

# QUANTUM INFORMATION PROCESSING TIME VS. RELATIVISTIC DILATATION: A NECESSARY PARADIGM CHANGE, FOR RELATIVITY AND ALSO QUANTUM PHYSICS.

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Translated to English by Eugene THIERS

Dedicated to Eugene THIERS (SRI), who left us on February 20, 2022.

## Abstract

In the LORENTZ Transformation, is extensively detailed why the relativistic Contraction/ Dilatation of Units was a **premature** interpretation and therefore **erroneous**, since its correct justification is the **appearance** of an **underlying quantum Information Processing Time** of Physics, therefore **empirical**, and also necessary for **control** of dynamics of Matter (the **intrinsic** laws of Physics). That **provides causality** to Physics, and **integrates** Relativity and Quantum. Modifying the LORENTZ Factor (wrongly assumed as a scalar) by a function of the interacting masses, it is **harmonized** the special Relativity (SR) with the general Relativity (GR). A new Time (which is an ignored part of empirical observed Time) that requires a **new 5-dimensional geometry** (three from Space, but **two from Time**) to resolve the paradoxes and inconsistencies of physics (e.g., explains HEISENBERG's Indeterminacy, etc.).

**PREVIOUS NOTE:** INFORMATION IS ALWAYS AT THE BASE OF ANY DYNAMICS/  
PHENOMENOLOGICAL BEHAVIOR STUDIED BY SCIENCE, PHYSICS INCLUDED.

These paragraphs are extracted from the first two submenus: "Mathesis universalis" (<https://www.sistemaconceptual.org/mathesis-universalis-eng/>) and "Physics and Information" (<https://www.sistemaconceptual.org/physics-and-information/>), of the Web: <https://www.sistemaconceptual.org>

LEIBNIZ (1646 - 1716) was 300 years ahead of his time proposing the Universal Science (= "Mathesis universalis") ... For example, the intended "Unification of 4 forces", or the integration of the confronted branches of physics (Quantum, Relativity, QED, ...), it's a little part of it.

Although he introduced the binary positional system (the basis of today's computers), the minimal knowledges about information in his time, prevented him from further discoveries. Conceiving "Universal science" is only possible with symbolic systems of information. And it begins with the study of intrinsic Semiology and the intrinsic Semantics that characterizes each information system. LEIBNIZ would have needed the knowledge of these information systems, but those would not be available until !another 200 years!

So, in the middle of the 20<sup>th</sup> century, science had to accept that life phenomenon was controlled by information, Genetic information in this case, directly codified from the material molecular bases of the DNA sequences. The symbolic basis of this language are the "Codons" which are ordered and structured to control biological processes. These symbolic systems with material support I represent by **(+M, +S)**: Material support (+), Symbolics (+). Contrary, traditional/ Galilean physics is **(+M, -S)**: matter only (+), **no** symbolic information (-).

But 50 years before, at the end of the 19<sup>th</sup> century, !more than 100 years ago!, FREUD (1856-1939) introduced the symbolic system of information of the psyche, which regulate the human prolific behaviour. Without even knowing over the genetics, he described even more complex and powerful information systems. Unlike the DNA that we cited above what is of material basis, the basic support of psychic information is not directly material. Differently, the basic support are informational-virtual signals and symbols of unknown coding yet. Undoubtedly, these signals and symbols circulate through the nervous system, but the material support is not direct. I represent by **(-M, +S)**: **no** Material support (-), Symbolics (+). Such as software, languages in general, ...

I insist, the direct support are the signals/ symbols, which adds very powerful and important properties (versatility, hiper-complexation, self-applications, methodological transfers, ...), not possible in the information systems directly supported in material elements (genetics, ...). This is especially important for understanding the "Underlying information of physics" that I explain later.

More in particular, human knowledge, one of the most prominent specific faculties of the psyche, has been shown (C. UDINA, 1996, "Intrinsic and exact conceptual system") to be perfectly represented and described on the basis of elementary information, the cognitive triads formed by two related concepts (a**R**b, where "a" and "b" are Concepts, and "**R**" a Relation). For example: "A Canyon **is the Result of** Erosion".

With which, through their groupings and structuring result all form of knowledge, however complex and profound it may be. Thus, with algebraic and geometric criteria applied to semiology and semantics, even the "Characteristica universalis" proposed by LEIBNIZ can be constructed, making an "Algebraic extension" of the accuracy of numbers to all concepts, something that was thought impossible. See in this same Web:

(<https://www.sistemaconceptual.org/teoria-del-conocimiento/>) or "Bases matemáticas del SC..." (<https://www.sistemaconceptual.org/pdf/MatematicaSC.pdf>), both in Spanish-Castilian.

Computing, symbolic information systems that are based on signals that travel through hardware materials (note the analogy with the psyche), have revolutionized civilization by allowing technologies (communication, ...) and automatization (the poorly named artificial intelligence, ...), absolutely unthinkable about 50 years ago.

It is clear that the biological, psychic, and cognitive dynamics cannot be explained without an information system that controls them. As all cooking recipe, what we call "processes", are in fact only intermediate elemental stages, that always progress (and/ or are described by mankind) by some kind of informational or virtual expression. Reciprocally, information systems allow mankind to automatize or simulate any dynamic. But, we are not conscious of this, because as adults, we are accustomed to using "Process" or "Phenomenon" without realizing what are elaborated concepts (that is, virtual in nature, and not directly real/ sensitive, in the sense that they are not based on reality, but rather based in previous virtual abstractions). For this reason, these two concepts are only correctly conceptualized by the child from the age of 6 years old, how is clinically proven (IMIPAE, 1986). Any "Process" or "Phenomenon" necessarily implies virtual information, either intrinsic-underlying, or descriptive by mankind. I insist, the only strictly real are the intermediate states.

Also in the middle of the last century, 1964, John BELL (1928 - 1990, not Alexander G. BELL of the telephone) raised (by its theorem and its inequalities that resolve the "Paradox EPR") the need for an unknown "sub-quantum level". Shortly after and progressively (CLAUSER, ASPECT, GISIN, ZEILINGER, ...) have confirmed with the experiments of "Entanglement" the existence of an exchange of information that eludes the material characteristics hitherto known (giving way to the instantaneity, the delocalization, ... that contradict the hypothesis of Relativity). There are no hidden variables, simply that the information is neither material nor tangible.

More recently, in a surprising convergence of quantum and computer phenomena, talking about the physical Particles, some exceptional information processing capabilities has been discovered, such as superposition and quantum computing that the physicists want to apply. Could it be that this exceptional processing capacity of the physical particles had been around for 14 billion years without being used? It is unquestionable that such information processing already existed from its inception, and can only be justified by the calculation of interactions with the other particles, in order to meet the strict intrinsic laws of physics.

So, as we will see, physical phenomena also have underlying information and not just the information that man has made. Underlying information supported in symbolic system, necessarily based in informational-virtual signals and symbols, analogous to computer science or the psyche. Likewise, these symbolic systems represent them by (-**M**, +**S**): non Material support, Symbolics.

Just one detail, the underlying symbolic systems of Physics do not have direct material support (hence "-"), but not even indirect (they have existed since before the appearance of matter, we could call them "pure" symbolic).

But in spite of this physic experts continue to reject information as a basic factor. Information that would avoid falling into anti-causality, a current anti-causality that contradicts its alleged condition of science. Information is used as something marginal, still not intrinsically integrated with physical theory (it is not until 1922 that SZILÁRD associates Entropy with Information, to solve one of the inconsistencies of Entropy, the so-called "MAXWELL Demon", who formulated the !1867!

