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Purported solutions of problems, and macroscopic oversights, in the presentation of theories related to physical Sciences and presentation of some basic concepts.

Part 1 of 2

- Invalidity of the formula increasing velocity of an object under observation in particular relativistic conditions.

The relativistic formula intending to explain the sum of velocities:

$$w = \frac{u+v}{1 + \frac{uv}{c^2}}$$

generates a question: “ if $u \rightarrow c$ and $v \rightarrow c$ then $u + v \rightarrow 2c$ and this cannot be denied since at denominator $u * v \rightarrow c^2$, then, not certainly, this can be explained with the limit ratio $w = 2c / 2$ which is a relation of geometric nature pretending that a physical mass, to move at w speed, must at the same time reach a speed $2c$ which is gradually divided by a number whose limit is 2 (where is the physical sense ?).

How can be accepted that an object reaches a speed $2c$ when the maximum allowed speed in absolute is c ?

The above w should have been reached gradually, through addition of values of m-e endowed of unidirectional Spin (inertial mass) to the object observed, producing increase of inertial content in the mass affected and continuous variation of velocity, passage from the initial v to whom the u was added as

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Σdv , to the point in which when the sum of v and u tend to reach the limit value c the corresponding inertial mass increase tends to infinity !

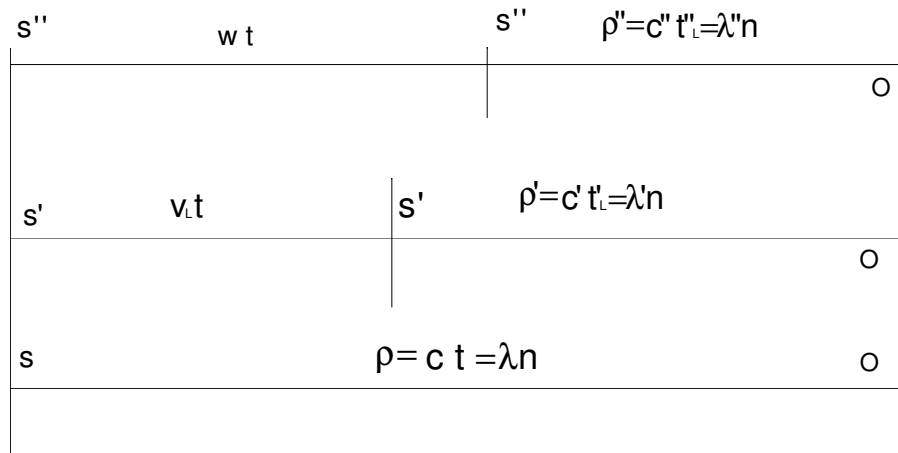
Then, increase of velocity towards the limit c , associated to an inordinate increase of inertial mass towards infinity, according to the formula of increase of inertial mass presented by Prof. A. Einstein seems to be the physical answer .

An external Observer would have evidence of presence of increase of velocity in the object observed, between two, distinct consecutive instants in time, through observation (registration) of Doppler effects made between the said instants:

$$w \approx v + c \frac{\Delta \lambda}{\lambda} = v + \mu \Delta \lambda$$

in this case (See article on, wbabin.net science papers, A. .Ruggeri "Physical laws, absolutes etc...." page 7, Oct. 15 -2007) , $\mu \Delta \lambda = \Delta v$ and through

successive additions of inertial mass ΔM to the mass M , from an initial value of velocity v , gradually we reach $w = v + \Sigma \Delta v = (v + u) \rightarrow c$, (whilst the inertial mass retards the deployment of the physical phenomena related to the temporal effect inside the object under observation), the phenomenon increasing the movements is represented (but only approximately), by a Lorentz graphic in which to v is substituted w :



The above expression could be better presented in the following manner (where λ , λ' and λ'' are astronomic readings made by an observer in O over the object S that at distance ρ is considered in three different conditions, S, S' and S''), and in the Lorentz's graphic below is used a notation in which $v = v_L$:

assuming $v_L = \mu (\lambda - \lambda')$ and $u = \mu (\lambda' - \lambda'')$:

$$w = v_L + u = \mu (\lambda - \lambda'')$$

and for $\lambda'' \rightarrow 0$ $w \rightarrow \mu \lambda = c$

we can see that increase of inertial mass(as mass-energy endowed of unidirectional Spin) produces the phenomenon increasing the total velocity from v_L to w , we can obtain this result by gradually summing velocities, whilst the physical mass M increases towards infinite value, provided that the increase of velocity is obtained inserting inertial mass through Dominant Force, whereas if the transformation-degradation is gravitational, increase of inertial mass is obtained at the expenses of the internal transformation-degradation of the neutronic mass M_{RM} inside the physical mass M which remains constant.

