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MASS, MOVEMENT AND FORCE

GLOBAL DYNAMICS





1. Mass, movement and force

2. Newton's laws and Physics

- Newton's First Law or Law of Inertia
- Newton's Second Law or Law of Force
- Newton's Third Law or Law of Action and Reaction

3. Global Dynamics

- Concept of space
- Nature of time
- Concept and definition of motion or movement
 - Types of movement
 - The speed of light
 - Physics and definition of velocity
- Definition of force
- Physics and concept of acceleration
- Mechanics of movement
 - Physics of movement without gravity
 - Physics of movement with gravity
 - Dynamics of the movement of light
 - Motion of bodies in free fall
 - Normal movement of bodies

I. MASS, MOVEMENT AND FORCE

Currently, the set of books on *Global Physics* that make up the new theory of everything is called **Theory of Global Equivalence**.

The development of the new gravity physics theory has implied changes in numerous principles and laws of physics, configuring an theory of unification and what in Physics is called a theory of everything. We can divide the modified physics principles of the new paradigm in two large groups:

- In the first group, the affected physics principles will define matter in the general sense (Globus) and its various states of aggregation such as gravity (globine), mass and wavine.

Mass, movement and force

Boeing 707 and Shuttle- NASA
(Public domain image)



- In the second one, the physics principles will be related to Euclidean space and absolute time and all the implications concerning other magnitudes such as movement, force, gravity force and energy.

Within the *Theory of Global Equivalence*, *Global Mechanics* analyzes the first group of physics principles; and the books of *Global Dynamics* and the *Law of Global Gravity* analyze the second group.

Actually, this *division* of the physics principles affected by the new *theory of everything* is a bit contrived; it is done in order to assist the presentation on a topic that is

both extensive and challenging and it corresponds to topics that are typically handled by *Quantum Mechanics*, **Einstein's General Relativity**, and **Newton's Laws of Dynamics** or causes of motion.

This free online book on Global Physics includes the new theory of everything regarding the second group of physics principles which mostly focuses on movement in the reticular structure of matter or globine with supersymmetry, without both curvature of longitudinal tension or gravitational force and electromagnetic energy.

Among the most important aspects, we can highlight the following:

- The **non-relativity of time and space** within the scientific and objective scope of reality.
- The observers' non-dependence of **physics reality**. If the measurements are different in terms of the observers, the following step would be to make a logical correction in order to obtain an objective measurement.
- The existence of a *constant speed of light* **only** within its natural system of reference or particular intensity of gravitational energy, immersed in the three dimensional Euclidean space of Greek metrics.
- The **speed of light is accumulative** in respects to that of its natural system of reference through which it moves. Light cannot exist without gravity or, better said, its reticular structure (**globine**). In spite of the great speed of light, we must remember that the gravitational fields through which light moves change its base velocity.
- The distinction between **physics velocity and abstract or conventional velocity**, such as the velocity of two objects separating.
- The quantification of global mass and kinetic energy is only real when the **natural system of reference** is used in the quantification of movement.
- The relationships of equivalence between **globine, force of gravity, movement, energy and mass**; which, likewise, imply an equivalence in the effect on the resonance of mass by acceleration and globine or, better said, by velocity and, in its case, the tension of the longitudinal curvature of the globine respectively.

All of this entails modifying **Newton's Laws of Dynamics** and the concepts of mass, movement and force in the new theory of everything.

The most essential aspects are:

- The nature of the different forces in terms of what concept or **definition of force** is made, bearing in mind the different types of movement and energy defined.
- The principle of equality between inertial mass and gravitational mass is no longer a principle but a reality based on the characteristics of the motion of physics mass, along with its corresponding peculiarities.
- The total drag of light due to the longitudinal tension of globine explains the **Michelson-Morley** experiment as an alternative to **Einstein's** *Theory of Relativity*.

The **related links** appear in all of the pages where the free on-line books are included, in which the new *theory of unification, theory of everything or, even better, Global Physics* is exposed. This division is due to numerous reasons such as: metaphysical or scientific experimental character, mathematical difficulty, the subject dealt with and presentation on the Internet.

Finally, the *Equation of Love* online book includes a section with a complete summary of all the science **online books** related to *Global Physics (Glóbica or Globics)* and its *theory of everything or Theory of Global Equivalence*.

2. NEWTON'S LAWS AND PHYSICS

Newton's laws in 1687, **first law or Law of Inertia**, **second law or Law of Force and Newton's third law or Law of Action and Reaction**, are the laws upon which classic **dynamics** or study of movement are based in relation to their causes.

Actually, **Newton's** Physics provided the causes for being at rest more than those for motion. I don't know if Newton liked to ski and eliminate friction much, but what he needed were forces that counteract the omnipresent force of gravity in order to explain why an object remained at rest.

Wikipedia points out that while, according to the ancient Physics of the Greeks, the natural state of bodies was to be at rest, for *Modern Physics*, it is conserving the state of movement that they are in if the causes for being at rest, such as friction, are eliminated.

If **Newton's Laws** developed the dynamics of being at rest, the *Theory of Relativity and Quantum Mechanics*, both of which were around the beginning of the last century, have developed the kinematics of movement. That is, they are scientific theories that describe movement but not the causes for it, just its mathematical representation.

Einstein's *General Relativity* tries to add some causes, such as the geometric effect of the space-time continuum, but it is still a mathematical explanation, always biased and with many odd singularities.

As far as *Quantum Mechanics*, which is incompatible with the aforementioned, it does not even attempt to explain the causes for motion. *Quantum Mechanics* is so abstract that some of its lines of argument end up stating that reality does not exist and that mass or matter are made of emerging waves, or something of the sort. So much kinematics or science without the support of physics causes is obviously closer to a type of mathematical philosophy than mechanistic Physics of *Newton's laws*.

Nor has *Modern Physics* managed to explain the causes for what are called **fictitious forces** of gravity, in spite of **Newton's** express wishes; but it has allowed reaching the conclusion of **vibrating Physics** by determining that the natural state of things is to be vibrating.

The *String Theory* makes an attempt to explain this state of vibration but from an entirely mathematical, relativistic, and quantum perspective, and with physics

dimensions that have magical powers.

Lastly, the development of **Global Mechanics** provides us with the reticular structure of gravity (globine) and the composition of elementary particles, mass, and normal matter. The composition of matter in the broad sense (globine) has given way not only to establishing the *attractis causa* for gravitational force and electromagnetism, as well as the unification of both forces, but also the distinction between movement due to these real forces of the gravito-magnetic field, and movement due to the displacement of the reticular structure itself, or globine.

From the abovementioned, we can gather that in order to thoroughly understand the changes to **Newton's laws** proposed by the **Theory of Global Equivalence** it is recommended to read the free online book, *Global Mechanics*. In other words, the attempt is to understand physics principles and the properties globine has regarding motion and **acceleration**, which support the *Global Equivalence Principle*, or the **gravity-energy-mass** equivalence.

GEMA'S PIANO



Perhaps the example of the piano of my friend Gema can help explain, in broad strokes, the different perspective of the theories involved:

◦ *Intuitive example of Gema's piano.*

First of all, we have *Newton's Laws* that describe movement on the flat part of the surface of the piano. The big advance in *Classical Physics* in relation to the Greeks is proposing that a piano on an icy surface will make it so that the bodies remain in their state of rest or motion due to lack of friction.

Later, we have *Relativistic Mechanics* which denies the existence of the poor frozen piano, and the differences between the anticipated movement and the observed movement are adjusted in making the abstract piano surface stretch or shrink in another dimension, which, by the way, would be quite strange. Time, besides being the additional dimension that was mentioned, also does something similar but, in this case, with itself.

A rather different perspective is that of *Quantum Mechanics*, which analyzes the motion of an atom of the abstract piano by imposing a limit to what is known about it; given that there is enormous uncertainty regarding what it is made of and why it moves.

A more modern unifying focus would be that of the *String Theory* that would add music to the scene by allowing the small strings of the piano to vibrate in nine or more dimensions with their corresponding stretching, dances or magical powers.

Other quantum theories suggest there are many parallel worlds or trips back in time in their eagerness to unify physics forces. It is a strange way to unify them by creating additional worlds.

The *Theory of Global Equivalence* and its *Global Dynamics* try to understand motion on top of a **piano of ice** in a pool of water, ripples in the trajectory of the objects due to the **vibration** of the piano by the pool being on the rooftop of a very tall metallic building, the joint dynamics of the objects on top of the piano and the same **floating piano**. Lastly, it aspires to understand the variations in all the previous movements caused by the changes in **temperature** and **saline concentration**, including changes in the physical state of normal matter.

The new physics paradigm includes, on one hand, returning to **Euclidean space** and to **absolute time** and, on the other hand, defining different **types of movement** according to whether they refer to the dynamics of the reticular structure of gravity or motion upon this structure due to globine being a means of support for energy and mass with their respective peculiarities.

Likewise, *Global Mechanics* provides us with the clues for new **types of energy** as

far as the aspect of their material support, or rather, reticular support.

The relationship of the new theory with *Classical Physics* of *Newton's Laws* and *Modern Physics* could be condensed into the following points:

- Along general lines, the physics model associated with the change of the current paradigm of *Modern Physics* is a more in-depth model of **Newton's Laws** in terms of a greater definition of its scope of application and its clarifications, corrections or developments of the corresponding laws and physics principles.
- As regards **Einstein's Theory of Relativity**, it only supports the concept of relativistic mass or mass-energy equivalence, yet with the necessary conceptual precisions. The relativity of time and space in *Relativistic Mechanics* is considered altogether wrong.
- In *Quantum Mechanics*, a large part of the description of physics reality is allowed, not like with the concepts related to it. Nonetheless, it is worth pointing out that this discipline is mostly descriptive and with functional or mathematical principles that are no longer necessary once they are replaced by characteristics or properties of matter (globine) and, to a lesser extent, by physics principles in the alternate model.

Given the enormous importance of the historical evolution of this topic, I am going to present each one of **Newton's three Laws** of *Dynamics* in the following sections in order to make it clear how convenient it is to update the *Laws of Dynamics* to the current development of *Physics*, especially the new paradigm that *Global Physics* proposes.

2.a) Newton's First Law, or Law of Inertia

According to Wikipedia, *Newton's First Law* states that in the absence of external forces, all bodies remain in their state of rest or linear uniform movement unless a force acts upon in.

Newton's First Law, or *Law of Inertia*, introduces or establishes many concepts at once, which I suppose form part of the context of the set of Newton's Laws. Among them, we can point out space, time, movement, and force, keeping in mind the spatial geometry, that is, motion and the direction of forces.

Globus normis



Newton includes the concepts of Euclidian space and absolute time in the initial or axiomatic fixation of concepts in his dynamics model; which fully coincide with the *Theory of Global Equivalence*. It is not the only coincidence since the new theory upholds the argument of **Newton's Laws** as far as being a completely mechanistic theory, and it does not acknowledge any magical effects from other dimensions or other worlds on physics reality.

However, it seems that the context of the dynamics model of **Newton's Laws** is situated in a completely empty space where not even gravitational forces, fictitious forces or forces that appear in non inertial systems exist. In spite of the level of such radical abstraction, in many ways *Newton's First Law* almost accurately establishes the inertial characteristic of the movement of bodies through the reticular structure of gravity, or globine.

The main problem with **Newton's First Law**, or **Law of Inertia**, from the point of view of the *Theory of Global Equivalence* becomes evident through the motion or variation of the spatial position of globine and its effect on the movement of electromagnetic energy and the energy of the bodies.

The response from *Quantum Mechanics* in face of this problem is to assign probabilities to the spatial position of the particles given it is incapable of calculating the spatial variation of the reticular structure of gravity since this does not exist in the model.

Obviously, *Newton's First Law*, or *Law of Inertia*, as well as the rest of *Newton's Laws* of dynamics suffer from their limited applicability to other types of movement. You can try to adapt the concepts to the new reticular context but I don't think it is always the most adequate and sometimes it is better to create new concepts and terms, in order to avoid that the same word have too many meanings that always have to be accompanied by the corresponding clarifications.

Another disadvantage of *Newton's First Law*, or *Law of Inertia*, is the concept of the definition of force since the forces of gravity or fictitious forces do not always behave like what we would call normal forces, just to be clear on this. We will see this problem later when we discuss *Newton's Second Law*.

