

## IMPORTANT NOTICE (16/10/2011)

If there is no error in the recent and controversial experiment "OPERA", confirm **once again** the Holistic theory. See the explanation of the surprising results of the neutrino experiment "OPERA" in: [www.sistemaconceptual.org](http://www.sistemaconceptual.org):

**"Why neutrino's of the experiment "OPERA", are slightly faster than the 'insuperable' speed of light?" (English translation pending)**

(<http://www.sistemaconceptual.org/mm/file/NeutrinosSuperluminicos.pdf>)

## THE HOLISTIC THEORY (ENGLISH SUMMARY)

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From the **incomplete** current paradigm of science:

“matter that consumes energy (describing effects, but **ignoring** deep causes)”

to the new and **correct** paradigm:

“information\* that **manages** energy (creating matter, life, ..., as well as managing them)”.

\* Pre-material or sub-quantum information for matter; genetic information for life; information with a neurological support for the psyche.

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(Translated by **Bea CAMPS**)

## .0 BRIEF SUMMARY OF THE HOLISTIC THEORY AND PHYSICS

### ¿MATTER OR INFORMATION?

In 1965 (when I first started studying physics!), BELL already said, with honesty:

“that the particles stay connected by a non-local subquantum level that **nobody knows**”

This level that “nobody knows”, is an **information system**, that managed the energy in order to structure the material Universe that we know and is also responsible for its ‘dark’ side.

In 1996, even before knowing about this (I have only recently come to know BELL’s arguments) in some notes from a “Course on the hygiene of ionizing radiations and radioprotection” that I used to teach, I used the term “**Pre-material phenomenology**” to name these two components (information and energy), previous to matter, that today are manifested in the field of physics (gravitational and electromagnetic) and in the energy of vacuum. Today it is easy to find quotes as:

“... despite the fact that the LHC doesn’t find anything, this would also be very interesting, because it would be saying to us that **we haven’t understood anything about the vacuum**. A total lack of understanding often **precedes** a scientific revolution” or “the vacuum is the **worst understood** substance” (A. De RÚJULA)

a revolution that is nothing else other than the “Holistic Theory”. And the vacuum is not understood because it is precisely **not an ‘excitable’ substance**, it is not made of ‘little balls’ like I ironically call the ‘virtual’ particles, neither are there any ‘fluctuations’. However, the action in the energy of this information, codified according to what I call “**Intrinsic semiology**” of physics, not a conventional but intrinsic “language”.

LEGGETT is even more radical, he doesn’t speak in conditional, but directly asserts and has been doing so for a few years:

“Quantum mechanics are merely a series of recipes”; “A new theory is needed that **we cannot imagine today**”

I stress “...that **we cannot imagine today**” because this is the biggest obstacle to accept the holistic Theory, the **difficulty to accept** what we have in front of our noses, because of its novelty, **not** because it is difficult to understand in itself.

The Holistic theory postulates these two components and their relationship (the “Correspondence pre-material information – energy”) as the **ultimate cause** of all these phenomena, either **material** (which replaces the **not very correct** current proposals of unification), **biological** or **mental**. It is a **correct theory** and not a mere hypothesis because for the last few years it can be considered as **proven** based on physical phenomena that **can only be explained** through it ([.211]):

- the stop of light in the polariton;
- the CASIMIR effect; and
- the uncountable superposition of the electron states (a ‘**chimera**’ in valuation by LEGGET).

The Holistic theory allows to explain what neither the relativity theory nor quantum mechanics can explain. For example, the delocalization and the quantum entanglement, and **quantum computation**. If the holistic Theory was a false hypothesis, **today we couldn’t talk** about the said computational ability. It even explains much better other seemingly ‘innocent’ phenomena, such as the radioactive desintegration constant (field in which I worked when I was younger) and the tunnel effect. Or FISHER’s ‘information’, introduced in physics by B. Roy FRIEDEN. Later on, in the sections “Holistic theory and life” and “Holistic theory and psyche” I mention other phenomena which prove this theory within the domains of life and psyche.

In the complete document “Holistic theory” (“[TeoriaHolisticaWeb.pdf](#)”, today **only in Catalan**, although it is intended to be translated into English) it has already been possible to **harmonize** with the holistic theory different phenomena from Relativity theory, from Quantum mechanics and from Cosmology (the extensive part [.3]), in a way that it seems that **nobody** is in contradiction with it. Furthermore, all physic phenomena are **much better explained** this way

and are more **commonsensical** without **neither** paradoxes **nor** anti-intuitiveness. It is in the website:

[www.holistictheory.org](http://www.holistictheory.org) or [www.sistemaconceptual.org](http://www.sistemaconceptual.org), in <http://www.sistemaconceptual.org/mm/file/TeoriaHolisticaWeb.pdf>, website that includes also the documents mentioned further below.

BELL had also a clear idea of the **limitations** of relativity, from which he **excluded** information without energetic support (which is the case of the said pre-material information):

"quantum information can be **instantaneously** transferred from an area of the universe to another one. And the Relativity theory wouldn't be violated because it is a transfert of information and not energy"

which is coherent, among other things, with the **immediacy** of the field. What he missed (he died young) was to deepen into what for him was an evidence, a need. And also into ¿how can information exist **without** material or energetic support?:

"No hidden local variable [of quantum mechanics] **can explain** the correlations that exist in the EPR paradox, which leaves open the **possibility**, even if they are light years away, that the particles remain connected by a **subquantum** non-local level that nobody knows"

This 'subquantum' level, which I refer to by using (**\***, **+S**) [Symbolic and pre-material system] is the already mentioned "Pre-material information" which -together with the energy- explains all the physical phenomena (including the 'flighty' Quarks). And even other things, like **life's appearance** (+M, +S) [Symbolic systems with a material support] 4 000 million years ago, and, finally, the **psyche's appearance** (-M, +S) [Symbolic systems with a symbolic support] appeared only some centuries of millions of years ago. However, in order to understand this, one has to **forget about matter** (+M, -S) and **consider information** ([.10], [.11] and [.12]), a field **very little** integrated in today's physics.

#### ALGEBRAIC DUALITY BETWEEN INFORMATION AND ENERGY (AND/OR MATTER)

I will give you a clue, it is through genetics. GAMOW was for me an **even** better genetist than physicist. Together with Rosalind FRANKLIN they should have received the Nobel Prize that WATSON (it is known that he stole the information from Rosalind) and CRICK received. It was GAMOW who introduced the idea of "codon", perhaps because he **knew about differential geometry**.

When opening the "zip" of the DNA/ RNA the sequence appears, but **with only this there is nothing**. Also is necessary an "(algebraic) Step to the dual"  $E \longrightarrow E^*$  (like the "Star" operator from differential geometry, like the derivation from which we obtain the differential applied to the point in the 'Analysis') through which the sequence of some molecules composing the DNA/ RNA (the sequences of carbonated bases A, C, G, T/U, which are elements of the **E** base space) become interpretable information (which is the **codon**, the associated informational element, in  $E^*$ , which is obviously a function [any function is, in essence, information about a correspondence]).

¿What manages this function/ information of the Dual space?, ¿what manages this interpretable information?, it manages the matter of the cell environment according to the chemical reactions of **E** in **E** ( $E \longrightarrow E$  in mathematical language). But it is important to clarify that the codons manage **E** molecules (the origin space, the one on the left in the function  $E \longrightarrow E$ ), molecules that **no** longer have anything to do with the carbonated bases of the DNA/ RNA that integrate the codon, bases which are also from **E**, but the molecules from **E** managed by the codons are **other** molecules, they are the molecular materials of the ribosome, like aminoacids and peptidic links, ... which allow the synthesis of peptids and proteins.

As a consequence, the codon is more than a simple catalizer, because it **manages/ synthesizes** the biological materials. Like in differential geometry, one thing is the derivation (the step to the dual) and another one is the differential/ tangent space (the action in the base space from which the move to the dual has taken place), even though this is only fully evident in three dimensions (in  $R \longrightarrow R$  functions everything gets confused).

¿Is there a homologous concept to the 'differential' in physics (dt, ds, dw, ...) in genetics?, yes, it is the groups of codons. The codon (the basic element of information of the genetic code) originating in matter (the DNA sequences), is the algebraic dual of matter because it manages matter (through chemical reactions of synthesis, in which with the available materials in the cell ribosome, the peptids and proteins are synthesized). The little didactic explanations of the synthesis of peptids and proteins (about the RNA transfer, the anticodons,...), it is best understood when one knows the algebraic bases of differential geometry.

