

# Intention Not Theory: the vertigo of Love\*

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A Theory of Everything (TOE) must be based on a principle so simple and powerful that it can explain not only all physics, but provide an answer to all philosophical questions and above all explain consciousness and the self. A principle is in fact all the more powerful the simpler it is, since everything that exists, from the simplest to the most complex, must derive from the nesting and stratification of the same principle. Around the nature of this principle, the candidate par excellence should be Hegel's dialectic. However, although Hegel's dialectic has proved useful in investigating the evolution of human thought and history, it is of little use in all other scientific areas such as in the investigation of natural laws.

The principle sought must therefore be even more primitive: it must be the foundation of the whole, even of Hegel's dialectic.

The purpose of this article is to show how this principle is the foundation of the whole and how everything, literally, springs from it.

**keywords:** *Intention, Consummation, Reflection, potency, entelecheia, energeia.*

*Meaning of symbols:  $\diamond$  and  $\blacklozenge$  indicate both a length or an angle or an operator on a path of light;  $R^\circ$  and  $R_\bullet$  indicate respectively the electrical and the gravitational Radius.*

## I. INTRODUCTION

General Theory of Relativity (GTR) and the Standard Model (SM) of particle physics, taken together, form our current view of the physical world. While the former governs physics in the macroscopic and cosmic scales the latter governs the physics of the microcosm. According to GTR, gravity is not a force but a manifestation of space-time curvature. The relation between space-time curvature and space-time content (mass-energy and momentum) being given by Einstein's field equations. The theory has been extensively tested and no astronomical observation or experimental test (the most accurate of which have been performed in space) has been found to deviate from its predictions. Thus it is the best description we have of gravitational phenomena that we observe in nature. The Standard Model of particle physics gives a unified formalism for the other three fundamental interactions (strong, weak and electromagnetic) between the fundamental particles that make up all matter. It is a quantum field theory which is consistent with both Quantum Mechanics and Special Theory of Relativity. To date, almost all experimental tests of the Standard Model have also agreed with its predictions.

However, merging these two very successful theories to form a single unified theory poses significant difficulties. While in SM particle fields are defined on a flat Minkowski space-time, GTR postulates a curved space-time which evolves with the motion of mass-energy. The definition of a gravitational field of a particle, whose position and momentum are governed by the Heisenberg Uncertainty Principle, is unclear. In addition quantum mechanics becomes inconsistent with GTR near singularities. Attempts at reconciling these theories often lead to a violation of the Equivalence Principle on which GTR is based. Therefore tests of the Equivalence Principle address a crucial problem which is at the heart of fundamental physics today.

In addition, the need to understand the nature of dark matter, the recent remarkable discoveries of observational cosmology and the puzzle of dark energy, all indicate that physics beyond the Standard Model and the General Theory of Relativity is needed. Invoked by most astronomers, dark matter probably consists of undiscovered elementary particles whose aggregation produces the gravitational pull capable of holding together galaxies and clusters of galaxies. It should account for more than 20% of the total mass in the universe but is not understood as yet. Dark energy is an even deeper mystery. Recent measurements show that the expansion of the universe is speeding up rather than slowing down, thus contradicting the fundamental idea that gravity is always attractive and calling

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for the presence of an unknown form of energy (the “dark energy”) - whose gravity is repulsive and whose nature determines the evolution of the universe- which should contribute by about 70% to its total mass.

Predictions of quantum mechanics have been verified experimentally to an extremely high degree of accuracy.[46] According to the correspondence principle between classical and quantum mechanics, all objects obey the laws of quantum mechanics, and classical mechanics is just an approximation for large systems of objects (or a statistical quantum mechanics of a large collection of particles).[47] The laws of classical mechanics thus follow from the laws of quantum mechanics as a statistical average at the limit of large systems or large quantum numbers.[48] Broadly speaking, quantum mechanics incorporates four classes of phenomena for which classical physics cannot account:

- probability information
- quantization of certain physical properties
- principle of uncertainty
- wave-particle duality
- quantum entanglement

In the formalism of quantum mechanics, the state of a system at a given time is described by a complex wave function, also referred to as state vector in a complex vector space.[28] This abstract mathematical object allows for the calculation of probabilities of outcomes of concrete experiments. According to one interpretation, as the result of a measurement, the wave function containing the probability information for a system collapses from a given initial state to a particular eigenstate. The possible results of a measurement are the eigenvalues of the operator representing the observable – which explains the choice of Hermitian operators, for which all the eigenvalues are real. The probability distribution of an observable in a given state can be found by computing the spectral decomposition of the corresponding operator.

Contrary to classical mechanics, one can never make simultaneous predictions of conjugate variables, such as position and momentum, to arbitrary precision. Heisenberg’s uncertainty principle quantifies the inability to precisely locate the particle given its conjugate momentum.[29]

Quantum coherence is an essential difference between classical and quantum theories as illustrated by the Einstein-Podolsky-Rosen (EPR) paradox, an attack on a certain philosophical interpretation of quantum mechanics by an appeal to local realism.[49] Quantum interference involves adding together probability amplitudes, whereas classical “waves” infer that there is an adding together of intensities. For microscopic bodies, the extension of the system is much smaller than the coherence length, which gives rise to long-range entanglement and other nonlocal phenomena characteristic of quantum systems.[50]

Quantum entanglement is a physical phenomenon that occurs when pairs or groups of particles are generated, interact, or share spatial proximity in ways such that the quantum state of each particle cannot be described independently of the state of the others, even when the particles are separated by a large distance.

Measurements of physical properties such as position, momentum, spin, and polarization, performed on entangled particles are found to be correlated. For example, if a pair of particles is generated in such a way that their total spin is known to be zero, and one particle is found to have clockwise spin on a certain axis, the spin of the other particle, measured on the same axis, will be found to be counterclockwise, as is to be expected due to their entanglement. However, this behavior gives rise to seemingly paradoxical effects: any measurement of a property of a particle performs an irreversible collapse on that particle and will change the original quantum state. In the case of entangled particles, such a measurement will be on the entangled system as a whole. Such phenomena were the subject of a 1935 paper by Albert Einstein, Boris Podolsky, and Nathan Rosen,[1] and several papers by Erwin Schrödinger shortly thereafter,[2][3] describing what came to be known as the EPR paradox. Einstein and others considered such behavior to be impossible, as it violated the local realism view of causality (Einstein referring to it as “spooky action at a distance”)[4] and argued that the accepted formulation of quantum mechanics must therefore be incomplete.

Later, however, the counterintuitive predictions of quantum mechanics were verified experimentally[5] in tests where the polarization or spin of entangled particles were measured at separate locations, statistically violating Bell’s inequality. In earlier tests it couldn’t be absolutely ruled out that the test result at one point could have been subtly transmitted to the remote point, affecting the outcome at the second location.[6] However so-called “loophole-free” Bell tests have been performed in which the locations were separated such that communications at the speed of light would have taken longer—in one case 10,000 times longer—than the interval between the measurements.[7][8]

According to some interpretations of quantum mechanics, the effect of one measurement occurs instantly. Other interpretations which don’t recognize wavefunction collapse dispute that there is any “effect” at all. However, all interpretations agree that entanglement produces correlation between the measurements and that the mutual information between the entangled particles can be exploited, but that any transmission of information at faster-than-light

speeds is impossible.[9][10]

Quantum entanglement has been demonstrated experimentally with photons,[11][12][13][14] neutrinos,[15] electrons,[16][17] molecules as large as buckyballs,[18][19] and even small diamonds.[20][21] On 13 July 2019, scientists from the University of Glasgow reported taking the first ever photo of a strong form of quantum entanglement known as Bell entanglement.[22][23] The utilization of entanglement in communication and computation is a very active area of research.

### Albert Einstein's original pedagogical treatment :

1. the laws of physics are invariant (i.e. identical) in all inertial frames of reference (i.e. non-accelerating frames of reference); and
2. the speed of light in a vacuum is the same for all observers, regardless of the motion of the light source or observer.

### Traditional "two postulates" approach to special relativity

1. The Principle of Relativity – the laws by which the states of physical systems undergo change are not affected, whether these changes of state be referred to the one or the other of two systems in uniform translatory motion relative to each other.[p 1]
2. The Principle of Invariant Light Speed – "... light is always propagated in empty space with a definite velocity [speed]  $c$  which is independent of the state of motion of the emitting body" (from the preface).[p 1] That is, light in vacuum propagates with the speed  $c$  (a fixed constant, independent of direction) in at least one system of inertial coordinates (the "stationary system"), regardless of the state of motion of the light source.

or **Lorentz invariance as the essential core of special relativity** Main article: Lorentz transformation Alternative approaches to special relativity Main article: Derivations of the Lorentz transformations Einstein consistently based the derivation of Lorentz invariance (the essential core of special relativity) on just the two basic principles of relativity and light-speed invariance. He wrote:

*The insight fundamental for the special theory of relativity is this: The assumptions relativity and light speed invariance are compatible if relations of a new type ("Lorentz transformation") are postulated for the conversion of coordinates and times of events... The universal principle of the special theory of relativity is contained in the postulate: The laws of physics are invariant with respect to Lorentz transformations (for the transition from one inertial system to any other arbitrarily chosen inertial system). This is a restricting principle for natural laws...[p 5]*

Thus many modern treatments of special relativity base it on the single postulate of universal Lorentz covariance, or, equivalently, on the single postulate of Minkowski spacetime.[p 9][p 10]

Rather than considering universal Lorentz covariance to be a derived principle, this article considers it to be the fundamental postulate of special relativity. The traditional two-postulate approach to special relativity is presented in innumerable college textbooks and popular presentations.[16] Textbooks starting with the single postulate of Minkowski spacetime include those by Taylor and Wheeler[17] and by Callahan.[18] This is also the approach followed by the Wikipedia articles Spacetime and Minkowski diagram.

In 1908, Hermann Minkowski—once one of the math professors of a young Einstein in Zürich—presented a geometric interpretation of special relativity that fused time and the three spatial dimensions of space into a single four-dimensional continuum now known as Minkowski space. A key feature of this interpretation is the formal definition of the spacetime interval. Although measurements of distance and time between events differ for measurements made in different reference frames, the spacetime interval is independent of the inertial frame of reference in which they are recorded.

Minkowski's geometric interpretation of relativity was to prove vital to Einstein's development of his 1915 general theory of relativity, wherein he showed how mass and energy curve this flat spacetime to a Pseudo Riemannian manifold. "Distances" Determine Geometry, that is Spacetime intervals between events, which are absolute, evidence the geometry of spacetime, its curvature.

Therefore the pillars of traditional physics are:

1. the continuum Minkowski spacetime which is the scenario in which all the events, real or only possible, are found. It incorporate:
  - (a) the finite speed of light (and of any signal);
  - (b) the metric, which is based on the Invariant distance between two events, ie  $d\tau^2 = dt^2 - dr^2$
  - (c) in particular, for two events linked by light  $dt^2 - dr^2 = 0$ .

2. mass and energy curve this flat spacetime to a Pseudo Riemannian manifold;

In this article we will show that this framework of the standard physics, in particular the movement of light and the Minkowski spacetime, is only an isomorphism of a more primitive reality where at the foundation there is the relation between two conjoined individuals. Matter, space and time are not substances, but only attributes of the relationship. In the three dimensional space of the relationship, light is instantaneous and movement and memory emerge only reflectively by the huge amounts of acts below. It is extremely simple since all its properties derive from a simple geometric scheme. Nevertheless it is extremely difficult since it imposes a complete change of paradigm and concepts.

### A. The legacy of Greek philosophy up to Hegel

Hereafter, we will limit ourselves to the philosophy of the Greeks within the horizon of intention philosophy, up to Hegel, and therefore to:

1. the Parmenides' ( 'En') one, and "Being and thought are the same"
2. the Anaxagoras' nous (mind).
3. Heraclitus' Logos. According to Hegel, Heraclitus is the first to recognize the dialectic as a principle
4. the Aristotle' Primacy of Substance and Teleology. Aristotle held that there were four kinds of answers ("four causes" ) to "why" questions (in Physics II, 3, and Metaphysics V, 2):
  - Material Cause - the stuff out of which something is made
  - Formal Cause - the defining characteristics of (e.g., shape) the thing
  - Efficient Cause - the antecedent condition that brought the thing about
  - Final Cause - the purpose of the thing
5. the dualism matter-nous or body-soul or matter-idea or material-form. Plato believed that the material world is a shadow of a higher reality that consists of concepts he called Forms (idea).
6. the Aristotle' dualism potentiality-actuality. The actuality-potentiality distinction in Aristotle is a key element linked to everything in his physics and metaphysics.

Anaxagoras, born about 500 BC, is the first person who is definitely known to have explained the concept of a nous (mind), which arranged all other things in the cosmos in their proper order, started them in a rotating motion, and continuing to control them to some extent, having an especially strong connection with living things. Amongst the pre-Socratic philosophers before Anaxagoras, other philosophers had proposed a similar ordering human-like principle causing life and the rotation of the heavens. For example, Empedocles, like Hesiod much earlier, described cosmic order and living things as caused by a cosmic version of love,[9] and Pythagoras and Heraclitus, attributed the cosmos with "reason" (logos).[10]

Aristotle points out that some things do seem to be more fundamental than others. If there is a hierarchy to being, such that some things are more fundamental than others, there must be a most fundamental thing on which everything else depends. Aristotle thinks that he can approach this most fundamental thing by examining definition. Properly speaking, a definition should list just those items without which the thing defined could not exist as it is. For instance, the definition of a toe should mention a foot, because without feet, toes could not exist. Since we cannot define toes without making mention of feet, we can infer that feet are more fundamental than toes. A substance, then, is something whose definition does not rely on the existence of other things besides it.

For the cosmos to be unified, there must be a base unit of existence on which all other kinds of existence depend. Aristotle's argument for the primacy of substance, then, is his way of saying that it is substance, and not time or location, that binds the cosmos together.

Aristotle believed that the best way to understand why things are the way they are is to understand what purpose they were designed to serve. For example, we can dissect an animal to see how its anatomical organs look and what they're made of, but we only understand each organ when we perceive what it's supposed to do. Aristotle's emphasis on teleology implies that there is a reason for everything.

"Actuality" means "anything which is currently happening". Actuality is often used to translate both *energeia* (*ἐνέργεια*) and *entelecheia* (*ἐντελέχεια*). The two words *energeia* and *entelecheia* were coined by Aristotle, and he stated that their meanings were intended to converge.[10] In practice, most commentators and translators consider the two words to be interchangeable. They both refer to something being in its own type of action or at work, as all things are when they are real in the fullest sense, and not just potentially real. Potentiality and potency are translations of the Ancient Greek word *dunamis* (*δύναμις*).

In the Hegel's philosophy (see Heidegger (1958) [13]), the key point is the dialectical movement of spirit, that is, of absolute subjectivity: the mirroring and reuniting of opposites as the spirit's process of self production. Hegel also names "speculative dialectics" simply "the method". By this appellation he means neither an instrument of representation nor a peculiar procedural mode of philosophy. "The method" is the innermost movement of subjectivity. "the soul of being", the production process through which the fabric of the whole of the absolute's actualization becomes actualized.

The method, that is speculative dialectic is for Hegel the fundamental trait of actuality. The method determines accordingly the movement of all occurrences, i.e. history. Hegel says: "In philosophy as such, most currently and recently, is contained what the work from a thousand years has produced; it is the result of all that has preceded it." According to Hegel, In the system of speculative dialectics, philosophy is completed, that is, it attains the highest and thereby its conclusion.

## II. THE INTENTION NOT THEORY

We define Intention the unique and universal Interaction between two Individuals which is composed by the cyclical alternation of two moments. In the Consummative moment, as result of a decision, the individual donates/receives a part of self to/from its other, which is its universal. In the Mirroring moment, which is the potentiality period between two Consummative acts, the individual mirrors in itself and is mirrored by its other.

More precisely, we must distinguish between three moments: Act (*ἐντελέχεια* *entelecheia*), Energy (*ἐνέργεια* *energeia*) and Potency (*δύναμις* *dunamis*).

In the consummative moment of the relationship, the two individuals emerge in act and, insofar as in act, one can give his energy and the other can receive it.

Although the two moments, Act and Energy, occur at the same time, they are logically distinct, the former logically preceding the latter.

In the period of the Potency of the relationship, which opens between an act of receiving and the subsequent act of donating, both individuals are in potency.

By universal we always mean an individual: the individual of which the individual member is a part.

We use the terms relationship, interaction and intention as synonyms, while individual is any physical entity engaged in an interaction.

The relation takes place between individuals, consequently, apart from the individuals and the relationship that binds them, nothing else exists.

Nevertheless, the individual is structured in itself, to its three moments correspond three corresponding axes, one for each of the moments, whose length is the Radius R which corresponds to its amount of energy (being), and which, in the period of potency, they constitute the reference triad of its finite spacetime of potency where the Radius unfolds-in and emerges-from.

There is a "part of" relationship between individuals that determines a hierarchical structure: the universe is the first, in its spacetime all other individuals take place, and so on.

The terms absolute, universal, invariant, mean that the properties to which they refer are such for each individual in the universe.

There is the absolute present time in act of universe (and of each individual). The Universe is the metronome of intentions. Every intention is in act in an instant in act of Universe.

The Intention relationship can be defined in three steps:

### 1. CONSUMMATION in ACT: Only ACT is real

- act (*ἐντελέχεια* *entelecheia*). the individual (particle) determined in one measurable in the instant of its measure
- energy (*ἐνέργεια* *energeia*): the radiation energy (bosons) exchanged instantaneously between two individuals in relationship

- consummation: the instantaneous exchange of energy between two interacting individuals
  - decision: the instantaneous not deterministic collapse of the potency of an individual
2. POTENCY: it is veiled, it is only presupposed, it is imaginary (in itself, it is the mystery which opens between an act and the next one)
- potency ( $\delta\acute{\upsilon}\nu\alpha\mu\iota\varsigma$  *dunamis*): the individual's wave function (wave) before its collapse
  - space of an individual: in the period of potency, each individual unfolds in its space constituted by a radius  $R_{\bullet}$ , whose module measures the quantity of its energy, and whose axis is placed along the reference triad consisting of an absolute spatial axis of energy (receiving donating), an absolute temporal axis of act (which starts or ends in the present) and an absolute spatial axis of potency, and whose center is placed (*hinc et nunc*) on the line of the present of its universal.
  - mirroring: the image  $a = M(b)$ , within each individual, of the other individual conjoined in the interaction during the period of potency. In the mirroring we have first of all a new kind of radius  $R_a^{\circ} = 1/R_{b\bullet}$ , which give place to a parallel and distinct kind of relation. Furthermore the Radius of each individual mirrors in the Radius of the other ( $R_{a_{tot}} = R_a + R_b \cos(\gamma^{\diamond})$ ), and the spaces of the two conjoined individuals relate each other according to the scheme of fig. 5 where the Radius  $R_{tot}$ , for both individuals, is either the gravitational one ( $R_{\bullet}$ ) or the electric one ( $R^{\circ}$ ). In the schema, each space mirrors in the other according to a Lorentz transformation.
  - period of potency: it last:
    - the Radius  $R_a$  between a receiving act and the successive donating act;
    - the distance  $D_{ab} + R_b + D_{ba}$  between a donating act and the successive receiving act ( $D_{ab} \neq D_{ba}$  see. fig. 5)
3. REFLECTION : what is veiled in the potency, is revealed in the reflection which appears in act in the present instant.
- Since everything that exists, from the simplest to the most complex, must derive from the nesting and stratification of the same principle, reflection is what emerges as a new and higher layer which takes form quantitatively from the huge number of consummative acts below. Reflection flourishes from Consummation and gives place to a new level of reality and so on since the individuals of every new level too relate each other through consummation.
- Indeed all the datum is in the snapshot of a single instant of an individual (in the act of receiving or in the act of donating). We have nothing else but what is given in the present instant. The previous instant and the next instant are not given. The multiplicity of intentions forms an image that appears in the reflection where only can bird the memory and knowledge.
- Therefore, besides elementary intentions, in the instant of act emerges reflective individuals that, all the same, relate each other according to the unique universal intention relationship.
- We define the reflective element of the reflective intention as follows:
- reflective time: it is the historical reconstruction, starting from *hinc et nunc*, of the succession of the previous interactions of the relation  $\tau = \sum thread_i$  where  $thread = \sigma + R$
  - reflective individual: it is a new universal, a new synthetic individual (with new synthetic dimensions) composed of, and emerging from the interactions of the most basic individuals members below
  - universal of an individual: the individual in whose space the member individual is placed. In other words, the individual is in relation part of with its universal. Every individual in act takes place in the present of the space of its universal individual (of which it is a part), and so on, up to the individual universe which is the place of each individual. So, every individual in act takes place on the time of the present of universe.
  - reflective context of a relationship (or the new synthetic dimensions of the universal) : emerges from all the remaining interactions, outside the relationship in progress, which can influence the decision of the relationship to the extent that, in their entirety, they constitute themselves as attributes (new dimension) of the individuals in relation
  - memory: it is the reflective image of the context which emerges reflectively: the spatial configuration of the context still in the act of donating appears, in the energy, to the reflective receiving (watching) individual, as a photo.

- evolution: it is the movement of the context which emerges reflectively: the sequence of successive photo, exchange of energy of the reflective intention between the context and the reflective receiving (watching) individual, which appears in the current present instant allowing a historical reconstruction that provides temporal depth to the context.

The unveiling of potency, which allows knowledge, requires the existence of conscious reflective individuals engaged as such in reflective relationship with the universe. Indeed, as persons, living reflectively, they don't mirror anymore the universe but reflect the universe in themselves through the mechanism of their senses and have only their own reflected representation of the world, towards which they can relate through their body (entelechy). The individual person is therefore a new level, the first level that comes out of the immediacy of the world and is outside of it. Reflection now takes on meaning and has a role, and a founding role which is that of representation, only in so far as belongs to a reflective person. Since these alive reflective individuals too emerge from the fabric of intentions of universe, and are conscious, it is necessary that the living is an intrinsic property of the intention and that the energy corresponds to the qualia of consciousness (conscious thinking, as all sensations, are qualia, i.e energy) and that the thinking, to the extent that we are not aware of it, is of the same substance that mirroring, that is potency.

### A. Intention philosophy vs Hegel's Logic and vs standard physics

The key point here is "The individual, in an intention, makes a decision that allows him to join with its other donating him a part of himself". This is the inner movement of intention physics.

In the Hegel's philosophy, viceversa, it is the dialectical movement of spirit, that is, of absolute subjectivity: the mirroring and reuniting of opposites as the spirit's process of self production.

The Hegel's philosophy is evolutive where the Intention philosophy is consummative.

The reflective individual unfolds from consummation, as saturation of the space of potency due to the multiplicity of underlying consummative acts, and from reflection derives evolution, as a temporal extension of reflection. Evolution is proper to the potency of the universal. The reflective individual consummates, according to the consummation, and as a result of his consummations evolves, according to the dialectic.

Dialectics is a temporal, evolutionary movement of a universal. It is the vertical movement between two moments of the same individual. Intention is a horizontal spatial movement between two irreducibly distinct individuals. Hegel's logic is the reflection of intention relationship on the temporal dimension of an individual.

The intention, in addition to being more primitive, and therefore the foundation of dialectics, is more detailed and therefore allows us to clarify the dialectic.

