FAKING THE SCIENCE FOR PUPILS – Part II

Motto:

Modern science has become a kind of fancy type of deviant art and it is outrageous that this large scale experiment is done on the expenses of the entire society. In the front of history though, there is one only thing which is going to be worth mentioned: who is going to be the first to stop this mad experiment, stop these futile astronomical expenses and return to normality. After that, probably anyone has heard about the herd of sheep effect (behavior) in nature, an effect not foreseen by Darwin laws....

As you probably know, the nobel prize in physics 2020 was awarded to Roger Penrose "for the discovery that black hole formation is a robust prediction of the general theory of relativity", and to Reinhard Genzel and Andrea Ghez "for the discovery of a supermassive compact object at the centre of our galaxy."

With such nomination, it is sure that general relativity remains a hot topic for an entire new series of newsletters, this one included. It is only pure coincidence the fact that five sections in this newsletter are dedicated to GR.

The first section makes a short review of the "newtonian myth" and offers a solution to the old Hooke-Newton dispute. Of course the section presents some new facts about Newton and why he is already framed as the most famous intellectual criminal in human history.

Most of historians have pushed under the carpet the implication of Newton in the longitude problem, with the hope that such topic will remain hidden from public scrutiny.

If Newton had solved this problem, quite all of them would have jumped out of their pants to polish the shoes of such a genius !....

As Newton was not able to solve the problem, it has been difficult to recognize at least that the greatest genius of humanity was proved wrong by a simple self-educated carpenter.....

The section presents yet another scientific confrontation between the genius of Newton and the royal astronomer, i.e. the human John Flamsteed, about the origins of comets. This is a very important dispute because it demonstrates the level of astronomical knowledge of Newton in 1680, more than a decade after being appointed as professor at Cambridge. I was always amazed by this special ability of Newton to re-write the history in his own favor. Newton was able to masterly perform this task in case of invention of calculus, where he has no merits at all, and up to this moment he has been falsely recognized as an inventor of this method.

It was even easier for Newton to re-write the history in his own favor in case of gravitation theory because here it is necessary to recognize that Newton has some contributions as mathematician.

Anyway, the section revives the image of Hooke as the main architect of the so called classical theory of gravitation and Newton remains his second.

Section two starts a discussion about the mechanism of gravitational wave generation.

A new postulate and its consequences are discussed here.

Postulate: An accelerated or decelerated mass cannot produce gravitational waves.

The third section is about wave properties and especially about gravitational waves properties. It analyses why from a celestial binary system only one gravitational wave is received although there are two accelerated masses in the system. A new postulate is analyzed here too.

Postulate: At a certain location, an observer can detect only the superposition of all gravitational waves (if they exists of course!) traveling that point at that very moment.

The forth section presents how LiGO-VIRGO consortium dismantle general relativity. Here one can find a data analysis for the first gravitational wave detection and how data were manipulated to generate an expected signal.

There is a postulate too: For very weak signals, one cannot extract an useful signal if the overlapping noise or other perturbing signals are an order of magnitude bigger.

If there are cases which contradict this postulate, I will be willing to receive the data set and their interpretation and I am going to publish them in a following newsletter and eventually revise the postulate. The only special case I know for the moment, close to this postulate, is the folding procedure in radio astronomy, but even there the noise is the same order of magnitude as the useful signal. Supplementary and very important for the reconstruction of signal there, is a very peculiar fact: the useful signal is periodic, but the noise is aleatory.

Sound scientific data acquisition requires a rule of dumb to be respected: *the useful signal has to be, or has to be made, an order of magnitude greater than other perturbing signals or noise.* Of course, in the initial stage of most discoveries, the useful signal has been often on the same order of magnitude as the noise, but in order to put in evidence a new phenomena, the follow up work made possible to increase the signal to noise ratio.

To the surprise of GR fanatics, this section advance a special postulate:

GR postulate: The supposed gravitational energy emitted during matter deceleration has to be equal with the supposed gravitational energy emitted during the same matter acceleration.

The fifth section is an introductory part in mathematics for GR fanatics. Not one, not two, but three postulates are here presented and introduced for the future ...

Postulate: Any curvature of a vector field must increase the dimensionality of the field.

Postulate: Any curvature of a vector field affects the equations of motion and the conservation laws.

Postulate: Scalar or scalar type units admit no curvature.

For the GR fanatics, there is a simple but special demonstration for the fact that time cannot be curved.

The sixth section advances only the idea that gravitational waves cannot be lensed.

The seventh section presents a simple experiment which rules out the second law of thermodynamics: an engine which perform mechanical work with heat absorbed from the surroundings.

The eighth section analyses the mass equivalence relationship and the implications for the nuclear field. In fact, the mass energy conversion is eliminated from the nuclear physics. Previously this idea was eliminated from relativity and atomic physics too.

The ninth section demonstrates that mass energy equivalence is not supported by the quark structure of nucleons; in fact one theory excludes automatically the other one.

The tenth section analyses one of the most remarkable experiments in nuclear science in the last decades from the perspective of shell model of nucleus.

The last section is a copy carbon from the previous newsletter (OLD GAME, SAME SCENE, NEW ACTORS AND FIGUREHEADS), because it is important for people to get in touch with the expected unexpected...

Section I THE NEWTONIAN MITH

I entitled this section exactly as an article published by an UK scientist, i.e. E Brian Davies, professor of Mathematics at King's College. Here is the link to the original article and a short excerpt from the introductory part.

https://nms.kcl.ac.uk/brian.davies/web_page/myth26.pdf

The scientific and philosophical literature relating to Isaac Newton's theory of gravitation provide us with a rare opportunity to observe the creation and development of a myth over a period of almost three centuries. The myth, briefly, is that in the Principia Newton presented a rigorous deduction of his universal laws of gravitation from Kepler's laws without invoking any hypotheses. The work was sufficiently difficult that many people took at face value Newton's own statement in the General Scholium that he had followed the (Baconian) inductive method, and did not appreciate the wide variety of different types of arguments to be found in the text itself. Newton was an extremely complex individual, and not to be trusted even when describing his own work! Indeed, later in his life he claimed to have derived most of the results in the Principia originally by using calculus, a claim for which no documentary evidence exists and which is almost certainly false.

Well, it has to be appreciated that Mr. Davies had the courage to tackle with this delicate topic, and leave us understand that it is important to take with a pinch of salt the stories told by Newton; even more important for the history of science is the notice that exist no documentary evidence regarding the development of calculus in Newton manuscripts.

One has to understand that Newton was a very meticulous person and there are preserved in original even his lists with daily expenses for household.

The development of calculus, could not be made in a week or in a month.

Leibniz, for example, worked for at least a decade to have a foundation for calculus.

By sure, from the entire editorial activity of Newton, some manuscripts got lost in about three centuries elapsed, but the idea to be taken home is simple: Newton could not invent calculus in one night and have this invention written in one single manuscript which later was lost ...

As presented in the previous newsletter, the fact that Newton did not use calculus in the first edition of Principia, is the strongest proof that he has no contribution at all to the invention of calculus.

So Newton faked the history of events, and his acolytes preserved the faked history until

it becomes official

Some historians of science have spent their entire life debating and bringing false arguments in this story, but when things are analyzed at their face value, from the entire method of flushing (sorry, I meant fluxions), there are only some irrelevant letters between Newton and his acolytes. Some of this letters are written much later and of course they are faked or are faking the history of events; few of the authentic letters from those times are only words, and unfortunately, the mathematical language is very different from literature...

For those who want to get their minds a bit tormented with (sometimes confusing) information or disinformation about these events, there is an online booklet written by a Italian historian of science :

The Newton–Leibniz Calculus Controversy, 1708–1730, Niccolo Guicciardini <u>https://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780199930418.001.00</u> <u>01/oxfordhb-9780199930418-e-9</u>

When looking backwards, it is very important to have a short imagine about the creation of this Newtonian myth.

First of all, during his long hegemony as president of Royal Society, he surrounded himself with a gang of acolytes and practically he controlled the Royal Society with a iron hand.

There were more collateral factors which helped him to gain an international fame, beside the scientific merits.

Principia is still considered to be the single most influential book on physics and possibly all of sciences. Its publication immediately raised Newton to international fame, although few people really understood it; even fewer people were interested if the information published in Principia represented Newton's original contribution to science.

There are many people who contributed to the creation of this Newtonian myth; this process started when Newton was still alive and continued even more acute after his death.

Here, attached, there is the beginning of an article written by Julia Epstein about Newton myth creation by Voltaire. The article is too costly for my pocket so I did not read the entire article, but from the first page one can imagine the entire content...

I reminded the article because Voltaire is one of his first supporters who helped to increase Newton's fame on the continent.

Most of the relevant events regarding Newton's work and live are well known for historians, but most of these events are either hidden or falsely presented because for the intellectual elites, Newton is still a demigod or an extraordinary genius.

VOLTAIRE'S MYTH OF NEWTON

JULIA L. EPSTEIN

Poets and philosophers invested Sir Isaac Newton with superhuman powers from one end of the eighteenth century to the other. He was a saint or a serpent, divinely inspired or demonic, a muse or the Anti-Imagination, Thomson's "pure intelligence" or Blake's "iron scourge over Albion." Newtonian physics radically altered both scientific and poetic views of the world by endowing the scientific endeavour itself with a quasi-divine mission. The scientist became a hero and a new source for heroic energy.¹ Like the poet, the scientist domesticates the natural world, explains the ways of God to man, harnesses mystical energies, and, above all, discovers new worlds. Newton became a legend in the eighteenth century; he became a symbol for the power of the human mind. This was equally true for those who, like Pope and Thomson, portrayed him as a saint and invoked his name as a reflection of the divine on earth, and for those who, like Blake, understood the new science to signal the death of the imagination.² Demon or angel, Isaac Newton represented an intermediary between men and spiritual power. He changed what we know about and how we perceive the material world.

Voltaire's portrait of Newton in the Lettres philosophiques and in his Elemens de la philosophie de Newton presents one of the most dynamic images of the scientist as a hero and as a creative imagination. In 1732, Voltaire wrote to Maupertuis: "[Newton] est notre Christophe Colomb. Il nous a menez dans un nouveau monde, et je voudrois bien y voiager . . ." (BestD 534). The repertoire of Newtonian images in the eighteenth century was connected to an avalanche of texts about Newton which tried to present — and to popularize — the Newtonian world-view for a nonscientific public.³ Both the Lettres philosophiques and Voltaire's Elémens fit into this popular Newtonian tradition, and it is to Voltaire that the famous story of Newton's discovery of gravity under an apple tree is usually attributed. The apple tree legend, more than any of the other powerful legendary images of Isaac Newton, has made the scientist accessible to large public. Voltaire, who called Newton "le dieu au quel je sacrifie" (BestD 1154) and "l'esprit créateur," made this legend the center of his Newtonian myth.

The thematic pivot of the Lettres philosophiques occurs with this sentence: "S'étant retiré en 1666 à la campagne près de Cambridge, un jour qu'il se promenoit dans son jardin, & qu'il voïoit des fruits tomber d'un arbre, il se laissa aller à une méditation profonde sur cette pesanteur..." (II, 19-20).⁴ This is the tale of Newton's discovery of gravity while walking in his mother's orchard at Woolsthorpe, where he had gone to take refuge from the plague. The falling apple figures both as the moment of conversion in Lately, a handful of people (most of them outside UK) considered necessary to revise a bit from Newton bibliography and especially to reconsider the Hooke contribution to science; from various reasons, I cannot quote all of them here, but in the future this task is going to be fulfilled...

In completion to the information presented in the previous newsletter, this section intends to sum up some new facts about Newton and why he is already framed as the most famous intellectual criminal in human history.

The subsequent facts are already known for the historians of science, but most of them still have reticence in making them public or when these facts are presented, someone has to read between the lines in order to understand the diabolic game played by Newton in these succession of events.

Most of historians have pushed under the carpet the implication of Newton in the longitude problem, with the hope that such topic will remain hidden from public scrutiny.

If Newton would have solved this problem, quite all of them would have jumped out of their pants to polish the shoes of such a genius !....

As Newton was not able to solve the problem, it was difficult to recognize at least that the greatest genius of humanity was proved wrong by a simple self-educated carpenter.....

Determining longitude was considered to be one of the greatest scientific challenges between the 16th and 18th centuries and the problem become stringent with an increased navigation on long routes across the oceans. By having only the latitude accurately measured, and the longitude value guessed, there were many expeditions which ended up in tragedies.

In fact as consequence of such a tragedy, the British Parliament created the Longitude Board in 1714 and offered a Prize of $\pounds 20\ 000$ (about 3,5 millions \pounds today) to whoever would find a method to determine longitude with a certain accuracy. Similar prizes were at stake in France, Spain and Netherlands.

At the time these events happened, Newton's fame was already skyrocketing ...

As President of the Royal Society from 1703, Newton became also a Commissioner of Longitude under the Act of 1714, and unfortunately he imposed his gang of acolytes even in this commission; of course I refer to the scientific part of the board, which had to take the decisions, because in the board there were also some non scientific personal. Newton himself, for more than a decade, has been the leading witness and advisor for the Parliament during debates on the longitude problem.

There were many ideas advanced for solving the longitude problem, but the dispute remained to be settled between the time-keeping and some astronomical methods.

The principle of the lunar distance method was described earlier by Johann Werner around 1514, and Newton adhered to this method. By this method one can find longitude with a certain precision based on the precise motion of the Moon relative to stars or to the Sun.

As a recognized scientific personality, Newton tried to solve the problem of the Moon motion based on the theory of gravitation he already published in Principia. Unfortunately, he failed to solve this task based on theory. It was necessary to gather much information organized as tables with the Moon position relative to other celestial objects in order to estimate the longitude by this method. This was a complicated and tedious task because the background stars are not the same in the North and South hemisphere. Supplementary, as the Earth moves along orbit, the background sky changes, so a lot of astronomical data were necessary to be accumulated in order to have a reliable method.

There is still a "considered valuable" manuscript from the Newton archive presenting the procedure of finding longitude by the lunar-distance method.

Assuming that lunar method demonstrated to be accurate for longitude measurements, the implementation of this method in daily use would have been a nightmare for unskilled people; it would have been necessary about four hours to compile tables with Moon position and do calculations in order to get a corresponding longitude.

Other considered astronomical method was based on the Jupiter's moons eclipses. In this case, the method was already implemented in practice by France, for measuring the coast line position, but for sea conditions the method proved completely impracticable. Observing Jupiter's Moon eclipse with a stationary observer on land was simple, but on an oscillating boat it was a completely impossible task.

In comparison with astronomical methods, the time-keeping method was simple and straightforward; from the information I read, this method was independently proposed by Huygens and Hooke. It is obvious that Newton never considered this method from the simple fact it was developed by his mortal enemies...

Since the Earth rotates at a steady rate, there is a direct relationship between time and longitude. If one measures the local time at the position of the boat (this is possible for example by observing the passage of the Sun through its zenith) and on the boat there is a clock which indicates the local time at a reference point (today the reference is Greenwich Mean Time), then, by difference, you can calculate the longitude of your boat; there is not necessary for a skilled person to do this task.

The problem that supporters of this method had to face was that there was no way to keep an accurate time reference on a boat. At the time, most accurate clocks used pendulums that were severely disturbed by the boat motion so that the reference time was rapidly lost. In order to have an accurate estimation of longitude a clock with less than one second a day error was necessary.

As far the scientific members of the longitude board was composed by Newton acolytes, it is obvious that most research efforts and money were allocated for the development of the astronomical methods.

Even Sir Isaac Newton, in a "press conference" of those times stressed this idea:

"And I have told you oftener then once that it [the longitude] is not be found by clock-work alone. [...] Nothing but Astronomy is sufficient for this purpose. But if you are unwilling to meddle with Astronomy, I am unwilling to meddle with any other methods then the right one."

The time elapsed without any palpable results, Newton died in 1727, but his gang of acolytes remained to control the Board of Longitude.

Although most of the support was directed toward the Lunar distance method, the solution offered by a simple carpenter. i.e. John Harrison, had to be taken into consideration and later it was adopted as standard method for longitude measurements.

