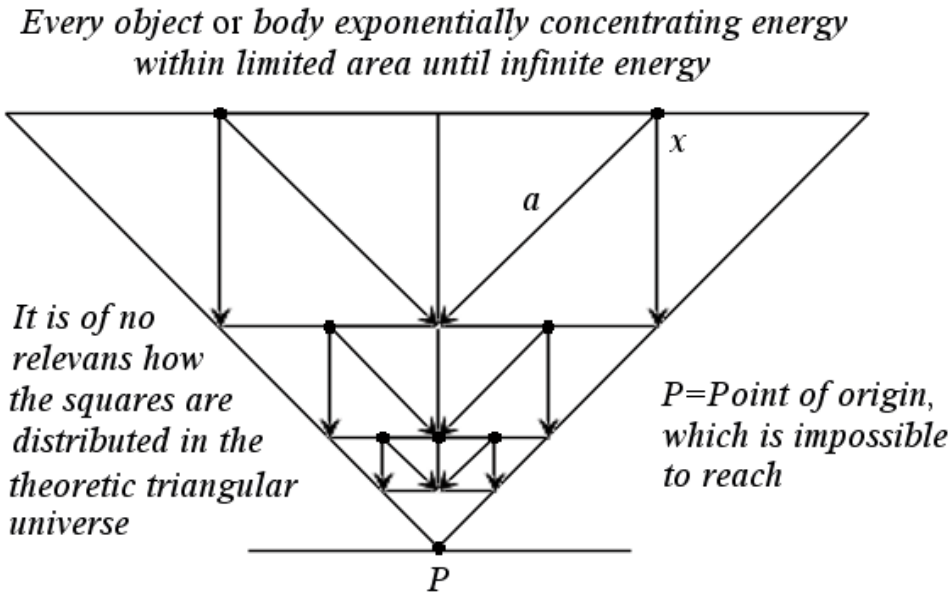


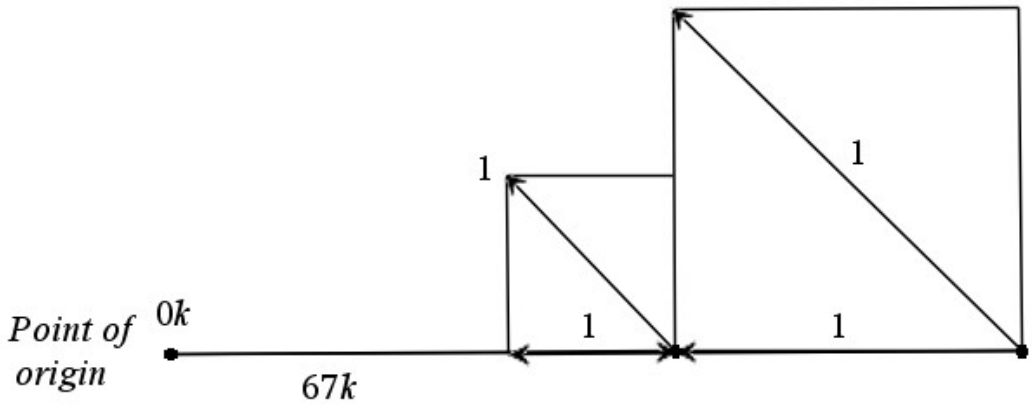
Image # 7a above doesn't quite resemble the universe and its theoretic shape. Either the universe is shaped like a quarter of a circle, or it is shaped like a hanging drop. The squares within the triangle represent "energy cubes" or energy quanta as described in the next two pages.

Here I am going to give a disclaimer of the generally accepted hypothesis that the universe is expanding out to eternity. There is a very simple geometric proof that the universe is finite. If the universe had not been finite but infinite, then two nearby stars at the farthest distance from the Earth (if you could say "the farthest from the Earth" in an infinite universe) seen horizontally from the Earth, would lie along exactly the same axis. Thus, triangular formations could not exist in such a universe and consequently the Pythagorean theorem would have no meaning. A theoretic triangle can never become a straight line no matter how long the base is and how short the height of the triangle is. Thus, the Pythagorean theorem makes an infinite universe impossible. Or one might say that a finite universe enables the Pythagorean theorem.

In image # 7b below we can further implicate matters and see how it is impossible to reach the point of origin with any mass within the given amounts of total directed energy. So, the velocity is always more than zero and matter must

always be located within the expanding universe, or at least within 180 degrees horizontally from the point of origin (in the image # 7a above). But for light it is another matter altogether. Light can reach anywhere in the universe, also behind the expansion direction of the universe since the expansion rate is less than 300,000 km/s.

Image # 7b



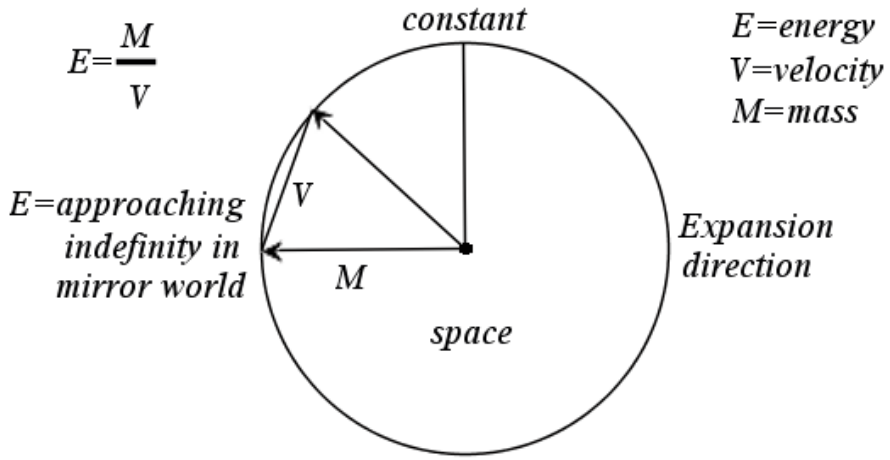
1. *Close to* 0*k*. 67*k is where you would* not expand *with the rest of the universe*

67k is the imagined expansion rate of the universe at our localization in space. But further out in the expansion direction the expansion rate increases, and closer to the point of origin the expansion rate is less than it is here. That is why the universe appears to be redshifted in every direction from X point in space, but also because the universe is a quarter circle shaped or shaped like a hanging drop and vast. We see most galaxies as redshifted regardless of position in space. For 1. to go beyond the expansion rate of the universe, closer to the point of origin, we must consider the Energy required as increasing per square meter while the Velocity is decreasing or $E=\frac{M}{V}$ (see graph # 7c below). To the left of the constant in graph # 7c numbers are approaching indefinity. Hold it for a sec, you might say, what about Isaac Newton's law; If $a>\frac{F}{m}$ then a body can leave the gravitational field of a larger object, according to Newton. It is true. Let me first say that, in the expansion direction of the universe $E=\frac{V1+V2}{M1+M2}$. The energy E, or the dilated time, in my equation can be synonymous with the acceleration a in

Newton's equation. My denominator V, or the velocity, can equal the numerator F as in Force in Newton's equation. So how can the mass M appear both in the numerator and the denominator in two otherwise nearly identical equation setups that are both supposedly true? Except, $E=\frac{M}{V}$ is supposedly true only in the "mirror world". Opposing it, to the right of the constant, in graph # 7d, numbers are approaching 1, and in this equation $E=\frac{V1+V2}{M1+M2}$ M isn't the numerator. This latter equation is comparable to Newton's formula $a>\frac{F}{m}$ and it is valid in the universe expansion direction. But the geometrical and mathematical interface between the "mirror world" and the expansion direction is seamless. You wouldn't notice if you traversed the interface between the expansion direction and the "mirror world" or vice versa. The expansion rate of the universe is not a static constant, but it could play a significant role. I propose that, the expansion of the universe has the property of accelerating less per distance unit the farther from the origin of space we get. It means that acceleration was faster closer to the origin of everything, but everything at our location is still accelerating but not as much as it previously used to in the same distance unit. It's elementary, just think of a car accelerating from standstill. The speed of the car increases till you reach maximum speed, but acceleration does not increase as much at the end. Once you get past the 67k towards the point of origin, the geometry in my two previous images gets more evident with noticeable contraction of the "energy cubes" without the loss of energy. The "energy cube" is an imagined cube with a certain amount of energy within its imagined boundaries. These cubic boundaries shrink as a body travel towards the point of origin and contract, but never reaching the velocity of zero. How much more noticeable? It of course partly depends on how low speed the body travels at as seen from the point of the origin of the universe. Simultaneously, when you accelerate a body in the expansion direction, it too contracts.

Image # 7c

How energy, velocity and *mass are interchangable on a grand scale*



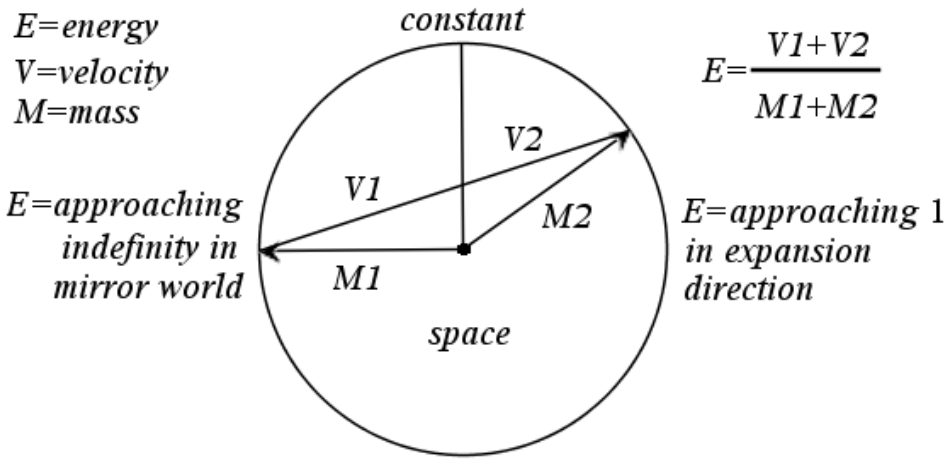
(The image isn't a depiction of the shape of the universe)

There is no overlapping or gap on the constant in the two graphs no matter if you calculate $E=\frac{M}{V}$ or if you calculate $E=\frac{V1+V2}{M1+M2}$, both in a 90-degree angle. It is as I said a seamless interface. In images # 7c and # 7d energy equals results from a universal frame of physics. The total mass of the universe and velocity are interrelated. They have got given variables like on a clock. $E=m*\cos(\theta)*qc^2$ is something else because it shows that the value E depends on interchanging mass energy (m) creating entropy (q) in one direction. The formula $E=m*\cos(\theta)*qc^2$ has got four relating variables on one side, and E is synonymous with dilated time and the formula can be understood like this; $t_d=m*\cos(\theta)*qc^2$. The formula doesn't explain the cause of the universe.

This part is by far the weakest point in my book, I admit. Only if you believe there can be a universal form of energy which is not compatible with the formula $t_d=m*\cos(\theta)*qc^2$, a formula that governs everything in the universe and definitely *is true*, can you perhaps accept the formulas $E=\frac{M}{V}$ and $E=\frac{V1+V2}{M1+M2}$ But the latter two formulas and images # 7c and 7d may explain how *dark energy* works. Everyone knows that dark energy is pushing the galaxies outwards to an ever greater speed, but nobody knows what dark energy is. Nobody has measured dark energy directly. Nobody even knows *how* to measure it. This is the only attempt that I know of, which present, a hypothetical at least, cohesive description of the features of dark energy.

Image # 7d

How energy, velocity and *mass are interchangable on a grand scale*



(*The image isn't a depiction of the shape of the universe*)

I didn't pursue this partial theory in images # 5 up to and including **# 7b**, I *inferred* it at the end of my authoring of this book. I want to make that clear. B follows on A, in a logical reasoning. A is here the absolute speed scale. If there is an absolute speed scale, then what I contend above must be true. Just ponder a grading scale, but for measuring speed. I for one cannot come to any other conclusion, and it is based on my rather well substantiated theory of speed in correlation with energy. The different parts of my theory converge wholly according to Karl Popper's criterion for what science is. My theory is stringent and nearly entirely causal and to bits and parts at least coherent.

Observations have revealed that our universe may be a spinning universe, because about 2/3 of the observable galaxies spin counter clockwise to the Milky Way, and that should only be possible if the universe is spinning around its axis. Scientists have already in 2012 dubbed the partly dis-aligned spinning of galaxies "Galactic axis of asymmetry", and this asymmetry was larger in the early universe. So, maybe the universe is shaped like a two-armed spiral galaxy, with a center of the origin of space which make it an impossibility to cross from one spiral arm into the other spiral arm. Except for light, which can cross any boundaries. It doesn't contradict my theory even though "our" spiral arm, shaped similar like a horn, must be a curved one. Same thing with the other spiral arm.

Image # 8

A) travels at 100,000 km/s B) travels at 150,000 km/s

A----------→ A is aging 1,000 times faster than B B----------→

Let us now assume that A speeds up a 1,000 km/s to a total of 101,000 km/s. A is now going to age at a rate 950 times faster than B.

(Observe that the numbers in themselves aren't important, it's the idea of how you're aging at certain speed that is in focus.)

The same applies if A and B are on a collision course.

A) travels at 100,000 km/s B) travels at 150,000 km/s to the left

A----------→ A is aging 1,000 times faster than B ←----------B

If two objects meet and one of the objects has a speed of 100,000 km/s and the other 150,000 km/s the difference equals up to 50,000 km/s, and it is the 50,000 km/s that determines the difference in aging. Both objects are aging differently in comparison to the other object.

(If the objects are moving towards or away from each other matters not.)

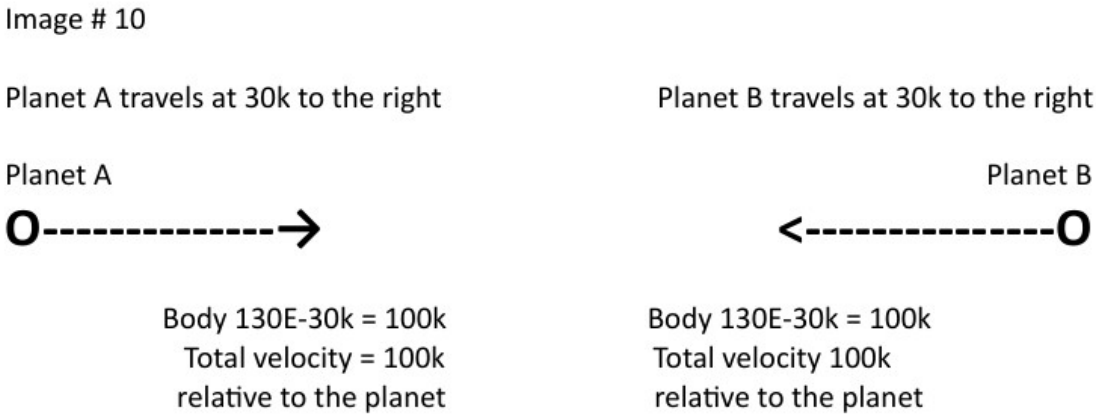
Image # 9

A. 150k reference point B. 150k

←----------O----------→

30k →

A travels at 150k, starting from the reference point.
B travels at 150k in the opposite direction, starting from the reference point.
The reference point travels at 30k to the right.
A and B needs the same amount of energy – 180E – in order to accelerate to cruise speed.
A and B are aging at the same slow rate relative to the reference point.
A and B are aging at the same rate relative to each other.



To simplify understanding, in the example (image # 10 above), the amount of energy is equivalent with the velocity of Planet A plus the velocity of the body projected from this larger object A, as well as the velocity of Planet B plus the velocity of the body projected from Planet B. Both bodies have a speed of 100k as seen from both Planet A and Planet B. *There is an absolute speed scale ranging from 0 up to 300,000 km/s.* The highest speed is reserved for electromagnetic radiation and light, and it is by measuring these that we can know which is the highest speed since the speed of light in vacuum is a constant. The body ejected from Planet B in the image is aging at the same slow rate relative to both planets A and B as the body ejected from Planet A is aging relative to planets A and B because the planets have the same mass, and the bodies are of the same rocket type and have the same amount of energy. Here we can ignore that fuel is de facto converted into light, thermal energy and motion energy and disappears through the exhaust and that thermal energy accumulates in the body of the rocket while the combustion reaction propels the rocket forward. The total amount of energy in a collision would be 130E + 130E = 260E for the bodies, but these bodies thus have a relative velocity of a total of 100k + 100k = 200k relative to the planets. By relative velocity I mean that the velocity of the bodies is relative to planet A and B, but planet A and B have an absolute velocity of 30k to the right, and therefore we can easily calculate the absolute velocity of the bodies. At the very least this, with ease, applies to most situations with multiple speeding bodies since there is a pretty much multiple linear expansion of the universe with a single point of origin. If someone feels compelled, he or she can calculate a 3-D version for multiple angles and derive it back to the point of origin.

Gravity = Acceleration

Isaac Newton's equation about body gravity is $F = G\frac{Mm}{r^2}$

If $a > \frac{F}{m}$ then a body can leave the gravitational field of a larger object, according to Newton.

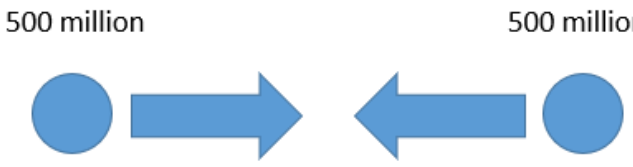
Explanation of character: F = force, G = gravity constant, M = mass of a larger object, m = mass of a smaller body, r^2 = distance between m and M's midpoint, a = acceleration of a body

A body with a mass 10 that is released against an object with a mass of a 1,000 million minus 10 accelerates towards impact against that object at practically the exact same time and speed as a body with a mass of 0,001 which accelerates against that same object. Two objects with a mass of 500 million that attract each other from the same distance will attract each other and reach impact at the same time, which we assume for the bodies with masses 10 or 0,001 against an object with a mass of ~1,000 million. (Image # 11 below.)

The only thing that separates gravity from acceleration is that gravity always works towards a point in space while the source of acceleration is thermal energy. An accelerating object can direct its momentum energy and change course in space. (Image # 12 p. 34) Rest mass energy is conservation of energy and without Rest mass energy we wouldn't have had any gravity. Otherwise, gravity and acceleration are two sides of the same coin. Einstein's example with a hairspring hanging from the top of inside a vertically gravitationally pulled cardboard box and not getting stretched inside the box, isn't entirely true. There is a certain small pull on the hairspring and the box, which you can notice if you consider the box traveling vertically the whole stretch from near an object's gravitational pull's outer boundaries. The box and its contents start with barely any velocity. This gravitational vertical pull increases motion energy for the box and its contents over time, and the box and the hairspring will return that accumulated energy when impacting the large object.

I think that the second law of thermodynamics is somewhat faulty since the universe is not a set where entropy is constantly increasing, because gravity of objects works contrary to entropy. The universe is a struggle between entropy i.e., thermal energy, and gravity, although entropy seems to be winning. It is just that when gravity restores order, matter is not contracted in the same order as it started with, before entropy had its way with it through thermal energy when for example a supernova exploded from an aged super massive star.

Image # 11



Same mass – same distance – same time

Image # 12

Acceleration – Changing direction is possible

In practice, direction change is possible also for a body which is gravitating towards an object, since it is extremely unlikely that a body is closing in on a large object straight to the center of that large object. But the body cannot be controlled without adding thermal energy.

To accelerate a body of 0,001 to 30k, you do not need the same amount of thermal energy as you need to accelerate a body of a 1,000 million to 30k, relative to a reference point.

Let's say that the gravity from a larger object has a force -X. It then follows that the acceleration of a body that would be able to escape the gravitational field must have an acceleration force that exceeds the larger object's gravitational pull. If the body has an accelerating force X or less, the body cannot escape the gravitational field of the larger mass. The amount of energy E required to accelerate the small body varies depending on the mass of the large object and the small body. If the gravitational pull -X and the acceleration force X have corresponding value inverted, then there must be a constant at the larger object. That constant must be the rest mass center. It is interesting that the forces have a rubber impact effect where all directed force from the constant up to X causes a motion that can extend all the way to the outermost boundary of the gravitational field in space but ultimately leads to the energy being returned to the closed system. The mass thus borrows energy but returns the extra energy when it crashes on the larger object it left, *iff* it crashes on the larger object. When you take a leap on Earth, the leap starts with an electrical reaction in the musculature, and during the jump or rather before when you are storing energy as a human battery, you borrow some energy from Earth and return the energy when you land. The only way to steal energy is to leave the solar system behind you for good.

Electro-magnetism is a natural phenomenon that can be created (and stored) by thermal reactions and movement in electrically conductive bodies, such as in the Earth's interior. Electro-magnetism is a special field in physics. The body has plenty of stored excess energy it can use to create motion. When the friction in the musculature becomes too great and heat becomes a by-product of your motion, the body must be cooled down just like an internal combustion engine. The thermal reaction above 37,4 degrees Celsius is an undesirable by-product. Only the nature that created the animals and man, and the natural man, have curbed electro-magnetism. Nature has done so by being as lazy as the surface tension of a soap bubble is, it never consumes more energy than is absolutely necessary to bring about motion of a biological body.

The heat of an internal combustion engine should not be seen as a by-product from the friction of its pistons against the combustion chambers inside the engine block. It should rather be seen as an energy equalization to the

surroundings by the thermal reaction from the combustion. The energy equalization is caused by the friction which reduces the power of the motor. The energy loss cannot exceed the energy of the total amount of explosions. It is the thermal combustion reaction that, just like a rocket, propels the vehicle forward. Design is important but the propulsion comes through a thermal reaction during the ignition at the fuel injection. Everything eventually moves toward greater entropy.

A substance like plutonium is more easily reactive than a correlating amount of lead and thus appears to have a greater amount of energy. The greater chaos in the shortest amount of time a reaction can cause in a substance, according to the second law of thermodynamics, the more energy-generating the reactive substance is perceived to be. The opposite of chaos is contraction. In this theory, 10 kg of plutonium does not have a greater amount of energy than 10 kg of lead, it is only more easily reactive. Everything that weighs 10 kg here on Earth has the same amount of energy. Since it is possible to achieve that a substance such as Plutonium, in a reaction, can release large amounts of energy in a short time, thus being converted into a flash of light, thermal energy and motion energy is no stranger than a reaction caused by a match and a matchbook which can release a certain amount of energy from paper that burns and causes light and thermal energy, when you cannot release any energy to speak of from lead, at least not by adding less thermal energy than you can gain. Scientists quantify this with the energy ratio Q, or how much energy goes in and how much energy goes out. Q equals the amount of energy output divided with the energy input. For lead, Q=<1. If Q is less than 1, the energy output is less than the energy input, as is always the case with lead, as far as we know. If Q=1 you break even. If Q=>1 you gain net energy. What method we use to try to gain energy from a substance decides how much net energy we can gain, if any. For example, if you burn Plutonium with a blowtorch, you probably don't gain net energy, but if you split Plutonium atoms in a controlled specific manner you gain a lot of net energy.

Let us imagine that a body with a mass 10 is *pushed* from standstill in a direction straight towards an object with a mass of 1,000 million. Then, in practice, the smaller body must be man-made, for this way of setting the example is like the Newtonian apple-which-falls-to-the-ground postulate. An object with a mass of 1,000 million that angularly attracts an autonomous body with a mass of 10, will

temporarily lose minimalistic amounts of energy to the body of mass 10, when the smaller body is attracted to the larger object. The larger object has a larger mass which slows down the time for that object as seen by an outside observer. But the small body accelerates towards the larger object, which causes the small body to age more slowly in comparison to an outside observer. The small body is almost weightless at this state, but in theory the mass of the big object moves towards the small body correspondingly albeit very little. When the small body crashes against the large object, the extra motion energy that the small body had transfers to the large object through the impact that comes. At the time of impact, the small body's energy mode is transferred from the mass that the small body had, and the gravitational pull of the large object increases, which in turn means that the larger object will be aging microscopically slower. The larger system adds energy.

If we imagine that we instead *accelerate* a body with a mass 10 starting from an object with a mass of a 1,000 million, so that the body with a mass 10 leaves the gravitational field of the larger object, then the smaller body will because of its acceleration from the larger object age at a slower rate. The only reference point we have is the larger object. What matters is the amount of energy required to accelerate from the large object and as we have already found out, it does not matter in which direction from an object, which travels at say 30k in the general direction we choose to use for ejecting a body away with thermal energy, because the energy required to achieve a certain velocity relative to the reference point is the same regardless of the firing direction. In other words, it doesn't matter if the larger object travels at 30k to the right and we choose to eject a body with a mass 10 to the left, because in correlation to the larger object, the body travels with a mass 10 just as much faster and is aging equally slow relative to the larger object regardless of the projecting direction from the larger object i.e. the reference point. The difference in aging is extremely small except at extremely high speeds. In this case, the conclusion is that the larger object will lose its corresponding energy as long as the small body does not return to the larger object.

To conclude, a smaller body accelerates and increases its energy and is aging slower when closing in, from the outside of the gravitational field, on a larger object. At the same time the larger object loses energy and is aging faster, until

impact when it gains energy from the small body's both motion energy and mass. In the other direction, a smaller body always has an increased thermal energy force *when ejected* from a large object, and the smaller body is aging slower as it accelerates. At the same time the larger object loses energy and is aging faster, provided that the smaller body can leave the gravitational field for good. It does not apply to orbital movement because an orbiting body is just borrowing energy from the bigger object, and it doesn't leave the gravitational field of the bigger object. If the small body comes from outside the larger object's gravitational field, it adds energy to the object's gravitational field, if caught in an orbit around the larger object. Whether the small body is launched into orbit or caught into orbit, the small orbiting body will predominantly age faster than the larger object. [See this book's initial stipulations.] A perfect circular orbit for a body revolving around an object doesn't last long before the body gets pulled into the surface of the object, by the objects' gravitational interactions. Just imagine the motor circus from your childhood, with a motorbike driver in a cylindrical velodrome. If the driver constantly stays on the same horizontal track without accelerating, he is going to lose altitude exponentially fast. But an elliptical orbit with an apogee and a perigee lasts what seems like forever. Elliptical orbits are the norm.

I am postulating that it doesn't matter whether a smaller body is *approaching or leaving a gravitational field* and an object's surface, the larger object will still lose energy to a smaller body if the body is not at rest on the larger object. The physical laws do not distinguish between gravity and acceleration in that regard.