Intention physics makes a change in the point of view that passes from that reflective of an external observer to that consummative of an individual dropped into intention and therefore breaks down the pillars of traditional physics :

Standard Physics	Intention Physics
There is an absolute spacetime, the continuum Minkowski spacetime which is the scenario in which all the events are found. Minkowski's continuum spacetime is the set of all real and potential events	The spacetime is NOT per se and absolute, but only an attribute of the individual in relationships with its conjoined other inside their common universal individual; indeed the spacetime of the individual has only three absolute dimensions: a temporal axis of the individual in act, a spatial axis of energy and a spatial axis of potency. Therefore, contrary to Minkowski's spacetime, Intention's spacetime contains only the real events of the particular real intention and, by extension, the historical reconstruction, starting from the photo of the now, of all past and future events of the particular relation. Each individual is the reference system of its own space inside the reference system of the space of its universal. The reference triads relates to each other according to the schema in fig 5
Each particle is characterized by its mass/energy, an electric charge and a color charge. Each one gives rise respectively to the gravitational, electroweak, strong interaction. To date, they require three different theories.	Each individual is characterized by its own gravitational Radius $R_{a\bullet}$ and mirrors in itself the gravitational Radius of the conjoined other as the electrical Radius $R_a^\circ = 1/R_{b\bullet}$ . Both radii correspond, indifferently, to the Radius R of schema in fig 5.
The speed of light (and of any signal) is finite, since it advances, in every instant, in Minkowsky's continuum space-time	The light (and any exchange in any intention) is instantaneous, since the distance between the receiving and donating in act is not real
For two events linked by light, the metric is:	For two events linked by light, the metric is:

$$dt^2 - dr^2 = 0$$

In comparison with the special theory of relativity and Standard Model, which apply in flat spacetime, the general theory of relativity is quite complicated since mass and energy curve this flat spacetime to a Pseudo Riemannian manifold.

Whereas the essential building block of the special theory, namely the Lorentz transformation, can be quickly derived from simple physical principles, the general theory requires the introduction of curved spacetime and an extensive use of differential geometry and tensor calculus.

$$dt^2 - dr^2 = R^2$$

The essential building block of the Intention Physics is the Lorentz transformation in the spacetime of the relationship, which unifies Special Relativity and General Relativity and Standard Model.

The curvature of spacetime induced by mass and energy is only an isomorphism that emerges reflectively by integrating the set of all potential schemas (see fig 5) of the relationship at every point in the spacetime of the individual

Intention physics includes the essential points of quantum physics and the standard model, as probability information, quantization and uncertainty principle, of which it provides a philosophical foundation, clarifying some aspects and correcting some errors and providing internal consistency and the mathematical foundation that is currently missing.

In particular, instantaneity of light provides an explanation for all the weirdnesses and quirks of quantum mechanics, and in particular of quantum entanglement. The alternation of potentiality-act moments gives reason of the wave-particle duality.

In the relation, therefore, we have the cyclical alternation of:

potency	↔ act
<i>mirroring</i>	↔ <i>consummation</i>
<i>universal</i>	↔ <i>instance</i>
<i>period</i>	↔ <i>instant</i>
<i>space</i>	↔ <i>point</i>
<i>wave</i>	↔ <i>particle</i>
complex number	↔ real number

### III. INTENTION PHYSICS

The point of view of classical Physics is that of a generic external observer abstract from any particular intention. Abstract from its natural seat, time must be the time external and common to all possible or real relations, and then per se and continuum, and analogously space, which now occupies all three dimensions that have lost their specificity to become equal and perfectly interchangeable with each other. They become the separate dimensions of a same reflective spacetime which is not, anymore, an attribute of a particular intention but acquires an artificial identity in self, it becomes the scenario of the independent events.

The point of view of Intention Physics is consummative, that of the relation of a concrete individual with its other, characterized by the cyclical instantaneous exchange of energy, which describes all the past and the future as it appears mirrored in the present instant. Limited to the scope of a concrete intention, all present in an instant, there are not events neither therefore the continuum of the spacetime but only two conjoined individuals and the nesting of exchange of their substances which link them forming a geometrical progression originated from the frequency of intention. The metric is consequently linear, the disentangling of a unique path. The instantaneousness of exchange and the angle between the temporal axes of two conjoined individuals in intention shrinks the world (the potency) in a receiving and a donating side.

The Uncertainty principle springs from the lack of memory in the primitive intentions. Indeed, physics is based on memory. Now memory is reflective. Yet reflection has not place in a primitive intention, not therefore memory. In the intention, we have the period of potentiality, which is imaginary, and the moment of the act, which is real. In every moment, the individual is suspended between the previous act and the next in the space of potency. All the nesting of spatial path of the myriads of previous acts is only a reflective reconstruction, which give place to the memory and to the image of present context where mature the decision. In this suspension is the flow of existential time.

$$\Psi(x, t) = Ae^{\frac{i}{\hbar}(px - Et)} = Ae^{i2\pi\left(\frac{x}{\lambda\phi} - \frac{t}{T\phi}\right)} \quad \text{where} \quad \lambda = hR^\circ/V \quad \text{or} \quad \lambda = hR^\circ/v$$



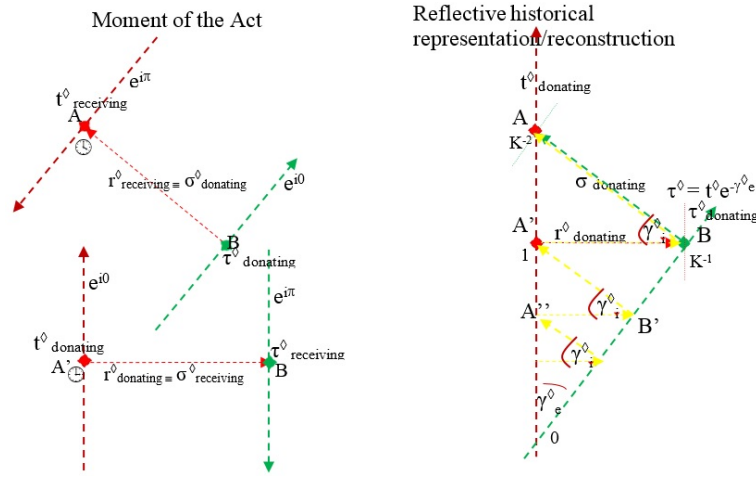


FIG. 1. Uncertainty principle: In a measurement, while the measuring instrument A is necessarily classic and therefore reflective, so we know  $P^\diamond = t_{A_i}^\diamond - t_{A_{i-1}}^\diamond$ , the measured B could be non-classic, therefore we would not know the time  $t_{B_i}^\diamond$  and therefore we would not know  $\cos \gamma^\diamond = \frac{t_{B_i}^\diamond - t_{A_{i-1}}^\diamond}{t_{A_i}^\diamond - t_{B_i}^\diamond}$ .

in the physics of intention the speed and the potential are unified [39]  $v^\diamond = V^\diamond = \sin \gamma^\diamond$ . The only difference is that the potential has a constraint in the radius and therefore varies with the variation of the distance according to the scheme of fig. 5, the speed does not and is therefore constant.

The donor and the receiver must be synchronized to have same period but opposite phase in the moment of the act. To know position and moment of the other in a given time, we must know the angle  $\gamma$  of the relation which is formed of the time of donating, or of receiving, of both individuals. Yet, in the act, we have never this case but, on the contrary, the receiving side of the one face the parallel and opposite donating side of the other and viceversa.

We can partially reduce this inherent lack of knowledge by putting the measuring individual as reflective but, differently from classical physics, in the quantum physics the measured individual is not reflective and therefore, if we can know its distance, we can't read its time too and therefore we can't know the  $\gamma_e^\diamond$  angle of relation. This is the origin of uncertainty principle. In other words, the period of potency (between the act of receiving and the act of donation) of an elementary (electric) individual lasts  $\Delta T = R^\diamond = (\Delta E)^{-1}$ , and this is the discrete unit of measure of the time of the individual. Therefore  $\Delta T \Delta E \geq 1$ .

In other words, in every instant the receiving side of an individual face the parallel donating side of the other and, therefore, the intention schema, composed from the juxtaposing of homologue sides of the two conjoined individuals, is only a construction for needs of knowledge representation. It is the begin of reflective knowledge which demands the determination of the angle  $\gamma$  of the relation given by the homologue side time of both individuals.

Because the observer and the observed as individuals are mirrors, each one reflects and is reflected by the other recursively.

On the path of light, at every reflection, we have an increment of the scale factor exponent:

$$s_n^\diamond = k s_{n-1}^\diamond$$

From the image present in the snapshot of an instant, it is therefore possible recognize a geometrical progression  $n \dots, 1, K, K^2, \dots$

Indicating with  $s_0$  the distance now on the spatial axis between A and B we have that:

$$T_a^\diamond = \frac{s_0^\diamond}{1-k} = s_0^\diamond (1 + k + k^2 + k^3 + \dots) = s_0^\diamond + s_1^\diamond + s_2^\diamond + s_3^\diamond + \dots$$

Therefore

$$\Delta \lambda^\diamond = T^\diamond - T_{-1}^\diamond \quad \text{and} \quad V^\diamond = \frac{\Delta \lambda^\diamond}{T^\diamond} = \frac{\overline{AB}}{\overline{OA}} = 1 - k$$

Since the act is instantaneous, the speed of light is instantaneous and the intention gives rise to a linear space-time metric characterized by  $\sin^\diamond x + \cos^\diamond x = 1$ .

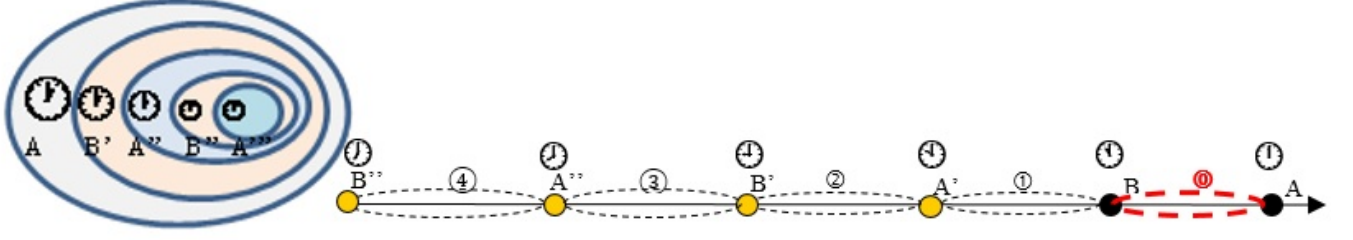


FIG. 2. Recursive mirroring: two mirrors facing each other are reflected recursively. If there is a clock on each of them, from the reflected image present in every instant it is possible to reconstruct distances historically and therefore the velocities and accelerations over time, as far as the reflection allows.

It is the geometry of the act where time is spatialized:  $time \equiv space$ . Later we will show also that  $space \equiv mass$ .

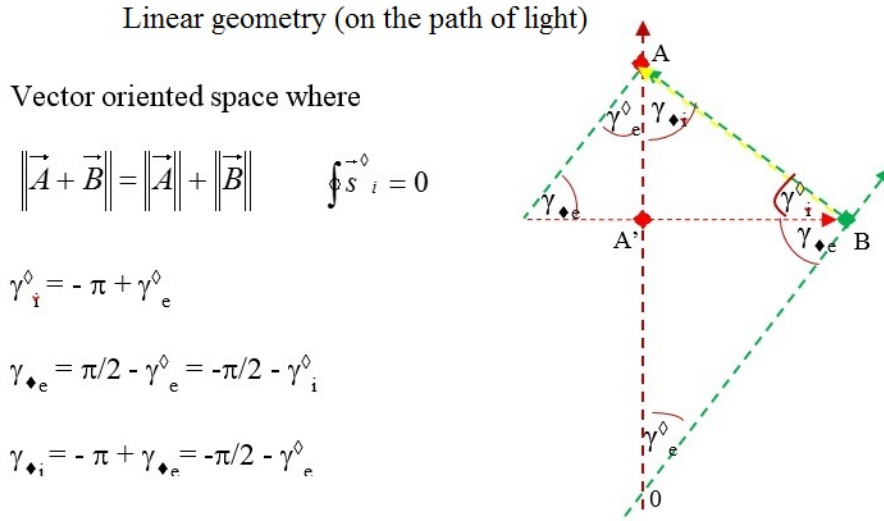


FIG. 3. Linear spacetime of the act (on the path of instantaneous light): It is a Linear vector oriented space. The angles are  $\gamma_e$  between two vectors in concordant direction, vice versa  $\gamma_i$ , and they alternate each other.

In referring to the linear space-time plane, where the linear geometry applies, we will adopt the convention of using the symbols:  $\diamond$  and  $\blacklozenge$  which can be placed indifferently on the operator and on the angle, or only on the operator or only on the angle:  $\cos^{\diamond} \gamma^{\diamond} \equiv \cos^{\blacklozenge} \gamma \equiv \cos \gamma^{\diamond}$ .

The relations between quadratic (without  $\diamond$  and  $\blacklozenge$ ) and linear trigonometric functions are:

$$\begin{bmatrix} \cos \gamma^{\diamond} = \cos \gamma & \sin \gamma^{\diamond} = 1 - \cos \gamma^{\diamond} = 1 - \cos \gamma \\ \cos \gamma_{\blacklozenge} = 1 - \sin \gamma_{\blacklozenge} = 1 - \sin \gamma & \sin \gamma_{\blacklozenge} = \sin \gamma \end{bmatrix} \quad (1)$$

$$\begin{bmatrix} \frac{d(1 - \cos \gamma^{\diamond})}{d\gamma^{\diamond}} = (1 - \cos \gamma^{\diamond}) & \frac{d \cos \gamma^{\diamond}}{d\gamma^{\diamond}} = -(1 - \cos \gamma^{\diamond}) \\ \frac{d(1 - \sin \gamma_{\blacklozenge})}{d\gamma_{\blacklozenge}} = (1 - \sin \gamma_{\blacklozenge}) & \frac{d \sin \gamma_{\blacklozenge}}{d\gamma_{\blacklozenge}} = -(1 - \sin \gamma_{\blacklozenge}) \end{bmatrix} \quad (2)$$

Furthermore, denoting by  $+^{\diamond}$  the reflective sum of two angles, we have  $(\varphi +^{\diamond} \psi) \neq (\varphi + \psi)$

$$\cos^{\diamond} (\psi +^{\diamond} \varphi) = \cos^{\diamond} \psi \cos^{\diamond} \varphi - (1 - \cos^{\diamond} \psi) (1 - \cos^{\diamond} \varphi) = \cos^{\diamond} \psi + \cos^{\diamond} \varphi - 1$$

$$\cos^{\diamond} (\psi -^{\diamond} \varphi) = \cos^{\diamond} \psi \cos^{\diamond} \varphi + (1 + \cos^{\diamond} \psi) (1 - \cos^{\diamond} \varphi) = \cos^{\diamond} \psi - \cos^{\diamond} \varphi + 1$$

$$\sin^\diamond \gamma_e = 1 - \cos^\diamond (\varphi +^\diamond \psi) = \sin^\diamond (\varphi) + \sin^\diamond (\psi)$$

$$\sin^\diamond \gamma_i = 1 + \cos^\diamond (\varphi +^\diamond \psi) = \cos^\diamond (\varphi) + \cos^\diamond (\psi)$$

Hereafter some notable examples:

$$\cos^\diamond \left( \frac{\pi}{2} +^\diamond \gamma \right) = \cos^\diamond \frac{\pi}{2} + \cos^\diamond \gamma - 1 = - (1 - \cos^\diamond \gamma) = - \sin^\diamond \gamma$$

$$\cos^\diamond (\pi -^\diamond \gamma) = \cos^\diamond \pi - \cos^\diamond \gamma + 1 = - \cos^\diamond \gamma$$

$$(\pi/3 +^\diamond \pi/3) = (\pi/2)$$

In Intention physics the time is defined only in the points of act A,B,A',B', ... since, between a point of act and the next one, the period of potency extends. Analogously space is defined only on the segments AB ecc.

These points and these segments are the only in act, the only real, and therefore absolute, and therefore are the only one that must have an equivalent representation (isomorphic) in whichever representation of the reality (isomorphism). We can therefore represent the recursive mirroring between A and B in the schema on the right and compare it with Minkowski schema used by relativistic physic on the left (see fig. 4).

It is necessary to pay attention to the suffix  $_e$  (between two vectors in concordant direction) and  $_i$  (between two vectors in discordant direction) of the linear angles, which alternate each other in the scheme:

$$\overline{AB} \equiv \sigma^\diamond = t^\diamond - \tau^\diamond = t^\diamond (1 - \cos^\diamond \gamma) \quad \text{or} \quad V_e = \sin \gamma_e^\diamond = 1 - \cos \gamma_e^\diamond = 1 - \cos \gamma^\diamond$$

$$\overline{AA'} \equiv t^\diamond - t'^\diamond = \sigma^\diamond + r^\diamond = \sigma^\diamond (1 + \cos^\diamond \gamma) \quad \text{or} \quad V_i = \sin \gamma_i^\diamond = 1 - \cos \gamma_i^\diamond = 1 + \cos \gamma^\diamond$$

We can see that, since  $\tau = \tau^\diamond$ , it is possible an isomorphic representation of the reality, represented by the intention schema, defining  $t \equiv t^\diamond - d$  and  $d \equiv (\sigma^\diamond + r^\diamond)/2$  so that to the linear metric of the intention physics corresponds the vectorial metric in the Minkowski spacetime of classic physics.

$$\left\{ \begin{array}{l} \text{RELATIVISTIC MINKOWSKI SPACETIME} \\ i\vec{\tau} = i\vec{t} + \vec{d} \end{array} \right\} \leftrightarrow \left\{ \begin{array}{l} \text{LINEAR INTENTION SPACETIME} \\ t^\diamond = t + d = \tau^\diamond / \cos \gamma^\diamond \\ t'^\diamond = t - d = \tau^\diamond \cos \gamma^\diamond \end{array} \right.$$

Or

$$i\tau \cosh \gamma \hat{t} + \tau \sinh \gamma \hat{d} = i\tau \hat{\tau} \quad \leftrightarrow \quad \left\{ \begin{array}{l} \tau \cosh \gamma - \tau \sinh \gamma = \tau \cos \gamma^\diamond \\ \tau \cosh \gamma + \tau \sinh \gamma = \tau / \cos \gamma^\diamond \end{array} \right. \quad (3)$$

and

$$e^{-\gamma} \quad \leftrightarrow \quad \cos \gamma^\diamond \quad (4)$$

Replacing  $\tau^\diamond$  with the mass  $m$ , it's easy to identify the vectorial sum on the left with the Dirac's free particle Equation, and the linear sum on the right with the definition of sinh and cosh since  $\cos \gamma^\diamond \leftrightarrow e^{-\gamma}$ .

The metric of reality, in other words the unique absolute metric, must depend only on geometry and therefore only on angles and distances. Both an inertial relationship and an intention relationship must be equally characterized by distances and angles: the relative velocity  $v$  for the first and the potential  $V$  for the other.

The relation manifests itself according to the scheme of fig. 5. We can identify the potential  $V$  with  $\sin \gamma_e^\diamond$ , so that  $Vr_2^\diamond = Vr = R_{Tot}$  must be a constant of the intention, and where  $V = \sin \gamma_e^\diamond = 1 - \cos \gamma^\diamond$ .

The  $\overline{hO}^\diamond \equiv \mu = \frac{R_a R_b}{R_a + R_b}$  is an invariant of the relation.

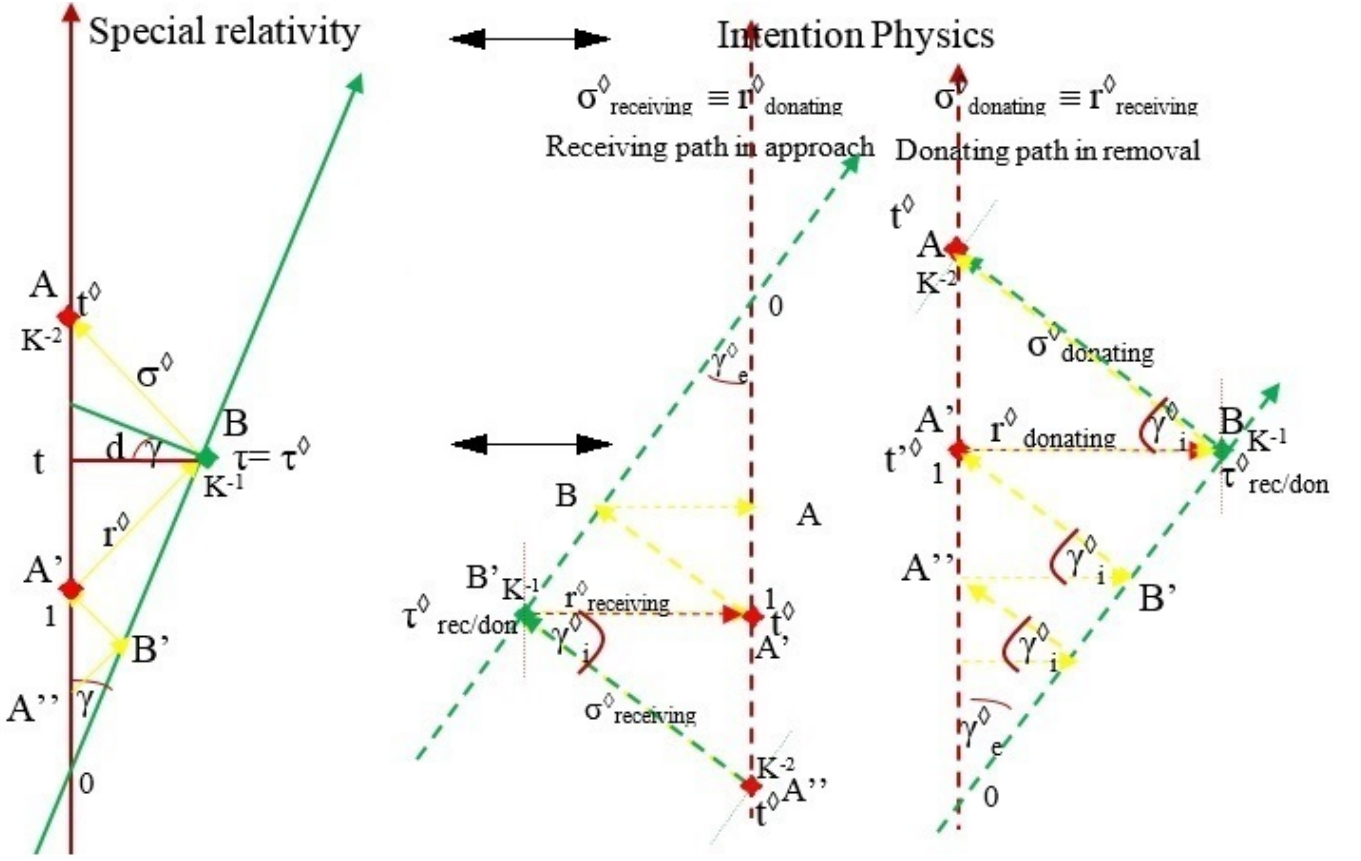


FIG. 4. isomorphism: the representation of the temporal and spatial distances between the real points  $A, B, A', B', A'', B'', \dots$  in the Minkowski spacetime, on the left, is equivalent to the representation in the Intention historical plane, on the right, with the conversion  $v = \tanh \gamma \rightarrow V = 1 - \cos \gamma^\diamond$  and  $e^{-\gamma} \rightarrow \cos \gamma^\diamond$ . The difference is that while the Intention historical plane defines only these points as the unique real, and the spatial distances, therefore, represent the correspondence between  $t^\diamond$  and  $\tau^\diamond$  that are therefore joined instantly at every act of donation/receiving, the Minkowski spacetime defines all the intermediate points too (that are in potency and therefore not real in the intention) and establishes a correspondence between each point on  $t$  axis and  $\tau$  axis (be it real or imaginary) making the speed of light finite and traveling in the spacetime. As it is shown in (Peluso 13 jan 2019 [37]) the Intention historical plane is the primitive space where General Theory of Relativity and Quantum Mechanics are reconciled.