What GAMOW suggested to genetics could **also** have been proposed by physics (he lacked information, he was born too early). The duality wave corpuscle is not only a bivalent duality like we understand it today (the so called "Principle of complementarity"), but a strict algebraic duality homologous to the one of the codon (for which the "principle of complementarity" should be called "**Step to dual particle → information**")

The physical particle is the element of the base space ( $\in E$ ), the associate wave is the **support** of the associated element of the dual ( $\in E^*$ ). However, this associated element is **not** the wave from SCHRÖDINGER's equation. This is only a human mathematical approximation to calculate effects. The element from the dual space  $E^*$  which is associated to the particle, is a **pre-material information element**, forseebly supported by the waving characteristics associated to the particle, which we haven't discovered yet, but the existence of which is today **unquestionable** (it's what quantum computation tries **to apply**). This information element defines the intrinsic characteristics of the particle and manages its behaviour (in relation to the other interacting particles) **in conjunction/ coordination** with the pre-material information of what we call physical field. If it wasn't this way, otherwise, ¿how could the particle know, what to do?

#### THE INFORMATION TRANSFER IS AT THE ORIGIN OF THE CONTINUITY IN CAUSALITY

Without this coordinated information and management between the particles and the physical field (that is, the underlying pre-material information that has generated it), the theories about the physics of particles have been violating the causality principle for more than 100 years, because we are implicitly accepting the anarchy, the absence of control, the chaos, which doesn't correspond at all with the strict real behaviours and the **rigorous** empirical predictions. If we don't accept the processing and the control from the pre-material information, we reach the **absurd**. ¿How can the two photons detected last November by the FERMI telescope that they have to go for 7 300 million years 'hand in hand', and even do it 'religiously'? There has to be an **intrinsic relationship** between the two of them.

The association "Entropy – Disorder" is **erroneous** and **equivocal**. The entropy must be associated to the energy required by the pre-material information for design and build the material **structures**, which is **lost** in the irreversible processes, **increasing** the dark side of the Universe (see [31] "Entropy and information", or [3110] "¿Where is the entropy?"). Therefore, the correct association, today **ignored**, is "Entropy – Structural information".

Additionally, ¿how could matter figure out the codon strategy in order to generate life 4 000 million years ago, if it's not because every element of matter has been homologously doing it for the past 14 000 million years? See [23]. The life codon is a simple **transferred** strategy through the wrongly named "Memory of water", a **transferred** pre-material information supported by the molecular/ dielectrical structures of water (which opens a possible **link with the CASIMIR effect**).

I arrived to the Holistic theory **through the study of the cognitive structures of the psyche**, because it makes obvious the still **ignored** phenomenon of the "**Transfer of methodological elements among different structural systems**" (what some ambiguously call the "Wisdom of nature"), which explains the fact that Pre-material information is **also** at the very origin of the structures of the psyche, through the **transfers of information** via **genetic, epigenetic** and **proteinic** structures (all that is represented by the "**Global model of the psyche**").

## ADDENDUM "A" (2010-03-14).

I have just seen an article by Luc MONTAGNIER (Nobel Prize in Medicine 2008) in "Interdiscip Sci Comput Life Sci" (2009), in which "A novel property of DNA is described: the capacity of some bacterial DNA sequences to **induce electromagnetic waves at high aqueous dilutions**" (<http://www.sciencebasedmedicine.org/?p=2081>), that, as it is easy to understand:

ENGLISH TRANSLATION PENDING

Si no se invoca a una aparición divina/ creacionista de la vida hace unos 4 000 MAño, fue imprescindible alguna **transferencia de información** a secuencias arbitrarias de las bases del ADN para que se estructuraran en información útil/ interpretable para otras moléculas (los aminoácidos y las proteínas que sintetizan, y que inician la estructuración de todos los seres vivos). Es impensable la probabilidad de una secuencia fortuita –como una superlotería– que estructurara de golpe toda la información necesaria para el ser vivo más simple. La presencia de actividad electromagnética –un óptimo soporte de transmisión de información– en solución acuosa –con su fuerte característica dieléctrica– marca el camino de este necesario intercambio de información desde la información pre-material (o subcuántica, o como se desee llamar), información que aporta el procesamiento de la Teoría holística. Y ambas informaciones se enlazarían mediante el efecto CASIMIR dinámico (un efecto de la llamada Energía del vacío tan real como incomprendido aún por la física actual, que se manifiesta en nanodieléctricos, como es el caso de las superestructuras moleculares del agua, igualmente tan reales como incomprendidas aún por la ciencia actual).

The vacuum energy (the pre-material information) → CASIMIR dynamic effect (dielectric) → ¿"The **memory** of water (dielectric)"? ↔ Effect of induction of electromagnetic **signals** (MONTAGNIER) ↔ DNA in a high aqueous dilution ↔ Genetic **information**

ENGLISH TRANSLATION PENDING

Así que el estudio, sin saberlo, aporta **un eslabón más de la cadena que confirma cuál pueda ser** el proceso de transmisión de información que originó la vida, del que, por esto mismo, ya falta menos para confirmar detalladamente (ver [.213], [.2340], y [.3230] a [.3234]).

También hace unas décadas, análogamente, unos pocos huesos de una anónima "Lucy" permitieron iniciar el estudio del necesario camino de la hominización. Fue un descubrimiento histórico y aún celebrado.

Posteriormente, diversas partes del citado trabajo han sido cuestionadas, más aún, se cuestiona que pueda tener relación con la Homeopatía (aunque dicho trabajo ni siquiera trata esta cuestión), y hasta se cuestiona la Revista, por su reciente creación. En cualquier caso esto es otra cuestión que no atañe aquí, donde sólo importa la presencia de actividad electromagnética en el ADN. Y aunque solo fuera durante unos segundos, serían suficientes para transmitir millones y millones de señales, cuando el estudio se refiere a diversas horas de actividad. Así pues no parece que pueda hacerse objeción alguna al estudio desde lo que aquí se trata. Al revés, !!debiera repetirse y obtener más información!! Sorprenden notablemente las reticencias de numerosos "científicos" a una hipótesis informacional del agua cuando la misma ciencia reconoce su ignorancia en la comprensión de la complejidad de las superestructuras moleculares del agua. Ver también: "La Memòria de l'aigua", 2009-03-12, en catalán (<http://www.sistemaconceptual.org/mm/file/MemoriaAiguaNature.pdf>).

## THE SPEED OF LIGHT, A SIMPLE CONSEQUENCE

Despite it being difficult to imagine because of its novelty, it is **not** science fiction, **everything matches the observed reality**. This '*universal computer*', when it is about matter, needs some time to calculate the dynamics and redefine the positions of all affected particles. For a movement in the vacuum of 300 000 Km at speed  $c$ , only !1 second of processing is required! **Doesn't it remind you of something?** (see [.300]). And if it's not in the vacuum, but there is a lot of matter in its nearest surroundings, a bit more time is needed and the speed of light in this environment **logically** decreases.

Here comes the interesting bit: LORENTZ's metrics **doesn't talk about a dilation of time** (it is a false appearance, which was **extremely harmful** to physics for the last 100 years). Metrics simply express mathematically this management/ organization time, in a **combined** way with the remaining time, of real/ material/ perceptible movement. The processing time,  $t_p$  (which doesn't imply movement but the opposite, a break, a 'toll'), and the remaining time, which I call time of "movement",  $t_d$ , are two times of a **completely different** nature. The first one is directly **imperceptible**; it is **only deductible** afterwards if there is an observer who contrasts data and calculates things. It is **imposed** by the control of the Pre-material information (hence it not being directly perceptible to matter). The second one is the real/ material time which is perceived (the life of atmospheric muon (0.999c) when entering the atmosphere continues the same, **ignoring** the processing time, which makes it become older slower; clocks in planes also go slower for the same reason, etc.). To say that time dilates is **wrong**, it is to mistaken both types of time, ignoring the processing time and thereby integrating its stopping effects into the time of movement, incorrectly dilating/ amplifying it.