John Harisson was able to build a clock with unheard or unimaginable accuracy for those times: about one second accuracy in about one month and a half. In fact the scientific board was so convinced that such clock cannot be built that Harrison was accused of fraud and new tests were asked to be done.

As far the follow up tests were consistent with the previous ones, the board of longitude had to admit that Harrison clock was real....

Despite the simplicity and handiness of Harrison method, the board of Longitude never declared Harrison as the winner of the prize.

Old habits die hard, and the gang from Board of Longitude had to preserve Newton's dogma or legacy and of course they did it thoroughly....

Well, in parallel with Harrison method, the lunar method was also completed and in the final stage one method was compared against the other. Probably the results were comparable or the time keeping method was better in terms of longitude accuracy - I could not find some clear information in the short time I looked for it. For the history of science though, the lunar method remained only a fancy thing for skilled scientists or for some tests, because no one wanted to use it in daily life.

Confronted with the constant opposition of Board of Longitude, who were unwilling to declare him a winner, Harrison complained to the King George III about the situation. The

King was wise enough to give him a helping hand and by a parliamentary decision, Harrison, in 1773, was finally declared the winner and got the prize

It took him about 40 years of frustrations in order to get recognition for something which later become evident even for laymen.

Now, only a few historians of science remind us about Harrison's struggle with the Board of Longitude, but even they carefully avoid to present a list with the eminent people who were members of this board and who should be, at least morally, condemned as intellectual criminals....

Do you think that many things changed in the meantime in the field? There is no time for such debates now.....

There are two nice documentaries presenting the longitude problem and for those interested in this topic here are the links:

Nova - Lost At Sea: The Search For Longitude (PBS Documentary) YouTube https://www.youtube.com/watch?v=BTwyFJxkER8

Le Fabuleux Destin des Inventions - Et la longitude fut

https://www.youtube.com/watch?v=hxQB_vE7deY

Do you think that this was again a singular fact and Newton abilities in physics were much over his peers?

Let us see another confrontation between the genius of Newton and the royal astronomer, i.e. the human John Flamsteed, about the origins of comets.

In 1680, in November, a new comet is observed passing the sky and of course it was a topic of debates for Europeans; at that time comets were still considered as messengers of bad news... so it is obvious that their apparitions emanated a wave of fear....

A couple of weeks later, in December 1680, apparently another comet was visible on the sky....

By sure one comet after another in this very short interval of time was something extraordinary and it became a hot topic of discussion for laymen and of course for scientists.

John Flamsteed considered these two apparitions as being a single comet, which only appeared twice due to the peculiarity of the comet motion. He assumed that, for the first time the comet was observed on a path of trajectory toward the Sun and, for the second time, the comet appeared visible after passing around the Sun and it was receding away from it.

It was a remarkable interpretation, but unfortunately the idea was not accepted by all other scientists.

We are in 1680 and it is very important to see the position of Newton regarding this astronomical topic. It is also important to be highlighted that in 1669, i.e. 11 years earlier, Newton was appointed as Lucasian professor of mathematics at Cambridge; so in 1680, he should have been at the apogee of his career.

Well, for a genius at the apogee of his career, comets are still considered to have a meteoric origin, i.e. they are some local phenomena which take place in the Earth upper atmosphere.

Of course a polemic is generated around this topic and having in mind the bad temper of Newton, who did not support to be contradicted, it is obvious that animosity between Newton and Flamsteed evolved on multiple planes (I suppose you read the previous newsletter which describes how Newton has stolen scientific information from Flamsteed).

The distance to the comets was established about a century earlier to these events, and although the entire science of those times could have been printed in a book of few hundred pages, Newton was not aware of this very important astronomical topic.

Tycho Brahe demonstrated first that comets were not atmospheric phenomena...; he already identified comets as astronomical objects.

Later, Kepler also interpreted comets as celestial objects, but he considered them as having a linear motion through our solar system.

Only by reading the information available at that moment, a simple layman would have concluded that Flamsteed interpretation was in fact a logical correction for the trajectory of a comet, a support for the existence of a central force, and there was no point in arguing about their distances.

One can draw by himself the conclusion how vast the luggage of astronomical ideas in the mind of genius, at that moment, was !....

This situation and other interesting things about Newton is presented in the following material:

https://www.youtube.com/watch?v=7KWkW0zruAU

Isaac Newton, l'astronomie et les astronomes, par Michel Bougard (UMONS)

Another important article regarding Hooke – Newton dispute was written by Jean-Pierre Romagnan and is entitled Robert Hooke et Isaac Newton : la pomme de la discorde.

Unfortunately, both the following article and the video bellow are in French, and it is a pity that no English versions are available for those who do not know French.

https://hal.archives-ouvertes.fr/hal-01061917/document

https://www.youtube.com/watch?v=NFSfiH6ndvo

Coşofreț Sorin Cezar - www.pleistoros.com

Although Newton himself and his gang of acolytes later erased the important contribution of Hooke to physics and to science in general, it is high time to reconsider the history of those events and correct the situation.

The history of science has to accept that Hooke was in fact the creator of a correct description of orbital motion and Hooke formulated the theory of universal gravitation at a time when Newton's mind was full of absurd concepts about planets motion in a special kind of ether invented by him.

There is a fresh new article which comes with new information about this quarrel and I am going to quote some longer excerpts from this article.

The article and the link:

On the invisibility and impact of Robert Hooke's theory of gravitation

Niccolò Guicciardini

DOI: https://doi.org/10.1515/opphil-2020-0131 | Published online: 26 Jun 2020

The episode I will consider is a well-known correspondence between Hooke and Newton that took place in 1679–80. Hooke proposed to Newton a new hypothesis concerning planetary motions. This hypothesis consists of the idea that planets move in the void accelerated by gravitational interactions. Until then, Newton had thought that planets moved because of some sort of interaction with the ether filling the planetary system, as he learned in his youth by reading Descartes' Opera. Newton's ether theory of planetary motion has never been a Cartesian theory based on impact though: the ether that Newton contemplated in his lifetime is composed of particles that repel one another at a distance. One might say that Newton's is an ether seen from the viewpoint of a natural philosopher who attributes to matter some sort of activity that would have never been endorsed by Descartes. After a failed attempt, which was corrected by Hooke, Newton was able to mathematize the motion of planets gravitationally attracted by the Sun. Hooke offered Newton a valuable suggestion; however, Hooke's contribution to gravitation theory was minimized by Newton and his acolytes and, as a matter of fact, underappreciated in a way, it remained "invisible," until recent historiography.

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In 1679–1680, Hooke addressed Newton letters in which he advanced a new hypothesis concerning the planetary system. Hooke proposed to view the planetary system as constituted by mutually gravitating bodies. The hypothesis in question was not new: it had already partly been presented by Hooke in some lectures to the Royal Society as early as May 1666 and had later been published – in 1674 – in an essay entitled An Attempt to Prove the Motion of the Earth by

Observations dedicated to his astronomical observations aimed to determine stellar parallax. Hooke brought to the attention of his readers a "System of the World" that differed "in many particulars from any yet known" and that was in compliance with the "common Rules of Mechanical Motions." Hooke's 1674 essay was reviewed in the Philosophical Transactions, and his planetary theory was thus given wide circulation.

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The new Hooke's system depended on three "suppositions." In these suppositions, Hooke merged two opposing scientific frameworks: the "mechanical philosophy," most notably as expounded by Descartes, and the "magnetic philosophy," proposed in England by John Dee, Francis Bacon, William Gilbert, Christopher Wren, among others. The first supposition was that all celestial bodies have an "attraction or gravitating power towards their own Centers. Whereby they attract not only their own parts [...] but that they do also attract all other Celestial Bodies that are within the sphere of their activity."

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The second supposition, drawn from Descartes, was that all bodies move in straight uniform motion until they are "deflected and bent" by some "effectual powers" in "a Circle, an Ellipsis [sic], or some other more compounded Curve Line."

The third supposition was that the "attractive powers" are "so much the more powerful in operating, by how much the nearer" the bodies are to the centers of attraction. Hooke described the way in which the planets of the solar system are attracted by the gravitational power of the sun and how they attract each other influencing "considerably" their motions and hoped that astronomers could determine the law of variation of the gravitational powers in order to reduce "all the celestial motions to a certain rule."

The correspondence between Hooke and Newton carried out in the winter 1679–80 shows that these three suppositions caught the Lucasian professor totally unprepared. Until then Newton had envisaged the motion of the planets as caused by a ether filling the planetary system, as it is apparent in his "An Hypothesis Explaining the Properties of Light," which he had sent to Henry Oldenburg in December 1675. Newton had then reiterated the concept in a famous letter to Robert Boyle in February 1679, in which he proposed a different ether model compared to that of the "Hypothesis." In both cases Newton envisaged the ether in ways that cannot be defined in Cartesian mechanistic terms: the particles composing the Newtonian ether are indeed endowed with some sort of activity, while for Descartes matter is passive. However, Newton shared with Descartes the idea that the interplanetary space is filled with matter.

According to Hooke, instead, the motions of the planets occur in empty space, and the mechanician can predict their orbital motions by "compounding the celestial motions of the planets of a direct motion by the tangent & an attractive motion towards the central body [of the Sun]." Further, Hooke assumed that the attraction of the Sun decreases with the inverse square of the distance; and in January 1680, he asked Newton to provide a demonstration of what would be the curve traced by a planet subject to a force of this kind.

Hooke was very tentatively proposing to Newton a hypothesis on the causes of planetary motions indebted to the explanation in terms of action-at-a-distance magnetism that had been considered by several natural philosophers, from William Gilbert and Johannes Kepler to Christopher Wren. In the "magnetic philosophy," however, planets move because of a magnetic, rather than a gravitational interaction. Hooke's planetary model was based on the hypothesis that what causes planetary motion is action-at-a-distance gravitation, an occult force banned by the mechanical philosophy as envisaged by Descartes and Thomas Hobbes. However, Hooke described his system as based on the "common rules" of mechanics. One might be tempted to characterize his model as "ambivalent," or at least, sufficiently complex to address the desiderata of a broad range of natural philosophers.

For sure, Hooke was uncertain about his hypothesis, and that is why he asked Newton's expert opinion. His letters to Newton have a very tentative character. In the first place, Hooke was unable to provide a mathematical proof of gravitation theory, as he candidly made clear, asking Newton for one. Further, he suggested several experiments with pendulums aimed at verifying his hypothesis. He hoped to measure a variation in the period of oscillation at different heights (e.g., at foot and at the top of St. Paul's Cathedral). We are confronted here with a momentous framework shift promoted by an actor – Hooke – who was very appreciative of the mechanical philosophy (as it is apparent from his Preface to the Micrographia (1665)) but who was also interested in considering action-at-a-distance characteristic of the alternative magnetic philosophy. Hooke's position was indeed a hybrid between the two competing philosophies, the mechanical and the magnetic.

Until 1679, Newton had embraced planetary models whereby planets move around the Sun because of the action of a medium filling the interplanetary spaces. The shift to the new model based on void and gravitation is unanimously considered in the literature as a decisive revolution in Newton's intellectual development. But how could Newton, to make use of the title of this special issue, "change his mind"? I have no space to enter into the details concerning the making of the Principia from 1679 to 1687 and I will not even attempt to broach the complex

historiographical issues concerning the nature of Newton's ether hypotheses: what I would like to underline here is that this is a change that implied new norms of what can be considered as a valid explanation of natural phenomena. In the framework dominating Newton's mind before the correspondence with Hooke, a medium filling the interplanetary spaces was causally responsible of planetary motions. In the new Hook's framework, instead, a gravitational interaction acting in void was accepted as a causal explanation, insofar as it could be mathematically deduced from the planetary phenomena. Newton was soon to discover that Hooke's model could be mathematized in a very successful way. One might contend that it is mostly because of such mathematical fruitfulness that Newton was eventually led to embrace Hooke's hypothesis, which, of course, is at the basis of the Principia.

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It is the correspondence with Hooke that tore a veil from Newton's eyes, allowing him to see very far. From the available documentary evidence it is not clear, however, how far Newton could see in 1680. According to some scholars, it was at this time that he first developed an outline of the theory of gravitation. It is considered likely that in early 1680 Newton managed to prove that the first two laws of Kepler imply that the planets are attracted to the Sun by a force that varies with the inverse square of the distance. According to others, things are not so straightforward. It is often said that, although the credit goes to Hooke for having turned Newton away from his ether model, he cannot claim the merit of having provided a mathematical formulation of the new model. It is one thing–we are often told–to advance a qualitative hypothesis (the planets move in a vacuum in which they are deflected from inertial straight trajectories by a gravitational force directed toward the Sun), and quite another to provide a mathematical demonstration. The weakness of Hooke's mathematics would also be evident– according to some scholars–from the fact that, as appears from his correspondence with Newton, he believed that the speed of a planet is inversely proportional to its distance from the Sun, a law that is not compatible with Kepler's law of areas.

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Recent documentary discoveries and a different sensitivity toward the complex meanings of the terms "mathematics" and "scientist," when such terms are evaluated in their historical context, have led to a dismissal of Hall's drastic judgment. Patri Pugliese discovered that Hooke resorted to graphic constructions of trajectories which allowed him to mathematize central force motion. Nauenberg has detailed Hooke's use of experiences with pendulums and balls rolled onto concave surfaces in order to verify the shape of the trajectories traced by bodies accelerated by central forces. These geometric constructions and experiences operate as a kind

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of graphical and mechanical simulation of planetary motions and should be viewed by the historian as methods belonging to the mathematical sciences, in the broad sense that the term "mathematics" had in the seventeenth century. An important feature of the mechanical philosophy was the use of artificial instruments such as pendulums, springs, and inclined planes as a means to shed light on the causes of natural phenomena, since the latter were thought to be generated by mechanical causes. Hooke investigated the mathematical structure of the planetary system using graphical models and mechanical devices, tools that were familiar in the practice of the mechanicians active in London in his times. Rather than criticizing Hooke on the basis of anachronistic normative values about what "good" mathematics should be, it is more appropriate for the historian to accept that his mechanical practice was considered the right way to proceed within the community of inventors and virtuosi who were pursuing natural philosophy by resorting to the "mixed mathematical sciences."

By corroborating the information in these and other articles, the situation becomes clear for someone who wants to see the truth.

Up to 1680, Newton's ideas about gravity, celestial motion and other related topics were completely absurd. Here is a quote from his genial thinking related to gravitational motion and his invented ether:

" Is not this medium much [denser] within the dense bodies of the Sun, Stars, Planets and Comets, than in the empty celestial spaces between them?

And in passing from them to great distances, doth it not grow [rarer] and [rarer] perpetually and thereby cause the gravity of those great bodies towards one another, and of their parts toward the bodies; every body endeavouring to go from the [rarer] parts of the medium towards the [denser]? ...

... And though this [decrease] of density may at great distances be exceeding slow, yet is the elastic force of this medium be exceeding great, it may suffice to impel bodies from the [rarer] parts of the medium towards the [denser], with all that power which we call Gravity. ..."

When we judge these ideas from our modern perspective, even the model advanced by Hooke is not perfect and not entirely correct; but, there is no comparison between the clarity and and the soundness of Hooke's assumptions and the clumsiness and absurdity of Newton's assumptions. As previously presented - see part one of this newsletter-, up to 1680, Newton was desperately trying to solve the gravitational problem based both on a wrong model and on a wrong assumption regarding the expression of gravitational force. For the new theory, the so called Isaac Newton's Annus Mirabilis, i.e. the year 1666, when Isaac Newton, aged 23, supposedly made revolutionary inventions and discoveries in calculus, motion, optics and gravitation is only a late fake from a master who fooled the history for a couple of centuries....

Up to 1680, Newton was probably aware only with Hooke and Huygens scientific achievements and his knowledge about astronomy was very limited or nonexistent. These two personalities were his mortal enemies, and, of course, it was a personal "problem" to stay updated with their latest researches.

Up to 1680, Newton was not curious to get updated with the achievements of Tycho Brahe and Kepler, although this information was currently available for anyone.