### A. The Unification of Gravitation and Electricity

The relation between gravitation and electricity is that they are each the mirror of the other:  $R_a^\circ = 1/R_{\bullet b}$ .

The Intention demands that the period of the two individuals in intention be the same (see fig. 5).

From the De Broglie relation  $\lambda = h/p$

Imposing  $p_a = p_b$  and then  $\lambda_a = \lambda_b$  we have:

$$\lambda_a = 2\pi \frac{R_b^\circ}{\sin_\blacklozenge \varphi} = \lambda_b = 2\pi \frac{R_a^\circ}{\sin_\blacklozenge \psi} = 2\pi r \quad (\text{from intention schema})$$

$$\lambda_a = 2\pi \frac{\alpha^{-1}}{p_a} = \lambda_b = 2\pi \frac{\alpha^{-1}}{p_b} = 2\pi r \quad (\text{from De Broglie relation})$$
(5)

And therefore (the term  $\alpha^{-1}$  depends on the unit of measure adopted see eq. 6 and 7) :

$$p_a = m_a \sin_\blacklozenge \varphi = R_b^{\circ-1} \sin_\blacklozenge \varphi \quad \text{or} \quad R_{\bullet a} = R_b^{\circ-1}$$

$$p_b = m_b \sin_\blacklozenge \psi = R_a^{\circ-1} \sin_\blacklozenge \psi \quad \text{or} \quad R_{\bullet b} = R_a^{\circ-1}$$

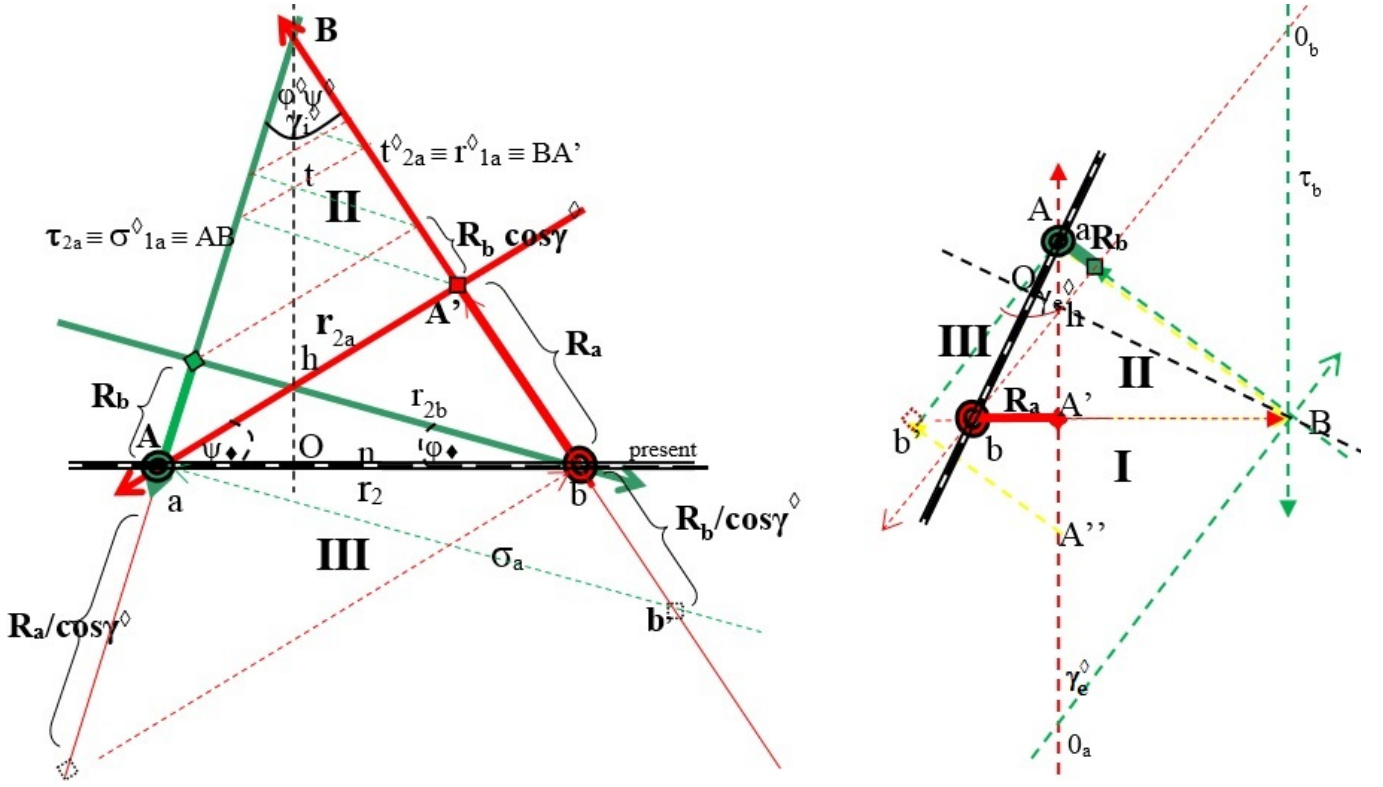


FIG. 5. The whole relation is enfolded and unfolds from the Radii of the two conjoined individuals. The schema of intention is recursive since to every angle follows its opposite. Each side of the fig. is the sum of a geometric series  $\sum_{i=0}^n Rf^i(\gamma^\diamond) = \sum R\{1 + f(\gamma^\diamond) + f^2(\gamma^\diamond) + f^3(\gamma^\diamond) + \dots\}$  where  $R$  is the total radius of the individual  $R_{Tot_a} = R_a \cos \gamma^\diamond + R_b$  and  $R_{Tot_b} = R_b \cos \gamma^\diamond + R_a$ .

Therefore  $l_a = R_{Tot_a} \sum_{i=1}^n k^{i-1} = R_{Tot_a} \frac{1-k^n}{1-k}$  and since from the point of view of the barycenter  $R_{Tot} = R_a + R_b = \frac{R_{Tot_a} + R_{Tot_b}}{1 + \cos \gamma}$ , we

have, from the point of view of the barycenter:  $l = \frac{l_a + l_b}{1 + \cos \gamma}$  and  $\frac{l_{1a}}{l_{2a}} = \frac{l_{1b}}{l_{2b}} = \frac{l_1}{l_2}$

It's at last easy to show that :

$$r = \frac{r_{2a}^\diamond + r_{2b}^\diamond}{1 + \cos \gamma^\diamond} = (\sigma_{1a}^\diamond + \sigma_{1b}^\diamond) = \frac{R_{Tot}}{1 - \cos \gamma^\diamond}$$

$$t = \frac{t_{1a}^\diamond + t_{1b}^\diamond}{1 + \cos \gamma^\diamond} = \frac{r}{V} = \frac{R_{Tot}}{(1 - \cos \gamma^\diamond)^2}$$

$$V_e^\diamond = \frac{R_{Tot_a}}{r_{2a}^\diamond} = \frac{R_{Tot_b}}{r_{2b}^\diamond} = \frac{r}{t} = \frac{R_{Tot}}{r}$$

and therefore that with respect to the barycenter,  $R_{Tot} : r = r : t$  which is the general relation of the intention scheme.

In the case of inertial evolution, it's easy to find that the only constraint is  $\gamma^\diamond$  constant. Vice versa, in the intention, the angle  $\gamma^\diamond$  varies, but we know from Newton law that  $V = \sin \gamma^\diamond = \frac{M}{r} = \frac{R_\bullet}{r_2}$ , where  $R_\bullet$  is the Schwarzschild radius and  $r$  corresponds to  $\frac{1}{2}r_2$ . The Intention Schema, which emerges reflectively, represents all the possible knowledge on the relation and it is just a knowledge representation. Indeed, contrarily to the above schema, in every instant the receiving side of an individual face the parallel donating side of the other. Therefore, the intention schema, composed from the juxtaposing of homologue sides (donating-donating or receiving-receiving) of the two conjoined individuals, is only a construction for needs of knowledge representation. It is the begin of reflective knowledge which demands the determination of the angle  $\gamma$  of the relation given by the homologue side time of both individuals.

What's more, from the schema of the universal relation we have  $\frac{\sin_\diamond \psi}{\sin_\diamond \varphi} = \frac{R_a}{R_b}$ . if the relationship is universal, then the radius  $R$  must be able to represent both the gravitational radius  $R_\bullet$  and the electric radius  $R^\circ$ .

Therefore we must have:

$$\frac{R_{\bullet b}}{\sin_{\blacklozenge} \psi} = \frac{R_{\bullet a}}{\sin_{\blacklozenge} \varphi} \quad \text{in the gravitational case}$$

$$\frac{R^{\circ}_b}{\sin_{\blacklozenge} \psi} = \frac{R^{\circ}_a}{\sin_{\blacklozenge} \varphi} \quad \text{in the electrical case}$$

More precisely, the gravitational radius mirror itself in the other as  $R^{\circ} = 1/R_{\bullet}$ . In the same location where is placed the individual A, we have therefore the gravitational radius  $R_{\bullet a}$ , corresponding to the energy that the individual has and can donate, and the electrical radius  $R^{\circ}_a = 1/R_{\bullet b}$ , corresponding to the energy that the individual can receive. Exactly, we affirm that the unification of gravitational and electromagnetic interactions, always joined and each mirror of the other, passes through the unification of mass and electric charge, being both reducible to a length. The law of the equality of the inertial and gravitational mass is equivalent to the assertion that the acceleration imparted to a body by a gravitational field is independent of the nature of the body. A ball of iron and a ball of lead fall with the same acceleration on the earth, but the acceleration is different to varying of the planet Earth or Jupiter. In overturned way, an electron and a muon fall with different accelerations on a same ion, but for everyone the acceleration is the same to varying of the ion, be it iron or lead. This overturned parallelism is the same between  $R_{\bullet}$  and its mirror on other  $R^{\circ}$ . While in the gravitation the mass appears where it lays, in the electricity it appears as the reciprocal and reflected in the other so the barycentre of electricity and gravitation is the same. The electrical radius is therefore the reflex on other of the gravitational radius and both relationships share the same intention schema that emanates from the radius.

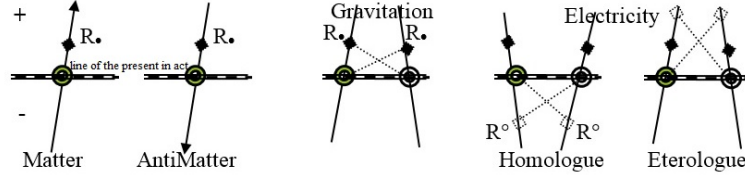


FIG. 6. The sign of acceleration: The  $R_{\bullet}$  is advanced and therefore positive for matter. The mirror  $R^{\circ}$ , being reflected on other, appears on the opposite side if the two conjugated individuals in the intention are homologue, on the same side elsewhere. Therefore, from the matter point of view, the acceleration is always attractive (polar axes converge toward the future) for gravitation, while repulsive or attractive depending on the sign of the polar axes for electromagnetism. All is reversed from the negative matter point of view

In the intention absolute system of measures, which contemplates as only measure the distance, it's advantageous to introduce the two constants:

$$\Theta = \frac{Qc^2}{(4\pi\epsilon_0 G)^{1/2}} = 1.671001..x10^{08} \text{ joule} \quad \text{and} \quad K = \Theta 2 \frac{G}{c^4} = 2.761312..x10^{-36} \text{ meters} \quad (6)$$

whence

$$K\Theta = 2 \frac{Q^2}{4\pi\epsilon_0} \quad \text{and} \quad \frac{K}{\Theta} = 2 \frac{G}{c^4}$$

and to impose  $K = \Theta = 1$  i.u (where i.u. is the intention unit measure), so that, at last, we get the universal relation:

$$R_{\bullet}R^{\circ} = -K^2 = -1i.u.^2 \quad (2\alpha \text{ in Planck Unit}) \quad (7)$$

Consequently it follows that  $c = 1$ ,  $G = 1/2$  and  $\hbar = 1/2\alpha^{-1}i.u.^2$ . We can recognize that  $K = 2\alpha^{1/2}l_p$  and  $\Theta = \alpha^{1/2}m_p c^2$  and  $Q = \sqrt{\alpha/2}q_p$  where  $l_p$ ,  $m_p$  and  $q_p$  are the Planck length, mass and charge.

## B. The absolute Metric

Finally, we can now return to the metric, and in particular to the equation that regulates a thread, treating it in a unified way.

The thread of intention between two individuals links the present in act of one with the past  $R$  of the other.

$$\left\{ \begin{array}{l} \text{RELATIVISTIC MINKOWSKI SPACETIME} \\ dl^2 = d\tau^2 - d\sigma^2 = 0 \end{array} \right. \leftrightarrow \left\{ \begin{array}{l} \text{LINEAR INTENTION SPACETIME} \\ \tau^\diamond - \sigma^\diamond = \tau^\diamond - r^\diamond - R \quad \vec{l} = i\vec{\tau} - \vec{\sigma} = \vec{R} \\ d\vec{l} = id\vec{\tau} - d\vec{\sigma} = d\vec{R} \end{array} \right. \quad (8)$$

or, since all the existent, exists because in relation, from the Intention Schema we have that the distance, or the length of the thread between the two conjoined individuals in act, is never  $dl^2 = d\tau^2 - d\sigma^2 = 0$  but always:

$$id\vec{\tau} - d\vec{\sigma} = \frac{d\vec{l}}{l} R = \rho dV_{olume} \frac{d\vec{l}}{|dl|} \quad (9)$$

where  $\vec{R} = \vec{l}$  is the gravitational radius  $R_{\bullet a}$  or the electrical radius  $R_a^\circ = R_{\bullet b}^{-1}$ , and which is the basis of the Dirac equation and of general relativity. Indeed it's equivalent to:

$$\left\{ \begin{array}{l} (\gamma^\mu \partial_\mu + im) \psi = 0 \\ R_{\mu\nu} - \frac{1}{2} g_{\mu\nu} R = \frac{8\pi G}{c^4} T_{\mu\nu} \end{array} \right. \quad (10)$$

Whatever is real, therefore, is isomorphic to, and must be described by, the Dirac equation. In the isomorphic Minkowsky spacetime scenario, the same potency enfolded in (and which unfolds from) the radius  $R$ , appears as a deformation in general relativity, where space and time are locally measurable with an external probe, as a wavefunction in quantum Mechanics, where the probe and the probed are the same thing.

The Absolute Metric, which compares the reflection in itself with the reflection on other, must, therefore, be founded on the Lorentz transformation where the angles are fixed and vary only the distances:

$$\left\{ \begin{array}{l} x_1 = x_1 \cos \gamma - x_4 \sin \gamma \\ x_4 = x_1 \sin \gamma + x_4 \cos \gamma \end{array} \right. \leftrightarrow \left\{ \begin{array}{l} x^\diamond = \sigma^\diamond (1 - V_i) - t^\diamond V_e \\ \tau^\diamond = -\sigma^\diamond V_i + t^\diamond (1 - V_e) \end{array} \right. \quad (11)$$

In the inertial reflection, where space and time are independent variables,

Setting  $x_1 = x$  and  $x_4 = ict$  and  $v = \tanh \gamma = \sqrt{1 - \frac{1}{\cosh^2 \gamma}}$  we have:

$$\left\{ \begin{array}{l} \sigma = \frac{x - vt}{\sqrt{1 - v^2}} \\ \tau = \frac{t - vx}{\sqrt{1 - v^2}} \end{array} \right. \leftrightarrow \left\{ \begin{array}{l} \sigma^\diamond = \frac{x^\diamond + V_e t^\diamond}{1 - V_i} \\ \tau^\diamond = (1 - V_e) t^\diamond - V_i \sigma^\diamond \end{array} \right.$$

And the metric:

$$d\tau^2 - d\sigma^2 = dt^2 - dx^2 \leftrightarrow d\tau^\diamond - dx^\diamond = dt^\diamond - d\sigma^\diamond$$

Still, since  $x = vt - r$  (or  $x^\diamond = -V_e t^\diamond + r^\diamond$ ) we can equally put:

$$\left\{ \begin{array}{l} \sigma = \frac{r}{\sqrt{1 - v^2}} \\ \tau = \sqrt{1 - v^2} t + v\sigma \end{array} \right. \leftrightarrow \left\{ \begin{array}{l} \sigma^\diamond = \frac{r^\diamond}{1 - V_i} \\ \tau^\diamond = (1 - V_e) t^\diamond - V_i \sigma^\diamond \end{array} \right. \quad (12)$$

Now, for  $\gamma^\diamond = \text{constant}$ , as must be in a Lorentz transformation metric, While in the inertial ( $R = 0$  and  $v = r/t = \tanh \gamma = \text{constant}$ ) case the  $v\sigma$  term is free to vary over time and therefore does not cancel itself in time derivative, in the Intention ( $R > 0$  and  $V = R/r = \sin^\diamond \gamma = \text{constant}$ ), its correspondent  $V\sigma = R$  is constant over time and therefore cancels in time derivative.

In other words, differently from the inertial system, in the intention, the relation between time and distance is indeed constant, since the geometrical configuration of the relation is constrained, besides by the angle  $\gamma^\diamond$ , which is constant, by  $R$  too, which is constant as well.

At last, for  $\gamma^\diamond = \text{constant}$  and  $R > 0$  we have that  $d\tau/dt$  becomes equal to  $d\tau^\diamond/dt^\diamond$  and therefore  $d\sigma/dr = d\sigma^\diamond/dr^\diamond$  and  $\sqrt{1-v^2} \leftrightarrow 1 - V_e$ .

$$\left\{ \begin{array}{l} \text{GENERAL RELATIVITY} \\ d\sigma = \frac{dr}{\cos \gamma^\diamond} \\ d\tau = dt \cos \gamma^\diamond \end{array} \right. \leftrightarrow \left\{ \begin{array}{l} \text{INTENTION RELATIONSHIP} \\ d\sigma^\diamond = \frac{dr^\diamond}{\cos \gamma^\diamond} \\ d\tau^\diamond = dt^\diamond \cos \gamma^\diamond \end{array} \right. \quad (13)$$

we arrive to the metric:

$$dl^2 = d\tau^2 - d\sigma^2 = dt^2 \cos^2 \gamma^\diamond - \frac{dr^2}{\cos^2 \gamma^\diamond}$$

that, since  $V\sigma = R$  and  $d\tau - d\sigma = 0$  and  $dl = d(\tau - \sigma - R)$ , we can put in the form:

$$-im_0 c^2 \vec{\tau} \equiv P \cos \phi \vec{r} + P \sin \phi \vec{L} - iE \vec{t}$$

or equivalently (the Dirac equation [34]):

$$\pm i \vec{k} E \pm \vec{i} p + \vec{j} m = 0 \quad (14)$$

Since the sole universe thread is sequential, without loops, the time axes of different individuals never intersect each other. Therefore, in the intention relationship, the  $r_x t_x$  planes of two any individuals are never parallel. The axis of the nodes  $r$  is the intersection of the  $r_x t_x$  planes of the two individuals. Perpendicular to the  $r$  axis of nodes, there is the time axis  $t$  along the local direction of the temporal axis  $t$  in the universe.

In the space of the relationship, therefore, we can identify an  $rt$  plane of the relation with respect to which the  $r_x t_x$  planes of the two individuals are rotated respectively by an angle  $\varphi$  e  $\psi$  where  $\varphi^\diamond + \psi^\diamond = \gamma^\diamond$ . The two reference frames must moreover twist around the axis of the nodes  $r$  forming the two angles of nutation  $\vartheta_a$  and  $\vartheta_b$  where  $\vartheta_a^\diamond + \vartheta_b^\diamond = \vartheta^\diamond$  according to the fig. 8, where:

$$\sin \vartheta^\diamond = \frac{\mu}{r(1 - \sin \gamma^\diamond) + \mu} = \frac{\mu}{\frac{(R_a + R_b)}{\sin \gamma^\diamond} (1 - \sin \gamma^\diamond) + \mu} = \frac{\frac{\mu}{R_a + R_b} \sin \gamma^\diamond}{(1 - \sin \gamma^\diamond) + \frac{\mu}{R_a + R_b} \sin \gamma^\diamond} \quad (15)$$

and

$$\cos \vartheta^\diamond = 1 - \sin \vartheta^\diamond = \frac{r(1 - \sin \gamma^\diamond)}{r(1 - \sin \gamma^\diamond) + \mu} \quad \tan \vartheta^\diamond = \frac{\mu}{r(1 - \sin \gamma^\diamond) + \mu}$$

The torsion, doesn't affect the metric but the charge of individuals in the strong interaction and the configuration of the relation.

Inside the baryon, the  $\sin^\diamond \vartheta$  potential corresponds to a kind of  $V_{Yukawa}$  potential with the origin translated on the circle  $r_c = R_e^\circ$ . The  $\sin^\diamond \vartheta$  potential, otherwise negligible, grows up asymptotically on  $r \simeq R_e^\circ$  and constitutes, in concomitance with the Pauli exclusion principle, the cause of the formation of baryons from three homologous individuals. Inside the Universe, viceversa, the torsion of the radiation energy is the seat of the Big-Bang nucleosynthesis.

The linear geometry of the act (consummation) must be fused and harmonized with the quadratic (elliptical, Euclidean, hyperbolic) geometry of space of potentiality in a global metric. To merge the historical plan of act (consummation) with the spatial plan of potentiality (evolution), we must resort to isomorphism between the historical



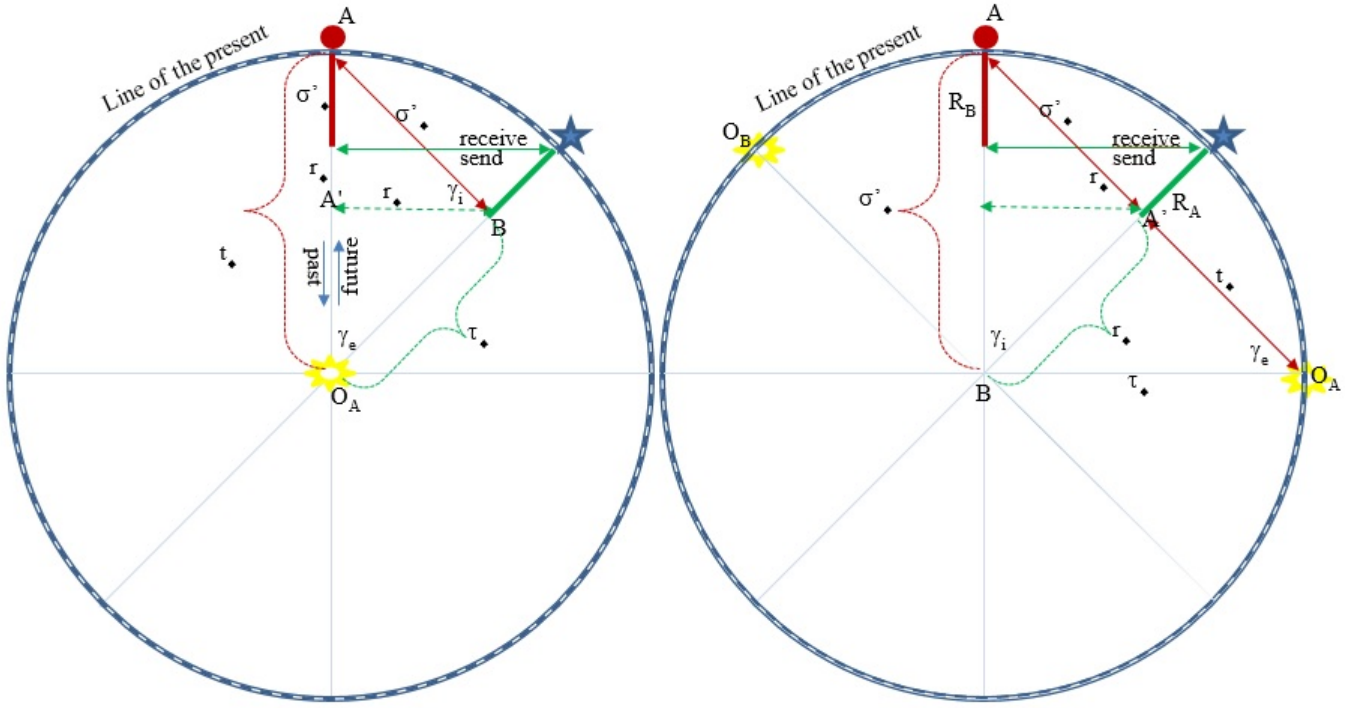


FIG. 7. The Dialectic of Intention Schema: Spaces is the difference, Time is the identity. Space, if it be thus immediate and equal to itself, is also conversely the same as Time is. The truth of Time (period) and of Space (wave-length) is accordingly the unity of the two: and this unity is Quantity inside the Relationship.

