

THE 5D UNIVERSE OF SPACE-TIME SUPÆRGANISMS.

"A human being is part of the whole, called by us 'Universe'; a part limited in time and spatial information. He experiences himself, his thoughts and feelings as something separated from the rest -- a kind of optical delusion of his consciousness." *Einstein*, on the entangled forest man cannot see - and its 5 elements, 'space', 'time', 'scales' of parts and wholes, 'entropic limits', and 'languages of the mind'

The Organic Paradigm of Social Sciences

In history of science there have been always 2 schools of thought. The simplest view of a mechanical Universe ruled by a single language, digital numbers, which happens to be the language best spoken by machines. Because a machine is not self-reproductive, it needs an external ensemble which is performed in this view (but hidden today in its explanation) by God. And so man speaks the language of God, makes machines like God and thus the theory makes also man, the superior species.

That was the view of science of Kepler, Newton and the first founding fathers of science: 'God, the clocker, waited 5000 years to find an intelligence like his, me, to understand his work' (Kepler). Yahweh also sent comets thought Newton, which dedicated most of his time to biblical studies, for him to learn gravitation. *A mechanical model is deist, because it needs God to make the machine.*

This view has been 'powered by power' - machines which are fast evolving organisms of metal that imitate human organs, give us added energy and information power. So this 'realpolitik' of 'big science' needs no 'knowledge-proof' as action proves it. Those who believe in mechanism, develop machines as their cultural idols, and acquire power to distribute information through machines faster than those who 'reason' on the second more complex but true model of reality:

The super organism. A system that reproduces itself, so it is self-sustainable, and doesn't need the concurrence of God. This is the view that starts with Aristotle and his 'Organon', follows through to Leibniz and his model of 'relational space-time beings', made of a finite number of time cycles and vital spaces with 'vis viva', momentum, and goes through XIX c. disciplines, from Darwin's biology to Spengler's super organisms of history and ends in systems sciences and the formal models of the fractal organic Universe, which I advanced during my tenure of duality at the International Systems society at the change of century.

In those conferences I also advanced the social, organic model of history as the super organism of mankind where the human being is a citizen cell organized by three physiological networks that must be designed with the laws of super organisms, which are:

1. *Cellular units.* These are cells in a human body, citizens in a human society.

Networks of energy or vital space; provided by Gaia, a super-organism made of living beings, joined by a common network of visual information and networks of life energy, gathered around her 'river veins'. Since Gaia is also the living organism that hosts the social organisms of Mankind.

2. *Networks=Languages of* This is the nervous system that organizes cells in a body, or the verbal/visual information that organizes human societies through laws, ethics and art.

3. *Networks that reproduce energy and information.* These are sexual systems in individuals; and economical networks that reproduce goods and cultural networks that define how humans reproduce in societies. This is the blood system in a human body and the economic networks of production & transport in a society that favor 'WHealth', that is, goods that satisfy the needs of the '3 physiological networks of life-existence that make us human beings, whose 'proper frame of reference' (left) is NOT based on financial values, manipulated by financial institutions and companies that set prices, but by 'biological true values.'

Of all the elements of a supærganism the most important is the head of information and its languages of perception of the universe, which are by definition, selfish, self-centered as they portray the universe from its survival subjective perspective.

All systems of nature can be modeled as super organisms of a certain scale of size, ruled by the scalar laws of all systems of the Universe, that co-exist at atomic/cellular/individual and gravitational/organic/social scales. As such their 'cycles' followed the scalar metric equation of 'Deep time' (Hutton, who discovered in geology, inventing the name of super organism for the Earth): S (space size=energy) \times T (frequency of information clocks) = Constant, which means larger systems LIVE slower time-cycles than its parts, which STORE the information of the system in its faster frequency of time clocks. So physical organisms are coded by quantum particles; biological ones by genes and human systems by memes that construct those super organisms of history, from birth as a fast seed of information (crystal cell, semen, prophet with verbal memes) which will reproduce into similar clones (crystal units, multicellular organisms, identical beliefs of human beings in nations, civilization and religions); and become connected by informative nervous-political-gravitational and reproductive, blood-economic-electromagnetic systems... thus finally emerging as a larger superorganism. Such super organisms then will be living 3 ages of increasing information, as the informative systems dominate the whole, and absorbs its energy, warping the system till its exhaustion and death (galaxies feeding its informative gravitational black hole, nervous systems wrinkling the vital body cells, human elites persisting the reproductive working class), which is an entropic explosion of that warped/wrinkled/absorbed energy: big-bang, $m=e/c^2$, death, war).

Such is the fractal Universe in a nutshell. And the application of those laws of general systems, which I systematized in my youth, to the super organisms of history and economics the scientific basis of this paper.

We will have therefore to introduce 20 pages or so of the general model to apply its laws to the study of the superorganism of history and its mind, the wor(l)d, starting with the concept of an organism, in which several planes of the 5th dimension co-exist together allowing parts to become wholes through those networks, the essence of an organic definition of reality.

5th dimension metric and the nested super organisms of the Universe: Δ -Scales.

When we google the 5th dimension one gets surprised by the quantity of speculative answers to a question, which is no longer pseudo-science, but has been for two decades a field of research in systems sciences rather than physics (: no, the answers of google, considering the fifth dimension the upper-self etc. seem to be very popular, but are to 5D science more like a medium in earlier XX c. talking about the 4th dimension as astrological awareness, for lack of understanding of Einstein's **metric functions** of the 4th dimension).

This is the key word that differentiates pseudo-science from a proper scientific description of a dimension of space-time, *the existence of a metric function that describes a dimension and allows to travel through it*. Why the 5th dimension metrics are not well known in modern science has to do with the fact it is not researched in physics but systemics, the mother discipline of all sciences of information, far less popular than physics; and the proprietary feeling physicists acquired on space-time matters since Galileo defined its 3D metric function $v=s/t$ completed with Einstein's 4D formalism, which makes difficult to spread the knowledge on space-time acquired on other disciplines. The arguments still raging about evolution, the fundamental theory of time in terms of information, as the 'arrow that defines' the future of species but has nothing to do with Relativity and locomotion is a clear case of that difficulty.

Indeed, we know since the XIX c. that the creation of the 'future time' of an existential entity is not ONLY mediated by the arrow of **locomotion** and entropy studied by physicists with Relativity Metrics (Galileo's $V=s/t$ and Einstein's more complex formalism), but there is a second arrow that defines the 'future' of existential species - the evolution of its information. So time – *the changes=motions that defines the existence of any species*, has at least 2 dimensions, locomotion or ordered translation in space and a more disordered version, entropy (scattered motion that 'dissolves' the inner form of the system, akin to death)...

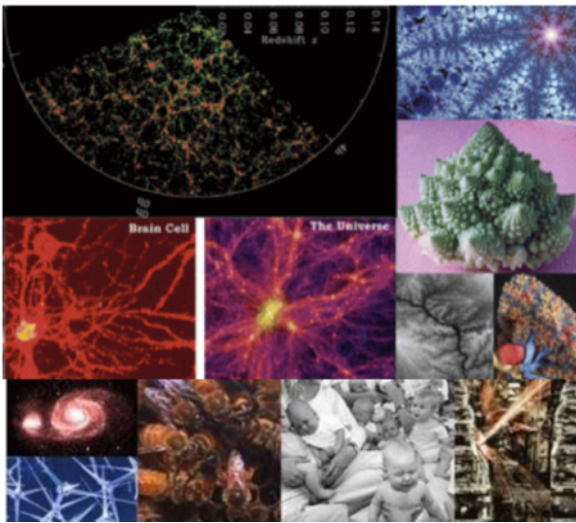
And in-form-ation, generation of form, inverse to entropy, as it requires the social gathering of parts into wholes; happening without external locomotions, as an internal trans-formation of **form**. This evolution of organic form as opposed to external change – translation in space, without evolution of form - is what systemics calls the scalar fifth dimension of time that it applies to all sciences, as all species evolve its form.

Specifically in systems sciences we model reality as an organic fractal of relative size scales, that evolve from parts into larger wholes, from particles into atoms, molecules, cells, matter states and so on till reaching the Universe, shaped by social and organic networks coded with information.

In the graph the Universe is a fractal that reproduces 'forms with motion', informations and then **organizes** them in networks and systems that evolve into larger organic systems creating the scalar structure of reality.

Thus we call *the sum of all those co-existing scales of parts and wholes the fifth dimension*.

Thus reality has a final key feature overlooked for too long: the co-existence of all those systems of space and



time in several scales of relative size from the smallest atom to the largest galaxy that put together create a dual scalar '4th and 5th Dimension of parts and wholes, which we shall call the 'social dimension of evolution' and the 'entropic dimension of dissolution'.

Mathematically then it is necessary to find a metric function to define this new dimension of spacetime. Since a dimension only exists when we can write a mathematical simple metric that leaves the dimension invariant when we change our parameters of space and time - hence we travel through it. (Klein).

This function, as all space-time metric functions, is simple. So we write using δ for cyclic time instead of t:

$$\zeta (\text{Lineal Size/ Space Volume}) \times \delta (\text{cyclic speed of its time clocks}) = Cj: \text{Constant Plane of timespace (ab.}\Delta j)$$

We call it a function, because as we keep exploring in depth, the concepts of Space and Time in all its varieties, we shall see it is the origin of multiple 'solutions', a whole family of function, from where we shall derive most of the logic relationships and particular equations of each science.

So according to those metrics, smaller systems in space have faster time clocks. And as information is stored in the frequency and form of those cycles, smaller systems have more information, coding larger ones: genes code cells, memes societies and particles' quantum numbers code atoms and molecules.

The nested Universe.



We shall use the metrics of the 5th scalar dimension to explain the fractal, nested Universe and its scales, shown in the graph. As 5D metrics balances the survival and symbiotic existence of all parts of the Universe, and all parts of a super organism, and defines 'what codes information' - the small being, and what codes energy- the larger whole, establishing the 'harmony' of all the scales of the

Universe, and explaining all its fundamental constants which are ratios between spatial volumes and informative clocks of temporal energy.

It follows from a nested structure and the search for creative, organic balances, a symbiotic relationship between the Δ -i smaller parts that have more speed of time clocks, which carry its in-form-ation in the form and frequency of its cycles, coding larger systems: genes code cells, memes code social organisms and particles' quantum

numbers code atoms and molecules. And the larger, $\Delta+1$ larger envelopes, membranes (static, dimensional view) or angular momentums (dynamic view as time=motions) which have more spatial energy and enclose and control in synchronicity its faster smaller parts, creating the co-existing scales and symbiotic cycles of super organisms in any system of the Universe.

For example, chips become smaller as they evolve into faster brains. Every 2 years a chip doubles its capacity to think, as it dwindles in size. Such process follows a generic law of evolution I call the 'Black hole Law', which computer scientists know as the 'Chip paradox' or 'Moore Law': maximal informative capacity= minimal spatial extension. The reason is obvious: to think, to calculate you have to communicate in-form-ation, forms between elements of any informative system. The smaller the brain, the faster the communication that takes place within that brain and the faster you can calculate and process information in a logic manner. And vice versa: larger wholes accumulate more energy and are stronger than parts, so they can protect and feed them. So wholes and parts co-exist in several scales forming super organisms.

The metric function of the fifth dimension of space-time (ab. Δ) defines 3 known scales of physical systems, with different quantity of information according to 5D metrics, $S \times \delta = k$.

Those metrics means information is higher in the smaller 'quantum plane' than in the larger gravitational one, and inversely the size of its physical parts is larger ins the Gravitational cosmological 'plane' than in the quantum one, with the human thermodynamic scale in-between.