This is the limit of  $c$ , the **compulsory** processing time which **calculates the material dynamics** of the particles (their position and movements), according to the **intrinsic laws** of matter codified by the Pre-material information, a **analogous code** to the one associated to the DNA/ RNA for the vital processes, **analogous** to the code that simulates the cognitive processes. This **stops** the movement (that is its speed of movement  $v_d$ ) with regards to the rest of the Universe and **doesn't allow it to be greater than  $c$** . This way, the speed of  $c$  for the photon (or what it's the same, the maximum speed of transport of energy in the material Universe) is only a **secondary consequence** of the processing time, of the required **control** of the material dynamics. I will explain more in detail about the speed of light, for its transcendence, because it enchains many other things (with the examples of "The train", "The motorways" and "Sleep"/ "Hibernation").

FRIEDEN introduced FISHER's information in the physics formulations and deduces that  $c$  is:

"a measure of the ability to *acquire knowledge*

With the Holistic theory (see [.30]) it is possible to **justify** and even make the following nuance:

"a measure of the **intrinsic faculty** [of light, of photons] of **processing information**"

and, furthermore, the purpose of this processing **can be explained** in detail.

When I started to divulge the Holistic theory I got to know LOGUNOV work (I hadn't known him until today, I studied physics 40 years ago). I see that, from another perspective, we say the same thing. I see that when I concluded that the pre-material information and the processing were necessary (1996), LUGONOV proved that the four-dimensional metrics of LORENTZ-MINKOWSKI were sufficient to explain the whole of the Special relativity, and also the limit of  $c$ . However, **it would be mistaken** to conclude from here, that nature has been behaving for millions of years in a way that respects a formula that goes back to 1908 (in the same way one cannot say that the quantum environment behaves in a way that the formulations of SCHRÖDINGER, HEISENBERG and DIRAC are respected). One formula **only** describes effects, but it doesn't explain **anything** about its real cause, about the "why?". Formulas are only abstract human **representations** of what has always existed.

Like with FRIEDEN, LOGUNOV can **only confirm**, through some formulas adjusted to the observed/ measured effects, whilst the Holistic theory **also gives us the explanation of "why?", which is the cause** behind it. And, I insist, it also explains **many more things**

about physics, but also, as we will see, about life. It is exactly like this: like I have already said, LORENTZ's metrics are the mathematical representation of the imperceptible processing time, when running simultaneously with the perceptible time or the time of the material life.

## SIMPLE EXAMPLES OF THE SERIOUS EINSTEINIAN INTERPRETATIVE MISTAKES

The following examples of the train, the motorway and the sleep clarify the above-mentioned to anybody (even some friends of mine, who don't know much about physics and mathematics, have understood it).

The train/ aeroplane. **Nobody** accepts the limitations of speed, either of our cars or of light (such as the speculations with tachyons in [.302], ...), however, **everybody** understands that there is always **some unavoidable dead time** ( $t_p$ ) that one has to spend in order to: **organize** a trip; the **previous work** to earn (or steal) the price/ money for the tickets; **buy** the tickets; obtain the **visas**; **the boarding time**; the **transits/ connections**,... From Barcelona to Zaragoza, 300 000 meters (=300 km):

- travelling on the TGV at 300 km/h ( $v_d$ ) would mean a own displacement time  $t_d$  of exactly one hour, plus some 'dead time'  $t_p$  of approximately an hour, a bit less than before, but the total time spent would be a bit more, 2 hours, which would mean an average speed of **150** km/h;
- if we take a plane at 1000 km/h ( $v_d$ ), the own displacement time  $t_d$  will only be of 18 minutes, but the '**dead time**'  $t_p$  can be of about one and a half hours, making a total of 1 hour 48 minutes, which would be the equivalent of a speed of **167** km/h.

This way **!it would be impossible** to go over 300 km/h! (the correspondence between hours ↔ seconds is clear, and so is the 1000 factor between metres ↔ km: 300 km/h ↔ 300 000 km/s): no matter how fast the train or the aeroplane go (during the strict own displacement, at  $v_d$ ), there is **unavoidable** some dead time that has to be spent. Isn't it what happens to us?

Let's simplify it: if  $t_p$  was only the price/ cost of the ticket (expressing the required working time), everybody understands that the price depends on the **displacement**, but also of a **quality factor**, depending on the speed of the train (high speed, express, direct, semi-direct, mail). This **variability of the price  $t_p$  depending on the speed is explained by LORENTZ's transformation**. They **don't** express a dilation of the time (it is not the same, it only seems so).

Motorways. Let's imagine also motorways with **many** lanes: the lane further to the right is the one for slow vehicles, whilst the further left you go, the higher the speed allowed, with even **no speed limit!** However, it is only possible to change lanes at the tolls, and every lane has a different price: the higher the speed allowed (as you go further to the left), **the more expensive!** The price/ cost (and the **dead time  $t_p$**  of work required to earn the money to pay for the toll) would be analogous to the processing time of the physical phenomena. LORENTZ's transformation would be like the **economical criterium** to determine the different prices of the motorway lanes.

Sleep/ hibernation. They say that the person who sleeps a lot, grows older slower (and that, this way, an elite sportsman/ sportswoman can **extend** his/ her sports life). Everybody grows old **at the same pace**, because what makes us older is 'active' life, the awaken/ conscious life, **not** sleeping, of which we are not aware, !which is analogous to the above-mentioned '**dead time**'  $t_p$ !. While we sleep, we **don't** 'live' (other external observers can live, those who are awake). It is as if we **hibernated** (like the bear or the marmot), or as if we were to be **frozen** and then defrosted in 1000 years time: this time would be '**dead time**', because we **wouldn't** have 'lived' it. Sleeping/ hibernating would be **dead time**, **analogous** to the "Processing time"  $t_p$ , only that, I insist, day and night wouldn't alternate, but it would be **simultaneous** to the time of material life. Between two olympic games (4 years), the sportsman/ sportswoman who sleeps 12 h/day lives awaken only 2 years, however, the one sleeping only 6 h/day lives awaken 3 years. The latter one **has grown older more hours**, but !the **hours are equally long** for the two of them! Nobody –not even the ones who sleep lots– says that the 'time unit dilates', nor that time runs 'slower'

because of the same reason. This would be the interpretation of a potential alien observing us from another planet and **who didn't know anything** about how things work here (it is, more or less, **what happened to EINSTEIN**).

The interpretation of the Holistic theory implies that, in order to get closer to  $c$  and, given the break imposed by the processing time, the "**Speed of the own displacement**"  $v_d$  must compensate it by **notably going over** the effective speed  $v$  (even well over  $c$ ). This way, when  $v = 0.87c$ , the input of the "Speed of the own displacement" is double (because of LORENTZ's factor  $\gamma$  is 2), and  $v_d = \gamma v = 2v = 1.74c$ , to make up for the fact that half of the time is processing time  $t_p$ , and only the other half of the time  $t_d$  is available in your displacement (see [.3000]). It is obvious that  $v_d > v$  always, with:

- $v_d \approx v$ , when  $v \approx 0$  (Newtonian/ Galilean conditions), and
- $v_d \gg v$ , when  $v \approx c$  (conditions very close to  $c$ );

Saying it "crudely", it would be as if the speed was the average speed between being some time still (when the processing time is running) and the remaining time in movement at  $v_d$ . And I have said "crudely", because both times,  $t_d$  and  $t_p$ , **!don't obviously alternate!**, but run **simultaneously**. With the Holistic theory, from only a abstract model but valid, MINKOWSKI's space becomes to represent also the real dynamics in each mobile/ system **if subtract** the processing time, which is **imperceptible** and that is **superimposed** on what moves, due to the **control**. Moreover, when time tends to immediacy ( $t \rightarrow 0$ ), it is possible to understand how discretion/ binarity/ 'pixelation' of time must be **in coherence** with the discretion of the energy 'quanta' (I will come back to this soon, a page and a bit further down).

**ESOP's fable** is a good example: the tortoise goes at the speed of light  $c$ , the mobile is the very fast hare, which **runs well over  $c$**  in your reality (as a high-energy cosmic ray, or a atmospheric muon), but, because it goes to sleep ( $t_p$ ), **it is not very useful**.