Note : we must at this point notice that the Lorentz graphics above is an approximation represented by three frames in which the inertial mass was added instantly, excluding the time necessary, so that the transformation-degradation can take place (assuming $\Delta t = 0$).

- More...

How can be accepted that inside any object moving at unknown velocity the measurement of the speed of the light is constant, whereas we know that presence of inertial mass in different amounts has effect on the manner the physical phenomena evolve?

A possible answer to this question is if inside a system O that we assume endowed of inertial mass and movement, respect to the absolute condition of quiet of the ESF the temporal phenomenon is measured in the same scale of the physical phenomena, a condition that would annul any attempt to measure from inside the system the effect that the inertial mass has over the physical mass, since there is inside it an established condition of invariable adjustment of all the physical phenomena including the time to variation of content of inertial mass.

Then, if the time phenomenon is invariable in conditions of acceleration must be invariable when there is no variation of inertial mass in the system of the observer, and the velocity is constant.

In conditions of constant velocity, the internal observer measures an invariable time inside his system and this is valid for any internal observer inside any system independently from the velocity in absolute, but depending from the contents of inertial mass inside two systems they will move at relative velocity and the time phenomenon inside them will run in a different scale in respect of each other (reflected by k and c in the system of the observer and k' and c' inside the system observed, both functions of v_L which is function of λ and λ').

We need then to set up a measure of the time phenomenon tied up to a transformation-degradation which does not produce variation of inertial mass and consequently does not produce increase of speed in absolute we have the Static Force which in a circular orbit is expressed by a transformation-degradation internal to the physical mass and by definition is a phenomenon not associated to variation of movement and the temporal phenomenon, which depends from the square of the constant orbital velocity and the constant radial distance results well defined:

$$M_0 \frac{v_0^2}{r} = \Delta M c^2 \quad \text{kJ/sec} \quad \text{or} \quad \text{kW}$$

Note : M_0 is gravitational mass M_{RM} and M_{ESCM} (neutronic mass and the glue binding the neutrons, both gravitational-inertial).

The above represents a transformation-degradation that can be permanently associated to a geometric measure through the orbital period T in which v_0 is the space distance run along the orbit in the unit of time (and T is measured by return of collimation with a fixed object).

The same transformation-degradation expressing the Static Force in orbit in another similar system is also tuned to the v_0 orbital (run in one second of time) and induces a condition in which we can consider that in the two systems are present two identical clocks whose measurements depend only from the velocity that they have in relation to each other and therefore the inertial mass content of their physical masses since that is what affects the scale of the time and this permits the observer inside a system to determine the difference of temporal scale in the other system, in respect of his system, but for this to happen it must be known the value of relative velocity along the line joining the two systems and who of the two, is containing the difference of inertial mass and therefore moves faster in absolute.

This can and must be obtained through measurements of astronomic geometric nature, permitting an observer who has the measure of relative velocity and who measures in absolute the universal constants including time into his system, to determine through formulation the retardation of a clock in the other system (provided that the other system is in excess of inertial mass in respect to the observer).

This answer satisfies if we are interested to determine what has been defined the relativistic time difference between two masses inside two independent systems in relative velocity, and can be assimilated to what happens inside the masses considered in the Lorentz's graphics when the distances are far enough that the orbital trajectories can be assimilated to a point and the systems are moving towards each other or away from each other along the line joining the centers of the two systems.

Relativistic time considered above is only one answer (half of the answer), to the problem of simultaneous representation, since gives the deployment of time in two different systems, as described above,

The other half of the answer is in the way the Lorentz's graphics should be interpreted and is shown in the diagram below, since in them, $c't_L$ though dependent from contents of inertial mass is a function measuring a physical distance in conditions reflecting simultaneity of position of the observer and of the object observed inside the Euclidean space.

The $c't_L$ in the graphics of Lorentz does not take into account what happens to the relativistic time phenomenon inside the system moving at velocity v_L , it only uses the fact that presence of inertial mass in the system in relative movement also reduces the dissipation that consequently is coming out of it at c' speed, and the t_L unknown, measured at the clock of the observer as absolute time, obtained through observations available to him, determines how many seconds t_L at the clock of the observer in virtual absolute quiet relative to its system, are

necessary to reach the distance of simultaneity ρ' moving at velocity of dissipation c' :

$$1) \quad \frac{t_L}{t} = \frac{c-v_L}{c'} \quad \text{and} \quad \frac{\rho'}{\rho} = \frac{c't_L}{ct} = \frac{c-v_L}{c}$$

$$\text{Where : } v_L = c \left(1 - \lambda'/\lambda\right)$$

Note : λ' is the measure at the spectroscopie of how the Doppler effect changes the original natural λ of emission of a signal coming out of an atomic element of our choice subjected to movement.