Bodies which come from outside a gravitational system and has a trajectory that is curved by the gravitational system, will steal energy from that gravitational system, as long as the smaller body isn't caught into a sustainable orbit around the large object in the center of that gravitational system. Just look at the accelerating body OUMUAMUA, the object from another Stellar system that is passing through our Sun's gravitational field. That means that the orbit and velocity of a larger object will be altered as a small body accelerates like a man-made projectile that is using a planet's gravitational pull to increase its speed. The small body will simultaneously increase its velocity correspondingly. It thus appears as if all linear movement, and actually all movement that is not orbital, packs a larger amount of energy than orbital movement, and it "steals" energy if

it can. That explains why gravitational pull exists in a constantly moving orbital universe. It's because it is geometrically energy conserving, and all bodies require transformation of rest mass energy to momentum energy for it to be able to leave a gravitational system. Newton's first law is thus not entirely correct, or at least not entirely complete, because you need a force of directed energy for a body to begin to accelerate in a straight trajectory. That energy can come from the Big bang, or it may come from an exploding supernova or something else very powerful.

Isaac Newton's first law states that if a body is at rest or moving at a constant speed in a straight line, it will remain at rest or keep moving in a straight line at constant speed unless it is acted upon by a force.

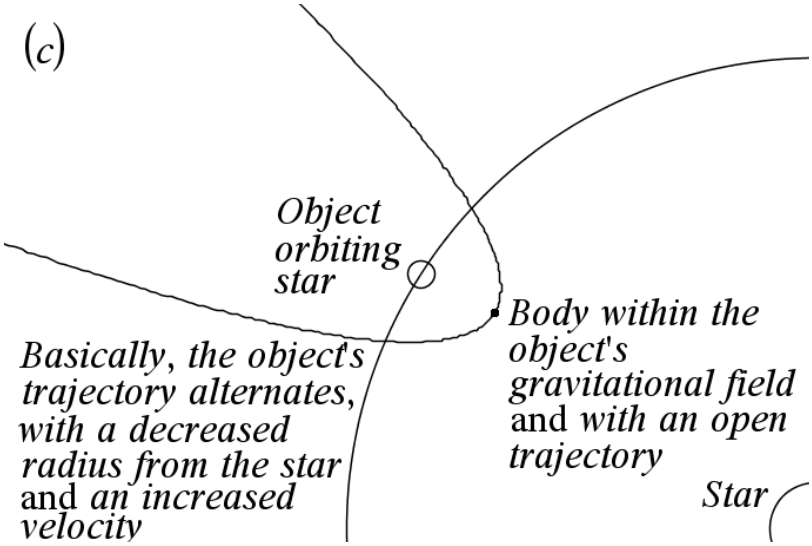
A refutation of Isaac Newton's first law:

a) If a body is in orbital motion with a given sufficient apogee and perigee it will stay in orbit in an energy-conserving state if there aren't any adequate amounts of accurately directed energy to it.
b) Thermal energy [or electro-magnetism] is required direct to make matter move in straight or otherwise non-orbital trajectories.

Have I rationalized away Einstein's theory of Relativity, or have I merely explained gravity's geometrical function? I know one thing, energy conservation i.e., the path of least resistance is the one law that can never be rationalized away. It governs the galaxies. This part alone can explain away the existence of Dark matter and explain how it is that spiral galaxies hold together and why they are not throwing stars out into the surrounding space.

(a) A small body passing through a gravitational field changes course and accelerates. [Or it becomes caught in an orbit around the larger object.]
(b) The larger object's velocity is decreasing. And the larger object's orbit around the central star alternates a certain bit too, albeit this is very marginal and corresponds with the amount of energy the small body "steals" as it pass through the large object's gravitational field once. The large object's trajectory alternates, basically with an increased radius from the star.

(c) One special circumstance is if the small body crosses paths (circumvents) with the larger object which is in orbit around a star or some massive celestial object. Then it will be the small body coming from outer space that loses energy in favor of the larger object, and the small body changes course with a decrease in speed for the small body which will appear to fall towards the larger object, if the body is within the larger object's gravitational field. The large object's trajectory alternates, basically with a decreased radius from the star, when the body is circumventing.

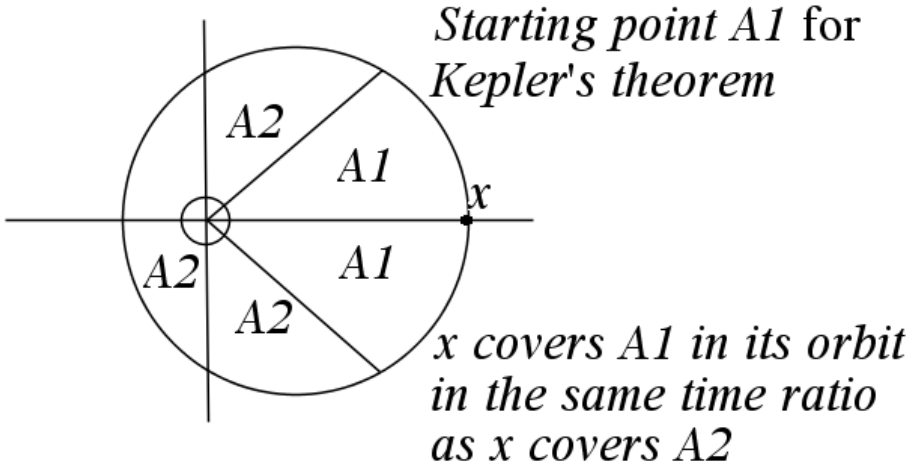


The sums of the two, the smaller body and the larger object's alterations, even each other out. Not equal, but still. There is a transfer of energy. But there is a thing called Time perception. If the small body accelerates (see a and b above), it must be aging a tiny bit slower, and if the larger object's orbiting speed is decreasing it must be aging a tiny bit faster compared to a reference point. Except, the small accelerating body passing through a gravitational field is aging "much" slower compared to a reference point than the larger object is aging faster than before, compared to the same reference point. ["Much" is here in the scale of micro- or milliseconds.] So, it appears in the normal case (see a and b above), like the smaller body is gaining considerably more energy for its acceleration than the larger object is losing energy. I thus think that time isn't an energy form you can put into the long side of an equation, but time dilation <u>is</u> energy. Just switch the E to a t for time in my formula so that it reads $t_d=m*\cos(\theta)*qc^2$ I also think that it is possible to find a mathematical correlation between a large object's mass and velocity, and a smaller body's mass, velocity,

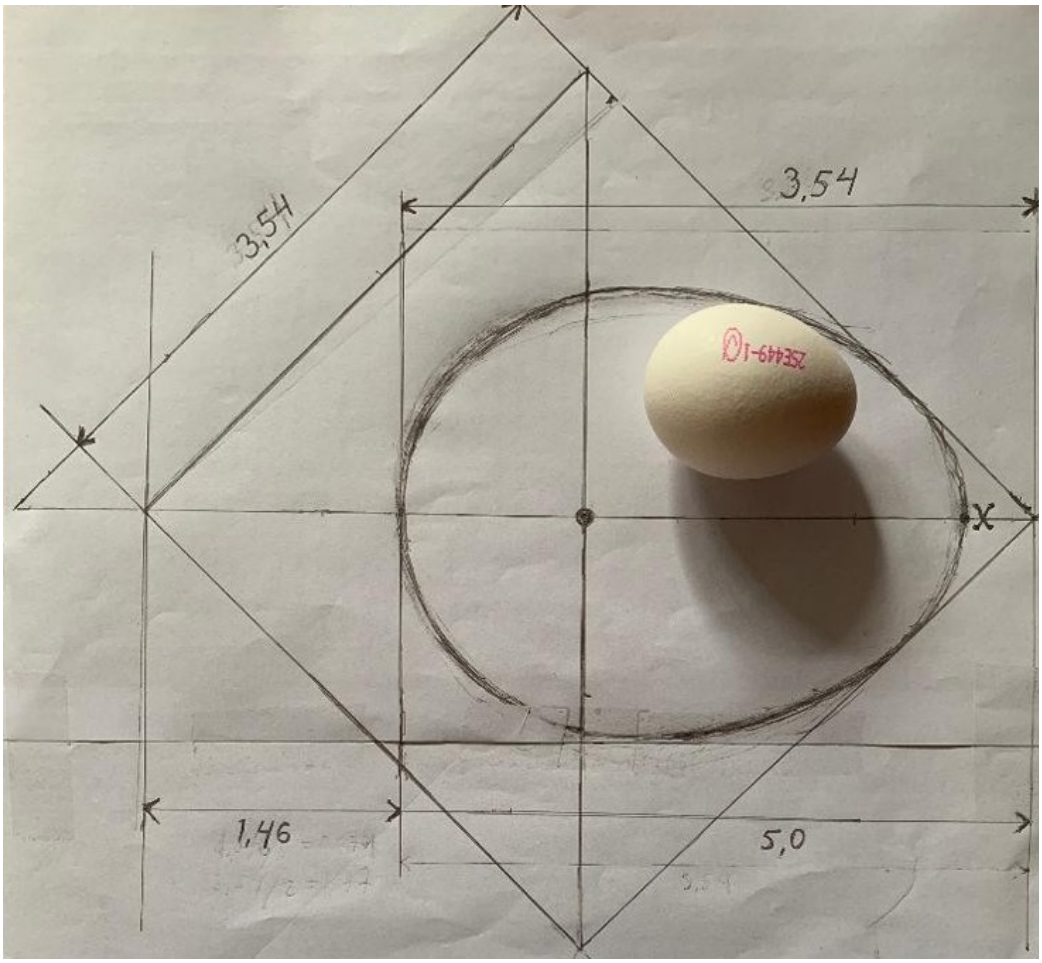
and distance from the larger object, whether the small body is going into orbit, leaving a gravitational field, or just passing by our solar system. And specifically, I want to know how this could be applicable to time dilation at different altitudes and velocities. I don't think it has been done properly yet. But Kepler's second law.

> **Kepler's Second Law:** The movement along each ellipse takes place at such a speed that the line from the Sun to the planet covers the same area in the same amount of time.
>
> This means that when the Earth (or any planet) moves in its orbit around the Sun and during the time (t) has created an area A1 which is formed by the Earth moving from point a and b. Sequent, the area measures A2, which is formed when you are closer to the Sun, so when the Earth moves from point d to c these two areas A1 and A2 will be equal. [See additional image below]
>
> And this: the area for an ellipse=πab

An orbiting object or planet in its perigee (when closest to the star) will age slower than in its apogee, due to the difference in its velocity and proximity to the star. But seen in the planet's whole orbiting course this will even out, but not necessarily completely equal, when completing a full cycle. [See pages 69-71]



However, an orbit isn't perfectly circular. In the graph below you can see one egg-shaped geometric interrelation sketched out. Note the 3.54 fifths. The orbit trajectory for x is identical in length for both area A1 and A2 in this graph.



Just like with a multiple Hoola hoop display, it may be that ice objects or Zednoids orbiting the Sun most of the time gravitationally align their orbital planes. Except, sometimes an object may be misaligned with the others in its orbit around the Sun, like the multiple Hoola hoops may be on a Hoola hooper. But, there is no need to introduce a planet nine to explain an alignment, which just as well can be violated. At first glance it looks weird to make a comparison with a Hoola hoop display, but thinking about it for a minute made me change my mind.

A launched rocket isn't "borrowing" energy initially from Earth, any more than a flying aircraft does, but transforms directed fuel energy into noise, heat, exhaust fumes, light, and momentum energy. Like an airplane in flight, it is aging slower. But when in orbit it is going to age faster. Consider the formula $t_d=m*\cos(\theta)*qc^2$

Less than 600km altitude	A rocket in its initial phase. Rocket is aging relatively slower.
c = < (less speed)	
m* = > (more directed mass)	
q* = > (more opposite directed thermal energy)	

~600km altitude	A satellite in orbit. satellite is aging relatively faster.
c* = >	
m = (+/- 0)	
q = (+/- 0)	

More than orbiting velocity	A rocket with continuously burning engines, leaving planet's gravitational field.
c* = >	Rocket is aging increasingly slower.
m* = >	
q* = >	

Out of gravitational field, no burning engines. Rocket is aging at its slowest.

c = (+/- 0)

m = (+/- 0)

q = (+/- 0)

Fibonacci's "snail shell" pattern number sequence may be connected to Kepler's second law, since if you consider launching a small body into orbit, the Fibonacci number sequence may provide you with the most energy conserving initial trajectory.

Induced life, and perhaps even manned spaceflight, may even be a precondition for the universe under the right circumstances. What if life emanated from quantum mechanics through a possibly complicated step-up mechanism to relativity scales, like in the photosynthesis process of a flower. But relativity is not causing this mechanism to appear, quantum tunneling is [not my idea; Roger's note]. Quantum mechanics does what quantum mechanics does and relativity does what relativity does. But take a step on Earth, and you will transform stored electromagnetic energy into small temporary lift-offs off the

ground. Or if it is a fish, it may propel itself by whiffing its fins. Thus, life could be described as rechargeable batteries following certain rules.

In many spiral galaxies the outer stars orbit around the center of their galaxy with greater speed than the inner stars, but without getting flung out into the surrounding universe, whilst in solar systems, the outer planets orbit around the star with lower speed than the inner planets. How can this inconsistency be? Most scientists in Astrophysics would explain this with the concept of "dark matter". But dark matter as an explaining entity in classic theories is inconsistent, since the precondition for dark matter is that its mass is more prevalent in the outer layers of the galaxies. [In the outer layers of the galaxies there are no evidence of stars or any other matter. From this they concluded already in the 1970-ies that the galaxies are surrounded by so-called "dark matter", never explaining how it came to be there in the first place.] I contend that the explanation for the formation of the stars in spiral galaxies, comes from the super massive black hole in the revolving galaxy frame-dragging spacetime with its super-fast spinning around its own axis, that unopposed as a force makes the outer stars as well as the stars within the Lense-Thirring effect zone orbit faster. It's not difficult to imagine that the stars within the Lense-Thirring effect zone will orbit faster. But why do stars often orbit faster in the outer layers than they do in the middle layers of a galaxy then? I contend that all the layers of stars around the super massive black hole in the center of the galaxy contribute to the greater velocity for stars in the outer layers by dragging spacetime with it, albeit ever so little for each layer, but aligned with the spin of the super massive black hole. But it happens unopposed as a force and thus it must happen. Our own Sun doesn't have the same mass as a super massive black hole (and multiple layers of stars), and thus it doesn't spin nearly as fast, and these two factors mean that our Sun cannot drag the outer planets with its spin very much. That is why the outer planets in our solar system don't orbit with an equal or higher velocity than the inner planets, but orbit slower. My revised Newton's first law explains why stars don't get flung out from the spiral-galaxies. The physical laws here on Earth are that, when we spin around holding two weights, and we drop those weights while spinning they continue outwards away from us. This applies at the small scales since our bodies don't have much gravitational pull and the weights are unproportionally massive. But at galaxy scale the gravitational pull is considerate and each individual star is but a spec of dust clinging to the cluster of stars in the galaxy. Except, if you use Newton's equation $F = G\frac{Mm}{r^2}$ correct on the grand scale

you get a good estimation of the force, but not if using $F=G\frac{M}{r^2}$ like so many make the mistake of doing. Imagine in the latter formula $F=G\frac{M}{r^2}$ putting in the numbers $F=1\frac{1000}{1^2}$ then F=1000. Now imagine in the first formula $F=G\frac{Mm}{r^2}$ putting in the numbers $F=1\frac{900*100}{1^2}$. Suddenly F=90,000. Remember, not multiplying M with m is the basic mistake people make. Just imagine M as the whole center of the galaxy with a mass 900 and m as the outer layers with a mass 100. If you push the logic further and put in the numbers $F=1\frac{800*200}{1^2}$ then F=160,000. Maximum is $F=1\frac{500*500}{1^2}$ then F=250,000. Even if you increase the radius squared you still get a much higher number F.

$$1000=1\frac{1000}{1^2}$$

$$90000=1\frac{900*100}{1^2} \quad 160000=1\frac{800*200}{1^2} \quad 250000=1\frac{500*500}{1^2}$$

My calculus, using Newton's equation, may well explain the barred spiral galaxies barred shape in the middle, since the force is greater in the middle spectrum with equal amount off masses for both M and m. Even if you take into account the longer radius between M and m, this is the case. I can give you two explaining equations:

$$3600=1\frac{900*100}{5^2} \quad 62500=1\frac{500*500}{2^2}$$

Obviously, the formula for acceleration $a>\frac{F}{m}$ produce the number 1, which is not greater than $\frac{F}{m}$ if first using the formula $F=G\frac{M}{r^2}$ and the input $500=1\frac{500}{1^2}$. Thus, if F=500 and m=500, or any other number divided by itself, then a isn't greater than $\frac{F}{m}$ but is 1.

If using $F=G\frac{Mm}{r^2}$ then if putting in the numbers $6{,}400=1\frac{800*200}{5^2}$ and if putting the counter and the result into the formula $a>\frac{F}{m}$ it equals $0.04=\frac{6{,}400}{160{,}000}$. Then 0.04, or the acceleration a, is lesser than 1. So the formula for acceleration $a>\frac{F}{m}$

can not be derived from the formula for gravity, or $F=G\frac{Mm}{r^2}$. Actually, you can put in any numbers you want, in the counter and the denominator, in the latter equation for gravitating bodies, and still a can never exceed the number 1 when calculating the acceleration $a>\frac{F}{m}$. That would imply that a body could never leave the gravitational field of a larger object.

$$F=G\frac{Mm}{r^2} \Rightarrow 250{,}000=1\frac{500*500}{1^2} \qquad a>\frac{F}{m} \quad 1=\frac{250{,}000}{250{,}000}$$

$$F=G\frac{M}{r^2} \Rightarrow 125=1\frac{500}{2^2} \Rightarrow 125=1\frac{500}{4} \qquad a>\frac{F}{m} \quad 0.25=\frac{125}{500}$$

$$F=G\frac{Mm}{r^2} \Rightarrow 6{,}400=1\frac{800*200}{5^2} \qquad a>\frac{F}{m} \quad 0.04=\frac{6{,}400}{160{,}000}$$

$$F=G\frac{Mm}{r^2} \Rightarrow 0{,}000001=1\frac{5*2}{5^{10}} \qquad a>\frac{F}{m} \quad 0.0000001=\frac{0.000001}{10}$$

Thus, we got used to calculate in an erroneous manner. The total mass of all galaxies appears to be off when ascertaining the speed of the outer layers of stars in an orbital trajectory around the center of spiral galaxies. I mean, based on the calculated speed of the orbiting stars, we expect a to be greater than 1 in spiral galaxies. This calculated speed in turn is based on the apparent shape of the spiral galaxies. But if deriving $a>\frac{F}{m}$ from the equation $F=G\frac{Mm}{r^2}$ a can never exceed 1, and that at least we know is wrong. My guess is that it is the formula $a>\frac{F}{m}$ which is incomplete, if not invalid. Albeit, I understand that the formula is good for rocket science. But then again, neither is $F=G\frac{Mm}{r^2}$ telling the whole truth for truly understanding gravity and mass. The formula tells the how but not the why. I am aware of the existing solid math [unfortunately there was no good image on internet I could copy, and I couldn't create any either].

The example (images # 13a and # 13b below) show that motion energy is equivalent to matter. Matter in motion induces gravity. Speed of light = ~300,000 km/s. Neither a. nor b. can in theory accelerate to more than a 1,000 km/s relative to the reference point i.e., the big object. [Schematic images below]

Image # 13a

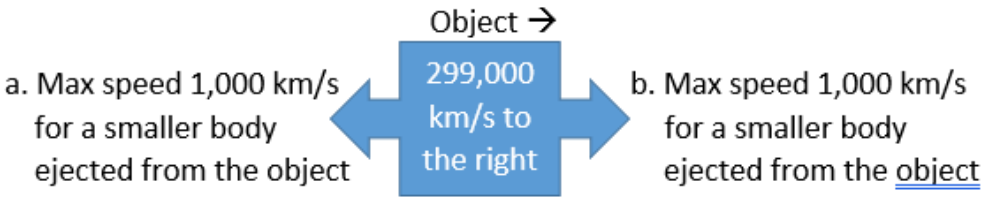
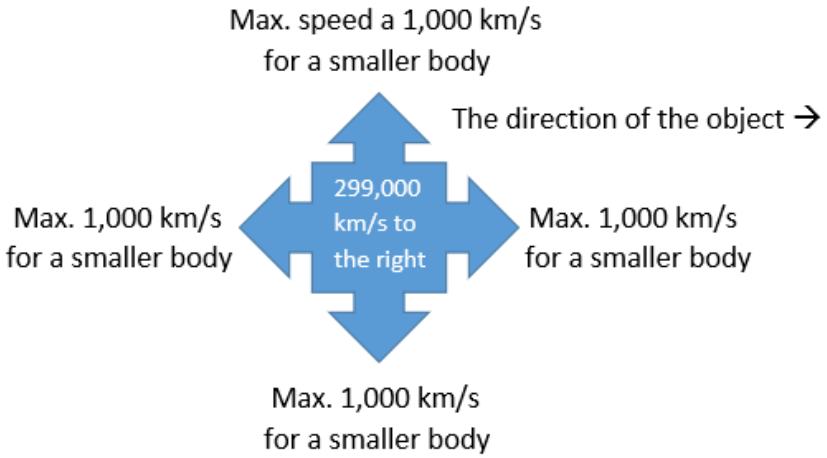


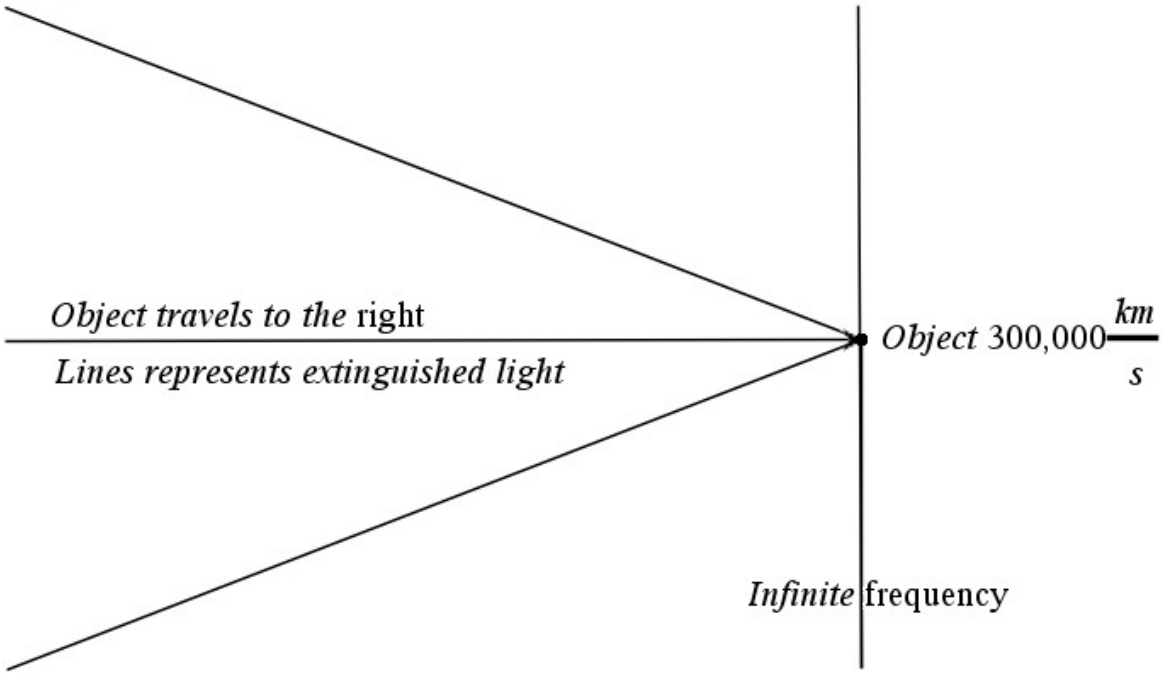
Image # 13b



[Space warp in image above not accounted for, as seen in image # 6a p. 18] At extremely high speeds, the mass of a speeding object substantially increases, which supposedly means that time slows down for the object in comparison to the surrounding world. Matter and the velocity of that matter have a mutual relationship. As all matter in the expanding universe accelerates, so must the total mass of the universe increase. Mass thus has no constancy. But Albert Einstein explicitly stated in his popular science book in the chapter of the Theory of Special Relativity that it has. He wrote this, among other things; *"Furthermore, the fact that bodies in motion are contracted is not determined by the motion*

itself, a concept that can make no sense, but by the motion in relation to the selected reference body." (See images # 13a and # 13b above and convince yourself that Einstein was wrong.) If one wants to launch anything from space one will need equal amounts of energy to accelerate a body in any direction from an object in motion. We have already concluded this. In the images above, extreme amounts of energy would be required to accelerate to the last possible 1,000 km/s. Should the object in the center have accelerated to the full speed of light, it would have had the same characteristics as a black hole. No matter would have been able to leave the surface of the object and the emitting radiation would have been extinguished as shown below. But as we have already concluded geometrically, it is an impossibility for a body to accelerate to the speed of light. Gravitational collapse is the only way to create a new Black hole.

Image # 14



In Einstein's book *"The Special and the General Theory of Relativity",* Einstein brings up an example where a person in a box who is in linear acceleration also experiences the law of gravity because of the acceleration. Like me, Einstein probably thought gravity was equivalent to acceleration. But Einstein did not realize that gravity is also equivalent to any constant velocity of a body, preferably a very high velocity. That is why he only labored with an *accelerating* person in the cardboard box example. A spaceship (or a cardboard box) that is launched from Earth and is on its way to the Moon experiences gravity only in the lifting phase during acceleration and during the Moon landing itself. This means

that at constant speeds well below the speed of light, the extra gravity created for the spaceship based on its added acceleration is small. The body's inherent mass is thus much more crucial. Although one cannot escape the fact that the total mass of the universe is substantially influenced upwards by matter's own velocity/acceleration.

Consider a spherical universe. The amount of energy in different objects can vary, but it is not infinite. If an object A and an object B are on a collision course with a total speed of 400,000 km/s, then the amount of energy cannot exceed that if they had met at a total speed of 300,000 km/s, according to a professed thesis. Therefore, purportedly, c in $E=mc^2$ can never exceed 300,000 km/s or the speed of light. E stands for energy, m stands for mass and c^2 stands for the speed of light squared. But…

…I amused myself by using Einstein's formula to calculate how much energy it would take to accelerate 10 kg to the speed of light if it had been possible. But we already know that no objects can be accelerated to full light speed. That is as close to an axiom as we can get. What you see below is a calculation using Einstein's original equation, in which it is possible for an object to reach the speed of light. And it is arguably not so much.