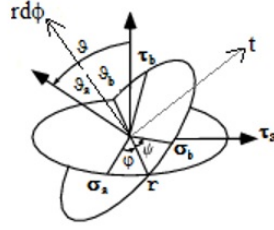


FIG. 8. Torsion: Since the sole universe thread is sequential, without loops, the time axes of different individuals never intersect each other. Therefore, the two reference frames must moreover twist around the axis of the nodes  $r$  forming the two angles of nutation  $\vartheta_a$  and  $\vartheta_b$  where  $\vartheta_a^\diamond + \vartheta_b^\diamond = \vartheta^\diamond$

plan of consummation and the Minkowski space-time, defining the metric in the latter. The metric is therefore defined in the Minkowski space-time :

Therefore the metric of universe is :

$$\begin{bmatrix} dx \\ id\tau \\ \sigma d\phi \end{bmatrix} = \begin{bmatrix} \cos \varphi^\diamond & \sin \varphi^\diamond & 0 \\ -\sin \varphi^\diamond & +\cos \varphi^\diamond & 0 \\ 0 & 0 & 1 \end{bmatrix} \begin{bmatrix} 1 & 0 & 0 \\ 0 & \cos \vartheta^\diamond & +\sin \vartheta^\diamond \\ 0 & -\sin \vartheta^\diamond & \cos \vartheta^\diamond \end{bmatrix} \begin{bmatrix} \cos \psi^\diamond & \sin \psi^\diamond & 0 \\ -\sin \psi^\diamond & +\cos \psi^\diamond & 0 \\ 0 & 0 & 1 \end{bmatrix} \begin{bmatrix} d\sigma \\ idt \\ rd\phi \end{bmatrix}$$

and then

$$\begin{bmatrix} dx \\ id\tau \\ \sigma d\phi \end{bmatrix} = \begin{bmatrix} \cos \varphi^\diamond \cos \psi^\diamond - \sin \varphi^\diamond \sin \psi^\diamond \cos \vartheta^\diamond & -\cos \varphi^\diamond \sin \psi^\diamond - \sin \varphi^\diamond \cos \psi^\diamond \cos \vartheta^\diamond & \sin \vartheta^\diamond \sin \varphi^\diamond \\ \sin \varphi^\diamond \cos \psi^\diamond + \cos \varphi^\diamond \sin \psi^\diamond \cos \vartheta^\diamond & -\sin \varphi^\diamond \sin \psi^\diamond + \cos \varphi^\diamond \cos \psi^\diamond \cos \vartheta^\diamond & -\sin \vartheta^\diamond \cos \varphi^\diamond \\ \sin \vartheta^\diamond \sin \psi^\diamond & \sin \vartheta^\diamond \cos \psi^\diamond & \cos \vartheta^\diamond \end{bmatrix} \begin{bmatrix} d\sigma \\ idt \\ rd\phi \end{bmatrix}$$

Since in the intention  $dx = V(-\cos \vartheta^\diamond idt + \sin \vartheta^\diamond rd\phi) + dr$ , or, equivalently,  $dx = (a_{12}idt + a_{13}rd\phi + dr) \vec{r}$  because  $r$  is the axis of nodes, we can replace  $dx$  with  $dr$  and put the terms  $a_{12}$  and  $a_{13}$  equal to zero.

$$\begin{bmatrix} dr \\ id\tau \\ \sigma d\phi \end{bmatrix} = \begin{bmatrix} \cos\varphi^\diamond \cos\psi^\diamond - \sin\varphi^\diamond \sin\psi^\diamond \cos\vartheta^\diamond & 0 & 0 \\ \sin\varphi^\diamond \cos\psi^\diamond + \cos\varphi^\diamond \sin\psi^\diamond \cos\vartheta^\diamond & -\sin\varphi^\diamond \sin\psi^\diamond + \cos\varphi^\diamond \cos\psi^\diamond \cos\vartheta^\diamond & -\sin\vartheta^\diamond \cos\varphi^\diamond \\ \sin\vartheta^\diamond \sin\psi^\diamond & \sin\vartheta^\diamond \cos\psi^\diamond & \cos\vartheta^\diamond \end{bmatrix} \begin{bmatrix} d\sigma \\ idt \\ rd\phi \end{bmatrix} \quad (16)$$

Furthermore, since  $d\vec{R} = (a_{21}\vec{t} + a_{31}\vec{L})d\sigma$  Where  $\vec{r}$ ,  $\vec{t}$  and  $\vec{L}$  are the versor of the radial, temporal and tangential motion

$$d\vec{R} = \begin{bmatrix} dR_{\parallel} \\ dR_{\dagger} \\ dR_{\perp} \end{bmatrix} = \begin{bmatrix} 0 & 0 & 0 \\ \sin\varphi^\diamond \cos\psi^\diamond + \cos\varphi^\diamond \sin\psi^\diamond \cos\vartheta^\diamond & 0 & 0 \\ \sin\vartheta^\diamond \sin\psi^\diamond & 0 & 0 \end{bmatrix} \begin{bmatrix} d\sigma \\ idt \\ rd\phi \end{bmatrix} \quad (17)$$

and since on the thread of energy  $dl = dR$  or

$$[dl] = \begin{bmatrix} d\sigma \\ id\tau \\ \sigma d\phi \end{bmatrix} - \begin{bmatrix} dR_{\parallel} \\ dR_{\dagger} \\ dR_{\perp} \end{bmatrix}$$

combining the (16) and (17) we have at last the universal metric :

$$[dl] = \begin{bmatrix} \frac{1}{\cos\varphi^\diamond \cos\psi^\diamond - \sin\varphi^\diamond \sin\psi^\diamond \cos\vartheta^\diamond} & 0 & 0 \\ 0 & -\sin\varphi^\diamond \sin\psi^\diamond + \cos\varphi^\diamond \cos\psi^\diamond \cos\vartheta^\diamond & -\sin\vartheta^\diamond \cos\varphi^\diamond \\ 0 & \sin\vartheta^\diamond \cos\psi^\diamond & \cos\vartheta^\diamond \end{bmatrix} \begin{bmatrix} dr \\ idt \\ rd\phi \end{bmatrix} \quad (18)$$

that we can put in the form:

$$-im_0 c^2 \vec{\tau} \equiv P \cos\phi \vec{r} + P \sin\phi \vec{L} - iE \vec{t}$$

or equivalently (the Dirac equation):

$$\pm i\vec{k}E \pm \vec{i}p + \vec{j}m = 0 \quad (19)$$

Since  $\gamma^\diamond = \psi^\diamond + \varphi^\diamond$ , We have now the following special cases :

1. **The Schwarzschild metric**, when  $\sin\vartheta^\diamond = 0$

The metric is  $d\vec{R} = \sin\varphi^\diamond d\sigma \vec{t}$  and:

$$[dl] \equiv \frac{\vec{r} dr}{V_i - 1} + \vec{t} \{idt(1 - V_e)\} + \vec{L} \{rd\phi\} \quad (20)$$

2. **The Kerr metric**, when the angle  $\psi^\diamond = 0$  (or  $\gamma^\diamond = \varphi^\diamond$ ).

Dividing the second and third rows by  $\cos\vartheta^\diamond$

$$[dl'] = \begin{bmatrix} \frac{1}{\cos\varphi^\diamond} & 0 & 0 \\ 0 & \cos\varphi^\diamond & -\cos\varphi^\diamond \tan\vartheta^\diamond \\ 0 & \tan\vartheta^\diamond & 1 \end{bmatrix} \begin{bmatrix} dr \\ idt \\ rd\phi \end{bmatrix}$$

we denote with  $V = \sin\gamma^\diamond = \sin\varphi^\diamond$  and,

since  $\tan\vartheta^\diamond = \frac{\mu}{r(1 - \sin^\diamond\gamma)} = \frac{\mu}{r - R_{tot}}$  it follows  $\lim_{r \rightarrow R_a} \tan\vartheta^\diamond = \frac{R_a}{R_a + R_b}$ ,

we have, for  $R_b \ll R_a$ ,  $\lim_{r \rightarrow R_a} \tan\vartheta^\diamond = \frac{a}{r}$  where  $a = J/R_a$  and  $J$  is the angular momentum.

$$[dl] \equiv \frac{\vec{r} dr}{V_i - 1} + \vec{t} \left\{ idt(1 - V_e) - rd\phi(1 - V_e) \frac{a}{r} \right\} + \vec{L} \left\{ idt \frac{a}{r} + rd\phi \right\} \quad (21)$$

The metric is:

$$dl^2 = -\frac{dr^2}{(V_i - 1)^2} + \left[ (1 - V_e)^2 + \frac{a^2}{r^2} \right] dt^2 + 2\frac{a}{r} \left[ (1 + V_e)^2 - 1 \right] rd\phi dt - \left[ 1 + (1 + V_e)^2 \frac{a^2}{r^2} \right] r^2 d\phi^2 \quad (22)$$

3. **The Universe metric**, when the angle  $\varphi^\diamond = 0$  (or  $\gamma^\diamond = \psi^\diamond$ )

$$[dl] = \begin{bmatrix} \cos \psi^\diamond & 0 & 0 \\ 0 & \cos \psi^\diamond \cos \vartheta^\diamond & -\sin \vartheta^\diamond \\ 0 & \sin \vartheta^\diamond \cos \psi^\diamond & \cos \vartheta^\diamond \end{bmatrix} \begin{bmatrix} d\sigma \\ idt \\ rd\phi \end{bmatrix}$$

denoting with  $V = \sin \gamma^\diamond = \sin \psi^\diamond$  and with  $d\vec{R} = \sin \psi^\diamond \left( \cos \vartheta^\diamond \vec{t} + \sin \vartheta^\diamond \vec{L} \right) d\sigma$

$$[dl] \equiv \frac{\vec{r} dr}{V_i - 1} + \vec{t} \{ idt (1 - V_e) \cos \vartheta^\diamond - rd\phi \sin \vartheta^\diamond \} + \vec{L} \{ idt (1 - V_e) \sin \vartheta^\diamond + rd\phi \cos \vartheta^\diamond \} \quad (23)$$

For both Schwarzschild and Universe metric we can unify gravitational and electrical interactions with:

$$dl^2 = (1 - V)^2 c^2 dt^2 - \frac{dr^2}{(1 - V)^2} - r^2 d\phi^2 \quad (24)$$

$$U = \frac{1}{2} mc^2 \left[ \frac{E_0^2}{m^2 c^4} - 1 - \left( \frac{dr}{d\tau} \right)^2 \right] = \frac{1}{2} mc^2 \left[ -2V + V^2 + \frac{L^2}{m^2 R^2 c^2} V^2 (1 - V)^2 \right] \quad (25)$$

$$F = -\frac{dU}{dr} = \frac{1}{r} mc^2 V (1 - V) \left[ 1 - \frac{L^2}{m^2 R^2 c^2} V \{ 1 - 2V \} \right] \quad (26)$$

where  $mR = 1$  in the electrical interaction,  $mR = mM$  in the gravitational one. About the  $V$  in the  $\vec{p}_\phi = LV$  term in the above two equations, it would be more appropriately substituted by  $r/R$  or  $R/r$  (depending on the seat of the relation: inside or outside respectively) since its formula, contrarily to the potential  $V$  term which is always less or equal to 1, doesn't invert when the distance  $r$ , overflowing its seat, crosses the threshold  $R_{ind}$ .

The torsion becomes appreciable when  $\gamma \simeq \pi/2$  in the radiation era.

It follows that the Dirac equation, and the Lagrangian more in general, is only a non-relativistic limit approximation of the general (19), valid when  $\cos \gamma \simeq 1$  and  $\sin \vartheta \simeq 0$  (coulomb and weak). Indeed, in the Coulomb and weak area, even neglecting the torsion  $\vartheta$  ( $\sin \vartheta \simeq 0$ ), the (19) gives:

$$\begin{pmatrix} \frac{E_0}{1 - V} & -c\sigma \cdot p \\ -c\sigma \cdot p & \frac{E_0}{1 - V} \end{pmatrix} \cdot \begin{pmatrix} \psi_1 \\ \psi_2 \end{pmatrix} - \begin{pmatrix} mc^2 & 0 \\ 0 & -mc^2 \end{pmatrix} \cdot \begin{pmatrix} \psi_1 \\ \psi_2 \end{pmatrix} = 0$$

Where  $V$  is positive in attraction, negative in repulsion.

Now, when  $1 - V \simeq 1$ , as in the electroweak or gravitational interaction, and in the non-relativistic limit, we have  $1/(1 - V) \simeq 1 + V$  and

$$T = \frac{E_0}{1 - V} \simeq E_0 (1 + V) = E_0 + \frac{E_0}{mc^2} U \simeq E_0 + U \text{ (Lagrangian)}$$

In the strong interaction area, these approximations are no longer valid.

### C. The primitive intention: the loving Universe

The mirroring function  $\text{Re}(R) = 1/R$ , where  $R^\circ = 1/R_\bullet$ , is the condition necessary and sufficient for the equilibrium of a mirroring universe, i.e. a universe where every individual makes itself mirror of whichever other, be it simple or



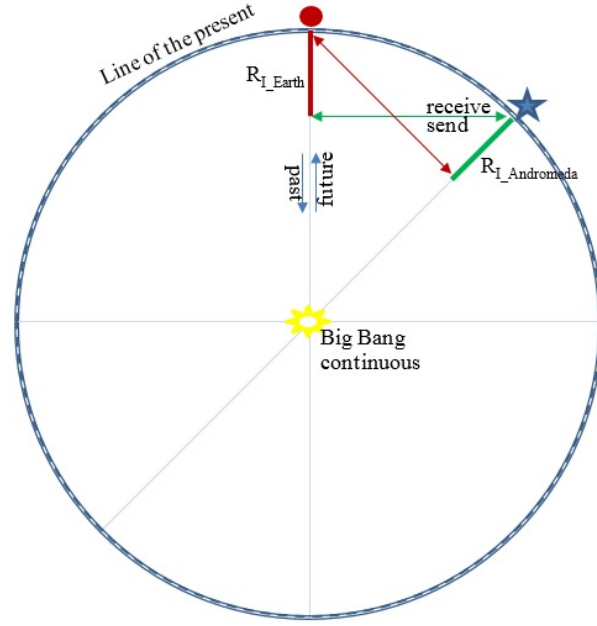


FIG. 10. Intention Earth-Andromeda: The present, which comes from the Big Bang continuous as an approaching future, as soon as it surfaces, it submerge as past (antimatter) that move away to go towards the continuous Big Bang, and in this descent informs of itself the future (matter) that ascend in the opposite direction. In this way the past does not vanish but endures as it forms the future.

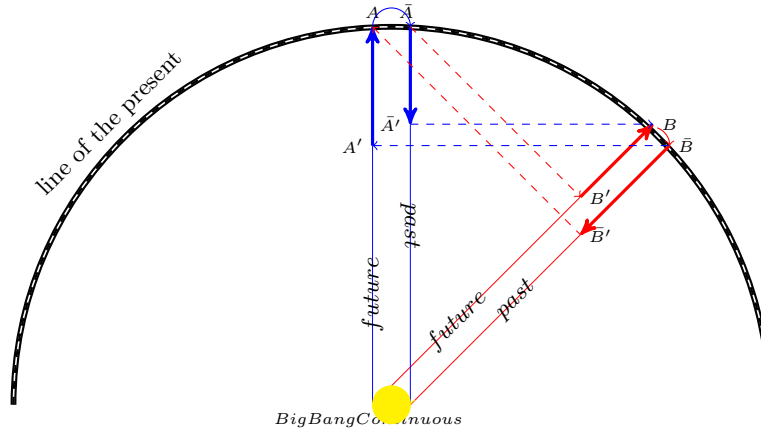


FIG. 11. The path of universe intention: The cosmological intention between two individual A and B consists of two overlapping paths (in the figure they were separated to highlight each of them). The path of the present of A: 1)  $\bar{B}' \rightarrow A$ , 2)  $Ae^{i0} \rightarrow e^{i\pi}\bar{A}$ , 3)  $\bar{A} \rightarrow \bar{B}'$ , 4)  $\bar{B}' \rightarrow B$ , 5)  $Be^{i0} \rightarrow e^{i\pi}\bar{B}$ , 6)  $\bar{B} \rightarrow \bar{B}'$ . Analogously for the path of the present of B. Note that only on the line of the present and in the Big Bang the matter converts in antimatter. In the intention, the sending and receiving take place from the present of the individual who sends/receives, not to the present of the other individual, but to his embryonic potentiality (which approaches ascending from the Big Bang). This is why we, on the Earth, cannot communicate with distant alien civilizations. In fact we can not receive from (see) the present in which only they live and act, but from the embryonic potentiality. Equally we can not send to their present in act, but only to the embryonic potentiality of their future present.

The amorone  $R_\alpha = R_\omega^{-1}$  is the unique elementary individual and the communion of amoroni gives rise to only two emergent compound individuals: the Electron and the Universe.

Indeed, amoroni attract each other immensely because each one sees in the other the entire universe, until the resulting agglomerate, which is the electron, is such that its reflection in every single amorone member, added for the number of all the members, equals the energy of the universe  $R_\omega$ .

$$R_\omega : R_\epsilon^\circ = R_\epsilon^\circ : R_{\bullet\epsilon} = R_{\bullet\epsilon} : R_\alpha \quad (28)$$

All the gravitation and the mirroring is between and by means of amoroni. The composite (gravitationally) elementary (electrically) individual  $R_e$  is the sole individual that is in equilibrium with universe. Indeed, it is the sole individual whose gravitational radius corresponds to the  $R_\bullet$  which emerges from the space enclosed by its electrical radius and vice versa. It is the sole stable individual. To enlarge the electrical radius implies to enlarge the emergent gravitational radius  $R_\bullet = R^{\circ 2}/R_\omega$  but this is in contradiction with the smaller gravitational radius requested by  $R_\bullet = 1/R^\circ$  and vice versa.

3. **the Interior relationship:** By keeping constant the time  $t = R_e$  or  $R_\omega$ , it describes the relation between individuals inside the radius in the Weak ( $r \ll R_{ind}$ ) and Strong ( $r \simeq R_{ind}$ ) interaction or in the Universe.
4. **the Exterior or Dialogue relationship:** By keeping constant the radius  $R_\bullet$  or  $R^\circ$ , it describes the gravitational or electrical relation between two individuals outside the radius.

Inside the elementary individuals,  $r \leq R_{ind}$ , we have  $t = t_{max} = R_{ind}$  ( $t$  constant and Radius  $R$  variable) .  
 Outside the elementary individuals,  $r \geq R_{ind}$ , we have  $R = R_{max} = R_{ind}$  ( $t$  variable and Radius  $R$  constant) .  
 See. tab. II

TABLE II. Here  $m_b R_a$  is equal to  $m_b m_b$  in the gravitational relation, to  $R_\bullet R^\circ_a = 1$  in the electrical one, and  $R_{ind}$  is equal to  $R_\omega$  in the gravitational relation,  $R_e^\circ$  in the electrical one.

It descends from the fundamental proportion of the intention schema  $V = R : r = r : T$  where the first ratio governs the potential inside the radius while the second ratio governs the potential outside the radius. The inside ( $r < R_{ind}$ ) and the outside ( $r > R_{ind}$ ) are respectively the seats of weak and Coulomb/Newton interactions, while the ( $r \simeq R_{ind}$ ) is the seat of strong interactions. Note how in the same schema, in the transition from outside to inside, the new emergent internal local radius  $R(r)$  takes the place of the constant Radius of the elementary individual  $R_{ind}$  which, in turn, changes from being the Radius (the quantum -unit of measure- of the external relation) to being the now constant time  $t$  (the roof -the maximum- of the internal relation). At last energy, equal to distance  $r$  in the inside, reverse as  $1/r$  in the outside.

$r$	$\gamma$	$V$	$R$	$t = 1/A$	$U \simeq m_b V$	$\Delta E$
$\geq R_{ind}$	$\leq \frac{\pi}{2}$	$\frac{R_a}{r}$	$R_a$	$t(r) = \frac{r^2}{R_a} = \frac{R_a}{V^2}$	$\simeq \frac{1}{r}$	$\Delta U \simeq \Delta \frac{1}{r}$
$\leq R_{ind}$	$\geq \frac{\pi}{2}$	$\frac{r}{R_{ind}}$	$R(r) = \frac{r^2}{R_{ind}} = R_{ind} V^2$	$R_{ind}$	$\simeq r$	$\frac{1}{\Delta U} \simeq \frac{1}{\Delta r}$

5. **the Part Of relationship :** Every relation finds its place inside an individual more complex of which it is a part of.

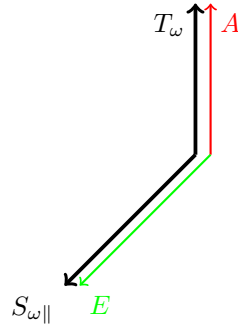
Therefore, apart from leptons and universe, the proportion  $R_\omega : R_{whole} = R_{whole} : R_{part}$ , starting from  $R_{part} = R_e^\circ$ , applies recursively through  $R_{whole} \rightarrow R_{part}$ , providing all the mirroring universe scale giving rise to stars  $R_{\bullet s}$  and galaxies  $R_{\bullet g}$  and clusters and so on.

#### D. The space of the individual in the space of Universe

In the act of the Intention relationship, the donating aspect of an individual faces always the receiving parallel aspect of the conjoined other, so there is no knowledge. Reflective knowledge, and therefore Physics, arises from reflection which makes possible the historical reconstruction of the path of the intention, adding a temporal dimension  $t$  to the spatial one of the energy  $r$  (radial distance), and therefore the arrangement of the homologous aspects of the two individuals.