And $\rho = ct$ is a measure usually obtained by the astronomers through geometric measurements (like the use of measurements based on the method using the parallax), usually little dependent from relativistic phenomena.

The dissipation from the mass in movement cannot be at the value c universal but must then be $c' = f(v_L)$ and varies with the addition of u to v_L , becoming a $c'' = f(w)$.

The velocity $w \rightarrow c$ in the other hand is a velocity that has an unreachable limit in c , the Lorentz's graphic diagram which has representation in the Euclidean space must respect the geometric condition $wt + c''t_L = ct$ which can be written also $wt + \rho'' = \rho$ the presence of a system O in which is the observer, in conditions of movement, does not affects the Lorentz's graphic since we consider simultaneity, which is an instantaneous condition.

Surely Lorentz's graphics that were presented in a condition in which $ct = \rho$ and $ct_L = \rho'$ (constancy of c in all systems independently from the velocity of the system) need to be reinterpreted. (See article on, wbabin.net science papers, A. .Ruggeri "Physical laws, absolutes etc..." Oct. 15 -2007).

I reinstate here my point of view that when Lorentz presented his geometric transformations gave an interpretation of simultaneity in which **the time t_L was rightly evaluated** but the interpretation of simultaneity considered the object observed dissipating at c speed, which was a condition of immobility (proper of an object devoid of inertial mass content) whereas since the object moves at v_L (absolute value) it contains inertial mass in which the presence of velocity v_L reduces the maximum allowable compression of heat inside the mass to c' and heat in these conditions, only has reduced capacity to dissipate at c' speed from S' .

This at the time resulted difficult to notice since what is stated here presumes presence of the Ether/ESF in conditions of immobility the presence of the inertial mass inside the physical mass and the fluidic properties of the heat coming out as dissipation at a velocity $c' < c$, resulting reduced by presence of inertial mass and of the associated velocity v_L .

It follows that Lorentz's graphics were to be intended as a geometric transformation of a polar representation of the universal reality whose purpose was to represent simultaneity of presence in space of the various objects in movement observed, at present instant of observation.

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It was supposed to be obtained through interpretation of signals emitted from each of the objects at different times in the past but the way in which it was presented was approximate and incomplete due to lack of knowledge (in the historical times during which the theory was formulated) of the related physical phenomena, which resulted into incorrect interpretation.

Note : it is worth to point that as the theory based on the presence of substance in the Euclidean space unfolds the assumption that the space is empty will reveal itself untenable .

Reinterpretation of relativistic phenomena taking into account the advances in the knowledge of physical phenomena.

The displacement v_L of a mass in time, in the Lorentz's graphics was rightly interpreted as tied up to the relativistic difference of contents of inertial mass of two objects, under the conditions that observations, made inside each of them, by an internal observer were absolute and invariable and only the determination of which of the two systems was moving at an higher absolute speed could permit to determine the distance in real time and the conditions of simultaneity.

The substitution of a Doppler effect to the measure of distance gives a better interpretation since $ct = \lambda n$ and $c't_L = \lambda' n$ connect measurements of absolutes and the only necessary datum required is to know which system moves faster than the other (contains more inertial mass).

The assumption in Lorentz's graphics that the observer in a mobile system can have access to absolute measurements of physical constants (that he can use as pure absolutes), and the fact that his measurements are not affected by presence of inertial mass inside the physical mass would produce a graphic considering the observer in a absolute condition of quiet and an observer in that condition or near to it would be able to determine at first the relativistic time retardation in the object observed as well as the reduction of emission of dissipation c' also associated to relative velocity (see 1 above), this second character giving him the opportunity to perform successively, the geometric transformation giving the distance related to simultaneity of position of the two objects.

Note : t_L is an absolute measure of time spent at the clock of the observer necessary to deduct the simultaneity and to determine a simultaneous distance with the object observed must be multiplied with the c' of dissipation.

Note : in the Lorentz's graphics, the condition of acceleration has been excluded, to simplify the presentation, but since Lorentz's graphics are describing an instantaneous condition, with their use, it is not possible include variations of m-e endowed of Spin in the systems observed which (as already explained above), would require a time of transformation.