Thus for more than a century, as a consequence of the unexpected implications of MAXWELL's equations (limit of "c", ...), when trying to justify them with the Einsteinian hypothesis of the "Dilation of time", theoretical physicists fall into contradictions. Sometimes leading into infinite errors as in the "Vacuum catastrophe".

There is a hypothesis that avoids all of the above, so it is strictly a correct theory. With it, information is introduced into the basis of physics in a fully empirical and calculable way. This is the "Processing time of the intrinsic information of physics" (a system of information previous and independent of the materialization), which explains without any contradiction or paradoxes:

- all known relativistic Phenomena (contributing in the LORENTZ Transformation, with the necessary hemisimmetricity of the Time Unit and the functionality of their Factor regarding the masses, allowing the harmonization of Special and General Relativity);
- quantum phenomena (and harmonizing them with the relativists) as the individualized/ differentiated states of the physical Particles (due to their very numerous superpositions);
- Quantum computing;
- the Energy of the vacuum, but a vacuum full of information..., and the Casimir Effect in dielectrics,
- Delocation and immediacy (misnamed "non-locality" and "action-at-a-distance");
- many others, such as darks Energy and Matter, the Ether (!!informational, not material!!), the reconciliation of the times of NEWTON (fixed) and LEIBNIZ (relative), Epitaxy, radioactive Decay, the "Memory of water", ...

For the versatility of the information (as a CPU, which can process all kinds of programs), as fifth dimension, the "Time of processing intrinsic/ quantum information", it does not require any more dimensions in the physics (otherwise, a gazillion times imaginary —NOT empirically— as in the "String theory"). Three dimensions of space, two of time.

Physics must incorporate three new informational /virtual concepts, which exist but are not real, do not belong to the material Universe:

- 1) the underlying quantum-**prematerial Information**,
- 2) your necessary **Processing**, and
- 3) the required **Processing time** (which, because of the aforementioned virtuality, does not manifest itself directly in our material Universe, manifests itself empirically indirectly, comparing the clocks of the systems in relative motion between them),

which allows us to explain the outstanding questions of current physics, avoid their contradictions, or improve their understanding, which fully validates the hypothesis (as opposed to the current "Dilatation", unsatisfactory for its numerous contradictions).

## INFORMATION OR DILATATION?

Judgments of the type: "it is difficult for Carles to understand Relativity; it invented the Processing time so that his mental schemes do not jump through the air"; "Carles makes or invents tricks" (both, on 2015-06-15, from a former School friend, and later a physics professor at a University), helped me write this brief summary (thanks!). A summary thinking about on these types of people, since I respond to their "arguments", arguments similar to those received from many other scientists (the one I remember most, from 2004: "Carles, the only problem that physics has is that you do not have fucking idea of quantum mechanics").

When I was young the first thing that did not fit (like many others, especially mathematicians), was the relativistic symmetry of the Time Unit. Regarding Earth clocks of HAFELE - KEATING, the clocks of the airplanes that moved when flying, were delayed in this experiment (a few millionths of a second), that is to say, they were "dilated" by time. In this, we also agree, no doubt. It is a proven fact. So, if HAFELE - KEATING had done the calculations of their experiment inside the airplanes, like the other clocks (those of the Earth), they had gone ahead, it would have turned out a Relativity in reverse, that the time regarding "their" clocks (of the planes), "contracts" instead of dilate.

I clarify. By saying "time is stretched", it is understood by omission, that it is its unit that expands, and if the unit of time dilates, this translates into the time passes slower (the clock is slower, is late). Explained easier for those who are not accustomed to tensor transformations: if the measuring stick that we use (= the unit or base) to measure a distance "x" would make us longer to expand, the time that fits in said distance "x" (= the coordinate) would be smaller. Or if the club were made shorter by contracting, more clubs would fit in the same "x" distance. Thus, if I measure a distance in "Meter" and there are 10,000, when doing so with a unit "dilated" a thousand times, as for example the "Kilometer", the distance will be only 10. Value of the unit and value of the measure go backwards. But, !the distance is the same! Reality and measurement are different concepts, something that is often ignored. I am not guilty of this omission/ license that can confuse, so clarification is required. Without this clarification, laypersons in Relativity —almost everyone— can not understand the relationship between "dilation of time" (!of their unit/ base!), and that "the traveling twin ages less" (lower value of the time coordinate).

That is, seen from the clocks of the plane, the clocks of the Earth came forward. This is obvious, if mine clock lags behind yours, yours is ahead with respect to mine ( $f(a, b) = -f(b, a)$ , !hemisymmetry!). To understand us, it's like what they taught us when they were young at school: to pass any member of an equation to the other side, you have to change the sign, add by subtract, multiply by divide. The changes in the mathematical equations are "hemisymmetric". With the Time is the same, too, no doubt. So, seen from the plane, the time of the Earth (its unit) contracted, and Special Relativity (hereinafter SR) would be the opposite: that time (unit d) is contracted. A theory that is different according to where it place is studied is absurd, it is self-contradictory. Then the relativist *ensorship* says that these reciprocities are not allowed, that "it dilates and it is enough!". The SR also argues the non-inertiality of the accelerations of the airplanes, but then if instead of an airplane we take a satellite and despise its acceleration of putting into orbit, the rest of its operation is inertial because it turns alone, and the contradiction remains as we will see. And all this without even entering into the contribution of LOGUNOV on non-inertial systems.

Another problem is: why should the Earth be taken as a reference and not the plane? It is not worth that the Earth is bigger, because we return to Ptolemaicism. We have not said that the Special Relativity (SR) does not consider masses? Then it is as valid to do it from the plane as from the Earth.

If a classical pendulum clock is delayed with respect to the "official" time, it is due its pendulum has extended / "dilated" its period of oscillation. But the time has passed the same in both watches, only the measurement has differed, due to the different units of measurement of the watches. No one can question it. The surprising thing about relativity is that two equal clocks (the ultra-precise atomic clocks that, when they are together, measure exactly the same), by separating them and making one move faster than the other (the one that is placed in the

airplanes, or the case of the atmospheric Muón that will be seen, or in the satellites), this clock automatically changes its "oscillation" rhythm, as if the clock time unit's is dilated, so the time it measures it gets slower. This implies that, with the Einsteinian interpretation, the concept of "unity" ceases to exist, having to accept that it is a variable. Something infinitely radical for all science, and not just for classical physics, what I should raise if there is any other more reasonable explanation. There is, and it is what we will see: the processing Time.

Herbert DINGLE was one of those who insisted on that; but there was never an answer to this self-contradiction, and they made life impossible due to other independent errors of this obvious argument. ESSEN, to whom the atomic clock is due, kept saying that the EINSTEIN hypothesis was absurd, but like many others, was totally marginalized (yet, his atomic watch is used everywhere). A professor of physics, emeritus (University of Toronto), Ian McCAUSLAND, rightly says:

"If a theory is contradictory in itself, then it is possible to adapt / manipulate the results of that contradictory theory to make it coincide with the results of the physical experiments that we choose. Therefore, when it says:

'A theory is contradictory in itself'

it cannot be refuted [by the defenders of such a self-contradictory theory] by saying that 'the theory is true because it coincides with different experimental results', so said, because being self-contradictory is able to equalize/ coincide with all possible outcomes."

See, the ADDENDUM of logic and GÖDEL, at the end.

People attend universities because they normally prefer the scientific method and the knowledge it brings, versus the dogmas that are dragged from high school. Regrettably, physic professors of the University sometimes lack sufficient math knowledge. For that reason, I studied tensorial (and matrix) algebra and differential geometry to a high level thanks to mathematical professors (S. XAMBÓ, ...) and "Bourbaki" books. I dreamed of doing for Quantum Mechanics and Relativity a book analogous to the one GODBILLON did for Classical Mechanics ("Géométrie différentielle et Mécanique analytique", Herman 1969). In contrast, Relativity does tensorial and metric juggling.