The period between 1680 and probably 1685 is indeed a turning point in redefining Newton as scientist.

The lengthy correspondence with Hooke during the 1679-1680 autumn and winter, left Newton without replica in face of the amazing complexity and fecundity of ideas advanced by Hooke; no wonder that Newton interrupted this correspondence...

After 1680, Newton renounced to his absurd ether concept for celestial motion and adopted entirely the model advanced by Hooke. This is not a singular fact in science. All the time scientists change their ideas in face of new evidence; all the time new models are created and old models abandoned or improved

Yet, there is a peculiarity in this situation which was not spotted by historians and it is high time to be corrected....

By publishing his "monumental" work Principia, in 1687, Newton appropriated the entire cosmological model of Hooke as if it were his own. It was not that Newton picked up one idea, i.e. the dependency of gravitational force with distance as some historians make us believe, and further developed it ! No, it was a complete appropriation and poor Hooke could do nothing.

Moreover, Hooke made the unpardonable error of his life: he died a quarter of century before Newton and this cost him a lot. Newton have had enough time to completely destroy the image of Hooke as scientist and even his public image. Although I understand and I know how Hooke must have felt, because the same thing happened to me, I do not take part of Hooke in this quarrel. There seems to be same information that Hooke also, by profiting of his position as curator of experiments, appropriated some ideas from others, without recognizing this fact, and these actions have to be condemned too. But from here, up to the hideous image of Hooke created by Newton and his acolytes later, there is a long way....

I was always amazed by this special ability of Newton to re-write the history in his own favor. Newton was able to masterly perform this task in case of invention of calculus, where he has no merits at all, and up to this moment he has been falsely recognized as an inventor of this method.

It was even easier for Newton to re-write the history in his own favor in case of gravitational theory because here it is necessary to recognize that Newton has some contributions as mathematician.

As mathematician, Newton was able to deduce the expression of gravitational force, and having this precious ace in the sleeve, he disguised Hooke's achievement in this field as his own achievements. No wonder that Hooke was furious....and asked for a recognition of his merits....

There are many historians who advance the idea that Hooke lacked mathematical knowledge. This is again a false idea promoted by Newton's acolytes. Hooke was already having a job as professor of geometry at Gresham college and I am sure that he got this position based on his own merits. He was not the son of a influential person to be pushed in this position by other means. At that moment mathematics was synonym with geometry, because other branches of mathematics were nonexistent or in an incipient stage of development.

I have read some recent materials which advance the idea that Hooke was also on the brink of getting close to a geometrical deduction for the gravitational force.

It is difficult to draw a correct line regarding what Hooke was really thinking about this demonstration. I am going to suppose that he was continuously working at this topic, but he did not insist much on this demonstration from many different reasons.

Probably, he had indeed the feeling that the problem is over his mathematical abilities and as far he was a very busy person, he postponed indefinitely this task for future...

Probably, he had the feeling that his already published articles about gravitation entitled him with enough credit for an important contribution to this field

Most probably, he was thinking that the solution for this model was only a small piece in the puzzle and no matter who was going to get this demonstration, his own contribution should have been recognized either.

In fact his correspondence with Newton leaves us understand that he was looking for someone who could help him to find this solution so that entire puzzle is resolved.

He did not imagine that someone is going to push him out of the scene and capitalize his entire work... without bringing him any recognition ...

Bad luck for him! Newton did everything possible to erase not only Hooke's contribution to astronomy, but his entire scientific contribution and this is an abominable fact.

For example few people know that Newton's ring in optics were in fact discovered by Hooke and even today these are considered a prove for the wave character of light. How was it possible that Newton get credit for such effect although his theory of light was about corpuscular nature of light?

It seems that even the analogy of throwing away objects from the top of a mountain with increased velocities until they get an orbital motion around Earth is also coming from Hooke.

There is still important to be reminded another successful appropriation, but in this case, not from Hooke. Even fewer people know that Newton was not the inventor of the first reflecting telescope as it is trumpeted in any scientific text about optic. First theoretical designs of this telescope are mentioned in the writings of Bonaventura Cavalieri (Lo Specchio Ustorio -On Burning Mirrors, 1632) and Marin Mersenne - L'harmonie universalle, 1636). In 1663, about tree decades later, the design of such telescope appeared in James Gregory publication Optica Promota (The Advance of Optics). It was the time when Newton, after dealing with an unsuccessful attempt in solving the problem of gravitational force, switched his direction of research from gravitation to optics so by sure he read this publication. If he did not read the publication, then it is even worse for his scientific conduit. *Reinventing the invented things cannot be a way to build up a fame... !*

Newton reflecting telescope was built around 1671, quite at the same time Cassegrain built or at least published a version of such type of telescope again in France and a bit later Hooke built a third one in 1673. For any common sense mind, none of these three instrument makers are the inventors for the reflecting telescope.

Here is a nice article debating this topic....

https://aeon.co/ideas/how-many-great-minds-does-it-take-to-invent-a-telescope How many great minds does it take to invent a telescope? Thony Christie

Well, there are many wrong things in the science history and the new proposed theory is going to correct them for posterity, at least

Anyway, from the perspective of the new proposed theory, the quarrel between Hooke and Newton has a simple and straightforward solution.

The gravitational model developed entirely by Hooke is more important then the mathematical solution obtained by Newton; this is going to be a topic for another newsletter though...!

It is normal that Hooke's image is restored and so called classical gravitation model has to be reminded as Hooke-Newton model. Well, this is necessary for historical purposes, because a new gravitation theory is in the pipeline.... I am sorry for the historians of science, who are going to remain without a preferred topic for research. In a normal society, few of them are going to be attracted by the Newton biography in the future. But in an abnormal society, all sorts of criminals are entitled to get more attention as the good guys. As far Newton has become the greatest intellectual criminal in history, I refrain myself to make predictions about the future....

Finally, for aficionados, I would like to remind some interesting materials relevant for the discussion.

BBC made a video material about Hooke and here is the link:

https://www.youtube.com/watch?v=sZrXv0dHARk

Robert Hooke Victim of Genius BBC

M. Nauenberg has written some articles about this quarrel too and his is one of them: Hooke's Memorandum on the development of orbital dynamics https://arxiv.org/pdf/physics/0504093.pdf

If by any chance someone has a subscription to the British Journal for the History of Science, I would like to read the following papers:

Hooke and Wren and the System of the World: Some Points Towards an Historical Account

J. A. Bennett, The British Journal for the History of Science, Vol. 8, No. 1 (Mar., 1975),

Newton's Early Thoughts on Planetary Motion: A Fresh Look

Derek T. Whiteside, The British Journal for the History of Science, Vol. 2, No. 2 (Dec., 1964),

SECTION II HOW GRAVITATIONAL WAVES ARE PRODUCED

The wikipedia is a good start for having some information about this topic, but not all the information there is correct.

For example, the first who advanced the idea about their existence was not Henry Poincare as specified there, but Olivier Heaviside. Anyway, it is worth having a look at that information and here is the link:

https://en.wikipedia.org/wiki/Gravitational_wave#History

It is important to start with a bit of history for this topic, because it is easier to grasp the model and the essence...

For about two centuries after Principia was published, Newton followers tried to frame and interpret everything in physics based on classical mechanics; of course this proved to be an impossible task.

When electromagnetism emerged as a distinct branch of physics, and especially after the publication of Maxwell equations, others were trying to do the same thing, but considering electromagnetism as the foundation for all phenomena in nature.

Oliver Heaviside, who was a brilliant scientist, but missed to became famous (I am going to came back to this topic when time allow), was the first who tried to write a set of equations for gravitation similar to those of Maxwell for electromagnetism. He predicted that gravitational wave can be produced and these waves travel with finite velocity in an article published in a quite off-topic journal, i.e. The Electrician, in 1893.

The topic of gravitational waves was further brought to public attention by a paper of Henri Poincaré in 1905 and became posh after the publication of general theory of relativity by Albert Einstein in 1916.

The starting point in the earliest prediction of gravitational waves is the similitude between electric and gravitational force; both have a similar form and both decrease with distance in a similar manner.

Once the "electromagnetic waves" were predicted and later confirmed, it became foreseeable for some scientists that gravitational force "must have" a corresponding kind of waves.

Unfortunately, as many other analogies discussed previously, even this analogy has nothing to do with reality.

There are many articles and newsletters were the topic of electromagnetic waves was debated and of course the topic is not closed. There were presented enough new experiments which prove that Maxwell equations have to be ruled out from science. There is going to be a return to the electromagnetism probably next year

In the new theory, it was already postulated that an accelerated charge does not emit electromagnetic waves (radio, microwave) or photons (IR, VIS, UV, X-ray). There are some peculiar conditions when "an accelerated charge" interacting with matter or some fields can produce both electromagnetic waves and photons and this a completely different thing.

In practice, beside a large spectrum emission, there are some specific techniques which allow a emission of electromagnetic waves or photons with a great yield in a specific domain of energies.

For example the emission of radio wave is very well performed with a LC oscillator, for which there is no convincing explanation in the modern physics. There is the idea that electrons somehow have a motion of oscillation around an equilibrium position and this motion generates radio waves, but this is an absurdity...

It is really true that an "oscillatory motion" is absolutely necessary in order to have a long term wave produced, but in a conductor electrons are not oscillating at all....

In a similar manner with what has been done for electromagnetism, it is necessary to clear the path for the future in gravitation and therefore a postulate is necessary.

Postulate: An accelerated or decelerated mass cannot produce gravitational waves.

This postulate can be proved right in many ways but here I am going to detail such demonstration by using two different methods.

For the beginning is necessary to revise a bit the core foundation of GR and define some concepts which escaped even to most intelligent GR fanatics.

The first idea to be stressed is: A non accelerated mass generates a "static" deformation of spacetime around it.

The second idea to be stressed is: *An accelerated mass generates a "dynamic" deformation of spacetime, i.e. a gravitational wave.*

The third idea to be stressed is: *A decelerated mass (the opposite to an acceleration) must also produce gravitational waves.*

These ideas are different and independent effects, which unfortunately are not clear even for theoreticians in the field.

In fact, in more than a century from the time this theory was advanced, no one was able to find at least a correct analogy when describing basic phenomena which are supposed to take place in GR.

Any text present how a mass deforms the space based on a stretchy blanket and the

deformation is assumed to be proportional to the mass of the object as in fig. 1.



Figure 1 - The Earth makes a dip in the fabric of space, as do all other objects. credit: NASA

This analogy is completely wrong because Earth is not staying on a space metric which is deformed bellow. Earth is part of this space metric, and this space metric should be deformed radially in any direction around Earth.

A much better analogy for this effect could be made based on defects in atomic latices, a field of science which is unknown to GR fanatics.

In fig. 2 left, one can see the case of a regular atomic lattice which can be assimilated with a region of space not deformed by the presence of a gravitational field. There is a equal distance between atoms and they are arranged into a lattice which simulate the metric of space.

In the right part of the fig. 2, one can see what happens when another atom is inserted into this regular lattice, of course without substituting the existing atoms in the lattice.

The interstitial atom needs a certain volume for its electronic shells, so the entire lattice get deformed. The greatest deformation is supported by the regions closed to this interstitial atom and the deformation gets smaller with distance.

The presentation is made in a two dimensional section, although in reality starting with a cubic lattice, the deformation is observed in all three dimensions of space.

One has to consider the inverse effect to that presented in fig. 2 in order to understand GR and what happen when a supposed mass contracts the space around it.



Figure 2 Lattice deformation due to an interstitial atom

By considering a massive celestial object, according to GR, the metric of space around it is contracted as in fig. 3. i.e. the distance between two "atoms" of space is smaller in its vicinity. "Atoms of space" is a metaphor, don't take the words mot à mot. Of course the "atoms of space" could be better represented as points instead of spheres, but I have no time for such details....



Figure 3 Space metric deformation according to GR due to massive celestial object

At a first glance, one could accept that space is deformed (it contracts) around massive objects, so the "static space deformation" with this new analogy gets a bit of consistency for non accelerated masses in the GR formalism.

Have your ever seen a simple representation or analogy for a time deformation around massive objects according to GR?

I never seen one and I am sure that such representation does not exist in tons of literature published about this topic.

Probably in a future newsletter such analogy is worth to be considered, but this is an advanced topic and of interest for specialists.

Let us go further and see what happen in case of accelerated massive objects, according to GR. It is obvious that an moving object, has to "carry" with him the spatial static deformation around it.

As the mass moves and occupies new positions in space, there are new slices of space which are deformed and older slices returns to normal metrics characteristic to the absence of any gravitational field. Of course someone can invent or find some small new effects due to to the "deformation" of this space traveling perturbation, but these are merely details, and not relevant for the level of this discussion.

Yet, the GR comes with a second absurdity, i.e. one accelerated mass generates a wave in this spacetime for which no mechanism can be imagined.

This is a *"completely new effect"* much different from the *"static"* space contraction around massive objects and this new effect can be grasped from fig. 4.

Case a) is justified because as previously presented a consistent mass is going to contract the space around it. But in order to have a "spatial wave", the opposite thing must take place, i.e. the same mass must expand the space around it – case b) and later contract it again as in case c).



Figure 4 Generated gravitational wave by an accelerated mass

It is a common sense idea for pupils that only a contraction of space cannot generate a wave. In order to have a spatial wave, it is necessary that distance between two arbitrary point of space periodically expands and after that contracts.

In the frame of GR, it is impossible to advance an idea about how a consistent mass instead of contracting the space around it, does exactly the opposite.

And this odd situation becomes even outrageous: *accelerated mass must contract and expands the space in a periodic manner...*

The frequency of gravitational wave must be set by the oscillation of the source, but for an accelerated body there is no source of oscillation.

When someone is looking to a general picture and the effects a gravitational wave generates - fig. 5, the following question must pop up in his mind:

How such deformation is generated?



Figure 5 - Gravitational waves stretch and squeeze the fabric of space in the plane perpendicular to the direction of travel. credit: Einstein-online.info

In the frame of GR, there is a far away possibility to create such a space wave if someone imagines that the accelerated mass, which is the source of gravitational wave, has a high deformability and during its acceleration there is a continuous redistribution of mass.

From my point of view this endeavor would be like reconstructing the epicycles theory...

It would mean that gravitational waves are generated not by the accelerated mass in itself, but by another cause, which means that automatically GR is ruled out.

By sure some GR fanatics would think that they could fix the generation of gravitational waves, because, for example, a celestial binary system "offers" this mass redistribution automatically as far the components of this system periodically change their position. This is a

wrong approach because each accelerated mass must emit its own gravitational wave independently on the existence of another accelerated mass. Anyway, as far science has become a domain where any absurdity can be promoted if there are enough followers, I expect the worse....

Though, there is a second kind of demonstration regarding the nonexistence of gravitational waves and this second one cannot be ever fixed.

The second demonstration uses the method of reductio ad absurdum, which is a wellknown method in mathematics and logic.

In our case the method starts by admitting that a gravitational wave is indeed generated by an accelerated mass and the consequences must contradict the reality ...

For simplicity, an accelerated body is supposed to emit gravitational waves in any direction of space as in fig. 6.



Figure 6 Radial distribution of emitted gravitational waves from a celestial body

What happen if there are two equally accelerated bodies, with close masses and accelerated one toward another like in a binary system?

Well, by having equal masses, both these celestial bodies are moving toward each other with an equal acceleration (they orbit each other of course), and each of them is going to emit a gravitational wave.

There is no way that one gravitational wave is screened or lost and therefore these waves have to overlap. The topic of wave overlapping is described in detail in the following section and here only the conclusions are presented.

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In the particular case of equal masses celestial bodies, the emitted gravitational waves are identical as amplitude and frequency so they have to interfere (constructive or destructive) as in fig. 7.



Figure 7 Interference of gravitational waves in a binary system

Any far away observer, which is the case for all celestial observations in this field, is going to receive only an interference pattern in case of observing such system with a gravitational waves detector.

There is no way to fake this conclusion.

It is impossible to assume that in the case of a binary system composed by two closed mass black holes, only one black hole generates a gravitational wave and the other one has no emission at all....