$E = 10 \times 60 \times 60 \times 300{,}000^2$

E = 3,240,000,000,000,000 Joules i.e., 3.24 Terajoules

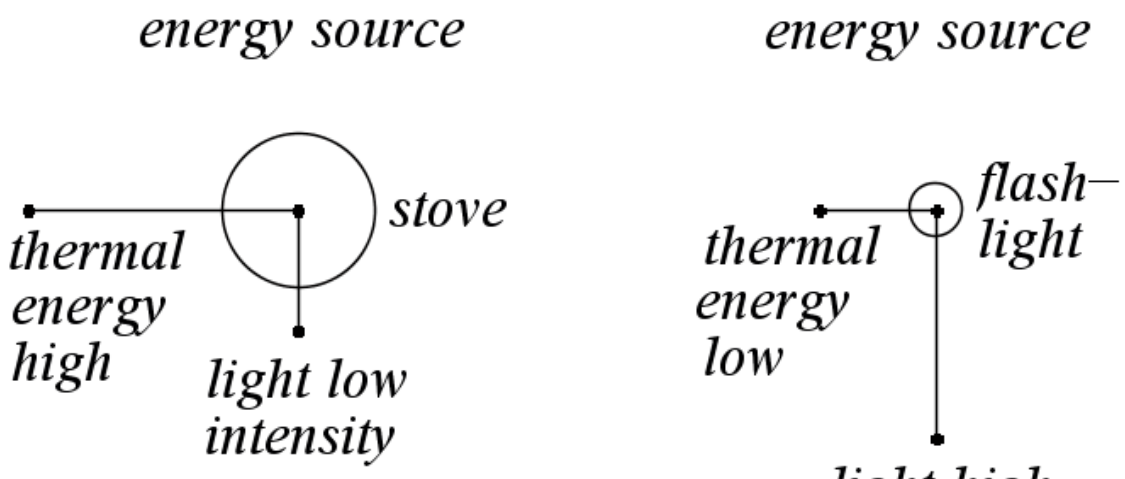
The atomic bomb over Hiroshima developed an amount of energy equal to approximately 63 Terajoules. It means that the energy from the atomic bomb detonating over Hiroshima could have made 10kg reach the speed of light 19 times over. But $E=m*\cos(\theta)*qc^2$, where q is the thermal energy.

Before a photon is emitted it had mass. Like in the battery of a flashlight. In fact, it is not even a photon yet. When a photon is released, or rather is induced, mass transforms into light traveling at the speed of light in vacuum. From the time of birth for an emitted photon to the time of impact of a photon, if it is destined to

impact some object, there will have passed no time at all as seen from the photon. As the photon, instantly from its own perspective, hits the wall your flashlight is aimed at, its momentum energy transforms into thermal energy. This should mean that, for a photon, everything happens at once. Energy transfer is immediate. For a photon there is no future, and there is no then. All light is non-intermediate. Maybe this explains how photons can be quantum entangled at a distance? But the procedure for a photon from birth to end is causal. Also, the latest laboratory experiments in the field of quantum mechanics performed by the Imperial College in London support the idea that light is non-intermediate. Imperial physicists have recreated the famous double-slit experiment, which showed light behaving as particles and a wave, in time rather than space.

Electro-magnetism might be the number one cornerstone of the birth of the universe. The cause of all existing mass and emitted light. But then again - light is within the electro-magnetic spectrum. Thus, the electro-magnetic spectrum must have caused itself if that is true. Electro-magnetism then must have pre-existed.

Image # 15



Transfer of thermal energy into light is greater in the flashlight

For photons moving at the speed of light, E=cp is where E stands for energy, c stands for the speed of light and p is its quantity of motion. Photons have no rest mass. The speed of light in vacuum is independent of the observer's motion. An

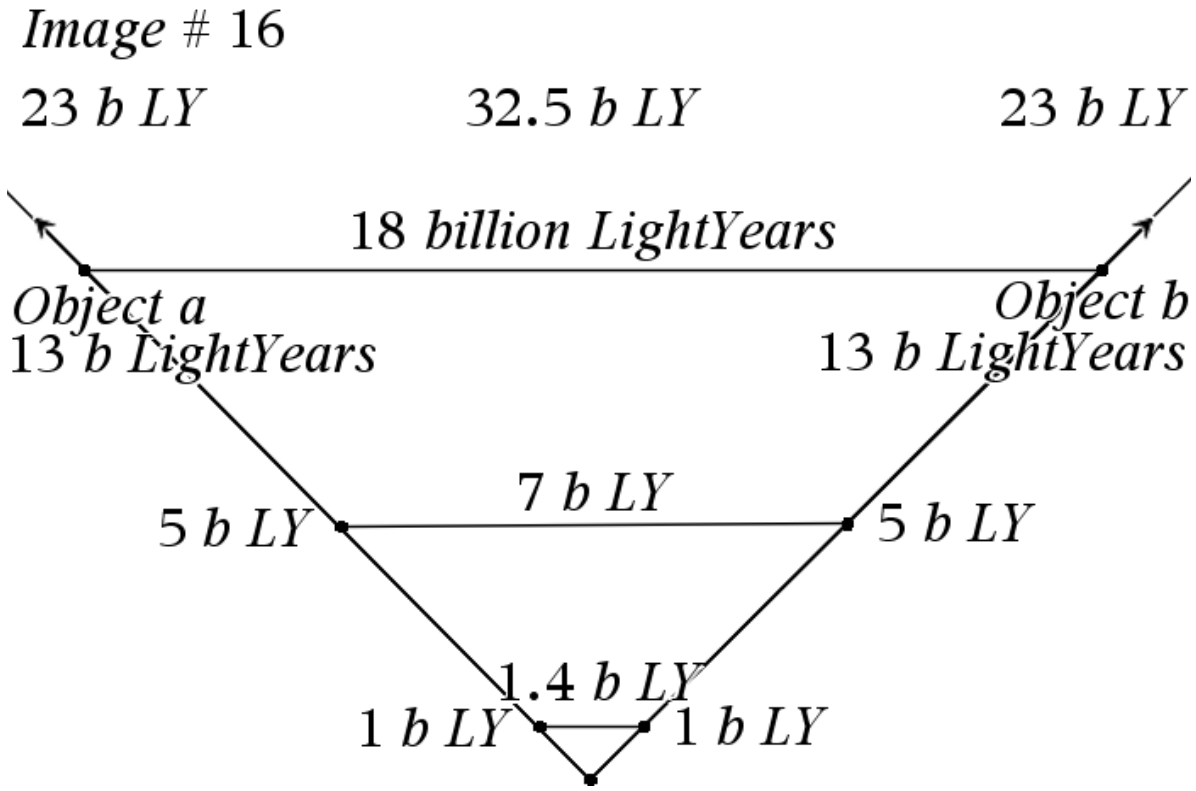
observer cannot see a photon that is heading in a different direction than towards his eye alt. is bent by an object alt. is reflected from another surface, like the Moon. The starlight that is heading in the opposite direction cannot be measured from one and the same location, and if you could measure it, it would prove to have a speed of 300,000 km/s toward the measuring site which must be located at a completely different location. If you do an experiment on Earth where you measure the speed of light from a light source from two opposite directions, then of course the opposing independent measurements each show 300,000 km/s. This is because the measurements are made from the radiation source out to the measuring site. It is pointless to talk about relative velocity of light in vacuum, because even if one can imagine in the head that the independent opposing measurements of the speed of light can be added to each other so that the total sum amounts to 600,000 km/s, this has no effect on the laws of physics. Two different observers will always measure the same speed of light no matter how they move in relation to each other. That is what is important. Whether the light source is moving away or is approaching does not matter.

The speed of light is thus a physical constant and that is explanation enough. We live inside the box that constitutes the universe and should not imagine the universe outside the box. It follows that an observer cannot measure through the stars or measure any emitted radiation of light in the opposite direction through the light source, because it is not compatible with the theory of Relativity. Thus, there is no total sum of 600,000 km/s because you always measure from the light source and out.

Then a legitimate question arises, what is redshift if there are no variations in the speed of the detected light in vacuum? Generally speaking, redshift is an increase in the wavelength of electromagnetic radiation. It is also possible to express the same thing as to say that the radiation frequency (oscillations) decreases. This, in turn, depends mainly on the thermal degree of the emitting object, but also on the fact that highly luminous objects such as galaxies move away from each other at a high speed. It does not affect the speed of light; it only affects the wavelength of the light. This is in accordance with both Einstein's theory of Relativity and my theory CAUSATION AND THE UNIVERSE. If you are stationary in the direction of a traveling galaxy, then the light looks blueshifted. If you are in

the galaxy's wake, the light emitted from the galaxy looks red in color. But the speed of light from the light emitted by a galaxy is constant if an outside (and inside) viewer measures it, whether the viewer measures the speed of light in the galaxy's direction of travel or in the wake of the galaxy. In the case of the Milky Way, most galaxies are distancing away from us as the universe expands. Therefore, most of the galaxies are redshifted as seen from Earth. The galaxies are varying much redshifted depending on the angle of the wake they are viewed from in the universe.

GN-z11 is a high-redshift galaxy found in the constellation Ursa Major. The discovery of this galaxy was published in a paper headed by P. A. Oesch and Gabriel Brammer (Cosmic Dawn Center). GN-z11 is the oldest and most distant known galaxy yet identified in the observable universe, having a spectroscopic redshift of z = 11.09, which is considered to correspond to a proper distance of approximately 32 billion light-years. They say it is observed as it existed 13.4 billion years ago, just 400 million years after the Big Bang. Except, look at the image below and convince yourself that the galaxy expands correspondingly with Earth. Someone measured the galaxy's redshift and concluded that the distance from Earth to this galaxy is allegedly 32 billion light-years. 97 percent of the galaxies in the universe are said to move away from us at a greater speed than 300,000 km/s. The galaxies that don't move away from us at a speed greater than the speed of light are said to be within the "Hubble Sphere" which is 14 billion lightyears in radius, with our Sun in the middle. Except, the idea that galaxies move away from us at a greater speed than the speed of light is utter nonsense. Light travels at 300,000 km/s if measured by any observer in the universe, always, wherever an observer is located and if ever two objects are moving away from, or toward one another. The speed of light in vacuum is constant as demonstrated in numerous experiments, period. That's where I think that the physics community is correct, but apparently the physics community itself isn't in agreement. Otherwise, we wouldn't see the GN-z11 at all because it would rip apart the spacetime continuum. I think the physics community people must rethink the whole concept about the alleged constituents of the universe, instead of concluding that the measured redshift in 97 percent of the observable matter in the universe would mean that this matter is moving away from us at a greater speed than the speed of light. Still they can measure this light. Enter the Pythagorean theorem for right-angled triangles: $a^2+b^2=c^2$



Let us slap the Pythagorean theorem onto the universe. In the image above, Objects a and b separate from each other in a ninety degrees angle at a speed well below the speed of light. The distance to the allegedly ascertained beginning of the universe is 13 billion lightyears for both Object a and Object b. The distance between Object a and Object b is then 18 billion lightyears. For the GN-z11 to be 32 billion lightyears apart from our galaxy, our galaxy must be 23 billion lightyears old. That is if we had been located at the edge of the universe as well as the GN-z11 had been located at the other edge. Obviously, we are not located at the edge of the visible universe. Since most of the objects in the universe have a velocity well below the speed of light, we should expect the universe to be much, much older than 13 (or perhaps 23) billion lightyears of age. Thirty-two billion lightyears is how far we to date can see, given that we are correct in our assessment of the distance from our galaxy to the GN-z11. Object a and object b in the image above have always been within "sight" of one another since the early universe. The luminosity from the origin of the universe has long since surpassed us since light travels at 300,000 km per second. Say that most of the galaxies in the known universe have a velocity of about 67 km per second. So, if the assessment for the expansion speed is correct, then the age of the universe must be more than 300,000km/s/67km/s~4478 times larger. Because it would take 4478 times longer for Object B in the image above to reach a distance from Earth where we can detect Object B at a 32 billion lightyear distance (based on Object B's redshift). Most of the emitted light from Object B, that we can see,

have long since surpassed us here on Earth. Only light leaving Object B at approximately 32 billion lightyears ago is visible to us.

23 billion lightyears x 4478~100 trillion years old, but supposedly more like double. Unless there was inflation. Lightyear is a yardstick but also an age.

If the scale of the universe is 100 trillion years of age or rather twice that, this would explain why the universe's galaxies are not noticeably more densely packed the further back in time we look from Hubble and James Webb. With the aid of telescopes, we can see only a fraction of the universe. It would also explain why mega-structure formation of galaxies like "the Big ring" and "the Giant arc" can have developed in our universe. They had time!

I have imaginary set up the calculation according to the Pythagorean theorem for a right-angled triangle i.e., $a^2+b^2=c^2$ and then calculated the square root of c^2 to get a horizontal distance between Object a and Object b in the image above.

That is why I don't think there is a real breakthrough in finding out the shape of the universe by cosmologists, because the scale of the universe is so enormous it's just not possible to assess what shape the universe has got by using their methods. Their proposal is that we can find out the geometry and ultimately topology of the universe by observing the universe in its largest scales possible with our available means. It is not achievable even when using the cosmic microwave background and its 93 billion lightyear cross stretch with us in the middle. I am postulating that the sheer scale of the universe makes it virtually impossible to come to any other conclusion than that our universe is a flat universe, whether that is the case or not. For massive object scales space can be curved, so it should allegedly be possible for the universe to be finitely (closed) curved. There are three basic geometric shapes – spherical (round), euclidean (flat), and hyperbolic (Pringles inwardly shaped). Draw a triangle on any one of them and the result will differ depending on which geometric shape you are using for the purpose. On a spherical shape the three angles will add up to more than 180 degrees. On an inwardly hyperbolic shape the angles will add up to less than 180 degrees. On a spherical shaped object parallel lines will eventually converge. On a hyperbolic inwardly shaped object parallel lines will diverge. However, if the universe is something like >100 trillion years of age, how can we hope to measure the universe by looking at CMB radiation which is only 93 billion lightyears distant, or even half of that? I also think that a universe with some sort of sophisticated finite topology, like a Taurus (doughnut) or a Mobius strip or a

Klein bottle, or really most of the all-in-all 18 topology shapes the universe can be shaped like, may just slightly complicate the origin of that universe. I mean, it is virtually impossible to ever explain an expanding finite universe shaped like a Klein bottle or even a Taurus. Two questions come to mind, not even considering the often expressed difficult unanswered questions of why and how our universe emerged from what appears as a singularity.

- Where did it origin?
- What force or law of nature is behind the very oddly developing topology of such a universe?

A trouble shoot

The following is not primarily a theory, it is a troubleshooting on Einstein's most famous and least understood consequence of the special theory of Relativity. It relates to the statement that specific events can occur at different moments for two different observers where for the difference to be detectable (by a human, my remark on Albert Einstein's example), at least one observer is in extremely fast motion.

It concerns the so-called time dilation. Do not imagine that you yourself are sitting on a light ray traveling at the speed of light and not experiencing time, as Einstein theoretically but erroneously imagined it. Bodies cannot move faster than 3.54 fifths of the speed of light, as we have already concluded. At a speed up to and including 3.54 fifths of the speed of light, a human body would not be able to sustain itself. Matter would contract or, if in orbital movement around a black hole, turn into plasma. Although, at a more normal speed, an outside observer can only measure a snapshot of a body moving at well below the speed of light, and this tells him that there is no practical time dilation, for both observers, the one at the embankment and the one on the train, find that a body launched from a train in motion is at point X at a given time on its course down the runway. Time dilation for electromagnetic radiation emitted from a moving body, *as seen by an outside idle standing observer*, is an important factor in Global Navigation Satellite Systems (GNSS). Albeit a human onboard a satellite at this altitude is aging faster than earthbound people, not slower.

For a body traveling at normal speed as we know it, there is thus no practical time dilation that implies there being exerted extreme force on the body. A fighter aircraft blasts the sound barrier when the pilot perceives it does so, the event is not defined by when an audience on the ground perceives the event. However, very importantly - there are different time *perceptions* on the moving body compared to an outside idle standing observer. [See pages 80 and 82-83 number 7.a to 7.d for further explaining input.]

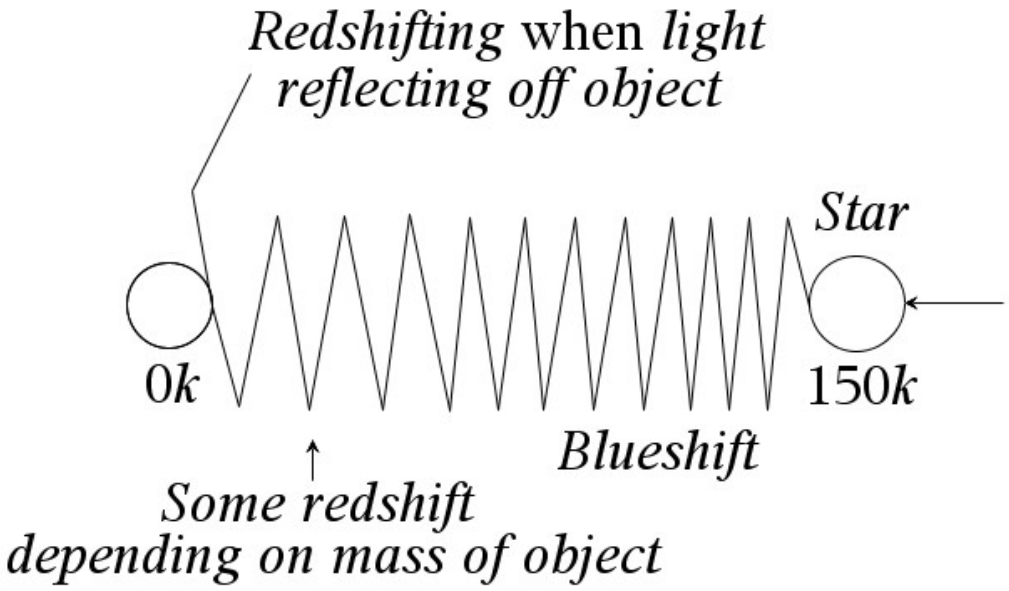
Let's start by looking at the problem from an object traveling at 150k. As we have established in previous sections, matter and velocity of matter are equivalent to

mass. Others have found that all matter, including black holes, bends light. It has also been established that light cannot exceed a speed of 300,000 km/s. And finally, it has been proven that here on Earth we measure different spectral shifts in light depending on whether the light source is moving away or approaching us. Does it matter how we move in relation to the light source, or is it only the movement of the light source as such that determines which spectral shift we detect? Is there a dynamic between light source and oncoming or distancing objects? I mean, would the light be blueshifted for a detection device placed on an object if a light source stood absolutely still while the object was traveling towards that light source at 150k? I answer this question with a yes myself.

Light maintains a constant velocity in a vacuum in accordance with every measurement ever executed on the speed of light. Light is energy relativistic since it can have higher or lower frequencies. Light does not necessarily have the same frequency depending on for instance whether one of the objects, the one emitting light or the object on which the speed of light is measured, is traveling away from or if it is approaching the other object. Higher frequency would mean higher energy level, in accordance with the electromagnetic spectrum. If one or both objects move away from each other the light shifts red, if the objects approach each other the light shifts blue. If the light is blueshifted, the intensity of the light increases. This means that light would get a higher energy density within a certain, say one cubic meter cube. If the light is redshifted, the energy density within a cubic meter is less. Energy density within an imagined square cube I think is the proper way to visualize the energy of light, since there is no way to determine a photon’s position as it has none until you measure it. Except blueshift and redshift are properties of visible light solely, and we can quite accurately measure the energy of visible light by looking at its spectral shifts.

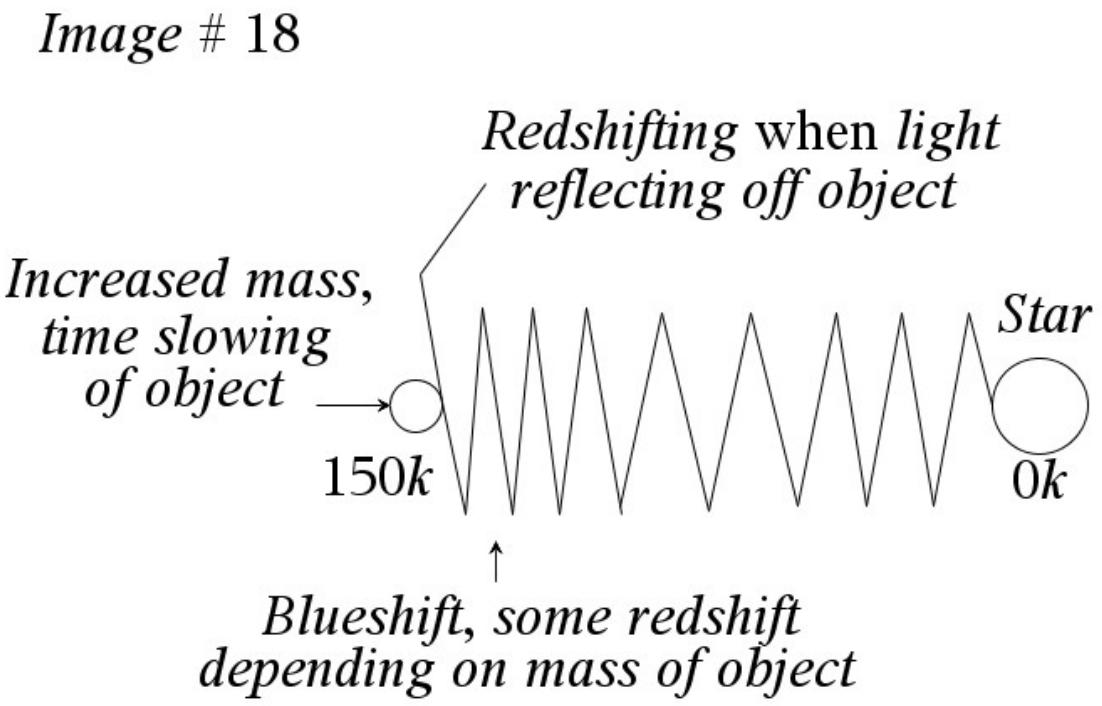
If the Doppler effect exists for light-waves emitted from an object like a star in motion, and it does, then my images # 17 to # 20 must also be valid. But the spectral shift seems to derive entirely from *the momentum* and direction of the *light source,* according to modern interpreters of Einstein's theory of Relativity. In the following images # 17, # 18 and # 19 there is a hypothetical but impossible speed of 0 k for either an object or a star just to simplify understanding.

Image # 17



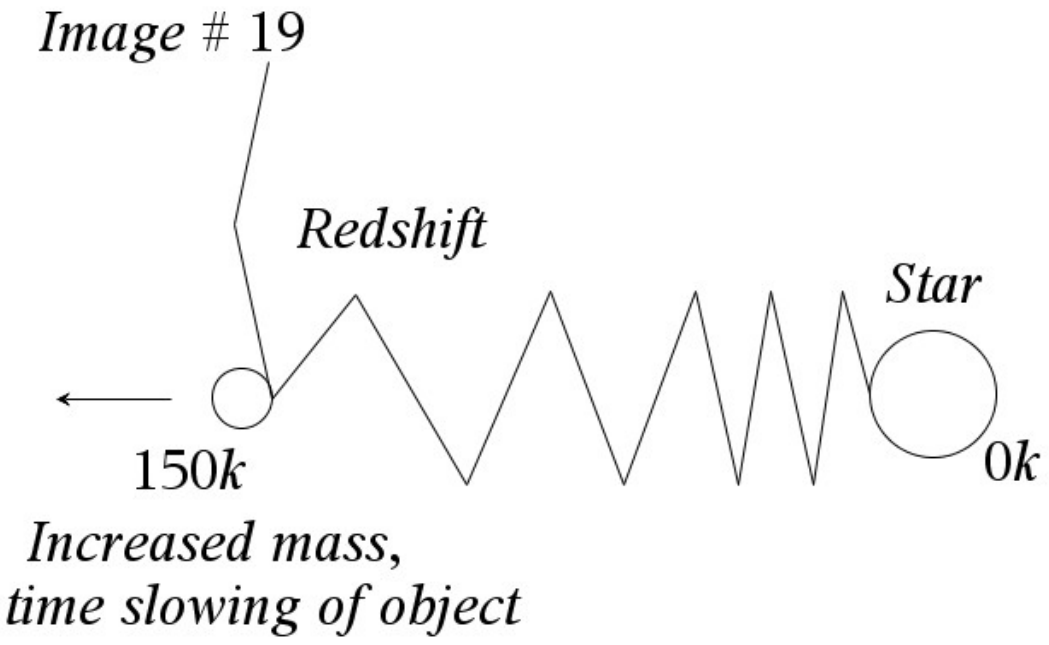
Einstein contended that it is entirely possible to explain, with the help of human perception (Roger's note), that an observer traveling near the speed of light on a train may experience two lightning strikes at a different moment than an observer who is not moving toward or away from the two lightning strikes, from what anyone who is at an equal distance from the two lightning strikes at the embankment will sense it. But as I see it, you must shorten the perception time span inversely proportional to the increasing speed of the passenger, especially at extremely high speeds. Otherwise, you obviously would have moved to another location a microsecond later (a microsecond in the observer's at the embankment view) and you no longer would be at an equal distance to the lightning strikes i.e., the same distance as the observer at the embankment. Despite this, Einstein is partly right, observers experience the event at different moments, but only if they are at different distances from the lightning strike. But that was not Einstein's example. In Einstein's example, the two observers were at the same distance from the lightning strikes, where one of them was on an extremely fast-moving train and the other was at the embankment. (See image # 21 p. 64. The image is ripped from Einstein's own book.) The observer at the embankment was in the middle between the lightning strikes and observed through two mirrors that the events were simultaneous to him.

But Einstein's example becomes only hypothetical because radiation at the moment you measure it always has a velocity of 300,000 km/s when you measure it from another moving object even if the moving object travels at 150k towards or from the radiation source. The variables are the shape of the object and the traveler's time perception and *the frequency of the incoming light* that are affected by the object's contraction, large mass increase and velocity. If the observer is sitting on a train traveling at a speed of 150k, the observer's time is slowing down in comparison to the outside world even though the observer will experience his own time as if nothing had changed since before the acceleration to 150k. This slowdown due to the mass increase and contraction of the object in rapid motion affects the *frequency* of the incoming radiation from a flash, so that the observer measures the speed of the incoming light as 300,000 km/s *in a compensated red spectral color*.