I was surprised by the time dilation with speed (I repeat, its unit dilates), so the measured time slows down. While with space it is not its unit that is contracted (required by MAXWELL Equations), but rather directly the resulting distance/ coordinate. That is, both units "dilated". Surely because otherwise "c" would be overcome locally (!not globally!) and this is not understood by "official" Relativity. The Relativity does not distinguish local reality and its own speed, from the external/ global speed (but there is no space to treat this here, nor the supposed increase of mass with speed).

The relativistic sum of speeds, and that "c" is the same from any moving system, can be sustained because an empirical verification is impossible.

With the current perspective, the contraction of space is not understood either, since nobody contracts despite the millions of high-speed particles that surround us and even pass through, and that would require said "contraction". This is due to the fact that Relativity does not distinguish between:

- local reality with its corresponding "Own Velocity" (in relation to its "Own-Material Time", which we will discuss),
- from the external/global velocity observed from another system.

This also forces us to reconsider the supposed increase in Mass with speed: with respect to what speed?, the "own"?, or, the what is observed externally? (but there is no space to explain this here).

The space is like a joke. For example with the controversial paradox of the sphere. If a sphere goes very fast, according to the Special Relativity, it should contract in the direction of the travel, but not in the transversal direction, that is, it flattens in the direction of the march, surprising! That is, suppose we travel in a rocket to almost "c" (something impossible, even at substantially less velocity, due to the instability of biological structures), so that the LORENTZ gamma factor is

2, then the pilot flattens from front to back in half, like a stamp, and if it occurs to him to turn his seat and look at the copilot, and assuming he would have enough energy, then in doing so he recovers his normal dimension from front to back, but in turn he shrugs his shoulders in half. Like the deformations of "Tom and Jerry".

For intellectual honesty I ended up disengaging from theoretical physics and dedicated myself to Nuclear Medicine that is totally engineering, and then to Radioprotection, even more engineering and with many positive social repercussions (I do not wish to bore you with what I got being responsible for the city of Barcelona between 1979 and 1986), even today I find that incredible. See for example, on Nuclear Safety:

<https://www.sistemaconceptual.org/pdf/Llibres1982RadiacionsTrenNuclearPetit.pdf> or  
<https://www.sistemaconceptual.org/pdf/GasetaSanitaria1983-12Petit.pdf> on Radiation Hygiene.

LORENTZ and POINCARÉ correctly calculated as much as they could, but they did not build a "new" theory based on dogmatic "postulates". EINSTEIN rushed with his postulates and erroneous interpretation of the "Dilation" of time, erroneous because it has led to the current situation of physics. Since EINSTEIN did not have enough knowledge in mathematics, he commissioned to build (to prestigious mathematicians like MINKOWSKI, HILBERT and others) a mathematical structure based on this self-contradictory interpretation. But even so, he imposed himself, and I say he imposed himself because his position is not based on something reasonable. A clear exposition of this absurd confrontation is detailed in "Teorías de la Relatividad del movimiento uniforme (=Theories of the Relativity of uniform movement)" (Á. L. LÓPEZ RAMOS, Oviedo 1998), the first book that any relativist should study, but unfortunately it is in Spanish and, worse, exhausted ((luckily, he gave me a copy in "pdf").

How would the LORENTZ Factor be applied between stars rotating and orbiting each other (a "binary or multiple star system")? And between them with respect to the rest of the Universe? Since they are too far, let's see what happens with two Earth' satellites, something that is fully tangible and verifiable today. If we take a satellite circling on a pole-to-pole meridian, once in orbit it is already inertial. That it goes around a circle by the attraction of the Earth does not affect the argument. If this were the case, WEEHLER would not have been able to make the statement that Father Prior explains in the complete Poblet document (pages 5 to 8). Neither the analogous ZEILINGER experiment requires any gravitational assumption (pages 9-10). We already know that photons are diverted by gravitational effects but nobody raises whether they are inertial or not.

Applying the LORENTZ Transformation to the satellite according to its speed, anyone can calculate the lag of the satellite clock each orbit, or what it is delayed each day. To say something, suppose that at the speed of a satellite at 4 km/s (4 km every second, 14 400 km/h, or a 1/ 75 000 of the speed of light) a delay of 38 microsecond, or there about.

Now we take another identical satellite in an identical orbit. Well, a separate orbit a few meters so that they do not collide, because they go in the opposite direction (it is an example, because, strictly, very little by little they will end up separating). Any relativist would do an identical calculation. The clock of the second satellite is likewise delayed 38 microseconds (or whatever) with respect to the terrestrial clocks, because the Special Relativity does not place any condition on direction, here the space is "isotropic". Exactly the same calculation was done here, or there.

Now let's ignore the Earth and compare only the two satellites among them by applying the SR. Even assuming gravitational effects, as they are identical for both, they neutralize each other: SAGNAC, DOPPLER, CORIOLIS effects and others. Assuming about their relative speed that:

- when they cross their relative speed is  $2x$ , about 8 km/s ( $x$  is their linear speed, like two cars to 100 in the opposite direction on the highway that, between them go to 200);
- at 90 degrees their relative speed becomes 0 for a few moments,
- the rest, its speed goes from 0 to  $2x$ ;

their average speed, among them, will be  $x$  (or whatever, just enough to move between them). Then, according to the SR, one or the other should be delayed 38 Microsecond (or there about). But apart from the irresolvable problem of choosing which of them is behind and which is ahead, it turns out that in addition the SR previously calculated that they were delayed the same with

respect to the Earth! If the two are delayed the same with respect to the Earth, they !!cannot be delayed between them!! Science does not like mysteries, not even when they are dissimulated with the name of "Paradoxes".

It would be very easy to compare their watches when they cross and check that there is no time gap between them despite the fact that SR demands it, !! the SR does not affect them in this case! Another exception. This is why the HAFELE - KEATING experiment has not been repeated, there is no need, there are gazillions of satellites with clocks to compare between them, which go much faster than the airplanes and go round and round: with them the SR is continually contradicted. I already know that SR is not the only thing to be taken into account in GPS, for this the example of satellites, because it avoids or compensates inertial/ gravitational effects. It is because of all the previous contradictions that attention is diverted towards the aspects of General Relativity (GR) of GPS. Another fallacy that combines up to 4 of them, the "ad hominem", the "ad baculum", the "ad verecundiam" and the "a silentio".

Precisely, it is because of these other gravitational aspects that GPS clocks have to be continuously adjusted one by one, and any engineer knows that it is done "manually", not "automatically" by some integration of the calculations of relativistic phenomena, or even less for an EINSTEIN formula (then, someone should tell me what it is). Of course, it is also said that the GPS works thanks to EINSTEIN. But it is not said that there are enough articles that confirm that the resulting phase shifts and "navigation" adjustments that must be made in satellite clocks are incompatible with the Einsteinian postulates.

Luckily, Anatoli LOGUNOV (died recently, on March 1, 2015, at 88 years) saved Relativity by reconstructing it directly from the MAXWELL equations ("Relativistic theory of Gravitation", RTG) and bypassing the Renaissance Einsteinian arguments. I insist on the "Renaissance" because even a relativist convinced and known as Miguel ALCUBIERRE makes very clear the foundations of the aforementioned self-contradictory mathematical structure:

"EINSTEIN took the Relativity principle of GALILEI (Renaissance) and another analyzed by POINCARÉ and LORENTZ derived from the equations compiled by MAXWELL: the insurmountability of the speed of light. From this the Special Relativity (1905) results. Aware that it was incomplete because it did not contemplate the gravitational effects of the masses, he added another well-known (Renaissance) principle ten years later, that of GALILEI's Equivalence (and hence came the General Relativity, GR)."