The galaxy's 5D metric is immediate: $\$(c) \times \delta (h) = \text{Constant}$, as its largest speed-distance is light and its minimal unit of cyclical information, is the Planck constant of angular momentum, the unit of the *3 human physical parameters of **spatial size, cyclical time frequency and 'scale'** (Active magnitude): $h = \text{mass } (\Delta) \times \text{area } (S) \times \text{frequency } (\delta)$* . Which becomes the unit of physics, related to the unit of mathematics, the fractal point.

But as there is no reason to stop the scales of the fractal in particles and galaxies, there is a 'potential' fourth, $\Delta\pm 4$ organic plane defined 'above' the galaxy, ($\Delta+4$, dark energy world) and below the quantum world ($\Delta-4$, Bohm's quantum potential), which represents the larger cosmos.

According to the fractal, nested principle a larger organic system, encloses smaller nested systems. Thus the $\Delta\pm 4$ cosmos contains $\Delta\pm 3$ galaxies, which contain $\Delta\pm 2$ solar systems and planets, which contain $\Delta\pm 1$ thermodynamic organisms and matter states, described by the human Δ^0 mind languages, contained on our brains.

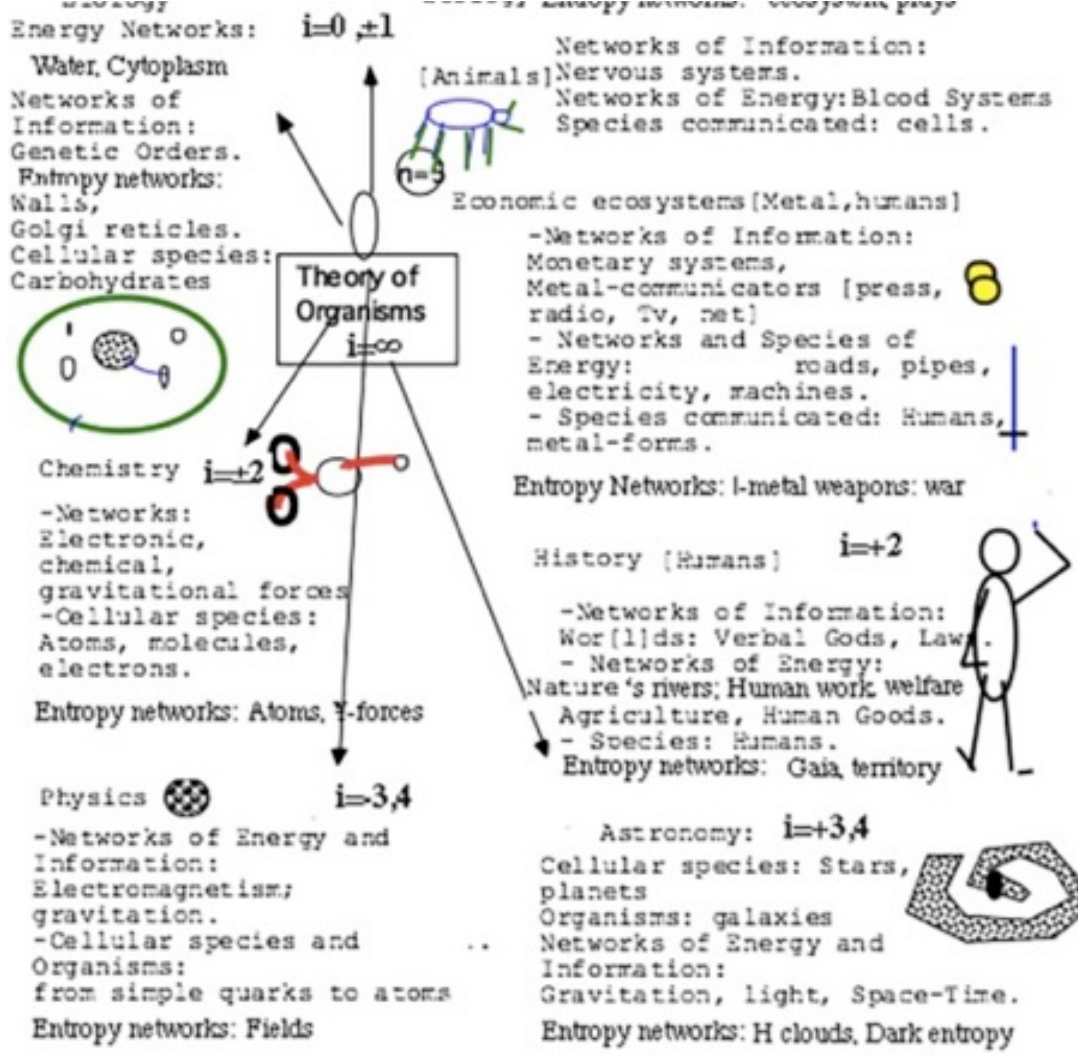
Thus bigger systems paradoxically are 'supported' by the smallest ones, in the same manner than within the nested planet, bigger mammals (whales) eat the smallest animals (Plancktons)

AS: organic properties extended to all superorganisms of space-time.

For all what we have said it is evident that we must add to the 3 canonical dimensions of space in a single plane of reality, now gifted with motion, hence 'dimensional motions' or dimotions; the fractal structure of the Universe in scales, which means to add two new dimensions. The canonical dimensional motion (ab. Dimotion) of entropic dissolution and death proper of classic physics – arrow of time, and *the inverse dimensional motion of parts that become wholes, of social evolution, of growth of information, as those parts emerge into a whole. We shall call this Dimotion, the most important of the Universe, the dimotion of social evolution, of love.*

How then it happens that parts become wholes is the key to depart from a mere abstract, quantitative analysis of reality and add the organic nature of all what exists, the dynamic interplay of parts that 'network' and connect to each other, forming simultaneous spacetime organisms, which synchronizes its clocks, emerge as a whole and develop all the intelligence and complexity of the systems we observe around us:

In the graph, we see the ternary network structure of the nested organisms of the fractal Universe as $\sim \mathcal{E}$ topological planes composed of 'similar fractal points' (atoms, cells, individuals) joined by 3 physiological lines=networks, whose 3 functions, distribution of locomotion, information and its 'combined' energy define the



3 conserved Dimensions of any system of the Universe. A final element though is needed to make sense of those superorganisms, *the still mind of information, mapping out the whole and controlling it to perform its Mandate of existence, Max. $SxT (s=t)$, to survive, grow and multiply.*

It's all in 5D metric equations, $SxT=C$ and its $S=T$ point of balance & equilibrium where the system reproduces as the two fundamental metric equations of all space-time organisms, which means many things, such as:

- Slow beings use networks of faster particles, which in physical systems are 'waves of force' in life beings, are

and networks with fractal branching and in human societies, networks of money and simultaneous legal messages. Yet all are essentially performing the same organic functions, we shall describe now as can 'translate' a light filling wave that penetrates lower planes, filling it till it touches particles, as a branching that 'speeds up frequency'; and a legal network that every citizen knows and obeys as a filling system of information, similar to a DNA network that all cells of an organism have in common. *Think always NOT in the differences of form and scale but in the homology of functions for the body/waves and particle/heads of each of the 3 superorganisms (working and informative classes in human societies), to see the unity of it all.*

The 2 languages of informative and reproductive networks: Bits of information and bites of energy.

It is important also to Understand not in pure abstract mathematical terms, but in logic, linguistic ones, the internal, dynamic nature of those networks, because only then we can proper understand how they work in advanced organisms of maximal information, the biological organism and the Historic organism, which belong as 'fractal systems' self-similar to each other, two the same specific type of organisms, we shall qualify as socio-biological organisms. A network, of informative nature, delivers messages of information to simultaneously coordinate the actions of all its parts; with its faster=smaller bits of information according to 5D metrics (min. spatial size x. max. temporal speed). While the networks of reproduction, the blood and financial system delivers larger bites of energy, which the organism needs to feed itself (when it is a healthy NON-corrupted superorganism as most of Nature, but not human societies, with an astounding level of corruption).

Indeed, the key to the full understanding of reality both in terms of energy but also in terms of information, as both are two sides of the same coin, called 'existence' is the fact that in the sentient Universe, each fractal point, atom, cell or citizen (physical, biologic or social systems) needs bits of in-form-ation, form, smaller in size of space, hence faster according to 5D metrics ($SxT=C$), but also 'bites' of entropic energy which will help the system to move. Networks are NOT some abstract 'fractal tube' but they exist to deliver 'energy and information' (SS:

form=language with a little motion=St-information and motion=entropy=TT with a bit of information = energy=Ts).

So a healthy superorganism will deliver to each 'fractal point' (molecules, cells, human citizens), two type of messages through two type of networks. We shall call 'generically' the 3 type of bits and bites of information and energy that each of those 3 physical, biological and social systems receive, 'particles, genes and memes' even if the words as usual in 5D sciences are slightly changed, and widened in its original meaning.

So with its specific variation, those are the two fundamental reproductive-'body-wave' and informative-'particle-head' bites of energy and bits of information of the fundamental systems of nature:

- In physical systems, the two networks are the gravitational faster network of information, which we humans do not perceive, as we are much larger beings with electronic networks. Its bits of information in this faster non-local network should be 'gravitons', components of gravitational waves. In physical papers we advance as the most likely particle state of those waves of information that 'position' the different physical systems of the galaxy, a gravitational tachyon 'neutrino' for multiple reasons, we study on our papers on physics.

On the other hand, because we do perceive it, it is much easier to prove that the energetic network of physical systems are electromagnetic waves, photons and its 'social, static state' as the elements of an electronic nebulae, trapped in the potential energy well of the atom. Thus photons and electrons become the 'energy network of physical system, molecules.

We shall escape then in this introduction further information on the scalar structure of those networks and how, as we 'grow in scale', what is a bite of slow energy for a smaller plane of space-time, *becomes for the larger plane's slower beings, a faster bit of information, in the amazing beauty of the harmonies between scales. So electronic 'food for atoms' becomes electronic information for biological organisms and so on.*

- Those biological organisms do have 2 fractal networks, the electronic, informative nervous system in which bits of electronic information moving along the myelin membrane deliver faster messages to every part of the organism to simultaneously synchronize its motions, so the body-cells act as a single form in simultaneous space.

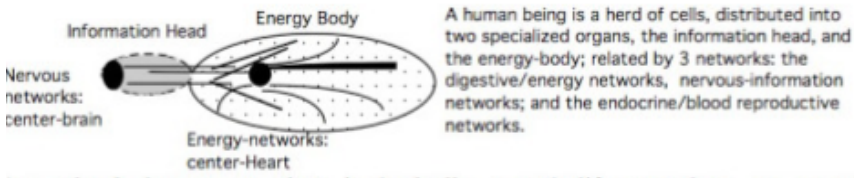
- But when we move into the bites of energy delivered by the blood organism, the network delivers to each cell the basic 'currency' language of energy that all cells need to move, called 'oxygen'. *It is an atom of slower motion than the electrons but due to its electro-negativity and readily availability in the atmosphere, with its capacity to kick with two OH- & H+ legs the water 'medium' on which cells exist, the perfect language of 'money' for the organism to start kicking its 'actions'.*

So we DO have in the next scale according to the perfect laws of harmony, the two basic biological bits and bites of information and energy, electrons and oxygens, and from then on, as systems become more complex, variations of those bits and bites occur.