Einstein's *Theory of Relativity* attempts to resolve the two previous problems by making it so the speed of light is artificially constant. Therefore, the variations due to the movement of globine and the effect of the *tension of the longitudinal curvature of globine*, which make up the radial symmetry of gravity, on light and mass are resolved mathematically by playing down time and space.

The fact is that **Einstein's** *Theory of Relativity* creates more problems than it solves since, besides the countless singularities and the lack of basic Physics concepts, it denies the real existence and effects of the reticular structure of gravity, thereby seriously hindering the advance of science during an entire century.

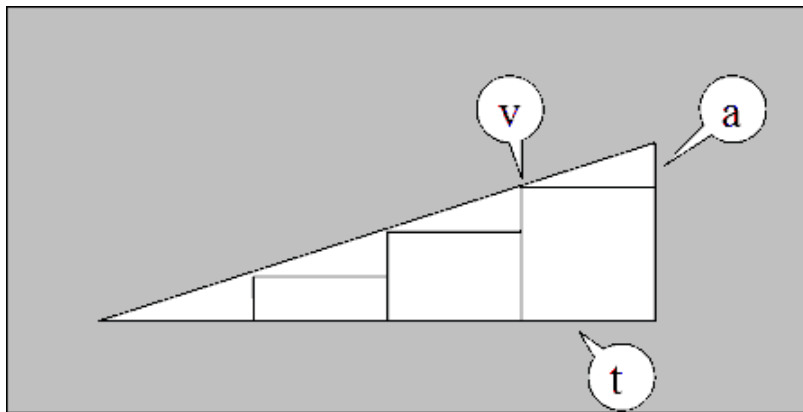
2.b) Newton's Second Law or Law of Force

Newton's Second Law, also known as the *Fundamental Law of Dynamics*, establishes a proportional relationship between force and variation of linear momentum of a body. In other words, force is directly proportional to mass and to the acceleration of a body.

When **Newton** unified the force of earth's gravity, included in his second law or *Law of Force*, with the force of gravity of the planetary orbits in his *Law of Universal Gravitation*, the principle of equality between the mentioned inertial mass and gravitational mass made sense since it was evident in all the scientific experiments and natural phenomena.

$$\text{Force} / \text{mass} = \text{acceleration}$$

$$\mathbf{F} = \mathbf{m} \mathbf{a}$$



Furthermore, **Newton's Classical Physics** proposes that a constant force could accelerate a mass to infinity.

Newton's Second Law has been modified by **Einstein's Special Theory of Relativity** by including the phenomenon of increasing the mass of a body with velocity and, later by *General Relativity* by introducing the disturbances in space-time. A constant force is no longer able to accelerate a mass to infinity, however, the proportional relationship between mass and force that produces acceleration is maintained for mass in a particular instant.

The first experiment that confirmed relativistic mass was the discover by **Bücherer** in **1908** of the relationship of the charge of the electron and its mass (e / m) was less for fast electrons than for the slow ones. Eventually, countless experiments confirm the results and previous physics formulas.

Mass and energy become, therefore, two forms of the same thing. The principles of conserving mass and conserving energy of *Classical Mechanics* go on to form the more general **conservation principle of relativistic energy-mass**.

However, **Einstein's** *Theory of Relativity* still does not tell us what that thing is that presents itself as mass or as energy. Therefore, the idea of countless experiments that confirm this theory is a little farfetched. One thing is to mathematically correspond with some results, and another is for the underlying physics reality to be supported by *Relativistic Mechanics*.

On the contrary, *Global Mechanics* explains the force of gravity as the effect of tension of the longitudinal curvature of the reticular structure of matter, or globine, so as to not confuse it with normal matter. It also explains what electromagnetic energy consists of and how mass forms, that is, it has unified gravity, energy and mass.

Of course, as we will later see, the same experiments and results coincide with the new alternate theory as precisely as those of **Einstein's** *Relativistic Mechanics*. Furthermore, other aspects coincide with the *Theory of Global Equivalence*, which are derived from the non-existent of the typical relativistic singularities and the compatibility between theory of the atom, the dynamics of the normal human scale and Astrophysics corresponding to the physics model of *Global Mechanics*.

As commented earlier, the **principle of equality between inertial mass and gravitational mass** allows the planets' gravitational force to be consistent with the *Fundamental Law of Dynamics*. **Einstein's** *Relativistic Physics* supports this principle but it is forced to modify space and time in order to cohere with the small, observed differences in Mercury's orbit and planets' orbits in general.

In the new point of view of the *Theory of Global Equivalence*, this principle is no longer necessary, since with the definition and characterization of physics mass, the movement of mass follows the same rules in the reticular structure of matter, or globine, regardless of the origin of the forces. Besides the variation of physics mass with velocity, the *Law of Global Gravity* introduces the variation of gravitational force with velocity in one single point in the globine.

In the new model of *Global Dynamics*, *Newton's Second Law*, *Law of Force* or *Fundamental Law of Dynamics* continues to be valid as far as the proportionality between force, mass and acceleration.

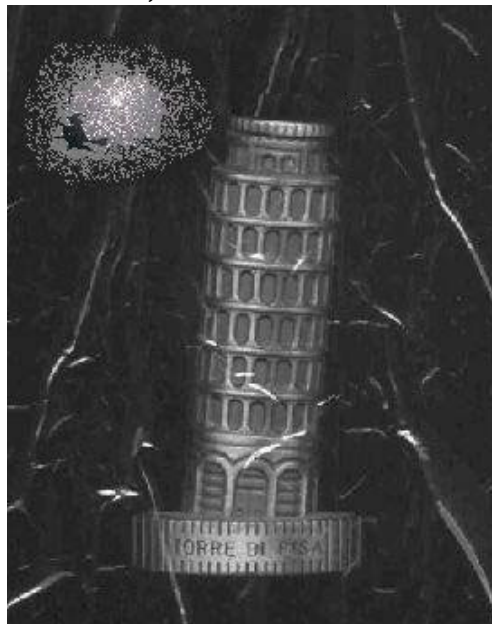
When velocity starts to become relevant as regards the speed of light, the increase in physics mass is due to the conversion mechanism between applied force, whether it comes out from gravitational energy or not, and stored kinetic energy in form of mass. However, the increase in mass will be compensated by an increase

in the gravitational attraction, such as in the case of the planets' orbits, which is why this effect can not create the anomalous precession in Mercury's perihelion.

In other words, out of the two components of the **attractis causa**, the first which is due to the longitudinal curvature of globine and the second, which is due to the velocity of the bodies with mass, only the second is responsible for the additional variation of gravitational force that causes the precession anomaly in the planets' orbits as far as that foreseen by **Isaac Newton's** *Law of Universal Gravitation*.

Pisa tower

Force, mass and acceleration



According to *Global Mechanics*, the conceptual difference is due to the mechanisms of globine interacting with the electromagnetic energy and with bodies that have mass, taking into account globine is the material support for both manifestations of energy in general.

The discussion regarding the concept of **attractis causa** takes place in the sections on *Newton's Law of Universal Gravitation* and the *Law of Global Gravity* in the online book about the latter.

In short, *Global Dynamics* maintains that physics mass in movement behaves the same with or without forces of gravity as far as proportionality of force, mass and acceleration, thereby making it necessary to carry out the following clarifications:

- The principle of equality between **Newton and Einstein's inertial mass and gravitational mass** is no longer a principle but rather it becomes a reality in characterizing the motion of physics mass.

- An increase in velocity produces an **increase in physics mass**. Although there are conceptual differences in regards to the reference system of movement, this effect in *Relativistic Mechanics* is similar to that in *Global Dynamics*. Notice that the increase in relativistic mass due to velocity does not affect the proportionality of force and global, or total, mass.
- The *Law of Global Gravity* explains the anomalous precession of the planets' orbits by including an **additional force** in the globine-mass interaction derived from velocity. In **Einstein's Relativistic Mechanics** and in *Quantum Mechanics*, this precession is justified by space-time alterations.

From another point of view, in carrying out *Newton's Second Law*, there are problems due to the mentioned characteristic of globine as a material support for electromagnetic energy and mass.

According to *Global Dynamics*, the problems are subsequent from the following:

- The variation in the spatial position of globine.
- The variation in the tension of the longitudinal curvature of globine for the same spatial point.

We could try to resolve the problems in **Newton's Fundamental Dynamics** or *Law of Force* with a more general definition of force that would include the respective displacements, but we would have to be cautious since, besides disguising different concepts, the strict proportionality with mass would not exist. The displacements derived from the two previous points can probably be treated as movement of mass on globine by supposing a variation in the relative velocity in the sense of **Galileo** between globine and mass.

It is important to remember that while the *Theory of Global Equivalence* clarifies *Newton's Second Law*, it does so within the context in which the motion of bodies does not take place in an abstract vacuum but rather in the three dimensional reticular structure of matter, or globine, with its characteristic radial symmetry in a Euclidean space.

Lastly, *Quantum Mechanics* says anything in relation to *Newton's Second Law*, except that it proposes a macroscopic approximation of reality due to its **uncertainty principle**. However, within the subatomic level, *Quantum Mechanics* does not know very well what an electron is either, and it keeps reaching for explanations for what is known as the tunnel effect or the double slit experiment with photons, where it even resorts to travelling back in time as a solution.

Global Mechanics explains, among many other things, the **tunnel effect** and the **double slit experiment**, and maintains that the orbital movement of electrons is

the result of the motion in the points of relaxation in the gravito-magnetic tension of globine. The detailed justification of these statements is deduced from the new structure of the atom proposed in the online book, *Global Mechanics*.

2.c) Newton's Third Law or Law of Action and Reaction

According to Wikipedia, *Newton's Third Law* explains that for each force that acts upon a body there is equal force but in the opposite direction upon the body that produced the force.

If *Newton's Second Law* is considered the *Fundamental Law of Dynamics* because it establishes the concept of force as the magnitude that associates mass with movement, the **Law of Action and Reaction** has more technical or instrumental nature.

Newton's Apple



In fact, **Newton's Third Law**, or principle of action and reaction, reminds me of **Luca Pacioli's** double-entry accounting system outlined in his book, *Tractatus particularis de computis et scripturis* (1494), and he is considered the grandfather of modern accounting. One technique as well as another uses pairs of equal amounts that facilitate the numerical calculation, which is not particularly complex but it is rather extensive.

Moreover, the double-entry accounting system and *Newton's Third Law* have the same deficiencies in that they place concept clarity below the practical advantages.

To briefly mention a few, the double-entry system ends up placing concepts in the assets' side of the balance sheet of companies that are very different such as

buildings, computer programs, patents or cash. Another odd technique is to end up entering construction of both a factory and a sports center in the books as investments in public accounting.

A figurative example of *Newton's Third Law* would be to say that if a person gives an **apple** to another, the latter returns a negative apple and the total sum remains unchanged and, in the end, the number of apples each person has inevitably corresponds to observable reality.

Therefore, it cannot be argued that the *Law of Action and Reaction* is not true and useful. Nonetheless, I still have never seen nor have I been able to imagine a negative apple. Negative objects do not exist in my world. Likewise, it could be said that negative forces do not exist, except those that have conventional or purely mathematical nature.

This instrumental characteristic of the forces of action and reaction in *Newton's Third Law* present two problems that may end being important:

- By becoming so transfixed on such elementary concepts, the human brain can eventually end up thinking about the physical existence of pairs of forces of action and reaction that this law refers to. And, even worse, by extension end up thinking about the existence of negative energies and even negative masses.

Not to mention if the orthodox doctrine of official physics also negatively defines potential energy and calls certain types of mass antimatter.

- In models with numerous forces at play, the forces that are real or imply physics mechanisms and those that are conventional are not very well distinguished.

We cannot forget that magnitudes such as velocity, force or energy are merely properties of the reticular structure of gravity (globine) in their different forms or physical states. As a result, in all of the cases of real forces, what is being produced is a transfer of energy, or modification of the elastic properties of globine.

Another big problem with *Newton's Third Law*, or *Law of Action and Reaction*, is the need to create fictitious forces independent from the purely mathematical forces previously mentioned.