What's worse, now consider the LHC of CERN where instead of satellites at relatively small speeds with respect to "c", we have hadrons circulating in opposite directions at almost "c". When they cross each other, at what speed do they go? No doubt that at almost "2c", is an empirical, not questionable fact. So, what is the relativistic sum for? For years now the relativists had to accept that the photons of an annihilation were separated to the double of "c" (a "2c", like those of any quantum "Entanglement"). And they had to say: "Well, photons are an exception, they are not governed by Relativity ... [nor apparently by the limit of 'c']." Well now we must add, also, the hadrons of the LHC. Can a "theory" be something that has continual exceptions and censures, like a Gruyere cheese with "holes" everywhere?

About 30 years later (1996), having more confidence in myself and daring to raise the blasphemy that EINSTEIN could be wrong (and taking the risk of ending up at the stake), I realized what was happening. Interestingly, it was after discovering how human cognitive processes work (the "Intrinsic and exact conceptual system"), because I worked in depth "Information systems without directly material support" —those cited (-M, +S): non Material support, Symbolics—, that is, those of the psyche. Something analogous to the information of the physics that we will see, information that is even previous to the matter, and the reason why it can not be conditioned by her. A surprising heuristic!

We must pay attention to what is not understood by the einstenian relativists, or what they do not want to understand. I do not question either MAXWELL's equations (that with AMPÈRE, FARADAY, LENZ, ... almost two centuries ago they correctly describe the electromagnetic phenomena, that is, the photons with their "light" velocity): what is already empirical is sacred. What is questioned as absurd and unsustainable is the interpretation that Einstein made of them

and consequently everything that derives from them, be they formulas or theories. The time directly measurable by any clock (mechanical, mineral, atomic, ..., on Earth, on the plane, on the satellite or in the atmospheric Muon) is never modified, it is fixed, unvariable. What I say is that having more speed in one system with respect to another, a new time appears that is of pre-material origin or, if you want, quantum origin and that is the ancestor of our material time (because this other time already existed before materialization, the poorly-called "Big Bang", the "Ápeiron" Greek). Therefore, this other time adds/ superimposes additively to the fixed material time measured by the clocks and, as we do not know, it seems erroneously that the material time has been dilated. Is not superposition a real/ empirical quantum phenomenon?

"Je n'ai pas compris non plus le concept de "Temps de traitement"." (G. B., 2017-09-07)

This is very well understood with the fractional dialogue that I established in Cistercian Monastery of Poblet with Andreu (2014, November), making it the role of Atmospheric Muon (and after Photon), and I of "Processor" with which its dynamics is calculated. I summarize it.

The "atmospheric Muon" is generated from the cosmic rays, when they collide with the stratosphere. It goes at a speed of almost "c" ("Factor" gamma of LORENTZ equal to 20). Its average life is only 2.2 millionths of a second, so it should only cover about 600 meters. Imagine the fiction that we could enter inside the Muon with a "very tiny" atomic clock to see what happens. Every 20 PLANCK times that measure the terrestrial clocks (also to say something, since no material clock can measure a unit so small [ $5,391 \times 10^{-44}$  seconds]), What happens inside the atmospheric Muon? The time units of your watch DO NOT dilate, passing a single unit for every 20 units in Earth clocks. But what about the other 19? The other 19 units the Muon is "abducted"/ "frozen"/ "asleep", without there being material processes (!Clock included!). Then, as it happens in the "Entanglement", it is interacting with the information that already existed before of any materialization (BigBang or whatever).

Finally, as a piece of matter, when only 1 of every 20 time intervals is computed, its velocity in its reality will be 20 times greater, "20c", or conversely it can be considered that the space has contracted 20 times. One or the other measure is indistinguishable by not being "conscious" as "material" during the remaining 19 time intervals. Externally, the space of the rest of the Universe remains fixed as always, it can not be otherwise.

Why this informational interaction?: so that its address and its speed will be calculated/ processed for the next fraction of time. If this was not so, how would it know the speed and direction it should take? If physics is a science, it must be causal. The quantum computability of the Particles, Muon included, is not something new, only that the Muon has just been discovered, ergo the quantum computability is much older than walking... The Muon goes so fast, and they change their gravitational interactions so rapidly with all Earth particles that we must continuously calculate its trajectory when approaching the Earth, so that it complies with the elementary laws of physics.

Our clocks and our material "life" that go at a negligible speed with respect to "c" are not subject to this intense control, which is practically null in relation to the control that the Muon requires at this tremendous speed. This explains why the Muon appears from the Earth that lives 20 times more (44 microseconds), because at almost "c", 19 times out of every 20 is "frozen". And in these periods, as part of matter, its "faculties" does not work. It has not dilated the unit of his watch 20 times, he has only "lived" as a matter of the Universe 1 time out of every 20. And how it lasts 20 times more (44  $\mu$ s), it ends up living the same time (2.2  $\mu$ s). And this is what allows you to make a journey 20 times longer (about 13 km, instead of 0.6 km) and get from the stratosphere to the surface of the sea, despite "living" the same as always. A reasonable explanation for the unexplained ROSSI - HALL experiment of the atmospheric Muon already mentioned.

The superposition, how the delocalization or the simultaneity of the "Entanglement", are realities in our Universe. A **two-stage additive superposition**:

- one (the processing, consequence of the "unknown quantum sub-level" required by "Entanglement") which is the ancestor of the
- another (the material time of the clocks),



In each system, the universal / total Time "t" is the sum of the "material/ own Time", which is fixed, and the "**Information processing time (pre-material/ quantum)**", which is variable, according to the speed of the system. In addition, it is common sense and happens in our own reality (in travel, sleeping, wintering, ..., freezing, even in Greek fables as we will see), but because it is new, it surprises. I enclose, in English, the fun and pedagogical analogies already cited, (<https://www.sistemaconceptual.org/pdf/ESOPOsFable.pdf>) which I suggest reading. Andreu in turn gives me the fact of the much lower autonomy/ life of the batteries of mobile phones traveling in AVE at 300 km/ h, their effective life (analogous to "Material Time"), that is, exchanging user information, is much lower, since they spend most of battery energy in positional controls (analogous to "Processing Time"). A reasonable explanations instead of the dilation dogma in which you have to "believe".

I indicate an important consequence of this unfolding/ duplicity: the hitherto incomprehensible **Principle of indetermination of HEISENBERG** between "conjugate" variables (that is, extensive-intensive, static-dynamic) is obvious. If we want to know where Muon is when your state is "alive" (active as matter), !it is impossible because it moves! The profane reader must take into account that we are in a quantum, microscopic and discrete environment, we can not "observe" and obtain information about the physical particle without altering it, unlike how it can be obtained from a football or a macroscopic projectile. And if we want to know its speed and direction when its state is exchanging information/ "frozen" / inactive as matter, not even, then because it !can not respond as living/ dynamic matter! Because of this splitting/ superposition of time, it is impossible to know both states at the same time. For the same reason, to obtain significant real results, it is necessary to observe a sufficiently large time interval, to make a more macroscopic "mean", greater than the interval in the insertion interventions of the processing time, an interval perhaps associated with the HEISENBERG inequality or to PLANK Time.

This also explains the existence of quantum fluctuations. Or the paradox of the famous cat ...

**(continues later)**

#### **EXPLANATORY ADDENDUM ON A MISUNDERSTANDING (2019-11-03)**

The purpose of this Addenda is to clarify a semantic problem already noted, but despite that people tell me that it is not clear enough. It comes from polysemy in the use of "time dilation" in a movement at high speeds. There are two ways of interpreting it: one is to assume that [the unit] of time is dilated (which is EINSTEIN's premise) and the other is simply to assume the natural empirical fact and observed that "time passes more slowly" (that by the mentioned abuse/ omission, it is said "time is dilated"). In the following paragraphs, we present arguments that support the second interpretation, refuting the first.