The main category are mixed ST messages, which deliver BOTH a stick and carrot 'complex' to the cells and its big molecules, which are amino acid systems, of great simplicity called Hormones, starting from the simplest of them all, an NO molecule (which do relax muscles, its main message to the locomotion system, increases the pressure of blood, provoking sexual erection, the simplest message to reproductive systems and multiplies the neuronal activity. *As nitrogens are the clock atom of our mind-brains.*

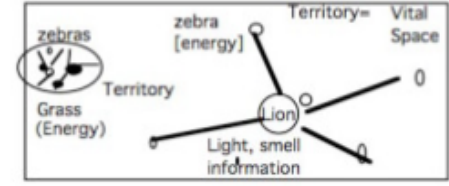
So finally more complex NO systems with a body support of carbon chains become 'hormones' which might have a 'higher informative message' (with more N, as in nucleotide molecules) or a higher energetic message (as in acids with more oxygen).

They form then the basic letters of the 'biological longer sentences that might accumulate information' in ever more complex molecules, as biological organisms are by far the more complex systems we know of.



An animal, human or plant is basically a carbolife organism, an organism constructed around a basic 'quantic species', the carbon atoms, and two other atoms very closely related to the carbon atom [nitrogen and oxygen, the 6, 7, and 8 element of the Mendeliev Table]. Yet those organisms are not the limit of social growth in the Universe of carbolife. Since those organisms associate in bigger systems, ecosystems [since they are not so well organized internally] where groups hunt energy and perceive information, in a single word, exist.

An 'animal ecosystem' is a population of carbolife species, related by networks of light information, and networks of life energy [plants, prey]



A life ecosystem is composed of several herds of species, each one with its own energy networks [vital-space=territory], which share the same informative forces: lights and smells the common network of information.

Finally a very important concept is the difference between an ecosystem in which multiple superorganisms co-exist, often in predatory relationships, vs. an organism in which only a type of atoms, cells or citizens co-exist, and is far more symbiotic as all parts love each other and share energy and information through its networks, over a common territorial space, as shown in graph.

Those three physiologic networks/classes/physical parts of ANY system of the Universe indeed as a fractal organism of infinite smaller and bigger super organisms, in a game of Russian dolls in which each of us is a 'island-Universe' within itself, made of smaller parts, and for that

reason each of us is also a part, cell/citizen of a social super organism, nation, religion or civilizations, which we do NOT see as a whole, as our cells do NOT see us as a whole, but DO exist as such.

What makes then the whole a whole? The answer is: the nervous, informative languages that communicate all the parts of the super organism and 'trace' within its syntax and value, its path of the future. And so we have talked first of it and will constantly coming to the bottom line of reality - the languages that construct the organisms of the world.

Let us then define with similar templates the 'stair of nested Universal supœrganisms, of the 3 stientific varieties – physical, biologic and social:

Δ+3: A galactic organism is a population of stars, related by energetic electromagnetic networks and gravitational information with a nucleus made of a swarm of black holes, and a membrane made of strangelet matter symmetric to:

Δ-3: An atomic organism is a population of particles, related by energetic electromagnetic networks and gravitational information with a nucleus made of a swarm of quarks, and a membrane made of electronic matter symmetric to:

Δ+2: A star organism is a population of electronic plasma, related by energetic networks of electromagnetism and gravitational information with a nucleus made of a swarm of atoms, and a membrane of photonic radiation symmetric to:

Δ-2: A light organism is a body of energetic waves over a quantum potential field of gravitational neutrinos, directed by its particle, informative photon state...

Δ-1: A cellular organism is a population of molecules, related by energetic networks (cytoplasm, membranes, Golgi reticules) and coded by genetic information (DNA-RNA.)

Δ=0: A human organism is a population of DNA cells, related by networks of genetic, hormonal and nervous information and energy networks (digestive and blood systems).

Δ+1: An animal ecosystem is a population of different carbon-life species, related by networks of light information and life energy (plants, prey) coded by instincts.

Δ+1: A historic organism or civilization is a population of humans, related by legal and cultural networks of verbal information and agricultural networks of carbon-life energy, coded by human memes.

Networks that share energy and information between parts and wholes that expresses the structural unity of all scales connect all systems of reality. Networks 'fill' space ad maximal to connect fully the whole with the parts, achieved in the Si=Te point of parallelism and self-similarity. *But they enter in a region of faster motion. So while Space 'tends to remain constant' in each scale thanks to filling networks, time accelerates.* So the 5D metric refers NOT to the whole Universe of 5D planes but to a given family of 'supærganisms' of which mankind in it 3 scales of 'biologic cells', human individuals and societies is undoubtedly a 'phyla'. When we go down in scales, the Universe 'enlarges' for a traveler that becomes smaller and accelerates its temporal energy.

The 2 languages of history: Verbal, legal, ethic 'nervous messages' and 'WHealthy money'.

So we arrive to the human social networks, which we anticipate are in the present form 'completely corrupted' by the existence of a parallel 'economic ecosystem' of lethal goods, weapons, and corrupted parasitic money. So it is difficult for the reader to understand how simple, easy, and efficient WAS in the past, before the age of Metal, in the Neolithic, or during the ages of social religions of love or could be in the future with a proper design of the social networks of money and law, a PERFECT superorganism of history as efficient as those we just have described. In such superorganism, there are exactly the same networks: Legal verbal just networks of bits of word information that shapes the informative and cultural systems of the wor(l)d. And a healthy form of money, delivered to each citizen cell as a Universal salary so humans have enough energy to survive and buy its natural welfare goods, which must be classified NOT by price but by its biological usefulness to mankind, reason why we give them positive and negative values in the ethonomic frame of reference, according to its use for the 3 organic parts of humanity at individual and social level.

The previous graph explains them. Since *vital, topologic, physiological network laws* are the most important to consider when studying History in Space, as the reader can observe in the previous graph, since History, the $\Delta+1$ scale of superorganisms of mankind follow all the exact laws of a lower organic plane – that of a biological organism, albeit, due to its 'primitive' degree of evolution is NOT a well designed organism, but one clearly 'sick', infected by 'lethal goods', with dysfunctional parasitic economic systems (as the language of reproduction of goods, money, is absorbed by a minimal number of people, or used to reproduce those lethal goods). And so the study of History as a superorganism has 2 different parts:

- On one side we can consider a perfect, efficient superorganism of History with the laws of vital topology just by imitating perfect efficient superorganisms of Nature, which *are the majority of them – History is in fact an exception – as we said a sick organism.*

- On the other side, we can study our superorganisms, as they have evolved in time, spotting their degrees of corruption and sickness of its 3 physiological systems, the life Earth, Gaia that sustains them; the economic and financial system that reproduces its goods, and the informative cultural and legal system that synchronizes its citizens cells. It is then when it will become evident what went wrong with 'human' history, one of many likely subspecies in the infinite fractal planets of the organic Universe that likely will not make it into the future...

In the next graph we can see a historic super organism based in welfare, whealthy memes that allow humans to survive, belonging to the 'ideal species' that would be efficient, provide to the 100% and survive...

History is a super-organism made of human cells, extended over a geographical body of energy called Gaia, the vital-space or body, where historic, social organisms evolve. In that sense, a human and a social organism, a nation or a civilization, have in common the elements of all super-organisms:

1. *Cellular units.* These are cells in a human body, citizens in a human society.

Networks of energy or vital space; provided by Gaia, a super-organism made of living beings, joined by a common network of visual information and networks of life energy, gathered around her 'river veins'. Since Gaia is also the living organism that hosts the social organisms of Mankind.

2. *Networks=Languages of information.* This is the nervous system that organizes cells in a body, or the verbal/visual information that organizes human societies through laws, ethics and art.

3. *Networks that reproduce energy and information.* These are sexual systems in individuals; and economical networks that reproduce goods and cultural networks that define how humans reproduce in societies. This is the blood system in a human body and the economic networks of production & transport in a society that favor 'WHealth', that is, goods that satisfy the needs of the '3 physiological networks of life-existence that make us human beings, whose 'proper frame of reference' (left) is NOT based on financial values, manipulated by financial institutions and companies that set prices, but by 'biological true values.'

So a human organism is a population of DNA cells, related by networks of nervous information and energy (blood). And a superorganism of history is a population of citizens, related by legal, cultural, informative and economic-energy networks 'predating' over a territorial geography, on the outer 'membrane' of planet Earth.

The role of true social science, its politicians and economists in a natural, efficient superorganism of history.

The same laws that apply to the study on how cells become wholes through its connection through physiological networks, of energy, reproduction and information, apply to the way humans are organized by energetic territories, economic, re=productive networks and informative, cultural, legal networks. So we can design a perfect superorganism of Humanity just by imitating the laws of social systems, in nature, which do construct perfect superorganisms all over the place where all cells receive enough energy and information to survive. As Humanity does not manage properly its social superorganisms, they become 'infected by lethal products, weapons and hate media which kills those social super organisms.

In the graph, we sum up the nature of History, the superorganism of mankind, and how it should be designed according to the biological WHealth humans need to thrive and survive, if the economic system was not an ill-designed parasitic system of debt slavery, born of the evolution of supremacist fetish gold cultures, in conjunction with the metal-entropic iron cultures that consider MONEY not what it is - a digital language of distribution and production of goods, no wealth per se, but a language that kicks the reproduction of those goods, as words do with human organisms and oxygen and hormones with biological systems - hence a language that should be delivered to citizens-cells to start production and consumption of welfare goods, with universal salary and NO-DEBT government issues (that is not need to return the money).

The science of economics *as a true social science*, is the science that should manage and design the 're=productive, blood-like system' of the superorganism of mankind in time, History, whose natural purpose should be to provide all human beings, citizens-cells of our superorganism, with the goods they need to survive and repress as blood-systems do the lethal goods that harm our body (weapons) and minds (hate memes and fiction thought that isolate us and create virtual 'mad-minds').

As those are the ± goals of all re=productive networks of Nature's superorganisms.

And so since mankind is a superorganism, and its legal, nervous political network and re=productive blood economic network its physiological systems, politicians and economists as 'doctors' of history should imitate Nature in the design of such efficient superorganism, which is extremely easy since in Nature no superorganism leaves one of its citizens-cells without enough food and welfare goods they need to survive, no superorganism allow lethal goods to reproduce within the body system, and no nervous system, emits unjust 'legal messages' which do not treat all cells as equals and synchronize its motions.

We explain those simple facts of nature, and the proper models of social sciences, in more detail in the graphs that draw the basic structure of the superorganism of mankind, History, including an 'economic frame of reference' that value positive and negative goods according to their biological utility, as organisms do.

In such a frame of reference, negative goods like weapons will have negative values, subtract from the GDP and be forbidden, because their use harm people.

And so the nervous and leukocyte, blood system would forbid and control its production.

While on the positive side we put the goods that foster the drives of life of human beings, making us thrive as individual and species. So a healthy, wealthy society with an efficient re=productive system would overproduce those goods.

And this would be done simply with the same system that organisms use to kick out the production of the goods its cells require: through a 'hormonal language' of orders controlled by the legal/nervous system that defined what to produce and what to inhibit and a common 'energy language', oxygen - money in the economic system, which is given to all cells to kick out their actions of consumption and production, within the restrictions of the legal nervous system.