Light will reach the observer from every angle, and it does so at 300,000 km/s. Only the frequency varies between blueshift and redshift or other spectrums. As time slows down for an observer on a train traveling at extremely high speed, he experiences a frequency shift of the oncoming light in the blue spectrum to a lower intensity inversely to his own speed and mass. In other words, the oncoming visible light cannot be experienced to exceed the blue frequencies in the frequency spectrum, even if one were to travel at 150,000 km/s towards the light source. Thus, someone who accelerates to fairly near light speed does not

experience that the visible oncoming blue light transitions to a more intense frequency, such as X-ray or gamma radiation, which are invisible to the naked eye. This is due to the train's own mass increase caused by its own enormous velocity, which in turn is causally caused by a strong energy input. It may be worth pointing out that the frequency band for visible light is only about 300 nanometers or $3x10^{-10}$ kilometers in the total electromagnetic field between 10^{-12} meter to 10^{3} meter. (10^{3} equals 1 kilometer.) That adds up to a 0,000035 kilometer band-width for visible light. About 3,5 centimeters of America's length from the East-coast to the West-coast if you want to compare the total bandwidth of the electromagnetic radiation field with America's length. And the stars can allegedly emit in different wavelength bands simultaneously. If the man on the train is moving away from a light source at 150k, the light becomes redshifted from the light source, as expected. If the light reaching him is redshifted, given his absolute speed away from a light source, the light can never meet him at a frequency corresponding to a more intense frequency. Such a situation is thus unproblematic.



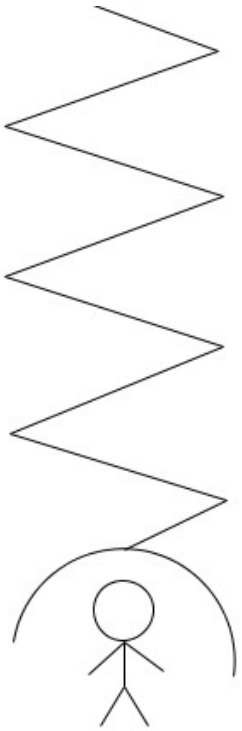
It all boils down to how light behaves within a gravitational field. Does its energy density intensify, or does it decrease? Of course, the electromagnetic radiation becomes redshifted. Only light *leaving an object's gravitational field* and light *reflecting from an object* is intensified close to the object, as seen by an outside observer, but decreasingly so with increasing distance from the object's

gravitational field. Of course, an object's surface redshifts light also. It may be that we experience the light coming from distant galaxies as more redshifted, due to Earth's gravitational field. It may be that we have calculated the mass of the galaxies as being less than their actual mass, and the distance to the galaxies as being larger than it actually is.

Gravitational redshift (as accounted for in the images # 17 to # 19) is explained by the increased *wavelength* of the emitted light further away from the massive and emitting object (i.e., the *frequency* of light decreases with the distance). But the slowdown of time for an object emitting light means that an observer on the emitting object does not perceive that the frequency of light decreases with distance, *iff* he could have observed the light leaving the object, which he cannot. For the emitting object, from the point of observation, the wavelength is the same and the frequency is constant. But if it is a reflecting massive object, then the light shifts red towards the reflecting object, as well as from it but then with a countering gravitational blueshift.

Image # 20

No gravitational redshift as seen from emitting object



Einstein, or someone, figured out a certain type of thought experiment with two light clocks with a light beam reflecting perpetually between mirrors at the top and the bottom on two separate boxes. Now imagine that the second light clock box suddenly starts moving to its linear right at near the speed of light. You would experience the moving second lightbox, if you could sit on it, that the light

inside the second lightbox is slowing down and thus time is also slowing down for you sitting on the moving box. This effect comes from that the reflecting light in the box is zigzagging to the right according to the speed of the box as far as an outside idle standing observer is concerned, and thus the light has a longer way to travel between every reflection as far as the outside observer sees it. But as I said, according to Einstein, if you're sitting on the box, you only experience how the light inside it is *slowing down* and the light, as you see it, is reflecting *vertically* up and down repeatedly. From the outside standing observer who is watching the box in its linear trajectory, the speed of the light is the same, it's the distance traveled by the light that is increasing to him.

Except, the box can only accelerate up to a certain speed still considerably below lightspeed, thus light can always intercept the mirrors in the box from within at the speed of light but with redshifting. The maximum speed of an object is apparently 3.54 fifths of the speed of light, according to my previously described geometry (in images # 5 to # 6). I could argue with the thought experiment above. I can say that there is a difference between speed and distance in such an experiment. The distance the light is perceived to travel may vary depending on the observer's motion and viewpoint, but the speed of light is always constant in vacuum as confirmed in numerous experiments. I profess that when light reflects off a mirror it gets redshifted, i.e., its energy level is fading for each reflection. It might thus be correct to imagine that in Einstein's, or whoever's particular thought experiment, the light beam inside the box gets redshifted and scattered bit by bit for each reflection. It might be that the box riding gentleman, or you, don't perceive the light beam as if it was slowing down inside the fast-moving box. It might be that you are only experiencing an increasing redshift of the light beam, up to a certain point on your course when what's left of the light beam scatters. Sorry Einstein, but you have no experimental evidence to support your intriguing thought experiment. On the contrary, it is an axiom that the $speed = \frac{Distance}{Time}$. If we increase the Distance twofold in the equation, from 300,000km to 600,000km, we must also increase the Time twofold from 1 second to 2 seconds, since the Speed of light cannot exceed 300,000 km/s which is a constant in vacuum. We can also halve the Distance and thus we must also halve the Time, and this too gives us the speed of light, or 300,000 km/s. Time perception though is another matter altogether, just not for measuring the speed of light at any other speed than the speed of light. We are going to sniff more on the subject of time perception later on.

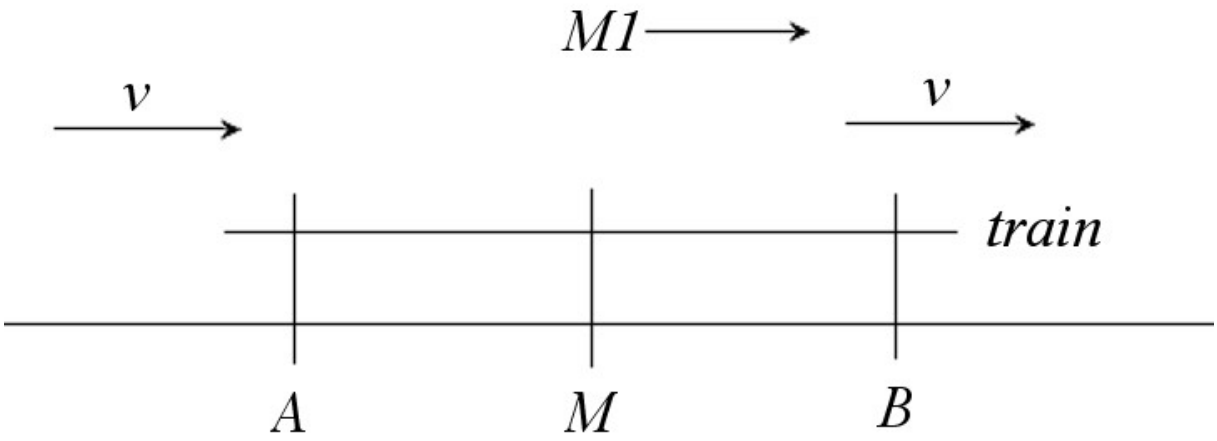
On pages 60-61 of Einstein's book *"The special and the general theory of Relativity"* he writes:

“Are two events (e.g., the two lightning strikes in A and B) that are simultaneous in relation to the embankment also simultaneous in relation to the train? We must now show that the answer must be negative.

When we say that the lightning strikes in A and B are simultaneous in correlation to the embankment, it means that the light rays emanating from points A and B meet at the midpoint M on the distance AB along the runway. Events A and B correspond to points A and B on the train. Let M^1 be the center point of the AB route on the moving train. The moment the lightning strikes[1], this point M^1 coincides with M, but it moves at the speed of the train v to the right of the picture. If an observer sitting in M^1 on the train did not have that speed, he would remain in M and the light rays from the lightning strikes in A and B would reach him simultaneously, i.e., would meet each other right at the point where he was. In reality, he (as seen from the embankment) travel towards the light beam from B, while he travels ahead of the light beam from A. The observers who use the train as a reference body must always come to the conclusion that the lightning strike in B occurred earlier than in A. We have thus come to the following important results:

Events that are contemporaneous with respect to the embankment are not contemporaneous on the train and vice versa (the relativity of the contemporary). Each reference body (coordinate system) has its own time. An indication of time is meaningful only if the reference body is indicated to which the indication of time relates. "

Image # 21



Based on known science, we can make one (1) correct conclusion from what Einstein is claiming above. The conclusion is that one cannot travel at the speed of light unless one is a photon, since there is no body in motion that cannot be sped up to by radiation at 300,000 km/s in any of the spectra. Two different observers will always measure the same speed of radiation regardless of how the observers move in relation to each other. Whether the radiation source is moving away or approaching does not matter. This applies to all matter in motion except for photons that do not have rest mass. Only radiation can avoid being sped up to by other radiation, as seen from our perspective. As I wrote earlier, there is an *absolute speed scale ranging from 0 up to 300,000 km/s.* The highest speed is reserved for electromagnetic radiation and light. I would like to point out that it is possible that objects, or any object in Einstein's universe, may only be able to travel at a maximum speed of <150,000 km/s since the universe allegedly is expanding spherically in all directions from every point in space, and the greater the distance the faster the separation. Somewhere there is bound to be a galaxy with the most redshift as opposed to our galaxy. And this is practically like coming back to a holistic worldview that makes sense, sort of. The speed of two objects in opposite or oncoming courses cannot put together exceed 300,000 km/s in Einstein's universe. Still, the Oh My God particle seems to falsify that all mass have a theoretical maximum speed of <150,000 km/s, because it is a near light speed *particle*, particle and *not object*, certainly with a small rest mass but it still has a rest mass, which can be thrown out at

99.99999999999999999951 percent of the speed of light, probably from a jet beam from a quasar or something even more powerful. But the OMG particle seemingly falsify my theory too.

Einstein's hypothesis that there is no absolute motion for matter is not empirically proven, nor is it logically inferred in a way that leads to the only true conclusion. What perhaps contradicts Einstein's original hypothesis in the special theory of Relativity that there is no absolute speed for physical objects is that objects that are in extremely fast motion are flattened in the direction of motion. At the same time, Einstein says that all objects have a mutual relationship. If you travel at 150,000 km/s towards another object, how do you know your own speed and speed of the other oncoming object? Both objects are relative to each other since the speed of objects according to Einstein is a relative concept. You could then just as well see it as if the second object is traveling towards you at 150,000 km/s while you are not moving at all, or that you separately travel at 75,000 km/s toward each other. And at these extreme velocities, which of the objects is flattened? Are both objects equally flattened? How can one object be more flattened than the other if there is no absolute speed scale? What happens if you add a third object in the equation, and a fourth and a fifth etc. with different oncoming directions? There is no way to calculate the interrelationship of several different objects' shapes traveling at different speeds and directions toward each other, if using Albert Einstein's original theory and valid mathematics! The same logic can be applied to aging when considering that there is allegedly no absolute speed scale for objects. For how can two space travelers in relative motion to each other actually age differently in Einstein's universe? Of course, they cannot. That we have not established this fact before is to me unfathomably stupid. Not that Albert Einstein was stupid. Ok to visual distortion, yes, but an object may not appear to be flat to an outside observer, an object may instead appear to be contracted. And the object's velocity is quite finite. Albeit, particles and bodies are flattened in the direction of motion when accelerated, but not very much so for massive objects since they contract at extreme speeds, according to my geometry and images number 13a and b in this book (p. 47). Single particles don't in every day context contract below a certain point, since it would suggest that relativity typically can make the particle probability cloud diminish in its radius below what is regulatory for a particle [below the Schwarzschild radius] and become a black hole. That is the reason why single particles appear smeared out and not contracted when accelerated.

It seems counterintuitive to look upon time perception as if there was no correlation between two objects traveling at very different speeds. If one object travels at a speed of 30k, and another object travels at a speed of 1k, then clearly there must be a correlation in aging between the two objects? The first object is aging slower in comparison with the second object, or you can look at it as if the second object is aging faster in comparison with the first object, as seen by an outside observer. Right? It is true. But you can also, philosophically speaking, opt to look at the first slower aging object as if it instead freezes with increasing directed energy of that object, instead of it aging slower in relation to its surroundings. Then the difference in aging would, philosophically speaking, be reduced to a slowing of activity for that first object as it gets colder if we set aside the thermal energy from that object's propulsion. This approach makes it much more cognitively comprehensible to not correlate the two objects' timeline, when thinking of the set we have of an object in fast motion and another object in slow motion. Or as I charted out early on in my book:

Massive object M **o----------=>** small spaceship (s)

M does not travel forwards in time compared to (s).....Time slows down for (s)
M does not travel backwards in time compared to (s). due to energy conversion.
M has the same amount of energy.....Added directed thermal energy for (s).
M is aging at a certain rate.....(s) is aging slower than M. This does not apply to orbital movement.

If we look back in time like the James Webb-telescope does, do we see denser formatted galaxy clusters in every direction 13 billion lightyears away? And wouldn't the universe be denser the farther the distance in every direction we look, with the currently accepted theory about how the universe is constituted and how space is expanding? I say there can be a center of the Big Bang at every imaginable spot in the universe if and only if the universe is endless, and I don't think it is. We must come up with an alternative explanation for why the background radiation is practically evened out in all directions. It may be because

the universe is so unimaginably big, that any measurements on galaxies' location in regard to each other are indiscriminate. And therefore, the background radiation too is indiscriminate. But the universe is still not infinite.

It may be that this revised theory of mine solves the problem with not being able to measure non-baryons i.e. undetectable dark matter, or explain the question; "what is dark energy?" for that matter. The imaginary quantity Dark matter may not be needed to explain the shape of galaxies and the to this date unexplained extra gravitational pull that holds together the galaxies. In images # 7 a-d to # 8 in this book I may have stumbled upon what the pushing force of Dark energy is. It wasn't intentional though, because I didn't pursue the conclusion, I *inferred* the conclusion.

If you are near the event horizon of a black hole it is like you are seeing the future of the universe playing out rapidly

The concept of "reciprocal slowdown of time" I have borrowed from the scientific community and used in my own thesis. But I don't think it is equal to the hypothesis I lay forth. What *is my thesis* is that I contend that a person who is located at near the event horizon of a black hole *perceives the time* of the outside world as moving faster relative to himself, because a person who is close to the event horizon experience things *in his very immediate surroundings* in slow motion relative to a more distant outside world. But even if you, from near the event horizon of a black hole *perceive the outside world* as if it is speeding up, the Sun still goes up and down on Earth as many times as it does according to its own spinning velocity. Electromagnetic radiation, like light, always travels at the speed of light in vacuum so that the only thing relative is the redshift of the light, not the speed of light. Signals sent from above the event horizon of a black hole *will thus travel at the speed of light and reach a more distant outside observer at the speed of light,* regardless of which perception of time. For you "sitting" near the event horizon of a black hole it is like you are seeing the future of the universe playing out rapidly. If you could be inside the black hole watching out, you would see time end for the universe in an instant. Except the space from inside a black hole is infinitely curved inward towards its singularity, so you wouldn't see a thing. But if you could be near the event horizon of a black hole

you could report the future as you see it happening in the surrounding world, via electromagnetic signals in real time, i.e., at the speed of light, to the outside world.

For the crew on a really fast traveling spaceship, time looks as if it is continuous with the man who is near the event horizon of the black hole. So, I think it is the case that the person at the event horizon of a black hole and the spaceship and its crew slows down in thinking, internal moving and in aging. An extremely fast traveling spaceship and its crew would slow down in aging, and the crew of the spaceship de facto sees the surrounding world as progressing faster, just like the man near the event horizon sees the surrounding world. Except the Sun rises here on Earth according to Earth's own rotational speed exactly the same number of times. The extremely fast traveling spaceship's crew and the man near the event horizon have their own very slow perceptions of time. Time on their wrist watches have the same numbers one to twelve or one to sixty, but every second is longer.

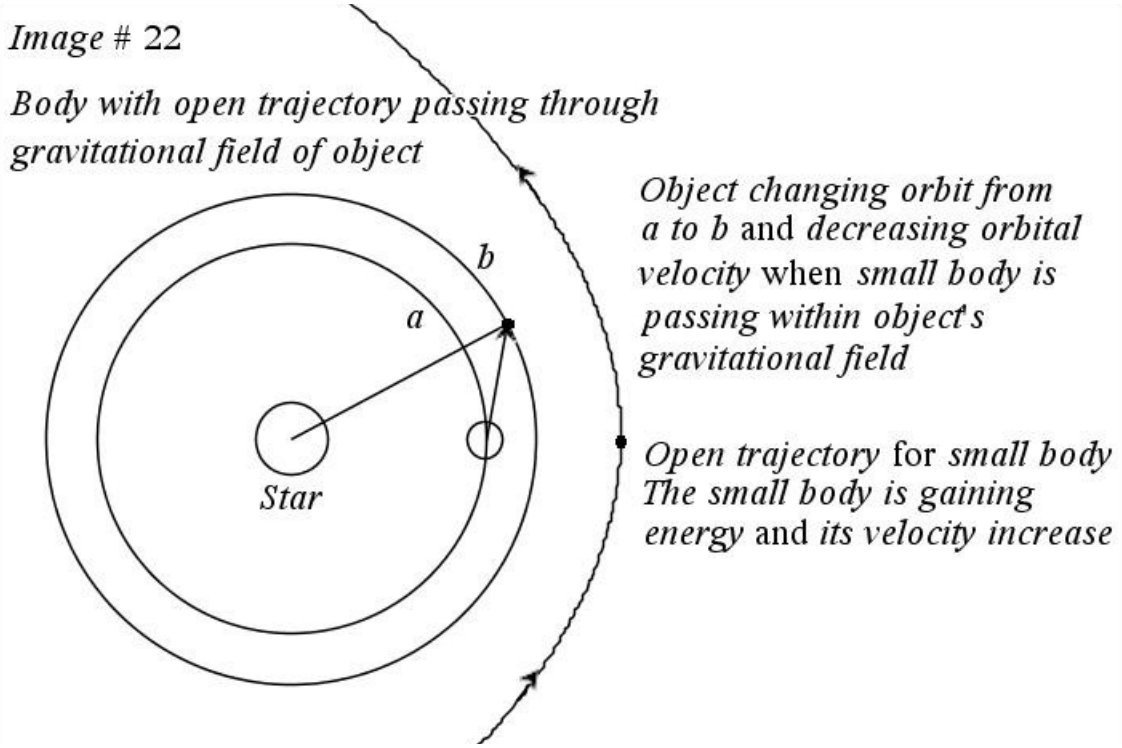
What perhaps is the most important and drastic implication for my contention about the spaceship and its crew who are traveling at a very high speed and the man near the event horizon, is that the spaceship's crew experience the man at the event horizon as if he is moving in a slower pace coequal time dimension, and the man at the event horizon sees the spaceship and its crew as if they are moving in a slower pace coequal time dimension with him. But everything outside of the event horizon and everything outside of the spaceship they experience as if it is speeding up so that their surroundings actually is displaying the future progressing rapidly before their eyes. This is all too weird.

The man near the event horizon of a black hole is orbiting the black hole at an enormous speed as seen by an idle standing observer far outside of the event horizon, as well as that the spaceship and its crew are moving at an enormous speed as seen by the same outside idle standing observer. But the difference in perceived speed is marginal. The 3.54 fifths of the speed of light that matter, or rather plasma, can max accelerate to, just outside of the event horizon means that time dilation is less than 0.7 seconds compared to a hypothetical outside idle standing observers measured 1.0 second.

Basic trajectories conjecture set

The difference in distance traveled in the two different orbits a and b in the image # 22 below, is telling us how much the smaller body deviates from its trajectory. The difference in velocity between the two different orbits tells us how much faster the smaller body will travel. But unfortunately it is not telling the whole story, especially not when there is a large difference in mass for the object versus the body. There is a larger increase in velocity for a small body than there is for a large body relative to a large mass object. The body is thus "stealing" energy. If you study the following image # 22, then hopefully you will come to the following conclusions.

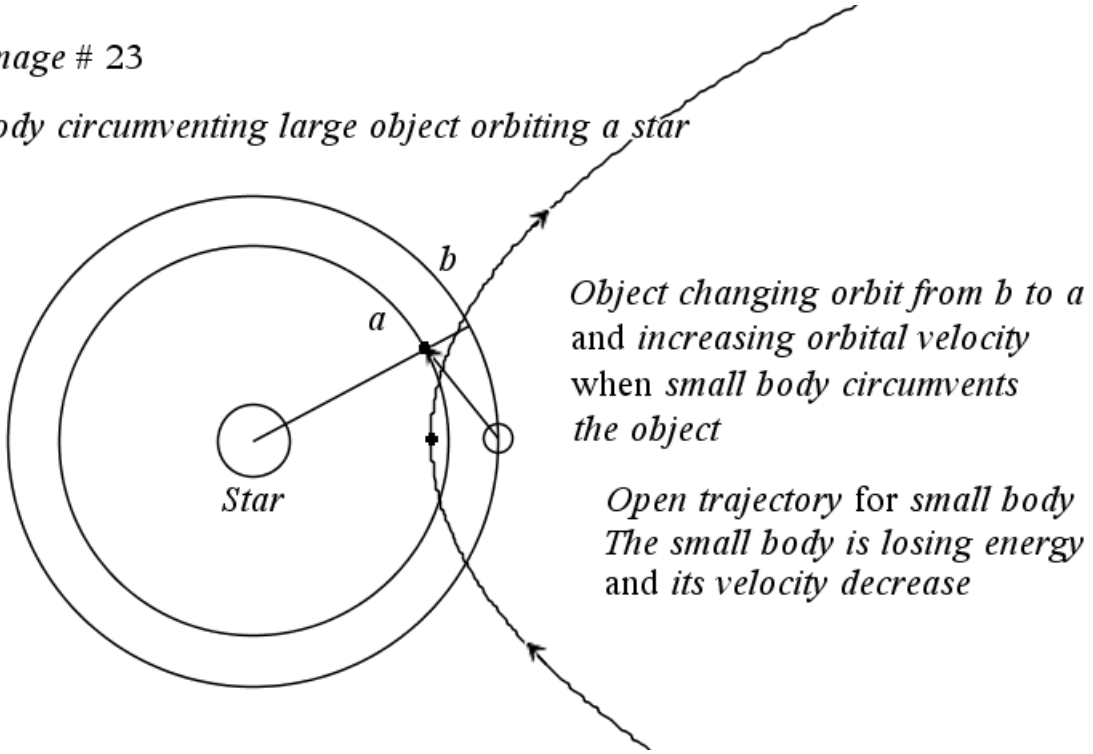
- New orbiting trajectory for object. Object is losing energy, predominantly in the form of decreased velocity in its orbiting plane.
- The small body is gaining energy, predominantly in the form of increased velocity.



Let us now study image # 23 below. Here it is the other way around. The smaller body is losing energy. There is a larger decrease in velocity for the small body, than there is an increase in velocity for the large object in its orbiting plane.

Image # 23

Body circumventing large object orbiting a star



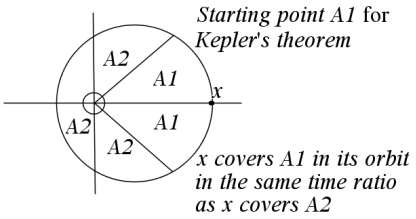
- New orbiting trajectory for object. Object is gaining energy, predominantly in the form of increased velocity in its orbiting plane.
- The small body is losing energy, predominantly in the form of decreased velocity.

At some point, an orbiting body in a given elliptic plane, is going to distance itself from the central object, in its course around the object. Just like Dark comets do. And just like the Moon is distancing from Earth. We know that the Moon currently is distancing itself from Earth with 3.8 centimeters per year. Thus we also know that the Moon is never going to crash into Earth. In five billion years the Moon will, if you use the math, be an additional 1,540,000 km from Earth. But, by then the Sun as we know it will have reached its maximum life span and it will, in its Red giant phase, engulf the Earth and the Moon and incinerate them. Except, what was the distance to the Moon five billion years ago if the distance in five billion years will be an additional 1,540,000 km? Within every 27-day orbit around Earth, the Moon now reaches its perigee at about 363,300 km from Earth, and its farthest point, or apogee, at about 405,500 km from Earth. The Moon will distance itself from Earth with 7/8 of the added distance from Earth of 1,540,000 km five billion years into the future as compared with the approximate 200,000 km of added total distance dating five billion years ago up till now. That is if we can assume that the Moon will continue distancing from Earth with ~4 cm per year like it does now. Can we? Not likely.

What is clear, is that a speeding small body “steals” energy from a larger object, within the object’s gravitational field, in the form of increased velocity.

It remains to be established an equation concerning the conjecture set;

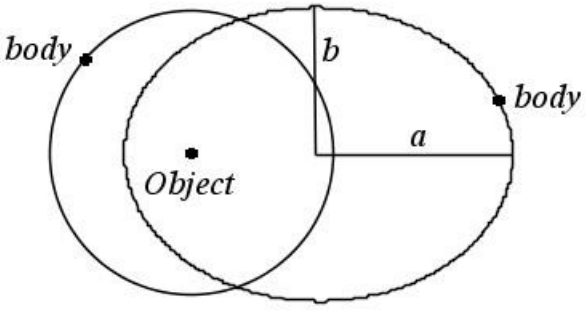
- at what perigee and apogee from a large object’s centrality and how elliptic an orbit has to be for a satellite to stay in orbit forever or even distancing itself from the large object, and
- the relationship between the large object’s mass and the satellite’s mass. But Isaac Newton's equation about body gravity is $F = G\frac{Mm}{r^2}$
- The velocity is incorporated into the equation how? But Kepler’s second law.



Take a look at image # 24 below to get clues.