We can accelerate and run as much as we want **with our** real time/ material/ perceptible, **without limit, to infinity**, because the **penalization** of the processing time doesn't ever allow, **never**, us to ever go over the  $c$  speed, for what concerns global movement and energy transport. The important thing is that  $v_d$ , **much higher** than  $v$  (and thereby, much higher even than  $c$ ) **is also real**, in **your** reality. Only thus can **reasonably explain** the combined data from experiments like those of ROSSI – HALL and HAFELE – KEATING (see a **ADDENDUM "C" 2010-05-30** dated, that will follow). Equally to the atmospheric muon (at  $0.999c$ ), or to the high speed clocks, the time unit **doesn't dilate**, simply  $t_p$  doesn't count in their lives, they don't perceive it, **it is not real time** for them, only  $t_d$  is real, which is **the time where material phenomena develop/ take place** in each case. The pre-material processing time to control the changes **doesn't count in their material lives** and **!must be deducted** from the total time observed from the outside!

The processing time **is not real**, because it is imposed to matter by the pre-material phenomenology, **it is not** lived by the mobile **nor** can be observed from '*stillness*', it can only be deduced **afterwards**. The processing and  $t_p$  time required by this processing **is what causes the existence of these two different realities** (!!not all of us sleep the same time, **nor** at the same time!! and **nobody** finds that strange; **nobody** is surprised either when, every morning when we get up, we hear the news about those living in the Antipodes), with the subsequent different units and measures, depending on the speeds. **A bivalence of realities that coexist simultaneously** (the one of movement and the one of '*stillness*'\*) but that are **independent** from each other\*\*. **This is, in essence, 'relativity'**, and **not the fables** of 'dilations' **nor** 'contractions'.

\* Strictly, **both move**, because –like when we are in a car or a train– the mobile system has the opposite impression that it's the system at rest that moves. Both move, but at a speed respectively **inverse** to their masses (speeds that, added, result in a relative speed). This **would make possible** that, in certain cases of a **common link/ origin** (annihilation photons [.3317], and the case of the LHC photons [.3326], ...) the both **relative** speed can be **up to  $2c$** , **against the general belief!**". LORENTZ's transformations, despite being correct, are not correctly applied, as the gravitational masses are ignored, which is at the origin of the discrepancies between the special Theory and the General Theory of Relativity.

\*\* If this is not well understood, polemics, sterile and centennial like the one of the sphere, appear (LAMPA, TERRELL, WEISKOPFF, PENROSE, ...)

## ADDENDUM "B" (2010-03-14)

A new important piece of information known now is the hypothesis that in the past there could have been a **speed of light higher than the current one** (John MOFFAT 1990; Paul DAVIES 2002; João MAGUEIJO 2002; ...). This could solve several difficulties in the current "Big bang" theories, but it would also avoid the complex Renormalizations, make GIBBS 'mechanism' obvious, etc.

It is obvious that a Million years ago, or even less 1 000 MYears, or 10 000 MYears, **nobody** could carry out an experiment like the one performed by MICHELSON – MORLEY; therefore, instead of 'complaining about and being shocked' ('*rasgarse las vestiduras*' = *tearing their clothes, tearing her dress*) by the proposal. The only thing that would need to be done is –like some have already started doing– to study it seriously, however few reasons justify this possibility. Also, these changes would be consistent with the photons 'twins' of FERMI, as would have affected the same way.

If  $c$  is seen as a consequence of the speed of processing the pre-material information (which, let's remember, is **immediate**/ delocalized), **nothing stops**, according to the Holistic theory, the existence of previous **global conditions** in the Universe, which would make it **faster** (or slower), in the same way that the speed of light, when travelling across local material media, is currently **slower** than in the vacuum.

CONSEQUENCES: NEED TO REVIEW THE THEORIES OF PHYSICS.

The dilation of the **only time** taken into consideration until present is a **very different** matter to the existence of **two times of a different nature**, one of which (the processing time) **interferes** in the dynamics of the other one. The same occurs with the **mistaken** interpretation of **entropy** (see [.31] y [.32]). Etc., etc., etc. They are **not** alternative interpretations, it gives a **u-turn, a completely positive one**, to all the current theories and also **it makes them more reasonable/ coherent**. From here, we only need to **solve** problems and **understand** everything much better:

- the **lower** decay of the atmospheric muon (its average lifespan seems longer, because what strictly happens is that it **lives a shorter time**, the time that is **subtracted**, without perceiving it, by the processing time, and **requires a lot more time** with regards to the '*still*' system in order to get to its material/ real average life, see [.3000] and [.3315]);
- the **delay** of clocks (idem, idem);
- the **very high** own/ real speeds  $v_d$ , perceived by the cosmic ray at  $10^{20}$  eV;
- many **paradoxes** of Quantum mechanics (see [.331]);
- the mistakenly/ wrongly called "Big Bang" (¿how can there be an explosion when there is no explosive, if there is still no matter to explode? see [.32]);
- **etc.; etc.; etc.**

Because of this, I've already written 150 pages (and I still haven't finished) in order to integrate the theory with more current empiric knowledge. And, particularly, in order to **explain the underlying mistakes** in the current theories of physics. These mistakes are **the reason to the current controversies/ disorientation**.

This also means good perspectives for the foundation of Quantum mechanics, and, obviously, for all the theories based on them (Quantum theory of fields, Standard model,...), because it would explain the possible discretion/ 'pixelation' of the time (analogously to what happens with the energy quanta) and it would also **trivially** explain the Indetermination principle (as a principle **in positive** and not in negative). And Quantum Mechanics would be twice as quantum (or even better, three times more, as we will see further down with mass in suggestion .11), as well as **intuitive** and **commonsensical**. From a specific scale there are **no** longer differential functions nor integral ones, neither continuous/ real time (neither Groups to a 1-parameter of transformations of the Variety), **neither** it is applicable the differential geometry (another thing is algebra, geometry and/or topology, but in a **new representation**, the "Intrinsic semiology" applied to physics).

LOGUNOV's "Relativistic theory of gravity", which I have just got to know, has really cheered me up, because the "**very serious heresies**" which I express on the unification of the physical

field in [.332], are no longer that serious (furthermore, I see that **I'm no longer the only heretic**). Heresies that derive from the pre-material information and its processing, which are summarized in the "Summary table" at the end of [.3325]. LOGUNOV's work has also made me very optimistic about the **surprising** possibility of mass, which I explain in suggestion .11.

### ADDENDUM "C" (2010-05-30)

Subsequent to this document, two documents on Relativity have been written: "Mistakes in EINSTEIN's interpretations on relativity" and "Example of the invalidity of Special relativity, which is resolved by the processing time,  $t_p$ , of the Holistic theory" (available at <http://www.sistemaconceptual.org/mm/file/ErroresEINSTEINInvalidezRE.pdf>), in Castilian-Spanish (with a summary in English) and English translation of which is in progress. At the end of the second one, in "Lorentz transformations and the Processing time", the **criteria to avoid the current contradictions of Relativity are detailed, as well as the criteria to avoid many of the problems** currently present by the theories of physics (astronomy, particle physics ... ).

### THE PHOTON, ANOTHER MISTAKEN CONCEPTUALIZATION

The definitions given to up to date to the photon are incomplete and even totally **mistaken** (see [.300]). It is not possible to define something which originated:

- 8 minutes away from the Sun
- 7 300 million years ago in a distant galaxy (like the photons detected by FERMI's telescope),
- or even 14 000 million years ago (like background radiation),

**only by its death**, at the final moment when interacting with matter and suffering an intrinsic modification (how to remember SCHUMANN, TCHAIKOVSKI, NIETZSCHE, NEWTON, BOLTZMANN, HAUSDORFF, LYAPUNOV, van GOGH, ... **only** for their final madness).

The photon is until today the only component of the pre-material phenomenology which is **observable** (I insist, indirectly, when it disappears and/or suffers an intrinsic modification)\*, because the pre-material information is **-still-** only deductible (the pre-material information is still **encrypted** to our **present** observations, we still **don't know how to observe it**, although it surely exists!). The photon is the **energy element** which already existed **prior to** materialization, carrier of the pre-material information, which **controls it** and allows it to interact equally with **all** manifestations of matter and all fields (electromagnetic and gravitational). It is the big '**joker**' for matter. It is the element **common** to both the pre-material and the material phenomenology, which we can observe. However, it is an energy that, when manifesting in the material Universe, is always **submitted** to the processing time, which is the reason why its maximum speed of transport is c.