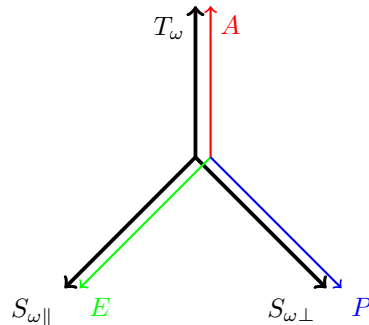
In the plane of the Act ( $rt$ ), every couple of homolog (donating-donating or receiving-receiving) polar axes in relationship forms an imaginary angle  $\gamma$ . If the polar A is parallel to the polar Z then  $\widehat{AZ} = 0$ ; if orthogonal, then  $\widehat{AZ} = \infty$ . But both zero and infinite are unphysical numbers, so never distances can stay unchanged, neither two orthogonal temporal axes can be present in the same instant, but if the one is temporal, the other is spatial. The property "If  $\widehat{AB} = \gamma_1$  and  $\widehat{BC} = \gamma_2$  then  $\widehat{AC} \leq \gamma_1 + \gamma_2$ " gives to the angle  $\gamma$  the ability to make a bipartition of the polar axes of the plane of the Act: every member of a set is orthogonal to every member of the other set, while no two members of a same set are orthogonal to each other.

### The spacetime plane of the relation in the ACT



We call material the one, that contains all the temporal polar axes, energetic the other one that contains all the spatial polar axes. We then call matter's side of the material axis that one who receives from past and donates to future, antimatter the other one. At least, in the plane of the act, the classification of individuals between Energy, Matter and Antimatter is an Equivalence relation that enjoys the reflective, commutative and transitive property. Furthermore, between an act and the next one, the being  $R$  dissolves into potency. In the period of potency there aren't acts. We can never have a relationship between a potency polar axis and a temporal or energy polar axis. The axis of potency ( $rd\phi$ ) is therefore orthogonal to the plane of the act.

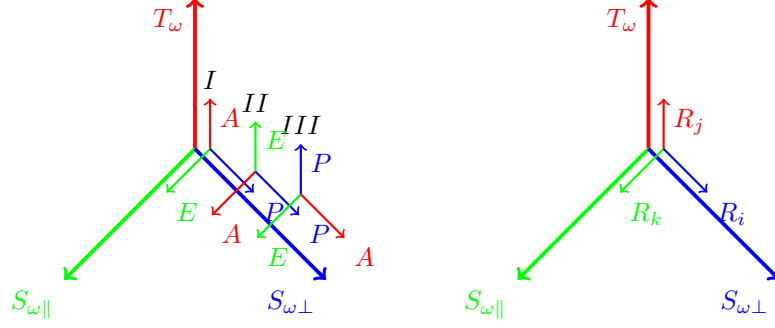
### The three dimensional spacetime of the relationship



Each individual takes place in the present of the space of its universal individual (of which it is a part), and so on, up to the individual universe that is the place of every individual. In the Intention physics, Every individual is characterized by a radius  $R$  which represents the quantity of its being. Furthermore, Act, Potency and Energiea are three concrete and distinct moments of a same individual in an intention. Each of these three different moments, that follow each other cyclically, corresponds to a distinct manifestation of being or radius  $R$ . They constitute the first three fundamental dimensions of the space of the relationship.

Furthermore, they represent a correspondent color (red-green-blue) in quantum chromodynamics (QCD) and, at last, depending on the disposition of the axes of the three-dimensional spacetime of the elementary individual on the axes of the three-dimensional spacetime of the Universe, give place to the three matter generations of the standard model. In other words, each one of the three generations of matter is the ongoing manifestation of one of the three aspects (facets) of the Radius of an individual in act (on the  $T_\omega$  axis of universe).

the I II III Matter GENERATIONS      the ijk components of the Radius



RADIUS aspect	RADIUS location	RADIUS Length
$P \equiv (\delta \nu \alpha \mu \varsigma)$ Amoroni (CDM)	Inside $R_{ind}$	$R_I = r^2 / R_{ind}$
$A \equiv (\dot{\epsilon} \nu \tau \epsilon \lambda \acute{\epsilon} \chi \epsilon \iota \alpha)$ baryonic matter	Outside $R_{ind}$	$R_J$ (located, to be measured)
$E \equiv (\epsilon \nu \acute{\epsilon} \rho \gamma \epsilon \iota \alpha)$ radiation	on the border of $R_{ind}$	$R_K$ (located, to be measured)

Where  $R_{ind}$  is the electrical Radius  $R_\epsilon$  for electrical relationship, or the Universe Radius  $R_\omega = c/H_0$  for gravitational relationship.

The radius is the sum of these three heterogeneous components:

$$\vec{R} = \begin{bmatrix} E \\ P \\ A \end{bmatrix} = \begin{bmatrix} R_k \sin \vartheta_k^\diamond \\ R_i + R_k \cos \vartheta_k^\diamond + R_j \cos \vartheta_j^\diamond \\ R_j \sin \vartheta_j^\diamond \end{bmatrix} \quad (29)$$

$$|\vec{R}| = \sum_{l=1}^3 |\vec{R}_l|$$

where the torsion between the time axes of every two conjoined individuals is :

$$\sin \vartheta_x^\diamond = \frac{\mu_x}{r(1 - \sin \gamma^\diamond) + \mu_x} = \frac{\mu_x}{\frac{R_{tot}}{\sin \gamma^\diamond} (1 - \sin \gamma^\diamond) + \mu_x} = \frac{\frac{\mu_x}{R_{tot}} \sin \gamma^\diamond}{(1 - \sin \gamma^\diamond) + \frac{\mu_x}{R_{tot}} \sin \gamma^\diamond} \quad (30)$$

where  $\mu_x = R_x(R_{tot} - R_x)/R_{tot}$

At last, from the intention schema follows the general relation:

$$r^2 = \sum_{l=1}^3 r_l^2 \quad V^2 = \sum_{l=1}^3 V_l^2 \quad R = \sum_{l=1}^3 R_l \quad (31)$$

$$V = \frac{\vec{R}}{\vec{r}} = \frac{\vec{r}}{\vec{t}} \quad \text{and} \quad V_x = \frac{\vec{R}_x}{\vec{r}_x} = \frac{\vec{r}_x}{\vec{t}_x} \quad (32)$$



$$\left\{ \begin{array}{l} t_x = t \\ R_x = V_x r_x = \frac{r_x^2}{t} \\ V_x = \frac{R_x}{r_x} = \frac{r_x}{t} \\ r_x = \sqrt{R_x t} = \sqrt{\frac{R_x}{R}} r = \sqrt{\frac{R_x}{\sum_{\iota=1}^3 R_\iota}} \cdot r \\ A_x = \frac{1}{t} = \frac{R_x}{r_x^2} \\ v_{x\perp} = \sqrt{V_x} = \sqrt{\frac{r_x}{t}} = \sqrt[4]{\frac{R_x}{t}} \\ \omega_x = \sqrt{\frac{1}{r_x t}} = \sqrt[4]{\frac{1}{R_x t^3}} \end{array} \right. \quad (33)$$

Koide's formula suggests that the three generations of leptons are interrelated. We can hypothesize that the three generations of the lepton are related to each other constituting the three different aspects of a same entity, where:

$$-\frac{t^2}{3} + r^2 = \frac{R^{\circ 2}}{3} \quad \text{since } t = R^\circ \quad r^2 = 2/3 R^{\circ 2}$$

$$\sum_{Y=I}^{III} r_Y^2 = 2/3 \left( \sum_{Y=I}^{III} R_Y^\circ \right)^2$$

at last, we arrive at the gravitational mass by dividing the above equation by  $R_{ind} = R_\omega$

$$\sum_{Y=I}^{III} \frac{r_Y^2}{R_\omega} = 2/3 \left( \sum_{Y=I}^{III} \frac{R_Y^\circ}{\sqrt{R_\omega}} \right)^2 \quad \text{and, for } \lim r \rightarrow R^\circ \quad \sum_{Y=I}^{III} m_Y = 2/3 \left( \sum_{Y=I}^{III} \sqrt{m_Y} \right)$$

### E. Electricity

Each individual is in himself a PEA (PotencyEnergyAct) but, out of himself, he is cyclically one at a time one of these three moments. Each moment corresponds to a color of chromodynamics. In other words, each relationship is color neutral. Each individual, as composed, is in self color neutral nevertheless is, for itself, cyclically one at a time one of these three moments. The exchange of energy, which is the fulcrum of the interaction, takes place between the act of a donor and the act of a recipient. In the electrical interaction (coulomb/strong/weak) the side donating/receiving corresponds to the charge sign, which in turn depends on the direction of time axis of the individual on the line of the present in act (positive from big bang to the present in act, negative viceversa). It is conventionally negative for matter and positive for antimatter. The charge of an aggregate is the relative sum of the component individuals. The composite (gravitationally) elementary (electrically) individual  $R_\epsilon$ , with its three generations, is the building block of all matter, leptons, quarks and bosons, since it is sole individual that is in equilibrium with universe. Accordingly, we will call electrical individual the electrons and the quarks DOWN, which is the electron in the strong area, in their three generations (I outside  $R_\epsilon$ , II on the border of  $R_\epsilon$ , III inside  $R_\epsilon$ ).

Therefore every electrical individual counts for one, with the exception of quarks, which exist as such only in the strong interaction, where each individual component counts for 1/3, since it is free to interact only one time out of three. From these assumptions it follows that neutrinos, as they are electrically neutral, are constituted by a couple matter-antimatter (-1, +1) linked via weak interaction. Analogously, the quarks Up are supposed to be constituted by a couple of individuals matter-antimatter (-1/3, +1) where only one is engaged in the strong interaction, the one

	GENERATIONS			charge	LEPTONS			charge	QUARKS		
	I	II	III		I	II	III		I	II	III
$T_\omega$	$\tau$	$\sigma_\parallel$	$\sigma_\perp$	-1	$e$	$\mu$	$\tau$	-1/3	$d$	$s$	$b$
$S_{\omega\parallel} + S_{\omega\perp}$	$\sigma_\parallel + \sigma_\perp$	$\tau + \sigma_\perp$	$\sigma_\parallel + \tau$	-1 + 1	$\bar{\nu}_e$	$\bar{\nu}_\mu$	$\bar{\nu}_\tau$	-1/3 + 1	$\bar{u}$	$\bar{c}$	$\bar{t}$

TABLE III. overview of the elements: We identify the unit charge with the individual and the sign with the matter-antimatter bipartition according to the direction of the individual's temporal axis on the local plane of the universe. Therefore each individual carries a unit charge except individuals involved in strong interaction that count for 1/3, since they are free to interact only one time out of three. Therefore, all the electrically composed matter, having to be linked by an attractive force, always involves a matter-antimatter pair except in the strong interaction where a triad of homologue individuals (-1/3), despite the repulsion, are bound to remain united because of the Pauli exclusion principle, and form the baryons. It follows also that the spin 1/2 is a property of the neutrino and quark Up wavefunctions as a whole, not of their component elements.

with charge  $-1/3$ , while the other is linked to this via weak interaction, far away, and therefore does not interfere with the strong interaction and has charge +1.

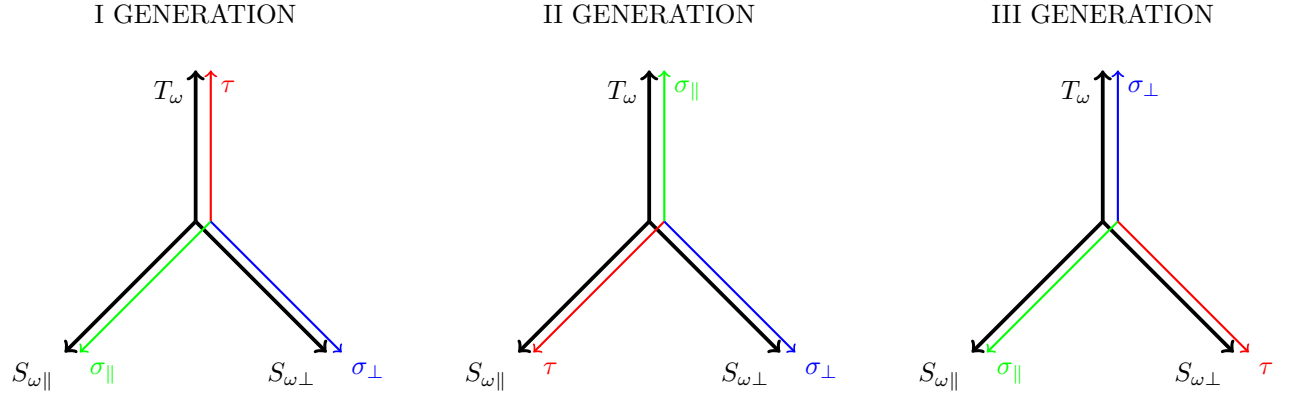
It follows also that the spin 1/2 is a property of the neutrino and quark Up wavefunctions as a whole, not of their component elements.

For energy and potency, the color and the anti-color are the same. Therefore leptons and baryons and mesons and photons and bosons are, in self, color neutral.

Since

$$\mu^- + \bar{\nu}_\mu \rightarrow W^- \rightarrow e^- + \bar{\nu}_e$$

$$q_d + \bar{q}_u \rightarrow W^- \rightarrow e^- + \bar{\nu}_e$$



$$S_\parallel \leftrightarrow S_\perp = 2\pi \quad T \leftrightarrow S_\parallel = \alpha^{-1} \quad T \leftrightarrow S_\perp = \alpha^{-2} \quad X \leftrightarrow X = 1$$

### LEPTONS

$$\begin{array}{c}
\text{charge} \\
\begin{pmatrix} -1 \\ -1 + 1 \end{pmatrix}
\end{array}
\begin{array}{c}
\text{GENERATIONS} \\
\begin{pmatrix} \tau_\ell \\ \sigma_{\ell\parallel} + \bar{\sigma}_{\ell\perp} \end{pmatrix}
\begin{pmatrix} \sigma_{\ell\parallel} \\ \tau_\ell + \bar{\sigma}_{\ell\perp} \end{pmatrix}
\begin{pmatrix} \sigma_{\ell\perp} \\ \sigma_{\ell\parallel} + \bar{\tau}_\ell \end{pmatrix}
\end{array}
\approx m_e \cdot
\begin{array}{c}
\text{GENERATIONS} \\
\begin{pmatrix} \tau_\ell \\ \sigma_{\ell\parallel} + \bar{\sigma}_{\ell\perp} \end{pmatrix}
\begin{pmatrix} \sigma_{\ell\parallel} \\ \tau_\ell + \bar{\sigma}_{\ell\perp} \end{pmatrix}
\begin{pmatrix} \sigma_{\ell\perp} \\ \sigma_{\ell\parallel} + \bar{\tau}_\ell \end{pmatrix}
\end{array}$$

$$\begin{array}{c}
\begin{pmatrix} T_\omega \\ S_{\omega\parallel} + S_{\omega\perp} \end{pmatrix}
\begin{pmatrix} e \\ \bar{\nu}_e \end{pmatrix}
\begin{pmatrix} \mu \\ \bar{\nu}_\mu \end{pmatrix}
\begin{pmatrix} \tau \\ \bar{\nu}_\tau \end{pmatrix}
\end{array}
\approx m_e \cdot
\begin{array}{c}
\begin{pmatrix} 1 \\ \alpha^4 \end{pmatrix}
\begin{pmatrix} 1/4 \cdot 2\pi\alpha^{-1} \\ \dots \end{pmatrix}
\begin{pmatrix} 1/4 \cdot \alpha^{-2} \\ \dots \end{pmatrix}
\end{array}$$

### QUARKS

$$\begin{array}{c} \text{charge} \\ \begin{pmatrix} -1/3 \\ -1/3 + 1 \end{pmatrix} \end{array} \begin{array}{c} \text{GENERATIONS} \\ \begin{pmatrix} \tau_q \\ \sigma_{q\parallel} + \bar{\sigma}_{q\perp} \end{pmatrix} \begin{pmatrix} \sigma_{q\parallel} \\ \tau_q + \bar{\sigma}_{q\perp} \end{pmatrix} \begin{pmatrix} \sigma_{q\perp} \\ \sigma_{q\parallel} + \bar{\tau}_q \end{pmatrix} \end{array} \approx m_{up} \cdot \begin{array}{c} \text{GENERATIONS} \\ \begin{pmatrix} \tau_q \\ \sigma_{q\parallel} + \bar{\sigma}_{q\perp} \end{pmatrix} \begin{pmatrix} \sigma_{q\parallel} \\ \tau_q + \bar{\sigma}_{q\perp} \end{pmatrix} \begin{pmatrix} \sigma_{q\perp} \\ \sigma_{q\parallel} + \bar{\tau}_q \end{pmatrix} \end{array} \\
 \begin{array}{c} \begin{pmatrix} T_\omega \\ S_{\omega\parallel} + S_{\omega\perp} \end{pmatrix} \\ \begin{pmatrix} d \\ \bar{u} \end{pmatrix} \quad \begin{pmatrix} s \\ \bar{c} \end{pmatrix} \quad \begin{pmatrix} b \\ \bar{t} \end{pmatrix} \end{array} \begin{array}{c} \begin{pmatrix} 2 \\ 1 \end{pmatrix} \quad \begin{pmatrix} \pi^{-1}\alpha^{-1} \\ 4 \cdot \alpha^{-1} \end{pmatrix} \quad \begin{pmatrix} \pi^{-2}\alpha^{-2} \\ 4 \cdot \alpha^{-2} \end{pmatrix} \end{array}
 \end{array}$$

### CKM Matrix

$$\begin{array}{c} \text{d} \quad \text{s} \quad \text{b} \\ \begin{matrix} u \\ c \\ t \end{matrix} \begin{vmatrix} V_{ud}^2 & V_{us}^2 & V_{ub}^2 \\ V_{cd}^2 & V_{cs}^2 & V_{cb}^2 \\ V_{td}^2 & V_{ts}^2 & V_{tb}^2 \end{vmatrix} \approx \begin{matrix} \sigma_{q\perp} \\ \sigma_{q\parallel} \\ \tau_q \end{matrix} \begin{vmatrix} \sigma_{q\perp} & \sigma_{q\parallel} & \tau_q \\ 1 & 1/3 \cdot (2\pi)^{-1} & 1/4 \cdot \alpha^2 \\ 1/3 \cdot (2\pi)^{-1} & 1 & 1/4 \cdot \alpha^1 \\ 1/4 \cdot 2\pi\alpha^2 & 1/4 \cdot \alpha^1 & 1 \end{vmatrix} \approx \begin{matrix} \text{d} & \text{s} & \text{b} \\ \begin{matrix} u \\ c \\ t \end{matrix} \begin{vmatrix} 0.94957 & 0.050409 & 1.3323 \times 10^{-5} \\ 0.050346 & 0.947877 & 0.0017758 \\ 8.028 \times 10^{-5} & 0.001708 & 0.99821 \end{vmatrix} \end{matrix}
 \end{array}$$

### INTERACTION CARRIERS (bosons: $\gamma, g, W^\pm, Z_0$ )

$$\begin{array}{c} \text{charge} \\ (-1 + 1) \end{array} \begin{array}{c} \text{GENERATIONS} \\ \begin{pmatrix} \tau + \bar{\tau} \\ \sigma_{\parallel} + \bar{\sigma}_{\parallel} \\ \sigma_{\perp} + \bar{\sigma}_{\perp} \end{pmatrix} \end{array} \begin{array}{c} \text{charge} \\ (-1 + 1) \end{array} \begin{array}{c} \text{GENERATIONS} \\ \begin{pmatrix} \tau \\ \sigma_{\parallel} + \bar{\sigma}_{\perp} \end{pmatrix} \begin{pmatrix} \sigma_{\parallel} \\ \tau + \bar{\sigma}_{\perp} \end{pmatrix} \begin{pmatrix} \sigma_{\perp} \\ \sigma_{\parallel} + \bar{\tau} \end{pmatrix} \end{array} \\
 S_{\omega\parallel} \begin{vmatrix} \gamma, g, Z_0 & \gamma, g, Z_0 & \gamma, g, Z_0 \end{vmatrix} \quad S_{\omega\parallel} \begin{vmatrix} W^- & W^- & W^- \end{vmatrix}
 \end{array}$$

Depending on the angle  $\gamma^\diamond = \gamma_q^\diamond \pm \alpha/n$ , we have all kinds of interactions (see fig. 12):

$$\begin{array}{ll}
 \gamma_q^\diamond = 0 & \text{in the external area (Newton/Coulomb),} \\
 \gamma_q^\diamond = \pi/2 & \text{in the border area (strong force),} \\
 \gamma_q^\diamond = \pi & \text{in the internal area (weak force).}
 \end{array}$$

The whole range of the relationship is covered by the only equation 25 (see fig. 13) .

$$1. \quad \text{Coulomb and Weak area } V = (\alpha/n)^2 \text{ or } (\gamma^\diamond \rightarrow [\pi] \pm \sqrt{2}\alpha/n)$$

When  $\gamma^\diamond \rightarrow \pm\alpha/n$ , we have the electromagnetic relation, which take place outside  $\gamma^\diamond \rightarrow \gamma_i^\diamond$ , and its inverse, the weak interaction, inside,  $\gamma^\diamond \rightarrow \gamma_e^\diamond$  when  $\gamma^\diamond \rightarrow \pi \pm \sqrt{2}\alpha/n$  (see fig. 14).

In the electromagnetic Interaction (see tab. IV),  $\Delta E$ , where  $R_{Tot}^\circ = (R_e^\circ + R_{nucleus}^\circ)$ , is the origin of the electromagnetic waves. We arrive at the Balmer's formula considering that  $R_e^\circ \gg R_{nucleus}^\circ$  and therefore  $R_{Tot}^\circ \simeq R_e^\circ$

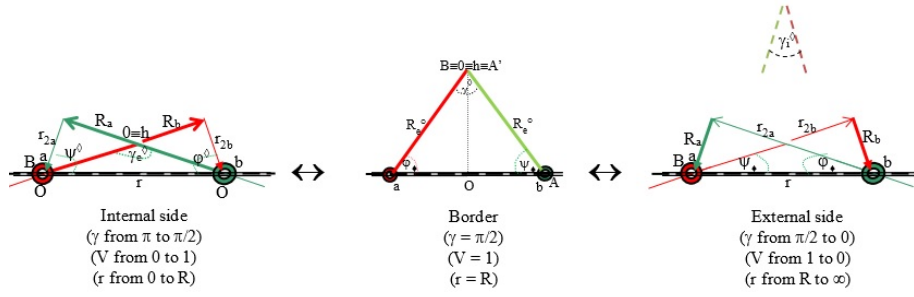


FIG. 12. The intention schema when the interaction takes place respectively: On the internal side, on the border and on the external side.