As simple as that. So a healthy wealthy economic system would be similar to the social-democratic welfare economic systems of the European Union in the XX century or China, before both systems became corrupted and changed its economy to a model of massive reproduction of lethal goods, and lack of credit for its people, imitating the economic system of American capitalism, where a few parasitic private bankers choke their people of credit, welfare, healthy goods are chronically under produced and lethal goods are massively overproduced to control and harm its population, which the corrupted political system does NOT serve, as it happens in organisms, with their neuronal system that serves the body - *because the cells of the body can harm with pain the mind if it does not serve them.*

In our corrupted organisms of history, akin to a cancerous body where a few cells absorb all the oxygen-money for themselves and viral germs multiply and attack the citizens-cells, nothing of this simple, obvious organization that *happens in all evolved mammal systems, in all superorganisms of nature, takes place.*

2 scales of human superorganisms. Its collective mind: art and religion

Finally to notice that some of those systems do become immortal, as death is caused by an excess of in-form-ation, which warps them, when the neuronal, informative, financial/military people-caste on top do NOT parasite their body-citizens or reproductive middle class, exhausting it, and causing the cycles of wars, r=evolutions and holocausts that end up killing the entire super organism, from the bottom to the top of the social pyramid, as the accelerated 800 ± 80 years cycles of the image, which all civilizations and nations have suffered prove. so the trick to make a system immortal is both to organize it socially with efficiency and justice, feeding all working cells with enough energy and information to survive and to maintain it in the balance of the mature age, repeating its cycles without evolving an excess of information that warps and kills in the 3rd age the organism. Men are doing exactly the opposite, evolving further Algorithms of information that substitute our brains and multiplying entropic weapons that kill us. In the graph, the 2 super organisms of mankind at the individual and social level and its informative, nervous or legal/ethic networks, and reproductive blood or economic networks. Those 3 physiological networks collapse with germs and wars that kill civilizations.

Religions are the ethic/visual collective mind of HISTORIC civilizations, crafted by its informative neuronal class, the artists and ethic prophets that foresee its demise in the 3rd baroque age of the civilization expressing its angst in artistic forms and ethic books of revelation that try to halt the collapse of the organism. Abrahamic religions were all born of an ethic prophet in the 3rd age of the culture. Yet when they fail to evolve socially mankind, a culture normally ends in an age of entropy=war and death which provokes the dissolution of its individuals into chaos=freedom, and finally its reformation into 'particle-heads' with the memes of the new super organism. This is the collective age of mankind, but the superorganism that colonizes us is no longer human but the memes and virtual screens of the metal-earth and its machines.

THE 3 AGES OF LIFE

IF MEN ARE ORGANISMS THAT GO THROUGH 3 SEQUENTIAL AGES CONTROLLED BY EACH OF ITS 3 NETWORKS...

Blood, energy networks:  Endocrine, reproductive networks:  ...and in-form-ative, nervous networks: 

YOUTH, AGE OF ENERGY **MATURITY, AGE OF REPRODUCTION** **OLD AGE, THE AGE OF IN-FORM-ATION...**

The existence of any organism made of 'cells' of energy and information follows an 'arrow of future' that trans-forms energy into information in 3 ages:

'Vital energy trans-forms itself...' ... reproduces ...AND ...into in-form-ation... ...and dies simplified again into energy...

CIVILIZATIONS ARE ORGANISMS MADE OF HUMAN CITIZENS...

The difference between a human and a social system ...joined by energy networks: Nature... reproductive networks:social groups... and informative networks: wor(l)ds and art:

of spatial size and time length. Since they follow similar laws, as a culture is an organism made of human cells, its citizens that share a common verbal/informative/nervous network - laws and religions - and a collective, visual/spatial perception - its art:

THAT GO THROUGH 3 AGES, DEFINED BY THEIR ART STYLE, THE COLLECTIVE MIND OF A CULTURE...

EPIC, LINEAL YOUTH, THE AGE OF ENERGY **CLASSIC, REALIST, SENSORIAL, MATURE ART THE AGE OF HARMONY:** **OLD AGE: DECADENT, PROPHETIC, BAROQUE, IN-FORM-ATIVE ART:**

When a culture is born, its mind, its art, is young, energetic: its spatial forms are big, simple, lineal. Its temporal, verbal literature is romantic, epic, optimistic, like the mind of a child that nothing fears and wants it all.

When weapons quiet down or the prophet dies, once its expansion has reached a zenith the culture matures, and its art finds a balance between energy and information. The style becomes classic, realist. Society abandons war as its main purpose and returns to the sensorial pleasures of a world paradise based in love and human goods. Wealth grows and distributes beyond the warrior castes that dominated its youth: Spatial art becomes armonic and diminishes in size, palaces with human proportions substitute tombs. In words, logic philosophy and realist tales substitute poetry and epic. In religion mercy and love to God softens the strict prophetic canon.

But the tree of science brings new weapons and wars that destroy the culture and its elites Art becomes pessimist, without energy, full of in-form-ation, baroque, ornamental, small in space, eclectic, nostalgic, in search of a better past, with 'angst' for the future. The cultural mind is similar to that of an old man. Wor(l)ds however, reach a zenith of informative, encyclopedic knowledge: Logic becomes complex, paradoxical and time becomes cyclical, evolving from the lineal perception of youth. In fiction, it is the age of tragedies and comedies. In religion it is the age of prophets which are able to survive the death of the culture, creating the seminal wor(l)ds of a son-culture with the same cultural memes that will resucite after death:

THAT END UNDER FASCIST CENSORSHIP IN A WAR AGE

Finally, the culture dies when a new warrior caste conquers the civilization imposing a new cycle of epic, young art... 'You will protect me with your sword, and I will defend you with my word'

But often, as warriors civilize, the old culture replicates its memetic symbols on the mind of the conquerors. And a child culture matures with the same 3 cyclical styles of the old one

Roman culture inherits its artistic 'memes' from the Greek culture, reproducing them again in 3 cultural, political and social ages:

Classic Age: Republic, 'Carpe Diem'

Baroque, decadent age: 'Nero'

Epic Age, lineal art: 'Wolverine'

THE 3 AGES OF ART, MIND OF CIVILIZATIONS

In the graphs, the two levels of human super organisms, the biological genetic level and the cultural memetic level. Human super organisms, are the collective subconscious of the Earth, where each human is a cell-neuron of Gaia, the rivers our blood networks that sustain life, and the legal, ethic political systems based in love (love religions in earlier age, true democracies in the modern age) our collective brain.

It is the ideal structure of History as a perfect world sustained by Gaia, able to provide welfare goods to all its members as supœrganisms feed all its cells with blood-money and nervous just, synchronous legal motions. Why the world is not immortal is obvious. A new supœrganism predates over Life and History - the metal-earth.

The 2 super organisms of mankind at the individual and social level and its informative, nervous or legal/ethic networks, and reproductive blood or economic networks. Those 3 physiological networks collapse with germs and wars that kill civilizations. Religions are inscribed within the ethic/visual collective mind of its informative neuronal class, the artists and ethic prophets that foresee its demise in the 3rd baroque age of the civilization expressing its angst in artistic forms and ethic books of revelation that try to halt the collapse of the organism. Love Religions were all born of an ethic prophet in the 3rd age of the culture. In the graph, the blood-reproductive network of economics, the digestive-entropic territory in which we feed and the nervous informative systems of politics are parallel and in systems sciences must follow similar laws. So we should tailor economic systems with laws of medicine, and put the nervous system above, as all evolved organisms. It follows that as doctors are in charge of curing and maintaining healthy the social organism of cells, through the caring of its physiological networks (blood=reproductive, nervous=informative and digestive=entropic, energetic systems), to the point that doctors say all sickness are not of cells but of physiological networks, historians, economists and

politicians on charge of the theoretical and practical well-being of human societies should take care of those economic, political=legal-informative and Gaia=entropic, energetic networks of life that shape the human superorganism. In the graph below we consider in more detail one example of those superorganisms, the most important for mankind – the superorganisms of humanity, nations and civilizations. Organicism puts man again @ the center of all things, because we are the most perfect superorganism. So biology & medicine that cure the physiological networks of sick organisms, are the true sciences of history and economics, since the goal of both is to create perfect physiological networks of economic welfare production and just democratic systems of nervous control and pain to the brain-politicians that do not obey the organic laws and develop a wealthy, healthy, humanist world to the image and likeness of man, made to the image and likeness of the fractal organic universe.

We call cultures the mind of a super organism of history – a collection of verbal memes, based in the laws of eusocial evolution and its carriers, which act as cells of that ‘collective subconscious’ (Jung), that in the mystic age of the science of History were called Gods.

Networks that share energy and information between parts and wholes express the structural unity of all scales connecting all systems of reality. Networks ‘fill’ space ad maximal to connect fully the whole with its parts, achieved due to the parallelism and similarity of its Si=Te, bits of energy and bites of information.

How then it happens that parts become wholes is the key to depart from a mere abstract, quantitative analysis of reality and add the organic nature of all what exists, the dynamic interplay of parts that ‘network’ and emerge as different superorganisms, ‘Gods’, which are minds of civilizations, in the language of verbal thought, which is the memetic DNA of mankind.

LEIBNIZ V. NEWTON: SCALAR PLANES SPACE-TIME: ΔST

"According to their [Newton and his followers] doctrine, God Almighty wants to wind up his watch from time to time: otherwise it would cease to move. He had not, it seems, sufficient foresight to make it a perpetual motion. Nay, the machine of God's making, so imperfect, according to these gentlemen; that he is obliged to clean it now and then by an extraordinary concourse, and even to mend it, as clockmaker mends his work.' *Leibniz-Clarke Correspondence on the absurdity of mechanical models of the Universe*

“Talent hits a target no one else can hit; Genius hits a target no one else can see.” Schopenhauer

“Leibniz is right. There are infinite time clocks in the Universe, but if so we have to restart science from its foundations’. *Einstein*, on the infinite relational time cycles of reality.

ABSTRACT. The immediate consequence of the existence of an internal fifth dimension of space-time, made of all other planes=scales of spacetime of a being, its parts and wholes, which store the information of a system, is the obvious fact that if we ARE made of planes=scales of space and temporal energy.

We ARE the vital space we occupy and we ARE the time flow of existence we live between birth and extinction. It is the obvious, simple answer to 2 questions that have puzzled scientists for eons.

Where is space and time? And, why the main science of space, geometry->Mathematics and of time, Logic, are obeyed by all systems and entities of Nature. Now we have the proper answer foreseen by Leibniz and Einstein: We are broken fractal species of space and time, whose mathematical and logic laws all vital space-time organisms follow.

The underlying question of time\$space: Absolute or Relational, Scalar space-Time?

The fundamental question physicists wondered for centuries regarding the nature of space and time unfortunately was resolved as usual in favor of the simpler view: it is space and time an absolute abstract background of the Universe (Mr. Newton’s view) or are we made of ‘vital space’ that lasts a time duration, so we

are generated by the bio-topo-logic properties of scalar space and cyclical time? This is the choice of 5D 'stiences'. And its simpler version was called relational spacetime, sponsored by Mr. Leibniz.

A realist interpretation of the world we live in, which has never shown in any scale of reality such 'background' - ultimately a mathematical graph used in abstract by human scientists - considers that we ARE the vital space we occupy with our cells, and we LIVE a cyclic time duration between birth and extinction. So we are scalar space and temporal energy. And must evolve our concepts of both parameters, to extract the properties of vital beings from them.

ument thus reached its height in the beginning of science in the correspondence between **Newton**, the author of the absolute Cartesian graph of space-time drawn by God (his body in his own words) vs. **Leibniz** who considered absolute space and time an abstraction, and so he coined the concept of relational space - merely the adjacent pegging of similar forms in simultaneous space and relational time - the sequence of events which we relate causally with reason.

In Newton's cosmos, space and time provide a fixed, immutable and eternal background, through which particles move. Space and time are the stage of intersecting lines sketched in the illustration. Fact is this 'mathematical artifact' made with pen and paper by earlier physicists, called the Cartesian graph, useful to measure 'translation in space' is no where to be seen in reality. Unfortunately as time went by the graph became somehow 'real' as scientists' felt the 'mathematical language' created reality.