Assuming such imbecility does not solve the situation either!

Let us consider that faked signal observed by LIGO-VIRGO is real, then it is either coming from an interference pattern or it represents one single gravitational wave.

In case of an interference pattern, all the mathematical data processing is a fake and of course even the physical model has to be revised.....

In case of a single gravitational wave, the GR has to be ruled out, because in a binary system there is only one black hole which emits a gravitational wave

The new proposed theory rule out the existence of gravitational waves so there is no such problem to be solved at all.

SECTION III TEACHING WAVES AND ESPECIALLY GRAVITATIONAL WAVES

I was struck by the absurdity of a lot of gravitational waves simulations, which can be found everywhere on internet, so I considered necessary to present this topic for pupils.

First, it is necessary to make known the opinion of the "specialists in the field" and therefore a video presented on Caltech web page is analyzed;

Here is the link:

https://www.ligo.caltech.edu/page/what-are-gw

From this video some pictures are extracted and some supplementary information is added to the images in order to figure out the phenomena. The observer is considered positioned in the right-down corner of the picture and according to the video, he sequentially receives a gravitational perturbation coming only from one of the neutron stars, which are in the process of collision.

In fig. 8, according to the video simulation, the observer can detect the gravitational perturbation generated by the NS1. A bit later, the observer can detect only the gravitational perturbation generated by NS2 - fig. 9.



Figure 8

From the observer perspective the overall signal registered seems to be a composite image with one sequence coming from the NS1 and the second sequence coming from the NS2.

It is important to be reminded that one very important characteristic of space in GR, is still unresolved: Does space comport like a spring when is perturbed or space return to the initial state at once, when the perturbation stops?



Figure 9

The presentation takes into consideration the simplest situation, i.e. once the perturbation stops there is a return to the initial state at once, not important how...

With these consideration the observer template for the signal detected is presented in fig. 10, where red is the sequence coming from NS1 and green is the sequence coming from NS2.



Figure 10 Signal detected from identical neutron star or black holes in process of collision

The video continues with this pattern up to the collision between these neutron stars when the emission stops.

Let us assume that such thing is indeed possible....

In case of neutron stars, which have close masses, there is no possibility for the observer to see a difference between the signal coming from the NS1 or the signal coming from NS2; nor is the observer able to attribute a sequence to a specific neutron star emission.

An identical situation would be observed in case of two black holes with relatively close masses.

But in case of black holes with different masses, the pattern of the signal has to be much different. The observer has to register a very curious waveform signal as in fig. 11. With green, the signal coming from the more massive black hole, has to be spotted visually even by a pupil....



Figure 11 Signal pattern detected from black holes with different mass in process of collision

In the short "history" of gravitational wave detection, has someone ever observed such pattern for the signal coming from these event collisions?

I do not think so

The simulation and all other similar simulation over the internet are fakes becasue there is no way to screen one gravitational wave emmited by an accelerated body from a second one emmited by a second body in a binary sistem.

Or only one accelerated body emmits a gravitational wave recently?

Unfortunately for the mainstream scientists, here there is a more complicated problem and in order to clear the thing once forever a postulate is formulated.

Postulate: At a certain location, an observer can detect only the superposition of all gravitational waves (if they exists of course!) traveling that point at that very moment.

Any pupil in science must learn how to think and question the physical phenomena in order to grasp the concept. In this way no one can be tormented with fake information anymore...

If gravitational waves exists, they must be special and different of all the wave we already know.

Common waves are conceived as a propagation of disturbances from place to place in a regular and organized way.

Although there are general characteristics for all waves, there are a lot of peculiarities either, for each type of wave.

For example radio wave or microwave of different frequencies do not overlap although they occupy the same volume in space. One radio station emitting at 100 MHz is not at all disturbed by another radio station emitting at 300 MHz although their antennas are one near another.

Other waves overlap (for example sound waves) and in this case the superposition principle applies.

The superposition principle states that, for all linear systems, the net response caused by two or more stimuli is the sum of the responses that would have been caused by each stimulus individually. So that if input A produces response X and input B produces response Y then input (A + B) produces response (X + Y). Usually the superposition of two wave comes with a secondary phenomena of interference.

In some older articles the case of pure constructive and destructive interference for identical waves was already presented so it is not worth to be repeated again.

For our case it is important to see what happen in case of superposition of non identical waves. Such superposition produces a combination of constructive and destructive interference, and the intensity of the final wave can vary from place to place and time to time as in fig. 12.



Addition of two different frequency waves

Figure 12. Constructive and destructive interference of waves

When the difference in frequency is large, the pattern of interference is quite complicated to be detected as in fig 13.

These introductory considerations are very important for the supposed gravitational waves.

There is no way to prevent the overlapping of all encountering gravitational waves which are present in a certain point of space.

Any of these wave will try to affect the metric of space, and therefore for any instrument, only the overlapping result is available.

This postulate is very important because it seriously limits the availability of a possible gravitational wave signal for the instrument.



Figure 13. Constructive and destructive interference of waves of much different frequencies

Let us suppose a gravitational wave detector is located in a point P of space. Further on, for theoretical modelling, two identical sources of gravitational waves situated at equal distance, are considered.

For this section it is not important how these waves are generated, but merely what happen at the detector with these waves.

In the point P, these strains of gravitational waves generates an overlap with interference and this can be with destructive fringes – fig. 14, or constructive fringes – fig. 15.

The observer could correctly interpret the results only if he knows a priori, by another method about the characteristics and the existence of both gravitational waves which encounters in the point P.

If the observer has only the instrument and is in searching of signals coming from various celestial systems, in case of destructive interference it is impossible to detect System 1 and /or System 2.

The fact that a series of instruments are quite close each other and the observer tries to do a kind of triangulation is not useful at this stage at all. For example all the instruments in a volume greater as our Solar System could still be in a region where the signal coming from System 1 and System 2 interfere completely or at least 90% and the remaining 10 % is to small to be detected.

Probably someone would consider that constructive interference is better, but this is only appearance



Figure 14 Gravitational wave interference - destructive fringes

Even in this case the observer can correctly interpret the results only if he knows a priori, by another method about the characteristics of the System 1 and System 2.

If the observer has only the instrument and is in searching of signals coming from far away systems, in case of constructive interference, it is again very complicated to interpret the results.

By sure the observer will infer that such signal comes from one system and he will miss the other. By using the triangulation method, corroborated with other optical methods, the observer will guess let us say the system one as the source of gravitational waves.

He proceeds with his calculations, a paper with 4000 authors is published, but all the data there, are biased; by missing the system 2, the data processing is going to lead to a completely wrong conclusion.



System 2

Figure 15 Gravitational wave interference - constructive fringes

System 1 MMMM

This was a hypothetical situation with only two sources of gravitational waves in the entire universe.

Well, if GR is correct, any accelerated mass has to emit in a certain measure gravitational waves. Any point in the observable universe becomes a messy place from this point of view, because a multitude of gravitational waves overlaps in a certain point in space.

A detector can only register the resultant of the overlap for all the waves which encounters in a certain point in space.

An now it is high time to come back to some predictions...

GR fanatics have prepared their lessons even before the so called discovery of gravitational waves took place and fig. 16 presents a spectrum of such possible gravitational waves - most of them are still waiting to be discovered...



Figure 16: The gravitational wave spectrum. The horizontal axis shows the frequency (and the wave period) on a logarithmic scale, with the colours representing the corresponding wavelengths (red = longer, blue = shorter). The detectors shown are those existing or planned, while the sources are those known to exist and expected to produce detectable gravitational waves. credit: https://lisa.nasa.gov

Assuming that existence of such gravitational waves spectra is correct, such a wave could be detected only if the source is strong enough and the detector is in the source close proximity, where the produced gravitational wave stands out from the myriad of gravitational waves which overlaps in that point.

For the new proposed theory there are no gravitational waves at all....

SECTION IV HOW LIGO-VIRGO CONSORTIUM DISMANTLES GR

Disclaimer: This section does not question why the signal from a binary system consists in one single gravitational wave, and assumes that signal observed by LIGO-VIRGO is real.

In a previous newsletter that case of first gravitational wave detection – GW150914 was presented and it was reminded that other scientists expressed doubts regarding this detection.

In an online article published by New Scientist, a Danish team expressed their doubts regarding this detection:

https://www.newscientist.com/article/mg24032022-600-exclusive-grave-doubts-overligos-discovery-of-gravitational-waves/

Exclusive: Grave doubts over LIGO's discovery of gravitational waves

The news we had finally found ripples in space-time reverberated around the world in 2015. Now it seems they might have been an illusion

Well, between their initial line of thoughts and the final article published by the team in Journal of Cosmology and Astroparticle Physics there is a 180 degrees change of situation.

Here is the abstract of the article published in the journal:

https://iopscience.iop.org/article/10.1088/1475-7516/2016/08/029/pdf

Understanding the LIGO GW150914 event

Pavel Naselsky, Andrew D. Jackson and Hao Liua,

We present a simplified method for the extraction of meaningful signals from Hanford and Livingston 32 second data for the GW150914 event made publicly available by the LIGO collaboration, and demonstrate its ability to reproduce the LIGO collaboration's own results quantitatively given the assumption that all narrow peaks in the power spectrum are a consequence of physically uninteresting signals and can be removed. After the clipping of these peaks and return to the time domain, the GW150914 event is readily distinguished from broadband background noise. This simple technique allows us to identify the GW150914 event without any assumption regarding its physical origin and with minimal assumptions regarding its shape. We also confirm that the LIGO GW150914 event is uniquely correlated in the Hanford and Livingston detectors for the full 4096 second data at the level of 6–7 σ with a temporal displacement of $\tau = 6.9 \pm 0.4$ ms. We have also identified a few events that are morphologically close to GW150914 but less strongly cross correlated with it.
It remains for the history of science to analyze how this team was convinced to suddenly change their point of view and become strong supporters of gravitational wave events. I consider they have had enough time to proceed with their initial analysis and write a new page of real science. For about two years I did not follow the latest "progresses" in the GW field and it was my intention to quote them again as a model of scientific honesty. Pity that they suddenly changed the field....

I am not a mathematician specialized in data processing, but I have done enough data processing and statistic about data in order to advance the following postulate.

Postulate: For very weak signals, one cannot extract an useful signal if the overlapping noise or other perturbing signals are an order of magnitude bigger.

If there are cases which contradict this postulate, I will be willing to receive the data set and their interpretation and I am going to publish them in a following newsletter and eventually revise the postulate. The only special case I know for the moment, close to this postulate, is the folding procedure in radio astronomy, but even there the noise is the same order of magnitude as the useful signal. Supplementary and very important for the reconstruction of signal there, is a very peculiar fact: the useful signal is periodic, but the noise is aleatory.

Sound scientific data acquisition requires a rule of dumb to be respected: **the useful signal has to be, or has to be made, an order of magnitude greater than other perturbing signals or noise.** Of course, in the initial stage of most discoveries, the useful signal has been often on the same order of magnitude as the noise, but in order to put in evidence a new phenomena, the follow up work made possible to increase the signal to noise ratio.

The postulate does not apply to the situations when the signal has a consistent presence.

For example, there is a perturbing 1A signal in AC and overlapping this signal, there is a secondary one of 0,1 A, but for the project research the small signal is the useful one.

Assuming that the strong perturbing signal has an accuracy of measurement of 0,03%, and the small signal has an accuracy of measurement of 0,05% (for smaller signals the measurement is less precise), by some methods it is going to be possible to detect the small signal.

The simplest one is to add a third AC current signal of 1 A, which cancel the strong signal (phase adjustment) and what remains is the noise and the small signal.

The noise from the strong signal is 0,03 from 1A = 30 mA

This noise can either add up or cancel down so it is possible that 60 mA from final result is simply noise; there are 30 mA of noise for each 1 A signal.

There is a noise from the small signal too: 0,05 from 0,1 A = 5 mA

The small signal being of 100 mA, it clearly stands out from the noise of maximum 65 mA.

What happen if the useful signal is 0,01 A (accuracy of measurement 0,07%) and the perturbing signal is as previous of 1 A (accuracy 0,03%) ?

In this case the noise is going to remain quite the same. There are 60 mA coming from those two 1 A currents and the noise from the small signal can be neglected.

When comparing the useful signal of 10 mA(0,01A) with the noise of 60 mA, it is clear that such method is not appropriate to put in evidence the useful signal.

Mathematical analysis, statistic and any other theoretical tools are useless when the ratio between useful signal and noise is 1 to 6. In this latest case, it is absolutely necessary to suppress the strong noise signal by another method in order to make the 0,01 A signal useful.

Well, by continuing decreasing the size of the signals, even in case of a pure electric signal situation, at much lower signals and greater incertitude of measure, it is going to be impossible to detect an useful signal from a noise or an perturbing signal which is an order of magnitude greater.

Keep in mind this simple example because it is going to be used as reference in the subsequent analysis.

The gravitational wave detection is the first case ever when the useful signal is very weak - at the limit of detection-, and supplementary it was two orders of magnitudes lower as other competitive signals (noise, perturbing signals), and yet the people working in the field dared to say that they detected something.....

This section is my detailed interpretation of an online article which makes a description of data processing in the case of first gravitational waves detection, i.e. GW150914.

The link to this article is:

https://www.soundsofspacetime.org/detection.html

I suppose the article will disappear soon after this newsletter delivery, therefore it is necessary that relevant information is duplicated here in order to make such analysis comprehensible even for a person who does not read the original article. Excerpts from the article are in italic.

Key facts about GW150914:

LIGO made the first observation of two black holes merging together.

The black holes had masses of 29 and 36 times the mass of the sun. They merged to form a single black hole with a mass of 62 solar masses. That black hole remnant spins at a rate of 100 rotations per second.

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An energy equivalent to the mass of three suns was released by the inspiral and merger of these black holes. This energy release happened over a time period of two-tenths of a second (0.2 sec). During that brief moment, this system released energy at a rate that was 50 times the energy output rate of all the stars in the entire observable universe $(3.6 \times 10^{56} \text{ erg/s} \text{ or the equivalent of } 200 \text{ solar masses per second}).$

This merger of two black holes happened 1.3 billion years ago, when the earth contained only simple multicellular life. Since GWs travel at the same speed as light, this merger occurred about 1.3 billion light years away.

The event was seen in both LIGO detectors with a time offset of 7 milliseconds (consistent with the time for the GWs to pass from the Livingston, La detector to the one in Hanford, Wa, accounting for the direction in space the waves originated from and the fact that GWs travel at light-speed).

The event was found in the data via multiple analysis methods and with high statistical significance. The signal was a strong one. The detector and local environment would randomly cause simultaneous disturbances of this magnitude in both detectors only at a rate of once every 203,000 years.

The signal is completely consistent with the predictions of general relativity and agrees well with the predictions of numerical calculations that model the merger of two black holes. This is the first time general relativity has been tested in conditions of extremely-strong gravity. General relativity has passed every experimental test to which it has been subjected.

The "big picture:"

This is first time GWs have been directly detected by instruments on Earth. The detection was unambiguous and thoroughly vetted. (The effect of GWs on the orbital motion of binary neutron stars was previously observed with radio telescopes. The discovery of the first system to show this effect was awarded the Nobel prize in 1993.)

This is the first time we have observed two black holes collide and merge, forming a single black hole. This is also the first time we have observed stellar mass black holes with such large masses; it is the first stellar-mass black hole binary to be discovered.

LIGO has made the most precise length measurement ever. The LIGO mirrors moved in response to GW150914 by an amount roughly equal to 1/1000th the diameter of a proton. This measurement is equivalent to measuring the distance to the nearest start (Proxima Centauri, 4.24 light-years away) to within the width of a human hair (and thin hair at that).

This discovery is important because it represents the birth of a new field of astronomy. We will now be able to "listen" to a class of celestial phenomena that were previously

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inaccessible to us with electromagnetic astronomy. Every time we have previously observed the universe with new tools, we have discovered entirely new phenomena.