Image # 24

Area for *ellipse* $A = \pi \cdot ab$

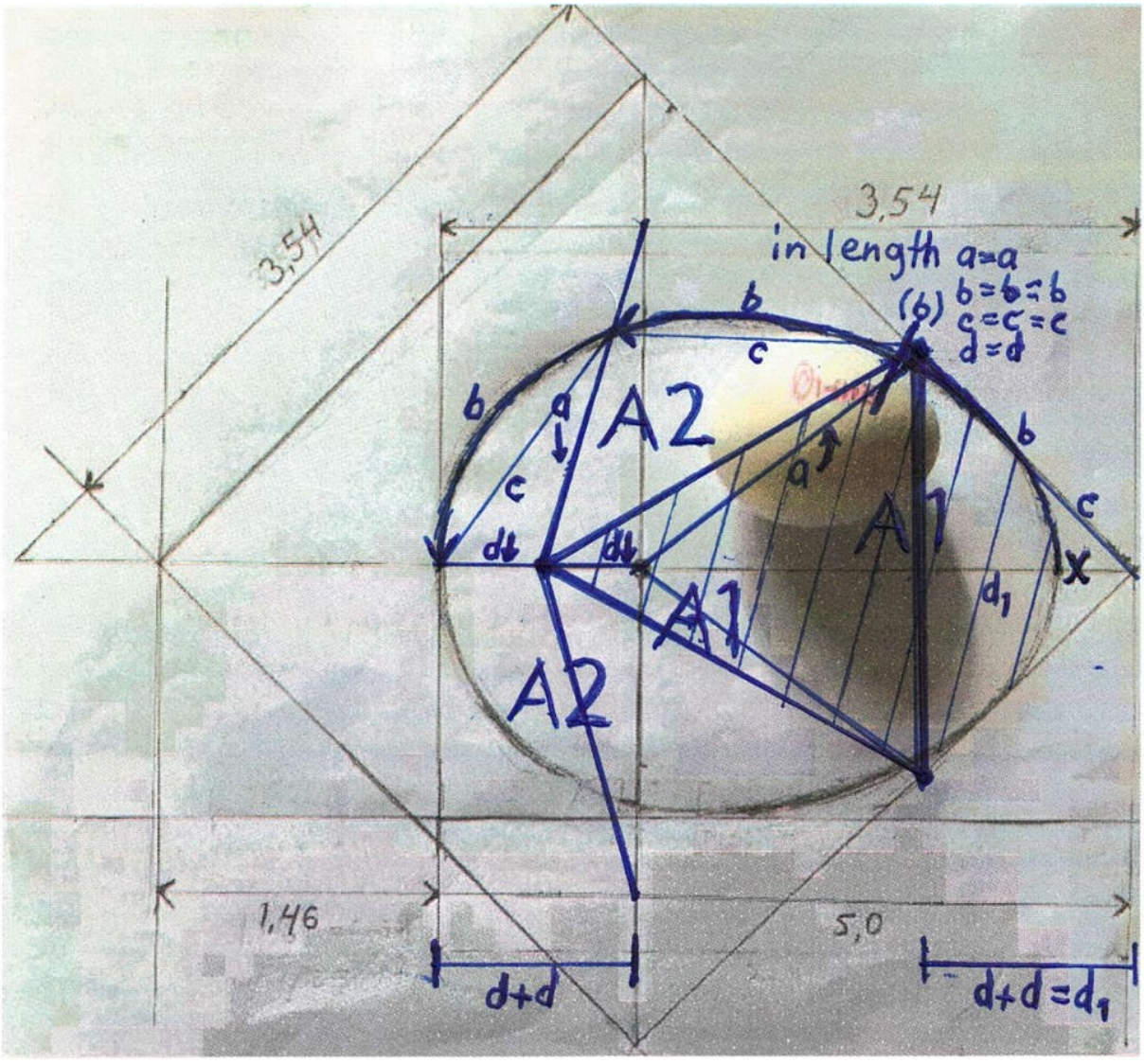


Circumference for *ellipse* [*approximation*] $P = 2\pi\sqrt{a^2 + \frac{b^2}{2}}$

I think that relativity as we conventionally have imagined its premises, isn't compatible with quantum mechanics. Quantum mechanics, though, is correct physics. It leads nowhere to imagine that energy increase for a planet that is gravitationally pulled, by another object skirting by on the far side of that planet. For atoms, yes, it is correct to imagine any expanding probability cloud to increase in energy when adding energy to the system. But this is not necessarily the case with planets' orbits, when adding energy to the gravitational system of the star, even though it is contemporary and the small object will continue out from the solar system in its trajectory. The small object will steal energy from the gravitational system. Every physicist must now reconsider their ideas of how to fuse quantum mechanics and relativity into one and the same equation. Except, there are no ideas. No wonder. Quantum particles do not abide by the same rules as relativity sized bodies.

Doodle

A certain orbital course for a body X with a certain perigee from the star and a certain velocity with a certain angle trajectory, and its geometric attributes. Body X moves in its orbit around a star i.e. the point to the left demarcating A1 and A2, and during the time (t) has covered an area A1. Sequent, the area A2, is covered when body X is closer to the star. X covers area A1 in the same time ratio as X covers area A2. Don't forget about the geometric scaffolding related to both of the a in the image (scaffolding indicated by pencil) when studying the image.



Question about how big the increase of both area A1 and A2 is when we decrease the perigee for body X but the mass of the star is the same, remains to be answered. But area of A1 and A2 *will increase*, and so is the average speed for body X correspondingly higher. However, the time span for X to complete a full orbit in its trajectory is the same with the same mass star.

$$F = G\frac{Mm}{r^2}$$

$$F = G\frac{Mm}{a\,b}$$

(The Area of a circle equals πr^2

The Area of an egg-shaped oval equals πab if ab is the radius measured 90 degrees from the two widest possible angled lines in oval.)

If GMm>Fab, then object M and body m will collide at some time sooner or later.

If GMm=Fab, there will be a sustainable orbital trajectory for a small body m.

If GMm<Fab, the small body m will eventually leave the gravitational field of M.

Approaches to verify or falsify my theory

On p. 10.

Stipulation: The traveler, as he is accelerating to near lightspeed, experiences time like a person who is near the event horizon of a black hole. The traveler and the other person near the event horizon of a black hole can wave at each other at the same rate and they experience each other's movements in corresponding real time.

On p. 16.

The Earth-bound people and the time traveler age as quickly or slowly in relation to each other during the return journey as they did in relation to each other during the departure. *It is thus the speed as such with which an object travels that determines how slowly or rapidly it ages in relation to other objects. It is not because objects move away from each other or move toward each other that makes them age differently,* but all objects are always in relation. Thus, there is an *absolute speed scale* ranging from 0 to 300,000 km/s.

The above two postulations are verifiable or falsifiable in the following way

At what rate do satellites with opposing tracks age compared to one another when they have the same inclination tracks, speed, and altitudes when meeting and also when they are moving away from each other? According to Einstein's theory of Relativity, both satellites must age at a certain subtracted rate for each satellite since there is allegedly no absolute speed scale for anything but light. If they don't age at that rate than what Einstein suggests within his theory, then someone has some explaining to do. According to my theory, they don't, and they shouldn't age at any other rate than what their measured speeds suggest for each satellite. This is applicable to satellites moving both toward each other and in the same direction since the satellites, according to my theory, age differently only in relation to us here on Earth and not to the respective satellite with the same inclination tracks, speed, and altitude but which is traveling in opposite directions. Do the satellites' clocks deviate from the expected time, of

the currently accepted theory, for meeting satellites with a certain speed and altitude in relation to each other then?

There was a very famous experiment in 1971 by Joseph Hafele and Richard Keating. In a test, Joseph Hafele of Washington University in Saint Louis, and Richard Keating of the U.S. Naval Observatory, flew cesium atomic clocks around the world on commercial jet flights, then compared the clocks with reference clocks on the ground to find that they had diverged. But did this prove Einstein's theory of Relativity, or did it disprove it? It confirmed that there is relative time, but it disproved Einstein's theory in part. You see, the clock that went Eastward around the world was 0.000059 seconds early and the clock that went Westward was 0.000273 seconds late. Thus, there must either be an absolute speed scale for traveling objects, or the measuring circumstances for this experiment is somewhat uncertain because of obvious reasons, or both. If one is located at the Earth's equator, one would be spinning Eastward around the Earth's axis with the rest of the planet at 1,667 km per hour or 0.463 km per second. Basically, the same amount of energy would be required to travel Westward as well as Eastward, as we have already concluded early on in this book. Let us assume that an airliner aircraft travels at about 1,000 km per hour. The Earth rotates in the direction East. If there is an absolute speed scale it would entail that an airliner flying Westwards would fly at an absolute speed of 1,000 km less per hour on an absolute speed scale.

Eastward; the Earth's rotational speed or 1,667 km/h + 1,000 km/h
----------→

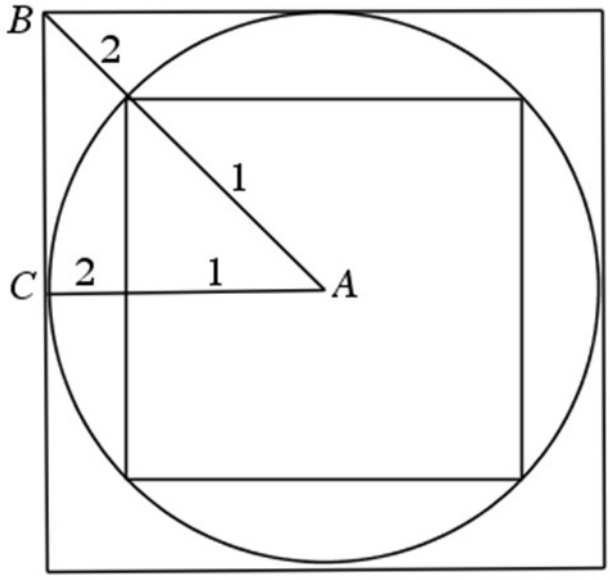
←----------

Westward; the Earth's rotational speed or 1,667 km/h – 1,000 km/h

Take the 0.000059 seconds and add it times two and you get 0.000118 seconds. This number 0.000118 is more compatible with the number for Westward travel or 0.000273 than is the first number 0.000059. This is in line with what I have been saying about the energy required to launch anything [into the atmosphere], basically being the same in all directions provided that the pre-conditions are equal. But to launch a body into a Westwards *orbit* around the Earth would require more energy than to launch a body into an Eastwards orbit. It's because the atmosphere and Earth versus space have two different reference frames. Except, if you launch anything from space it would take equal amounts of energy in any direction provided that the pre-conditions are equal. At the same time, the

Earth travels in its orbit around the Sun at 108,000 km per hour, and the latter would make up a speed of 30 km per second but let us not delve into that since it is otiose information for this section of my book. Incidentally, flying Westwards means that it takes longer to get from point A to point B than flying Eastwards from point B to point A. It is the rotation of the Earth that is causing the longer flight times, but not because it's moving towards or away from the flying aircraft. The main reason for the difference in travel time is due to the jet stream. The jet stream is a high-altitude wind that blows from the West to the East across the globe. But I seriously doubt that they flew at such an altitude for this experiment without having a method for compensating for the loss of speed due to the jet stream when flying Westward. However, the result of the experiment is standing a little bit on shaky ground due to possible wind gusts in flight, irregularities in air pressure and technical aspects etcetera. I imagine they would have conducted multiple flights and then they would have calculated the mean value or the median of the digitals on the atomic clocks. That is what I would have done. Albeit it isn't to much help against wind gusts and irregularities in air pressure if you don't know approximately how many of those there will be.

Image # 6b

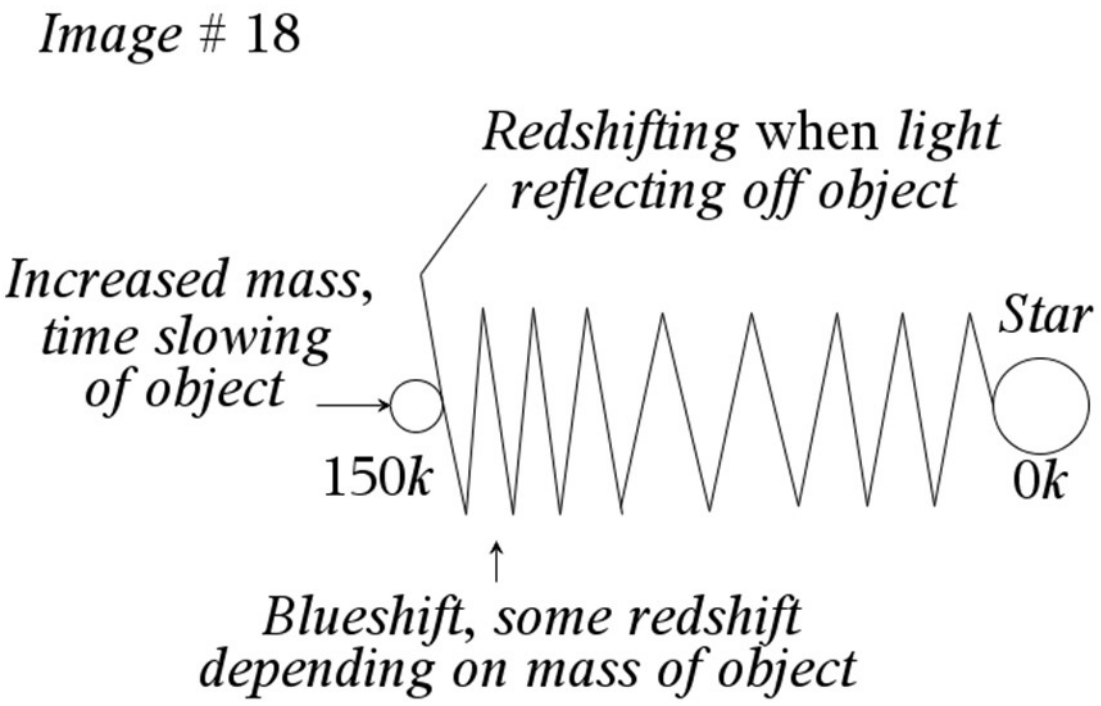


1 = ~3.54 *fifths of both A to B* and *A to C*

2 = ~1.46 *fifths of both A to B* and *A to C*

The above postulation is verifiable or falsifiable in the following way:

Measure the maximum speed, in which matter at a proper distance revolves around black holes, that devours stars and other matter in orbiting trajectories around the black hole. If the maximum speed exceeds 3.54 fifths of the speed of light, then my theory is wrong. And measure the speed at which matter revolves around as many separate known black holes as possible, that are devouring matter, and see if matter has the same velocity at a proper distance regardless of the mass of the black hole. By doing that you can determine if there is a maximum speed or not for mass. There is also a Blazar that is pointing right at us, the PBC J2333.9-2343, that we can measure.



On p. 60-61

It all boils down to how light behaves within a gravitational field. Does its energy density intensify, or does it decrease? Of course, the electromagnetic radiation becomes redshifted. Only light *leaving an object's gravitational field* and light *reflecting from an object* is intensified close to the object, as seen by an outside observer, but decreasingly so with increasing distance from the object's gravitational field. It may be that we experience the light coming from distant galaxies as more redshifted, due to Earth's gravitational field. It may be that we have calculated the mass of the galaxies as being less than their actual mass, and the distance to the galaxies as being larger than it actually is.

The above postulations are verifiable or falsifiable in the following way:

1. Repeatedly measure the frequency of light from a star, with a sensor onboard a satellite in orbit around the Earth, and/or measure the light from a star with a sensor onboard a spacecraft leaving the Earth's gravitational field 90 degrees from the star/Earth.
2. Measure the frequency of light from the same star, with an equally fine-tuned tool placed on the Moon.
3. See if the measured frequencies deviate from each other and how.

On p. 56-57

> However, very importantly - there are different time *perceptions* on the moving body compared to an outside idle standing observer. /…/
>
> Light maintains a constant velocity in a vacuum in accordance with every measurement ever executed on the speed of light.

The above postulations are verifiable *and* falsifiable in the following way:

One can accurately measure time dilation for a moving body even when it is traveling at moderate speed. Build an instrument for accurately measuring the speed of light and another instrument for accurately measuring time. Place the devices in a shuttle in a vacuum tunnel. Set a light source from a distance onto the shuttle's light measuring device. Launch the shuttle. When launched, let the dedicated shuttle measuring device measure the speed of light from the light source mounted at the end of the tunnel. Send the speed measurement result via radio signals to a receiver device on the ground in real time. I bet the device for measuring the speed of light onboard the shuttle will show the exact speed limit for light in vacuum when the result is sent from an onboard transmitter to a receiver device on the ground. But I also bet the clock onboard the shuttle will show different time from a pre-synchronized clock on the ground when compared. We will thus have proved that the speed of light is measured the same no matter what velocity an emitting body or object has. Yet we will have also proved, contradictory, that time dilation is a fact. How could these contradictory results be explained? The results would appear to disprove each

other. But like I mentioned, and this is a clue: *Also, the latest laboratory experiments in the field of quantum mechanics performed by the Imperial College in London support the idea that light is non-intermediate. Imperial physicists have recreated the famous double-slit experiment, which showed light behaving as particles and a wave, in time rather than space.* It should be the same for all electro-magnetic radiation, like the radio signals emitted from the shuttle.

How to, according to my theory, verify the size and the shape of the universe:

In a paper [not peer reviewed] from late November 2024: "A Reassessment of Hemispherical Power Asymmetry in CMB Temperature Data from Planck PR4 using LVE method", by researchers; Sanjeev Sanyal, Sanjeet K. Patel, Pavan K. Aluri, and Arman Shafieloo, who concluded that the universe has different hemispherical power asymmetry depending on what direction we look out into the universe from. There is more texture or details on the one side of the universe than on the other. The statistical significance is between two and three sigma, which means that there is a one in a few hundred chance that the deviation appears coincidentally. But it's there, and the odds are favoring a causal scenario. But there are two other kinds of explanation. Like, either the data is askew because of human failure to process or make correct observations, or our location in the universe is not as random as we assumed. Is this paper confirming my conclusions that the universe is both vastly larger than we thought it was, and that it is shaped like a quarter of a circle or a hanging drop? If so, knowing how far we can look out into the universe, it is possible to calculate the size of a portion of the universe by looking at the average difference of the texture density in both directions and then deduct the angle using Pythagorean trigonometry, calculating the distance from the section of the observable universe in both directions from our Sun added together, to the origin of space. We would probably get a pretty accurate approximation of the distance to the origin of space. The universe could still be larger, but not smaller than what Pythagorean trigonometry suggests. By making these calculations one can verify my theories about both the size of the universe and the shape of the universe. My assumption is that the universe is at least 100 trillion years old. 13/100000=0.00013 (tan u).

A hypothesis

What if? What if there existed a one-dimensional dimension that we cannot see, isn't tangible and is behind a "wall" which constitutes a spaceless interface, and makes it possible for entangled particles to be immediately entangled over large distances as seen from our three dimensions + the time dimension? Think of an old-time telephone switchboard where the callers are phoning from all over the place and are connected at the telephone company who can listen in on all of the callers. That would be the easiest way to explain it with a metaphor. This is not to say that you can straight off interpret the metaphor literally as if the interface had the function of a switchboard. This is a hypothesis, use your imagination!

What if? Everything existed at once in one spot in this interface dimension because there is no time lapse or space in this dimension. Can we consider quantum entanglement experiments as an indication of my hypothesis about a non-time "switchboard" property dimension? What if the Spinor's 720 degrees rotation property indicates that the spinor is at its heart in this interface dimension of no place and everywhere at once. Can the conjugated variables, of undefined orientation and defined angular momentum, of a particle be explained by introducing this interface dimension? What if a non-time "switchboard" interface dimension explains quantum properties? If you ever wonder, I adhere to the "nonlocality" phalanx, albeit with my own twist.

What if? As I see it, black holes are collapsed objects with infinite gravitation within the two-dimensional but curved event horizon. What if black holes penetrate the barrier to the above-described interface by its sheer gravitational pull, staying eternally still in time?

What if? What if photons penetrate the barrier to this interface by its sheer speed and by it not having rest mass? A photon travels at the maximum speed in vacuum, and it may be two-dimensional like a spot of light on the wall from a flashlight, yet on the move at a speed of 300,000km per second. A photon would experience time the same way a black hole does, if they could experience time.

And as I contended earlier on p. 49-50:

> *Before a photon is emitted it had mass. Like in the battery of a flashlight. In fact, it is not even a photon yet. When a photon is released, or rather is induced, mass transforms into light traveling at the speed of light in vacuum. From the time of birth for an emitted photon to the time of impact of a photon, if it is destined to impact some object, there will have passed no time at all as seen from the photon. As the photon, instantly from its own perspective, hits the wall your flashlight is aimed at, its momentum energy transforms into thermal energy. This should mean that, for a photon, everything happens at once. Energy transfer is immediate. For a photon there is no future, and there is no then. It's non-intermediate. Maybe this explains how photons can be quantum entangled at a distance? But the procedure for a photon from birth to end is causal. Also, the latest laboratory experiments in the field of quantum mechanics performed by the Imperial College in London support the idea that light is non-intermediate. Imperial physicists have recreated the famous double-slit experiment, which showed light behaving as particles and a wave, in time rather than space.*

A penny for your thoughts

1. I wrote this book not only for scholars but for any average person too. That is why I have incorporated ideas that are more self-evident and already established since long ago.
2. My book is much more thoroughly logically describing, elaborated, and explicated than Einstein's book and/or thesis. That's a plus on my side.
3. Relative aging is closely correlated to directed thermal energy and the velocity of the mass - total amounts.
4. The formula for energy, I contend, is $E=m*\cos(\theta)*qc^2$ E isn't equal to mere angled heat and mass and lightspeed squared, creating entropy in one direction, since electro-magnetism is in effect induced but interchangeable energy too. But energy according to the equation above might have been separated from electro-magnetism as an energy form since the beginning of the universe. We may not be able to conjoin the two separate forms of interchangeable energy into a common equation.
5. How can a small body steal energy from a larger object when passing through the larger object's gravitational field, you say? Isn't the causality the other way around, that the larger object mostly affects the course of the small body?
   a) Forget about the larger object for a minute and concentrate on what happens with the small body. The small body is gaining energy as it accelerates and is altered in its course with a curved trajectory.
   b) Now forget about the small body for a minute and concentrate on what happens with the larger object. The larger object is losing energy as it slows down and is altered in its orbital trajectory so that the radius from the star to the larger object increases.
6. But the small body does lose energy when crossing paths with the larger object [when circumventing the large object on its orbiting course around for example a central star]. Under these circumstances the larger object is gaining a higher energy level as the larger object speeds up and is altered in its orbital trajectory so that the radius from the star to the larger object basically decreases.
7. In my headline: *If you are near the event horizon of a black hole it is like you are seeing the future of the universe playing out rapidly*
   a) I admit it. I admit that black holes are weird. But it's not like we had a firm grip on the paradox of black holes and time, before this thesis. The

3.54 fifths of the speed of light that matter, or rather plasma, can maximum accelerate to, just outside of the event horizon means that time dilation is less than 30 percent or 0.7 seconds compared to a hypothetical outside idle standing observers measured 1.0 second.

b) Except, electromagnetic radiation still travel at a velocity of 300,000 km/s towards the black hole's event horizon as well as it travels at a velocity of 300,000 km/s from outside of the black hole's event horizon and outwards for any observer to measure. Thus, there is no time dilation for light, only frequency variations. But black holes are still weird. ~~They are like God's crystal ball.~~ I am sorry, I shouldn't have mentioned that. But it makes for a good story.
c) Time dilation, is it real? It is real for an emitting *body* in the eyes of an outside idle standing observer. A satellite atomic, or mechanical, clock runs faster than a clock onboard a flying aircraft despite having greater speed. So, in orbital movement in a gravitational field time dilation certainly appears real. This implies that Einstein's mass/spacetime idea is correct. But the speed of light or any electromagnetic radiation is constant and measured the same for an observer on Earth as well as for an observer onboard a satellite. Maybe we should relativize time *perception* on a moving *object* or *body* instead of relativizing the speed of electromagnetic radiation.
d) I believe that we will eventually solve this problem concerning emitted electro-magnetic radiation from a moving body or a massive object and time dilation. I bet it has to do with light behaving as particles and a wave, *in time* rather than space, and light being non-intermediate. We only must set our minds to this new concept, even if we don't fully understand it yet.

8. Mass has no constancy; it increases when a body accelerates, preferably to a very high speed. But the total amount of energy in the universe can never decline.
9. Except from there being an absolute speed scale, mass having a maximum speed limit, and mass having no constancy, Albert Einstein discovered what God's blueprints were for the building of the universe. However, Einstein's imaginary thought experiments cannot be applied to the constitution of the house we call the universe. He didn't consider that the building blocks of the universe are limited. His imaginary thought experiments are therefore to a certain extent a hypothesis somersault, not practicality.

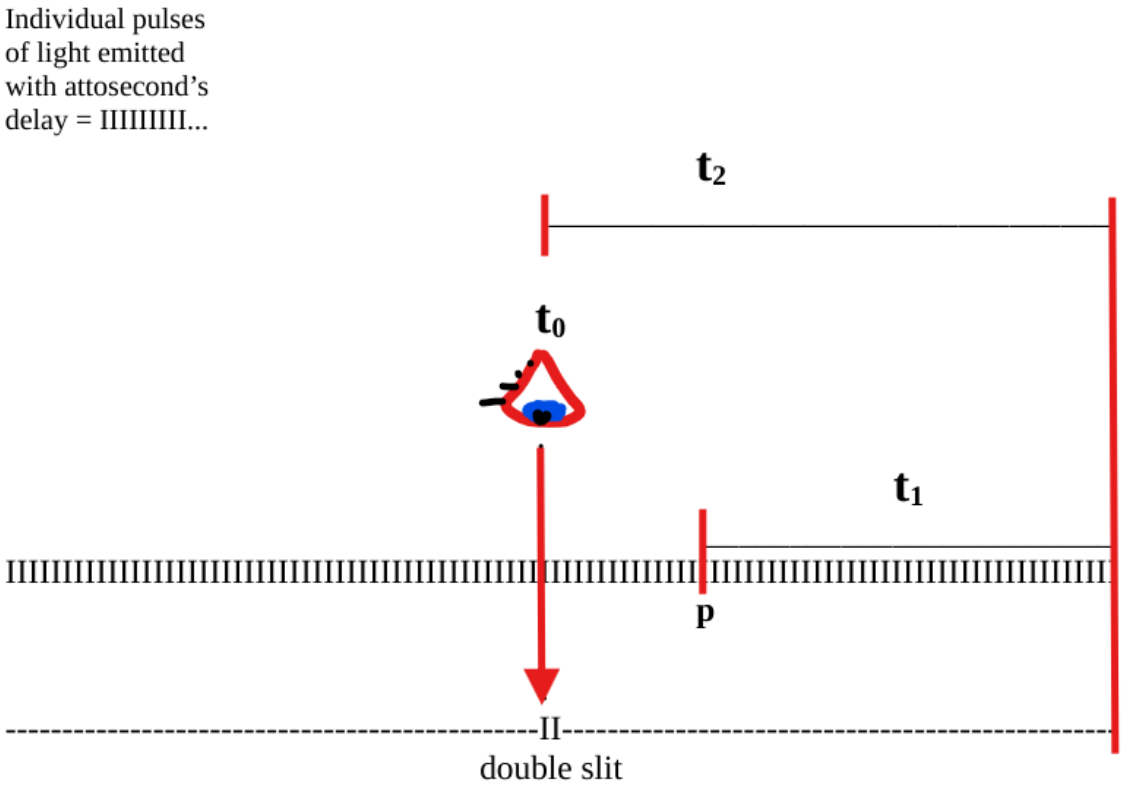
Shut up and calculate!