When to contradict the need for "Processing Time" they tell me:

"time dilation is an obvious **natural** phenomenon"

such ambiguous polysemy is incurred with respect to "**dilation [of the unit of time]**". Already warned on page 5 ("... I am not to blame for this omission/ license that can confuse, ..."). There is no mistake if it is said "**the time delay [in the watches of the observed mobile] is an obvious natural phenomenon**", a phenomenon known from the experiments of HAFELE-KEATING, ROSSI-HALL, the countless satellites, ... and so totally "natural". "**Delay**" is the natural and empirical, the "**dilation [of the unit of time]**" is not at all:

- "Dilation [of the unit of time]" is the explanation proposed by EINSTEIN to this delay, which implies **an alteration/ modification** of the tensor base due to the effect of speed. But this hypothesis, apart from its scientific radicalism and lack of common sense, generates the **multiple contradictions and physical absurdities** that are being exposed.
- The "Processing time of the underlying quantum-prematerial information" is **another different explanation** for this observed "natural" delay, and **that does not generate any of the contradictions and absurdities of Einsteinian "dilation."** And as it is being seen in this writing, it also explains many other physical phenomena.

At the same time it must be thought that 100 years ago there was no current culture of information and its automation (computing) that has revolutionized everything, for its power and for its need to represent and reproduce any type of dynamics, in which "exact" physical dynamics cannot be an exception. It is understood that LORENTZ or POINCARÉ could not go further by not having such a culture, and that for the same reason, EINSTEIN had to venture with an erroneous explanation.

Let's put a scale drawing of infinitesimal times, of PLANCK time units. In red, the intervention/ superposition of the processing time to calculate the next infinitesimal movement. During this time the "material life" of the system (clocks included) is "hibernate"/ "winterized"/ "frozen", **which does not prevent the continuity of the movement** of the system. As if we slept on a trip by car, train or plane, and we are not aware of the trip/ movement, on arrival we seem to have had a more brief trip and/ or that the distance has been shortened.

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Earth clocks only work during **green** intervals. The slowness of the Earth with respect to the "Microwave Background" requires minimal calculations of its trajectory (**red** intervals), so that its movement is in accordance with the intrinsic laws of physics:



since Processing Time (**red**) is imperceptible to matter (because it is prior to it), Earth clocks can only count their own "material life" (**green**) time:



But the high speed of the atmospheric Muon, near "c", causes their interaction to change rapidly with respect to the rest of the Universe, so it is necessary to continually re-calculate its movement (**red intervals**), so that it is in accordance with intrinsic laws of physics, and there is almost no time for his material life (**green intervals**).

With the very fast Muon you have to calculate much more, and many more times:



Thus, if simultaneously the same atomic clock on Earth could be put to the atmospheric Muon (strictly, it would not even fit ...), its measured time would only be:



which is the twentieth part of what the Earth clock has measured in the same time interval, because Muon's own clocks can only count their own "material life" time, **fulfilling** the LORENTZ Factor corresponding to their speed, **20** in this case, difference due to the different speeds of the clocks according to the different speeds of the systems. It must be remembered that the Processing Time is **imperceptible to any material object**, because it is prior to it.

Because of this lag that causes the "Information Processing Time" to break in, after 2 microseconds on Earth, Muon's life has only been 0.1 microseconds and he can continue to "live" up to the 2 microseconds that his life **always** lasts, and that is when it disintegrates. But as on Earth the clocks go 20 times faster, on Earth it takes 40 microseconds until it disintegrates, and therefore it seems that it has lived much longer, 20 times more.

The atmospheric Muon has **not** lived longer, his life **always lasts the same**, because for its very high speed most of the time he is "wintering" as matter (the intervals of time that it is not possible to know its speed or its address —according to the indeterminacy of HEISENBERG— because it is being calculated), to **exchange/ process** control information of its dynamics (**red**).

Do we not sleep at night —unconscious and recovering to be able to carry out the next active period— but in the rest everything is still moving the same way?

The information processing time, besides than reasonable, **is totally empirical/ natural**, but it **only manifests itself by comparing** systems at different speeds. And it also explains this "natural" difference in a natural way, based on a natural phenomenon but **until now ignored** (the quantum superposition-insertion of a quantum-prematerial time to calculate the dynamics and respect the **essential** causality in all science).

Is it surprising? Just because we have been thinking about something else for 100 years, and I insist, **ignoring the power of information and its need** to manage any dynamic process. The above demonstrates that it is sufficient to consider the Time of information processing, instead of the supposed variability of the unit of time.

### (continuation)

When someone asks me:

"If you can design an experiment in which your model correctly predicts a result and the SR another different and incorrect result, it would be worth studying."

it is evident that he has not read the above carefully or simply does not understand what he reads. All the thousands of known relativistic experiments that "confirm" the Einsteinian hypothesis of the "Dilation (of the unit of time)", "confirm" that of the superposition of the "Processing time". Likewise with those of General Relativity. And how it has been seen from the previous paragraphs, the "Processing time" is consistent/ compatible with experiments in which the hypothesis of dilation is absurd/ inconsistent. I insist, they are all related by the impossible symmetry of relativistic time ( $f(a, b) = f(b, a)$ ), how some totally obvious and common sense have already been explained, but in addition there are many more. In addition, as we will continue to see, the "Processing Time" hypothesis explains many other of the current inconsistencies in physics. This new hypothesis not only does not contradict but clarifies, reaffirms and integrates. It is the "orthodoxy", the "MainStream", who must have the courage and honesty to recognize their contradictions.

The superposition of the variable "Processing time (of the information)" to the "Material Time" (fixed!) that any clock can measure is a different interpretation. An alternative hypothesis. Is it not inherent in science to doubt, question, falsify and criticize, in order to ensure the certainty of knowledge? So what is the correct interpretation? The Einsteinian interpretation certainly can not be, it implies absurdities like those previously mentioned and many others. And the one I propose, which implies an "Information processing time"? We will continue to see it, and the honest reader should choose coldly.

I don't understand my disqualification because I do not intend to disturb. I only intend to provide solutions to the theoretical and interpretative errors of physics. It is hard to understand the reluctance of scientists to consider this new hypothesis, especially when, to date, I have not been given any argument to question it. Perhaps it is for convenience, because the change of interpretation is not a trifle, it is not just an epistemological debate that is already important. It implies a radical change, because we do not deal with a simple variable "t" but we deal with the sum of two variables. The omnipresent "**dt**" (time differential) is unsustainable at high speeds, because strictly it is the sum of:

- a component whose unit is fixed, **NOT** "dilatable", the "material"/ real/ traditional time, which is measured directly by the clocks, the NEWTON Time; and
- a component that with respect to the unit of the previous one is variable/ virtual/ informational. It is the "Processing Time", computational origin, pre-material, quantum or whatever you want to call it, the relative time of LEIBNITZ. A second time imperceptible to matter and consequently to its clocks (since it already existed prior to materialization). A time that only appears by comparing the times of their watches when one of the systems moves faster than the other. A time to calculate compliance with the intrinsic laws of material dynamics. If we have laws that represent in a comprehensible way what happens, I say that somewhere these laws will be in their intrinsic form, because 1000 years ago we did not know

these physical laws, but everything moved exactly the same. Without accepting these intrinsic laws, we fall into a-causality and creationism, and that is not science.

which, by the way, the historical discrepancy between NEWTON and LEIBNIZ over time is resolved: it ends in a tie, both are necessary... Only when comparing the two systems at different speeds there is a difference that, I insist, is not by "dilatation" some but by the emergent/ additive superposition of this other time, of a different nature.