Exploring the universe with this new tool and previously developed ones helps us to understand our origins---how everything came to be the way it is. We are also probing how the fundamental laws of nature work. Like the other great works of humankind---Shakespeare, Mozart, da Vinci, and countless other artists and scholars---the process of discovery and understanding enriches our lives. It inspires the next generation of scientists (and helps employ the current generation). This discovery illustrates to society that the natural world is understandable via rational investigations. It is an amazing discovery---originating from the thoughts of Einstein 100 years ago, and brought to fruition by the hard work of thousands of scientists since then.

The key observable for LIGO is the strain, the fractional difference between the change in the lengths of the two arms of the interferometer. [The GW causes a length change in each "arm" of a GW detector; the interferometer signal is the difference between the length changes in the two separate arms. Dividing this difference by the 4 km length of the arms gives the strain h(t).] The GW that was detected produced a peak strain of $10^{(-21)}$. This is a very tiny signal. **Other influences in the environment or the detector itself will regularly cause much larger strains. Even for a strong source like GW150914, the signal will not be readily apparent by looking at the data (as we will see below). Instead, one must filter the data in some way to make the signal visible.** (This is done after one has searched through all the data and identified a strong candidate signal.)

Here is what the "raw" strain data looks like from the two detectors (Hanford/H1 in red and Livingston/L1 in blue). We show the data taken from the LOSC sampled at a rate of 4096 Hz. Here is a 32 second stretch of data with GW150914 at t = 0 s, followed by several zoom-ins near the location of the signal from GW150914. Sounds of the strain data follow the plots.



Figure 17 Gravitational-wave strain data from the Hanford (top/red) and Livingston (bottom/blue) LIGO detectors. A 32-second time window centered on the GW150914 signal is shown. [Data here and below from LOSC. There is a very low-frequency oscillation that causes the Livingston strain to be offset from 0 during this stretch of data. These low-frequency modulations do not affect the data analysis.]

If one analysis the extent of the signals in the strains from fig. 17, it can be visually observed that some perturbing factors are much bigger than the useful signal. For example in the blue strain, at -5, +7, 5, +13 seconds, the amplitude of unknown factors is bigger than the strain around 0 seconds where the GW150914 signal is presented. The same thing happen in the red strain at -9, +5, +11 +13 seconds where the amplitude of the strain is bigger than the strain around 0 seconds where the GW150914 signal is presented.

This is already a weak point for the data set, generally speaking....

The fact that someone looks for correlations considering only few seconds slices from these signals is a completely wrong mathematical approach.

Those black holes have been orbiting each others for billions of years and some is looking for correlations in a signal from them which lasts for few seconds...

Someone could consider such approach as valid if there is a correlation between signals for at least a few months or years....

The fact that Livingstone signal has a supplementary mix with a low frequency oscillation and is offset from zero is a problem, but more curios is that no one was observed that Livingstone signal is also one order of magnitude bigger.

In fig. 17, the Hanford detector the raw signal varies between approx. $+5 \times 10^{(-19)}$ and $+5 \times 10^{(-19)}$, but in the Livingston detector the raw signal varies between $+1 \times 10^{(-18)}$ and $+2,5 \times 10^{(-18)}$.

If this increase of signal strength is caused by the low frequency oscillation signal, then there is a serious problem in cleaning the data...

If this signal difference has other cause (an late update of Hanford system, etc) then there is again a problem in dealing with this raw data.

Another strange situation which has not been observed: on a calibrated scale, the Livingston signal is about 50% bigger than the Hanford signal; someone have to do the difference between two amplitude of the registered wave...

Any sound scientific mind would have discarded this set of data and corrected the situation, instead of processing them and publishing the results. Well, the LIGO scientists have chosen to go further with the data processing, so the critical analysis go further.....



Figure 18 Same as above, but showing a 10 second time window around GW150914.



Figure 19 Same as above, but now showing a 2-second time window. The oscillations seen here and in the above plots are low-frequency detector noise. No signal is visible by eye.

In fig. 18 and 19 some sequences from the previous signal is detailed. There is a very curios fact in this enlargement, and it is a pity that specialists in the field did not spot it: there is no correlation between useful signal and signal/noise ratio and the scale of representation.

The signal coming from gravitational wave must have the same intensity for both detectors. But if I represent the same signal intensity plus noise on a scale from 1 to 10 or if I represent it on s a scale from 1 to 100, there should be a certain correlation between signal and noise. This is not the case in these images. Data seems to be a perfect fitting for an unique scale.



Figure 20 Zooming-in still more to a 2-millisecond time window. The small-oscillations visible here have amplitudes $\sim 10^{(-19)}$. This is 100 times larger than the gravitational wave signal. GW150914 fills much of this time window, but there is no way to see it without filtering the data. One can easily verify that the small-scale oscillations on the blue curve have a frequency ~ 500 Hz. This is above the frequency of GW150914 and corresponds to the fundamental vibration mode of the test mass suspensions. GW150914 contains frequency components in the range of 20 Hz to 300 Hz.

Only the information from fig. 20 corroborated with the up presented example about electric currents detection, rules out the entire validity of data processing in the view of gravitational waves detection.

In the regime of very weak signals, one cannot have an perturbation signal, which is 100 times greater than the useful signal, and yet to claim that by a mathematical trick the useful signal is recovered. The noise introduced by this oscillation is much bigger than the useful signal.

Well, the cherry on the cake is the last part of analysis where it is supposed that a collision between two black holes is detected. Figure 21 presents the filtered signals from Hanford and Livingston strain.

According to GR predictions, the signal expected to be generated by a black hole collision is presented in fig. 22.



Figure 21 Filtered Hanford and Livingston strain. Frequency components outside the band of GW150914 have been removed. A signal now becomes apparent. The Hanford signal is delayed by about 7 milliseconds due to the time for the gravitational-wave to propagate between the detectors. (The Livingston detector received the signal first.)



Figure 22 Best-fit model for the gravitational wave signal as would be seen in the detector. This signal is consistent with numerical simulations of the merger of two black holes as predicted by general relativity. The black holes have masses 29 and 36 times the mass of the sun.

After other operations made with the signals from fig. 21, the signal is reconstructed and the final plot of the black hole merging is presented in fig. 23.

Apparently, for GR fanatics, there is a good match between expectations and observations and therefore the first gravitational wave detection entered in history

Is it really so?

By sure it is, but as a fake information

At a visual inspection of this representation, there seems to be a "useful signal" between about 0,4 and 0,6 seconds and outside this interval there is only the background noise.



Figure 23. Reconstructed signals from GW150914 as seen in the Hanford (red) and Livingston (blue) detectors.

Based on these data, it has to be admitted that emission of gravitational waves in case of these black holes collision, took place only for a very short interval of time, i.e. 0,2 seconds.

This picture demonstrates a fundamental flaw in the theory and practically rule out the entire GR.

I stressed out in a previous newsletter that it is not "normal" that signal get extinct immediately after the black holes collisions. It is impossible to have all the matter re-arranged in only 0,2 seconds in order to not emit gravitational waves for a longer time.

Now, it is important to analyze other facts: what happens before the collision and what happens during the effective collision.

If I count correctly, in the happiest case, the emission of gravitational waves started when the black holes were very close each others, i.e. when it remained only 10 revolutions up to the final collision. In the plot, from 0 up to 0,4 seconds the signal is flat, so no gravitational waves were emitted previously.

Why there is no emission of gravitational waves in this interval and before?

GR predicts that these black holes orbited each others for hundreds of millions of years at least, and they should have emitted gravitational waves during all this time.

Of course, the predicted emission of gravitational wave is related to the relative distance between these black holes and as the orbit shrinks, this emission has to get more intense.

In a consistent GR theory, for hundreds of years years before a black hole collision, the signal had to have a sinusoidal form with an increased amplitude in the latest moments before collision, as in fig. 24.

Figure 24. The expected sinusoidal signal before a black hole collision (time scale in centuries)

Do you recognize the template of such signal in in any of the experimental data harvested by LIGO-VIRGO consortium?

I can't see anything at all

In fig 25 some example of observed collisions released by LIGO-VIRGO consortium are presented. The longest period the sinusoidal signal which was observed, i.e. the time some supposed gravitational waves are emitted, is maximum 1,7 seconds.



Figure 25: The first three gravitational waves detections on (from top) 14 September 2015, 26 December 2015 and 4 January 2017, all produced by merging black holes. As these traces show, each signal builds up gradually and decays rapidly once the merger has happened. The horizontal axis shows the time from when the signal was first seen in the detector, while the three vertical axes show the tiny fractional distortions registered.

Going further, no GR fanatic has ever presented what happen during the collision of two black holes, so it is the case to debunk this information.

Imagine two huge amounts of compressed matter, each of them at 0,55c (i.e. 165000 km/s) and in process of collision...

There must be an unimaginable deceleration of this matter and of course a lot of energy has to be released. The problem is, nothing can escape from this collision so entire energy has to be released as gravitational waves.

For the GR fanatics it seems that accelerated matter generates gravitational waves, but decelerated matter don't. Where did they learn physics, by the way?

During the "effective" collision of two black holes, there should be the strongest emission of gravitational waves and the signal should go crazy....

I have to teach GR fanatics a bit of GR relativity and therefore I am going to advance a postulate for GR too:

GR postulate: The supposed gravitational energy emitted during matter deceleration has to be equal with the supposed gravitational energy emitted during the same matter acceleration.

If I have an black hole which emits an gravitational wave energy E, during an acceleration from zero to å, the same amount of energy has to be released when the black hole is decelerated from å to zero.

I do not want to clutter the discussion with a justification for this postulate, because for a common sense mind the idea has to be self explanatory.

According to this postulate, and assuming that GR is correct, in those 0,2 seconds when the effective collision between black holes take place, the amount of energy released must be equivalent with the amount of energy the same black holes emitted during billions or hundreds of millions of years of orbital motion before.

As consequence a more realistic expectation for the signal variation is presented in fig. 26. Do look only to the signal variation, not at the time scale which is not uniformly represented before and after effective collision. And anyway what is a correct time scale for a faked black hole with increased mass?

In fig. 26, I am going to suppose that average rate of energy transfer for gravitational waves is proportional to both the square of the amplitude and the square of the frequency. The rule is not always respected - see the case of electromagnetic waves, but here is only a qualitative discussion.

In this approximation, at a visual inspection, one can assume that energy released before the vertical blue line is equal with the energy released after; the vertical blue line represents the start of the impact between black holes. I tried to make a more common sense explanation and signal variation for the expectations in case of black holes collisions.



Figure 26 Energy emitted during acceleration and deceleration by a black hole

Let us see how some specialists with Ph. D. in GR, have interpreted the first so called black holes collision, i.e. GW150914.

Figure 27 is a synthesis of GR modeling completed with observational data and, apparently for GR fanatics, there is no flaw in the interpretation (the interested people can google the original article for more information).

I completed the picture with a label for the important peaks observed there.

By corroborating the variation of separation between black holes and their velocities with the strain amplitude, it is obvious that black holes are emitting gravitational energy as distance between them decreases and the velocities increase. All the peaks from 1 to 8, represent energy which is emitted before the effective black holes collision.

The only energy released during the effective two black hole collisions is represented by a small amortized oscillation which has no relevance for the energy budget of the entire process.

Of course, someone would like to consider that effective black holes collision took place during the highest peak registered on the scale.

It is not a problem at all if they want to assume this fact, because this assumption cannot support the energetic of the entire process either

The gravitational wave energy released in the peak number one and the amortized oscillation after is much smaller than the energy released in the summation of peak 2, 3, 4, 5, 6, 7 and 8.

GR is not able to offer a consistent explication for the energetic of this process even in case when the energy carried by gravitational wave has other mathematical expression.



Let us see who can fix this imbecility in GR ...

Figure 27 Some key results of our analysis of GW150914, comparing the reconstructed gravitational-wave strain with the predictions of the bestmatching waveform computed from general relativity, over the three stages of the event: inspiral, merger and ringdown. Also shown are the separation and velocity of the black holes, and how they change as the merger event unfolds.

SECTION V A BIT OF MATHEMATIC FOR GR FANATICS

Any mathematician or theoretician physicist is going to think that a mostly self educated person like me could not compete with an entire army of mathematicians and, in order to come with something new, it is necessary to have at least a few decades of background in mathematics. Of course I have a Bachelor degree in chemistry and physics, Master and Ph. D., but when I look back to those diplomas it remands me how the society tried to adjust me in conformity with the standard.

Of course standard is good for machines and for creating a background of information which is absolutely necessary for the luggage of a considered educated person; but standard knowledge is very detrimental for any person who wants to do real research.....

Well, a solid background in mathematics is fine, when the person involved in this activity understands not only the symbols used in mathematics but also the real use of these symbols.

Unfortunately, few people arrive to this level ever....

Most of people in this field learn how to use some symbols, which are already accepted to describe some (physical) phenomena and after that they run a software which gives them the result.

For example there are already published "scientific" papers with LIGO-VIRGO consortium where 3500 or 4000 authors are supposed to have contribution to the study. How many of them have been able to understand the flaws in the entire mathematical data treatment presented in a previous section?

There are entire branches of mathematics which are going to be ruled out and tons of so called scientific literature in this field are going to be preserved only to have for the future the memory of what a mad and infatuated society thinks it has created...

As far this is only an introductory discussion in mathematics, and as far the discussion is focused on GR, some postulates are formulated, followed by some simple considerations about their use.

Postulate: Any curvature of a vector field must increase the dimensionality of the field.

Postulate: Any curvature of a vector field affects the equations of motion and the conservation laws.

Let us assume a particle is moving horizontally after x direction with an inertial motion, as in fig. 28. Of course, describing this motion is a simple problem of dynamics which is taught to pupils at introductory lessons in mechanics.





In order to "curve" this vector, it is obvious that a second dimension of space is necessary. A vector cannot be curved and remain in one single dimension. In this peculiar case, it is necessary to have a perturbing factor (a force) which is able to generate a component of the momentum on a direction different from x axis as in fig. 29.





It is very important to be observed that in absence of a force, the initial vector cannot be curved. Curving the initial velocity vector in absence of a force, rules out the conservation laws because a transversal component of the motion would appear out of nothing.

Let us apply this simple analogy to a space deformation and see what happen when space becomes curved. In order to grasp the idea, a comparison is necessary to be made between the inertial motion of a material body in a region of space which is not curved and in a region of curved space as in fig. 30. Well, in the non distorted space region, the trajectory of the body is, as expected from classical mechanics, a straight line. The conservation laws from classical mechanics are respected for this case.

Once the inertial body enters a region of curved space, all things changes....

It is obvious that a curvature of x dimension must automatically suppose a second dimension of space let us say T. For the simplicity, I am going to assume that for the curved region of space, it is possible to describe the motion of particle after the old dimension x and the new dimension T. At general case, this is not respected all the time, because x axis changes its properties too.

When entering a region of distorted space, the velocity of the particle is going to have two components, one after the x direction and a second one after the T direction.



Figure 30

As far along the transversal direction, there is a variation in the velocity of the material body, an acceleration appears from "nothing"; well "nothing" in this case is the curvature of space which acts as a innate force.

Where is this force coming from?

To date there is no explanation for this fact, and I suppose few are going to be interested to advance one in the future.

The greater the curvature of space after T direction, the greater is this "supplementary acceleration" in a transversal direction.

It is obvious that a space curvature affects all the equations of motion for the considered particle and the conservation laws.

For example, a momentum transversal to the direction of motion appears out of thin air and the conservation of momentum and energy laws are disrespected. The angular momentum law does not hold also if the initial particles had an certain amount of angular momentum after a certain direction.

The presentation was made for a motion after one dimension, which is only a simplified situation of reality. For the case of a real particle, which has a component of momentum after each of the three direction of space, a region of space curvature implies the existence of a forth or even fifth dimensions.

Even assuming by absurd that a curvature of space after x direction, moves into the ,,already" existent y direction, does not improve the situation. One cannot get a change of momentum from x direction to y direction without a ,,real" cause, etc.

To put in evidence such space curvature, one has to look after cases which break the conservation laws.