It meant also the invention of an absolute 'continuous space' and a single 'lineal time' that extends to infinity contradicting the obvious fact that all 'spaces' are broken, divided by membranes, and all beings have a finite time duration. Further on, as we kept exploring smaller scales of reality, we never found the drawings of God, not even a solid still substance, but always 'motions' tracing closed time-space cycles; since even particles turned to be also 'vortices of time-space motions'.

So the true, sound experimental and logic theory was Leibniz's who rightly considered absolute space and time an abstraction, and so he coined the concept of relational space -merely the adjacent pegging of similar forms in simultaneous space and relational time - the sequence of events which we relate causally with reason origin of the 'Scalar space-time' model of 5D in which are the space we occupy and the time we last – as in the graph where there is no longer abstract background lines.

This realist concept was NOT adopted by physicists despite its sheer evidence. *Unfortunately Physicists sided with Newton not with Leibniz on the question of what is space and time - an abstract background put by God or the substance of which we are all made; and so the conceptual jump would not happen.*

But if space is what objects occupy that distance between the red square's vital spade and the yellow 'circle' must have something. Horror vacuum comes then into place: indeed the Universe must be scalar. There must be very small parts between them, which we do not see. And that is what we have proved with microscopes - *as we probe smaller distances forms with motion, spaces with time-motions appear and there it seems no limit to the fractal scales of the Universe. It is the fifth dimension of space-time, which as the sum of all those 'planes of reality' includes within it all other dimensions.*

Next, to explain all this properly came Einstein. One of the fundamental discoveries of Einstein is that in our universe, there is indeed no fixed space-time background. In Einstein's theory of general relativity, which replaces Newton's theory of mechanics and the gravitational force, the geometry of spacetime is not fixed. Instead it is an evolving, dynamical quantity – a topology; and it is the substance of which reality is. So we are topological beings, geometries of space with motions of temporal energy.

What Newton called absolute space-time is not: Space is the sum of all discontinuous vital spaces occupied by different beings: $\sum s=S$ Lineal time, T the sum of all the finite life-death cycles of all beings $T=\sum t$.

"Behind it all is surely an idea so simple, so beautiful, that when we grasp it - in a decade, a century, or a millennium - we will all say to each other, how could it have been otherwise..."
- John A. Wheeler

Since space and time do exist and so if they are not in the background we 'are' vital space and cyclic temporal energy. The simple idea behind the structure of the fractal Universe is then to consider time=change=motion and Topologic, formal space= extension the 2 elements of which all beings are made.

Wheeler said 'Space-time tells matter how to move; matter tells spacetime how to curve'. More precisely *Spacetime is geometry in motion*. Time is change, the perception of change moves time; time is motion; space is its opposite, stillness, form, the information of temporal energy. And so it is all about 2 parameters: time=motion and space=form.

Look around you, all what you see are 'space-forms' with 'time-motion'. We are all space-time, forms in motion, 'in-form-motion', 'information', forms in action, play with the words of what you are.

Because both are always messed up in practical terms is often easier to measure, 'forms with a little motion', we shall call '**information**', **sT**; and motions with a little form, we shall call **energy**, **Ts**, and talk of beings made of spatial information and temporal energy, as *there is no 'yin (information)' without a little yang (energy)*. And call *the pure absolute motion without form*, **TT**, **entropy**; and the absolute form without motion, **SS**, **language**. So we can establish a gradation of combined space-time dualities, **SS<St<ST<sT<TT**, with a symbol < for an increase of motion over form, or 'arrow of energetic entropy', which we shall call 'past arrow' or arrow of 'death' as it erases information, devolving a system to simpler forms; and vice versa, an inverse arrow, **TT>sT>ST>St>SS**, with the symbol > of an increase of form over motion, or 'arrow of in-form-ation', which we shall call the 'future arrow' or 'arrow of life' as it increases information. It then becomes evident that the intermediate state, ST, with a balanced quantity of Spatial information and temporal energy, S=T, is the 'state of present', that doesn't seem to change as it is a balance of form and motion. And it is the preferred state for any system of spacetime in the Universe, akin to the concept of 'beauty' (balance between cyclical forms and lineal motions), of reproduction and creative communication (as it brings together the two poles of reality merging and combining them). This state is seek by all systems. So in physics we find it akin to the state of 'minimal energy' hence 'more form', in which most particles like to remain; in biology is akin to the age between adolescence of maximal energy and the 3rd age of maximal information, or age of reproduction, in which most people like to live and so on.

So we have 5 'states of space-time' of which we are all made that have topological, formal, geometric and temporal, moving properties. Because those states are messing 'dimensions of formal space' and 'motions of time', we have coined a new word, 'Dimotion' (ab. Đ, which is the capital of đ, similar to D of Dimension and T of time). The main property of a Dimotion is to be holographic, having both spatial dimension and time motion; and we shall soon find that Dimotions are closely related to the 3 classic dimensions of space, to which we must add a function=motion in time, as their study becomes a new discipline of knowledge called topological evolution.

In the graphs above if space is what large objects occupy, what they are, the distance between the red square's vital space and the yellow 'circle's vital space must have something; even if it is tinier. Horror vacuum comes then into place: indeed the Universe must be scalar. There must be very small parts between them, which we do not see. And that is what we have proved with microscopes - *as we probe smaller distances forms with motion, spaces with time-motions appear*

It is the fifth dimension of space-time, which is the sum of all those 'planes of reality' co-existing in organic scales, based in the simple metric laws that make smaller system run faster time cycles:

Some initial comments on the planes of space-time.

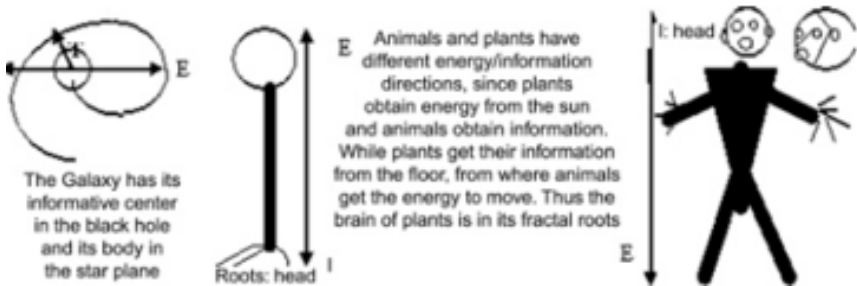
To have all the elements to construct reality besides S and T we need Δ, the scalar property of reality, by which 'space-time beings' are made of smaller ones and form part of larger wholes. We talk of multiple planes of space-time *because each scale has different parameters as parts becomes wholes, unit of a next scale*. We will explain this as the product of network formation, emergence and other disciplines of General Systems Sciences, of which

5D is a formal view. In mathematics ‘fractal points will evolve’ through network-lines into topological planes of space-time. This discontinuity between scales *is real*. *There are transition regions between planes, which can only be crossed with loss of information, therefore only by energy, by entropic motion, by ‘death’ of a system*. Latter we shall study those regions, evident in physical equations as there are asymptotic barriers – Lorentz transformations in the c-barrier; negative temperature in the 0 barrier; etc. What then the Universe conserves is easy to see: *the total volume of space-time of each scale; that is its energy*. We will also elaborate latter on those concepts. To mention now that the symbol Δ is both a visual reminder of the two different arrows of ‘growth in space, inverse to the loss of information’, and a tribute to one of the few predecessors of this work, in the formal arena – Wilson’s renormalization mathematical apparatus, which finally realized of those discontinuities using a symbol Λ , for the energy scale under which a measurement of *a physical parameter* is performed. According to Wilson every scale of the Universe and the fields of space-time that define them have its energy cut-off Λ , *i.e.* the theory is no longer valid at energies higher than Λ , and all degrees of freedom above the scale Λ are to be omitted. But Λ is *related to a size of space*. For example, the cut-off could be the inverse of the atomic spacing in a condensed matter system, and in elementary particle physics it could be associated with the fundamental "graininess" of spacetime caused by quantum fluctuations in gravity. The failure to remove the cut-off Λ from calculations in such a theory merely indicates that new physical phenomena appear at scales above Λ , where a new theory is necessary. As today only with the use of Wilson’s renormalization, which simply eliminates absolute zeros and infinities outside the scaling of space-time of a given plane, quantum physics makes sense.

RECAP. We are made of 5 Dimensions of space and time

Leibniz proposed a Universe of relative space-time beings where 'vacuum' did not exist, but reality was a nested chain of 'fractal' (to use modern terminologies) entities, as 'each point' hold a world in itself. Hence an organic Universe in which parts and wholes co-existed together to form those 'chains of beings'; without the intercourse of a God; as organicism was 'a sufficient reason'. Newton, a biblical pious believer, considered a single absolute space, the 'plenum-body of god', or void on which entities travelled through with a single clock-time for all of

them, set by God. This error is at the heart of our concepts of time and space, which are basically born of mathematical creationism, by expanding a pen and paper graph invented by Descartes to measure locomotions over which it traced those measures to the Universe itself. And so Descartes Spacetime graph became the graph of the whole Universe. *We must evolve our concepts of space*



and time to extract the properties of 'existential beings' from them.

SPACE: VITAL, 3- ORGANIC TOPOLOGY

“Henceforth *space* by itself, and *time* by itself, are doomed to fade away into mere *shadows*, and only a kind of union of the two will preserve an independent reality. Hermann *Minkowski*

This said the devil is in the details. So the next question is how many *types of vital space, we are made of*. *And the answer provided by topology which studies geometric forms with spatial dimension and time motions is only 3; which perform the 3 organic functions of all systems of vital space-time of which we are all made: A 4 or 5D Universe has only 3 'topological varieties' each one best suited to perform one the 3 organic vital functions of any physic or biologic system –gauging information (1D spheres, the topology that stores more information in lesser space, hence used in all particles and heads in the height dimension), lineal or cylindrical forms that move the system (2D, the shortest distance between two points, hence used as fields or limbs in the length dimension) and hyperbolic body-waves, a mixture of the other two topologies that reproduces the system and stores its energy in the width dimension (3D); which are similar to the 3 ‘conserved quantities’ of physics, angular, lineal momentum and energy, but not quite... as it is impossible to translate the ‘game of existence’, into the limited understanding*

and terminology humans use to describe it, plagued with conceptual errors that limits our use of the correspondence principle. For that reason, after much time wasted in attempting translations we start from scratch with the concepts of TT-Ts-St-SS and ST dimotions and its topological, qualitative and organic translation. And only in the papers that deal with mathematical physics we shall attempt the more quantitative description

So we define the 'Fractal Generator of Vital space-time topologies for all systems of Nature:

$$\Gamma: \quad |-\$T(\text{limbs-fields})\langle\emptyset\text{-Si=Te-Body-waves}\rangle\text{O-}\$d \quad (\text{particle-heads}).$$

The easiest human equivalence: Temporal Energy and Spatial Information.

“Call information entropy. Nobody knows what entropy really is, so you have the advantage.”

Neumann to Shannon, on the science of duality that studies the two inverse arrows of timespace of the Universe, entropy=pure motion and in/form/ation. And the ignorance humans have of their properties.

‘Energy is Temporal energy. The conservation of Time is the most important law of the Universe that all its fractal parts try to achieve. But only Time is immortal.’ **L§**

Human closest translation of the duality of primary elements was in the classic age of verbal thought, Asian philosophies of yin=in/form/ation=space=Vishnu and yang=entropic energy=time=Shiva, and in the age of digital thought, motion=time has become synonymous of entropic energy, while mental simultaneous space is akin to the concept of in/form/ation; since our concepts of space and time have been restricted enormously by virtue of the Galilean equation of speed, $v=s/t$ which became as physicists substituted philosophers of science in the summit of scientific thought, due to its power as machines and weapons makers, the ‘only equation of time’, when in fact was just a measure of speed with very limited space and time parameters.