\* This is why it **hasn't** got any mass and it has **nothing to do** with the material domain, neither **with the limitations of relativity**.

Qualifications of the photon as "particle", "field carrier" or "interaction mediator" are restrictive, misleading and/or erroneous. As explained in [.3324], the photon, is explicitly the carrier of **nothing else but energy and pre-material information**, but, implicitly, derived from its intrinsic components (pre-material information and energy), it can be 'carrier' of **anything** such as:

- the **gravitational** interaction,
- the **electromagnetic** interaction, or
- **generator** or **consumer** of matter and anti-matter (for instance, in the creations of 'pairs' by high energy gamma cosmic rays or in the annihilations of 'pairs'\*).

\* Something like the **reverse process** of what we intend to explain with **HIGGS' boson and mechanism**.

The field as a substance (!Ether rides again!), the photon as a particle, the 'dilation' of time, entropy as a disorder, ... and many others misunderstanding and mistaken, have led to the current "cul de sac" of the physical theories (the difficulties of unifying the 4-'forces'; the antagonisms of the two Relativities, the divergences between Relativity and Quantum mechanics, and the '*mysteries*' of astronomy and the "Big Bang", ...), all this despite anti-intuitive and complex resources (Renormalizations, 'mechanisms', ...) and even **disguised dogmas**.

## .1 TWO SUGGESTIONS FOR THE LHC (=Large Hadron Collider)

Only to clarify one of the two, even the two, would **justify its big investments** and **without waiting to know** what happens with HIGGS' boson. Even if the 'HIGGS' is not found where it is expected, the Holistic Theory **provides the criteria for the necessary reconversion of the current theories**. I understand that this possibility makes it worth it for the reader to give a special attention to the Holistic Theory, **despite** his initial disbelief, and even **despite** some possible errors in my explanation.

.10) Two photons of an annihilation separate at  $2c$ . That is:

- Not because the relativistic addition of speeds "is not considered applicable". To say that "it is not considered applicable" **only** means that the photons are **at the other side of the domain** of relativity, because it **is known that they don't follow it**, because it is known that they separate at  $2c$  and, consequently, **neither** the relativistic addition **nor** relativity **is valid** to them.
- The reason why this is possible is **only** explained by the Holistic theory, because neither of the two transports energy at a speed higher than  $c$  ([.3003], [.3004], and [.3005]).

For the same reason, according to the Holistic theory, **nothing stops** two protons at almost  $c$  speed (for instance in the LHC), despite being matter, from **colliding** against each other **at nearly  $2c$ , and not** at nearly  $c$ , as an intransigent relativist would demand ([.3326]).

I don't know the LHC and it was many years ago that I dissociated myself from theoretical physics, because I was **demotivated** by the current 'theories' at that time. However, I can make an **unequivocal analogy**. The deformation effects of two vehicles **at 100 km/h** that collide in their (respective) lanes into two other parked vehicles, for instance, at some traffic lights, are very **different** from the deformation effects of a frontal collision between two vehicles at 100 km/h that crash into each other at the same traffic lights but in the middle (the crash against the two vehicles is at 200 km/h). If we were to take the four vehicles to the garage, any surveyor would be able to **immediately recognize from the effects** suffered which of the two accidents had occurred, whether the first one or the second one, **independently** from the many fabulist and contradictory testimonials of the accident reported to a Judge, that is, independently from all possible interpretations.

The experts on accelerators **could be surveyors**, but in the LHC. Even if BELL determined the criteria necessary to discern the elaborate EPR paradox (which was done also by CLAUSER, ASPECT and others later), I think **an event that demonstrates if the effective speed between protons is  $c$ , or higher than  $c$ , could be produced**. Only by being  $1.00...001c$ , the domain of relativity would be significantly restricted, and its current interpretations would be made clearly **wrong**. Since even make '*best*' on the 'HIGGS', my '*bet*' the transfer to it  $2c$ .

.11) The second suggestion is related to the **increase of mass with speed**. The Holistic theory is compatible with this increase, but it also allows **another surprising possibility**: that the mass **doesn't** increase, as assumed (or that it increases much less), because the energy input, which allegedly increases the mass, could **also be associated with the kinetic energy of the "Speed of own displacement"  $v_d$**  (and not to the lowest speed  $v$  like it has been associated until now, among other reasons because **the false 'dilation' of time has prevented us from seeing the action of the highest speed of own displacement  $v_d$** ).

In summary, given that  $v_d \gg v$  (when  $v \approx c$ ), the kinetic energy of the speed of own displacement  $v_d$  –and not necessarily the increase in the mass– **could justify the energies incorporated** by the particles (see [.3326]). To know which one of the two solutions/ options is the real one can **only** be discerned experimentally.

It is **not** about the poly-solutions of the string '*theories*', which, as FRIEDEN says "And if there are an infinity of them [theories], is this not **equivalent to having no theory at all?**". It is like many formulas which represent laws and/or phenomena, which have two theoretical solutions, but only one corresponds to the real solution.

Here I am even more ignorant: taking advantage of the LHC and its high performance, ¿could it be possible to accelerate a charged but unstable particle? Because of its stability, the proton is completely **useless**; the muon may be at the other extreme, it may be too unstable and with a large mass. Among the many **radioactive nuclides** easily available (when I was young, I used some of them), there may be more to choose from than among the physical particles. In summary, if the said particle/ nuclide increased its life up to **factors of a hundred** or whatever the LHC allows it to reach, it would mean a  $v_d \gg c$ , and everything could start clarifying itself with a measure that would equally imply its real mass, because of its real effects, not according to interpretations (as in the previous suggestion). At high speeds close to  $c$  ( $v \approx c$ ), **any relationship** between  $\Delta E$  y  $\Delta v_d$ , would imply kinetic energy **at the expense** of the mass increase, and **would put in question the current interpretation**.

This is my '*bet*', as I am the one proposing it, but I would sincerely be the first one to find it **surprising, revolutionary**. It would surprise me a lot less that there was a huge error in my approach... If **-categorically-** time **does not** '*dilate*' (is a **mirage**, due ignoring the processing time  $t_p$ ), ¿why can't it also happen with mass? ¿is the **difficulty** of measuring mass in movement (or even at rest for particles) not known? Why?

And, if it was eventually this way, it would **simplify** physics even more, as well as explaining more reasonably the cause of the high energy cosmic rays (see [[.3326](#)]).

However, **even** if the option currently accepted is correct, that is, that the mass increases with speed (and not the  $E_c$  of the  $v_d$  of the mobile's local reality, how it has been suggested before), more than any other '*mechanism*' (how the GIBBS) **there has to be necessarily** some '*mechanism*' (obviously an **informational** process, **neither** material nor materializer) that **knows at each moment** the speed of the particle, for it **to know how to distribute differentially and at each moment** the energy provided, **between** the increase of mass and the increase of kinetic energy (even at negligible speeds, where LORENTZ's transformation **rules equally** and with the **same precision**). A **complex** '*mechanism*' that is **only** possible if it is some kind of **powerful** process, **which makes the Holistic theory even more necessary**, in order to calculate not only positions and speeds, **but also**, the progressive increases in mass".