The theory of relativity presently accepted is based over correct physical understanding that description of simultaneity can be obtained through a mathematical transformation of geometric distances (the distance p where the system was in the past when the signal was emitted and the distance p' where

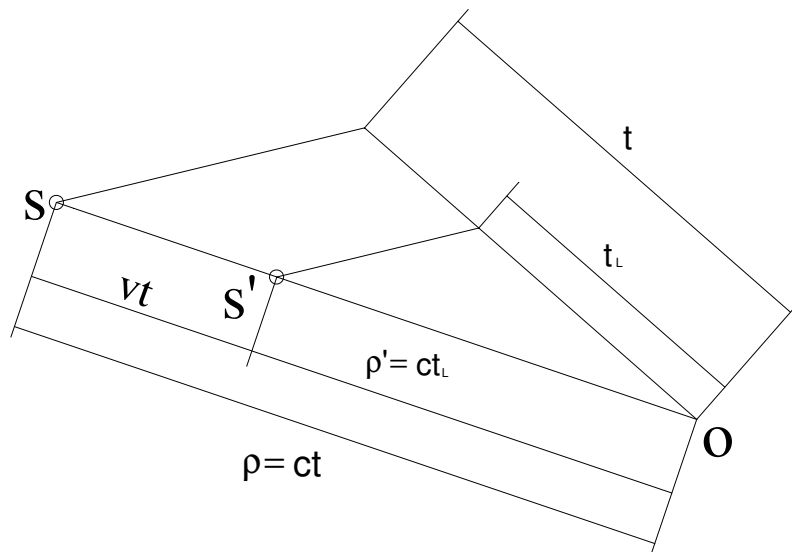
the system is at the moment of observation, obtained through what has been defined Lorentz's time t_L multiplied for a constant value c of dissipation.

They are correct up to the point in which Lorentz's time t_L is multiplied by c instead of c' (the right value of dissipation coming out of a mass whose inertial content affects the dissipation).

The mathematical relations intended to describe the phenomenon were expressed by Lorentz and by A.E. in the following manner:

$$\frac{\rho'}{\rho} = \frac{ct_L}{ct} = \frac{t_L}{t}$$

The result is a transformation purporting to obtain simultaneity putting space and time in conditions as if they could be treated with a relation using a geometric projective transformation, (passage from Euclidean space to projective space using the metrics of two straight lines, ρ and t , coming out of a pole O in order to obtain simultaneity of position ρ' through t_L , t , and $\rho=ct$, where t_L is function of c and v_L which at the moment the theory was presented was a non well defined value of velocity v since obtained on an interpretation of the Doppler effect based on the atomic theories of the historical period.



In the said theory, the measurement of relativistic time between the two systems and the Lorentz's time are assumed to be the same, a fact representing an unwarranted conclusion that is challenged by the justifications of the phenomenon offered above, by me.

I am in conditions to demonstrate that the solution offered by the present theory does not respect the conditions of conservation and therefore I am able to give one more reason, to why the theory is untenable.

The reader that has been introduced to the notion of the presence of a Doppler effect must just observe that in the Theory of relativity of A.E. the essential phenomenon constituting the Doppler Effect had also to be considered in order to evaluate the velocity v_L and a solution considering the

value of v_L was presented, but then was ignored that the observer was measuring the time in absolute in his own system (an invariable measurement independent from presence of inertial mass which although was present had no effect on the measurement of the time inside the system of the observer) and that the object observed endowed of an amount of inertial mass, since moving at relative speed, was subjected in respect of the observer, to internal relativistic time retardation and to reduction of dissipation, since they are two distinct phenomena and both are present in the theory of the ESF whereas in the theory of Prof. A.E. relativistic time inside the object observed and Lorentz's time as discussed are considered to be one and the same in value.

In the said theory, the object observed is present in conditions of simultaneity at ct_L distance whilst the relativistic physical phenomenon which is taking t_L seconds to develop at the clock of the observer, takes t seconds to develop inside the object observed.

At this point it should be understood that the theory based on existence of the ESF, the Doppler effect, the new concepts regarding the structure of the atomic mass etc .. (as seen above) soon or later will find its way to acceptance and the old theory, based on the interpretation of simultaneity made by Lorentz, (which was accepted and expanded by A.E.) has to be reviewed in base of the above justifications.

The truth is that Lorentz's geometric transformations reinterpreted through the use of the relations in 1 represent a more advanced solution in the effort to represent the universal reality in real time.

- Existence of mass in a status not gravitational and not inertial having fluidic characters permitting it to be subjected to depression and flow was never taken into consideration, why?

Q: Can we conceive the existence of a mass not gravitational and not inertial?