If I with military terms would try to explain the macro world and the micro world, I'd say that macro is strategy and micro is tactics. Here we have two different ways in how to think, and you may be good at one but not good at the other. Yet they are both indispensable, from the small to the big, for the outcome of a war, and there is no clear interface between the two. Strategy is about the bigger goal, and tactics is about the detailed means to reach this bigger goal. An apposite analogy would be if strategy is compared with Relativity and tactics is compared with quantum mechanics. But how does this apply to the theory of Relativity versus quantum mechanics? Suppose that the right preconditions in the double slit experiment setup have been met so that we can emit individual photons subsequent through two adjacent double slits. It will then display a wave-pattern or interference pattern, on a front screen just like if the light was water passing through both slits and interfering with itself on the other side. If we measure the light prior to the slits, and thereby define or fix the photon, we find that the interference pattern on the front screen collapses and the light-wave suddenly appear as a particle, i.e. it traverses just one of the two slits. That is how we know that light cares about being observed or not. And that is also how we know that light is a wave-particle. In addition, we have no way of telling exactly where the emitted photon particle is going to end up on the end screen. It can show up at any of a finite number of probability defined *pattern* places if you emit many single photons subsequent, but only if you don't measure the light at the slits. Even a single emitted photon will show up at any of a finite number of probability defined places. Prior the wave-particle was in a probability state. When a photon is emitted, it is emitted as a particle, and when that photon hit the end screen it is again a particle. But in between it is a wave. But if you observe it in between at the slit it is a particle, and it is a particle all the way from the emitter to the slit since there is an absence of interference pattern on the front screen and that can only be if the light know in advance that it is going to be measured at the slit. At the very instant you measure a single photon at the first slit, at the other slit there is no longer any wave-particle traversing. Nothing is stopping it from doing so but the wave-particle itself. Make a cavity at each slit and I don't think the result will differ. Thus light already from the start must know that it will get detected at the one slit. That is my understanding. So indeed, it is weird, and our brains will never be able to fully understand or correctly perceive

the physics of a wave-particle, since our brains are not wired for that. But somehow this unintuitive result, which to us looks like magic, is solid state physics. We will at some point in time finally have to learn to accept that, I think. But even if we cannot grasp the How, we may still be able to understand the Why. It is like a magician that does a trick, we don't know how he does it but we have clues to how the deception is set up. All double slit experiments ever rigged are important clues.

I may add, that even if we measure the emitted light at one of the slits, thereby causing the wave to collapse into a particle, there will be a pattern for subsequently emitted photons at the end screen, only with less fringes than an interference pattern. We only know that the particle supposedly is a particle at that instant because it traverses just the one slit we measure at, and because we can localize it. And also, it is not sufficient to merely ocularly observe the light for the interference pattern to disappear. Something has to interact with the wave-particle for the wave to collapse. We need a measuring device for that.

DOUBLE SLIT EXPERIMENT



t_0 = time of measurement at double slit

t_1 = pre-emitted photon's time left to impact: **p** = this photon's location when measuring emitted follow up photon

t_2 = the time it takes for light to travel distance from double slit to end screen from the time of measurement at a speed of 299,792,458 m/s

You never measure p but you calculate the predicted time of impact on end screen for p. You can additional do this experiment in a medium, like for instance water or a gas.

If you can emit a number of photons at atto-second intervals, you can see whether an interference pattern appears or not when you measure the subsequent photons at the double-slit, before the first photons have even hit the end screen. If the end screen doesn't display an interference pattern whatsoever within the given extremely short time span, then the whole set of subsequent emitted photons have been particles all the way to the screen, even at the

stretch when and where the first photons traveled, prior to the moment you started to measure the follow-up photons at the double slit. [See image]

- We pre-emit a number of photons which together can display an interference pattern if they hadn't been measured at the double slit. But we don't measure them at the double slit at this moment.
- We initiate the measuring of the subsequent emitted photons at the double slit some femto- or atto-seconds later. But at this moment when we start the measuring at the double slit, the first emitted photons have yet to reach the end screen.
- When we initiate the measuring we check if the photons which were emitted some atto-seconds earlier, when we were not yet measuring at the double slit, if they form an interference pattern on the end screen or not. That is why the photons have to be emitted with super short intervals.
- Then we would know if light is immediately linked, not just to its past but to its past and its future simultaneously. If the end screen doesn't reveal an interference pattern, then we have proved that light is linked, not only to its past (which has already been confirmed in experiments) but also to its future, and whence, in theory, information can be transmitted faster than light speed, even immediately over vast distances.
- The executed experiment time span is extremely short.

If light can be established to be immediately linked to, not just its past but to its past and future simultaneously, then the implications are mind-boggling. It would inevitably imply that from the moment light leaves a distant star, and if we eventually detect this light here on Earth, the light would know prior from the moment it leaped from the star that it would get detected even though the distance to this star is billions of light-years. It in turn would imply that the property we call *'distance*' or *'space'* has no real meaning for light and that information can be transmitted faster than lightspeed, even immediately, for mass-less photons, *but not as seen by us detectors*. But then how does light know its speed-limit? Surely, it must have a speed limit since Distance/Time equals Velocity [V=D/T]? Yes, and it is 299,792,458 m/s in vacuum. But I think the speed

limit of light is observed as the speed limit only for us non particles. Whatever the case, this hypothesis is easily falsifiable.

This experiment has the potential to explain how two particles can be in a quantum entangled condition, where the one particle immediately can know the spin of the other particle.

Hyperbolic thinking

$E=m*\cos(\theta)*qc^2$

Physicists' models assumes that the highest possible temperature is the Planck temperature, with the value $1.416785(71)\times10^{32}$ kelvin.

$E=m*\cos(\theta)*qc^2$

Or;

$t_d=m*\cos(\theta)*qc^2$

45 degree angle; 10000 degrees kelvin; mass equal to 1;

$1*0.7*10000*299{,}792^2=6.3*10^{14}$

60 degree angle; 10000 degrees kelvin; mass equal to 1;

$1*0.5*10000*299{,}792^2=4.5*10^{14}$

80 degree angle; 10000 degrees kelvin; mass equal to 1;

$1*0.17*10000*299{,}792^2=1.53*10^{14}$

---

45 degree angle at Planck temperature and the mass equal to 1.5

$1.5*0.7*1.416*10^{32}*299{,}792^2=1.33627*10^{43}$

The equation for energy involving both mass, its velocity and thermal energy after E equals, I contend, is $\mathbf{E=m*cos\ (\theta)*qc^2}$ The q is the thermal entropy in one direction caused by the directed jet propulsion angle. The given angle cannot be 0 or 180 degrees, or E wouldn't increase. This equation can show one possible limit for the amount of energy, *iff* the universe we know has a certain shape and angle from the origin of space, and if we can know the initial mass. You could also put t_d for time dilation instead of E on the left side of the equation sign so that it reads

$\mathbf{t_d=m*cos\ (\theta)*qc^2}$

They are synonymous. The equation doesn't explain the cause of the universe, but it does imply the shape of our known universe. What if the universe originated from something like a speeding bullet exploding into a quarter circle (or smaller piece of a circle, or a drop formation) forwardly expanding direction. It would make the universe significantly older than scientists think, particularly if it has got a drop formation. But the estimated mass of $1.5*10^{53}$ kg for the whole observable baryonic universe is far, far greater than what we get out of the equation $t_d=q*\cos(\theta)*c^2$ where q is Planck temperature. Not quite there since $1.33627*10^{43}$ is not nearly as much. But, mass is not a constant, I assert in my book. Still, there is a vast gap between 10^{43} and 10^{53}. So, maybe this added formula $\mathbf{E=m*cos\ (\theta)*qc^2}$ cannot be applied to the origin of the universe. But it <u>is</u> applicable to jet airplanes, I know that. Thus it is a valid equation. Still, it does not align with the equivalence principle. Why is that? Well, I know why, I am just asking a rhetorical question. But why then can the formula be applicable to Jet airplanes? With my calculus, a small airliner, with a 20 degree jetbeam in the air, display an energy level equal to:

$E=m*\cos(\theta)*qc^2$

$6.77*10^{18}=40{,}000*0.9397*2000*300{,}000^2$

In the splitting of an atom at an atom bomb explosion, a single split atom developes an energy level equal to (remove cos (θ) from the equation):

$E=mqc^2$

$1.494*10^{-8}=1.66*10^{-27}*100,000,000*300,000^2$

The speed of light above is approximated.

In both instances it is a large number for the respective reference frames. But the value is not in Joules since one joules equals 1 $kg*m^2/s^2$. Where m^2 is meter squared and s^2 is seconds squared.

Numbers keep climbing if you for instance instead of a small airliner with a mere 40,000kg take-off weight do the calculation on an Airbus A380 weighing in at 575,000kg at take-off. You then end up with an energy level of $9.73*10^{19}$. That is why it is a usable formula in the first place.

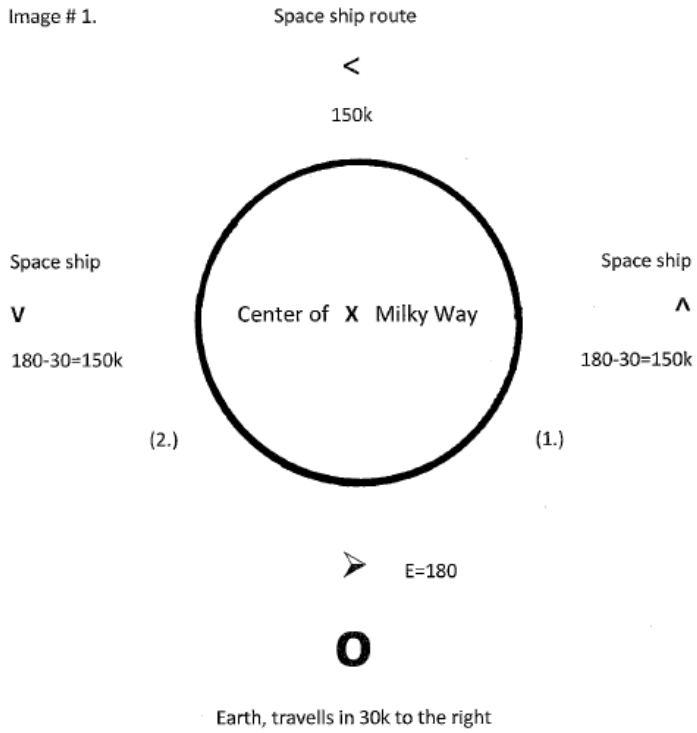
But the formula $\mathbf{E=m*\cos(\theta)*qc^2}$ is merely a product of multipliers. Thus, all you do is multiplying different energy forms, and you can do this with other converting unit factors too. That is exactly my point. I profess that mass and thermal energy simply are two forms of energy, sometimes displayed in opposite directions in our universe, and that the phenomenon time dilation equals total energy which depends much on the factor of thermal energy q. Like this;

$\mathbf{t_d=m*\cos(\theta)*qc^2}$

If we can use the formula as an indicator for the origin of our universe is really just a bonus. But it would be neat if we could. Albeit, if the formula is correct, it *would* mean that the equivalence principle is wrong, as mentioned. Setting up a fundamental and consistent formula for time dilation based on mass and thermal energy would be difficult. But it fits my model well.

The causality of my theory

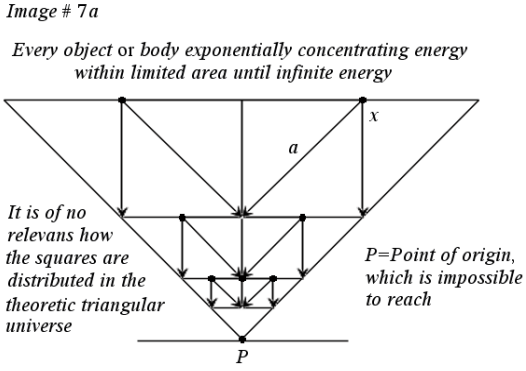
I will in a few steps show the reader why my theory is causal.
This:



The amount of energy E = 30k+150k. To simplify understanding the amount of energy is equivalent with the sums of k, i.e. the earth's and the spaceship's total velocity as seen from an extern observer's viewpoint.

See (1.) and (2.) below and place them according to number in the image.

leads to there being an absolute speed scale for objects,
which leads to the figure of the universe being quarter circle shaped or drop shaped..,



...which leads to this: $E=m*\cos(\theta)*qc^2$ which leads to the formula for matter with inertial mass: $t_d=m*\cos(\theta)*qc^2$

There is a maximum speed and a minimum speed. If there is a minimum speed, nothing can be allowed to cross into the other half of the universe, because there cannot be inverted speed, a velocity below 0k.

And this:

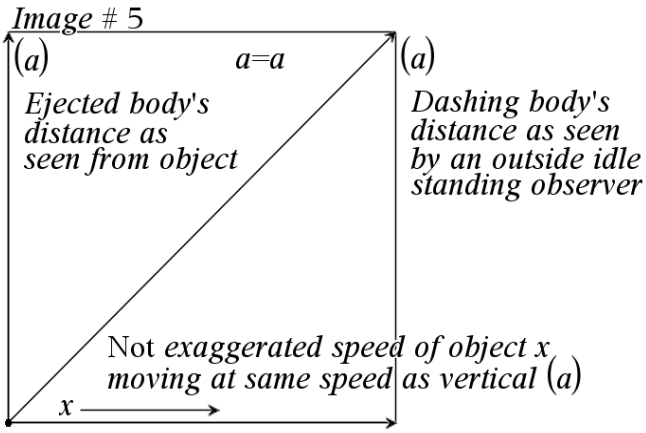


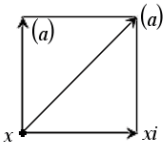
Image # 6a

Contraction of space diagonal dashing body near lightspeed as seen from an outside idle standing observer

Diagonal (a) must with necessity shorten in length since the speed of (a) cannot exceed 300,000 kilometers per second

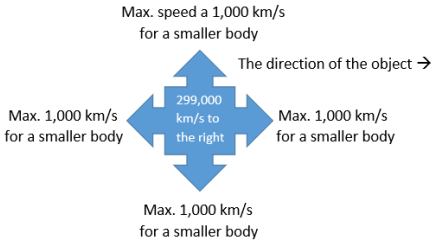
Distance x to xi equals x to vertical (a)

Near lightspeed of object x to the right



plus this...

Image # 13b



...lead to the conclusion that mass has no constancy. Dunn'it? If you don't understand this, I am sorry you didn't put in the effort and thoroughly studied my book so far first.

Interlude

Something that can be conveyed from one person's mind to another person's consciousness is information, if the person receiving the information perceives it as the transmitter intended. That the receiver syncs the information that the transmitter has in his head is a confirmation that the information is logic. But for this to be possible, it requires that the receiver is at least as intelligent as the transmitter alt. that the transmitted information is simple enough for the receiver to perceive the information as the transmitter had intended for the receiver to perceive it. A proviso must be included. Emotions can also be conveyed between a transmitter and one or more receivers. But emotions are more likely to have a socially logical function rather than that emotions are purely irrational. E.g., in mating and childcaring or in the forming of communities and nations. It's just that you can't build houses with emotional expressions. Although you may want to build a house with emotional expressions. From this follows that emotions can be logical from an evolutionary perspective. Everything indicates that emotions and logical thinking are mixed to varying degrees in solving problems, music production, and in grief, revenge, happiness, envy, curiosity, etc.

An informed person can intuitively understand how the universe is constituted. A person can also be wrong if his brain is of a poor quality or not good enough quality. There are a lot of stupid men trying to get the scientists' attention. They usually don't know higher math and they usually are wrong. A mathematician can also understand the universe, but he too can, although his math equations are unquestionable, just as often be wrong. I claim that math is both discovered and invented, and invented math is folly. It is far from sure that math can be implemented in science in a correct way that truly describes the world. So, his math may not be applicable to science at all. And he is undoubtedly an educated man. I am not an uneducated man myself, but I'm mostly autodidact. Except for in the subject of philosophy. My brain is hardwired to solve advanced problems. Math is only a tool, and that tool is kind of unreliable as it is. Lots and lots of mathematical calculations, however correctly calculated, have been either left out or proven wrong for understanding the universe. What I mean to say is that logical intuition is a function of the brain, and although when I started this project I didn't know higher math, I may still be able to correctly infer the overall constitution of the universe. Math skills are not the sole marker of what intelligence is and it is not the only analytic method.

Why is the universe composed so that intelligent life is possible

Some say that the reason we can even ponder the question ”why does the universe bother to exist?”, is because the universe is composed so that intelligent life is possible (inevitable some say), that is, because we are here. The improbable coincidence (or the therefore probable God) in the origins of all the well-tuned building blocks and conditions of the universe is therefore allegedly solved. All of these randomly well-tuned universal laws of nature and components that make up our universe are ”explained” by our existence, that we can contemplate it. Had we not existed, there would have been nothing to ponder, some say with another choice of words.

That's not very argumentative, in my opinion. If, on the other hand, there were a conglomerate of universes with different conditions, well then the same argument about randomly well-tuned laws of nature and components explained by the fact that we exist would suddenly be hard core, because the existence of our universe, which makes it possible for us to ponder about the question why the universe exists, increase with the number of universes that exist. That Stephen Hawking was on to something.

Roger M. Klang, August 2008

Multiverse, where does it stop – the opposite opinion

What says that the universe must end with one (1) multiverse? If the universe we know today is not the complete universe, then scientists do not have to stop with one (1) multiverse either. There may just as well be an added universe, as the multiverse is just barely infinite. After this universe, there can be many more universes, so why stop at a multi-multi-universe when you can count multi-multi-multi-multi-multi-universes x 10?

It does not have to be our specific world - the universe as we see it from the inside - that is the largest complete space containing matter. But there is also no good reason to think that there must be a multiverse that is larger than our universe, and which contains our universe and multiple other universes.

A multiverse could explain why we live in a universe that is so finely tuned that it is precisely adapted to produce intelligent life that can reflect on the Multiverse. But you just push the problem with the origin of the universe/multiverse in front of you. The only thing you can explain is the origin of the intelligent man and then only that man has evolved, not how man has evolved. Same with the Universe. In addition, the hypothesis of one or more multiverses is not even a falsifiable or verifiable hypothesis.

No matter how much Stephen Hawking (R.I.P.) and his agnostic or atheist equals desire, they cannot rule out any existence of a God. It does not matter how large multi-universes there might exist, because you can still not get rid of a possible creator no matter how many multiverses. Then we can just as well stop where we are today, and accept one (1) universe, without ruling out the possibility of the non-falsifiable, non-verifiable hypothesis that there may be an even larger multiverse. I doubt that one can make mathematical calculations that are complete and valid and support the hypothesis of possible multiverses. Why should one apply the mathematical laws of our visible universe to other strange universes in multiverses? In any case, I am sure that one cannot make mathematical calculations that truly support the theory of the origin of a multiverse, when one cannot even mathematically prove the causality of the origin for the visible and measurable universe.

At first man knew that Earth was the center of the universe. Then suddenly the Sun became the center of our solar system. Much later we understood that we live in a galaxy with many, many stars. Shortly thereafter, we lived in a galaxy cluster among billions of other galaxies. And now they say, without being able to see or detect this mysterious multiverse, that our universe is just one among an immense number of universes with different conditions and laws of nature. And

what are these laws of nature then, I ask? Mathematics and laws of nature seem to come in one and the same set and are dependent on space, time, and mass in motion. I cannot imagine a lasting universe without these factors.

The question is, where to stop? At what point do you set the limit for our understanding of the extent of the universe or the multiverse? At some point you must hold back your imagination and trust common sense, especially as there is a complete lack of empirical evidence for a multiverse.

Roger M. Klang, March 2014

How many lightyears does the universe extend

There is a book called *"Just six numbers. The deep forces that shape the universe"* written by the astrophysicist Sir Martin Rees. He, or rather the inflation theorists, are presenting a hypothesis, that the universe was expanding with inflation speed to an almost unimaginable expanse, which would entail that the light from the edge of the universe would need so many years for it to reach us, that we would have to write this number with millions of zeros after. I assert that this is absurd. Even a number as large as a thousand billion light-years would be improbable, because it would mean that the location of our solar system in relation to the place of origin for the universe would account for an implausible one percent chance of being located where it is, i.e., ~10 billion light-years from the Big Bang if the universe was 1000 billion light-years in extent. I assert that the extension of our universe can be at most say an arbitrarily set 100 billion light-years, i.e., our galaxy has one chance in ten of being located where it is located. Ten percent probability makes the probability many times higher that we are in square one out of ten possible. Except, it may be the case that the reason why we are here in square one, out of an infinite number of billions of places from the Big Bang, is because life can only develop and thrive in the first ~10 billion lightyear square out of a fantasillion number of squares from the universe's origin, and hence we are simply living here and not in any other place. Thus, any creature

can therefore look out into the universe only from our approximate lightyear square in the universe. But the hypothesis mediated in the mentioned book is an unlikely one, as far as I can try to understand.

Roger M. Klang, March 2008

The finite universe

There is a very simple geometric proof that the universe is finite. If the universe had not been finite but infinite, then two nearby stars at the farthest distance from the Earth (if you could say ”farthest distance from the Earth” in an infinite universe) seen horizontally from the Earth, would lie along exactly the same axis. Thus, triangular formations could not exist in such a universe and consequently the Pythagorean theorem would have no meaning. It does not matter if two stars are at a 44-degree angle from each other from the Earth, because if the universe is infinite, sooner or later with the increased distance the stars will lie along one and the same axis seen from Earth. This means that an infinite universe would necessarily have had to be one-dimensional if it were to exist, just like the number series. The whole thing reminds me of the turtle that repeatedly halved its walking pace or distance walked and therefore never reached the finish line. There is a similar principle that prevails in the Pythagorean theorem. A theoretical triangle can never become a straight line no matter how long the base is and how short the height of the triangle is. Thus, the Pythagorean theorem makes an infinite universe impossible. Or one might say that a finite universe enables the Pythagorean theorem.

It is a mistake to think of nothingness outside the universe as an entity or an infinite and/or dark but empty extension of the universe. One should see the universe as an infinite but limited and curved sphere. Infinity thus exists only within the curvature of the universe. There is no point in imagining an *”outside universe”*. We stand within the universe and look at our universe from the inside, and the so-called infinity outside this concept neither exists nor can be

understood. It cannot be understood because it cannot exist. The absence of light is not equal to black. Black is a perception, or a lack of a perception, that manifests itself in our brain and that only exists in living beings in the universe. If you ask a blind person what black is, he probably answers that this is what he experiences. But black does not exist outside the brains of thinking creatures. Black is a brain ghost. Thus, we may have eliminated the need to imagine the so-called properties of the outer universe. The only place in which infinity has a theoretical bearing is, as mentioned, the two-dimensional number series. Theoretical because in theory you can continue to count as far as you want or can.

Roger M. Klang, October 2014

Where we should look for other civilizations in the universe

Since it takes 4.5 billion years for life forms to evolve into humans, every other star with a planetary system with intelligent life must have lived half of its total life span. And since the nature of our Sun is such that it becomes 10 % hotter for every billion years, intelligent life can continue for a maximum of 2.5 billion years. So, we should only look for stars that are between 4.5 and 7 billion years old. The star must be a yellow dwarf with the same composition as our Sun.

But an important factor or two are missing, such as how wide the belt in the Milky Way is, which can accommodate intelligent life, and how dense the collection of stars is there.

The central region of the galaxy has a diameter of more than 20,000 light-years. In the middle of that central area there is a supermassive black hole, with a mass of about 2.5 million solar masses. The stars in the central region are about 10 billion years old. Our own Sun is in the Milky Way's large rotating disk about 27,000 light-years from the central supermassive black hole. In the large rotating

disk, we find the galaxy's huge spiral arms, where new stars are born. With an age of 4.5 billion years, the Sun is among the older ones in this disk. The diameter of the galaxy is 100,000 light-years. There are two hundred billion stars in the Milky Way. The age of our galaxy is 13 billion+ years.

The nearest star, which has three giant planets that orbits a Sun almost exactly like ours, is only 41 light-years away. It is not yet known if there is a habitable planet in that solar system, but it may even be probable. Given the short distance from Earth to this solar system with giant planets, and solar systems elsewhere that have giant planets, the odds are high that similar yellow dwarf solar systems as Earth have giant planets, perhaps in virtually every such solar system, thus increasing the likelihood of intelligent life in these solar systems. Giant planets are needed as asteroid magnets, for advanced life to evolve on other planets in that solar system.

Now we come to the planet's importance for being habitable for intelligent life. We need the right planet, of the right size, with water, with a magnetic field, with the right orbit and at the right distance from the star. And to be on the safe side, so that we do not overestimate the possibilities of planets with intelligent life in the universe, a planet with the right tilt and the right Moon for seasons and tides.

If all this are to fit the model, then the probability for intelligent life in other solar systems in the Milky Way are more limited. Add to the equation how many planets with intelligent life there can be, whos' opposable thumb inhabitants are in an advanced civilization where radio emission is the result of a technology, if one assumes that such a civilization can last for a thousand years. It must be considered that it takes a long time for their emitted radio-waves to reach Earth. Also, radio-waves thin out fast, like rings from a stone thrown in a pond, so it is virtually impossible to detect other civilizations in the Milky Way.

Roger M. Klang, March 2009

Tilted Earth

It may be that a tilted planet with continents and sufficient land mass with different habitable climate zones is a requirement for highly intelligent life forms that can construct advanced tools to develop. If the Earth wasn't tilted there might have been only very limited habitable zones on land. Not only would the zones in the north and south be uninhabitable if a planet isn't tilted between about 22.1 and 24.5 degrees, but so too might the zone at the equator be uninhabitable.

The reason I am professing, is that Man and His perpetual aspiration to cross geological boundaries into other habitable zones and continents, yes even into space, to in a Darwinian perspective expand His borders and subsequent extend His genetic imprints on the planet, is key for a specie to develop that extra cognitive abilities needed to manage and survive such voyages. Also, there is no doubt that Man's ability to construct buildings has bolstered His chances of survival in any climate zone. Man's ability to construct tools has bolstered His chances of survival all in all.