## .2 THE 2004 SUMMARY

### PRE-MATERIAL SYMBOLISMS. A HOLISTIC PERSPECTIVE FOR THE "THEORIES OF UNIFICATION OF THE FOUR FORCES". (FIRST PART\*)

C. UDINA (© 2004-12-02)

#### Summary of summary

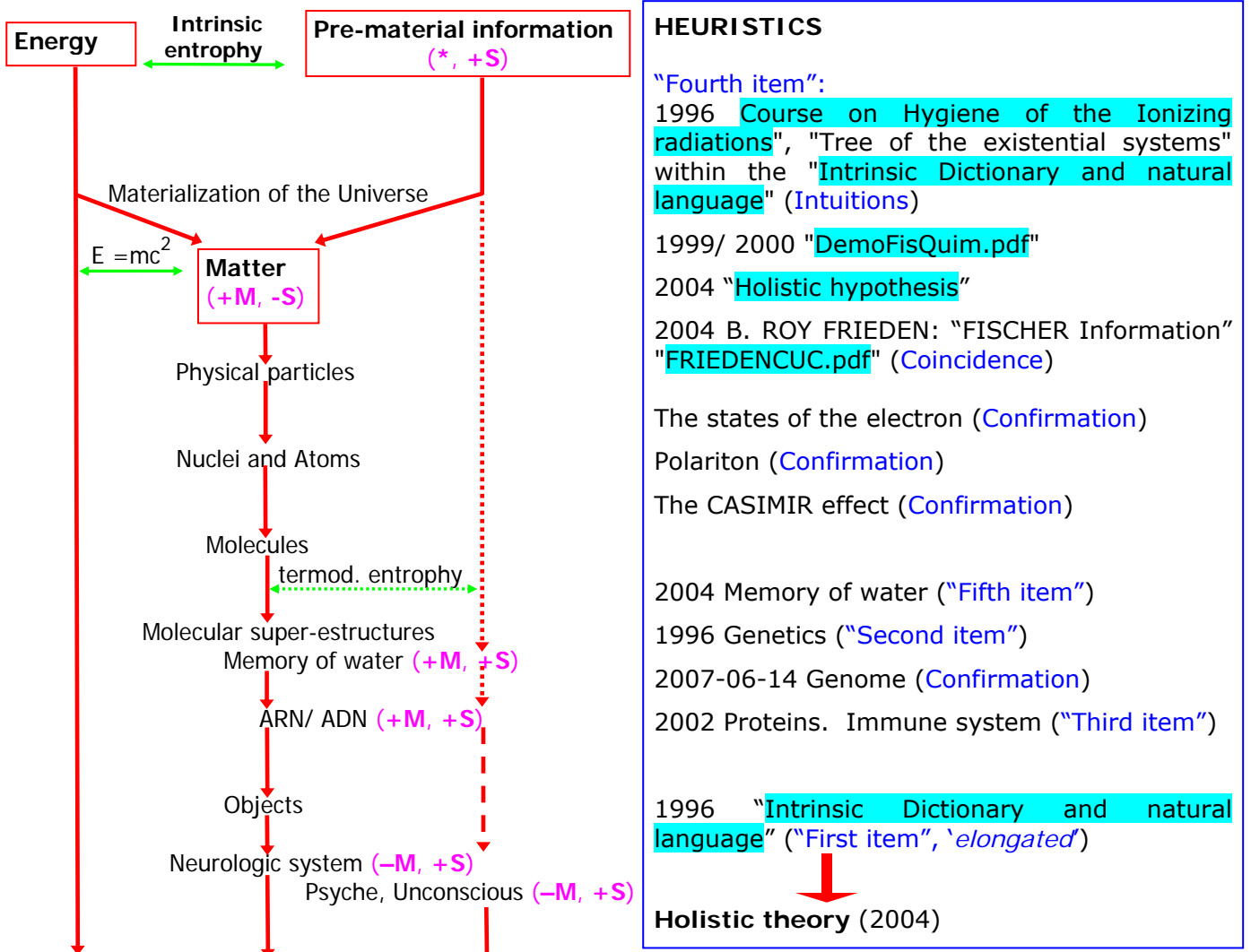
Many quantum phenomena today are insufficiently explained, it needs to be explained by the **existence of an information system supported by a pre-material code**, intelligible due to **the necessary analogies** that must have with the codification's that the human thought manages.

With this pre-material symbolic hypothesis, LINNE-DARWIN's contribution on the living reality could be extended/generalized to all that is real, alive or not, and even to what exists but is not real, that is, the virtual reality. All "cause-effect" relationships would apply with **continuity** to all that exists (the "**Tree of existential systems**").

Information –like energy– **preceded** matter, generated it (materialization that happened in the "Big-bang"), and later has used matter as a new support for its own transmission (Life, Psyche).

The "great unification" pending is **not** between "4 forces" of "4 fields", but that it is **between the pre-material information and the energy**.

\* The Second part is **the explanation of the structure and the operation of the thought process**, which helps understand this holistic exposition. Finally, in 2008, this pending "Second part" gave birth to the website [www.sistemaconceptual.org](http://www.sistemaconceptual.org)



To the right, above, the table indicates the heuristic process

### .3 THE HOLISTIC THEORY AND THE PSYCHE

One of the questions that has interested me the most is –according to me– the biggest incoherence of science:

“the **contrast** between the **big** knowledge of the phenomenology external to man and the **non-existent** knowledge of our own internal cognitive phenomenology, **which allows us** the above-mentioned external knowledge”

After 10 years (1985 – 1995) of analyzing the elements generated by the thought process (its effects: identifiers, concepts, knowledge, procedures, ...) looking for its **invariants** (the intrinsic **relationships**) with a simple software which **simulated** the endomorphism and base changes of algebraic geometry, and encouraged by the failure of "Artificial intelligence" (in 1992, a foreseeable failure, as its approach was in the opposite direction to what it should have been), in 1996 I was able to give a **precise description** of the human cognitive processes and of the **structural levels** of the human thought process (“**Diccionari intrínsec i llenguatge natural**” [=Intrinsic dictionary and natural language]; “**Estructuració del pensament i del llenguatge**” [=The structure of thought and language]).

Some structural levels:

Sensitive identification → Sensitive/simple conceptualization → Virtual/composed conceptualization → Knowledge (and reasoning) → Methodological elements

**analogous** to other structural levels as well known as:

Physical particles (nucleus and orbitals) → Atoms → Molecules → Substances → Objects

Astronomic object → Planetary/astral system → → Part of a Galaxy → Galaxy → → Galaxy cluster → Galaxy SuperCluster → → Universe

Cell → Tissue → Organ → Device/ Anatomical system → ... Individual

Myofilament → Myofibre → Muscular fibre (the muscular cell) → Muscle bundle → Muscle → Tendon

and that also explain the **cognitive evolution with age in all children** (the mathematical formulation that PIAGET searched for without ever finding it).

That way, from the "Positional numerical Systems" that are **only** valid for quantitative concepts (the average quantities), originated the "Conceptual system (intrinsic and exact)", which is its strict **algebraic extension to all** the concepts.

At the same time, the "Intrinsic semiology" appeared, which studies the **compatibility** of any representation system with its support, and also the "Intrinsic semantics", an **intrinsic link** between psychology and mathematics, all **essential to understand** these psychic phenomena.

Because of its intrinsic character, the "Intrinsic semiology" and the "Intrinsic semantics" are also usefully applicable to genetic codification. For instance, the predictions of phenomena made based on it, as well as the **dynamic/ relational action** of the genetic code (and **not only** sequential action, see “**L’exactitud a les ciències**” [=The exactness of sciences]). Additionally, as already mentioned, applied to physics, it is what will allow to progress efficiently in this domain in the coming years.

Finally, because the faculties of thought and knowledge are the most external and recent of the psyche, I was able to establish a "Global model of the psyche", integrating all the psychology knowledge currently available (especially from of the deep psychology of the unconscious). See “**Què és la conscienciació?**” [=“What is consciousness?”]; “**El kerigma del pensament**” [=The kerigma of thought]; “**Què és la intel·ligència?**” [=What is intelligence?], “**Les relacions ...**” [=Relationships ...]; ..., where **everything is clarified unequivocally**. I equally transformed the endomorphism software in a **simulator of cognitive processes** (in migration phase in order to make it available on the "Internet").

Translated into English there is one document, from 10 years ago, simple and partial, but clear and informative, which can complete these paragraphs: "**Brief comments on the intrinsic symbolic structure of thought**". There are other indirectly related such "**What causes autism?**".

However, in 1996, like with "Artificial intelligence" had done previously, science was still looking in another direction, and I wasn't able to divulge certain knowledge, despite them being completely verifiable and **applicable** (learning, communication,...). This led me to create the website [www.sistemaconceptual.org](http://www.sistemaconceptual.org) at the beginning of 2008 where you can find the fifty-something documents that explain all this.

Today we have started to understand, not so much because I'm explaining myself better ("Only a few words are needed for somebody who understands well"), but also because science, after **many failures and errors** has had to change its perspective, heading every time closer to the symbolic-informational approach of my work (see for instance the intrinsic and exact semantic perspective in "**Conferencia del Search-congress, Barcelona 2009**" [=Conference of the Search-congress, Barcelona 2009])<sup>\*</sup>.