The very same **Newton** was aware of these problems but he recognized that science was not developed enough to delve into physics concepts that, according to him, were still a mystery. In other words, **Newton** pointed out that he did not like distant forces that were characteristic in his *Law of Universal Gravitation*.

In any case, I feel obligated to make it explicit that I am grateful to **Newton** for his

Law of Action and Reaction and for his position on finding explanations for physics nature using common sense to gravitational forces, for having helped me discover that I was not alone in a world where almost no one knows nor gives answers; and the rest, either they stretch out time, creates new and vibrant dimensions, or they feed off of negative apples or come and go to other worlds or parallel universes.

From another perspective, *Newton's Third Law* represents something similar to the *Principle of Global Conservation*, which gives us the idea that energy is not created or destroyed, but rather changes from one form to another.

From a scientific point of view, there cannot be an exchange between what is real or physical and what is imaginary or abstract, despite how one can end up confusing one concept with another. Likewise, the objective world does not end when a person dies. Nor do I believe that that person's spiritual world ends, but that is more of a Love philosophy than Physics science.

3. DYNAMICS - PHYSICS OF SPACE AND TIME

The development of *Global Mechanics* has explained the gravity-energy-mass equivalence in the extent of unifying the force of gravity with electromagnetic energy, and the clarification of how mass is created from the reticular structure of matter, or globine, in order to distinguish it from normal matter.

Likewise, *Global Mechanics* gives the foundation for **Dynamics - Physics of space and time, or concept of Dynamics**, as a science that studies the causes of movement.

After **Newton's Laws**, two problems emerged regarding Dynamics - Physics of space and time, the effect of *gravitational lens of light* and the *anomalous precession of the perihelion of Mercury*. Both problems were resolved by **Einstein's Relativistic Mechanics** although, in my opinion, *Relativistic Dynamics* is incorrect as well as incompatible with both *Quantum Mechanics* and *Global Mechanics*.

Furthermore, *Relativistic Mechanics* considerably adjusts the **concept of Dynamics** by playing down the very same space and time.

Quantum Mechanics, in turn, discovers new conflicting ideas in the Dynamics of **Newton's Laws** in the world of the atom and elementary particles.

The in-depth study of the *concept of Dynamics* by **Global Physics** not only resolves the problem of the curvature of light and the small deviation in the orbits of the planets but also distinguishes between the different types of movement a propos the causes or nature of the forces that bring them about.

The study of the causes of the motion of Dynamics in *Global Physics* has implied the appearance of a new perspective in the classification of different types of forces and energy.

Therefore, *Newton's Laws* of Dynamics need a small quantitative adaptation and a large conceptual change, especially in the area of its application.

Before explaining in depth the mechanisms and forces of movement of light and bodies in free fall, their motion upon globine or through it, we are going to analyze the elements of the **concept of Dynamics of Global Physics** such as space, time, movement and velocity, acceleration and force.

3.a) Concept of space

Both time and space are conventional concepts or mental elaborations that we create in order to be able to live, understand this world and try to represent the Dynamics of that which exists, or reality. The concept of space is necessary for a **definition of movement**.

Currently, the meter definition for the Dynamics of *Relativistic Physics* depends on the **speed of light**, which, in turn, depends on relative time. *It cannot be simpler!*

In spite of the fact that the idea of space is simple, the human brain has problems when it comes to managing three spatial dimensions in many branches of knowledge. Therefore, we have to be especially careful with the scientific configuration of the definition of space and to not make it more complex than necessary.

As always, the brunt of the scientific work of *Dynamic Physics* of space and time consists of establishing some conventional patterns that can be applied in all situations, can allow for comparisons and are as simple as possible.

The result is a much more powerful understanding of reality that facilitates greater scientific and technological development of society.

The online book, *Global Mechanics*, explains what are called processes of expansion and contraction of space without abandoning the nature of Euclidean space or concept of three-dimensional space. Furthermore, *Global Dynamics* allows us to understand an important characteristic of the concept of relativistic space.

I hope the following example will help understanding of the different nature of space in *Global Dynamics* and in **Einstein's** *Theory of Relativity*. It is not an exact example but it comes close and, at times, it can make it so the relativistic texts can be better understood.

- Example of crossing a river

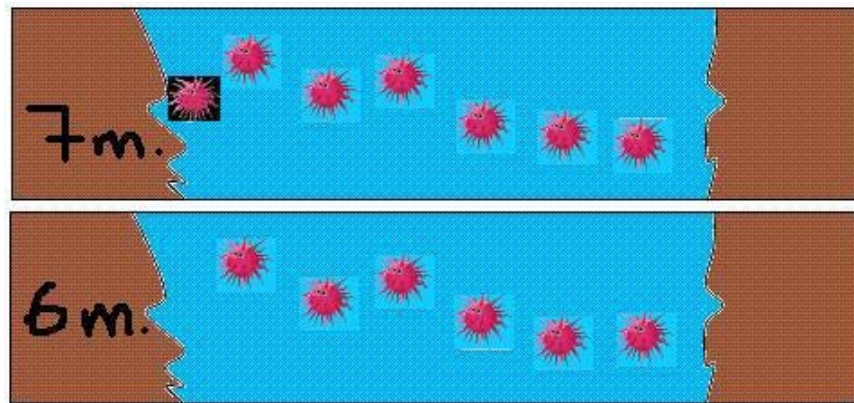
Imagine we have to cross a small river and there is no bridge. We will have to find a place where there are stones so we can cross by jumping stone to stone to the other side without getting wet.

The Relativistic Dynamics states that the river is seven meters wide at the site where we can cross if we jump onto seven stones. That is, if a month later

someone put another stone to make it easier to jump across, the Relativistic Mechanics then states that the width of the river is eight meters. At this rate, if a stone disappears because of being carried away by the water or a by stone thief, then it would be six meters.

This confusion is due to the fact that **Einstein's** *Theory of Relativity* does not allow for stones to be in the riverbed. Or it ignores that the reticular structure of gravity (globine) is the **support medium for light and mass**, with the total drag of light and the partial drag of mass, regardless of the gravitational effects of the Merlin effect, as we will see when discussing the movement of free falling bodies.

Concept of relativistic space



We need to make a distinction between the effects of globine as a **support medium** that explain the **Michelson-Morley** experiment, the small displacements of mass, and the second component of *atractis causa*, or the **Merlin effect** in the gravitational interaction that explain the phenomena of the **curvature of light** in the gravitational lens and the **anomalous precession of the orbit of Mercury** and of the planets in general, as presented in the book, *Law of Global Gravity*.

In *Dynamic - Physics*, there are other divergences between relativistic space and Euclidean space due to the mathematical effects of the relativity of time and its different causes, but this is not the time to go into it in detail. In any case, by confirming globine as a support medium for light, **Einstein's** *Theory of Relativity* immediately vanishes.

3.b) Nature of time

The basic elements of the *Dynamics of Global Physics* are space, time, and Globus since everything else is derived from them.

Time has various meanings as I have commented in the section about the *Theory of time* in the online book, *Equation of Love*. As far as *Dynamic - Physics* and the **concept of movement** and the scientific method, the relevant concept should be **absolute and objective time**; because, besides the inaccuracy of **Einstein's** *Theory of Relativity*, it fulfills the scientific objectivity and is much simpler.

Although reality can be perceived in many forms and, mathematically, some of them offer very precise calculations, it does not seem that the *Imperial System of Measurements* is as simple as the *International System of Units* (SI), ignoring the relativistic units from the latter.

There are things that, due to their significance, should be proven, or be able to be directly proven if they want to belong to a field of science and not just to philosophy. I think that no one or anything has travelled in time, except travel in absolute time which we are all familiar with. Likewise, no one has seen space bending and later straightening; or movement through other physical dimensions that only exist in abstract terms (Contradictus in terminus)

Likewise, in the online book, *Theory of Relativity, Elements and Critics*, I have dedicated a section to the concept of space-time in the Kinematics of *Relativistic Physics*.

So that the concept of Dynamics is truly functional and efficient, a new definition of the unit of absolute or objective time is necessary for it to be independent from energy. Currently, by depending on energy, the **second** is certainly relative given that it depends on the vibrations of the Cesium atom, the period of which is based on certain energy levels that depend, in turn, on many factors, among which are velocity and gravity.

The only thing there is to do is to change the definition of time, or better said, the second definition established in 1967 by the *International System of Units* so that it is no longer influenced by the environmental changes that produce modifications in the frequency of the photons of the **Cesium atom**.

Besides facilitating normal mental processes, this definition of time allows us to be able to accurately discuss a *Dynamic Physics* of normal space and time by specifying

both the concept of **simultaneity** of the events and that of the **cause-effect** sequence; being that both concepts are enormously useful in both the new *Theory of Gravitation of Global Physics*, as well as day to day life. No doubt, the opposite is mad science.

It is worth remembering that the definition of relativistic time denies the concept of simultaneity and that certain branches of *Quantum Mechanics* openly defend the inexistence of the cause-effect sequence, which is certainly indispensable, even in philosophy.

The physical experiment of the **Invisible Clock** proposed by the *Theory of Global Equivalence* in the book, *Physics Experiments*, directly deals with the controversial measurement of time and the god **Chronos**. The idea of this name is to highlight the fact that clocks are affected by velocity and gravity. A perfect clock would be an invisible one in the sense of being independent from any condition; that is, it may not be enough to be invisible, but the idea it conveys is still valid.

Regarding the problem of simultaneity, the scientific experiment of the **Abrujuela's Train** is proposed, keeping in mind the *speed of light* and the rotational movement of the Earth.

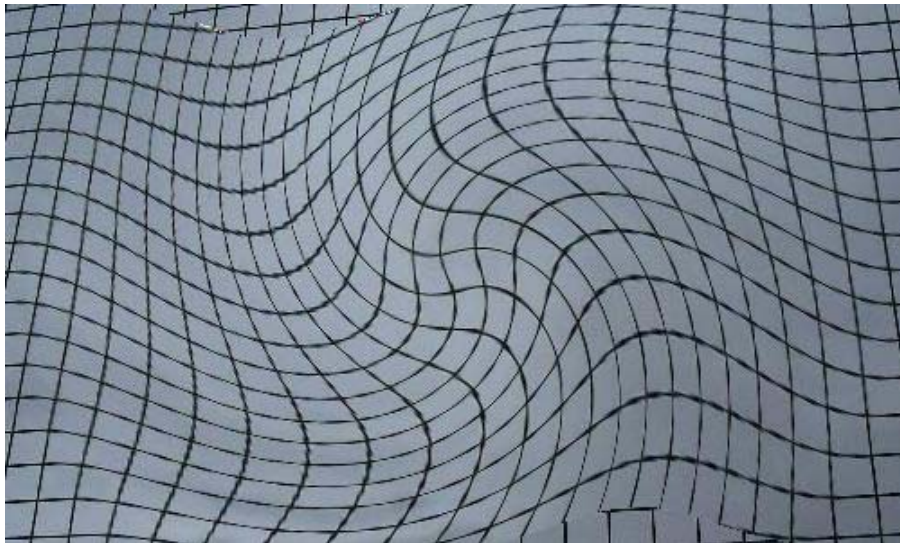
In short, I believe the concept of **absolute time** for scientific purposes to be a **monotonous, uniform, constant and growing function**.

3.c) Concept and definition of motion or movement

In the previous section we saw the concept of space and the nature of time according to the *Theory of Global Equivalence* and the distinction in regards to **Einstein's** *Theory of Relativity*.

We have also seen how the concept of movement needed a third element which is exactly that which changes position in space over the course of time. This element should, therefore, have material nature and *Global Mechanics* describes Globus as the reticular structure of matter in general from which the entire universe is formed, that is elastic and unbreakable, and accounts for the equivalence between gravity, energy and mass.

Globine as an essential element in the concept of movement



In short, the **definition of movement** is a physics phenomenon due to the fact that a part of Globus (globine) or some of its internal properties change their location in space over the course of time.

Of course, the concept of motion also includes any form or phase of globine.

I want to underline the significance of the concept of the internal properties mentioned in the definition of movement. The initial development of *Global Mechanics* did not seem to need any internal elements of globine but, slowly, parts, or sub-elements, of globine started to appear in order to make its intrinsic elastic properties possible.