If one assumes that a space curvature caused by the Sun exists, the same conservations law must be broken for some grazing comets moving close to the Sun, etc. Of course, many other astronomical phenomena can be analyzed from this perspective.

Law of inertia is also affected, because the body changes its trajectory without any "aparent" force acting on it. In fact, the case of an "detector" for gravitational waves which weigh about 45 Kg, performing oscillations with a frequency of 100 or 250 Hz is a pure imbecility. This situation is going to be debated in a future newsletter related to the way an gravitational detector works.

Postulate: Scalar or scalar type units admit no curvature.

In physics two main type of units are used: vectors and scalars. Unlike a vector unit, which can be forced to curve from one direction to another direction, a scalar unit cannot do such acrobatics.

Let us consider a temperature field. It is obvious that for each point of the considered physical system a value for the temperature can be measured; but to admit that one can curve the temperature in another dimension is completely non sense.

Time is a scalar unit or at least a scalar type of physical unit. As consequence time cannot be curved because it has no background structure which allow this curvature to take place.

For the GR fanatics, time can be curved and this would suppose that time is a vector unit.

In fact there are some more extravagant GR fanatics which published some materials admitting that time has more dimensions and after their opinion it is possible to put in evidence this fact; from the perspective of the new theory this is pure science fiction and not science.

The fact that time is a scalar type of unit can be simply demonstrate by reductio ad absurdum.

Let us suppose that time is a vector unit and analyze a simple consequence for this fact.

In introductory physics, velocity is a vector quantity that indicates the displacement of a material point in time and of course into a certain direction according to the formula:

$$\vec{v} = \frac{d\vec{r}}{dt}$$

It is obvious that dt, is considered a scalar unit in classical mechanics, and from mathematical point of view, the velocity formula makes sense. A vector unit, i.e. dr, can be any time multiplied or divided with a scalar unit which is dt.

If one wants to consider time as a vector unit, then the formula of velocity makes no sense in physics, and another mathematics had to be advanced.

$$\vec{v} = \frac{d \vec{r}}{d \vec{t}} \rightarrow \cdots$$
 mathematically not defined

The division of vectors makes no sense form physical point of view, and therefore it could not been defined for the three dimensional space and for physics.

As consequence it is impossible to admit that time is a vector units. By demonstrating that time cannot be curved, the entire GR edifice receives crashes like a sand castle...

In the real world, as presented in previous newsletter, it is impossible to mingle space and time into a kind of syrup and later on, to extract the needed space time interval for imagining other imbecilities...

If time is a vector unit, then any other formula which involves time has to be revised too....

I have seen that most physicists are not so keen to renounce at the luggage of absurdities preached with each occasion. Maybe some mathematicians wants to give me a helping hand in preparing the field of mathematics for the future foundation of science.

SECTION VI GRAVITATIONAL WAVES LENSING

According to some famous GR fanatics, gravitational lensing of gravitational waves (GWs) should occur in the same way as it does for light. However, it is admitted that some peculiarities of GW, could potentially favor the observation of such lensing much easier than in case of light.

It is quite known that the concentrated masses located at the centers of galaxies tend to block the focused light with clouds of dust and also tend to emit some "noise" that often dominates any desired focused signal. The focused "ring" of light rays can only be observed if its diameter is sufficiently large so as to avoid such dust and noise.

It is assumed that such dust clouds and noise are not going to be a "problem" for GWs propagation and focus.

As consequence, it is expected that probability of observing gravitational lensing for gravitational waves has an increassed probability to occur in comparison with optical case.

This topic is introduced here only to have the intelectual property covered for later.

As already presented in other articles related to electromagnetic waves and photons, there is a real lensing effect only for photons (IR, VIS; UV, X-ray).

Electromagnetic waves (radio, microwaves) cannot be lensed, but for them only a diffraction or refraction phenomena can be observed.

In a similar manner to electromagentic waves, *if gravitational waves exists, they cannot ever be lensed by another masses in their path.*

The 2020 nobel prize for "psychics" is a quest to continue this series of articles about imbecility of General relativity theory.

Being hectic with time, the following topics about GR are only reminded here and they are going to be presented in a future newsletter:

1. HOW A GRAVITATIONAL WAVE DETECTOR WORKS.

- 2. GRAVITATIONAL WAVE AND OPTICAL EMMISION
- 3. STATIC AND DINAMIC TIME DELAY IN GR
- 4. GRAVITATIONAL WAVES AND FAKED NEUTRON STARS

SECTION VII PERFORMING MECHANICAL WORK WITH HEAT ABSORBTION

As previously presented, the so called modern thermodynamic theory is based on the assumption that part of the heat generated during a fuel burning is converted into mechanical work.

For about three centuries the entire research of all scientists working in this field was concentrated to make more and more efficient this process of burning in order to obtain more mechanical work.

Of course, no one can contest that from practical point of view there are notable results. The simple fact that mileage for a car has continuously increased by using the same amount of fuels is a welcome result.

The problem is, with smaller efforts, better results would have been obtained with a proper and sound foundation of thermodynamics. There have been more articles dealing with thermodynamic foundation on my website and this article, although very short and very simple, is of paramount importance.

This section opens a new window of research in thermodynamics and tries to answer to a simple question: *Can mechanical work be produced by absorbing heat from the surroundings?*

This idea flies in the face of modern thermodynamics, which admits that combustion heat is necessary to be delivered to a system in order to generate mechanical work. As far this process of conversion is not 100% efficient, the same modern thermodynamics needs to transfer another amount of heat to the surroundings, otherwise the engine heats itself and get damaged.

Yet, in the new proposed theory, mechanical work is generated by a gradient of pressure. This gradient of pressure can be secondarily influenced by the exchange of heat between the considered thermodynamic system and surroundings.

In most cases, the gradient of pressure is further amplified by the heat generated during the fuel burning. In other cases, which are not yet studied, there is the possibility to generate an gradient of pressures by absorbing heat from the surroundings.

Let us consider again a version of the Papin experiment as in fig. 23 and as working agent another freon, i.e. tetrafluorometane (R-14). This compound indicated as R-14 in the list of refrigerants is restricted for being released in the atmosphere as far is a compound which last for long time there and affects the climate, but the compound can be used in closed circuits under a controlled functioning.

Our experiment has only a pedagogical purpose, i.e. to demonstrate that a mechanical work can be produced when heat is absorbed from atmosphere; therefore the recovery of this

compound after functioning or a possible implementation for larger scale use is not described here.

As far R-14 has a low boiling point, i.e. -127 °C, it is obvious that in liquid state, this compound has to be kept in Dewar containers.

What happen with such liquid when it is poured on a surface?

Well, it absorb heat from the surface or from atmosphere and starts to boil until all the amount of liquid vaporizes.

The same thing happen if one uses this compound in an experiment similar to what Papin made centuries ago. Of course the set-up for experiment has to be a bit modified, because the condensing of vapors after performing mechanical work is not interesting and even not possible with this simple configuration.

The experiment can be easily visualized as a kind of two steps engine. In a first step there is an admission stage: an amount of liquid R-14 is feed to the cylinder and after that the admission valve is closed.

The liquid absorbs heat from the cylinder walls or from the "cooling system" of the engine. Of course in this case the so called "cooling system" for an engine works to bring heat from atmosphere toward cylinder and practically it heats the cylinder. In normal conditions, the atmosphere has a temperature which is higher than the boiling point of R-14. Even at Earth Poles, the temperature rarely arrives to -70 °C, so R-14 is going to boil and evaporate even in polar conditions.

As result of heat absorbed from surroundings (cylinder walls and atmosphere), the liquid vaporize and the pressure inside cylinder builds up. As far gases have much bigger volume as liquids, the increase in pressure pushes up the piston and mechanical work is performed.

In our simple set-up and for pedagogical purpose, I added a weight on the top of the piston, so the mechanical work performed is simple to be grasped.

In the same time, the gravitation help this improvised engine to perform the return motion of the piston to the initial state, after the work is done. Once the works is done, the exhaust valve opens and released most of the gas from the cylinder.

The piston and the weight on top of it fall under the action of gravitation and this action makes possible for this engine to return to the initial state and start another cycle.

The yield of this engine is mainly dictated by the rapidity of heat transfer from surroundings to the freon.

This succession of steps is presented in fig. 31.



Figure 31 Improvised two steps engine working with absorption of heat from atmospheres

The experiment rules out the second law of thermodynamics and the cost to perform this experiment is insignificant.

From the perspective of new proposed theory, in order to generate mechanical work a gradient of pressure is necessary and this can be obtained in various way. Relevant for this section is the fact that one can obtain a gradient of pressure by vaporizing a fluid with the heat absorbed from the surroundings.

SECTION VIII MASS ENERGY EQUIVALENCE AND NUCLEAR FORCES

The infamous relationship between mass and energy is expressed in the following equation: $E = mc^2$, where: c is the speed of light (2,998×10⁸m/s), E is energy and m the mass expressed in units of joules and kilograms, respectively.

It is assumed that Albert Einstein first derived this relationship in 1905 as part of his special theory of relativity; some are contesting this priority to Einstein, but I am sure that for the science of the future, to establish the priority of this relation is going to become a futile thing.

According to this equivalence formula, every mass has an associated energy, and similarly, any process that involves a change in energy must be accompanied by a change in mass.

The mass equivalence topic has been already presented previously for chemistry.

https://www.pleistoros.com/en/books/nuclear/mass-energy-equivalence

There are also some things I would like to add in completion to that material in order to make things clearer...

For a layman understanding the "binding energy" refers to the amount of energy it takes to break something in pieces.

For an electron in a hydrogen atom (ground state) this energy is equivalent to its ionization energy: 13,6 eV.

The greater is this binding energy for an electron orbiting an nucleus, the more amount is necessary to break the system in pieces so there is a direct correlation between binding energy and stability.

For comparison, it takes about 24,6 eV to remove first electron and 54.4 eV to remove the second electron from a He atom. Since it takes more energy for this particles separation as for hydrogen, He atom is obvious a more stable system in comparison with an hydrogen atom.

In that article, it was demonstrated that in case of electrons orbiting around nuclei, mass cannot be converted in energy. If this is possible, then electron would stop being elementary particle and chunks of it have to be converted into energy. Of course this possibility would violate the famous quantum idea too...

The exemplification was made for some heavy elements like bismuth, where for the electrons occupying the most internal shell, about 20% of electron mass have to be converted into energy.

It is important to be reminded that up to this moment, although there are accelerators of electrons working at level of hundreds of GeV, it was not possible to split an electron in chunks

in such very extreme conditions.

Strange enough, in case of an atom, the most "infamous formula" in physics assumes that chunks from electron mass can be removed and converted into energy in very mild conditions; unfortunately no explanation is offered about how the process is performed.

Well, it is a pity that in more then a century from the advent of this infamous formula, none of its fanatics have been analyzing the case of electrons arrangement for heavy elements. One can find that for electrons a greater percentage of its mass can be converted into energy as for nucleons in nuclei. It is really true that effects are much smaller as absolute value in case of electrons because electron mass is much smaller as the mass of a nucleon.

All theoreticians in the field have focused on nuclear field, where this equivalence massenergy formula is considered to resolve quite any problem

It is high time to see the implications of $E=mc^2$ formula for atomic nuclei too.

One of first application of this formula is related to the binding energy of nucleons in atomic nuclei.

The concept of binding energy works fine if one considers the nuclei of atoms as independent physical systems. In this case too, the "binding energy" refers to the amount of energy it takes to break a nucleus in pieces.

The general idea remains the same as previously: the greater is a nucleus binding energy, more stable the nucleus is and more amount is necessary to break it in pieces.

It is assumed that mass energy equivalence can explain the fact that mass of an atom is always less than the sum of the masses of its component particles.

In case of ¹H, which is composed of one electron and one proton, the mass defect is very small and is given only by the energy which keep electron in orbit around proton.

Each atomic species with a mass greater than one must have a nucleus with more than one nucleon so the mass defect is s composite effect coming from nucleus and from electrons orbiting the nucleus.

For example, the experimentally measured mass of an atom of deuterium (²H) is 2,014102 amu, although its calculated mass is 2,016490 amu:

 $m_{2H}=m_{neutron}+m_{proton}+m_{electron}=1,008665+1,007276+0,000549=2,016490$ amu

To calculate the mass defect in case of heavier nuclides is simple and straightforward and follows the same procedure: summation of mass of nucleons and electrons and subtract the measured mass for the nuclide.

As example, an iron-56 atom has 26 protons, 26 electrons, and 30 neutrons. We could add the masses of these three sets of particles; however, noting that 26 protons and 26 electrons are

equivalent to 26 1H atoms, it is possible calculate the sum of the masses more quickly as follows:

calculated mass = 26×mass ¹H + 30×mass neutron = 26×1,007825+30×1,008665 = =56,463400 amu experimental mass =55,934938 By subtracting these values, the mass defect is: mass defect=calculated mass-experimental mass=56,463400-55,934938=0,528462 amu The nuclear binding energy is 0,528462 amu × 931 MeV/amu = 492 MeV.

The binding energy per nucleon is 492 MeV/56 nucleons = 8,79 MeV/nucleon.

The exemplifications made previously are not 100% accurate because the total mass defect has to shared between nucleons and electrons. Anyway, when speaking about these things, the theoreticians in the field have left aside electrons and their energy binding (is a few order of magnitude smaller than the nuclear one) so the following discussion will maintain this status quo in order to simplify the situation.

The difference between the sum of the masses of the components and the measured atomic mass is attributed to the mass defect of the nucleus.

Just as an atom or a molecule is more stable than its isolated atoms, a nucleus is more stable (lower in energy) than its isolated components.

Consequently, when isolated nucleons assemble into a stable nucleus, energy is released. According to mass energy equivalence formula, this release of energy must be accompanied by a decrease in the mass of the nucleus.

It is further assumed that larger the value of the mass defect, the greater the nuclear binding energy and the more stable the nucleus is.

In the case of deuterium, the mass defect is 0,002388 amu, which corresponds to a nuclear binding energy of 2,22 MeV for the deuterium nucleus. Because the magnitude of the mass defect is proportional to the nuclear binding energy, both values indicate the stability of the nucleus.

The same procedure can be applied to any known nuclide and of course a variation of nuclear binding energy per nucleon in case of each nuclear species can be obtained - fig. 32.

Some of the nuclides with masses close to 60, have the maximum energy binding per nucleon and these are the most stable nuclear species.

The rationale for this peak in binding energy is considered the interplay between the electrical repulsion of the protons in the nucleus and the nuclear force. The nuclear force is

supposed to keep protons and neutrons together at short distances, while protons repel each other because they are like charges. As the size of the nucleus increases, the strong nuclear force is only felt between nucleons that are close together, while the electrical repulsion continues to be felt throughout the nucleus; this leads to instability and hence the radioactivity and fissile nature of the heavier elements.



Figure 32 Variation of energy binding energy per nucleon

When someone with a "bit of common sense" analyses the up presented situation, it is impossible to not observe a fundamental flaw in the physical model; for the future science this is a pure imbecility and not a flaw, but for the moment, it is necessary to spare the ego of some scientists and take it easy....

In order to grasp the idea behind this imbecility, it is necessary to make an analogy and compare what happen in case of an atom and/or a nucleus and in case of classical gravitational interaction.

It is important to be reminded that this analogy is made in the frame of Hooke-Newton model of gravitation, although the model is not entirely correct.

The general expression for gravitational potential energy arises from the law of gravity and is equal to the work done against gravity to bring a mass to a given point in space. The gravitational potential energy near the central body is negative, since gravity does positive work as the mass approaches. This negative potential is indicative of a "bound state"; once a mass is near a large body, it is trapped until something can provide enough energy from outside in order to allow it to escape. The general form of the gravitational potential energy of mass m is:

$$U = \frac{-GMm}{r}$$

where G is the gravitation constant, M is the mass of the attracting body, and r is the distance between their centers.

In practice, one can determine the potential energy of two particles separated by a distance "r", using the concept of zero potential energy at infinity - fig. 33; as far the force approaches zero at large distances, it makes sense to choose the zero of gravitational potential energy at an infinite distance away.