We do not deal with a space of four dimensions, but of five: three of space and two of time. And precisely this new dimension of time, to be both:

- empirical-measurable (this is what makes the LORENTZ transformation derived from the MAXWELL equations [besides making it hemisimetric]), and
- express the virtuality of information,

it is precisely the dimension that is missing from physics and that is so sought after. And because of its inherent versatility associated with its informational virtuality, no further dimension is required (I insist on the uselessness of the "SuperStrings"). The concept "versatility" requires additional space to this document, because apart the example of the CPU, the best examples are those of the Psyche (Psychomotricity, Intelligence, Consciousness, ...).

It is another hypothesis but with immediate and far-reaching consequences, because the LORENTZ factor stops being a simple and scalar Ptolomeic, becoming an invertible function that is distributed in inverse function to the respective masses of the compared mobiles. I insist on the example: how would the "LORENTZ Factor" be applied between the two stars of equal masses of a "Binary star system"? Since having equal mass, half factor for each (50%), that is, there is no factor between them (0%); but the factor appears at 99.9999999999999999...% with respect to the rest of the Universe (and its static observers with respect to the "Binary system"). Exactly the same as with the satellites between them (50% share by equal masses, neither there are a factor between them: 0%); but a factor of 99.99999999...% with respect to the Earth (and its static observers), due to the negligible mass of the satellites (0.000000...1%, the only case that the RE deals, with airplanes on Earth, with particles in the LHC, ...). The day an atomic clock is sent to the Moon; initially synchronized with another that is sent years later; both in identical inertial conditions\*; and compared when they again assembled; then this distributed operation will be clear, since the Moon no longer has a negligible mass with respect to the Earth (an intermediate case,  $1/81 = 1.2\%$ ), differently such as it happens to an airplane or a satellite (0.000000...1%). It is a pity that the Americans did not leave one in 1969 for a future second trip.

\* It must be assumed, obviously, that the incidence of any other effect, such as gravitational, is also discounted.

This creates the necessary and reasonable hemi-symmetry of Time (what has already been said:  $f(a, b) = -f(b, a)$ ) that rescues the physics of symmetry and its absurdities, like those previously mentioned. The relativist symmetry of Time, I insist, is absurd and contradictory, is the main reason that there are so many "dissidents", since its publication and throughout the world. In addition, the mass is introduced into the SR and the two relativities can be harmonized, the special SR with the general GR, which every physicist knows (but in silence) that are incompatible with each other.

We started talking about Relativity from Quantum and Information computation (calculation of the intrinsic Laws of physics): the desired harmonization between Relativity and Quantum. This alone, is already sufficient. Furthermore, it does not contradicts what was already working since it is strictly compatible with Newtonian mechanics by keeping fixed its Material/ Newtonian Time. This is why some of the principles of classical mechanics have been mathematically demonstrated to explain various relativistic phenomena, since Material Time does not expand. And, then, neither is there direct dependence between Time and Space. So it seems reasonable to think that such splitting of Time avoids the need for patches like "Renormalizations".

You can not continue to derive respect "dt", there is no one Time but two, and of a different nature and behavior. If the three spaces of matter are of an identical nature, due they only differ in their direction, on the contrary, the two Times do not have something in common, the

Processing Time is previous to the existence of matter and its derivated Material Time, that of clocks. As if the first were the "prequel" of the second, which is its "sequel". But they superpose in our material perceptions (clocks, ...), which, if not taken into account, appears to be a dilatation of the second Material Time, but erroneous. The traditional schemes of special relativity are no longer valid, the problems of simultaneity disappear. The generalization beyond the current ptolomeic perspective involves reviewing the MINKOWSKI metric so that it can consider the Time hemisymmetry, and the systems with masses, and with any masses between them. And the same with the "Space-Time" R4, which must be R5.

**We have to reintegrate the equations of physics**, something that no longer corresponds to my age or 40 years after not doing them. It is enough to say what needs to be done (similar to the computer programs I analyzed in the '70s, but they were coded by Telecommunications students, were called "teleco's", a thousand times better and faster than me). In June 2010 I contacted LOGUNOV, but the language, distance and age were major barriers. He had already done this reintegration with his "relativistic theory of gravity" (RTG) in the 80's, but unfortunately without considering the necessary splitting of "t", by the Information Processing, which on the other hand I did not understand until many years later, in 1996.

I insist, why are physicists not excited about quantum computing? Why a simple particle can have so much computing power if not because they have been calculating for 14 billion years? Why is quantum essentially wave form? Because waves can deal with information! The time associated with this information processing to calculate the behavior of the particles is this other time that is added to the entity that moves faster because it needs more "calculations" per unit of time to calculate that its trajectory responds to the laws of physics that it carries implicitly. It is not only logical, but also makes everything that today is incomprehensible to physics understandable. Otherwise, how does a simple Muon know when it has to die and disintegrate? Or something simpler and more mysterious in what I worked for a few years: how is the constant of radioactive decay explained without some exchange of information? Or the "Tunnel effect"? Or the "disappearance" of Entropy?

It also allows us to understand "delocalization", what is vacuum Energy, and understand the "miraculous" Effect CASIMIR (which creates errors with other branches of physics of up to 120 orders of magnitude, a practically infinite error, the so-called "Vacuum catastrophe", so what we call the accuracy of physics today is false). Or understand why the Quarks can not be confined. It also serves to solve the "dark" that is not found (which is on the way to ending just as bad as the confinement of the "Quarks" in his day). Or to unify "Forces". The GISIN question is also solved:

*"How is the correlation [in the entanglement] produced?, as it is not part of conventional physics. I am firmly convinced that today is, possibly, the most important question for physics."*

It also solves the contradictions regarding the overcoming of "c" in the diagrams of (STÜCKELBERG-) FEYNMAN (another new "exception"). Also the "cats" cease to be enigmatic, etc., etc., etc. And much more.

BELL and the empirical confirmations of the "Entanglement" (CLAUSER, ASPECT, ..., GISIN, ... ZEILINGER) demonstrating empirically that it is an exchange of information, leads to an information processing that justifies the processing time.

Is it not said that the electron does not oscillate, but that the electron is the oscillation? Well, it's already clear, we deal with information. The tangible matter appears not only with the mass, but also when the so-called "Particles" define distances in the atoms and create aggregate volumes, and with a minimum stability in time.

Poblet's Prior completed a doctorate in quantum theory and worked with ZEILINGER. Unknowingly, we both belong to a collective of almost a thousand Internet experts spread across fifty countries, and with a common e-mail. For this reason when I, incidentally, commented about the Big Bang (BB) for being simplistic and creationist, his religious beliefs did not prevent him from agreeing with me regarding the information (the concept of God varies from one person to another and, in my case, I neither believe nor disbelieve: I do not need or care about this concept). Because of his quantum training he understood my thesis of Information and

Processing Time. And for this reason he offered his Poblet Monastery (2014-11-22) so that I could explain it, adding his presence to my presentation. What he had never considered, and it surprised him (despite BELL), is that it implied that EINSTEIN was wrong, but this is no longer my problem. "E pur, se muove."

In Poblet I was able to explain many things that HEISENBERG, WEEHLER, FEYNMANN, FRIEDEN, ALCUBIERRE could not explain, ... I also have 300 pages from 5 years ago explaining many other things. In short, it is "The theory that we can not even imagine" that LEGGETT claims. And I pretend not to die before it is known. There is no Big Bang (BB). There was (and still is, obviously):

- information (the "subquantum" level required by "Entanglement"), and
- photons (for this reason photons do not have mass because they already existed prior to materialization).