The main idea is to maintain the logic of scientific reasoning in that any property of globine, whether it is internal or of a phase, should be supported by some real, material or physical characteristic. Otherwise, we would be talking about fictitious or non-existent properties. In other words, the fact that sub-reticular mechanics has not been presented yet does not mean it does not exist since it will always be the bottom line for *Global Mechanics* as it is in *Newton's mechanics*.

Now we can see the **differences in the concept of movement** in *Global Dynamics* from that in *Newton's Laws*. Among the differences, we can highlight the following:

- The new *definition of movement or motion* refers to globine, or the reticular structure of matter, while *Newton's Laws* refer to movement of normal matter.
- *Global Dynamics* applies the same *concept of movement* to the various situations in which it is produced and, as a result, it follows diverse rules. *Newton's Laws* do not provide for the motion of globine, but assumes motion takes place upon a completely empty space and the movements are only partially correct in a space full of globine.
- A large part of the concept of motion or movement in *Global Dynamics* eliminates the need for fictitious forces.

Newton's Fundamental Law of Dynamics established force as a relationship between mass and the variation in the rhythm of movement; in short, a liaison between mass and energy. From another point of view, **Einstein's Theory of Relativity** quantitatively recognizes this relationship to be a constant, but it diminishes the substance of its units, that is, the second and the meter.

Global Dynamics sustains and generalizes the relationship between mass and energy; it adjusts its quantification based on the conditions. It also recognizes different forms of this relationship which outline the diverse types of movement.

The definition of motion with Euclidean space and absolute time make it possible for a concept of velocity to be independent from energy and gravity since it is not necessary to establish a fixed association between mass and energy.

Reality does not depend on the observer and the magnitudes of velocity, force, acceleration or energy are no more than the properties of matter in general, or globine, in its different phases.

3.c.1. Types of movement

A large part of the argument that outlines the new *types of movement* appears in the online books, *Global Mechanics* and *Law of Global Gravity*.

The classification of the types of movement that is presented has been carried out from the perspective of their reticular structure. That is, it is independent from the existing types of movement with other perspectives regarding the relationship of space with time, such as linear uniform motion, circular motion, accelerated movement, etc.

Nonetheless, it will produce an effect on the classification of the types of motion related to inertial and non-inertial systems from the point of view of physics in *Relativistic Mechanics*, or the purely mathematical types of movement in *Quantum Mechanics*.

The evolution of the local universe, or *Little Bang*, can serve as the sort order for the presentation of the *types of movement* with a global perspective. According to the online book on *Global Astrophysics and Cosmology*, the possible creation of a **Little Bang** is the clash of two very large black holes spinning in opposite directions.

Certainly, the following classification of the **types of movement** is quite far-fetched in some of its proposed forms due to it being the new model for Dynamics - Physics that is completely different from the current one. Nevertheless, I hope that it comes conceptually closer to physics reality than the models in *Modern Physics* regarding space, time and their relationship.

Given that the movement of globine is intimately related to that of light and mass, there can be some overlapping descriptions of the different *types of movement, displacement or motion*.

Keeping the previous statement in mind, the following **types of movement** appear:

Types of movement
<p><i>Motion of globine</i></p> <ul style="list-style-type: none"> • ○ Reticular expansion and contraction <ul style="list-style-type: none"> ○ Little Bang ○ Motion of stars regardless gravity force ○ Creation and dissolution of electrons ○ Creation of mass (compaction) ○ Creation of mass (confinement) • Longitudinal vibration of globine (Cause of internal resonance of particles with mass) • Movement of the gravito-magnetic field (Cause of electron's orbits) • Variation in the tension of the longitudinal curvature of globine
<p><i>Propagation of light</i></p> <ul style="list-style-type: none"> • Total drag by longitudinal tension of globine • Movement of mechanical wave upon the non-dispersive medium • Curvature of light (Merlin Effect)
<p>• <i>The motion of mass (And wavine)</i></p> <ul style="list-style-type: none"> • The dance of the wavons. (Wavine) (Globudesics) Vibration of atomic nucleus • Greek movement or normal motion • Anomalous precession of the orbits of the planets • Drag of mass by globine

- **Motion of globine**

These *types of movement, or displacement, in Global Physics* have little to do with *Newton's Laws* or with **Einstein's Theory of Relativity**, and much less with *Quantum Mechanics*.

Please refer to the examples of Gema's piano and Crossing the river by jumping onto stones in the definition of space and how it differs from **Einstein's Theory of Relativity**.

- **Reticular expansion and contraction**

- **Rapid movement in the Theory of Inflation of the universe (Little Bang)**

The decompression of squeezed mass that contains black holes would result in increased volume and globine motion in such a way that the speed of its movement could be much faster than that of light.

At this stage, the **propagation of light** would be at speeds much faster than $*c*$, and this speed is due to light moving upon the longitudinal tension of the reticular structure of matter or, in the same regards, its physical motion is additive in regards to its medium support.

- **Motion of stars regardless gravity force**

Normally known as expansion and contraction of the universe.

Outside of the stage of inflation, globine is always in movement due to the effect of the **universe expanding** which is brought about by the emission of electromagnetic energy from stars and from the contraction due to the accumulation of compressed mass in the black holes.

- **Creation and dissolution of electrons**

As explained in *Global Mechanics*, the same phenomena of **expansion and contraction of the reticular structure** of matter, or globine, is produced along with the creation or destruction of elementary particles with mass.

- **Creation of mass (compaction)**

A different case is the stretching of a reticule in the process of forming protons and neutrons, which is what ends up giving them stability.

- **Creation of mass (confinement)**

The elastic movements of the filaments of the reticule that holds the mass of atomic nuclei due to their changes of energy.

- **Longitudinal vibration of globine**

Vibration that transmits the longitudinal tension of the reticular structure of gravity. The *tension of the longitudinal curvature* is the basis for the force of gravitational attraction.

This vibration is also connected to the phenomena of internal **resonance** of elementary particles with mass.

- **Movement of the gravito-magnetic field**

We should also point out that according to *Global Mechanics*, due to the presence of the mass, the electromagnetic field or, to be more accurate, the gravito-magnetic field, is partially formed and the existence of photons is not necessary.

The propagation of light, or the diffusion of electromagnetic energy, such as the transversal wave of mechanical nature upon globine, produces an additional *type of movement* in globine by altering its spatial distribution.

This type of movement includes not only the propagation of light, as mentioned in the previous paragraph, but the **dance of wavons** and the vibration of the nucleus of the atom.

The phase of matter in the broad sense, which is formed by zones of compressed globine but different from the phase of mass, due to its instability, is called **Wavine**.

- **Variation in the tension of the longitudinal curvature of globine**

The true medium of support of light is not the reticular structure of matter, or globine, but rather the tension of the longitudinal and transversal curvature of this structure in the absence of photons. As a result, when one says that globine, or reticular structure of gravity, is the medium of support for light, this concept has to be understood keeping

in mind the relevance of the precision that has just been presented.

The motion, or variation in the tension of the longitudinal curvature of the filaments of globine, upholds the alternate explanation of the *Michelson-Morley physics experiment*. This is an aspect that is unquestionably achieved since the gravitational field accompanies the movement of the planets.

This type of drag provides an explanation, which is an alternative to **Einstein's** *Theory of Relativity*, for the **Michelson-Morley** physics experiment.

Nonetheless, the reticular structure of gravity is not a fluid; according to **Wikipedia**, "The first step in abandoning the concept of elastic ether was taken by **MacCullagh** who postulated a medium with properties different from that of ordinary bodies. The laws of propagation of waves in this type of aether are similar to the electromagnetic equations of **Maxwell**."

The variation in the tension of longitudinal curvature of globine due to the rotation of the planet, and the different motion of the particles with mass that make up the globine could be the main reason for the existence of the Earth's magnetic field.

- **Propagation of light**

As I mentioned earlier, due to the fact that electromagnetic energy is a physical disturbance in globine, the movement of light always implies a displacement of globine; no matter how small the variation is of the location of globine in space.

- **Total drag by longitudinal tension of globine**

Movement derived from the displacement of globine in space and of its longitudinal tension. Keep in mind that, besides the very same motion of globine, there is a variation in the longitudinal tension and not only a variation in the tension of the longitudinal curvature of globine.

The propagation of light at a speed faster than $*c*$ is maintained beyond the stage of the inflation of the universe given that as long as globine is moving, or there is a variation in its longitudinal tension, an effect of the **total drag** of light is produced; that is, the **speed of light is additive** and will be the sum of its speed of propagation along globine plus that of the

globine.

o **Movement of mechanical wave upon the non-dispersive medium**

Light is propagated as a **transversal wave** of mechanical character with the longitudinal tension of globine as a medium of support.

Regardless of the movement of globine, the force of gravity derived from the **tension of the longitudinal curvature of globine** generated by mass affects the speed of light in that the more tension there is the greater the speed of light. This topic of whether the speed of light is constant or not is discussed in detail in the book, *Global Mechanics*.

The same happens with the longitudinal tension of globine. Think of how in the phenomena of *Astrophysics*, large variations in the longitudinal tension can be produced without barely any variation in the longitudinal curvature of the filaments of globine.

Gravitational lensing

Einstein's Ring (NASA)

(Public domain image)



o **Curvature of light (Merlin Effect)**

A *type of movement* that is another characteristic or property of the propagation of light in space is that which is produced by the potential gravitational energy, or tension of the longitudinal curvature of globine,

by forming the **radial symmetry of gravity**.

The mechanism of transferring energy – the **Merlin effect** (Mercury Lightning) or Merluza effect (Mercurio-Luz) or second component of *atractis causa* – is due to the speed of light and it is similar to that of the first component or force of gravity in **Newton's Law of Gravity** that is due to the speed of vibration of the longitudinal waves of the gravitational field. A thorough explanation is in the book, *Law of Global Gravity*.

The implications of this type of movement are significant in *Global Physics* because they explain the **curvature of light** due to the stars and galaxies, or the **gravitational lens** effect.

Clearly it is an alternative explanation to **Einstein's Theory of Relativity**. Displacement in space is not the same as space expanding or shrinking, especially for the sanity of the neurons!

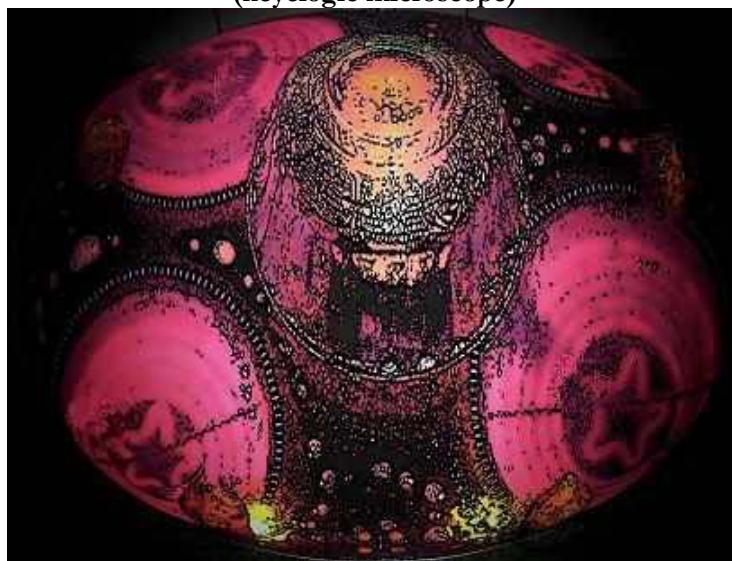
- **The motion of mass (And wavine)**

- **The dance of the wavons**

After the **Little Bang**, mass was formed. Certainly there were wavons in the inflation phase but it is irrelevant for our analysis.

Electrons orbits

(heyelologic microscope)



Global Mechanics has defined wavons as a new type of particles. Physics mass of wavons is the result of the relaxation of the difference in the

transversal tension in the reticular structure, or electromagnetic energy, by means of movement. The most well-known case is where electrons neutralize the charge of the atom.

At times, I call the mass of wavons wavine in order to differentiate it from normal mass.

This **type of movement** refers to the motion of wavons in space within their orbits since, in order to change orbits, the loops that formed them come undone and create electromagnetic energy. Afterwards, they create loops, coils, or spirals again that form the wavons in one spatial point that belongs to another orbit or globudesic line.