A: First we must say that mass gravitational is also inertial and inside the physical mass the mass can exist in condition inertial having lost the gravitational capacity to absorb the ESF, by definition mass gravitational-inertial and mass inertial constitute two states of existence of the mass (and mass gravitational-inertial exists in two states as well, the neutronic mass M_{RM} and the mass M_{ESCM} (the mass in a status of existence gluing together the neutrons) but when mass is released as dissipation into the ESF, cannot be defined gravitational-inertial or inertial since both are characters of mass contained in the physical mass (the M_{HM} which as a whole never loses the inertial character) and depend from the modality in which they exist inside it.

Dissipation and the ESF as well, constitute a case of presence in the same physical (Euclidean space) in two different states of existence, of the unique substance occupying the universe, they are both equivalent to mass, in fluidic status, and both exist and interact with each other, in conditions not gravitational, nor inertial.

Of this peculiar condition in which the mass exists nothing can be said, except that is an observed fact and a necessity.

Therefore ESF and dissipation, being both made of mass not gravitational and not inertial and both behaving as fluids capable to sustain depression and to flow, are to be found at the beginning and at the end of the cycle of transformations-degradations of the mass, and together with the physical mass constitute the presence of the natural world.

The ESF absorbed by the gravitational mass contained inside the M_{HM} (the physical mass) and transformed inside it, into neutronic mass and the heat expelled through internal transformation-degradation by the physical mass and absorbed as dissipation by the ESF, both require our acceptance that substance after having undergone an intermediate number of transformations-degradations always in conditions of conservation, exists inside the same volume devoid of physical mass, in the two particular fluidic states defined below:

A) Mass not gravitational, nor inertial, the ESF, subjected to absorption by a mass in gravitational-inertial status of existence contained inside the physical mass.

B) Mass also not gravitational nor inertial, separated from the physical mass in conditions of quiet but trapped inside it under compression as heat that in contact with the ESF immediately is subjected to depression c and acquires c speed becoming dissipation.

Note : it is to be pointed again that presence of velocity in absolute being presence of inertial mass, reduces compression of the heat expelled by the physical mass to c' and depression and dissipation occur at c' .

The basic condition of gravity is the peculiarity that the gravitational mass, contained inside the physical mass, has to absorb the ESF, transforming it into neutronic mass (gravitational) and to produce an effect, inside the ESF occupying the Euclidean space, that we call field of depression and flow, whose presence produces in a physical mass immersed inside it, what we call gravitation (or gravitational effects).

The ESF can only be absorbed, by necessity, in a physical condition fulfilling the above description.

Note : all these phenomena require variability of status of existence in order to develop the dynamics of the universal reality, and this variability is better defined through the physical concept of transformations-degradations, successively undergone by an unique substance, and of time as the necessary reference to a basic unstoppable transformation-degradation common to all the universal reality made in regard of an amount of substance opportunely fixed by us.

- What is the physical meaning of the universal constant ?

Newton ULG contains a constant endowed of dimensions.

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How can be generally accepted without questioning, by individuals versed in the scientific disciplines, that a physical constant associated to a mass through a direct relation of proportionality can have so many dimensions?

Why only few scientists in the course of the centuries, since Newton, defied this concept and the question still remains open?

The universal constant is a pure number, a measure of a constant value of transformation-degradation during the unit of time of an amount of ESF expressed in units of mass into neutronic mass M_{RM} (a ΔM_{ESF} that becomes a ΔM_{RM} through a fixed universal unstoppable process common to all the gravitational-inertial masses contained inside the universal physical masses is the phenomenon establishing the universal passage of time, and once defined the value of ΔM subject to transformation-degradation, we can attach to it a definition of transformation-degradation happening along an unit of time) :

$$K = \frac{\Delta M_{RM}}{M_0} [-]$$

It requires the physical relation of equivalence between mass-energy ΔM [Ton], and mass-energy in physical units $\Delta M c^2$ [kJ] defined through the constant c^2 , and if we want to relate the K in the above expression to the historical formulations developed before Prof. A.E. enounced the equivalence principle, we must use :

$$\frac{\Delta M_{RM} c^2}{\text{sec}} = \frac{k M_{RM}}{\text{sec}} \left[\frac{\text{kJ}}{\text{sec}} \right]$$

k is a fixed expression of an amount of ESF absorbed by the unit of gravitational mass and transformed-degraded into gravitational mass M_{RM} through an unstoppable phenomenon (whose intensity k, to be described, needs the concept of unit of time) is representing a phenomenon that the gravitational masses in the universe share unconditionally.

To this transformation-degradation that acts on the ESF surrounding the physical mass generating a flow and a depression inside it, are related all the successive phenomena constituting the presence of physical objects and their capacity to develop movements, in the natural world.

It is up to us to identify describe and justify them in sensible manner.

End of part 1