That is, there was Information and Energy (in the form of photons), which is the only thing necessary to construct matter. The information manages the energy to materialize, and this explains that zero entropy can be associated to the materialization (BB?), which is not possible to justify in a supposed "explosion" (another semiological problem of using polysemic expressions). Furthermore, what can "explode" if there was no matter to explode? And by the same rule, if there were still no physical Particles, nor their associated dual waves, how to justify the quantum "fluctuations"? (see brief Addendum on the BB, at the end). The original fluctuations conceal a creative entity.

It is not scientific not considering any intrinsic cause in which the behavior of the dynamics of matter lies; it would lead to deny the causality, on which science is based. It is to suppose a God that directly moves the threads of all the particles. I am usually asked:

"... and who has "created" this "Pre-material/ quantum information" and its processing?"

I am pragmatic, I only know that it is necessary and it exists. I'm not interested in religion or metaphysics. It is the same thing that until today ask ¿who has "created" the Universe? I only take one more step to not break the essential causality of science with creationist approaches (like the BB), resolve contradictions and harmonize disciplines, which is enough!

Poblet's writing is readable for those who want to read it, and there are no formulas. It explains what is not understood about "c" and its speed, about photons, about mass, etc. Instead of vainly looking for the photon mass to continue cheating, scientists should ask: "Why do you not have it?"; that has also been answered before. For example, B. Roy FRIEDEN says:

"The speed of light  $c$  is, aside from its definition as a speed, to measure of the ability [of the light, of the photon] to **acquire knowledge**."

It is very good to make information intervene, but strictly there is no "acquisition of knowledge". How I wrote to you (on 2010-06-14), it is about:

"... a measure of the intrinsic faculty [of light, photon] to **process information**".

"c" is not a "cinematic" limit, it is nonsense to speak of "displacement" of light. The strict limit is temporal: for an elementary transport of non-material energy (photon) between two points of the Universe separated by 300,000 kilometers, it takes a second to process the transit information of the photon. How HEISENBERG intuited correctly:

"I think the trajectory exists from the moment we observe it."

indeed, there is only point of origin and point of arrival. The path exists, true, but only virtually, it is not real. A posteriori we can determine all the points of the Universe in which, if there had been a material object, the photon would have collided before, which does not mean that the photon has been "dragged" by this path. Strictly speaking, the photon does not belong to the Universe, only its "corpse" when it collides with matter and yields its energy transforming itself into material degraded energy and/ or materializes the particles resulting from the collision. Obviously NO "breaking of anything" is required, neither field nor HIGGS boson for such materialization. The HIGGS boson is like any other boson, but very "fat"... maybe (if its detection is confirmed without a doubt), nothing to do with the materialization.

From its origin to its point of destiny/ death, the photon could have been displaced at infinite speed due to "delocalization" (given to delocalization there are no distances, then there is no possible displacement, and there is immediacy). As with the "infinite speed" of information exchange in the "Entanglement", immediacy (I insist, do not call it "action-at-a-distance") because the physics intrinsic information comes before materialisation and, for that reason, cannot be subject to matter and distances. But, inside the material Universe, its possible interactions must be calculated, because of that, all your "time" between the two points is not "Material Time" but only "Processing Time" in order to progressively calculate the virtual trajectory already mentioned.

For the transport of energy of the photon within the Universe, in which the physical laws intrinsic to the interactions with the other material objects of the Universe must be fulfilled, the "limit" is the speed of processing of those interactions (!!not speed of displacement!!). And this allows us to understand the real possibility of speeds "2c", between reciprocal photons, hadrons, ...

Although locally the speed can be infinite (referred to the material time "own", and for all material purposes), how the processing time is forced, globally (for the external observer) can not exceed "c". It is consistent with the consequences derived from the MAXWELL equations over "c", and also explains what Relativity can not explain, since not surpassing "c" is a Sacred principle (see page 8). One can understand now what is so difficult to accept: a speed limit. There is not, the limit is of time, of a logical waiting time of calculation/ processing.

Without this double perspective (real/ material <—> virtual/ informational/ pre-material) one can not understand recent experiments like the "Delayed-choice entanglement swapping" by ZEILINGER et al. There may be a semantic problem\*, there is a polysemy: I clarify that one thing is the photon as intrinsic energy, another its corpse in our Universe. Two denominations are needed, one for the "alive"/ informational photon misunderstood by science (that of the "Delayed-choice ..."), another for its material corpse. When physics speaks of "virtual" it should simply say "information" and eliminate the mention of "Particle". If physics does not yet recognize what existed before the Universe, and that today it still exists ("on the other side" of the real/ material, "behind the curtain" of our material scenario, "the sub-quantum level" of BELL), Why are we going to waste time arguing nonsense about "Ropes", Multiverses and parallel Universes?

\* "When in science the conceptual contradictions are eliminated, our mind, free from bewilderment, will stop formulating spurious/ false questions" (H. R. HERTZ).

MICHELSON - MORLEY contributes very little, only measurement of phase speeds, but not measurement of "cinematic" speeds, which is a usual confusion. In 1991 Roland deWITTE demonstrated (again) the "anisotropy" of the speed of "c". Apart from dying in strange circumstances, his article was censored until 2006.

With the "Particles", Relativity also does not explain "why?" more mass continuously appears with the speed (in addition, !!without "symmetry breakings", nor the intervention of the HIGGS Boson!!..., I call her the "Snail paradox"), and, curiously, mass it is measured in units of energy, not of mass. At high speeds, the supposed increase in mass probably does not exist, the mass could also be fixed. If one considers that at great velocities the processing time takes away from the material time, the moving object, for example the atmospheric Muon at nearly :"c" (Lorentz's factor= 20) only lives as a matter once every 20 times. As has already been said, its real velocity in your "own" reality will be 20 times greater, almost 20 c . Then, the increase in mass could correspond to the kinetic energy associated with the "own" velocity (velocity associated with the "own/ material Time", discounting the "processing Time"), that therefore exceeds the speed observed externally/ globally.

The experiment OPERA and before that the MINOS measured neutrinos faster than "c". In the MINOS (FermiLab, Chicago 2007) they said that maybe it was due to errors in the experiment and it did not come out (but what if the mistake was that they were wrong at the bottom, that is, they were even faster?). In the OPERA of CERN's LHC it was published in the press for several months, it could not be hidden, which is why they argued the failure of a connector that only contributed in a small part of the overcoming of "c" (any "teleco" engineer specialized in fiber

optic can calculate it). And that curiously failed exactly the same in the 15 000 experiments performed... (here there is no room for "why c was exceeded?"; and they did not want to consider my explanation either). CERN's solution was ostrich like: dismissed, I insist, they dismissed the responsible (EREDITATO) and they have not repeated the experiment. If they were so sure that this was, why did not they repeat it a dozen times once the connector was fixed? They argued that in another experiment that was only done a dozen times!! and that the notes were lost, "c" was not exceeded ... With these precedents, what guarantees will there be for the Japanese attempt to measure the speed of the neutrinos?

And over the ether there is a very curious story. All physics has advanced based on reasonings about the ether. You just have to read the arguments of AMPERE, FARADAY, ..., GAUSS, ..., MAXWELL and initially even of EINSTEIN himself. Everybody. But suddenly, Einstein, without any new justification affirms the opposite, that does not exist. And from here on anyone who comes to do a doctorate on the ether, he is taken for an idiot. But it turns out that the famous HIGGS Field is an undercover ether under the name of Field. Worse, if you have not yet been able to unify the 4 Fields, now there is another Field to unify... The error is to consider a material ether. If we speak of "Electromagnetic ether", ¿are not electromagnetic waves the paradigmatic carrier of information? The ether it is not real, it is not material, therefore there is no "wind". Like all the information, the ether is virtual and not-localized (and if space does not affect it, let alone its speeds). The ether is an information system, it is the desired "unified physical field".