The wavons are displaced throughout their orbit as a result of the movement of globine and of the motion of the nucleus of the atom in order to relax the transversal tension that is not relaxed or eliminated with the complete loops created, or electrons.

- o **Greek movement or normal motion**

Of all the types of movement, this is the most normal one and part of everyday life since it refers to the motion of things in space that we are all familiar with.

The mechanism that allows for movement of mass is called **kinetic energy** and is what *Newton's Laws* mainly refer to and, from a recent point of view, the known concept of **relativistic mass** or the mass at rest plus the mass that is acquired with velocity.

The movement of physics mass is odd since, according to *Global Mechanics*, mass is no more than a loop of globine. In order to move, there should be a mechanism that allows it to move all along globine, with the complication of being a three-dimensional loop of globine. In other words, the movement of mass is like that in a slipknot.

Physics mass moves through globine almost like a ball moves between sheets, with the peculiarity being that the ball is made of the same threads as the sheets.

- o **Anomalous precession of the orbits of the planets (Merlin Effect)**

As in the case of the *gravitational lens* in the movement of light, this type of movement of mass is also produced by the second component of the *attractis causa*, or **Merlin effect**.

The *Law of Global Gravity* adds a second physics cause for the force of gravity; which is the **Merlin effect** due to the velocity upon the gravitation field, or natural system of reference.

- **Drag of mass by globine**

This *type of movement* could be confused with the previous one, but from a physics point of view, they are very different. It is not a movement of mass upon globine, which is its support medium, but rather the movement of globine. Globine is a partial support medium as far as the drag of physics mass.

An illustrative example of this **type of movement** is the variation in the location of the ball between the sheets in space due to the **displacement of the bed**.

I think the best way to understand this movement is to think of the **inverse movement**. If mass is displaced upon globine at a certain velocity due to the spatial configuration of its physics mass, modulated by acquired kinetic energy; a displacement of globine has an effect on the movement of mass based on this spatial configuration.

This *type of physics movement* is also related to the **movement of the atom** in which now we have a ball in a swaying hammock.

3.c.2. Physics of the speed of light

Outlining the **concept of the speed of light in Physics** – whether it is constant or not – its system of reference and its relation to mass, energy and gravity, is a complicated task, although much simpler after the development of *Global Mechanics*.

I get the impression that the current physics model is a partially and inaccurately solved **puzzle** in that the shape and size of the all the pieces have been forced to fit when they are not the equal – something similar to squaring the circle. Therefore, in order to solve the puzzle, the first thing to do is to go back to the real appearance of the pieces and start from the beginning.

Let's take a look at some considerations regarding the concept of the speed of light in Physics from different perspectives that provide us with the basic equations or relationships that intervene:

- **Liaison between space and time**

The *Theory of Global Equivalence* considers space and time as abstract and absolute concepts.

Putting aside the irony of measuring axiomatic values and forgetting about the current paradigm of *Modern Physics*, let's say that the **concept of the speed of light** for *Global Dynamics* is like that of any other velocity: travelling Euclidean space in an absolute unit of time.

A physics experiment with the speed of light in order to prove that simultaneity exists, contrary to what is suggested by **Einstein's Theory of Relativity**:

- The *Abrujuelas's Train* on the existence of simultaneity

Likewise, from the point of view of the overestimated usefulness by the philosophy of the science, we cannot deny the advantages of Euclidean space and an absolute time, since the current technology has the capacity to function with the mentioned magnitudes.

- **Speed of light independent of the speed of its source**

Based on the numerous optical experiments and empirical observations, we can gather that **the speed of the propagation of light is independent of the speed of its source**.

The experiment that clearly shows the independence of the speed of light in

relation to its source is:

- The *Sagnac Effect*, as far as flatly denying the ballistic theory of light in its day.

Locally, the speed of light is constant and independent from that of its source, understanding that local speed is that which has the following characteristics:

- No qualitative or quantitative alteration of the support medium.
- Displacement measured within its medium of support, that is, with the medium of support as reference system in the sense of the principle of relativity of **Galileo**.

As far as this statement, there is no problem given that all of us are in agreement, although possibly for different reasons. The reason is that it is not necessary to apply the **Lorentz** transformations once we find ourselves in an entirely classical situation.

The speed of light is constant and independent from that of its source, or object, within its system of natural reference. If we measure the speed of light on Earth we will get one value, but if we measure this speed outside of Earth, for example on the Sun, the value has to change unless we do some sort of magic trick or we change the concept of speed, of course.

- **Conditional independence of the source of the speed of light (support medium)**

This characteristic of conditional independence of the source refers to what is understood as the source of light; an everyday object, a planet and its gravitational field or a space ship. The mistake that is normally made is to generalize the case of a common object in Earth's gravity.

In the online book, *Physics Experiments*, scientific experiments are proposed regarding the different types of the source of light on Earth and in space.

On the contrary, it does not make any sense to me that if in the internal space of Pluto, light moves at the speed of c and it had the same speed measured from the Sun as it had when travelling on Earth at the speed of c but also in relation to the Sun.

It is clear that the speed of **Earth and Pluto** is different in regards to the Sun, or origin of the system of reference used in the example and that, in science, we should be **skeptical** as far as the help of spells or witches in calculations

because, although they may give results at first, they are counterproductive in the long run.

One thing is to transform velocity when it changes from a system of reference, and another is to transform it without changing from a system since, in the example provided, the Sun is the system of reference for both planets. The model in *Global Mechanics* states that light is a transversal wave of mechanical nature along globine. The natural system of reference, or privileged system, of the speed of light is the gravitational field due to being the medium of support in which it is displaced; in other words, light represents a disruption in globine's gravitational energy and, therefore, is completely dragged.

To put it another way, the **speed of light is additive** in regards to its natural system of reference, or privileged system of reference.

Physics of the speed of light



Among the experiments mentioned in the book, *Physics Experiments*, that endorse this property of the electromagnetic waves (in order to simplify light waves) we find the following:

- Michelson-Morley experiment
- The **new physics experiment** in the *Distant Michelson-Morley* space (LISA)
- **The constant or variable speed of light.**

Another element to keep in mind is the distinct *speed of the propagation of light*

with the medium and its conditions; for example, in the air it also depends on density, pressure and the temperature, and it is not the same in water as it is in ice. If gravity is the medium of support, these variations in speed could be due to the internal gravity of the medium and, as a result, variations in the intensity of the gravitational field should also affect the speed of light – it would be something like tension and the spatial configuration of globine.

Due to the observations of the *speed of light*, we know that it is constant in every medium or, said another way, it changes with the medium. Therefore, *Global Dynamics* states that the speed of light changes with the reticular density and with the longitudinal tension of the gravitational field.

The constancy or inconstancy of the **speed of light** is disputed under the perspective of **Maxwell's** Equations and from a mechanical wave in a non-dispersive medium, in the section, *Properties of light waves or photons* in the online book, *Global Mechanics*, and in *Maxwell's Equations* cited in the book, the *Theory of Relativity, Elements, and Critics*.

Indeed, the measurements of the speed of light exist and it seems that it is **constant in a vacuum** although it may need to be transformed appropriately; even some people say that it has been measured and it is exactly 299,792,458 m/s.

After seeing the definition of the current meter, there is no doubt in my mind about the exactness of these measurements. Notice that the meter is $1/299,792,458$ of space travelled by light in a second, relatively speaking, of course.

We have to keep in mind that when observations do not give the mentioned value, an asymptotic transformation is made to the units of space, time, or of both in order to made the *speed of light* constant since the **constancy of the speed of light is an axiom** that is imposed a priori in **Einstein's** relativistic model. I suppose that if it were a constant it wouldn't need to be adjusted. Very illustrative examples regarding the systems of references, measurements of velocity and transformations are the classical and relativistic explanations about the phenomenon of the *stellar aberration of light*.

The immediate result of the mentioned axiom is that by changing the **system of reference**, the calculation for the speed of light should change; then, in order for it to remain a constant in *Relativistic Mechanics*, the generally accepted conventional model, it should be transformed. This transformation casually implies changing almost all the units of the *International System of Units* (SI)

- **Limit of the speed of light in the medium and the maximum velocity**

The speed of light is the maximum speed of a material object moving through globine due to the very concept of the **Greek movement** of the mass, or normal motion of things. That is, it is due to the mechanism of kinetic energy and synchronization between mass and the vibration of globine, as we will see later in the section about *Physics of movement in gravity*.

However, the maximum velocity in a medium, for example water, does not impede the existence of a greater speed in another medium. Likewise, the speed of light or the maximum speed in normal space or reticular structure of gravity varies with the reticular density and the longitudinal tension of globine.

Furthermore, the movement of globine in the processes of reticular expansion and contraction do not have the same limit because the mechanisms for the displacements are completely different from those of the material objects with mass, as we have seen when discussing types of movement.

- **Speed of light as a critical point of changing phases**

The most important aspect of the speed of light is that it signifies a physics limit at different phases of matter in general (globine) just as temperature represents a limit between the physical stages of water and ice.

The most well-known limit is **Einstein's** equation for the transformation between energy and mass:

$$\mathbf{E} = \mathbf{m} \mathbf{c}^2$$

However, the *Theory of Global Equivalence* shows how this quantitative equivalence should be understood. On one hand, *Global Mechanics* tells us what electromagnetic energy is and its abstraction as a property of globine and, on the other hand, how it is transformed into elastic energy of reversible deformation and of tension of the longitudinal curvature with the change of phase into mass.

Furthermore, the change of paradigm assumes that the speed of light is variable and it leads to the idea that quantitative equivalence of **Einstein's** famous equation has to be understood dynamically or within its gravitational context.

This gravitational context is included by the *Theory of Global Equivalence* in its basic equation deduced from the *Gravity Riddle* or *GigaChron Experiment*:

$$[\mathbf{g} = \mathbf{E} \mathbf{c} / \mathbf{G}] * \mathbf{n}$$

Another important critical point is that of the change of mental state due to

the new paradigm in *Global Physics* by analyzing the facts and its causes from a strictly scientific point of view without imaginary dimensions, and with logic.

3.c.3. Definition of the physics velocity of mass

A definition of physics velocity can be the rhythm of movement. Recall that the physics model in *Global Dynamics* operates on **Euclidean** space and absolute or objective time.

Logically, each type of movement has its formula for calculating the temporal rhythm of its spatial displacement or what velocity there is with specific parameters and equations, but the *definition of velocity* will always refer to the relationship between the space travelled and time used. In other words, the *concept of physics velocity* is a concept derived from the relationship between space and time.

By mentioning the different **types of movement**, I have discussed the *Inflation Theory* and the *expansion and contraction of the universe* and the possibility of producing velocities much faster than that of light since these physics phenomena do not represent a motion upon globine but rather of globine itself. This concept of physics velocity clearly contradicts **Einstein's Theory of Relativity**. Other types of movement of globine have likewise been mentioned.

Furthermore, I have previously spoken about *what the speed of light is* and the different movements that affect light or electromagnetic energy.

A third category of the types of movement that affects the concept of speed refers to the motion of mass. In this category we include the complex *dance of the wavons*, the most well-known movements such as the *Greek movement*, or normal motion, and the displacement of mass due to a second component of *attractis causa* of the force of gravity due to radial symmetry (**Merlin Effect**) and lastly, the partial drag of mass along globine (inverse movement)

The **Merlin effect** (Mercury-Lightning) or Merluza effect (Mercurio-Luz), which explains both the orbit of Mercury and the curvature of light with a new and very simple formula for the acceleration of gravity, will be in the section, *Physics of movement in gravity*, in this online book along with the calculations corresponding to the orbits of the planets of the Solar System in the section *Physics Experiments*, in the book *Law of Global Gravity*.