Roger M. Klang, September 2024

God or no God

Let us assume that God exists. Then there are two alternatives to why I am sitting here contemplating this:

a) Either God created us humans like an artist, tangibly influencing the process of evolution here on Earth.
b) Or God has created the universe in such a way that it is a law of nature that the universe automatically, in the right solar systems and on the right

planets, produces social beings with the capacity for cognition, and that they can use tools to create advanced civilizations through evolutionary processes.

What he cannot have done, however, is to create the universe and only hope that it will produce advanced social creatures with the capacity for cognition, that use tools to create advanced civilizations. If it is a fact, and this is true whether there is a God or not, that it is only chance that determines whether advanced creatures who can use tools to build a civilization could evolve, then it is far from certain that such advanced creatures would evolve on other planets in our galaxy or in the universe at some point.

Now suppose there is no God. Then there are two options:

1. It was a fluke that made us evolve into social beings who could build an advanced civilization based on fossil fuels.
2. The universe is fortunately so complex that it is a law of nature that the universe automatically, in the right solar systems with the right planets, produces social beings with advanced cognition, beings that through the evolutionary process developed tools to create civilizations. Maybe we are here and can observe the universe only because the universe laws of nature are so fortunately composed? People who reason like that tend to embrace the theory of multiple universes because it is a convenient way to get rid of God in the equation, since an almost infinite number of universes is assumed to increase the probability that our universe, which is fine-tuned to create advanced life, equals the probability of 1. But to argue that the hypothesis of multiple universes is true, is to describe reality beyond what we can know. It's almost unscientific. But it is assumed necessary if we are to have any hope of ever being able to falsify or verify the theory experimentally.

Roger M. Klang, June 2019

Ten indications that Earth was spherical, for medieval Man

1. The star constellations differ depending on what latitude you are on. The North Star disappears behind the horizon when you are southbound.

2. The ocean horizon looks (and is) curved.

3. The Moon's shadow indicates that it is spherical and thus it is not part of a papier-mâché-like two-dimensional vault in the sky. 2 + 2 = the Earth is round.

4. The spots on the Sun moves in the same direction over the meridian of the Sun and thus it is easy to conclude that the Sun is spherical and rotates around its own axis, which leads one to conclude that the Sun is not suspended in the Earth's atmosphere, therefore the Earth must be spherical as well. (Note: A telescope is required to study the spots on the Sun.)

5. The midnight Sun on the northern and southern hemispheres (which occurs in opposite seasons).

6. Parallel shadows from the Sun indicate an enormous Sun that is very, very far away, and thus it is not a Sun suspended from a vault in the sky. You cannot focus on a star with your eyes, but you see double, which indicates that the star is extremely far away and not suspended from the vault in the sky. Thus, one can conclude from these two premises that the Earth ”hangs” freely in space and thus is just as probable spherical, as the Sun and the stars.

7. The Moon sometimes lies down in its eclipsed phases at the equator.

8. The path of the Sun across the sky differs. When it’s noon at the equator, the Sun is located over your head unlike in the north, in the winter season.

9. It is summer in the southern hemisphere, while it is winter in the northern hemisphere.

10. Total solar and lunar eclipses suggested that something was wrong with the medieval general worldview.

Roger M. Klang, March 2008

Universe; creation, or popping into existence?

Can one say, with equal validity, that the Universe is a creation, and not a coincidence?

There is a problem with that opinion. If one takes for granted that the universe was created by a divine God, one is simultaneously saying that there either was a God that was born, or one is saying that God has always been there for eternity. If God was ”born” it means that something must have caused God to come into existence. That something must have been immensely fine tuned to cause a creator to come into existence with all of the creators characteristic intelligence. This in turn would imply that the chance of something like the universe just popping into existence as dead matter, is vastly more probable than something causing a creator. ”Vastly” is here an understatement, to put it mildly.

But since there allegedly is just one in 10^{10} to the power of ^{123} chance for the universe being this fine tuned by chance [according to Sir Roger Penrose, and I concur], why not think that the creator hypothesis is vastly more probable than the universe just popping into existence? Problem is you can’t prove it. Until you are dead at least, because then it gets to be empirical evidence. If not, well, then you are dead and gone and nothing matters to you anymore. The rest of us will continue to ponder the dilemma. Till we in turn die.

Of course, if one takes for granted that a creator has always been there for eternity, then why is evidence pointing to a big bang? Don’t people holding this point of view that the creator is eternal believe that there was an origin of the universe? This view reminds me of the science denying flatearthers. It reminds me of the Catholic Church when they said that the Sun orbited Earth or hung on a spherical globe revolving around Earth. They were so dogmatic that they were even willing to execute people for saying that the Sun revolved around Earth. And they did. Albert Einstein allegedly said that; *“Only two things are infinite, the universe and human stupidity, and I’m not sure about the former.”* Check mate!

Even though an infinite universe is improbable to more modern humans, he was right about the human stopidity. [Albert Einstein most likely phrased the quote at the time when we didn't yet know that the universe is expanding.]

However, there is another interesting aspect to it. The multiverse hypothesis. Traditionally, this hypothesis has been the preferred hypothesis for the atheists, since it removes the need for a creator. But, knowing man, following this philosophical discourse, I think that it will become the religious phalanx, be it scientists or fundamentalists, that will make this hypothesis discourse their own. Because man is stupid, he will also choose his preferred arguments after his beliefs and not the other way around. Check mate!

Roger M. Klang, February 2026

“The next sentence is true.”
“The previous sentence is false.”

Preface part 2

This part of the book is written by a partly schooled philosopher, namely I. If you have read the first part of the book, which is also written by me even though I am not trained in physics, then hopefully you will not be so shocked or feel blasé, suspicious, angry, full of laughter or superior when you start reading this piece. I put these two parts together in one book and the presentation of my Astro-physics theory comes first because I hope people will read this controversial part as well. I can't say that this second part of the book is particularly easy to understand. But it is thoroughly elaborated and the very simple heuristic mathematics in it is easy to understand even for primary school students. It is the simple heuristic mathematics that I set up that above all else proves that I have in fact refuted Gödel's incompleteness theorem. If you were not impressed with the first part of the book, I do not think you should continue reading, the second part of the book will not be easier to understand. But if you were pleasantly surprised by the first part of the book, I think you should try to understand the second part of the book, especially if you are a philosopher. Here it is not enough with 240+240 minutes to read and understand the text. You must study the text thoroughly and really make an effort to understand. It took me 12 years and 20 versions plus even minor changes and clarifications to get to the result in this part of the book. What sets Gödel apart from me is that he assumed that the (German) language is completely logical, while I assume the opposite that all languages are fallible, incomplete, and generalizing, which means, among other things, that sentences and words can be broken down into smaller components. It so happens that I am right before Gödel, and therefore it is possible to refute this cognitive giant and provide evidence that can be scrutinized. I present incontrovertible evidence against this incompleteness theorem and at the same time I largely exalt the German mathematician David Hilbert (R.I.P.), who confessed to the formalists as opposed to the intuitionists. If I can refute Gödel, then I must also be able to refute Bertrand Russel. It is up to you to decide whether I have irrefutable proof, should you choose to study the text.

The author

Gödel's theorem as it is believed to mean

Quote:

In a book called ”Introduction to Metamathematics” by Stephen Cole Kleene, a standard work about Gödel's theorem (claims to contain the complete proof for Gödel's theorem) with over 500 pages. On page 205 (following a theoretical background of about 200 pages) Kleene gives a heuristic ”proof” for the theorem, which I will present here:

By the construction of A [a proposition],

(1) A means that A is unprovable

Let us assume, as we hope is the case, that formulas which express false propositions are unprovable in the system, i.e.

(2) false formulas are unprovable.

Now formula A cannot be false, because by (1) that would mean that it is not unprovable, contradicting (2). But A can be true, provided it is unprovable. Indeed, this must be the case. For assuming that A is provable, by (1), A is false, and hence by (2) unprovable. By (intuitive) reductio ad absurdum, this means that A is unprovable, whereupon by (1) also A is true. Thus, the system is incomplete in the sense that it fails to afford a proof of every formula which is true under the interpretation (if (2) is so, or if at least the particular formula A is unprovable if false).

The negation of A (not-A) is also unprovable. For A is true; hence not-A is false; and by (2), not-A is unprovable. So, the system is incomplete also in the simple sense defined meta mathematically in the last section (if (2) is so, or if at least the particular formulas A and not-A are each unprovable if false).

The above is of course only a preliminary heuristic account of Gödel's reasoning. Because of the nature of this intuitive argument, which skirts so close to and yet misses a paradox, it is important that the strictly finitary metamathematical proof of Gödel's theorem should be appreciated. When this metamathematical proof is examined in full detail, it is seen to be of the nature of ordinary mathematics. In fact, if we choose to make our metamathematics a part of number theory (now informal rather than formal number theory) by talking about the indices in the enumeration [the Gödel numbering], and if we ignore the interpretations of the object system (now a system of numbers), the theorem becomes a proposition of ordinary elementary number theory. Its proof, while exceedingly long and tedious in these terms, is not open to any objection which would not equally involve parts of traditional mathematics which have been held most secure.

End quotation.

So, we have two statements:

(1) A means that A is unprovable
(2) False formulas are unprovable

One can easily replace (1) with either “False A is unprovable” or “True A is unprovable”. (See below)

“A means that A is unprovable” can only devolve upon that A is unprovable, because to say, “A means that” is just an added appendage to saying “(this claim) A is unprovable”. So, the full sentence “A means that A is unprovable” is a

predication in which A is either true or false. Unprovable means that something cannot be proved true. So, we come to the question of not-A i.e., false A.

(3) A means that A is unprovable (if false A or if true A)
(4) False formulas are unprovable

We cannot initially put an equal sign between the premise “A means that A is unprovable” and “False formulas are unprovable”, because we do not yet know if A is false or true. The following are all four heuristic possibilities for a theorem which I am going to exam very shortly:

A = false and provable
Since A cannot be false and provable, I will leave this sentence aside.

A = true and provable
If A is true and provable it does not contradict “False formulas are unprovable” – nr (4) above – and hence (true and provable) is still valid and thus also is independent from (4) which is rendered superfluous.

A = false and unprovable
“False A means that false A is unprovable” is a true proposition. It does not contradict with (4). (See the asterisk in parentheses below (*))

A = true and unprovable
And of course, if A is true and unprovable it does not contradict (4), because true A is supposedly just unprovable (for now anyway) and not false.

(*) Remember that “is unprovable” means that something cannot be proven true. “Unprovable” does <u>not</u> mean that A is both not true and true at the same time, or even undecided, because that is impossible anywhere but in quantum mechanics. A true proposition cannot be unprovable, and a false proposition can

never be proven true. A false proposition can perhaps be proven false, but it would still not contradict (4).

Someone may suggest that we must transform the formulations above into basic math-rules like this, and strip it of digits:

(- +) = (-) (imaginary)

(+ +) = (+) (true)

(- -) = (+) (true)

(+ -) = (-) (imaginary)

The following is an explanation of what I am claiming here:

a) We would get (- +) = (-) (imaginary) if A could be false and provable, which it cannot. False propositions cannot be proved true.

b) We get the formula (+ +) = (+) (true) if it is true and provable, which certainly wouldn't conflict with (4).

c) We get (- -) = (+) (true) if it is false and unprovable.

d) Thus, we get the formula (+ -) = (-) (imaginary) for the true and unprovable.

I realize that labelling "unprovable" as a negative equaling with "false", by assigning it too the negative (-) when "true" represents the solid plus (+), can open for an interpretation of the above four a), b), c) and d) as erroneous thinking all in all. Because "false A is unprovable" means that false A cannot be proven true, but false A can still be proven false which seems to correspond with the negative (-) much better. And that would have been correct if it hadn't been impossible to prove false A true, as we have accounted for in and above the deterministic expressions. So, what we are left with, is that false A can never be proven true, that is, false A (-) must always be followed by (-) for "unprovable" and that means that this proposition (- -) is true. A true proposition cannot be unprovable, and a false proposition can never be proved true.

In the original theorem it is claimed:

- **A means that A is unprovable.**

  That means that A cannot be positive (+) if unprovable is (-) since true A cannot be unprovable. Because everything true is provable, and (+ -) = Imaginary = (not true). Therefore A = not-A = -A. And the formula must read (- -) = (+) or true.

- **False formulas are unprovable.**

  Wherein the false formula equals (-) and unprovable equals (-). Therefore (- -) = (+) = true**.**

Even though "unprovable" is a factor in the proposition, there is no contradiction.

The important thing is that the plus (+) indicates existence, and the minus (-) is indicating non-existence, so that the result equals one of two things – true or imaginary. For the fun of it one can maintain that this is the explanation of why the universe exists and that it is a God proof as well. Let us assume that (- -) represents the two unexplained fundamental entities, the universe and God. Since two non-existing of anything (- -) equals plus, i.e., a positive number = (+), the universe and God are destined to exist however unlikely they seem to be. In fact, the improbability of their existence separately, could be a precondition for their very co-existence, (-) God (-) universe = (+) existence. And if it (math) is a precondition for their very co-existence, then the existence of the universe and God suddenly seems very plausible. And if either the universe or God fails to exist the result is that neither of them exist (+ -) = (-). But we exist, and therefore God exists. But is this God proof conclusive? Of course not, no God proof is conclusive. I am just having fun.

They use the words similarly in both German and English except they make one word out of “nicht beweisbar” in the English language, and that is interpreted “unprovable” in English. But that does not change my argument. “Sind” and “nicht” are interpreted “is” and “isn’t” or “are” and “aren’t” in my argumentation. (See below)

A meint, dass A nicht beweisbar ist
Falsche Formeln sind nicht beweisbar

We have to revise the semantics in certain suggested variants of formulas for Gödel’s incompleteness theorem and Plato’s theorem, but Edmund L Gettier’s theorem remains a shining example still

A suggested variant of formula for Gödel’s incompleteness theorem:

In any logical system for mathematics, there are statements of speech that are true, but that cannot be proved.

This statement cannot be true

Must be either true or false.

If the claim is false, it can be proved. Then it must be true. Which is a contradiction, therefore, the claim is true.

This is therefore a mathematical claim that is true but cannot be proven.

The mathematical implication is: What if the Riemann hypothesis would prove to be true, but is impossible to prove?

*

It seems to me, this suggested variant of formula for Gödel's incompleteness theorem gets entangled in its own linguistics. It is certainly a logical argument based on the theorem, but you cannot use the order in which the words follow, mathematically. What do I mean? Well, the sentence: "This statement cannot be true" must indeed be either false or true, but if it is true then you should - if it is possible to translate it into a mathematical formula that says something about something other than linguistics - replace the words "cannot be true" with the words "is not true", which makes it correct without the inconsistencies. Y can stand for "is not true", and X can represent "must be true." A can stand for the opening words "this statement".

---------- X "must be true" (+)

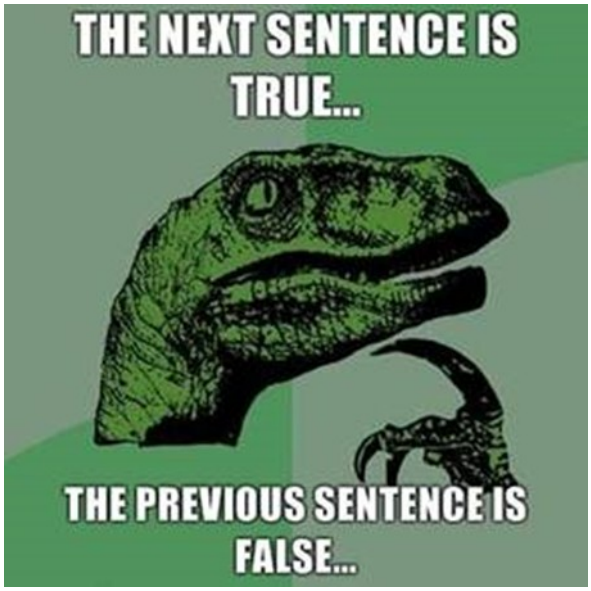
A X or Y, but it cannot be both!

---------- Y "is not true" (-) (cannot be true)

The theorem as it appears above the asterisk proves that it linguistically can be either false or true, though it cannot be proven. But does it prove anything, with mathematics, of the nature of the world beyond it? No, it rather seems to disprove the theorem itself. The theorem doesn't help us understand the world. Perhaps one cannot conclude a solution from the first ("This statement") or A with both ("must be true") and ("cannot be true") for it to be a correct formula? Either "This statement" or A is true or it's not true, so Y should read "is not true" if it should be adjacent with "This statement" or A since "Can" is a statement that says that something either is, or is not, but not both at the same time. When you put "not" after "can" (cannot), you are either saying (can; as in must[+] not[-]) = (-) = ("is not true") which translates into a mathematical language + (-) = - or with other words it is a negative. Or you are saying (can; as in not[-] not[-]) = [+] =

("must be true") which mathematically translates into - (-) = + or with other words it is a positive and henceforth must be true. Conclusion: "is not true" or "can not be true" is a correct wording, but not "cannot be true". And what is the statement A? We don't know. What we are doing is to apply the label of an unknown statement to a formula. But we cannot say anything about any actual statement. Is that logical? Surely "this statement A" is not a statement!? So, what we have got left in "Y" is "A is not true" or "A is false" + - = - or just plain -.

Maybe we need to accept the fact that the answer to the Riemann hypothesis involves no pattern in any sequence of prime numbers and still the enigma could be solvable – if we look outside the box.



The above image with the text "the next sentence is true" and "the previous sentence is false" is an anomaly if you translate it into a mathematical language. Think about how wrong it is linguistically to not say anything about the sentence we read for the moment being, but instead say something about the second sentence which we do not read for the moment and haven't had the opportunity to infer anything from now. The sentence we are reading does not in any way entail the other sentence but is merely referring to it. These two combined sentences in the above image with the dinosaur are related to the first suggested formula on Gödel's incompleteness theorem This statement cannot be true, but only separated into two individual sentences and without the inconsistencies that comes with the word/words "cannot" (can; as in must [+] alt can; as in not [-] + not [-]) from the bipolar word "can" and "not" which the originator didn't split up like I did here. The above statement in the image is like saying

“x+1=something in another formula (the next sentence) here not specified or even correlating (with the next sentence)”. It translates into (the next sentence[x] is true[1]) and then goes on to saying (the previous sentence[y] is false[-1]). The two sentences are simply not translatable into any logical algorithm one can solve, it only states that x=1 and y=-1. Or maybe you should say that x=-1 and y=1, but it still does not translate into any logical algorithm with a plausible answer. There is no mathematical connection between the two sentences, not even an equal sign. It is like saying; (the next bun [x] is tasty [1]) and (the previous bun [y] is disgusting [-1]). You could also shift the meaning in the two statements “the next sentence” and “the previous sentence” and get (this sentence [y] is true [1]) and (this sentence [x] is false [-1]). “This sentence is true”, is always a true sentence. “This sentence is false” if it is a true statement, it must be false. If it is a false statement, it must be true. It’s a pun that is transferable into a solvable mathematical formula (x=-1). Thus [x] is false and when one reads it in its mathematical formula one can see no further implications because x=-1. It shows that there can be something illogical and subjective with the linguistics we humans use.

I have other philosophical examples as well, of how linguistics can mess it up, when trying to convey it into logical theorems (read below). The presentation of the criteria (for how we could be considered to have knowledge of anything) is constructed by Plato and problematized by the renowned philosopher E. Gettier. It has been considered an unsolvable problem for many years. The problem is related to Gödel’s incompleteness theorem, because of their linguistic nature. I consider myself to have solved the enigma of Gettier’s problematization of Plato’s theorem:

An epistemological and rational conclusion from Plato’s theorem and E. Gettier’s example with the wolf

1:st example: A train is running on the railway tracks past a meadow. In the meadow there is a wolf. The passengers can see the wolf from the train.

According to Plato we require three criteria for enabling us to have knowledge of it:

(1) It should be a conviction.

(2) It must be consistent with reality.

(3) We must have rational reasons to accept it.

All three criteria are met.

2:nd example: Now suppose that, as in E. Gettier's example, the wolf is actually a dog dressed up as a wolf. But a little further beyond the dog in the meadow there is a real wolf. The three criteria are still met, and this is E. Gettier's problematization of Plato's theorem, for the wolf we see is not a wolf at all, and hence the theorem is faulty even if it is true, according to Gettier.

Can we have knowledge that there is a wolf in the meadow (that the theorem is satisfied) by observing the dog, and applying the three criteria? The answer is that we cannot. The theorem's correctness is completely independent of our observation of the dog (we do not know that the "wolf" is our costumed dog or that there is a real wolf just behind the dog in the meadow).

Or should we perhaps say that the theorem, on the contrary, is totally dependent on our observation, because our observation results in our belief (1), and our rational reasons to accept it (3). But thereby follows that our observation leads to a faulty conclusion, for the visible wolf is false. The theorem is still true, but Plato's theorem requires an alteration applied to the unique situation.

(1) It should be a conviction.

(2) It must be consistent with reality.

An omniscient archangel must be the judge of whether the theorem is consistent with the real situation. Or in other words:

(3) ONE must have rational reasons to accept it.

Thus premise (3)'s rationality (as above) is not based on observations from *our* side. By changing premise (3) to; One must have rational reasons to accept the belief, we move the decision for what is rational from the group to an omniscient archangel. One obvious objection you might come up with is that one can say that premise (3) is not needed then, because to claim premise (3), is the same as to claim premise (2).

The ideal type theorem itself is not critical to getting an epistemological answer to an investigation of the rational conclusion of the theorem. The key is to know *when a rational answer* emanates from the premises, not *when a premise is rational*. “A rational answer” is comprehensive of the whole situation with the wolf and considers both the wolf and the dog as distinctive entities (even in mathematics). The original premises (1), (2) and (3) have not led to a rational answer to Plato's theorems inconsistencies in this unique situation from Gettier’s example with the wolf and the dog simultaneously located in the meadow but where we only see the dog, because that is what the whole point with Gettier’s fictional example is, that Plato’s theorem is inconsistent. Here the archangel in my modified third premise that equals the second premise, comes into the picture. Or should I say - it eliminates the third premise and leaves us with only premise two and premise one.

In one possible Gettier reality applied on Plato's original theorem, all of Plato's original premises are not fulfilled: Say that in one occasion there is a dog dressed up as a wolf in the meadow (premises 1 and 3 are satisfied), while there is not a wolf behind the dog (premise 2 is not satisfied), then the conclusion we make about the so called “wolf” is not a correct conclusion, because the “wolf” is

actually a dressed-up dog. If we had been able to make a correct conclusion, it would not have been our belief that there is a wolf in the meadow.

In our second example from above (read **2:nd example** in bold red letters above) from Plato's original theorem, there is a real wolf standing behind the dog, and all three premises are met. Let me first say that a correct conclusion would be as seen from a correct supervision of an omniscient archangel's judgment about what constitutes a proper conclusion. On this occasion, we cannot make a correct conclusion based on our position on the train, that there is a wolf in the meadow, because we do not see it, we only see the dressed-up dog. We believe however that the conditions are in order, (which they actually are, but not as we think, because we believe that the dog is the wolf in the meadow), and from it derives a conclusion that happens to be true, based on our false beliefs and Plato's original premise, (from which I say that we have achieved an "Accidental Conclusion", which we may call it). It also requires that the dressed-up dog really looks like a wolf for us to be able to make a true (but not overall correct) conclusion. If there had been a water fountain or a Dachshund dressed up in front of the wolf rather than a German shepherd dog dressed up, we would never come to the conclusion that there is a wolf in the meadow, by looking at the fountain or Dachshund. The conclusion is true in this our other example, where all three original Platonic premises complied with the conclusion, but it is not a correct one. For this to be a correct conclusion requires that the premises implicitly take into account all the underlaying facts. (Read and compare with my deconstruction of suggested formulas posing as Gödel's incompleteness theorem.) Again, the theorem itself is not of crucial importance. The key is to determine when the premises amount to a rational conclusion. And here is where the archangel and my modified premise comes to use, for here it is the archangel's insight that is the standard, and not my insight, and from that follows a rational answer to the theorem. The fact that the original theorem is true in this unique situation where we see the dog but not the wolf, is a pure coincidence (read blot on Plato's behalf) and not relevant to how we should set up the premises properly. To make a true conclusion based on faulty underlaying facts is something that has happened before in history. For example, there was an ancient Greek (Plato) who said that the Earth was round long before anyone else had thought of it, and he founded this conclusion from that the shadow the Earth cast on the Moon could not be a likeness of the Earth's shape, if the Earth was flat. He believed that the Earth cast its shadow on the Moon, when in fact the Moon (usually) is shaded by itself and its position relative to the Sun as seen from our perspective. Considering this, Plato's original theorem appears quite absurd,

and Gettier's situation with the wolf, in the context of Plato's theorem, is revealing deeper thoughts about the nature of epistemology, how we humans are limited and how we can be wrong without realizing it. I don't know if Gettier was conscious about it, but that is what Gettier's article implies. The theorem "proves" more than it can prove, just as the Moon's shadow can do for those who have certain beliefs.

There is another way of going about Plato's inconsistent theorem. The belief ((1) we believe there is a wolf in the meadow) and the rational reasons ((3) we have rational reasons to accept that there is a wolf in the meadow) with ((2) there is a wolf in the meadow) may seem to be waterproof as a logical framework. But the premise (2) should be read/understood and set up like this: *The wolf is false, but there is a real wolf in the meadow that we do not see = it must be consistent with reality, and the whole complete reality with every underlying fact taken account for,* if the belief is to conform with truth. This is how we must see the adapting of the situation with the wolf and the dressed-up dog, I think. Had we just said; *It must be consistent with reality,* yes, it would have been correct. But should we allow the reality of our second premise to be so simplified as to say; "there is a wolf in the meadow"? If so, the premise would not be completely true, or at least not entirely complete. Look at the example with the costumed dog which had a wolf behind it. We have rational reasons to accept the belief that there is a wolf in the meadow when we run by in the train, according to the original theorem. We have the illusion of the dog as a wolf. But coincidentally there was a wolf in the meadow. Leaving aside premise (2), here in the form: "it must be consistent with reality, and the whole complete reality with every underlying fact taken account for"; is premise (1) and premise (3) merely cosmetic? They are at least "ideal types" constructed from our own shortsighted perspective, but still inconclusively constructed since they in Plato's original theorem are not based on any actual situation in an all in all complete situation with at least as in this case the dog and the wolf in E. Gettier's example. Premise (1) and premise (3) are merely *convictions*, which by chance happens to mess it up in at least one of the cases written above, where the wolf and the dog coexisted in the meadow simultaneously, in Gettier's example – hence "Accidental Conclusions".