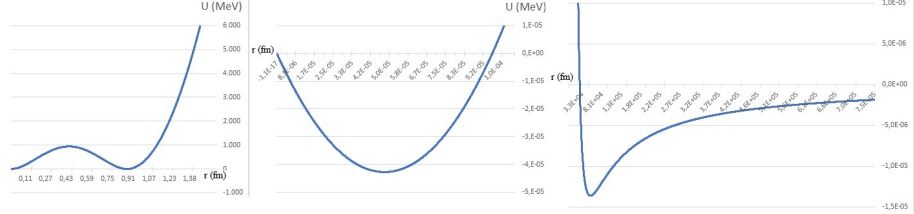


FIG. 13. The plot of the eq. 25 where  $\frac{L}{c} = n\alpha^{-1}$ .

$$R_{\bullet} = mc^2 \frac{1}{\Theta} i.u. = mc^2 \frac{K}{\Theta} meters = mc^2 \frac{2G}{c^4} meters \text{ and } R^{\circ} = \frac{1}{R_{\bullet}} i.u. = K \frac{1}{R_{\bullet}} meters$$

$m = m_e$  in the Coulomb area or  $m = m_e = \pi m_e$  in the weak area ( $R_e^{\circ} = R_e^{\circ} / (2\pi) = 0.896978 \text{ fm}$ )

$V = \sin \gamma^{\diamond} = 1 - \cos \gamma^{\diamond} = r/R^{\circ}$  in the internal side and the reverse  $V = R^{\circ}/r$  by crossing the border ( $\gamma^{\diamond} = \pi/2$ ) crossing, is particularized as:

$$U = mc^2 \left( -V + \frac{1}{2}V^2 + \frac{1}{2}n^2\alpha^{-2} \left( \frac{r}{R^{\circ}} \right)^2 (1-V)^2 \right) \text{ when the interaction takes place on the internal side.}$$

$$U = mc^2 \left( -V + \frac{1}{2}V^2 + \frac{1}{2}n^2\alpha^{-2} \left( \frac{R^{\circ}}{r} \right)^2 (1-V)^2 \right) \text{ when the interaction takes place on the external side.}$$

Both particularizations present:

three real roots at  $V \simeq \{0, 2(\alpha/n)^2, 1 - \alpha/n\}$  i.e.  $\gamma^{\diamond}$  or  $\pi - \gamma^{\diamond} \simeq \{0, 2(\alpha/n), \pi/2 - \alpha/n\}$

a global minimum  $U = -1/2 mc^2$  at  $V = 1$  i.e.  $\gamma^{\diamond}$  or  $\pi - \gamma^{\diamond} \simeq \pi/2$

a local minimum  $U \simeq -1/2 (\alpha/n)^2 mc^2$  at  $V \simeq (\alpha/n)^2$  i.e.  $\gamma^{\diamond}$  or  $\pi - \gamma^{\diamond} \simeq \sqrt{2}\alpha/n$  (on the central panel)

a local maximum  $U \simeq (-3/8 + (1/2)^5 n^2 \alpha^{-2}) mc^2$  at  $V = 1/2 - (\alpha/n)^2$  i.e.  $\gamma^{\diamond}$  or  $\pi - \gamma^{\diamond} \simeq \pi/3 - \alpha^2/n^2$ .

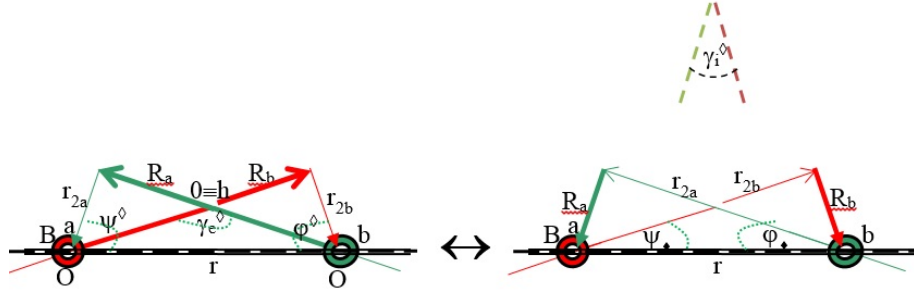


FIG. 14. When  $\gamma^{\diamond} \rightarrow \pm\alpha/n$ , we have the electromagnetic relation (on the right), which take place outside  $\gamma^{\diamond} \rightarrow \gamma_i^{\diamond}$ . When  $\gamma^{\diamond} \rightarrow \pi \pm \alpha/n$ , we have its inverse, the weak interaction (on the left), which takes place inside  $\gamma^{\diamond} \rightarrow \gamma_e^{\diamond}$ .

Weak Relation  $\leftrightarrow$  Electromagnetic Relation    Space  $\leftrightarrow$  Time     $P \leftrightarrow M$      $R_{ind} \leftrightarrow t$      $\gamma_i^{\diamond} \leftrightarrow \gamma_e^{\diamond}$      $R_a \leftrightarrow r_{2a}$      $R_b \leftrightarrow r_{2b}$      $\psi^{\diamond} \leftrightarrow \psi_{\diamond}$      $\varphi^{\diamond} \leftrightarrow \psi_{\diamond}$ .

In the weak interaction (see tab.IV), which is the inverse of electromagnetic interaction,

in particular, in the beta decay, if  $R_a^{\circ}$  and  $R_b^{\circ}$  are the eterologue individuals of a quark Down and anti-Up, jumping from  $n=2$  to  $n=1$ , we have  $\Delta M \simeq 2(1 - 1/4)^{-1} \alpha^{-2} \pi m_{0e} = 80.38575 \text{ GeV}$  which is equal to the mass of  $W^{\pm}$ . Analogously, if  $R_a^{\circ}$  and  $R_b^{\circ}$  are the eterologue individuals of a quark Up and anti-Up on  $n=2$  and  $n=3$ , and both these individuals jump on  $n=1$ , then we have

TABLE IV. the electromagnetic Interaction takes place outside the Radius  $R_{ind} \equiv R_\epsilon$  whereas the weak interaction inside  
 Since  $\Delta U \simeq \Delta V$  and  $\Delta V = \Delta(1 - \cos \gamma^\diamond) = \Delta \cos \gamma^\diamond = \Delta \cos \left( [\pi] \pm \sqrt{2} \frac{\alpha}{n} \right) \simeq \Delta \frac{1}{n^2 \alpha^{-2}}$ :

area	$\gamma^\circ$	$\Delta E_{n1}^{n2} = \Delta U_{n1}^{n2}$	products
outside	$+\sqrt{2} \frac{\alpha}{n}$	$\simeq \mu \bullet \frac{1}{2} \Delta V = \frac{1}{2} \Delta \frac{1}{r} = \frac{1}{2} \left( \frac{1}{n_1^2 \alpha^{-2} R_{Tot}^\circ} - \frac{1}{n_2^2 \alpha^{-2} R_{Tot}^\circ} \right)$	<i>Balmer's radiation</i>
inside	$\pi - \sqrt{2} \frac{\alpha}{n}$	$\simeq \mu \bullet \left( \frac{1}{2} \Delta V \right)^{-1} = \frac{1}{\frac{1}{2} \Delta r} = \left( \frac{1}{2} \left( \frac{1}{n_1^2 \alpha^{-2} R_{\bullet Tot}} - \frac{1}{n_2^2 \alpha^{-2} R_{\bullet Tot}} \right) \right)^{-1} [\pi]^a$	<i>bosons</i>

<sup>a</sup> the  $\pi$  term depend on the kind of motion: circular or radial.

$\Delta M = W^\pm + (1 - 1/9)^{-1} \alpha^{-2} m_{0e} = 91.18676$  GeV which is equal to the mass of  $Z_0$ .

More generally, a change from  $n = i$  to  $n = j$  is never direct since it requires less energy to change from  $n = i$  to  $n = 1$  and then from  $n = 1$  to  $n = j$ .

Neutrinos emerge from the weak relationship between two individuals matter-antimatter.

When  $\gamma^\diamond = \pi - \frac{\alpha}{n}$  and  $r = VR_\epsilon^\circ = \frac{\pi}{2} \alpha^2 m_e$  and  $t = R_\epsilon^\circ$ , we have the Neutrinos (see fig. 15).

$$m_\nu = 2 \frac{r^2}{R_\epsilon^{\circ 2}} \frac{R_\epsilon^{\circ 2}}{R_\omega} = 2V^2 m_\epsilon = \frac{\pi}{2} \alpha^4 m_e$$

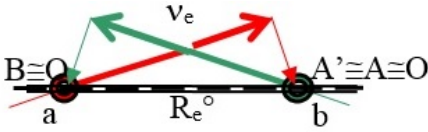


FIG. 15. Neutrino:

$$\gamma = \pi - \diamond \frac{\alpha}{n}, \vartheta \approx 0, m_\nu = 2V^2 R_{\bullet} = \frac{\pi}{2} \alpha^4 m_e \text{ and } r = VR_\epsilon^\circ = \frac{\pi}{2} \alpha^2 m_e$$

## 2. STRONG area $V = 1 - \alpha/n$ or $(\gamma^\diamond \rightarrow \pi/2 \pm \alpha/n)$

When  $\gamma^\diamond \rightarrow \pi/2 \pm \alpha/n$  we have the strong relation with  $\vartheta = \pi/2$  and energy and momentum are inverted.

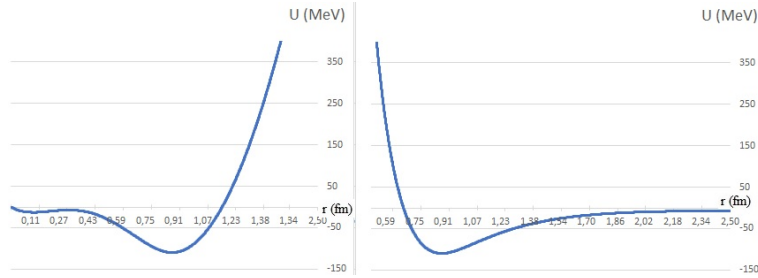


FIG. 16. The plot of the eq. 25 when  $R^\circ = R_\epsilon^\circ = R_\epsilon^\circ / (2\pi) = 0.896978$  fm and  $m_q = \alpha^{-1} m_\epsilon = \alpha^{-1} \pi m_e$  and  $\frac{L}{c} = \pi \alpha^{-1}$ .

Therefore the eq. 25 is particularized as:

$$U = \alpha^{-1} \pi m_\epsilon c^2 \left( -V + \frac{1}{2} V^2 + \frac{1}{2} \pi^2 \left( \frac{r}{R_\epsilon^\circ} \right)^2 (1 - V)^2 \right) \text{ when the interaction takes place on the internal side.}$$

$$U = \alpha^{-1} \pi m_\epsilon c^2 \left( -V + \frac{1}{2} V^2 + \frac{1}{2} \pi^2 \left( \frac{R_\epsilon^\circ}{r} \right)^2 (1 - V)^2 \right) \text{ when the interaction takes place on the external side.}$$

The potential presents:

two roots at  $V \simeq \{0, 0.764\}$

a local maximum  $U \simeq -7.31 \text{ MeV}$  at  $V \simeq 0.3588$

a global minimum  $U = -1/2 mc^2 = -109.99$  MeV at  $V = 1$ .

On the right the plot of the eq. 25 in the strong area from the external side. The plot on the right corresponds to the AV18 Potential

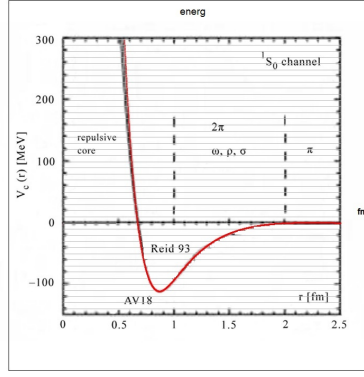


FIG. 17. AV18 Neutron Neutron Potential: The plot represent the comparison between the plot on the right side in fig. 16 (red line) with the AV18 potential (black line). For a more strict agreement, though neglecting hyperfine structure terms, it has been added the term  $U_{spin} = m \left[ \left( IF \frac{r}{R_\epsilon^o} > 1 \text{ then } 1 \text{ else } -1 \right) - \frac{1}{4} \text{Spin} \left( \frac{L R_\epsilon^o}{c r} \right) V(1 - V) \right]$  where  $\text{Spin} = -\frac{1}{2}$ .

From the (25), outside  $R_{ind}^o$ , when  $\gamma^\diamond \rightarrow \pi/2 + \alpha$ , we get a Neutron Neutron potential in street agreement with AV18 (see fig. 17).

TABLE V. the electromagnetic Interaction takes place outside the Radius  $R_{ind} \equiv R_\epsilon$  whereas the strong interaction inside Since  $\Delta U \simeq \Delta V$  and  $\Delta V = \Delta(1 - \cos \gamma^\diamond) = \Delta \cos \gamma^\diamond = \Delta \cos(\pi/2 \pm \alpha/n) \simeq \pm \Delta \frac{1}{n\alpha^{-1}}$ :

area	$\gamma^\circ$	$\Delta E_{n1}^{n2} = \Delta U_{n1}^{n2}$	products
outside	$\frac{\pi}{2} - \frac{\alpha}{n}$	$\simeq \mu_\bullet (\Delta V) = \Delta \frac{1}{r} = \left( \frac{1}{n_1 \alpha^{-1} R_{Tot}^o} - \frac{1}{n_2 \alpha^{-1} R_{Tot}^o} \right)$	$\mathbf{X}, \gamma$ radiation
inside	$\frac{\pi}{2} + \frac{\alpha}{n}$	$\simeq \mu_\bullet (\Delta V)^{-1} = \frac{1}{\Delta r} = \left( \frac{1}{n_1 \alpha^{-1} R_{\bullet Tot}} - \frac{1}{n_2 \alpha^{-1} R_{\bullet Tot}} \right)^{-1} [\pi]^a$	mesons

<sup>a</sup> the  $\pi$  term depend on the kind of motion: circular or radial.

Mesons, (see tab. V), are constituted by a couple quark-antiquark which links two individuals of equal and opposite charge 1/3. The presence of both matter and antimatter in the quarks UP doesn't change the structure of interaction, since only one of them ( $\pm 1/3$ ) is engaged in the strong interaction while the conjoined ( $\mp 1$ ) is linked to this via weak interaction, therefore far outside the range of strong interaction. Mesons can decay or via electromagnetic interaction in presence of a couple of quarks of the same type, or via weak interaction otherwise.

When  $\gamma^\diamond = \pi/2$  or  $\sin \gamma = 1$  or  $r = t = R_\epsilon^o$ , space and time axis overlaps, we have the photon (see fig. 18)

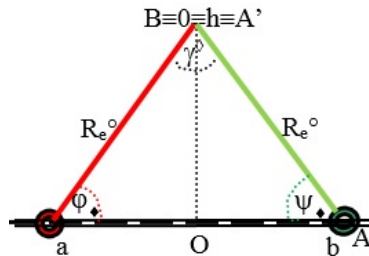


FIG. 18. Photon: the photon is characterized by  $\gamma^\diamond = \pi/2$ ,  $\vartheta = \pi/2$ ,  $E = h\nu$ ,  $v = c$  and  $r = \overline{ah}^\diamond + \overline{bh}^\diamond = 2R_\epsilon^o$

Therefore, all the composed matter, from the electrical to the strong interaction and weak interaction, having to be linked by an attractive force, always involves a matter-antimatter pair.

An exception is the interaction between three quarks, which links three individual homologues  $(-1/3)$ , which forms the baryons (see fig. 19).

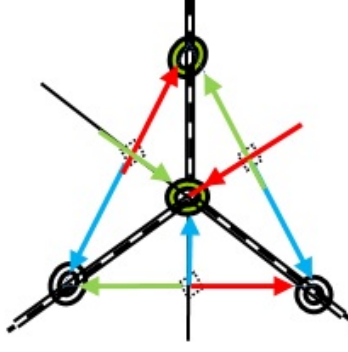


FIG. 19. Baryon: the baryon is characterized by  $\gamma^\diamond = \pi/2$ ,  $\vartheta = \pi/2$ ,  $\varphi_\blacklozenge = \psi_\blacklozenge = \vartheta_a = \vartheta_b = \pi/3$

The torsion  $\vartheta$  is relevant only in the close proximity of  $\gamma = \pi/2$ , growing up asymptotically on  $\gamma = \pi/2$ . In the baryon, in concomitance with the Pauli exclusion principle, it constitutes the cause of its stability. The three quarks constituent, having the same charge  $-1/3$ , repel each other but, since each one occupies one of the three possible states, for the Pauli exclusion principle they cannot escape since whatever change implies to invade the place of the other.

Regarding the composition of a baryon, we can basically expect, in its simplest configuration, a symmetrical arrangement of three quarks (see 19) at  $\varphi_\blacklozenge = \psi_\blacklozenge = \vartheta_a = \vartheta_b = \pi/3$  between them. The (25) presents a local maximum  $U \simeq (-3/8 + (1/2)^5 n^2 \alpha^{-2}) mc^2$  at  $V = 1/2 - (\alpha/n)^2$  or  $\pi - \varphi_\blacklozenge \simeq \pi/3 - \alpha^2/n^2$ .

When  $m = m_\epsilon = \pi m_e$  and  $n = 1$  we have  $U_{(\varphi_\blacklozenge=2\pi/3+\alpha^2/n^2)} - 2m_\epsilon = 938.2704 MeV \simeq m_p$ .

## F. Gravitation

See [38]. Briefly:

### 1. Galaxy rotation curves

To find the relation between the terms of the equation  $r_j^2 + r_i^2 + r_k^2 = r^2$ , neglecting the energy term  $k$ , we can set

$$r_j = \sqrt{\frac{R_j}{R_j + R_i}} \cdot r \quad \text{and} \quad r_i = \sqrt{\frac{R_i}{R_j + R_i}} \cdot r$$

and defining  $\sin \xi = \sqrt{\frac{R_j}{R_j + R_i}} = \frac{\sqrt{\rho_b}}{\sqrt{\rho_b + \rho_{cdm}}}$  and  $\cos \xi = \sqrt{\frac{R_i}{R_j + R_i}} = \frac{\sqrt{\rho_{cdm}}}{\sqrt{\rho_b + \rho_{cdm}}}$  we have:

$$r_j = r \sin \xi \quad \text{and} \quad r_i = r \cos \xi$$

Therefore  $A = A_j = \frac{R_j}{r_j^2} = A_i = \frac{R_i}{r_i^2} = A_j \sin^2 \xi + A_i \cos^2 \xi = \frac{R_j + R_i}{r^2}$

At last, since  $A_{j\_centrifugal} = \frac{v_{centrifugal}^2}{r_j} = A_{j\_gravitational} = \frac{R_j}{r_j^2} = \frac{R_j + R_i}{r^2} = \frac{R_j}{r^2} + \frac{1}{R_w}$

We have

$$v_{centrifugal} = \sqrt{V_j} = \sqrt[4]{\frac{R_j + R_i}{r^2} R_j} \quad (34)$$

and the limits

$$r_{j\infty} = \lim_{r \rightarrow \infty} \sqrt{\frac{R_j}{R_j + R_i}} r = \sqrt{R_j R_\omega} \quad v_\infty = \lim_{r \rightarrow \infty} \sqrt[4]{\frac{R_j + R_i}{r^2} R_j} = \sqrt[4]{\frac{R_j}{R_\omega}}$$

On radial orbits, stars plunging in and out of the galactic center,  $R_\omega = cH_0^{-1}$ , while on circular orbit  $R_\omega = 2\pi cH_0^{-1}$ . In motion of satellite galaxies around normal galaxies at distances 50-500 kpc (see Klypin A. & Prada F. 2009 [35]), the rotation curves are considerably affected by the radial component of the motion which gradually decreases as moving away from the host galaxy. The the maximum speed  $v_\infty = \sqrt[4]{\frac{R_K}{R_\omega}}$  consequently decreases as  $^{-4/2\pi}$  as the initial radial speed turns into tangential speed moving away from the host galaxy consistently with the experimental results.

The radial component is instead usually negligible in the galaxy rotation curves of stars.

We find that the predictions for the galaxy rotation curves from Intention physics, MSTG and Milgrom's Mond agree remarkably for all of the 101 galaxies reported in J.R.Brownstein and J.W.Moffat 2005 [25]. In particular, we adopted the mass distribution model  $R_j(r) = R_{jTot} \left( \frac{r}{r_c + r} \right)^{3\beta}$  of a spherically symmetric galaxy, where  $r_c$  is the inner core and  $\beta = 1$  for HSB galaxies and 2 for LSB and Dwarf galaxies, and used the  $R_{jTot}$  and  $r_c$  of the MSTG solution, with no need of any further parameter. It is relevant that the Newton velocity, once replaced the total distance  $r$  with the distance  $r_j$  along the J axis, are consistent with the experimented values everywhere.

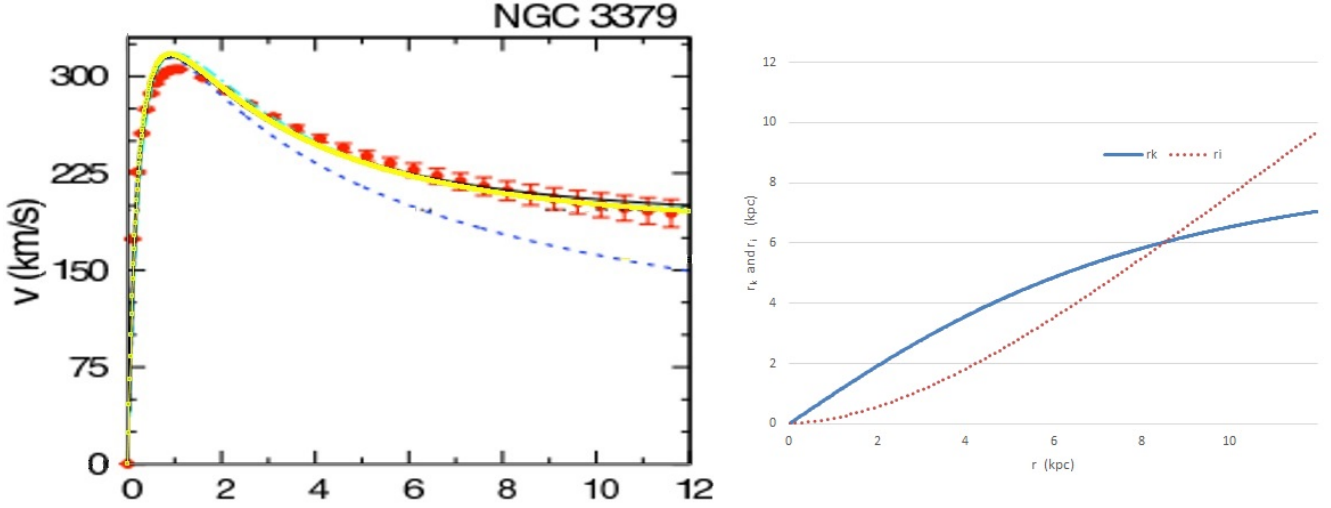


FIG. 20. Rotation curve for the elliptical galaxy NGC 3379. The red points (with error bars) are the observations. The solid yellow line is the rotation curve determined by Intention Physics (eq. 34), the short dashed blue line is the Newtonian galaxy rotation curve. Both rotation curves are the best fit to a parametric mass distribution (independent of luminosity observations) a two parameter fit to the total galactic Mass,  $M = 6.99 \cdot 10^{10} M_\odot$ , and a core radius  $r_c = 0.45$  kpc and  $\beta = 1$ . On the right the trend of  $r_k$  and  $r_i$

Very interesting is the determination of the barycentre. From

$$\sum_{i=1}^n (M_{J_i} \ddot{r}_{j_i}) = M_{J_{Tot}} \ddot{r}_j$$

we have the barycentre coordinates:

$$r_j = \frac{\sum_{i=1}^n M_{J_i} r_{j_i}}{M_{J_{Tot}}} = \frac{\sum_{i=1}^n \frac{M_{J_i}^{3/2}}{\sqrt{M_{J_i} + \frac{r_i^2}{R_\omega}}} r_i}{M_{J_{Tot}}} = \sum_{i=1}^n \frac{M_{J_i} r_{j_{max_i}}}{M_{J_{Tot}}} \frac{r_i}{\sqrt{r_{j_{max_i}}^2 + r_i^2}} \quad (35)$$



Where the barycenter, outside the  $r_{j_{max}}$  perimeter of any attractor, where the Acceleration becomes constant and equal to  $1/R_\omega$ , reduces to a gradient which emerges from and reveals a contour plane.