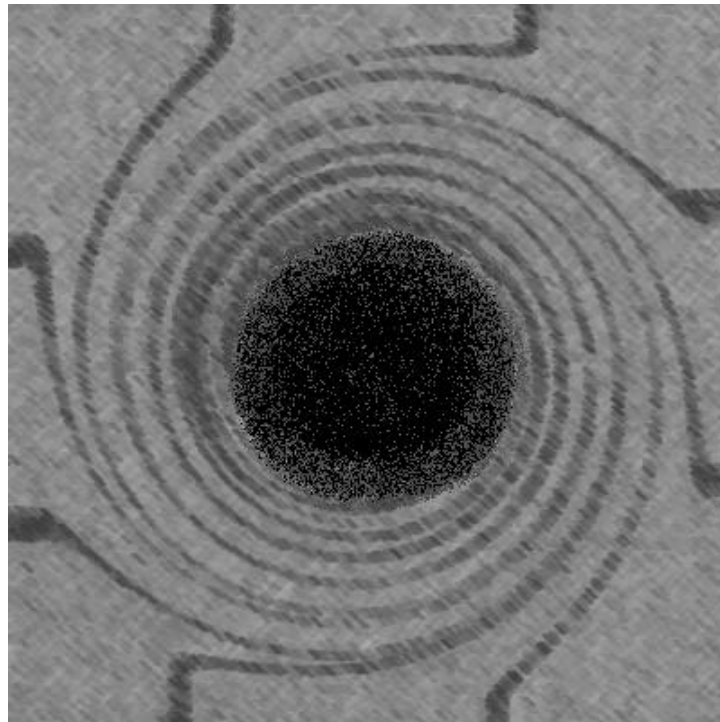
The inclusion of this modification of the motion of the planets in the *definition of physics velocity* also becomes a direct contradiction of **Einstein's Relativistic Physics**.

Now I am going to explain the mechanism for **Greek movement**, or normal displacement, of material objects, or things, according to *Newton's Laws of Dynamics*, but within the new paradigm of *Global Physics*. In other words, we are looking at the

concept of physics velocity, movement or motion of mass through the reticular structure of matter in the broad sense, with theoretical supersymmetry or without the existence of gravitational forces.

According to *Global Mechanics*, physics mass is made up of three dimensional loops, or curls, of globine. By establishing this equivalence, electromagnetic energy is unified with mass or loops of filaments of globine. This is nothing new since **Einstein's** *Theory of Relativity* already established that energy and mass were equivalents, although it did not indicate what the material element (globine) supporting both elastic properties was.

Concept of physics mass



Likewise, as far as **what physics velocity of mass is**, it proposes that the movement of mass is carried out as if it were a slipknot along globine.

◦ *Experiment with hair at home*

The idea is to prove that a slipknot, with little resistance or friction, is not as difficult as it seems at first glance.

First, get a long hair with a little yank from the head. Then, hold the hair with two fingers, separating the two ends.

With a pen, make a loop in the middle of the hair in such a way that the pen is trapped between the two ends of the hair.

Now, you can prove how another person can displace the pen left to right and vice versa with very little friction. If we add a very fast vibration of the hair, surely the displacement of the pen will be even smoother and with even less friction. We can try this with something that vibrates like modern toothbrushes or automatic shavers and hold them in the hands while holding the ends of the hair.

It is rather difficult to imagine a mechanism that is capable of producing a shift in a three dimensional loop throughout the same filaments of globine as those that it is made of. We have to assume the filaments of globine have that property thanks to the resonance of the vibrating mass and its constant synchronization with globine.

This shifting or sliding of mass is one of the essential elements of the concept or definition of its physics velocity.

Since *Modern Physics* does not know what mass is or even what mechanisms produce movement, it assigns the capacity of producing the displacement of mass to **kinetic energy** and, as a result, kinetic energy ends up being the *abstract essence* of the concept of physics velocity.

Before going on to describe the additional elements in the definition of physics velocity of mass, I would like to briefly recall the *example of cotton* used in the page on *Kinetic Energy* in the book, *Law of Global Gravitation*.

- *Example of cotton and kinetic energy*

The cotton would be the globine, the thread would be its filaments, and the mass is a ball of cotton.

The electromagnetic energy would be small twists in the cotton that make the ball bigger and deformed according to the direction of the absorption of those small pieces of cotton.

Just as with the example with cotton, the reticular mechanism of kinetic energy is consistent with the formula for kinetic energy, the formula for **physics velocity** and the equation for the acceleration of bodies with mass and, above all else, it is perfectly compatible with the increase in mass with velocity and the formula for the *Law of Global Gravitation* that incorporates the previously mentioned **Merlin effect**.

What is really noticeable is that the concept of kinetic energy is radically separated from the concept of electromagnetic energy once it is integrated with mass. Energy is transformed into another and vice versa with ease but it implies different processes and they are supported in different phases of matter in general (globine)

Among the **elements of reticular mechanism of kinetic energy** that lead us to the concept and definition of physics velocity of mass, we can highlight the following:

- **Globine**

It is the reticular structure of matter in general and the support for gravitational energy, electromagnetic energy and mass; nonetheless, in this case we will not consider radial symmetry or, better said, spherical symmetry.

The necessary elasticity, both longitudinal and of longitudinal curvature as well as transversal is a property of unbreakable filaments that make up the three dimensional network..

Globine is in constant longitudinal vibration with the same speed of propagation as the speed of light. Both speeds depend on the elastic properties of globine and it is assumed that they change their density and their longitudinal tension according to Maxwell's equations. In the book, *Global Mechanics*, more details is given regarding this aspect.

- **Mass**

As I have commented, it is formed by loops of the three dimensional net of filaments of globine. Therefore, it is also in constant vibration and synchronized with globine.

In the recurring example of the cotton, mass would be the ball of cotton, something similar to a knot, and without a doubt we can talk about the *Knot Theory*.

- **Mass of kinetic energy**

The absorption of electromagnetic energy or heat by mass implies incorporating a part of the filaments of globine to the loop of mass.

This incorporation produces a slight deformation of the mass as a whole because the elasticity of the formation of loops of the filaments has quantitative limits of creation and annulations; that is, the material support for kinetic energy is the mass as a whole.

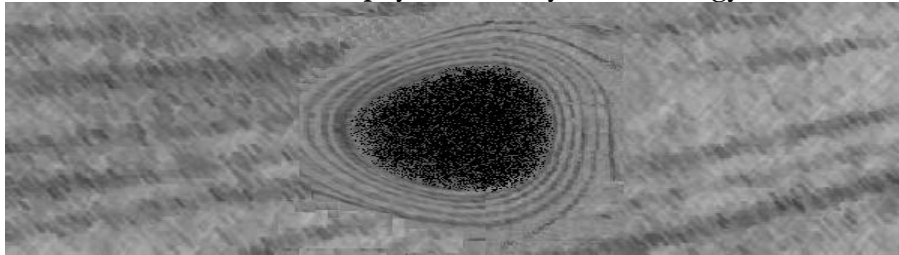
- **What is velocity and how is it produced?**

The spatial configuration of the deformation of mass is the cause for velocity. Only a symmetrical configuration in all of the directions produces a null movement in regards to globine or systems of natural or privileged reference.

This is due to the continuous vibration and synchronization of mass with globine and play of elastic forces that are produced by the curvature of filaments that represent the existence of mass. If the resultant of these forces is not null, the mechanisms of the new definition and concept of physics velocity of mass will begin.

Concept of physics velocity of mass

Deformation of physics mass by kinetic energy



So as to not repeat the explanation, more details of this mechanism are found in the section of *Physics of movement with gravity*.

3.d) Concept and definition of force

As is deduced from the comments on *Newton's Laws* of Dynamics, the new paradigm of *Global Physics* delves into the **concepts of force and acceleration**. These concepts are connected to the types of movement that have been defined.

$$\begin{aligned}\text{Force / mass} &= \text{acceleration} \\ \mathbf{N / kg} &= \mathbf{m / s^2}\end{aligned}$$

It is no longer possible to establish a definition of force as rigid as that of the *second Law of Force* or **Newton's Fundamental Law of Dynamics**. First of all, it is because the concept and types of movement do not always refer to mass and, secondly, because there are different types of energy or properties of the reticular structure of matter in the broad sense.

Nor can it be argued that the effects of the new types of forces are minor since they are found in all physics processes. Although quantitatively they can seem insignificant due to the traditional idea of the small deviation of light in passing close to the stars, or the small variation in the orbit of Mercury, it is not at all true that they are not important.

In economics, physics, or any other science, a partial analysis can always be carried out, but we must be aware of the limitations of such analyses so as to not misinterpret the model used.

In the physics processes of motion, not only is kinetic energy present as a result of a force caused by heat, electromagnetic energy and potential gravitational energy, but there are new types of force and energy due to the movement of globine, such as those phenomena called expansion and contraction of space in the area of *Astrophysics* and movements of atoms and electrons.

The **concept of force**, or resultant of forces, is tied to mass and acceleration by **Newton's Fundamental Law of Dynamics**, however, I understand it better if I associate the concept of force with energy. In this sense, the concept of force refers to energy applied in a point, or the possibility of its application in a point of space in what are called force fields.

Mathematically, it can be said that force is the partial derivative from energy in regards to space since if we make the integral of force throughout a specific space we will get energy. At this point, we will have to keep in mind the comments made in the book, *Law of Global Gravitation*, about the definition of energy and the

problem with its units and dimensions.

With this perspective, a broader concept of force appears along with new types of forces in the extent that new types of energy appear. The types of energy are, in turn, associated with the types of movement that we have seen in the previous section.

Types of force in space

Retouched Carina Nebula Jet – NASA
(Public domain image)



For example, a type of force that produces the expansion and contraction of the universe is that which takes place due to the accumulated elastic energy in the mass with the mechanism of its creation or compression of globine. It is possible that these types of forces create movement or displacement of stars regardless of their mass.

Another **type of force** of tangential nature is also derived from the potential gravitational energy, and this type of force is responsible for the *curvature of light* and the *precession of the perihelion of Mercury*. In the case of the orbit of Mercury and any mass in free fall movement, besides **Newton's gravitational force**, the new gravitational force depends on the velocity of mass, specifically on its kinetic energy.

The fact that the force of gravity has a component due to velocity does not greatly alter the concept of force since it is still a force of the same nature as that contemplated by **Newton's Law of Universal Gravitation**. And it does not alter space or time as proposed by **Einstein's Theory of Relativity**.

As a result, either other physics concepts are created or it ends up being necessary to modify the **concept of force**, making it partially independent from mass and

bringing it closer to movement and energy in its various forms.

Speaking of new **concepts of force**, the *Theory of General Relativity* does something similar with the space-time continuum and gravity as a geometric effect. A major inconvenience in the relativistic attempt is that it is incorrect and, more than helping with new concepts, what it does is distort the basic concepts of physics reality and mental reasoning.

The **definition of force** and other physics magnitudes in *Quantum Mechanics* is overlooked due to being below certain levels of knowledge, properly using the *Uncertainty Principle* in this case. That is, *Quantum Mechanics* starts using the concepts of force and energy based on certain macroscopic phases and descriptions of observed reality that are merely statistical and with highly doubtful justifications.

Wikipedia proposes the **definition of force** as any interaction between two bodies or more. I like this definition of force for its generality but there is the problem with the definition of body since the very same Wikipedia later points out that the gravitational force affects all bodies. Surely it is a definition of force according with *Newton's First Law*, or *Law of Inertia*.

Wikipedia also mentions the four types of fundamental forces such as those that cannot be explained with more basic ones. The **fundamental forces** are:

- Gravitational force
- Electromagnetic force
- Weak nuclear force
- Strong nuclear force

It seems that this Wikipedia article still has not included the unification of electromagnetic force and weak nuclear force in what is called **electroweak force**.

As we know, *Global Mechanics* has unified gravitational force with electromagnetic interaction and states that the strong and weak nuclear forces have nature similar to that of the gravito-magnetic field in the whole atom. In other words, there is only one fundamental force that is the force of reticular elasticity.

Besides obtaining the unification of the four types of fundamental forces, **reticular force** explains the new types of forces defined by *Global Mechanics*, such as those that produce the expansion and contraction of the universe or the cited *additional gravitational force* or **Merlin Force** (for having managed to explain the orbit of Mercury and the curvature of light)

A more appropriate and more general **definition of force** than that offered by Wikipedia is, in my opinion, the **manifestation of any type of energy in a space point**. Of course, if we want to talk about force fields, we can expand the concept

of force to the possibility of manifestation of energy in the points of the field.

Note the relevance of the words *spatial point* in the new definition of force.