Figure 33

The situation is a well known topic from classical mechanics and it is not worth insisting upon a detailed description.

There is an interesting situation, I would like to discuss though: *what happen if another interaction overlaps to this well known gravitational interaction?*

As far the main topic is related to the so called mass defect, it would be nice to have the supplementary interaction generated by this effect; unfortunately, by modifying the mass of particles, the gravitational interaction modifies too, the overall situation becomes cluttered with secondary factors and difficult to be interpreted.

So, I am going to suppose that another pure mechanical interaction, for example a spring, is overlapping the gravitational interaction and both interactions are quite on the same order of magnitude.

In order to simplify the situation, the pictures bellow shows only the forces acting on the test mass m, although there are corresponding equal but opposite forces acting on the central body M, too.

Also, very important to be highlighted, this is not an ordinary spring too!

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In the first case presented in fig. 34, this spring was already stretched out and for the entire distance between infinity and distance r, it acts on the mass m with a force directed toward the mass M; in a laymen words, this huge imaginary spring does not arrive to the state of compression up to the distance r, and therefore as particle m moves from infinity up to r, both F_g and F_e act in the same direction.



Figure 34

It is obvious even for a laymen that having such configuration the system is more stable in comparison with the case when only the gravitational force was present.

In this latest case, at distance r from mass M, the total potential energy is a summation between the gravitational energy and the spring potential energy:

 $U_{total} = U_{gravitational} + U_{elastic}$

The bound state of the mass m is conditioned by the total potential energy, and of course the parameters of motion changes in comparison with the case only a gravitational force was acting on mass m.

As far we considered that $U_{elastic}$ is quite on the same order of magnitude as $U_{gravitational}$, the U_{total} is approximately equal with 2 × $U_{gravitational}$ so the stability of the system is doubled by the summation of these interactions.

Of course, in order to free the mass m from the "bound" state, it is necessary to deliver an energy greater than total binding energy and this means in this case an energy greater as $2 \times U_{\text{gravitational}}$ is necessary.

Even for a pupil mind, by delivering an energy only equal to $U_{elastic}$ or to $U_{gravitational}$, the mass m will not become free, because the other interaction keep it in the system.

In the second case presented in fig. 35, this huge imaginary spring was already compressed, and the initial distance between m and M was initially r.

What happen in this case with the m mass, keeping in mind that forces are acting in opposite directions?

For a pupil or laymen understanding, it is obvious that the "bound state" of the mass m becomes loose, due to the fact that these interactions acts in opposite directions and they are on the same order of magnitude.

From mathematical point of view, the total potential energy formula for the mass m is the difference between the gravitational potential energy and elastic potential energy:

 $\boldsymbol{U}_{\textit{total}} {=} \boldsymbol{U}_{\textit{gravitational}} {-} \boldsymbol{U}_{\textit{elastic}}$

As far we considered that $U_{elastic}$ is quite on the same order of magnitude as $U_{gravitational}$, the U_{total} becomes zero, so the "bound state" for the mass m does not persists anymore.



Figure 35

It is obvious even for a laymen that having such configuration the stability of the system is seriously affected and in fact there is no bound system anymore.

Well, now it is high time to go further and see what happens for an atomic structure. Modern quantum theory assumes that an electrical interaction, quite similar to the gravitational one exists between electrons and nuclei in case of atomic structure.

By performing a similar analysis, it is possible to demonstrate that such an atomic structure composed by opposite electric charges becomes more stable into a bound state.

In this case, an electric potential V is defined as being equal with the work done in transferring a unit of electric charge from infinity to the point.

I am not going to enter and discuss in detail the assumptions of quantum theory, but even for a laymen the general idea is simple: the modern picture of atoms, advanced by quantum mechanics, relays on the "bound states" of electrons to nuclei as result of this electrical interaction.

For the purpose of our discussion, it is importation to be highlighted that by delivering to an electron an amount of energy greater then the binding energy, the electron becomes free.

In my opinion, this situation seems quite consistent, in the frame of present day physics.

The problem is that fanatics of mass energy equivalence admit that a second interaction exist between nuclei and electrons and due to this interaction an amount of electron or nuclei mass get converted into energy.

This second interaction is not coming from a force. In fact, there is little or no information about the nature of this interaction.

Fanatics of mass energy equivalence postulates that a bit of electron or nuclei mass is converted into energy and of course, this enters in contradiction with the previous explanation of electrons binding energy as coming from electrical interaction.

Apparently a Gordian knot was unveiled for modern science and this situation cannot get a consistent solution, irrespective of what imbecility is adopted to solve it.

If the binding energy of electrons is caused by the electrical interaction, then for atomic structure the mass equivalence formula is ruled out.

If the binding energy of electrons is caused the mass being converted into energy, then the electric interaction between electrons and nuclei has to be ruled out.

If the binding energy of electrons is caused by an overlapping between these interactions (electrical interactions and mass converted into energy), the entire quantum theory has to be reformulated. Of course, it is easy to demonstrate that such overlapping of these two interactions cannot lead to a stable atomic structure from many many reasons. For example, the energy generated by a possible mass energy conversion cannot fit to a potential energy coming from a conservative force and this means a lot of problems for the theory.

In the new proposed theory, the mass equivalence hypothesis has nothing to do with atomic structure and this idea was presented already a decade ago....

Ok, let us go further and consider the nuclei of atoms from the perspective of this mass equivalence formula. Maybe here fanatics of mass energy conversion are luckier, as far the entire nuclear field is presently formulated based on this equivalence....

The interactions between nucleons are a bit more complicated and this topic is going to be presented into a future newsletter. For the moment, it is important to adopt a simplified version based on an attraction force (the so called nuclear force) and an repulsive force (electrical repulsion between protons).

As far the protons inside the nucleus are the same charge, they repel; it is obvious that this electrical potential energy variation has the same form as previously, only the sign is changed.

In a simplified assumption it is possible to consider that nuclear attractive force has a dependency with distance on the form of $1/r^n$, where n>2 and this force is derived from a potential function too.

With these considerations, the potential energy of a nucleon inside a nucleus is a difference between the attractive potential of nuclear force and the repulsive potential of electrostatic force:

 $U_{nucleon} = U_{nuclear force} - U_{electric}$

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The fact that inside nuclei, the potential energy of protons have to be much different then potential energy of neutrons is an obvious fact, but this idea is going to be discussed later.

For our exemplification, it is important to highlighted that inside nuclei there are two forces, each of them derived from some potential function and the size of these potentials and their interplay dictate the nuclear stability.

So, if this is the situation, even a laymen have to ask himself: What the heck is the massenergy conversion doing in this case inside a nucleus?

If one assumes that such imbecile mass energy conversion is possible, then inside nuclei there is a third type of interaction and the stability of nuclei is a difficult task to be predicted.

The same considerations made previously for the atomic structure, have to be repeated for nuclear structure

If the binding energy of nucleons is caused by the nuclear and electrical interactions, then for nuclear structure the mass equivalence formula is ruled out.

If the binding energy of nucleons is caused the mass being converted into energy, then the nuclear and electric interaction between nucleons have to be ruled out. *The accepted nuclear physics is based on this imbecility, so it is obvious the value of tons of literature already published in this field.*

If the binding energy of nucleons is caused by an overlapping between all these three interactions, the entire nuclear theory has to be reformulated. Of course, it is easy to demonstrate that such overlapping of these three interactions cannot lead to a stable nuclear structure from many many reasons. For example, the potential energy generated by a possible mass energy conversion cannot fit to a potential energy coming from a conservative force and this means a lot of problems for the theory.

In the new proposed theory the mass equivalence hypothesis has nothing to do with nuclear structure too.

Practically, the mass energy conversion is eliminated from the nuclear physics and from atomic physics; previously this idea was eliminated from relativity too.

Is there any other relevant application for this idiocy which need to be debated?

SECTION IX MASS ENERGY EQUIVALENCE AND SUBNUCLEAR FIELD

This section is going to demonstrate that mass energy formula enters in conflict with the subnuclear structure of nucleons too!

Protons and neutrons are best known as the components of atomic nuclei, but they also exist as free particles. Free neutrons are unstable, with a half-life of around 14 minutes. A ¹H nucleus is in fact formed from one proton and the same proton can be found as cation when the electron is removed from atom.

Until the 1960s, nucleons were thought to be elementary particles, not made up of smaller parts.

Now, they are accepted to be composite particles, made of three quarks bound together by the so-called strong interaction. The interaction between nucleons is called internucleon interaction or nuclear force.

A proton is composed of two up quarks and one down quark, while the neutron has one up quark and two down quarks – fig. 36.



Figure 36

Quarks are held together by the strong force, or equivalently, by gluons, which mediate the strong force at the quark level.

An up quark has electric charge + 2/3e, and a down quark has charge - 1/3e, so the summed electric charges of proton and neutron are +e and 0, respectively.

The masses of the proton and neutron are quite similar: The proton is 1.6726×10^{-27} kg or 938.27 MeV/c2, while the neutron is 1.6749×10^{-27} kg or 939.57 MeV/c2. The neutron is roughly 0.13% heavier. The similarity in mass can be explained roughly by the slight difference in masses of up quarks and down quarks composing the nucleons. However, a detailed explanation remains an unsolved problem in particle physics.

The spin of the nucleon is 1/2, which means they are fermions and, like electrons, are subject to the Pauli exclusion principle: No more than one nucleon, e.g. in an atomic nucleus, may occupy the same quantum state.

The isospin and spin quantum numbers of the nucleon have two states each, resulting in four combinations in total. An alpha particle is composed of four nucleons occupying all four combinations, namely it has two protons (having opposite spin) and two neutrons (also having opposite spin) and its net nuclear spin is zero. In larger nuclei constituent nucleons, to avoid Pauli exclusion, are compelled to have relative motion which may also contribute to nuclear spin via the orbital quantum number. They spread out into nuclear shells analogous to electron shells known from chemistry.

The magnetic moment of a proton, denoted μp , is 2.79 μN (where μN represents the atomic-scale unit of measure called the nuclear magneton). The magnetic moment of a neutron is $\mu n = -1.91 \ \mu N$.

For the future, it is worth mentioning that exploration of the internal composition of nucleons, provided us the most representative deviant artistic works ever....

Here are some examples published in an article entitled *Structure functions of the nucleon and their interpretation* by A. M. Cooper-Sarkar, R.C.E. Devenish and A. de Roeck



Figure 37 Extreme deviant abstract art in scientific literature - case a)



Figure 38 Extreme deviant abstract art in scientific literature - case b)



Figure 39 Extreme deviant abstract art in scientific literature - case c)



Figure 40 Extreme deviant abstract art in scientific literature - case d)



Figure 41 Extreme deviant abstract art in scientific literature - case e)

It is difficult for me to appreciate the value of these deviant artefacts; I suppose that any child, before learning how to write, painted such kind of images or maybe even better

The article is hosted by the website of the most famous organizations in the nuclear particles research, i.e. CERN:

http://cds.cern.ch/record/340363/files/9712301.pdf

Going back to our topic, the starting point of the new analysis is the assumption that nucleons have a complex structure and a quark models was already developed for explaining this fact. Up to this moment, it was not possible to break a nucleon in the expected sub nuclear quarks, although there is a high hope that such thing is going to be made.



Figure 42 Extreme deviant abstract art in scientific literature - case f)

The largest accelerator currently operating (Large Hadron Collider, CERN) is able to accelerate protons at energies of the order of TeV and yet, it was not possible to obtain a single quark in experiments at these huge energies.

On the other hand, the energy of nucleons inside of nuclei of different atoms is less than
10 MeV, and yet in these mild conditions some theoreticians assumes implicitly or explicitly that phenomena involving quarks take currently place.

One implicit phenomena taking place at nuclear level and involving quarks is by sure, the so called mass energy conversion.

At a first expectation, as far a nucleon is assumed to have a composite structure, it would be expected that such mass energy transformation presents a kind of "megaquantum variation".

For example, in case of a deuterium nuclide formation, one would imagine that a quark from a proton and a quark from a neutron are transformed into energy as in fig. 43.





At a simple estimation, it is obvious that such conversion of quarks into energy does not fit with reality because there would be a huge discrepancy between expected ΔE and observed one.

One third of proton and neutron mass would give an amount of energy :

 $\Delta E = 938,27/3 + 939,57/3 = 625,94 \text{ MeV}$

The observed ΔE for deuterium is about 2,2 MeV.

OK, if an entire quark is not converted into energy, by sure, a part of a quark cannot be converted either. Such process would assume that not only nucleons are composite systems, but quarks are composite systems too and to think that only a portion of a quark is converted into energy in the up mentioned conditions is completely absurd.

The conservation of charge would not be respected too in such kind of transformations, so this is another impediment for assuming this hypothesis. In fact only the charge conservation forbid quarks to ever be converted into energy.

The only possibility to convert a nucleon in energy is to take some of his gluons or so called "energy of quarks interaction" and "convert" it into energy – fig. 44. If this is possible, then, this is not a conversion of mass into energy at all; this would be only a transfer of energy f(x) = 1.

from "inside" nucleon toward another physical system.



There is a major problem with this idea too: such transfer of energy would break automatically the nucleon into its component quarks and this thing was never observed yet - fig. 45.





So, the conclusion is very simple: the mass energy conversion is completely incompatible with the nucleons internal structure and one theory excludes automatically the other one.

The new proposed theory by sure excludes the mass energy conversion hypothesis.

If the accepted internal structure of nucleons is true or false, this is another problem for the future.....

SECTION X NUCLEAR SHELL MODEL AND CLAS EXPERIMENTS

Following the discovery of nucleus about a century ago, more theoretical models were advanced in order to explain its properties. The most relevant nuclear models are the Liquid Drop Model, the Shell Model and the Collective Model.

Each of this models are considered suitable for explaining some of the properties of atomic nuclei, but none of them were able to explain the entirety of nuclear properties and rule out the others.

The Liquid Drop Model treats the nucleus as a liquid. Nuclear properties, such as the binding energy, are described in terms of volume energy, surface energy, compressibility, etc.– parameters that are usually associated with a liquid. This model has been successful in describing how a nucleus can deform and undergo fission.

The nuclear shell model is a variation of the atomic model, which uses the Pauli exclusion principle to describe the structure of the nucleus in terms of energy levels. The first shell model was proposed by D. Ivanenko and E. Gapon in 1932. The model was later developed by several physicists, most notably E. P. Wigner, Maria Goeppert Mayer, D. Jensen, etc.

Similar to electrons arrangement into shells around the nucleus, it is assumed that nucleons inside nucleus are supposed to follow the same pattern.

Since protons and neutrons are also fermions, the energy states the nucleons occupy are filled from the lowest to the highest as nucleons are added to the nucleus. In the shell model the nucleons fill each energy state with nucleons in orbitals with definite angular momentum. There are separate energy levels for protons and neutrons. The ground state of a nucleus has each of its protons and neutrons in the lowest possible energy level. Excited states of the nucleus are then described as promotions of nucleons to higher energy levels. This model has been very successful in explaining the basic nuclear properties. As is the case with atoms, many nuclear properties (angular momentum, magnetic moment, shape, etc.) are dominated by the last filled or unfilled valence level.

When a nucleus has an even number of protons and neutrons, such a nucleus is more stable than with the odd numbers. This number is known as "magic numbers" and they offer a greater stability to the system. Following is the sequence of magic number:

2, 8, 20, 28, 50, 82, 126.

When nuclei will have both neutron number and proton number equal to one of the magic numbers, they are known as "doubly magic". Calcium is an example of a nucleus that has a doubly magic number.

The shells for protons and for neutrons are independent of each other. Therefore, "magic nuclei" exist in which one nucleon type or the other is at a magic number, and "doubly magic nuclei", where both are.

The properties of nuclei are thus characterized by the number of nucleons and by the ratio between neutron and proton numbers.

The Collective Model emphasizes the coherent behavior of all of the nucleons. Among the kinds of collective motion that can occur in nuclei are rotations or vibrations that involve the entire nucleus. In this respect, the nuclear properties can be analyzed using the same description that is used to analyze the properties of a charged drop of liquid suspended in space. The Collective Model can thus be viewed as an extension of the Liquid Drop Model; like the Liquid Drop Model, the Collective Model provides a good starting point for understanding fission.