As Einstein merely added – c term to that equation nothing changed despite the hype surrounding his work. So we shall often use the terms temporal energy or entropic energy for time=motion and spatial information or spatial form, for spatial information. As time and space are synonymous of motion and form they do have multiple meanings. So there are 5 types of time change=motion parallel to 5 types of space= form. Yet in fact as we have seen space and time are always mixed together, since human still mental one dimensional space is a simplification and definitely *a single time arrow of entropic energy or absolute motion is an extraordinary simplification of the richness of motions of temporal energy.* Energy in that sense with its multiple variations of meaning is much closer. Specifically entropic energy; that is, a motion which is internal and external to the being or ‘TT’, pure motion appears in the equations, $E=Mc^2 (\Delta+1) = knT (\Delta^e)=hf(\Delta-1)$ that transfer temporal motion through scales of the fifth dimension. This is the entropic arrow of time and disorder akin to death which physicists consider the single arrow of temporal energy. My advice, because of so much messy and simplified understanding of time in physics is really to take with some irony their work on philosophy of science, though as their equations have their own life and self-consistency those are ‘real’ and must be addressed with much more rigor, as we shall do in the papers on mathematical physics. But for concepts of time and space useful to all scales and sciences we shall use temporal entropic energy and spatial in/form/ation. Energy, being the jack of all trades, in messy human philosophy of science is also used for Si=Te, balanced ‘work’ which in fact is both space and time, energy and information, as it imprints form into motion, reproducing cyclical patterns of science. So it is better to define ST as reproductive work.

It is then obvious that the fundamental law of science, the law of conservation of energy, becomes the law of conservation and immortality of time-motions, which can be expressed as follows:

‘All is time=motion=change in perpetual trans-form-ation in one of the 5 Dimotions of time-space: $S \leftrightarrow T$ ’

Thus the purpose of science in each sub-discipline, which studies one of the scales of the fifth dimension in to study how one transforms into the other.

As we unify them all under the common language of Scalar space-time we shall make a lot of homologic disquisitions on the jargons of each science. Consider the case of the previous equation largely the fundamental one of mathematical physics. How do physics measure information, St; as opposed to energy, Ts; different from entropic energy, TT? We can't overextend in the general model, but it is obvious that the law is expressed as a function of momentum, the derivative of physical energy, whereas a derivative is a 'quanta of temporal energy', and position, a function of form, expressed as potential energy. So in this particular case St-form is potential energy, Ts is kinetic energy; and at the finitesimal scale, momentum.

Does it mean we are going to change all the equations and terminology of science? Not, so. It would certainly much better for mankind if Newton had gone to pasture and Leibniz arrived to London with his king putting the record straight from the beginning. But at this moment of history if we cannot even change the routine of calling wrongly the electron a negative charge (as it is the dominant positive sink of electric forces), we will become extinct much earlier than we adopt the jargon of Δst for all species. This I know. But my purpose is simply 'amore gratis', 'for the sake of art', to leave the template model of a much more advanced understanding of the entanglement of reality and the structure of the fractal organic, Universe.

Spatial information and temporal energy thus adopt multiple jargons even if ultimately reduce to the 3 topological varieties of Ts-limbs/fields of entropic temporal energy=motion, St-heads/particles of informative space, and TS-working body waves that combine both.

A question of importance for metaphysics is the conservation of spatial information, as opposed to the obvious conservation of all the modes of time-energy (once we correct the entropic big-bang, it will be obvious that the immortal Universe indeed conserves its dimotions). The answer lays in the dualities of discontinuous information vs. continuous time motion, or at least the perception of sequential flows of dimotion as a continuous river of temporal energy. Information is however always discontinuous, so the preservation of information requires its reproduction in a discontinuous region of time-space, and in different scales.

Information is preserved but NOT the ego that converts motion into temporal energy. And this leads to the ultimate metaphysical question – are we then repeated in parallel fractal worlds. And the answer is positive, as the number of worlds is much larger than the possible combinations of information of the 3 topologies of a 5D Universe. And so then a question is left for the reader to wonder, and perhaps one of a million to answer if he becomes proficient in 5D metaphysics: is the mind a flow of time 'entangled' across space and time, to be reborn in a continuous sense of existjence in a parallel being born in other region of reality?

But how it happens that time becomes energy and space information, intermingled in infinite fractal beings, fighting for the conservation of its time existjence? It is a process that requires a huge conceptual upgrading of the humind, distorted for so long by the mere expression of $Si \Leftrightarrow Te$ interactions in a single mathematical language, with little understanding in our verbal, natural 'form of thought', of what was the meaning of it all.

We shall thus reserve for our papers on the 'algebra of time' the translation of 'mathematical physics' & its formulae... and intensify in this paper the understanding of time in pure topo-logical, spatial and causal terms. But use constantly as synonymous T&E, S&I, and study its entanglements into 'dimotions' of time-space.

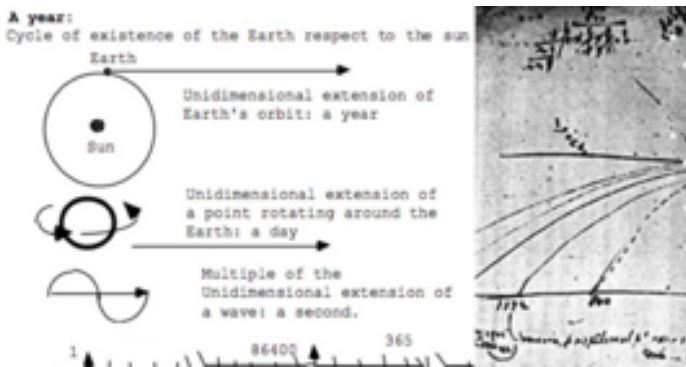
CYCLIC TIME: CONSERVATION OF ENERGY≈TIME CYCLES

'I seem the only physicist that think there are infinite time clocks in the Universe'. Einstein

Fundamental principle of reality is the conservation of time. Its immediate consequence in all sciences is the fact that time is cyclical, repetitive, as iterations are the only form to conserve time in a 'present' that doesn't seem to change. It is equivalent to the principle of conservation of energy. Because time is cyclical, it does break Newton's absolute time into infinite cycles, which make its motions equivalent to those of physical conserved energy cycles, in which work doesn't happen.

The causal repetitive laws of 'sciences'

A Universe of ∞ time clocks of different size and speed differs from its human description with a single mechanical clock-time to which all time clocks of the universe are equalized, elongated into a lineal 'second-minute-hour-day-year' system of equalized time clocks (of light waves, mechanical clocks, earth's astronomical clocks). As Galilean physics, born of ballistics, simplified the nature of cycles of time-space into lineal durations, to



measure best the locomotions of cannonballs:

Time is cyclical, all clocks of time and laws of science are based in the cyclical patterns of nature. But physicists developed ballistics and denied the truth that we can know the future because it will repeat the causality of the past, and we can change it by changing that causality, in History by repressing the lethal memes of the tree of metal and enhance the welfare memes that make us survive.

Lineal and cyclical time render the same functions as one is the inverse of the other, measured by frequency, $T=1/f$, but

the philosophical implications of cyclical time, are enormous, as we regain the in-form-ation provided by those cycles, *origin of the laws of science, which would not exist if there were not cyclical patterns; including the cycles of history and economics. The most important of them being, the fact that a time cycle breaks reality (1st knot theorem) in an outer and inner region, creating a membrane that encloses a vital space, the 'substance of which we are all made'.*

We thus have a brief description of reality – a fractal system made of topological organisms of co-existing scales of space and cyclical time which close its 'internal vital point content' with the entropic limit of those time cycles, in its vital territorial body-waves, synchronized symbiotically by 5D metrics. As we are all ultimately $-\Delta@St$; dust of space-time.

Why there are 2 forms of time, the long lineal Time and the 'short' frequency steps we integrate into the larger whole? Precisely because *there are 2 $\pm j$ scales of 5D reality whose metric, $SxT=\Delta\pm j$ defines larger space systems as having slower time cycles. So we can always consider the frequency of time the $\Delta-j$ 'quanta of time' or 'finitesimal derivative' of the larger whole represented with the concept of lineal time; as in the classic formula, $S=f(t) \lambda(s)$. The whole Space can be measured, $Vt=S$ with lineal time as a single unit, or it can be measured as a sum of frequency steps, with more detail.*

But if we see those two 'forms' of time, as 'lineal energy and cyclical information', since information is stored in the frequency and form of time cycles, we can then consider that 'time=motion' splits in two essential forms, lineal motion or 'energy', and cyclical motion or 'information', and express the main law of science, the principle of conservation of energy in terms of the conservation of time=motion in its two varieties that transform each other ad eternal:

'All what exists are time motions that transform between lineal open and cyclic closed forms ad eternal: $Si \Leftrightarrow Te$ '

This sentence is the simplest expression reality as a constant game of transformation of 'spatial information' (cyclical time) and temporal energy (lineal time) and was first understood by Taoism, where 'tao=time', is composed of yin=cyclical form and yang=lineal energy, today expressed as the principle of conservation of energy. Its 'mathematical, logic' formula is $Si \leq \geq Te$ & and its logic form, $exi=st$, is the function of existence.

WORLDCYCLE OF EXISTENCE: ITS BALANCED MAX. REPRODUCTIVE $Si=Te$ POINT.

' $\Delta@st$ of spacetime you are, to Dust you shall return' Bible

We can then put together scales of 5D space, vital topology and cyclical time to find the fundamental event of reality, a superorganism perceived in simultaneous space that traces a worldcycle in temporal energy.

Absolute spacetime is the sum of an ∞ number of Timespace beings that observed in space become simultaneous super organisms, and when observed in time, traces a **worldcycle** of existence between birth and extinction; as all systems are born in a seminal seed, of faster time clocks, in a lower scale of the fifth dimension, growing socially till emerging in an organic scale, where they will live 3 ages dominated by one of its 3 topologic organs and its functions=dimotions, a young age of maximal locomotion, dominated by its limbs/fields, a mature age of reproduction dominated by the body-wave and a third age of information dominated by the informative dimotions, which finally exhausts all energy and as time-space never stops, it reverses its dimotion from information to entropy, exploding in the moment of death.

So we marry the 3 vital functions=motions of time and the 3 dimensions of space, either in 1 or 2D (height=spherical information, length=planar locomotion, width=hyperbolic reproduction) which merge in all Time-space Beings; and dominate one of the 3 ages of its life-death worldcycles, the past, young age of limbic entropic motions, the mature reproductive age dominated by the hyperbolic body/wave and the 3rd age dominated by the informative particle-head, when the illusion of time ends with an entropic big-bang death that dissolves the being into its 'scalar cellular, atomic parts', which lead us to the realization that time cycles NOT only return to its origin in a single spacetime continuum but they move up and down 5D scales.

The 3 ages of existence of space-time organisms. Its 2 worldcycles and Metric functions.

Let us deduce from those 2 functions the fundamental process in time of reality, the worldcycle of existence:

The *development of the Function of Existence* of a space-time organism, can be developed as a feedback function, $S \Leftrightarrow T$, in 3 sequential phases/ages /horizons:

$$\text{Max. } T \times \text{Min. } S \text{ (youth); Max. } S \times T \text{ (} s=t \text{); Max. } S \times \text{Min. } T \text{ (3}^{\text{rd}} \text{ age)}.$$

They are the functions of the 3 ages of life, between $S \times 0 T$ (seed in the lower plane, $i-1$) and $T \times 0 S$ (function of entropy=death), which develop 5D metric into an 'existential function' of 'extremal points':

$\Delta-1 \gg \Delta^0$: The supœrganism worldcycle starts its existential function as a seed of pure form (4D) that creates its space-time form.