An advantage of this definition of force is that it has simplified the concept of force by connecting it to the definition of energy and types of it. Likewise, *Global Dynamics* opens up the definition of force of its relationship with mass or bodies to which Wikipedia refers; in accordance with the definition of mass and other phases of globine in the model in *Global Mechanics*.

3.e) Definition of physics acceleration and velocity

The concept of definition of physics acceleration is very simple since it is the change in velocity per unit of time. In the model in *Global Dynamics*, with Euclidean space and absolute time, the concept is pretty simplified, although new types of movement appear as we have seen in the corresponding section.

There is a problem with the concept of **physics acceleration** due to the *Theory of Relativity* and its *Equivalence Principle* in regards to time and the very same relativity of space.

Acceleration and gravity

Spiral galaxy NGC 1309 (NASA)
(Public domain image)



Logically, the mechanisms that produce physics acceleration in the motion on globe, according to *Global Dynamics*, are the same that produce the acceleration of movement or velocity, pointed out in its corresponding pages.

On the other hand, someone can think that you cannot eventually distinguish the effects of acceleration of gravity and **physics acceleration** due to other motives in the reticular structure with radial symmetry, or globe, but in some way we all distinguish it. It could never be said that it is the same to throw a stone at someone's head as to accidentally fall from the fifth floor. That is, in fact, it can be distinguished and, in fact, they are quite different things.

In spite of the previous example, it is true that from a physics point of view, these concepts have many elements in common and it is essential to understand the characteristics of both movements with acceleration in order to establish when

they behave the same and in **what way a physics acceleration differs from another**. And, if possible, escape physics principles that are artificially imposed instead of respecting the empirically observed facts.

Let's take a look at the following example:

◦ *Enchanted forest*

Let's imagine a space with trees where we are going to stroll. It will be an enjoyable stroll if there are not too many trees that impede us from a continuous passage. In other words, there is a specific density of trees that is innate and independent of the observer in this forest. Without a doubt, other forests can be more or less populated.

Now we are going to a forest to jog, we will notice that we have to be more careful than when we were strolling so as to not run into trees. The faster we go the more crowded the forest seems, that is, **physics acceleration** changes the subjective density of trees in the forest.

Now let's imagine but only for a moment that we are giants and we are going for a picnic in the **enchanted forest**, surely the forest will once again appear more crowded than in the first case.

Likewise, but in the other way, we could be in three different forests as far as their tree density but that the density **perceived** by each observer were exactly the same.

The scientific work in this case is not to maintain this apparent confusion of the forests with relative definitions as a result of the natural subjectivity of our senses.

Nor it consists in the definition of a different system of measurements' units for each situation, so that it is impossible to grasp an intuitive idea of reality; by forcing us to constantly change units. And much less force us to calculate equations as if we were in any lost forest of the universe in order to take a small stroll through the woods by the house.

This example of the enchanted forest helps us understand the partial equivalence between gravity and velocity or between variations in the tension of the longitudinal curvature or matter, or globine, the support for gravitational force, and physics acceleration or variation of velocity. As we will later see when discussing movement with gravity, the frequency of resonating mass changes with gravity and with the variations in velocity or physics acceleration due to changes in the movement on **globine**.

The typical relationship between physics acceleration in globine and acceleration of gravity is elemental physics since the most well-known effect of gravity is a centripetal acceleration by definition, that is, a force by unit of mass that an object endures aimed toward the center of the gravity field of another object.

The physics units of the definition of acceleration of gravity coincide with acceleration. Mathematically, it can be said that the normal concept of **gravity is a particular case of abstract acceleration**.

Likewise, from the physics point of view, it can be stated that the acceleration of movement on globine exists as a secondary effect or as a result of the existence of gravity, understood as reticular structure with radial symmetry.

Furthermore, as has been repeated on several occasions throughout this book, acceleration due to gravity is a result of the two components of *attractis causa* that generates global force of gravity. That is, there is no distortion of space or time, just of some physics theories.

Some interesting cases of *acceleration due to the force of global gravity* are:

- At times, according to the definition of acceleration of **gravity, it can be null** due to the effect of two gravitational fields balancing each other out; but that the curvature of the filaments of globine does not exist does not mean that longitudinal tension of globine, as a physical or material entity, has disappeared at this point.
- For the orbit of the planets, **Newton's Law of Universal Gravitation** provides us with the relationships between inertia or centrifugal force and gravity or **force of centripetal acceleration** that have to exist in order to obtain a stable orbit in the case of planetary orbits. However, the small deviation in the anomalous precession of the planets is only explained by **Einstein's General Relativity** with its typical mathematical complication and lack of physics sense, and by *Global Dynamics* with the **Merlin effect**.
- Another relevant aspect of the development of the theory of gravitation is the force that produces the curvature of light in the presence of a mass. This fact, oddly enough, depends in two times the **Newton's force of gravitational acceleration**. The cause for which the curvature of light is double is due to the **Merlin effect** explained in the book, *Law of Global Gravity*.

The *Theory of Global Equivalence* is based on the **Global Conservation Principle** that, as indicated in its name, represents a more general equivalence than that of Albert Einstein's *Theory of Relativity*, by including gravity together with mass and energy. Nonetheless, it is different and it goes in line with the extension of the

classic *Principle of Energy Conservation*.

On the contrary, as far as the variations in gravity and physics acceleration of motion on globe, the equivalence is more restricted besides being different since it does not end up representing an identity between concepts of acceleration and gravity and much less assign the temporal effects to any of them.

The proposed global equivalence is based on the unification of fundamental forces by *Global Mechanics* and in the energy effects of physics velocity, acceleration and gravity on mass, studied by the *Law of Global Gravity* and *Global Dynamics*.

In the example of the *enchanted forest*, is equivalent if there are more trees, or that we ourselves move, or even better that the forest moves toward us; to the effects analyzed, the three cases are indistinguishable. But the number of trees is different if we know how to do the calculation.

Lastly, besides not assigning temporal effects to gravity or to physics velocity, *Global Dynamics*, by explaining the orbit of Mercury and the curvature of light with the **Merlin effect** makes the physics principle of **equality between inertial mass and gravitational mass** unnecessary in both *Classical Mechanics* as **Einstein's Theory of Relativity**.

The definition of mass in *Global Mechanics* is based on its physics reality and not for its inertial or gravitational behavior. Physics mass concept is unique in agreement with *Global Mechanics* and the behavior of mass depends on the forces and energy with which it interacts.

With velocity, mass increases both in the presence of the curvature of longitudinal tension or globe or not, but only with gravity are there also intrinsic variations in the force of gravity by unit of mass as a result of the greater gravitational interaction with greater velocity, explained in the **Merlin effect**. The variations in force of gravity to which the Merlin effect refers differ from both those derived from the variation in distance and the variation in mass in **Newton's** formula for gravity.

3.f) Mechanics of physics movement

By discussing movement in general, we have seen the characteristics and properties of the speed of light and we have shown the source, meaning, and material support for **kinetic energy** in relation to the physics velocity of mass on globine or reticular structure of matter in general.

The breaking of supersymmetry through mass by the creation of the gravitational field due to the potential gravitational energy presents two types of effects on the mechanics of physics movement:

- Acceleration of the free fall of bodies corresponding to **Newton's Law of Universal Gravitation** that operates according to *Newton's second Law* or proportionality of force, mass and acceleration, keeping in mind the increase of mass with velocity.

The main difference between physics movement with supersymmetry and accelerated movement of free fall is that kinetic energy is normally provided by the potential gravitational energy in the latter.

- The *Merlin effect* or second component of *attractis causa*, explained in the book *Law of Global Gravity*, enlightens the effect of the curvature of light in the gravitational lens and the anomalous precession of the orbits of the planets.

Next we will go into more depth with the physics meaning of *kinetic energy* as a direct cause of movement and how the mechanics of movement works, physics velocity and acceleration of mass with and without gravity.

3.f.1. Physics of movement without gravity

In this section we are going to analyze the mechanics of movement of bodies with mass in a theoretical physics of **supersymmetry** of the reticular structure of globine. In the section, *Movement with gravity*, we will see that the mechanics of physics movement of mass with radial **symmetry** of gravity is the same as supersymmetry with the addition of intrinsic force of gravity, which has two components.

Let's take a look at the different situations of mass and kinetic energy in regards to the physics of movement, velocity and physics acceleration.

- **Rest**

Physics mass is mass at rest and **kinetic energy is null**. Remember that when

there is kinetic energy its material support is mass as a whole. We are also always talking about a model with Euclidean space, absolute time, and with measured velocities in relation to the natural reference system.

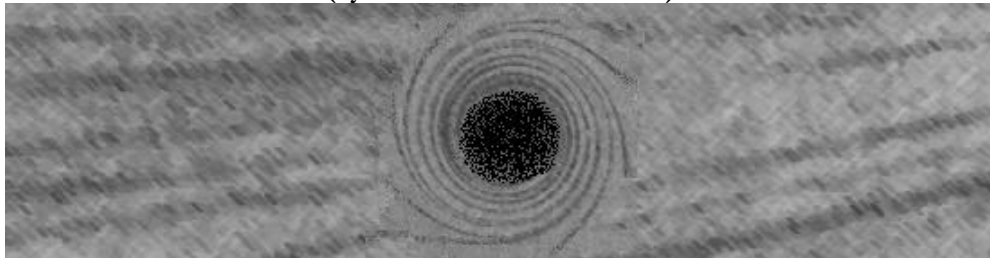
Globine is in constant vibration and synchronized with the resonance of mass. Logically, the greater the longitudinal tension of globine the faster its vibration will be, as well as the resonant frequency of the mass.

Furthermore, the greater the longitudinal tension of globine the greater the energy related to each elastocyte, or internal elastic element of the filaments of globine, will be. The equivalence $E = mc^2$ will be maintained because **what is greater is the value for the speed of light *c*** as has been discussed when talking about the characteristics and properties of the speed of light.

It is worth pointing out that I have discussed the increase in longitudinal tension, not the increase in the tension of longitudinal curvature that supports the forces of gravity. In more intuitive physics, what it is produced is an increase in the intensity of the gravitational field which has the same results as those mentioned in the last paragraphs.

Mass at rest or null movement

(System of natural reference)



Time does not appear to be affected by any acceleration or increase in its absolute rhythm except when we measure it based on the resonance of mass as **Einstein's** *Relativistic Mechanics* does, but it is not the case in the physics model *Global Dynamics*.

The **privileged physics velocity** is zero when mass is at rest in regards to globine, which is its natural system of reference, kinetic energy is null and, therefore, there is a balance in the three dimensional play of forces in the interaction between globine and mass, given the supersymmetry of globine of our hypothesis.

Although there is no physics movement of mass on globine, if the system of reference changes there is relative movement but physics mass would not have changed and kinetic energy would still be null. That is, relative motion does

not express the underlying physics reality. It is like when you are moving in a car and the trees appear to move towards us and look bigger.

- **Physics of linear and uniform motion**

After an instant acceleration or acceleration during a specific period of time, we can outline a physics state of linear uniform motion.

Then there is a certain quantity of *kinetic energy* provided by the force that produced the mentioned acceleration. Physics mass has deformed or altered its spatial configuration once it absorbs energy; this absorption and spatial deformation of physics mass is the essence of kinetic energy.

As a result, the concept of increase in **Einstein's** *relativistic mass* is only correct when the natural system of reference of physics movement is used.

Furthermore, the increase in kinetic energy in fact creates a greater force of gravity according to **Newton's** *Law of Universal Gravitation* by mass having increased; but this increase does not produce greater acceleration of the total mass. The increase of the centripetal acceleration in the orbits of the planets is due to the **Merlin effect** that we will see in the section about *Physics of movement in gravity* in this online book, and that now we are ignoring for the premise of theoretical supersymmetry of globine.

Continuing with the case of supersymmetry, the vibration of globine is synchronized with the vibration or resonance of mass given that mass is made up of filaments of globine.

The interaction between the elastic energy of the filaments of the loops of mass and the surrounding globine produce forces due to its natural tendency to revert to the state of supersymmetry; yet the composition of mass no longer has the symmetry of the figure of mass at rest or, in other words, the play of forces does not give a resultant null as in the case of being at rest.