A huge quantity of mass, fractioned in little parts far away, is negligible with respect to a much smaller quantity of mass concentrated in bigger parts.

At last, the presumed direct proof of Dark matter [Clowe et al. 2006], given by the recent observed collision of two clusters of galaxies ("bullet cluster" 1E0657-56), where it is shown that the sources of gravity in the cluster are not located where the ordinary matter is located, can be explained by the correct determination of the barycentre. Intention physics, indeed, predicts the irrelevance of the huge quantity of dominant tiny matter component, that is the X-ray plasma clouds, with respect to the very more large masses constituted by the galaxy clusters. The barycentre gives reason also of the large structure of universe.

## 2. Cosmology

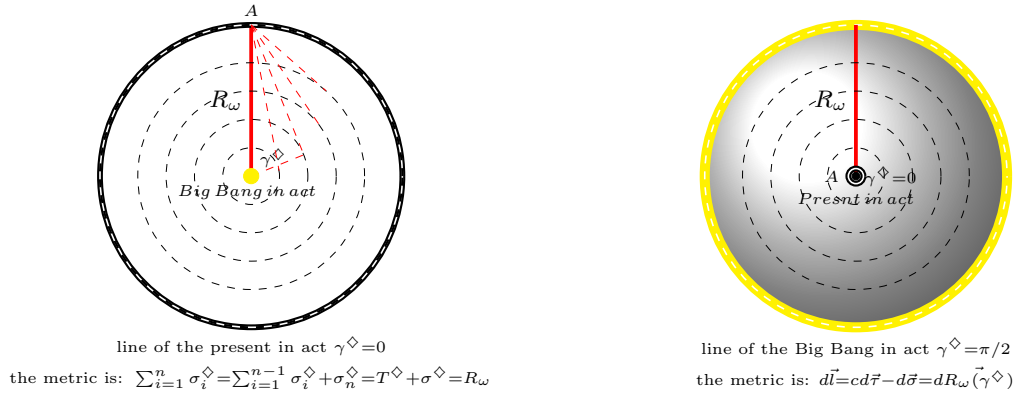


FIG. 21. each individual on the line of the present has his own point of view on the universe Radius  $R_\omega$ . For each individual, every point in the universe Radius  $R_\omega$  represents a distance  $\sigma^\diamond + T^\diamond = R_\omega$  in the linear spacetime that turns in the isomorphic spherical surface of equidistant points in the three-dimensional quadratic space of potentiality. The space of potentiality, interposed between the big bang and the line of the present in progress, is three-dimensional and flat. In the present model all space-time is in potency, with the exception of the Big Bang and the line of progress, and every instant is all new and all present. Every instant the whole universe recurs unfolding itself from the Radius all interconnected.

The universe metric, in the free falling reference system, is

$$d\vec{l} = cd\vec{\tau} - d\vec{\sigma} = dR_\omega(\vec{\gamma}) \quad \text{or} \quad d\vec{l} = cd\vec{\tau} - d\vec{\sigma}(1 + dR_\omega(\gamma)/d\sigma)$$

Since  $d\sigma = \frac{dr}{1 - \sin_\blacklozenge \gamma}$  and  $dr = dR_\omega \sin_\blacklozenge \gamma = R_\omega (1 - \sin_\blacklozenge \gamma) d\gamma$  it follows  $d\sigma = R_\omega d\chi$  and

$$dl^2 = c^2 d\tau^2 - b(\gamma)^2 (R_\omega^2 d\chi^2 + R_\omega^2 \chi^2 d\theta^2 + R_\omega^2 \chi^2 \sin^2 \theta d\phi^2) \quad (36)$$

where the distance factor  $b(\gamma) = (1 + dR_\omega(\gamma)/d\sigma)$  depends only on the distance (angle  $\gamma$ ) between sender and receiver.

At last the universe metric, in the frame of a free falling observer, using the comoving coordinates is:

$$dl^2 = c^2 \frac{dT^2}{a(t)^2} - (dD_M^2 + D_M^2 d\theta^2 + D_M^2 \sin^2 \theta d\phi^2) \quad (37)$$

where  $dT = a(t) d\tau$  and  $dD_M = b(\gamma) R_\omega d\chi$  and the scale factor  $a(t) = \frac{1}{1+z} = \frac{\tau}{R_\omega} = (1 - \sin_\blacklozenge \gamma)$ .

At last, since  $z = \frac{\sin \gamma}{1 - \sin \gamma}$  we have  $dz = \frac{\cos \gamma}{(1 - \sin \gamma)^2} d\gamma$ , and therefore:

$$D_M = b(\gamma) \int_0^\gamma R_\omega d\chi = b(\gamma) \cdot \frac{c}{H_0} \gamma \quad (38)$$

$$H(z) = \frac{dz}{dD_M} = H_0 E(z) = H_0 \frac{\cos \gamma}{(1 - \sin \gamma)^2} \cdot \frac{1}{b(\gamma) + \gamma db(\gamma)/d\gamma} = H_0 \sqrt{a^{-3} \cdot \frac{(1 + \sin \gamma)}{(b(\gamma) + \gamma \cdot db(\gamma)/d\gamma)^2}} \quad (39)$$

In the event that the universe is made up of only CDM (Amoroni) we have:  $dR_\omega(\gamma) = dR_I = V d\sigma = \sin \gamma d\sigma$  and therefore  $b(\gamma) = (1 + \sin \gamma)$  and

$$\frac{\rho_{cdm}(\gamma)}{\rho_{critic}} = \frac{(1 + \sin \gamma)}{(b(\gamma) + \gamma \cdot db(\gamma)/d\gamma)^2} = \frac{(1 + \sin \gamma)}{(1 + \sin \gamma + \gamma \cos \gamma)^2} \quad (40)$$

Now the universe is also made up of baryonic matter and radiation, and therefore

$$\vec{R}_\omega = \begin{bmatrix} E \\ P \\ A \end{bmatrix} = \begin{bmatrix} \Omega_r(\vartheta_r) \\ \Omega_{cdm}(\gamma, \vartheta) \\ \Omega_b(\vartheta_b) \end{bmatrix} = \begin{bmatrix} \Omega_r \sin \vartheta_r^\diamond \\ (\Omega_{cdm} + \Omega_b \cos \vartheta_b^\diamond + \Omega_r \cos \vartheta_r^\diamond) \frac{\rho_{cdm}(\gamma)}{\rho_{critic}} \\ \Omega_b \sin \vartheta_b^\diamond \end{bmatrix} \quad (41)$$

and, since  $z = \frac{\lambda - \lambda_0}{\lambda_0} = \frac{1}{1 - \sin \gamma} - 1$  which gives  $\gamma = \arcsin \frac{z}{z+1}$ , from the eq. (15),

$$\sin^\diamond \vartheta_r = \frac{\frac{\mu_r}{R_{tot}} \sin \gamma}{(1 - \sin \gamma) + \frac{\mu_r}{R_{tot}} \sin \gamma} = \frac{\frac{\mu_r}{R_{tot}} (z/(1+z))}{1/(1+z) + \frac{\mu_r}{R_{tot}} (z/(1+z))} \quad (42)$$

$$\sin^\diamond \vartheta_b = \frac{\frac{\mu_b}{R_{tot}} \sin \gamma}{(1 - \sin \gamma) + \frac{\mu_b}{R_{tot}} \sin \gamma} = \frac{\frac{\mu_b}{R_{tot}} (z/(1+z))}{1/(1+z) + \frac{\mu_b}{R_{tot}} (z/(1+z))} \quad (43)$$

with  $\frac{\mu_r}{R_{tot}} = \Omega_r (1 - \Omega_r)$  and  $\frac{\mu_b}{R_{tot}} = \Omega_b (1 - \Omega_b)$  and  $\cos^\diamond \vartheta = 1 - \sin^\diamond \vartheta$  and  $\Omega_{cdm} + \Omega_b + \Omega_r = 1$ .

Since from  $H(a) \equiv \frac{\dot{a}}{a}$  we have  $d\tau(a) = \frac{c}{H(a)} \frac{da}{a}$ , we arrive at last to:

$$H(z) = H_0 \sqrt{\Omega_r(\vartheta_r) (1+z)^4 + \Omega_b(\vartheta_b) (1+z)^3 + \Omega_{cdm}(\gamma, \vartheta) (1+z)^3} = H_0 E(z) \quad (44)$$

$$D_M = \int_0^z \frac{dz}{H(z)} \quad (45)$$

$$T_\omega = \int_\infty^z \frac{a}{H(z)} dz \quad (46)$$

### 3. The Radiation-dominated era

In the Radiation-dominated epoch, where takes place the Big-Bang nucleosynthesis (BBN), we have  $cd\tau(a) \simeq R_\omega \frac{ada}{\sqrt{\Omega_r \sin \vartheta_r}}$  and therefore  $c\tau \simeq \frac{R_\omega}{\sqrt{\Omega_r}} \int \frac{ada}{\sqrt{\sin \vartheta_r}}$  where  $\sin^\diamond \vartheta_r \simeq 1$ . The  $\Lambda$ CDM model and the present model are indistinguishable in this era. The present model therefore shares the same nucleosynthesis theory as the  $\Lambda$ CDM model.

### 4. The Matter-dominated era

The matter-dominated era, which does not include the CDM, extends between the energy dominated era and the potency dominated era

### 5. The Potency-dominated era

The time and distances scale with the redshift of the  $\Lambda$ CDM model and of the present model are only very slightly different in the matter-dominated era. Therefore, as in the  $\Lambda$ CDM model we have  $r_{s_{drag}} = \int_z^\infty \frac{c_s(z)}{H(z)} dz$ , where  $c_s(z)$  is the sound speed,

$$c_s(z) = \frac{c}{\sqrt{3}} \frac{1}{\sqrt{1 + \frac{3\Omega_b}{4\Omega_\gamma} a}}$$

The acoustic oscillations in  $l$  seen in the CMB power spectra correspond to a sharply-defined acoustic angular scale on the sky, given by:

$$\theta_* = \frac{r_s^*}{D_M} \quad (\text{with the metric of the standard model})$$

$$\theta_* = \frac{r_s^*}{D_{M_{cdm}}} = \frac{r_s^* \cos \xi}{D_M} \quad (\text{with the metric of the present model})$$

where  $r_s^*$  is the comoving sound horizon at recombination quantifying the distance the photon-baryon perturbations can influence,  $D_M$  is the comoving angular diameter distance that maps this distance into an angle on the sky,  $\cos \xi = \frac{\sqrt{\Omega_{cdm}(\vartheta)} (1+z)^3}{E(z)} \simeq 0.94311 + (1090 - z) \cdot 0.00001$  in the neighbourhood of  $Z=1090$ , represents the cosmic component (without the baryonic one) of the  $D_M$ . *Planck* measures:

$100\theta_* = 1.04109 \pm 0.00030$  (68%, TT,TE,EE+lowE), a measurement with 0.03% precision.

It is the CMB analogue of the transverse baryon acoustic oscillation scale  $r_{drag}/D_M$  measured from galaxy surveys, where  $r_{drag}$  is the comoving sound horizon at the end of the baryonic-drag epoch. The BAO measurement constraint can be expressed as a approximate relation between  $r_{drag}$  and  $h$  as:

$$\left( \frac{r_{drag} h}{\text{Mpc}} \right) \left( \frac{0.3}{\Omega_m} \right)^{0.4} = 101.056 \pm 0.036 \quad (\text{with the scale ladder of the standard model see. Planck Collaboration 2018 [30]})$$

$$\left( \frac{r_{drag} h}{\text{Mpc}} \right) = 101.766 \pm 0.036 \quad (\text{with the scale ladder of the present model})$$

Therefore from the two constraints:

$$\frac{r_s^* \cos \xi}{D_M} = \theta_* \simeq 0.0104109 \quad (47)$$

$$r_{s_{drag}} h \simeq 101.766 \text{Mpc} \quad (48)$$

and the scale ladder of the present model, we find the following useful approximate formulas:

$$r_s^* \simeq \frac{100.13}{h} \text{Mpc} \quad (49)$$

$$r_{s_{drag}} \simeq \frac{101.766}{h} \text{Mpc} \quad (50)$$

$$z^* \simeq 1126.002 - 6336\Omega_b + 379.5h \quad (51)$$

$$z_{drag} \simeq 1099.956 - 5140\Omega_b + 293h \quad (52)$$

and by imposing the two further constraints:

$$z^* \simeq 1090$$

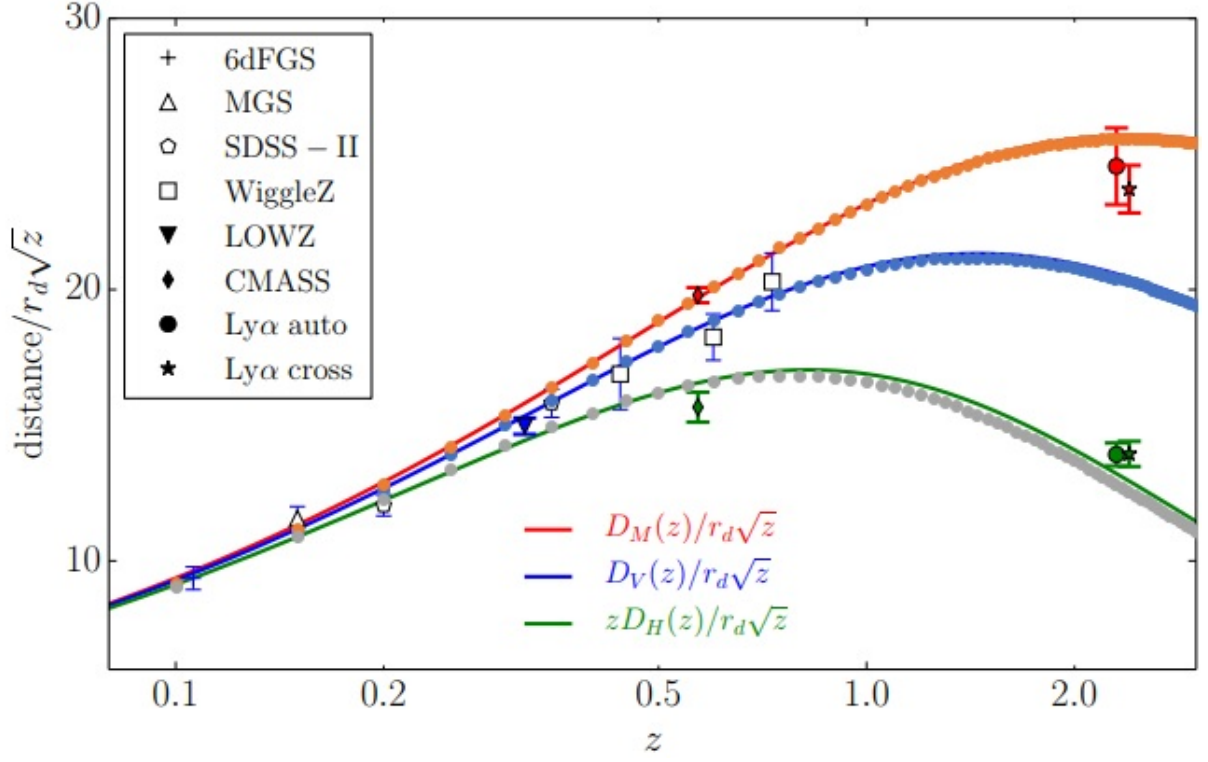


FIG. 22. The BAO "Hubble diagram" (Aubourg  $\acute{E}$ . et al. 2014 [28] ) from a world collection of detections. Blue, red, and green points show BAO measurements of  $D_V/r_d$ ,  $D_M/r_d$ , and  $zD_H/r_d$ , respectively, from the sources indicated in the legend. These can be compared to the correspondingly colored lines, which represents predictions of the fiducial Planck  $\Lambda$ CDM model (with  $m = 0.3183$ ,  $h = 0.6704$ ) and the prediction of the Intention model (dotted line) when  $r_{s_{drag}} = 101.766/h$  Mpc. The scaling by  $\sqrt{z}$  is arbitrary, chosen to compress the dynamic range sufficiently to make error bars visible on the plot. Filled points represent BOSS data, which yield the most precise BAO measurements at  $z < 0.7$  and the only measurements at  $z > 2$ . For visual clarity, the  $Ly\alpha$  cross-correlation points have been shifted slightly in redshift; auto-correlation points are plotted at the correct effective redshift.

$$z_{drag} \simeq 1060$$

we find the approximate

$$\Omega_b \simeq 0.0056 + 0.06h \quad (53)$$

Since the radiation density is:

$$\Omega_r = \Omega_\gamma (1 + 0.2271N_{eff}) = 2.469 \times 10^{-5} h^{-2} (1 + 0.2271N_{eff}) \text{ for } T_{cmb} = 2.725 \text{ K} \quad (54)$$

the above eq. (53) alone, given the eq. (54), guarantees that the scale ladder of the present model fits the BAO measurements (see fig.22 and fig.23) on  $z_{drag} \simeq 1060$  and matches the acoustic angular scale on  $z^* \simeq 1090$ .

In the hypothesis in which the universe Radius  $R_\omega$  unfolds on its three axis as :

$$R_{\omega_{cdm}} = R_\omega \quad \Omega'_{cdm} = 1 \quad \Omega_{cdm} = \frac{\Omega'_{cdm}}{\Omega'_{Tot}} = \frac{1}{1 + (2\pi^2)^{-1} + \alpha^2} = 0.951734 \quad (55)$$

$$R_{\omega_b} = 2\pi R_\omega \quad \Omega'_b = 2(2\pi)^{-2} \quad \Omega_b = \frac{\Omega'_b}{\Omega'_{Tot}} = \frac{(2\pi^2)^{-1}}{1 + (2\pi^2)^{-1} + \alpha^2} = 0.048215 \quad (56)$$

$$R_{\omega_r} = \alpha^{-1} R_\omega \quad \Omega'_\gamma = \alpha^2 \quad \Omega_\gamma = \frac{\Omega'_\gamma}{\Omega'_{Tot}} = \frac{\alpha^2}{1 + (2\pi^2)^{-1} + \alpha^2} = 0.0000506811 \quad (57)$$

we find that the equation (57) ( $\Omega_\gamma = 5.068 \times 10^{-5}$ ) determine

$$H_0 = \sqrt{\frac{2.469 \times 10^{-5}}{5.06811 \times 10^{-5}}} \times 100 = 69.8 \pm 0.01 \quad (58)$$

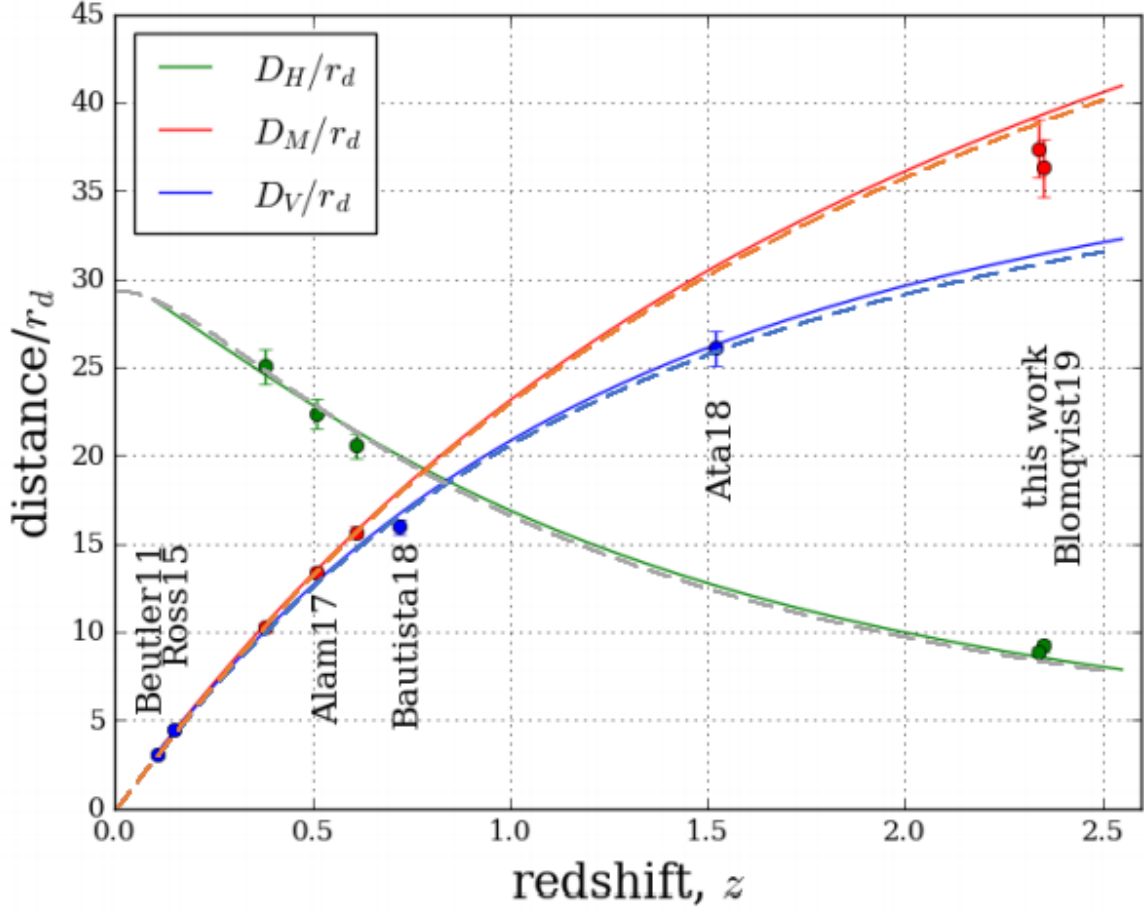


FIG. 23. BAO measurement (Agathe VS. et al. 2019 [26]) of  $D_H/r_d$  and  $D_M/r_d$  using BOSS galaxies (Alam et al. 2017),  $Ly\alpha$  absorption in BOSS-eBOSS quasars (Agathe et al. 2019) and correlation between BOSS-eBOSS quasars and  $Ly\alpha$  absorption (Blomqvist et al. 2019). Other measurements give  $D_V/r_d$ , with  $D_V = D_M^{2/3}(zD_H)^{1/3}$ , using galaxies (Beutler et al. (2011), Ross et al. (2015), Bautista et al. (2018)) and BOSS-eBOSS quasars (Ata et al.2018). Solid lines show the Planck 2015 values (Planck Collaboration et al.2016). These can be compared to the correspondingly colored lines, which represents predictions of the fiducial Planck  $\Lambda$ CDM model (with  $m = 0.3183$ ,  $h = 0.6704$ ) and the prediction of the Intention model (dashed lines) when  $r_{s_{drag}} = 101.766/h$  Mpc.