$\$T$: It is the first horizon or 'energy, youth age' of the cycle, in which energy dominates the system and so we write this phase as, max. $\$T \times$ min. T .

Max. $S \times T$: $s=t$. It is the present balanced age of the cycle or classic age of 'life', when energy and information are in a constant proportion. It is the most efficient age, when the cycle reproduces.

ST : Max. $T \times$ min. S : it is the 3rd age of the cycle when information has combed and exhausted the space-time field that warps into itself.

$\Delta^0 \ll \Delta-1$: $0S \times T$: It is the end or death of the cycle that reverses its form and becomes energy again.

Existence is an \propto (ab. relative infinite, with an entropic limit of death) sum of 3 space/time planes, fluctuating between birth and extinction through those 3 phases or ages. The 3 ages of Timespace supœrganisms happen in all systems, including mental languages:

In State Physics they are, Ts -gas, the moving state, $S_i=Te$ liquid, the balanced state and $\$ \delta$ -solid the informative state; into Cosmology, where it describes the Universe as a space-time system that fluctuates between both limits, a form of pure time, the singularity ($\text{min. } \$T \times \text{max. } \delta \$$) and a form of pure space, the big-bang ($\text{max. } \$T \times \text{min. } \delta \$$): In Biology, they are the 3 ages of living beings AND the 3 horizons of evolution of species.

In social organisms, through the subconscious collective mind of civilizations which in art styles mimic in a longer 800 year cycle of life and death of civilizations (according to 5D metrics a human social superorganism is larger in space – a nation, culture, religion – and so it lives longer in time).

All what exists is a supærganism of vital space tracing a 0-sum worldcycle of time through 3 scales of the 5th dimension: Born as a seed of fast time cycles in a lower 5D scale ($\Delta-1$:Max. T x Min. S), emerging as an organism in Δ_0 , living 3 ages of increasing information, as its time clocks slow down in its $\Delta+1$ world to die in a time quanta back to $\Delta-1$. Yet the maximal point $S_i=Te$ where reproduction happens defines the classic age, maturity, beauty, balance, survival of the system, all disomorphic jargons.

The 3 ages of life emerge in human social superorganisms as the 3 ages of cultures and its 3 artistic styles: Min.S x Max. T (infantile epic, lineal art, as in trecento, Greek kuroi; $S_i=Te$; balanced beauty, when form and size are in balance, the classic mature age; and Max. S x Min. T: baroque, 3rd age of a civilisation, whose subconscious mind is the art of its 'neuronal artists', the age of maximal form and an Δ_{st} for a no future, which is the age of war and death of cultures).

THE GENERATIONAL=LIFE CYCLE: $e_{i-1} < E > ET > T < e_{i-2}$

SUPER-ORGANISMS D=EVOLVE BETWEEN 2 I-PLANES OF EXISTENCE IN 3+1 AGES DOMINATED BY ITS ENERGY, REPRODUCTIVE AND INFORMATIVE NETWORKS:

Birth: $e_{i-1} <$ Youth: $\sum E_i >$ Maturity: $ET_i >$ Old age: $T_i <$ Death: $\sum e_{i-2}$

Human Socio-Biological Organisms:

Individual, living organism

Universal, Physical, Organisms:

Birth: $e_{i-1} <$ Youth: $\sum E_i >$ Maturity: $ET_i >$ Old age: $T_i <$ Death: $\sum e_{i-2}$

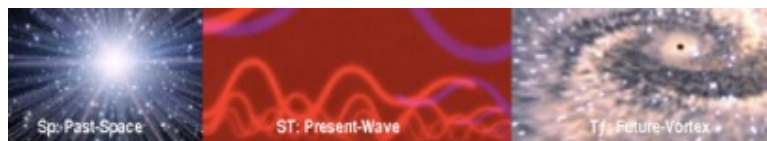
Plasma Birth Energetic Gas Liquid, Reproductive State Solid, informative state, M=E death

STATES OF MATTER

Energetic Birth Irregular galaxy Spiral State Informative, Globular Age Quasar Death

We talk of 3 $\Delta \pm 1$ scales of worldcycles as the being live in a placenta, then emerges as organism in a world:

p: 0-1: its palingenetic o-1 social evolution in the accelerated time sphere of existence, till becoming 1 (0-1 bounded unit circle in jlogic mathematics; quantum probability sphere of particles in physical systems;



palingenetic fetal age in biologic systems; 0-9 memetic learning childhood in social systems). It is the highly ordered world cycle as a 'placental mother-energy world' is nurturing as memorial cyclical spacetime has erased errors of previous generations.

- **c: The outer 1-∞ world**, in which it will deploy its 2nd world cycle of existence in an environment which is open, entropic (1-∞ hyperbolic unbounded Cartesian plane in logic mathematics; thermodynamic entropic statistical molecular populations in physics; Darwinian struggle between populations in biology; idol-ogic dog-eat-dog capitalist, nationalist competitive eco(nomic)systems in the super organisms of history. In this 1-∞ existence the world cycle is not ensured to continue, as the entropy of the world system can cut it off.

ω: The existential life cycle, though is part of a larger world of hierarchical social scales (§ Di), where it performs 5 survival actions through $\Delta\pm 4$ Planes self-centered in its mind, beyond which it cannot longer perceive, to become if successful a new superorganism of the infinite planes of God, the game of existence. *Thus Social love=evolution of parts into a whole new plane of existence is the survival strategy of all systems.*

In graph, physical, biologic & social worldcycles show to which extent 5D laws enlighten our understanding of reality. Matter States are physical time ages, from left pure solid, crystal, stop state, to an even more solid $\Delta+1$ boson condensate, etc. We see that systems either move a step at a time within a plane of existence (gas, liquid, solid) or they can jump « two states at once, (as in the case sublimation) within that plane, or most often between two planes, as in « scattering & entropic death), to become a different Dimotional state. We can then see how the fundamental elements of 5D time appear on the graph: the worldcycle is local and complete. There are 2 inverse arrows from an entropic past (plasma), in a lower plane (ion particles) to the 3 ages of the matter states with increasing form (gas to solid), to end in a higher plane of existence as a boson-Einstein condensate. Do those worldcycles happen for the whole Universe? (cyclic big-bang). Unlikely...

RECAP. Time is cyclical as all time clocks return to its origin. All time cycles including life & its vital space-time beings are finite. Further on those time cycles break 'space' into inner and outer parts, so vital space is broken by the membranes and angular momentums of those time cycles that make spacetime beings also finite in spatial information. And an obvious experimental facts about timespace: cycles of time, vital spaces and the species made of them, co-exist in several scales of relative size from particles to galaxies, each one with clocks of time of different speeds. So spacetime is fractal broken in scales that added create a new 5th dimension of spacetime.

The dual functions of 5D Absolute Relativity, the function of 5D scales, $SxT=C$ & the function of equality between form and motion, $Si=Te$, develops in 3 ages with 3 standing points, a max. point of existence, $Si=Te$ or mature age, a young age of Max. T =motion, and an old age of Max. S =information; between birth in $\Delta-1$ Form & T -entropic death. The search for space-time, Energy=information balances in a classic reproductive age of conserved time is thus the goal of all existjences, but only the whole achieves the immortality of time-space, as we shall see egocy errors of fractal mind-points of space trying to stop the flow of time from a single selfish point of view, accelerates the imbalance that brings death equations. We are richer in our still property at that 0T-moment, when all is quiet so for time to keep moving, a reversal of entropy takes place.

Conservation of time vs. inverse annihilation of information.

An essential truth, systematically denied by @-minds is that while the initial substance of reality time=motion is conserved, as it trans-forms ad eternal in different forms of information information becomes annihilated into 0' sums, regardless of leaving memorial remains and possibly being recreated. Thus algebra has always inverse operands and elements that 'annihilate' the form into a residual 0'; which in mathematical physics become the game of particles and antiparticles, inverse waves that annihilate its height information, etc.

Entangling Vital topology and cyclical time: Local Past=Entropy, Present=Iteration & Future=Information

'The separation between past, present and future is an illusion' Einstein

“All what is possible, demands to exist” *Leibniz, on the chain of beings.*

Of all the consequences of cyclical time, the most important is the existence of infinite local time clocks of which we are all made, which therefore imply the existence of infinite local past, present and future states.

Past then means a system with less ‘form’, less information, which slowly acquires a dimension of height-form, as it completes its cycle to return back in the moment of death to an age of no information. This ‘worldcycle’ of existence, which creates and erases information becomes then the function of duality:

Entropy-youth (relative past) <Energy-mature reproduction (present)> 3rd In-Form-ation age (relative future)

Which each of us follows as a time-space superorganism. In physics is equivalent to the dual function of Einstein: $E \Leftrightarrow Mc^2$, which reverses when E, which should be properly considered ‘Entropy’, as it is a disordered state, collapses through gravitation into Mass, a cyclical vortex of space-time; while its intermediate state is c^2 , radiation; the relative present:

Whereas the past is the beginning of a pi cycle, starting as a line of entropy with no form that curves and raises in height in its second state of present, and returns back to its origin in its future 3rd age of information, completing a 0-sum of life and death. Thus instead of a single ∞ lineal absolute time there are ∞ living cycles of time happening in zillions of entities.

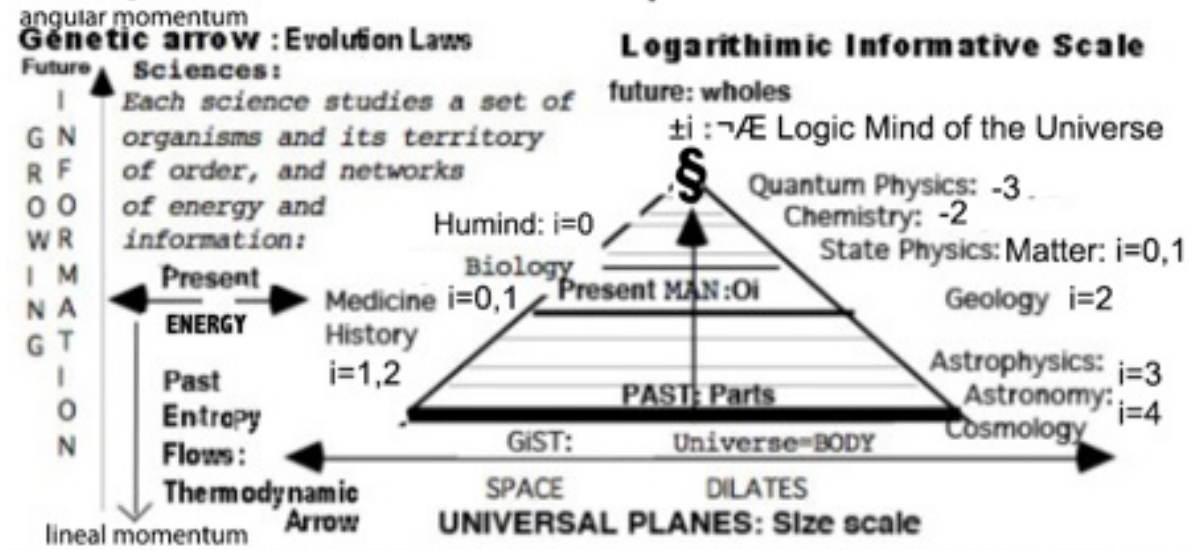
Those relative time ages in the simplest physical organisms are equivalent to the 3 conserved quantities of physics. So as time is cyclical, made of 3’ π ’ lineal time motions, we shall distinguish 3 conserved ‘ages’ of timespace that put together create a 0 sum worldcycle of life death for any spacetime organisms: a relative devolving past or arrow of entropy represented in physics by disordered explosions in space and in vital topology by lineal limbs/fields of lineal momentum, an iterative reproductive present that seems not to change, represented by hyperbolic body/waves of energy, and an implosive in-form-ative local future arrow represented in physic by accelerated, $V(t)R(s)=K$ vortices and angular momentum, and by particle/heads in the ensembles of vital topology. So timespace breaks in ∞ relative local, fractal entropic pasts, iterative energy presents and informative futures, which put together create the illusion of a single timespace continuum.