As a consequence, the forces balance themselves out due to the mechanics of the movement of mass since it relaxes the tension of the filaments of the loops with greater tension in the direction of movement and increases the tension of filaments in the opposite direction. With this, we keep in mind the total effects are in the three dimensions of Euclidean space.

While kinetic energy does not undergo any variation, the velocity continues with uniform motion.

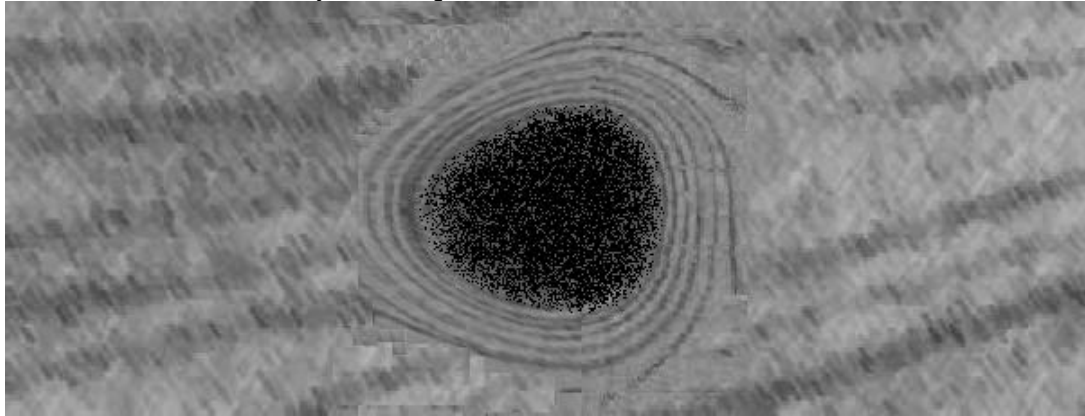
On the other hand, the physics movement makes it so that the mass reaches the next vibration of the filaments of globine a little earlier than if it were at

rest and so on. In other words, the resonant frequency of mass is greater than in the state of rest.

Therefore, the frequency of the resonance of mass, increased by the physics mechanics of movement, is still synchronized with the filaments of globine. That is, the **physics movement on globine is the mechanism of balancing** the resonance of mass and globine, or of its synchronization.

Physics of uniform movement

Dynamic equilibrium of the elastic forces



The frequency of resonance or **vibration of mass has increased with velocity on globine**, just as the longitudinal tension of globine did in the previous point about being at rest; but it appears **that time is not changed in this case either**, unless is it precisely defined based on this frequency as **Einstein's *Theory of Relativity*** does.

- **Physics of linear motion with acceleration**

Physics acceleration within the natural system of reference of globine implies an increase in kinetic energy. The process is similar to the previous case of linear uniform motion in that it has a change or acceleration in relation to the state of rest.

The increase of kinetic energy implies a greater increase and greater deformation of mass. Likewise, the greater velocity makes it so that the resonance of mass increases so as to synchronize with globine. As long as it maintains a certain velocity it will maintain its corresponding resonance. In **Einstein's *Theory of Relativity***, what determines the relative unit of time is velocity and the acceleration produces changes in this unit. Likewise, the intensity of the field of gravity determines the relative unit and the change in intensity or in gravity the alteration in this unit.

3.f.2. Physics of movement with gravity

This section analyzes an important characteristic of movement or movement on globe with the radial symmetry of gravitational potential energy, in contrast to the physics of theoretical movement in a reticular structure with supersymmetry that has been studied in the previous page.

I am referring to the **Merlin effect** that produces the curvature of light by the gravitational lens and the small deviation in the orbits of the planets in relation to that foreseen by **Newton's** *Law of Universal Gravitation*. Both natural phenomena are explained by **Einstein's** *General Relativity* with its *field equations* and its distortion of space and time.

The significance of this physics characteristic lies in the fact that not only it is compatible with the composition of mass, electromagnetic energy and the model of *Global Mechanics* as a whole, but that it reinforces it at the same time. In other words, the new explanation of the mechanics of movement in gravity makes **Einstein's** *Relativistic Mechanics* evidently incorrect.

The most well-known case in the physics of free fall movement of bodies with mass – for having a more pronounced deviation – is the **anomalous precession of the orbit of Mercury**. For the movement of light, the most famous cases are the solar eclipse of 1919 and **Einstein's** rings observed by *Astronomy*.

3.f.2.a) Dynamics of the movement of light

Knowledge about the physics theory regarding the rules of the *dynamics of the movement of light*, or propagation of electromagnetic energy from the effect of *gravitational lens*, helps to understand its nature and vice versa. Regardless of the description of wave movement and **Maxwell's Laws**, the movement of light shows a small angular variation when passing close by the stars, or curvature of light.

The characteristics of the propagation of electromagnetic energy of light has been mentioned in the book, *Global Mechanics*, and on the other hand, the mathematical demonstration of the curvature of light is carried out in the section *Energy experiments* in the book, *Law of Global Gravity*.

Equation of the Global Gravity Law

$$\mathbf{g}_g = \mathbf{G} \frac{\mathbf{M} [1 + \pi \mathbf{v}^2 / \mathbf{c}^2]}{\mathbf{r}^2}$$

The **Laws of Global Gravity** are a simple mathematical formula that collect the implications of the **Merlin effect**, or second component of *attractis causa*, on **Newton's Law of Universal Gravitation**.

Conceptually, we can see that the total mass of the object in movement does not appear in the formula because it should appear in both sides of the equation; that is, an increase of the total mass does not change the orbit of the planets or the velocity of the free falling bodies.

In the case of light, we would have to put this equation in terms of energy but it would be entirely the same as the one shown given that the physics mass is nothing more than a type of elastic energy or phase of globine.

In short, the formula for the *Law of Global Gravity* adds kinetic energy to **Newton's Law of Gravitation** as a second physics component of *attractis causa* in the gravitational interaction. For the case of light, since its speed is equal to gravitational waves, the gravitational interaction due to physics velocity is exactly twice that of mass; the same result as the solar eclipse of 1919 and that presented by **Einstein's Relativistic Mechanics** with its space alterations based on the gravitational energy.

3.f.2.b) Physics of bodies in free fall

According to Wikipedia, the free fall movement of bodies is that which is only affected by the forces of gravity. Although, they also speak of free fall in the cases of movement with distortion of space and time due to the gravitational energy in **Einstein's** *Theory of Relativity*.

Global Dynamics explains the physics deviation in the motion of free fall in relation to that predicted by **Newton's** *Law of Gravitation* as an alternative to **Einstein's** *Theory of Relativity*, and maintaining the principles of Euclidean space and absolute time, and clearly without using any artificial dimension or changes in physics reality for each observer.

This special feature of the **physic of free fall** is explained in simple terms based on the following points:

- **Kinetic energy and the velocity of physics mass**

The section, *Physics velocity of mass*, mentions the elements that intervene in the definition of the velocity of mass, specifically, the concept of mass in *Global Mechanics* and the material support of kinetic energy.

- **Movement of bodies with mass with supersymmetry**

The common peculiarities of movement on globine with supersymmetry were initially discussed in the section, *Physics of movement without gravity*.

Kinetic energy is the cause for the mechanics of the motion of mass in a theoretical supersymmetry of globine and that, as we will see, also affects the **free fall movement of bodies** that we are analyzing.

To be specific, I have explained the various states of motion of mass, rest, uniform movement and acceleration, together with the meaning or effects of the corresponding kinetic energy related to them. In other words, the mechanics of motion as a response to gravitational interaction and synchronization of resonance of mass with vibration of globine in the changes of velocity of mass.

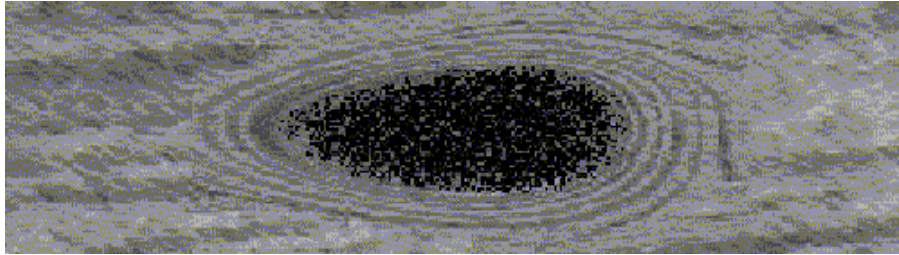
- **Free fall movement in Newton's Mechanics (radial symmetry)**

This movement is similar to displacement with supersymmetry when the force applied is the force of **Newton's** gravity. This force is the **first component** of the *attractis causa* in the *Law of Global Gravity*.

The special feature of the increase in mass with velocity derived from relativistic mass does not affect the acceleration given that **Newton's** gravity increases in the same proportion as mass. Earlier in this book, and in the book of the *Law of Global Gravity*, it was mentioned that this increase in mass with velocity is correct as long as the velocity is measured in relation to the natural or privileged system of reference.

Velocity of mass

Free fall movement of bodies



- **Second physics component of *atractis causa*, or Merlin effect**

The special characteristic of the free fall movement of bodies that explain the **Merlin effect** is produced in any displacement of physics mass throughout globine with radial symmetry. In other words, it appears in the cases of **Newton's** gravity wherever there is also movement of mass in regards to the natural system of reference.

The only thing left to explain is why the deviation is less in the case of *free fall motion of bodies* than in that of the movement of light.

The difference between the movement with gravity of light and of bodies with mass is important because in spite of existing, both deviations in regards to **Newton's** *Law of Gravitation* are explained with the same formula and the same argument. The **Merlin effect** is due to the increase in the gravitational interaction due to the velocity, and kinetic energy quantifies both in the case of light as well as in the case of bodies with mass.

Quantification is given by kinetic energy because movement of the total mass is involved and, taking into account its velocity, it assumes an energy equivalent to the electromagnetic or gravitational energy necessary to reach this speed from the initial situation at rest within its natural reference system.

In other words, the second component of *atractis causa* or the **Merlin effect** on the total mass is equal to **Newton's** force of gravity on the kinetic mass or the increase of the mass at rest due to the velocity; given that the force of gravity on electromagnetic energy is double. One part compensates for the mass

increase with speed, maintaining the force of gravity per unit of mass, and the other produces an increase in the force of gravity per unit of mass.

Potential gravitational energy is also seen to be affected, as discussed in the section on *Potential energy* from the online book *The Law of Global Gravity*.

In short, as the force of total gravity per unit of mass will increase, the orbit of the planets and, in general, the free fall movement of bodies with mass will be affected.

The mathematical demonstration of the anomalous precession of Mercury with the formula for the *Law of Global Gravity* is also found in the section mentioned earlier in *Energy experiments*.

As mentioned in the section, *Newton's Second Law, the Law of Force or Fundamental Law of Dynamics*, the proportionality between force, mass and acceleration continued to be maintained but we have to keep in mind the intrinsic increases in mass and in force of total gravity with velocity, besides the decrease in the force of gravity with distance.

3.f.2.c) Physics of the normal movement of bodies

If when the bodies are in free fall we add other forces, kinetic energy of the whole can make the body move in any direction. The direction and sense of movement of the bodies depends on the spatial configuration of the object's global mass in motion and on the field of gravity. The resulting force cause by the energy exchange, given the spatial configurations mentioned, is the cause of the movement.

Movement of bodies in gravity

Bewitched heart



In the figure of the bewitched heart, one can see, from the string's arrangement (further apart at the top than at the bottom), that if we make the strings vibrate, any object or energetic property on them will tend to move upwards (imaging the strings are a bit convex to the vertical axis in the middle and that they have some longitudinal tension)

So, if the object were to be shaped like a black triangle it could well move to the contrary, then its spatial configuration would mean a greater effect on the exchange of energy than that of the spatial configuration of the strings.

The fact that the spatial configuration of global mass and the field of gravity determine the movement is the reason why bodies in motion do not stop until new forces are applied, as was seen in the previous section on *Physics of movement without gravity*.

* * *

When Don Magufo finishes the book,
he happily calls Einsotro to thank him for his collaboration.

Who puts on a pensive face and says:

– *Thanks very mucho.*

Afterwards, *Don Magufo* happily calls *M^a José*.

She tells him:

– *Thanks very macho.*

He then thinksa:


¡*Thanks God I haven't called Goblin!*



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