<sup>\*</sup> This way, in 2006, "Science" (and "Nature") disassociated themselves from what afterwards became the document "**Què és la consciència?**" [=What is consciousness?] despite it is considered one of the 25 most important questions still to be resolved by science, because of their **obstinacy** in believing that the explanation lies with biology (if the causes are not known, ¿how can somebody affirm where they are and where they are not?).

In 1996, the **coincidence** of this work on the cognitive domain, together with the residual activity of my dedication, when I was younger, to nuclear medicine, the hygiene of radiations and radioprotection (the already-mentioned course) was what led me to the "Holistic hypothesis", but that I left aside for its novelty and **transcendence**. With the new phenomena of physics that I was starting to find out about, which **pointed at its success**, led me to a first formulation in 2004 with a first attempt of diffusion, until in November 2009 I had time to write the document "**La teoría holística**" [=The Holistic theory], validating with this theory –as already mentioned– many phenomena of physics, so far **unexplained** or **badly explained**.

One has to think that the informational systems that structure the psyche –the "Symbolic systems with a symbolic support" (–M, +S)– are, because of their own nature, **much closer** to the "Pre-material information" (\*, +S) than the "Symbolic systems with a material support" (+M, +S) of life (genetics, proteins-hormone, immune system, ...).

In 50 years time, the Holistic theory (and the subsequent continuity of all the existential systems, whether real or virtual) will be something obvious that will be explained at school, like today the "Theory of the evolution of the species" is explained. However, today we are still at the beginning of the process that SCHOPENHAUER caricaturized very well:

"Any truth requires three phases. First it is ridiculed and distorted/ twisted. Afterwards, it is categorically denied. And, finally, it is accepted like an obvious and unquestionable thing",

that is why, today we have no other option but to demonstrate it, even more because of its novelty and **rupture** (it means a change of paradigm):

- within the **physical** domain, it is widely and repeatedly demonstrated in the complete document "**La teoría holística**" [=The holistic theory], and –in connection with Relativity theory– in the documents related in **ADDENDUM "C" (2010-05-30)**;
- within the domain of **Life** it has been sufficiently demonstrated in the below-mentioned document;
- and, with regards to the psyche, it is **unnecessary**. By definition, the psyche is the **information systems** that rule our behaviours, which is the basic assumption of the theory. Another thing is that even today the existence of the psyche is still denied, by **many sectors of science**, and particularly **by religion**, as well as **there are people that still today continue to deny** the "Theory of the evolution of the species", a theory on the dynamics of life that –as seen in the "2004 summary"– the Holistic theory **extends** to "everything that is real, alive or not, and also to everything that exists but is not real, that is, to the virtual domain".

## .4 THE HOLISTIC THEORY AND LIFE

The launch of the website at the beginning of 2008 coincided with the birth of my little daughter. This gave me the idea of treating the subject of newborns from a perspective until then not sufficiently treated: the perspective of the own child. That way I wrote "**Els drets dels nens**" (=Children's rights), which was highly downloaded in the space of a few months. Thanks to this, I was invited to the BioCulture fair, which gave birth to "**Els drets dels nens a BioCultura 2009**" (=Children's rights at BioCulture 2009) and afterwards, "**What causes autism**" (there is an **English translation** of the text:

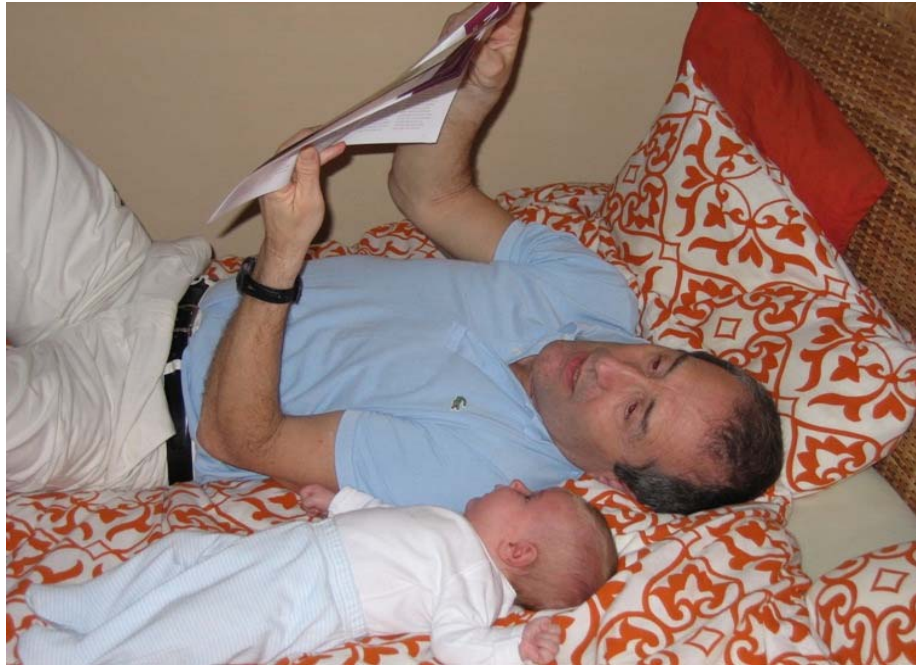


Foto MVB, 2008-04-12

<http://www.sistemaconceptual.org/mm/file/AutismENG.pdf>).

\* Even if it doesn't affect me directly, because of the **importance and drama** of the problem, I tried again with "Science" and "Nature" magazines not long ago (summer of 2009), and they disassociated themselves from the subject because they **obstinately** insist in its genetic causes, and this is precisely why they cannot and will never find them, because its causes are **environmental, informational and iatrogenic**.

The large **diffusion** of the subject made possible by the website, allowed me to be contacted, in November 2009, one set of parents who had, 14 years ago, one of the **most premature newborns known** (at only 23 weeks!), **today a completely normal teenager**. They lived simultaneously together with six other premature babies, **all of them have now very serious neurological or cognitive damage or are even dead**. Why? Because they noticed that what they instinctively did 14 years ago –the **complete opposite** to what they did to the other six babies– was **explained and justified** in these documents and supported by the Holistic theory.

That way I have just written "**El 'miracle' d'un nadó molt prematur de 23 setmanes: ¿matèria o informació?**" (=The 'miracle' of a very premature newborn, of 23 weeks: matter or information?). It is also available in the said website, in Catalan. Its translation into English is in progress (scheduled in June 2010), and in Spanish-Castilian.

This document includes half a dozen scientific articles that help describe more than half a dozen **phenomena of very important informational exchanges** (birth, bond, newborn-imprint, skin-to-skin, colostrum and/or breastfeeding, vaccination, ...) the presence or absence of which explain the **different effects**:

- a **full and healthy life** in Pau's case
- the **dramatic consequences** or even the **death** of his six other peers,

which leads to the **full demonstration of the Holistic theory** within the domain of life, because the survival conditions of very premature babies are the initial and **most critical** circumstances of our life.

Understanding that the **only justification of scientific validity is the prediction of phenomena**, that is, the coherence between theory and practice, Pau's case versus his six other peers, is an unequivocal **multiple prediction**.

I copy a little part of the introduction of this document: "Physics and medicine: matter or information?".

## PHYSICS AND MEDICINE: MATTER OR INFORMATION?

Pau's story is a timely and **excellent demonstration** of a good part of the "Holistic theory". A part corresponding to 'half' of the living reality and that is complemented by another 'half' of what is inert, without life. In summary:

- matter with energy –which is currently the basic assumption of science– **doesn't** quite explain anything,
- however, **information as manager of energy and matter explains everything**, which is, in essence, the basic assumption of the Holistic theory.

In physics, overvaluing what is material and ignoring/ underestimating information is what has led to:

- 100 years of putting a stop to the development of strict theories and the current **bewilderment** (to the extent that, for example, there is a betting game on whether HIGGS's boson will be found or not in the LHC, without questioning certain theories of physics);
- the **mistaken** and **anti-intuitive** interpretations, like the idea that time 'dilates' (see [.300]), or associating entropy to disorder (see [.31]);
- the **incapacity** to explain reasonably and satisfactorily almost everything, seeking refuge, as sole justification, in some tables with empiric data **disguised** as a formulas (Quantum mechanics, ...);
- etc., etc., etc.

However, when taking information and energy as a base, all paradoxes, all anti-intuitive ideas and all misunderstandings **disappear**, appearing only strict theories, **coherent** with practice (practice which is nothing else but the empiric data).