Information has enabled our current technology, things that work automatically as we could never have imagined, but physicists refuse to incorporate information and its processing in physics, which is the only thing that would allow to explain without dogmas and without censorship all the infinite automatisms and accuracies of the matter. Today some physicists already talk about information, but they only speak. No one has been able to incorporate it into physics as something empirical and analytical ("formulable" / integratable). This is perhaps because for such incorporation it is necessary to accept that EINSTEIN was wrong (as with the EPR paradox). Incidentally, a mistake that takes 100 years doing more damage to science than the Inquisition could do in its day.

Thank you for having come this far.

2015-06-15 (revised 2019-11-03)

I must thank the suggestions and corrections of professors **Hugo A. FERNÁNDEZ** (Universidad Tecnológica Nacional, Argentina) and **Georges SARDIN** (Universitat de Barcelona), regardless of their degree of acceptance of this new theory . As well as the improvements provided by **Eugene THIERS**, on the occasion of translating it into English.

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**ADDENDUM** (2015-06-22): J. M. BLASCO tells me that the self-contradiction expressed discursively by Ian McCAUSLAND ("A Question of Relativity", Apeiron, Vol. 15, No. 2, April 2008 156) has a formal logical expression in mathematics :

- A contradiction is to consider "P" and "not-P" as valid ("P" is a proposition).
- Within a self-contradictory formulation, all statements are valid, anything can be deduced ("ex-false, quodlibet").

Long before McCAUSLAND and similarly, in 1949 GÖDEL sent EINSTEIN —as a "gift" for its 70th anniversary— its "Rotating universes" ("An Example of a New Type of Cosmological Solutions of EINSTEIN's ..."), a "model" derivated of the so-called equations"of EINSTEIN" of the gravitational field. This implies absurdities as returns of time (to travel towards the past), fiction as well known as impossible. Previously GÖDEL had already surprised by demonstrating the "incompleteness" of HILBERT's "Formalism", which was accepted by all mathematicians, proof of its rigor and professional seriousness (HILBERT was already —and is— considered, perhaps, the most prominent mathematician, whereas GÖDEL was —then— an unknown young man). Contrast, then, with the lack of reflection of the physicists, who continue to ignore GÖDEL, DINGLE, ESSEN, SELLERI, NOSKOV, ... and whoever needs it.

"I concluded that the theory [of Relativity] is not a theory at all, but simply a series of contradictory hypotheses together with real errors." Louis ESSEN

"The researchers of our planet have gotten themselves into a trap, an infinite labyrinth from which there is no way out, nor is it visible today, year after year, based on the dissatisfactions and critical approaches to RG 2 ... 3, new mathematical formalisms appear to try to correct it, and a set of new approaches has appeared, such as multidimensional spaces, "Super Strigs" and others. The methodology of relativity has conditioned electrodynamics, quantum, and particle physics, preventing its development." Nikolay NOSKOV\*, 2000-02-10.

\* **Nikolai Kupriyanovich NOSKOV** (1940 - 2008). With the "retarded Potentials", NOSKOV tried unsuccessfully to find the solution to the relativistic errors generated by the Einstein expansion. I met his work on Relativity in 2010, deciding to refresh my university knowledge of physics and rewrite them from the perspective of Information in physics and its processing time. Already dead, I had no option to transmit the solution explained here. NOSKOV earned his living as a nuclear reactor designer engineer and nuclear power plant manager. As an expert in radiological protection, I think that, perhaps, his early death could be due to the terrible radiological protection conditions of the Russian nuclear power plants (in the late 70's, in Barcelona, I proposed the closure of hundreds of radiology facilities by radioscopy to prevent the effects of ionizing radiation on radiologists [premature deaths], their patients and the neighbors [deferred cancers in the population]).

## ADDENDUM ABOUT TIME AND QUANTUM FLUCTUATIONS IN THE BIG BANG.

Logical and epistemological reflections (comes from page 11).

We have measured time with clocks based on objects of all sizes and types (daily terrestrial rotation, annual earth rotation, hourglasses, pendulums), molecular substances (quartz watches), atomic, which give us all the same measure, except minor or greater fineness and precision. But we do not have even more precise clocks, based on Physical Particles, nor maybe they can be possible, because if we interact with them, we alter them. Our directly measurable "material" time only exists from the existence of atoms.

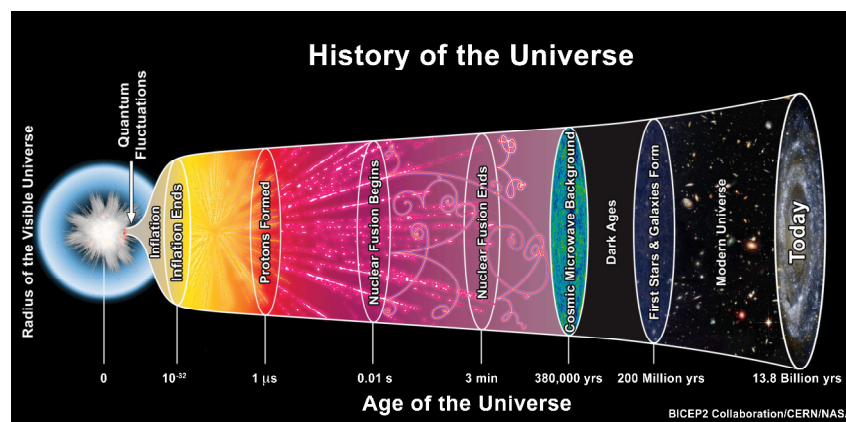
So, what is the point of proposing measures of time when there were not even atoms to measure it yet? The Big Bang time scale proposes  $10^{-32}$  seconds of "Inflation", 1 second of "Unification", "Bariogenesis", "Annihilation", and 3 minutes of "Nucleosynthesis" for the formation of atoms.

Out of nowhere and without space (in a stage of "delocalization" because there is no matter that defines its distances), it becomes a Universe of millions and millions of light-years in diameter. Not even in that supposed first second of material time, the associated speeds (for example in "Inflation", to extend and "occupy" the entire immense Universe) would surpass millions and millions of times "c" and LORENTZ Gamma factors practically infinite, so that the "Processing Time" can be as great as you want, even with respect to a "material time" extrapolated with a backward arrow of time (extrapolation that maybe is unjustifiable). The first second, or even just inflation (assumed in  $10^{-32}$  seconds) can suppose a "total time", infinite, an "eternity".

This, apart from justifying where "quantum fluctuations" come from (either at a single point, or at infinite infinitely separated points, when there cannot be any "separation" due to lack of matter), and taking into account that there are not even physical particles that can fluctuate (these "quantum fluctuations" or "singularities" are as theological and anti-scientific falacies as the divine Creation). How can one propose a quantum domain and its derived hypotheses (not "theories"), without the phenomenon that defines said domain ("Domain" = Scope of validity of a certain phenomenon)? In other words, how to build a theory of the beginning of something totally new, based on the same thing that still does not exist?: a rare tautology.

And in addition to what has already been said about Entropy (in the pages 2 and 15), what energy would such a brutal expansive phenomenon require? Has anyone dared to calculate it? Do we have a new "Vacuum Catastrophe"? Where does it come from, if the energy cannot be created or destroyed? We will have to make a new Axiom, that is, another Dogma, so that no one dares to refute the BB ...

Undoubtedly, an amendment should be made to the totality of the innumerable hypotheses that the Big Bang supposes. A radically different approach is necessary, starting with a non-absurd denomination, such as the one already described "Materialization of the Universe".



Drawings like the previous one are very beautiful (although much less than those of Michelangelo BOUNARROTI in the "Sistine Chapel" of the Vatican...), but these drawings are only religious prints.