In conclusion, we must revise Plato's theorem, or abolish it. And E. Gettier's example reveals more about the world or epistemology than he perhaps thought

it would. I'm sorry I in previous versions 1-9 did not recognize Gettier's genius potential!

Conclusion 1: One must have rational grounds for accepting the belief.

Conclusion 2: Convictions lead to "Accidental Conclusions."

Conclusion 3: The costumed dog must look like a wolf, and not a Dachshund or a water fountain, for the theorem to work.

Conclusion 4: The theorem proves more than it can prove, by the principle "the Earth casts its distinctive shadow on the Moon, and therefore the Earth is round", which is false for some.

In a textbook used at Lund University in the B course, called "Philosophy of Language a contemporary introduction" by William G. Lycan from University of North Carolina, chapter 13 on "Implicative relations", page 198 it says to read in the first lines; "Sentences entail other sentences, and in that strong sense imply them. But there are several ways in which sentences, or utterances also linguistically imply things they do not strictly entail."

It describes the chapter's content very briefly. Anyway, in this chapter you can read an interesting thing that you can directly connect to and make use of for Gettier's problem without Lycan, or rather Grice, seemingly had any intentions in that direction.

There you can read; "-Here as in many cases, a good way to investigate the nature of these different kinds of implications, is to ask about the penalty or sanction that ensues when an implicatum is false. When S:1 entails S:2 and S:2 is false, the penalty is that S:1 is false. When S:1 semantically presupposes S:2 and S:2 is false, then S:1 is sent ignominiously to zip. When someone utters S:1, thereby conversationally implicating S:2, and the conveyed meaning or invited inference S:2 is false, then the penalty is that, even if S:1 is true, the speaker's

utterance is misleading. If S:1 conventionally implicates S:2 and S:2 is false, then S:1 is misworded even if not false."

One can implicate and translate this into Gettier's example with the wolf directly like this:

"-Here as in many cases, a good way to investigate the nature of these different kinds of implications, is to ask about the penalty or sanction that ensues when an implicatum is false. When a "wolf" in the meadow (S:1) entails a belief (S:2) and the belief (S:2) is false, the penalty is that the wolf (S:1) is false. When the wolf (S:1) (semantically) (I here chose to put this word within parentheses) presupposes a belief (S:2) and the belief (S:2) is false, then the wolf (S:1) is sent ignominiously to zip. When someone utters wolf (S:1), thereby conversationally implicating a belief (S:2), and the conveyed meaning or invited inference of the belief (S:2) is false, then the penalty is that, even if the wolf (S:1) is true, the speaker's utterance is misleading. If the wolf (S:1) conventionally implies a belief (S:2) and the belief (S:2) is false, then the wolf (S:1) is misworded even if not false."

To translate this, one must resort to some drastic interpretations. Among other things, one must interpret the following sentence – "When someone utters Wolf (S: 1), thereby conversationally implicating a belief (S: 2), and the conveyed meaning or invited inference of the belief (S: 2) is false, then the penalty is that, even if the wolf (S: 1) is true, the speaker's utterance is misleading." - as utterances never are trustworthy regardless of whether they are true. But sequentially following a complementary interesting thing is mentioned, namely: - "If the wolf (S: 1) conventionally implicates a belief (S: 2) and the belief (S: 2) is false, then the wolf (S: 1) is misworded even if not false."

Also the philosopher Bertrand Russell addressed the self-contradictory logical problems one can construct with linguistics and set up in an equally contradictory theorem, in Russel's paradox or "Performative Contradiction". The paradox is as follows: *When people say; "all truths are relative" they make an absolute claim, and thus it becomes a contradiction in terms.* I can answer with

saying that; if all truths are relative, they are not truths, they are but a misch mash or a composite of separate truths and non-truths and/or a misch mash in the interpretation of the meaning of different non-hyphenated (usually) words, that need to be figured out separately, just like I did with the suggested variants of Gödel's incompleteness theorem above. Either "the truth" (or in other words - the claim) is true, or it is false, but it cannot be half true in between.

An example of Russel's paradox is the following: *A male barber in a village shaves all the men in the village who do not shave themselves. The question is: Does the barber shave himself? If the barber shaves himself, the claim that the barber shaves a man who shaves himself must go against the definitions and therefore he cannot shave himself. But if the barber does not shave himself, he is a man who does not shave himself and consequently he must be shaved by the barber - so the barber must shave himself.* This contradiction is Russell's paradox.

I personally look at the paradox in the following manner: the barber represents the answer to a math problem. The answer A should not be part of the calculation, it should be the result of the equation. Let us call the answer i.e., the male barber A. And let us call every man in the village whom the barber shaves (a). The rest of the male population in the village shave themselves, let us call them (b). A represents not the barber, but the total number of shaved men, because why would you say that A is a person when (a) is the number of men that gets shaved and (b) is the number of men that shaves themselves. It's just numbers. I know, it's confusing. But it is because Russel's setup is illogical. But we thus get the formula:

A = (a) + (b)

Suppose now that we rearrange the composition into:

A – (a) = (b)

Or:

A – (b) = (a)

A is the total number. If we subtract (a) from A we get the number of men who shave themselves. If we subtract (b) from A we get the number of men who get

shaved by A. This is simple math and not a story about a barber, the result cannot be about whether a barber shaves himself or not because that results in inconsistencies. Two of them being that (a) and (b) cannot be numbers if the answer A is not a total number added from (a) and (b). That's it. It is not really a conundrum.

But let us set up the equation wholly and fallible according to Russel's paradox by starting with the barber A and assume that he gets shaved by the barber A, i.e., himself. As before, (a) is the number of men that gets shaved and (b) is the number of men that shaves themselves:

A + (a) – (b) = A

Or in other words:

A = A + (a) – (b)

Barber A gets shaved (depending on how you look at it), and so are a portion of the villagers (a) shaved by him, so he appears twice in the equation. Thus, we would get the absurd situation where the result A and the barber A becomes a factor on both sides of the equal sign, and then again, they don't because the A on the long side of the line-up represents a single barber that shaves the barber, while on the short side we have the total number of shaved men by the barber. Except we don't get a correct result from this equation since it is not a valid equation.

Now let us assume that the barber A shaves himself:

A + (b) – (a) = A

Or in other words:

A = A + (b) – (a)

Here we get the same paradoxical situation since A is one of the men that shaves himself. So, what does this faulty math tell us? It tells us that the total result A on the short side of the equal sign, would presuppose the result in the equation on the long side of the equal sign. That means that you will have the total number of shaved men called A on both sides of the equation (A should then equal A + (b) – (a)). Except you won't, since A shaves himself and adds to (b) who all shave

themselves, and thus the remainder gets shaved, so you subtract (a) and get A. The math line-up is incorrect since it doesn't add up, and you should not be upset over the bad math.

The German mathematician David Hilbert (born 1862, deceased 1943), who confessed to the formalists as opposed to the intuitionists, set up to prove that mathematics was both;

A) Complete

Meaning; does every true statement have a proof? If yes, then mathematics is complete.

B) Consistent

Meaning; is it free of contradictions, or contrary – can you prove both a, and not-a simultaneously? If you can prove both a, and not-a simultaneously, then mathematics is not consistent.

C) Decidable

Meaning; Is there an algorithm that can always determine whether a statement follows from the axioms? If yes, then mathematics is decidable.

Kurt Gödel (b. 1906, d. 1978) was thought to once and for all have proven that the first mentioned postulate A), can be considered to be incomplete. And that mathematics at best is questionable, partly contradicting the second postulate B).

Alan Turing (b. 1912, d. 1954) was thought to have proven that mathematics is undecidable, contradicting the third postulate C).

Alan Turing was presumably right in that mathematics is undecidable, albeit this might only apply in the quantum world but stepping up in the macro world as a "bug". That is why the Turing machine was not so useful in answering Hilbert's question on decidability, *iff* there is only supposed to be one possible macroscopic outcome based on the input, to each singular step in a digitally

linear computer with a read-write head that can read one digit at a time and that can perform one of only a few tasks. Even though Turing's computer machine has large electronic components, it might not be in the macro world that the computer operation "bug" emerges, it just pops up there. Same thing?

Let me give you another example of a quantum bug jumping up in the macro world. In May 2003, voters in Belgium went to the polls. Often the municipalities provided a computer for voting. One of them was in Schaerbeek in central Brussels. One of the politicians in Schaerbeek received more votes than mathematically possible. Luckily, they could recount the magnetic voter cards manually by inserting them into the voting machine. This time the outcome looked much more correct, and the opted for politician received four thousand less votes. They meticulously searched through the code but couldn't find any bugs. They tested the hardware but again they could not find any errors at all. The exact number of votes for this politician in the first instance was 4096. What happened was that the thirteenth binary Bit flipped from a zero to a one for no apparent reason. What is remarkable about the number 4096 is that it is exactly a power of two or 2^{12}. That is the thirteenth bit. The funny thing is that they counted the votes exactly in the same way the second time and got the correct number of votes, as opposed to the first time. Was it a quantum bug stepping up in the macro world, or was it a cosmic ray kinetically flipping the Bit from a zero to a one? We can only receive an answer if we reconstruct the Turing machine and run it till a bug appears. But it is weird that the bug in the voting computer manifested itself the way it did if it was caused by a cosmic ray.

But Kurt Gödel I assert was wrong in that mathematics would be incomplete (outside of the quantum realm; Roger's note).

What is the point with mathematics if it is both incomplete, inconsistent, and undecidable? If it were, we would not have been able to make any sense of it as a tool at all.

Author: Roger Klang, updated version 20 the 23d of May 2021. First translated into English in 2011.

The P-problem and the NP-problem in math

What is a P-problem and what is a NP-problem?

> **** Class P (Polynomial Time):***
> *Problems in class P can be solved by an algorithm that runs in a time that is bounded by a polynomial function of the input size. This means the time to solve the problem doesn't grow too quickly as the input gets larger.* ***Example:*** *2a + 5b is a polynomial of two terms in two variables a and b.*
>
> **** Class NP (Nondeterministic Polynomial Time):***
> *Problems in class NP have solutions that can be verified (checked to see if they are correct) in polynomial time. However, it's not necessarily known if a solution can be found quickly.* ***Explanation:*** *A problem is called NP (nondeterministic polynomial) if its solution can be guessed and verified in polynomial time; nondeterministic means that no particular rule is followed to make the guess. If a problem is NP and all other NP problems are polynomial-time reducible to it, the problem is NP-complete.*

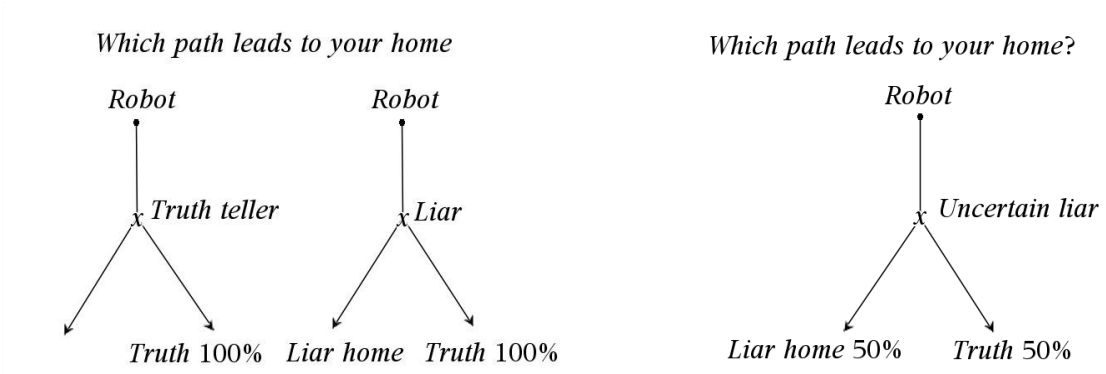
This is supposedly a P-problem in math. A robot wants to find truth, and it stands before a fork in the road supervised by an undefined truth-telling equipped or unequipped person. The question the robot must ask the supervising person, if the robot is to reach truth is: "Which path leads to your home?"

Truth teller would answer: This path [pointing in the direction to truth tellers home].
Liar would answer: That path [pointing to the same path as truth teller, thus leading to the truth tellers path].

Except, why would a compulsive liar from Hell agree to send the truth seeking robot into the right path? But isn't this rather an ethical puzzle which should be sentenced - Can you ever trust a moderate liar? It doesn't look like you can, because if the lying person at the fork in the road can both lie and tell the truth

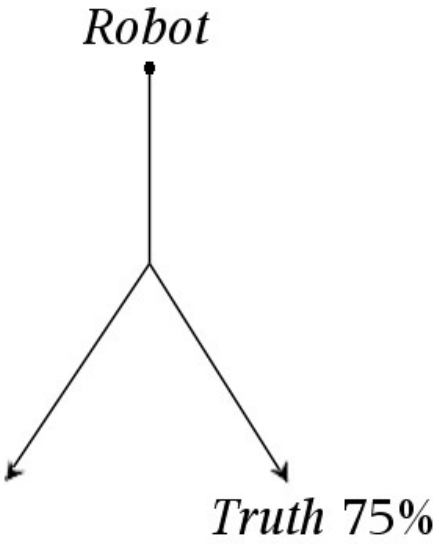
depending on his mood there is no way to tell whether any of the two possible fork guarding persons consistently tells the truth. This should entail that humans (and robots) cannot trust humans, which leads to the conclusion that you cannot even trust my conclusion that this leads to my conclusion that you cannot even trust my conclusion that this... and so on. So, we are stuck in a loop. Maybe Hell is a continuous loop in which you live your lies over and over again? Like in the movie Groundhog day. Is it impossible to solve the puzzle, with certainty anyway? There may be a solution for the problem since there is a road to truth.

All jokes set aside, even an NP-problem must have a solid solution to every fork in the road. There cannot be illogical solutions to any P or NP-problem. Let us make this into an NP-problem. It must be possible to write an NP-problem in code, or the problem isn't possible to solve with logic but would be random. But it *is* possible to *unravel* a certain lucky robot's path to truth even within an NP-problem. If you have the answer, just follow the road back and you will end up at the start since there is only one road to follow in reverse. How do I know that there is only one road to follow in reverse? Because even though solving a Sudoku-problem is really hard because it presumably is an NP-problem, I can check if a solution is correct within a very limited amount of time.



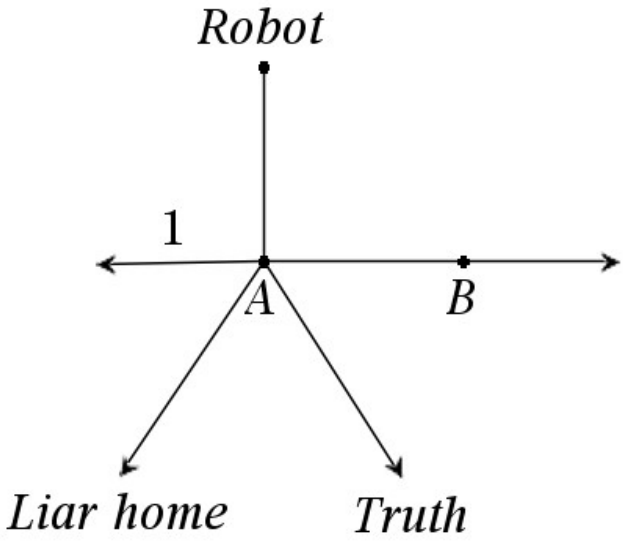
The only way for the robot to reach truth with certainty above 50% in the binary set up truth teller/liar P-problem chart above to the left, is to ask the question "which path leads to your home?". But by asking this question chances immediately jumps to 100% and become certain.

Which path leads to your home?



However, even with the uncertain liar chances are 75%, prior to entering possible paths, for the robot to reach truth according to the formula 100*1.5/2, *iff* robot is allowed to consider both possible fork guards' answers. When clueless because truth teller and uncertain liar point in opposite directions, the robot is going to have to take a guess. But it is kneaded into the existing 75% probability for the robot to reach truth.

1=*Switch*



Another way to put it is like the above:

- If switch 1 is set to On in A, and the robot asks the question [secluded] to the truth teller A at the fork in the road - “which path leads to your home?” - he can only receive the answer leading to truth. That is a 100% probability in switch A.
- If switch 1 is set to On in B, and the robot asks the question [secluded] to the uncertain liar B - “which path leads to your home?” - he will receive a 50% chance of reaching truth and a 50% risk of ending up at uncertain liars home.

The robot is allowed to consider answer from both A and B. According to the formula 100*1.5/2, if he follows the directions given to him while switch is set on B, he will have a 75% probability to reach truth, *when combined with truth teller answer while switch is set on A*. Of course the robot has no way of telling which one is the truth teller and which one is the uncertain liar. Not until he sees who is pointing consistently in one direction every time. But the robot won’t come down that same fork in the road twice. But if both A and B point in the same direction there is a 100% probability to reach truth since one of them always tells the truth. If A and B point in different directions there is only a 50% probability to reach truth. What I am in effect saying is that with prior knowledge (with clues) you can up your chances, because if you are a controller located at Robot starting point for both choice of paths the robot can take, and you can supervise the answers of both truth teller A and uncertain liar B, then you have a 75% probability on average to reach truth teller’s home. Note that you still don’t know who is the truth teller and who is the liar since you only get one shot at it. By knowing your prior position and monitoring the future given directions from both A and B, you are following clues in an arrow of time. Thus an NP-problem like this appear to have a probability state solution based on prior knowledge.

This may add a dimension for understanding quantum mechanics. Falsify it if you can, but recognize it if you cannot.

Prime

The elimination method I present is about calculating which prime numbers there exist up to infinity. The rules for calculating prime numbers are simple. All the numbers on the far left in the table list are prime, the rest are not:

2	~~4~~	~~6~~	~~8~~	~~10~~	~~12~~	~~14~~	~~16~~	~~18~~	~~20~~
3	6	9	12	15	18	21	24	27	30
5	~~10~~	~~15~~	~~20~~	~~25~~	~~30~~	~~35~~	~~40~~	~~45~~	~~50~~
7	14	21	28	35	42	49	56	63	70
11	22	33	44	55	66	77	88	99	110

Remove all numbers that are even, except 2. This means that all numbers that are added by 2 to the first series of numbers from left to right are eliminated, except 2 itself. Any number with an even digit at the end cannot possibly be prime.

Remove all numbers that end in an even 0 or 5, except 5 itself, i.e. the entire third series of numbers except the first number 5 which is indivisible. Any numbers that are more than one digit and end in 0 or 5 cannot possibly be prime.

For a given prime P, repeatedly add P to the previous multiple, starting from P*P, to find and mark every subsequent number as composite. Multiples of 3 are numerically *denser* than multiples of 7 or 11, meaning a higher percentage of smaller numbers are eliminated by the prime 3. [This is purely for computational purpose]

If you want to know if any high uneven number is a prime number, you start by dividing the number by 3. If the number is evenly divisible by 3, it is not a prime number. Then you divide the high number by 7 and if the number is evenly divisible by 7, it is not a prime number. You continue by dividing the high number by the prime numbers in the order of lower prime numbers to higher and if the number is evenly divisible by any of the prime numbers, the number is not a prime number.

To check if a number N is prime, you only need to test for divisibility by prime numbers p such that $p^2 \leq N$. If N has no prime factor less than or equal to √N, then N is prime.

Go through all the numbers in numerical order from 1 to infinity and eliminate all the numbers that are arranged in the number series in the table. The numbers that are left over, that is, are not on the list, are prime numbers. You can exclude all even numbers (except 2) and all numbers that end in 5 or zero (except 5). These cannot be prime numbers. New prime numbers will pop up that are not in the table and they can be arranged in the vertical prime number series on the far left. For example, you cannot find the number 13 anywhere in the table and 13 is therefore a prime number. Therefore, build the table further on the number 13.

Residuum

I have very recently discovered that I probably have dyscalculia, or perhaps is unevenly gifted. The proofreader for the first part of my book is named Peter Blixt and he has also contributed a little to the first part as he has put a lot of effort into also understanding it, not just complaining about commas and spelling mistakes. Blixt has critically reviewed the book, and in that Blixt has done an extraordinary job. Peter Blixt is a computer-savvy author who resides here in the university city of Lund, Sweden. Lund University is the largest and the first founded university in Sweden. Peter Blixt is the author of the book *Hur hjärnan fungerar*. Blixt certainly doesn't have dyscalculia, and he has made some corrections for math errors in my book. I want to thank Peter for all the work he has put in for me. He didn't have to do it, but he did a thorough job with my book on his own initiative. Thank You Peter!

I would like to point out a relevant thesis from the year 1942 which speaks in my favor, before anyone else gets a chance to point it out:

MECHANIZATION IN PROBLEM SOLVING; The Effect of Einstellung

by Abraham S. Luchins PhD Instructor of Psychology Yeshiva College and Research Assistant, Graduate Faculty, New School for Social Research

Here is a dumbing down video source:

https://www.youtube.com/watch?v=-adHRNYHbm0 [Can Learning Make You Dumb? Yes.]

But it took some serious thinking for me to come to my conclusions for this book, at least fifteen years. I don't like to label myself stupid but lucky. I hope the scientific community will grant me either the scorn for writing this book, or the credit for writing this book, depending on their ability to understand it. If it even is understandable to any scholar? I think it is.

The author

Image # 5

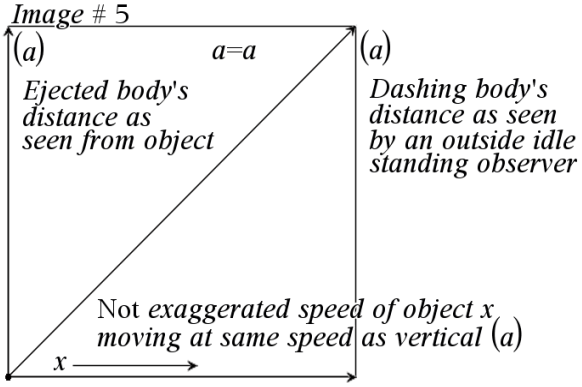
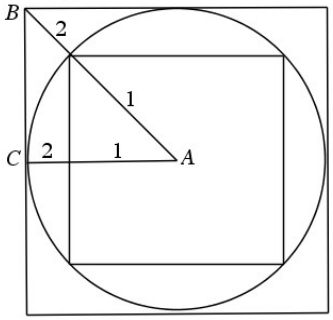


Image # 6b



1 = ~3.54 *fifths of both A to B* and *A to C*

2 = ~1.46 *fifths of both A to B* and *A to C*

Image # 6d

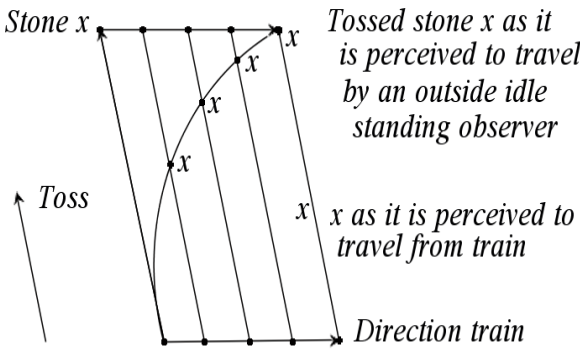
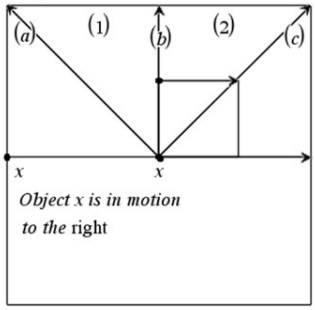


Image # 6e



(a) equals (b) as seen by an outside idle standing observer.

(b) is (c) for the same observer.

Motion of x equals those of (a, b, c)

(a, b, c) have straight trajectories whilst bodies in (1, 2) do not travel in linear trajectories for an outside idle standing observer

Image # 6f

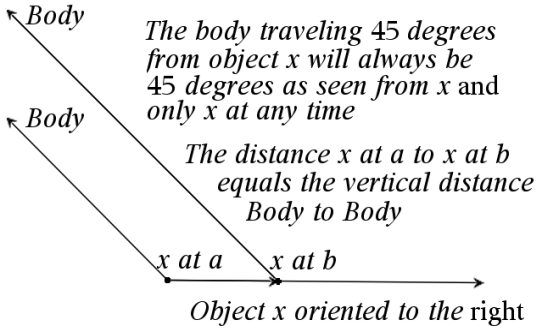
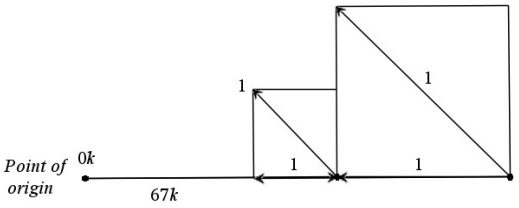


Image # 7b



1. *Close to* 0k. 67k *is where you would* not expand *with the rest of the universe*

(c)

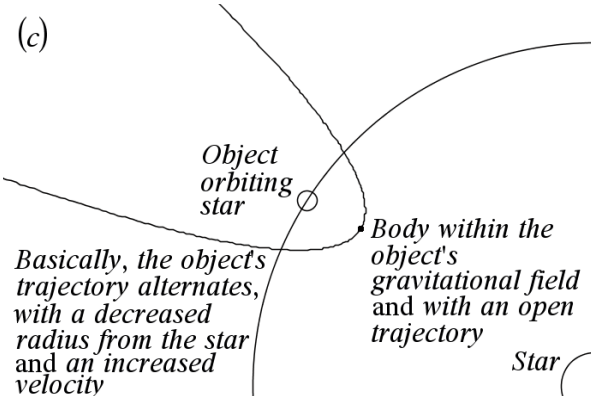
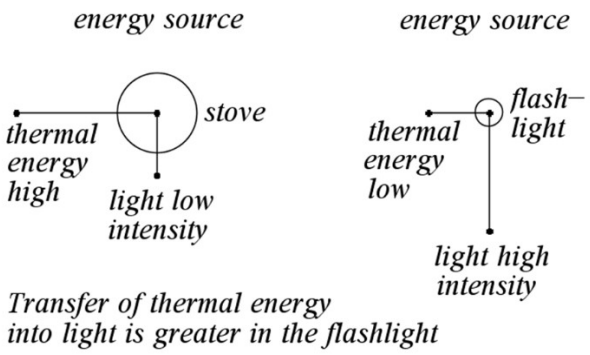


Image # 15



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