In addition to fission, the Collective Model has been very successful in describing a variety of nuclear properties, especially energy levels in nuclei with an even number of protons and neutrons. These even nuclei can often be treated as having no valence particles so that the Shell Model does not apply. These energy levels show the characteristics of rotating or vibrating systems expected from the laws of quantum mechanics. Commonly measured properties of these nuclei, including broad systematics of excited state energies, angular momentum, magnetic moments, and nuclear shapes, can be understood using the Collective Model.

The Shell Model and the Collective Model represent the two extremes of the behavior of nucleons in the nucleus. More realistic models, known as unified models, attempt to include both shell and collective behaviors.

Compared with most physical systems, nuclei are difficult to study and the reason lies in the strength of the nuclear interaction, which results in a very tightly bound system. There are basically two ways to investigate nuclear properties, namely radioactive decay and nuclear reactions.

The experiment performed by the CLAS collaboration can be considered one of the most relevant experiments in the last decades in nuclear physics.

The idea of experiment is quite simple and other similar experiments were performed before with the same set-up but different range of energies for the electron incident beam.

When a high energy beam of electrons collides with an atomic nucleus, beside the deflected electrons, one proton and one neutron are ejected from the nucleus – fig. 46.

This was a bit of a shock for the nuclear physicists in the field and I think it is worth reading some entire articles about this kind of experiments.



Figure 46 CLAS colaboration experiment (internet picture)

Here I am going to reference the article I found in internet: https://www.nature.com/articles/s41586-018-0400-z

Probing high-momentum protons and neutrons in neutron-rich nuclei

The CLAS Collaboration, Nature volume 560

Abstract

The atomic nucleus is one of the densest and most complex quantum-mechanical systems in nature. Nuclei account for nearly all the mass of the visible Universe. The properties of individual nucleons (protons and neutrons) in nuclei can be probed by scattering a high-energy particle from the nucleus and detecting this particle after it scatters, often also detecting an additional knocked-out proton. Analysis of electron- and proton-scattering experiments suggests that some nucleons in nuclei form close-proximity neutron-proton pairs with high nucleon momentum, greater than the nuclear Fermi momentum. However, how excess neutrons in neutron-rich nuclei form such close-proximity pairs remains unclear. Here we measure protons and, for the first time, neutrons knocked out of medium-to-heavy nuclei by high-energy electrons and show that the fraction of high-momentum protons increases markedly with the neutron

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excess in the nucleus, whereas the fraction of high-momentum neutrons decreases slightly. This effect is surprising because in the classical nuclear shell model, protons and neutrons obey Fermi statistics, have little correlation and mostly fill independent energy shells. These high-momentum nucleons in neutron-rich nuclei are important for understanding nuclear parton distribution functions (the partial momentum distribution of the constituents of the nucleon) and changes in the quark distributions of nucleons bound in nuclei (the EMC effect). They are also relevant for the interpretation of neutrino-oscillation measurements and understanding of neutron-rich systems such as neutron stars.

This is an experiment worth a Nobel prize because it opens a new window of research in nuclear field. Unfortunately, the Nobel supporters think that by prizing imbecility in physics automatically this legitimate their action and things are going on.....

In our modern society, most of us are craving for a bit of fame, at least for a moment...

Who cares about what happen tomorrow? Who cares about the way this fame is gained?

Anyway, I brought up this kind of experiments because the consequences of this experiment are tremendous and, at a first glance, this experiment rules out completely the shell model of nucleus.

The experiment demonstrates that a proton forms a pair with a neutron an not with another proton as the shell nuclear structure assumes.

If indeed a proton forms a pair with a neutron, then what is real and what is only supposition in tons of literature published about nuclear field?

I do not think that someone wants to contests the experiment, neither do I, but I think it is important to revise a bit some concepts before having a solid interpretation.

The first idea I would like to advance here, complicate a bit the entire physics, chemistry and of course the nuclear field.

When a collision between two material bodies is presented in the classical mechanics, the magnetic interaction is not taken into consideration.

Most of the material bodies around us, except the man made ones, are not magnetic so it is obvious that such interaction was somehow neglected; at the time classical mechanics was developed, magnetism was only a fancy curiosity and not a science

Now, it is handy to find magnets of any geometry and colliding magnets should be a very important topic of research, because the outcome of such collisions are not as simple as one can guess.....

When two magnets are approaching each other, a torque is generated and the equations of

motions before and after collision becomes a bit more complicated....

This idea has to be implemented in the mechanism of chemical reactions because the formation of a new chemical bond supposes a re-orientation of electron magnetic moments and this is followed by a certain re-arrangement of atoms.

The same idea has to be implemented in case of a lot of physical processes and especially the nuclear processes, because at nuclear level magnetic interactions are present all the time.

It is obvious the in case of the CLAS experiment the magnetic interaction was neglected and therefore, at least from my point of view, I am not sure if the conclusions are 100% correct.

It is curious another fact or another idea: at this huge energies, electron has like a bullet comportment for our everyday experience; when a bullet is fired, things are evolving so rapidly, that one can see the outcome and after that the causes are analyzed.

The expectations for this experiment would be that about 50% of collisions would be between electron and proton and 50% of collision would be between electron and neutron. I assumed that target nuclei are 50% protons and 50% neutrons; the percentage can vary a bit with the ratio between protons and neutrons in target nuclei.

Well, for my logic, and having in mind the energy involved into this experiment, there should be a very different outcome in case of electron-proton collision as for electron-neutron collision.

The electron, accelerated at GeV energies, has enough energy to not only knock out the proton from the nucleus, but to convert this proton in a neutron....

Why this thing does not happen?

Irrespective of the final interpretation for this outstanding experiment, the CLAS team has to be congratulated for doing a bit of real science; not the same is valid for CERN, where they are still hunting ghostly particles ...

This was only an introduction to the topic of nuclear models and more advanced facts are going to be analyzed in future newsletters.

I hope to find some materials about the collisions between high energy protons and nuclei and what happen in this case....

If there is a coupling between proton and neutron in case of a nucleus, by colliding this nucleus with a high energy proton, a certain pattern for the outcome must be observed too.

Last but not least some similar experiments performed with lower energy electrons colliding with atomic nuclei, have to be taken into discussion.

SECTION XI OLD GAME, SAME SCENE, NEW ACTORS AND FIGUREHEADS

In a previous section, I made a short presentation for the Papin case in order to see what lesseon of history has to be learned.

Of course, I am going to continue the investigations and write a book about the Papin's life. I hope that some French organizations or individuals are going to support this initiative.

By sure the life of a genial man deserves a book; by comparison, some people considered necessary to write a book which analyses only the origin of the expression used by Newton ,, by standing on the shoulders of giants".

I hope that some German and UK organizations are going to support a much larger project to write a more objective version of the XVIIth century events based on the documents available.

And now it is important to make a comparison between what happened three centuries ago and what happens now....

At that time there was only Royal Society which sabotaged Papin, for some small reasons which by sure are going to surface soon

In our days, and for a quarter of century, a crowd of imbeciles, occupying key positions in society, have been preventing an intelectual revolution, i.e. a change of the entire foundation of exact sciences.

This crowd is composed mainly by the present intelectual elites but legislatives and executives are part of the plot too.

The European Commission is a representative example which needs a special attention. They are meant to ensure progress and stability for the European Union and steward the interests of European citizens, but in reality they are doing the opposite. In the past, I filled in a complaint against European Commission without any positive result, there is still a petition to the European parliament, but as in the Savery times, it is so simple to pass by these things and cover everything in a bureaucratic procedures.

Of course, from their point of view, no one sabotaged me! They were doing their jobs only and they were only doing with a bit of excess of zeal their jobs! Can someone accuse such people that being well paid, they were doing the jobs even more thoroughly as it should have been done?

The academies and other representative institutions (universities, research centres) all over the world are part of the plot or in any case they tacitly tolerated it. I remember sending a paper for publishing to the Australian Academy of Science around 2007-2008 and they refused publishing it on the reason they do not understand the English in the article. I kept the original

version of the article on the website (about covalent bond - the atomic book) and although there are some grammatical errors, the idea can be spotted easily. Anyway, after correcting the article by a professional English speaker and resubmitting the corrected article, they did not ever answer to my email.

Any such representative institution, in a direct or in an indirect way, has took part in the plot, by not doing what they were meant to do!

The Romanian Academy, which should promote the national values, including this theory, did the worse job in its history. There are available about 40000 Euro each year for an academician to be spend on indemnity and other expenses, but one Euro for this theory could not be found! Well, don't imagine that an academician lives only from the money coming from Academy!

Of course, all the present Romanian academicians have been schooled in the wealthy western society and they are in contact with the intellectual elites; in fact, they have been paid directly or indirectly by these elites to keep their mouth shut and do nothing for promoting this theory. For a few thousands euro, they can be bought anytime at "their real market value". They have forgotten that they should represent the cultural elite of a nation and in the same time to be a model for the young generations.

It is important to be highlighted what is at stake for the entire society in this modern plot...

Well, it is impossible to quantify at this moment what this new theory in economic terms really means! I am going to exemplify what does it mean only for a part of the energetic sector. Again, I do not make the estimation for the entire energetic sector, but only to highlight the consequences for the simple application discussed today, i.e. a simple change of a fluid in a power plant without any other investment. We have shown that by doing such small change, an amount of 3000 TWh (from coal and nuclear) could have been produced "from thin air" at the level of production estimated for 2016.

Ok, "from thin air" it does not mean I got it from my pocket, it is only the result of a technological improvement.

At a cost of production of about 0,1 Euro per KWh, that amount would have represented 300 billions Euro for 2016, i.e. more than entire GDP of my country.

What do you think now? Would someone want to kill for this fortune? If you say no, then your are completely torn from the reality! 99% of the human population in these civilised times would do it with the first occasion if they would be sure they are not caught!

Attention, this is not a new technology in itself...it is only a small detail which was left aside by an imbecile science...

What can a real new technology of electricity production bring, is going to be seen in the future....

Anyway, there is going to come a time when any company in the electricity field is going to be asked why did they, directly or indirectly, opposed to a switch in the technology!

The direct consequence of not implementing these technologies is seen in climate change and industrial pollution. Of course many people, especially politicians, make a lot of noise about these topics but all the strange measures they want to implement have to be supported by citizens.

The new theory comes with solutions to at least alleviate this burden on the citizens shoulders; but, do you think that this is important for a bunch of corrupt or lazy bureaucrats?

Even a laymen could understand that society as a whole is already losing because these technologies are not implemented.

I am not going to lose because the royalties for the electricity production are going to be recovered for me starting with 2010. Supplementary the new technologies are going to remain as intellectual property and never as brevets. Someone in the field of intellectual property knows what the difference is....

If a country wants to have progress and real scientific research, then it is high time to think in the future.

Let us see what the consequence of this organised plot for the educational system are!

At least 20 generations of pupils, scholars, students and teachers were indoctrinated with a wrong scientific background and for most of them it is going to be impossible to switch to the new one. There are other generations coming from behind and although theoretically it is possible to "re-educate" these lost generations, in practice this is not going to happen.

Although there is no doubt that this new theory of science is going to become the foundation for the future progress of humanity, this theory is only in its initial stage....

In the view of opposed resistance from the imbecility of elitist intellectuals, I was forced to dedicate my scarce time to bring up new experiments and facts which could demolish or rule out the present accepted dogma, so the "proper" development of the theory is lagging behind. If for example, the theory is going to be accepted tomorrow, there is a huge vacuum in many branches of science which cannot be filled over the night.

As already presented with another occasion a period of at least five years is normally necessary for having new manuals, new teachers and so on. If the society as a whole afforded to be careless about such transition, this period is going to be extended accorded to the rules defined in a previous newsletter.

How many lost generations can a society still afford? And who is going to be charged guilty for this disaster?

Another major loss for the society as a whole is related to research expenses.

The amount of money spent on futile research in this lost quarter of century is difficult to be imagined. At national level, for a developed country, there is about 5% of GDP dedicated to research. This is money from budget dedicated to fundamental research by the grant system. If one considers the private and industrial research, the expenses are bigger. In a quarter of a century, each developed country has thrown away at least the equivalent of a GDP....

Of course some are going to argue that part of these research are applicative research which remains valid even the foundation changes. This is true, but now there is necessary other

input of money to clean up the mess and decide what is going to remain and what is going to be discarded.

If this step were to be done a quarter of century earlier, tons of junk literature would have not been written and the transition would have been simpler...

Does someone think that such process can be performed over the night and with a team of few people?

Where are these people coming if the entire community is indoctrinated with imbecilities?

So, even for research there is going to be a discontinuity period according to the rules defined in a previous newsletter.

In a future newsletter, there is going to be a broader presentation about the purpose of this theory and what are the targets....

First of all, each living person should ask himself what price would (s)he pay that his/her offspring have access to this theory.

A real price, from my point of view, would be as follows: one generation of his/her offspring work for me, in the same conditions I have been working for decades and paid as I was paid. When his/her offspring have generated at least 1% of what I generated, then they are free to have access to this theory for them and for their descendants.

If they are not able to generate in one generation that 1% of what I have generated, the contract extends in the same conditions for the next generation and so one.

What do you think about this bargain? Would you be interested in it?

The difference between a great man and a common one can be seen in these conditions.

What is going to happen when a great man acquires the power? Would he change something for the future or will he use the power only to get revenge for what happened to him previously.

The Newton – Hooke case can be framed as a classical example for what happen when a tyrant got the power in his hands....

We imagine that such repetition of things is not possible in democracy but this is false. In a democracy these things happen all the time, but they are hidden.

Beside professional harassment, for a quarter of century I was hunted by "imaginary ghosts" because when the entire system is against you, the danger comes from everywhere.

A simple walk in a beautiful but uncrowded place, in a second can become a place where your life is endangered. A simple theft can appear as an accident, but these are only appearances because few (if any) such occasional acts are done for documents. Or maybe in the latest times many thieves want to improve their scientific knowledge...

Probably the most tranquil period I remember was when I worked as a chemist for a half year to a cannabis cultivar in Switzerland. Unfortunately, this tranquillity suddenly disappeared when in a Sunday morning some gunshots outside disturbed my intellectual preoccupations. By sure I did not want to be a collateral victim in another war so this was also a reason I quit soon that job. Of course I was not keen to be part of such insignificant conflict either....

In a dictatorship, a dissident knows where the danger is coming from. In a democracy the danger comes from everywhere.

Of course there is police but they are only to serve the system and to register the facts; they are not to prevent such situations.

Such direct or indirect pressure would drive any normal person crazy and would make it slip into paranoia and mental derangements. Boltzmann arrived to suicide for much less pressure and of course there was no one to see why such a person arrived to such desperate act.

Unfortunately for this bunch of criminals, I have trained myself to endure this pressure and overcome any situation.

Of course in such situations a strong believe in a "upper" protection is crucial; I always had an internal feeling that there is a greater purpose behind all these events and maybe someone incarnate in this life in order to change these things and show another path to be followed in the future.

What would you think if your offspring would live in these conditions for decades?

Aren't you happy that the modern democracy we have build has tried to eliminate the greatest mind of humanity ever?...

.....and no one is guilty!

Is someone in a hurry to unveil another commemorative plaque for me and I did not know ?

This is not a new thing in history. The first democracy in Athens, succeeded in killing one of the most outstanding personality of that time and of course no one was charged guilty.

In the meantime they have learned to keep secret these things though!

The purpose of this theory is to change a lot of things in the world, starting with environmental aspects, education, research and development, sound and sustainable economic rules and up to some social aspects. Do not worry, it is not the purpose of this theory to change a political system!

As Romanian, it is going to be a priority to buy my country back for Romanians and to make it entire.....

Now, my country is chopped and has become only a colony for the mercantilism of a mad society.

I hope that God is going to help me to transform my nation in an example to be followed by others, in their way toward progress and spirituality.