In the domain of life (the other big domain, complementary to what is inert and material), only Pau's case **illustrates widely** more than half a dozen of phenomena that can only be explained from the same premise that **life is essentially information** (information inherited from the pre-material information which, in the wrongly called 'Big bang', generated matter).

And that living matter is a simple instrument, **secondary and totally managed** by information, and the same happens to physical matter. One piece of information:

- life is supported by material structures (molecules and substances, like the DNA carbonated bases, proteins and **hormones** in general, like the immune system, ... (+M, +S), and
- in the psyche not even in this material structures, the support is directly in the **symbols/ signals** of the phenomena which enable communication (–M, +S) through the neurological support,
- in physics, information appears **before**, with the wave characteristics underlying physical particles and the wrongly called 'substance' which makes the energy of vacuum, ... (\*, +S)

However, independently from where the support starts, the information that manages all behaviours is always the same: information. The **only** thing that changes is its support and the way in which it is coded for it to be **compatible** with this support (which is the object of study of the **intrinsic semiology**).

Analogously to what occurs in physics when we make information intervene, if we also understand life:

- as **information that manages** the matter as well as the energy that it requires;
- and **not** as matter –regardless of your complexity– that consumes energy forced by a physical or chemical laws (**biochemistry**);

the '*miracles*' in premature babies and the misunderstandings also disappear, and they are replaced by **strictly scientific criteria** with which we should **approach the future** of sciences of health (individual and/or collective), both of our **bodies** and **minds**.

# THE HOLISTIC THEORY

## (ENGLISH TRANSLATION OF CONTENTS)

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- [.11] MATTER OR ENERGY?, !NOT!
- [.12] INFORMATION AND ENERGY?, !YES!
  - [.120] Before the materialization of the Universe
  - [.121] Life's emergence
  - [.122] Quantum mechanics and information
  - [.123] Reflection on the lazy bear and the cheetah (the hypothetical case of the "cheetah-lazy")
  - [.124] Cybernetics. FISHER. SHANNON.

#### [.2] WHAT IS THE HOLISTIC THEORY?

- [.20] HISTORY, BACKGROUND (SMUTS, BERTALANFFY, ...), HEURISTICS.
  - [.200] The 2004 summary
  - [.201] Some structural levels
  - [.202] Reflection on the Holistic theory
- [.21] EXPERIMENTAL FACTS THAT DEMONSTRATE THE VERACITY OF THE HOLISTIC THEORY
  - [.210] Quantum computing, vestige or proof?: prediction
  - [.211] The identity states of the electron
  - [.212] The Polariton
  - [.213] The CASIMIR effect
- [.22] WORKS/ SCIENCES INTEGRATED BY THE HOLISTIC THEORY
- [.23] WHAT IS LIFE? HOW WAS IT ABLE TO APPEAR?
  - [.230] Information. Symbolic systems with material support and with symbolic support
    - [.2300] Comment on "The 2004 Summary"
    - [.231] AutoApplications
    - [.232] Identity, equality or equivalence
    - [.233] Algebraic duality
    - [.234] ¿How can there be such a close relationship between two such different things (water and the DNA/ RNA)?
      - [.2340] 'Memory of water' and CASIMIR effect
- [.24] GENETICS AND THE COMPLEXITY OF THE INTERPRETATION OF THE GENOME
- [.25] PROTEINS, HORMONES AND THE IMMUNE SYSTEM
- [.26] THE APPEARANCE OF THE PSYCHE: 'BRAIN' VERSUS VERSATILITY. THE GLOBAL MODEL OF THE PSYCHE.
- [.27] THE HUMAN LANGUAGE

#### [.3] SOME CONCEPTS OF PHYSICS AFFECTED BY THE HOLISTIC THEORY

- [.30] SPEED OF LIGHT
  - [.300] Displacement or processing?
    - [.3000] NASA's FERMIS' space observatory
    - [.3001] What is the photon?
    - [.3002] What else can explain this huge confusion on what the speed of light is?
    - [.3003] A correct interpretation of FERMI's data
    - [.3004] Werner Karl HEISENBERG ("I believe the path exists from the very moment we observe it")
    - [.3005] Real or virtual
  - [.301] B. ROY FRIEDEN
  - [.302] Tachyon
  - [.303] Formulas and interpretability
    - [.3030] The limits/ domain of Relativity
    - [.3031]¿EINSTEIN or LORENTZ? ¿EINSTEIN or POINCARÉ?
- [.31] ENTROPY AND INFORMATION. MAXWELL'S DEMON. FISHER. SHANNON. CONCEPTUAL SYSTEM.
  - [.310] Entropy and information
  - [.311] MAXWELL's demon
    - [.3110] Where is the entropy?
  - [.312] FISHER's information
  - [.313] SHANNON's communication
  - [.313] The '*entropy*' of the Conceptual system
- [.32] COSMOGONY AND COSMOLOGY
  - [.320] The low entropy at the beginning of the materialization of the Universe
    - [.3200] Terminology
    - [.3201] An explosion that never exploded, because of the lack of explosive
    - [.3202] Zero entropy
    - [.3203] Entropy and cosmologists
  - [.321] Low density and infinite measure at the beginning of the materialization of the Universe

- [.322] The eternity of the first moments of the Universe
- [.323] The dark side of the Universe
  - [.3230] Vacuum and compactness of the Universe
  - [.3231] Ether and Energy at point zero (=“NullPunktEnergie”)
  - [.3232] Dark energy and dark matter
  - [.3233] Constant cosmology
  - [.3234] Black holes
- [.324] “Big yes; but not bang”. “E pur, non sfrutta”
- [.325] Epilogue to this part of cosmology
- [.33] QUANTUM MECHANICS AND RELATIVITY
  - [.330] The physical field
    - [.3300] Of which type of system?
    - [.3301] The elements
    - [.3302] The interactions
    - [.3303] Of which system?
  - [.331] Paradoxes of quantum mechanics. Quantum superposition and entanglement
    - [.3310] Quantum superposition and entanglement
    - [.3311] Neither alive, nor dead, but all the contrary (SCHRODINGER's cat)
    - [.3312] The EPR paradox (EINSTEIN, PODOLSKY, ROSE) and Relativity
    - [.3313] YOUNG's interferences
    - [.3314] Physical interaction. STUCKELBERG's diagrams (FEYNMAN's diagrams)
    - [.3315] Radioactive desintegration
    - [.3316] The tunel effect
    - [.3317] The photons of the annihilations
    - [.3318] Epilogue to this part of Quantum mechanics
  - [.332] Theories on the great unification of the (physical) field
    - [.3320] The great unification between wolves and sheep
    - [.3321] 'Strong force' and 'Weak force': field or interaction?
    - [.3322] "Electro" and "magnetic" fields
    - [.3323] Quarks and atomism
    - [.3324] Can gravity unify with the other three 'forces'? What is energy? What is the graviton?
    - [.3325] Materialization
    - [.3326] What can the LHC find? (HIGGS' 'particle')
    - [.3327] GÖDEL's theorem and physical “Unification”

PENDING REVISION AND INCORPORATION

- [.333] Determinism or undeterminism
  - [.3330] Time
  - [.3331] The Principle of undetermination
  - [.3332] LAPLACE's demon and determinism
  - [.3333] Scientific nihilism and stupidity
  - [.3334] A law is more than a formula. The future of physics

Telepathy

#### [.4] OTHER IMPLICATIONS

- [.40] NATURE'S WISDOM. INTUITION
- [.41] ONE UNIQUE CULTURE, NEITHER TWO, NOR THREE
  - [.410] Epistemology
  - [.411] The end of ambiguities: phylosophy, moral, ethics
    - [.4110] Application of the right to abort
  - [.412] An “+n” economy
- [.42] WHAT ARE THE APPLICATIONS?
- [.5] THE "MEMORY" OF WATER (see also “[MemoriaAigua.pdf](#)”)
- [.6] EPILOGUE (see also “[MemoriaAigua.pdf](#)”)
- [.7] ANNEX
  - [.70] THE TREE OF THE EXISTENTIAL SYSTEMS
  - [.71] HEURISTICS OF THE HOLISTIC THEORY
  - [.72] LETTER TO "NATURE" (P. CAMPBELL, 2006) (see also “[MemoriaAigua.pdf](#)”)