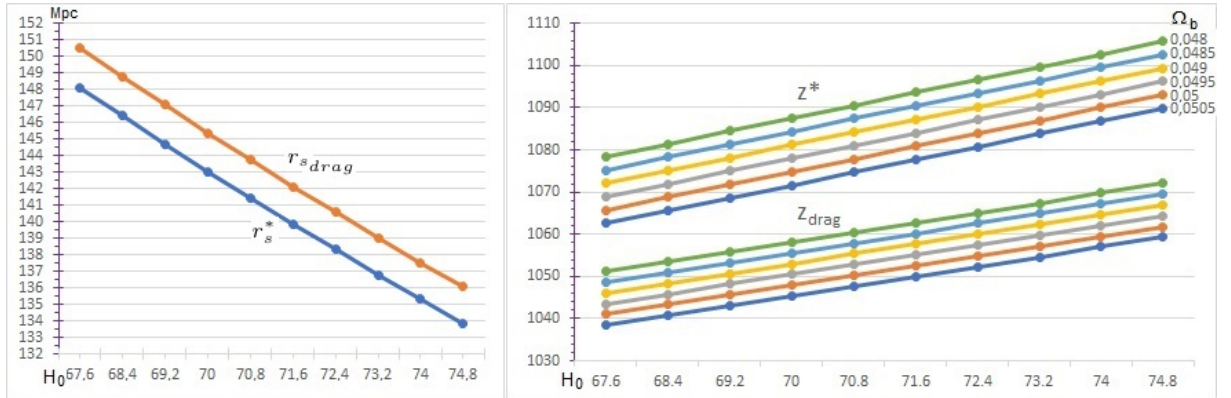


FIG. 24. Sound Horizon: in the plot the comoving sound horizon at recombination  $r_s^*$  and the comoving sound horizon at the baryon drag epoch with the relative redshifts

and the age of the Universe =  $13.464 \pm 0.003$  Gyr and that this result, together with the equation (56) ( $\Omega_b = 0.048215$ ), satisfies the eq.(53).

Viceversa, if we hypotesize that the first column of the CKM Matrix represents the density parameters of CDM, baryons and radiation respectively, we have:

$$\Omega_\gamma = V_{td}^2 / (1 + 0.2271 \times N_{eff}) = (8.028 \times 10^{-5} \pm 0.00024) / (1 + 0.2271 \times 3.046) = 4.745 \times 10^{-5} \pm 2.54 \times 10^{-6}$$

that implies:

$$H_0 = \sqrt{\frac{2.469 \times 10^{-5}}{4.745 \times 10^{-5}}} \times 100 = 72.13 \pm 2 \quad (59)$$

## IV. COSCIIOUSNESS

### A. The foundation of intention

The intention involves individuals of a same universal who, in the period of potency, unfold their being R constituting their space. Space is matter and it is potency and it is thought. The nature of thought is to mirror for love by measuring the other with himself. In the instant of act, through the decision, the individual donates a part of himself to its other who needs it.

The intention involves two individuals of a same universal and takes place in the true living time.

Mirroring takes place in the period of potency, when the being R unfolds and constitutes its space, between a donating and the successive receiving act: potency  $\equiv$  mirroring.

Potency is thought.

To mirror is to love.

The decision is the choice, made by an individual, of one of all possibilities and is guided by mirroring (by love).

The potency, canceled by decision, is converted into energy, that is, into the qualia of consciousness.

Thought is the evolution of brain matter, which corresponds to the evolution of its potency, and therefore, as evolution, it is dialectical, its movement is that of Hegel's dialectic.

Mirroring is fulfilled through donation  $\equiv$  love is fulfilled through charity.

### B. The reflective intention: the movement, the mechanism, the animal, the perception through senses, the Consciousness

Everything emerge reflectively from the innumerable intentions in the originary relationship between the Universe and Amorone. In the period of potency, the Amorone mirrors in itself the Universe giving place to the entire space of universe where unfolds its entire potency. This intention gives place to a single substance in the form of potency, entelecheia and energy, which is the universe. There is nothing more.

There is not an absolute potency that does not change, the SHAPE of forms. But ideas, logic, mathematics, universals, the laws of nature, are not in themselves, are not substance, are not subsisting metaphysical entities. They too, like everything, emerge reflectively.

Each universal has its own space with its own set of dimensions. The reflective individual, on the basis of the intention in which it fell, can make himself the son of innumerable universals. The reflective intention is the relationship between two reflective individuals of a same universal that, as reflective, have a body which appears to external observers and evolves although each individual, as such, is in potency in its own intention. Similarly, the object of gift, if reflective, has a body which appears to external observers and evolves traveling with a finite speed although, in the intention, it is exchanged instantaneously. In fact, the elements of the intention are the two individuals and the instantaneous exchange of their energy, everything else, including their bodies, appears reflexively in the background, and what is reflective constitutes the context of the intention, but it is not an element of intention.

The whole world can be seen as a single orginal consciousness.

With life the other is born. It was born as a living mechanism, as an individual person, which leaves the immediate world, of which, as a person, it is no longer an immediate part, reflecting the world itself through mechanisms, which are its own sense organs, and which now, getted out of the world, has only its own reflected representation of the

world, towards which it can relate through its body (entelechy). The individual person is therefore a new level, the first level that comes out of the immediacy of the world and is outside of it. Reflection now takes on meaning and has a role, and a founding role which is that of representation, only in so far as a reflective individual person is born. The reflective individual has a body (entelechy) which, as such, has its own potency (dunamis). Its body immediately belongs to the external world but, as a reflexive mechanism, is the bridge between the person and the cosmos with which he is always in relationship. The reflective person stand out from the individual immediately immersed in the world for making his own representation of the world that is now external. The representation arises from the same potency of the individual that turns into energy in the relationship, as the world reflected through the senses interacts with the potency of the person becoming representation or, more precisely, awareness of the representation of the external world. This same potency, limited to a body (a mechanism), can in turn interact on the representation of the external world. Only an individual person now has a self, his own potency and can make decisions as this self. The individual is a potency that has made itself independent of the rest of the potency of the world to which it belongs. The person lives and builds its own story, has its own potency which is constituted as the person's subconscious. His senses interact with his potency and his decisions interact with his potency as well as with the outside world. The person is in himself, like every individual, threefold: entelecheia (form), potency, energeia. As a mechanism immediately immersed in the world, it is subject to the physical laws of Darwinism, as a potency that has become progressively independent by separating itself from the world with its own reflective representation, it is a person. The temptation of the person is to increase more and more this potency, which is his own self, without limits, going beyond that of others, to the point of dreaming of taking over all the potency: becoming God.

Each reflective individual evolves as constituted of parts (evolution is the fruit of the reflection of the parts), consummates as a person (himself) involved in an intention.

A self is not a form, but a body that has a potency and that updates instant by instant transforming itself, thus modifying its body and at the same time its potency, evolving and making its history.

Everything is in the body, both its memory and its potency.

The individual perceives his energy. Energy, fruit of the consummation that transforms the body and the world with which it interacts, is to appear and appear as, and is, the Qualia.

The reflection, which we carry out through the mechanism of the senses, is energy and therefore Qualia. The senses of the animal can be defective, and therefore malfunction or not work at all, for example we can be deaf or hear bad or be blind or color blind, but what we perceive is not a creation of our body, but they are the Qualia, and these are universal. They are the alphabet of universal consciousness. The red, any given sound, are Qualia and are universal and appear to us. In the same way, each animal has its own potency that evolves simultaneously with the evolution of its body, decision after decision, energy after energy.

Each animal is a historical instance, a living body, it is not a form. A living body means that it has a potency as a living animal and has a memory, and the body occupies a place in the universe at all times.

In this way, in addition to the universal and immediate consciousness in which all the components of the matter of the Universe participate and which is constituted by them, the reflective consciousness of animals is born.

When an animal is born, a new consciousness is born, which is more, which does not take anything away from universal consciousness but is added as something beyond and more. It's a creation.

When an animal dies, a conscience disappears.

The individual is an instance of a Universal that consummates and relates as an instance of that universal.

The potency of the brain turns into energy during the relationship with the external world and becomes consciousness.

Memory is reflective. Movement, Evolution and history are reflective.

Mirroring Potency and reflection are dual, one is the form (the universal) and the other is its fulfillment (an instance), one is the internal of the intention the other is the external, one is interior, existential, primitive, the other is exterior, objective, appearance. The scheme of intention and mirroring conveys the basic structure to potency, and the nesting and the stratification of intentions on ever higher levels, generates new entities that are increasingly structured, with the corresponding dimensions and laws.

All the matter, in itself, is immediate thoughts, immediate life. Mechanisms, operators, in itself, work not directly for the sake of consummation but always as a medium. They are forms of potency and as such they are constrained thoughts and passive life.

Analogously, behavioral repertoire of animals, tactics, strategies, in itself, work not directly for the sake of consummation but always indirectly, as a medium.

Brain itself is a mechanism, it is a generator of mirroring potency. It is plastic because it is plasmed by its own mirroring since it memorizes all its own mirroring, either because it is induced by senses or because it is induced

for the sake of consummation. The brain evolves and works with the same rules as Darwinism for the purpose of consumption. Darwinism is the universal mechanism of evolution.

The animal individual, existentially, is his own consciousness, and this is his thoughts where thoughts are also understood as sensations. Reflexively it is his body by which he reflects and has thoughts. Nevertheless, the individual has thoughts. The individual perceives is thoughts for the sake of consummation inside its intention. The individual is therefore the lover, behind the mirroring potency or thoughts, in the intention relationship with its universal. As lover, it is free to choose its own universal.

The animal, in itself, exits from the cosmos as one and becomes an entity external to it. Their body is a mechanism. Animals don't mirror, but reflect the external world with their senses that are mechanisms. Conscious life is the ability to transform the reflection of the external world through senses in mirroring potency inside the brain and the mirroring potency inside the brain in reflection on the external world through the body. The brain is the seat of a huge mirroring potency. It loves because it mirrors and it mirrors what it loves, it thinks thanks to its mirroring potency, it lives since it is in intention and therefore freely decides and consummates, but it lives in a reflective world. They can therefore have thoughts and select and evolve their thoughts through mirroring, and can actualize their thinking, grafting the mechanism of one's body, matching the mirroring of their body to their thinking.

Only a reflective individual, who lives reflective intentions, can see the reflexive movement of the exchange of gifts of a reflexive intention or the evolution of a reflective body. Only a reflective body maintains its identity, constitutes itself as "this" individual, and evolves and has a history. In fact, its history, its evolution, is given by the progressive and continuous actualization of its parts along the lines of the present in progress. It is actualized and evolves not directly, as an individual, in itself, but indirectly, as it is composed of parts in turn composed of parts and so on up to the elementary individual. Its own movement is the reflection that fills its own potency taking its form, because only potency has movement in itself. The reflection in itself, as actualization, has no movement but, taking the form of potency, it assumes the movement that it lacks.

Potency is first, reflection follows by actualizing potency. But potency is alive, it is thought that has a purpose and lives in an intention. Consequently it presupposes the relationship, a loving individual and a loved individual. We can understand nature because our thoughts are of the same substance as nature. Nature is potency in action and our thoughts are potency, the same potency.

Potency is therefore the form of reflection, which is the phenomenon, which is actualized and becomes conscious through the senses, appearing what is already in itself, that is images and colors and sounds. The potency is already immediately, in itself and for itself, image colors and sounds.

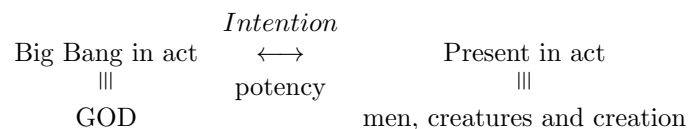
Nature is the potency of a first individual that places all other individuals intentioning them. What is elementary cannot have a history. It must place the compounded individual who rises reflexively from his potency and enter into intention with it, becoming in turn an individual and building history together.

Physics, Mathematics and thought are daughters of Potency. This is the reason why Physics "The book of nature is written in the language of mathematics" and we can know them.

Potency therefore has its own structure, and this structure was what Plato investigated.

But ideas, logic, mathematics, universals, the laws of nature, are not in themselves, are not substance, are not subsisting metaphysical entities. They too, like everything, reflectively emerge from the innumerable intentions in the originary relationship between the Universe and Amorone. Universals are only contingent words and logic and mathematics and physics are the contingent language in the dialogue between God and living beings. They have no truth in themselves, but only utility and suitability for the purpose.

This structure unfolds from the scheme of intention, and arises only reflectively. If we look at it more closely, it vanishes in the uncertainty principle, that gives way only to freedom of intention. There is an intentional relationship between the Present in act and the Big Bang in act. The Big Bang determines the present just as the present determines the Big Bang.



The Universe evolution is governed by :

1. teleology of intention

- dialectic



2. physical laws: arise reflectively from the intention schema:

- conservation of energy.
- the maximum entropy production: Those who have more donate to those who have less.
- Darwinism: *suitable*  $\equiv$  *possible*  $\equiv$  *Potency* : what is more suitable is more possible.

individuals, although they have a place in the world, transcend it. In fact, the world is only the word of the dialogue between God and the living individuals.

### C. The sin and the mystery of evil

In the immediate life of matter, whichever intention is always the fulfillment of love through charity and each individual is in intention with its universal. The reflective individuals, vice-versa, in choosing its own universal, it can choose not in its entirety but only a part of it. In the consummation, freedom lets us decide to say no to being. Refusing love, and therefore being.

The universe is the immediate moment and places the other, the reflective individual, who lives by reflex, the reflexive moment. With his decisions, the reflective individual can join the universe by becoming one with it, or he can deny it, refusing the being.

## V. INTENTION PHILOSOPHY

We affirm that whichever existent exists in the intention, since the intention is primitive and the nesting of intentions gives place to new reflective intentions of higher level. As a result, the sole principle of intention physics is not restricted to the bottom intentions, but it extends to whichever intention to whichever reflective level it could emerge, as well in the range of quantum mechanics or standard model, as in the range of general relativity and cosmology. Indeed, no one only process of our everyday life is not governed by it.

The first Intention is that between the Universe and Amorone. From this first intention reflexively arise all the entities of the universe and its laws, and finally the reflective animal. There are no laws in the Single Principle. The so-called "iron" laws of logic or of nature are nothing more than the reflective appearance on a fabric of underlying consummative intentions. The quantitative emergence from a multiplicity of acts, each new, free, dictated only by love.

Being is not the totality of form, immutable in its perfection, to which nothing can be missing and therefore therefore still, immobile. This is the error of those who consider being as an absolute space by itself, as a space that is substance. Potency is not infinite, eternal. There are no Platonic ideas per se, subsisting metaphysical entities.

The space, and therefore the form, rests on the NON and therefore they are always an attribute of the intention. Reflected in nothingness, being appears as potency, it is reflected in nothing (man) vivifying it and it appears as one space of power ordered by an ontology within which it takes ground and passes the word and questions it. Potency is thus a home only within which thoughts, words, entities and everything that expresses, represents, knowledge are finally possible.

The infinity of the intention, however, is not the cancellation of movement, novelty, freedom, does not mean the exhaustion of variety in the copresent totality, since space is not substance, it does not exist in itself, but it is always space of an individual in an intention, and in the surroundings of the individual space can vary between one instant and another, and can vary in infinite ways precisely because the intention is movement in that it is giving oneself to the other. The intention then adds a spiritual center (the individual Foundation) and a temporal dimension transcendent to space, which becomes new around the other at every moment. There is no eternal and unchanging firm space, totality of forms, but the historical space of the instant where words take root. The beginning is not the space or the matter, but it is the individual in the intention. The space, and the form which fill it, is not substance, it is the image that an individual endowed of interiority receives in the intention with Foundation, source of the life, which creates and maintains him in existence.

As engaged in intention with Foundation, we become individual and receive the life incarnating in the physical space of the intention. The physical space is therefore the language and the context of this intention.

Dialectics is like an enchanted fairy tale without a heart. It does not know that it is only the external surface of the wonders of love. Ignore the living heart that beats inside: it is without charity. Indeed, to the Hegel's dialectic

of mirrors, inside the Idea, we substitute the mirroring dynamic of Intention between two distinct individuals that freely make themselves each mirror of the other. The sole principle, which must mirror itself in everything, even if, in itself, cannot not be beyond the range of objective experience, nevertheless it must gain its legitimacy from its being an existential, directly at the hearth of our consciousness. Better still, it must be the sole principle of the true existential philosophy, the sole capable at last to unify interiority and exteriority showing that objective experiences correspond to subjective experiences as the external to the internal, being each the reflection of the other. The seed of our external world is the same seed of our consciousness, and we know, in the innermost of our consciousness, that to live is overcoming abyss separating ourselves from the other. The laws of physics, at last, are only the emergent flowering of the seed below, and this seed is love fulfilled through charity.

The Unique Principle of all that exists, that is, of all inorganic matter and of all that lives, of language as well as of thought, is the love that is fulfilled through charity and which we call intention. Everything is a fabric of intentions and besides intention there is nothing else. An intention is cyclical and takes place between two conjoined individuals, one of whom is the universal of the other who makes himself his son. The intention consists of two moments connected by the decision that finds space between them:

- the moment of separation, in which the father and the son are distinct from each other in the instant that precedes the consummation. In this moment:
  - one yearns to give a part of oneself, one's body, to one's Universal The donor does not see the other, he must have hope, moved by love he must go out of himself, he must jump in the dark towards the other he does not see to give him self.
  - the other yearns to receive a part of himself, of the body of these, from his Universal The recipient does not see the other, must have faith, moved by love must listen, must be seduced by the other, open up to the other, welcome him.
- the moment of union in the spirit that occurs in the decision through the gift of oneself, of one's own body. At the moment of union, distances are canceled, spacetime disappears and is replaced by real time, the time of the spirit. The time of the spirit is what is placed in the middle between two different space-time instants.

The decision, inherent in the movement of intention, is the only real movement and as such must necessarily be immediate: if it were mediated, it would have to be mediated by some other more original movement. At the basis of the movement of intention, which is giving or receiving, there is therefore the decision that is immediate. In its originality, decision and giving and receiving are three moments of a discreet whole: the entire movement of intention is therefore immediate. It is the leap that makes the power go from one state to another.

The individual then, in placing himself in an intention, freely chooses the universal of which to make himself an instance, chooses his own essence. It exists because it is kept in intention, as a point, that it dresses itself in universals. The Universal, however, always appears personified, it is not something abstract or ideal, but it is concrete in that it is an individual: the individual to whom the other individual tends to give and receive in order to join it. The Universal is at the same time the other of the individual and its essence. The other in the act of decision when the individual separates from the power, its very essence when the individual outside the decision returns to his power. In consummation the individual, in joining with the other as something, does nothing but rejoin himself, but since this something has been chosen, in consummation the individual chooses his essence. To be more precise, the individual does not choose his essence, his essence is already given, he is one and he cannot create another, but he chooses himself in his authenticity by opening himself to the whole Life or, closing himself to it, a more or less driven mutilation which goes as far as falsification.

The Spirit is the unity that in space-time breaks and leaves its trace: the split line that becomes a mirror axis of symmetry. The two faces facing each other, previously united, are now like two lovers, each reflecting the other. Each of the two parts, in separating, carries the image of the other in itself, unites the essence of the other to its own: in this way each becomes a mirror of the other, sees itself reflected in the other, and the two form a relationship that has the split line as its axis of symmetry: each sees the other as his own image reflected in this line. The individual exists as a mirror in that he reflects outside what he has inside and vice versa. The individual, therefore, exists on one side externally, as he has fallen into the space of his universal where he takes up a position and makes his own, on the other inside, as a soul.

The NOT vertical, is the NOT ontological between the "being" and the "other by reflection": the mirror. These is the shadow placed infinitely of the first Trinity. This shadow is what we can indicate with the name "not being". This "not being" is not beyond "being" or within it. It is a darkness that inherits the WE as its extreme attribute, as the limit tending to infinity of being. Nothing, or "not being", cannot be the "other", because the latter should be "being" in order to be "other", but in this way it would end up being the "being" itself and not the "other". The

"other", then, can only be "being by reflection": it can only exist as "what has being" without being able to retain it, have it when it accepts and reflects it. This extreme form of being is the "other by reflection" that can only live like a mirror, but live with love, and love, which is charity, presupposes life and the free gift of self. This nothing, placed and held back as touched by "being", exists as a living, free mirror, and is made to love. To reflect the love from which it arose. To be part of the US of the First Trinity. The NOT horizontal is that between created individuals.

In the intention that binds them, the two conjoined individuals are each other's reflection. The thought, in its search for the foundation, in the clear area to which the paths leading to it reach, encounters the dialectic of mirrors: it observes the one and sees the other reflected in it, then turns to the other and finds you in return the first. But mirroring, reflecting, is not the essence of an ultimate substance, the point of arrival, instead it is the miracle of love of an individual who freely makes himself a mirror of the other. The two merge in spirit, in consummation, but this is only a moment of the two individuals who remain two within an intention. A new word can then emerge reflexively, quantitatively, from the number of consummations between the two parts conjugated in the intention. But this new word is not the overcoming of the underlying level, but it is the instrumentalization, the nesting and the stratification of the intentions between them which thus give rise to the intentional fabric through which God speaks to us.

From this mirror symmetry it must not be concluded that the two are the same. The two merge in the spiritual time of consummation as they separate in the space-time instant, but they are always two distinct individuals. Distinguished from a NOT. In a horizontal sense, the individual is NOT the other individual, in a vertical sense, the individual is NOT his universal.

The nothing, the other as an infinity-tending limit of being, whose action is closure or acceptance:

- arises by opening up to the love of God, in which it finds its foundation
- accepts or falsifies its meaning

Only love (is being) can be nientified (in nothing), only nothing can nientify. Nothing can only reflect love, and in this live, or nientify love, and in doing so die.

As reflective person, we are not being but nothing. We have the being. We are not God, we have God. We have a body, we have sensations, we have thoughts, we have emotions, we have moods, we have life. Being nothing means having being from Being, a gift that can be accepted or refused by nientifying it. Love gives itself to nothing by placing it as an individual, making it the recipient of love.

Nothingness is not a constituent of being. "Being there" (dasein) is not being, being does not belong to him, but is continually given to him. "Being there" is like a mirror that reflects this life-giving energy. The individual cannot therefore nientify the being that is the Foundation or the energy from it, but can open or close to it. The word nientification, with this warning, must always be understood as a filter lowered onto being, or as the closing of "being there" to being. The nientifying of nothing does not have being as object, but consists in opening or closing oneself to the being that is given to it. And since being is his life, nientifying corresponds to suicide. Being does not contain the nientification within it. Nothing is not a constituent of being.

Thus, nientification starts from the animating principle, which is love, and from the general structure of charity in which it is expressed.

If you make the mistake of considering the individual for himself, abstracted from the intention that poses and maintains him, then it can be said that Existence is before the essence, as Sartre claims (see Jean-Paul Sartre (1946) [12]).

But the individual exists in that it is placed by the Foundation in an intention, as invested with love. The individual cannot exist outside of an intention, and an intention unites the Founder and the founded placing them in the same species. Being there comes into existence already endowed with an essence, mutual that of its Foundation, reflects it. This essence is love. The founded individual is then free to amputate up to totally distort his nature. Existence, then, is not before essence.

[1] *Parmenide, On Nature*

[2] *Plato: Parmenides (IV century BD)*

[3] *Aristotle, Physics*

[4] *Aristotle, Metaphysics*

[5] *Plotinus: Enneads (250 AD)*

[6] *Proclus: Elements of Theology (V century AD)*

[7] *Giordano Bruno: Cena de le Ceneri, 1584*

[8] *Giordano Bruno: De la causa, principio et uno, 1584*

[9] *Giordano Bruno: De l'infinito, universo e mondi, 1584*

- [10] G.Galilei, Dialogo sui due Massimi sistemi del mondo
- [11] *G.W.F. Hegel, Logic (1830)*
- [12] *Jean-Paul Sartre: Existentialism Is a Humanism, Lecture given in 1946*
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