Species are supœrganisms as they go through the same 3 ages and processes of birth, reproductive radiation, end of growth (mimetic in its log curve to that of cellular growth of an individual) and 3rd age of information and extinction *or social evolution into a superorganism* (ants, humans) – the strategy of immortality. An interesting detail of 5D evolution is the St-ST beat between fast evolution in smaller forms (Floresiensis, mole mammal) and ST-radiations of populations as they grow. I.e. the 1st human was the maligned dwarf Floresiensis who evolved a

head similar to man, spoke, used advanced technolog and merged with Erectus to grow mass, spreading in a global radiation to give birth to a dual S-verbal Sapiens+T-visual Neanderthal whose ST-merging gave birth to the explosion of instrumental creation of the modern man, which would become an enzyman, catalyzer of the evolution of machines, the III Age, studied in other posts, as we shall dedicate this to the purest humind languages of thought, visual space and temporal verbs and its $\Delta+1$ scales, art and Gods of civilizations.



SCALAR SPACE & CYCLIC TIME ADD TOPO-BIOLOGIC PROPERTIES TO ALL SYSTEMS:



5D scientific scales: its $S \times \delta = K$ metric define 5 Dimensions generators of δ imeSpace organisms

5D SPACETIME PLANES & SCIENCES

Reality is composed of 3 elements: Δ -planes of space-time, $\Delta \pm i S \leftrightarrow T$, ΔST entangled in 3 organic co-existing $\Delta \pm i$ planes. In physical systems they are the $\Delta-1$ quantum plane, Δ^0 thermodynamic plane and $\Delta+1$ gravitational plane, equivalent in the reduced nested world of Life on Earth to the $\Delta-1$: molecular plane, Δ^0 organic plane and $\Delta+1$ ecosystemic plane. The absolute arrow of future survival is eusocial evolution of parts into wholes, as parts must come before; hence they are a relative past, and wholes survive better. A fact HUMANS have forgotten. As individualism is synonymous of chaos=death, it is obvious History, the superorganism of mankind enters its age of entropic social self-destruction, committing suicide, evolving instead a supærganism of machines; a tragic problem, which we will study in the analysis of social sciences.

And in each of those planes we shall see that 'spatial information' and 'temporal energy' constantly transform into each other. Space is the perception of form as if it was still, but ultimately is cyclical self-repetitive motion that seems not to change and acquires at larger scale solid forms.

In between those scales, each one a different plane of space-time, ruled by 5D metric (Time speed x Space size = Constant plane) there are 'connections', which can be seen in space as 'networks' that 'thin out' as they branch till they connect both planes; something obvious on a physiological organism; but also through the impedance of waves and its geometric forms for physical systems with its dual, informative, gravitational and electromagnetic, energetic networks; and through the organic structure of financial=economic=blood like systems and legal=nervous=informative system for social systems. So we talk of the fifth dimension proper as the 'fractal, network, wave like' systems that communicate the different planes of similar 5D metric.

All together they form a superorganism we call reality. So a fundamental task of those texts is to redefine the foundations of sciences in much solid grounds – its 3 fundamental elements, ΔST , which 'sciences' study plane by plane of $S_i \leftrightarrow T_e$ elements, to which we must add the connecting 'network' laws between planes, which we call the '5th dimension proper'.

It is the philosophy of science, we develop in a series of papers at Academia.edu that will substitute the simpler mechanic view of reality sponsored by physicists, with its 'mathematical creationism' and constructivist view; which reduces the two poles of time=motion to one (lineal time), compresses all the planes of space-time into a single continuum; while only the properties of reality that can be easily fit in a numerical description matter.

A more evolved civilization would start in philosophy of science and the principle of conservation of time and space, and its structure in 5D organic scales and derive from them the fundamental laws of every other discipline; correcting whenever necessary its errors as we do in those papers with the simplest principles of reality as any science mirrors them in its study of its specific scales of beings – the details of those principles.

THE LIMITS OF REALITY: – ENTROPY & MINDS

The sum of all 5 D scales sets an absolute 'dimensional motion' (ab. dimotion) of spacetime. Because for a whole $\Delta+1$ to exist, the parts 'illogically' must come first; so social evolution and love between parts is the absolute arrow of future for the organic Universe, or 'future', while a form that repeats itself seems not to change, so the function of reproduction is the absolute arrow of present, leaving thus entropy= death, the dissolution of form as the inverse arrow of past.

So we draw the 3 'dimotions of space-time' in terms of the 3 time ages of absolute past (TT-entropy=death) and its relative lesser Ts- locomotion; ST-present reproduction, which is the function that maximizes $S \times T$ ($s=t$) existence in any scale of science and the relative future of St-communication of information that evolves parts into larger social wholes, herds and superorganisms; whereas the absolute future, SS, is the language of still minds, shared by all of them – the game of Generational Space-time we explain here and its two fundamental mirrors of space and time (mathematics and logic).

It is an architectonical perfect Universe as long as you abandon the illusion of the ego that cuts-off man from its entanglement with the self-similar whole and all its parts. Since, why humans do not see reality like that, has to do with the mind function and its distorted self-centered view.

So 2 final elements are needed to have the whole structure of reality properly defined': The existence of entropic limits (ab. –) for each 'superorganic structure' of $\Delta \pm j$ planes. We saw those limits in the enclosing membrain (as it holds the sensorial holes that communicate the timespace organism with the outer larger world) of all systems, which must be seen as 'solid' or as 'angular momentum'. We could say that a 'solid membrain' is made of multiple smaller π cycles... But let us not enter into details. Those limits thus exist both in planes, as superorganisms do exist within 3 planes and when dying merely dissolve its information, $St_j \ll St_{j-2}$, two planes down; and within each plane as membrains break a world into a tapestry of vital space-times, called it a border In social nations, a territory in life organisms, a field of forces or magnetic membrain in physical systems.

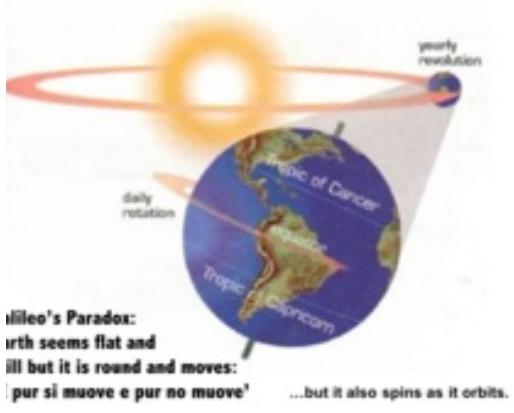
The other element is the @-mind; that is the gauging center of the system that perceives simultaneously all the elements of the T.œ (ab. superorganism). And so as it requires some deeper thoughts we shall consider now, since curiously enough the structure of the mind is based in the discovery Galileo or rather Leonardo did first – that motion is relative and it is not perceived by a mind in reference to its world.

The 3 scales of an organic co-existing system are completely different in language of thought (@-mind) as the larger is organic, the smaller is quantic, numerical and the middle one is e-motional, active, topology of existence, (S-pace), as the smaller one is hyperbolic, the middle one flat, and the upper one elliptic, in time ages, as the big lives longer, seems immortal to the fleeting small quanta, reproduced every day, synchronous though all of them to the beating time of its middle heart; and so we come in this manner to the entropy limits of death that the larger imposes on the smaller constrained to its territorial substance, crowded by clone brothers – *but all laws are within the –Ælgebra of Δ -scales* – the Holy of wholes.

This said we shall continue translating and correcting the original errors of physics regarding time and space, as they weight heavily In all our disciplines. So after resolving the error of Newton and side with Leibniz, which opened up the understanding of vital topology and its dimensions; and solving the error of lineal inertia and defining the real thing, cyclical time, and its equivalence with energy; we shall solve the 3rd earlier error of physics, this time regarding the nature of Space and time together and how they convert into each other ad eternal, origin of relativity and the paradox of Galileo – the fact we don't see the Earth moving.

A final element is needed as Leibniz realized when he discovered the Non-Euclidean Point crossed by ∞ parallels of information: the @-mental particle-heads; based in the principle of Relativity that Galileo discovered but never understood: we cannot distinguish motion=time and space=form, because minds stop information to fit a selected mental world in its monad: O' -mind $\times \infty$ universe=world

We know the Earth orbits the sun...



5D METRICS. ITS PHYSICAL Si=Te FUNCTIONS OF RELATIVITY AND MOTION.

As it turns out the fundamental sciences of the Universe will be in its essential postulates connected to the simple metric functions of 5D, $SxT= C$ which is achieved at $Si=Te$. This second function in particular is the best possible definition of the fundamental principle of Physics, the principle of relativity, which defines the fact that we cannot distinguish between motion and form. The second metric function, which we shall call the 'function of existence' as it defines the program of survival of all entities of the Universe will be the

basis of the biological behavior of all species that try to maximize its energy and information and reproduce.

It couldn't be otherwise, since if we are space-time, space-time functions, in its widest expression, those of 5D must be the functions of all space-time beings, regardless of its physical or socio-biological nature.

Galilean Paradox: $S \leftrightarrow T$: Relativity of space Dimensions=Forms=Motion in time: 5 Universal Dimotions

Galileo's Principle of Relativity is the concept behind the relationship between the equality of time=motion and space=form and why one can converted into another: All what exists is made of space=form and time=motion. And yet physicists know that we cannot distinguish motion from form. That any being in motion from its point of view seems to be still and all other things moving around it. *This is the principle of Relativity of motion.*

Physicists then without much thought about that fascinating duality, went on to use mathematics to calculate the relative motion of each entity of reality respect to other system, which seems static from both points of view. This is called Galilean relativity, latter refined by Einstein's relativity, and essentially is concerned with the mathematical calculus of what we shall call the 2nd Dimotion of time=change, locomotion. Fine, but *we are more interested on the duality of space=form and motion=time and its entangled relationships –the reasons why we do NOT see together motion and form, even if all systems have both.*

The conclusion is then rather obvious: one of the two parameters of reality is 'hidden' to perception; we either see motion or form, 'waves or particles' (quantum complementarity), distances and lines or points in motion (as in the night when fast cars in a picture appear as lines). *So physicists calculate only one when in fact we must assess the existence of 2; and since we cannot distinguish them, logically we must equal them. 'Form=motion-function; space=time; Si=Te'.*

Relativity then becomes a duality, $Si=Te$, which is *at the heart of every law of the Universe. Whereas the primary element, the ultimate substance is time=motion. As space is a Maya of the senses – a slice of time motion. Form is what a 'still mind', makes of that motion to 'perceive', information, forms-in-action.*

Since we see Earth still and flat but it is round and moving. Galileo's profession was ballistics - the study of cannonballs motion. So he chose ONLY motion and lost the chance to start physics with a complex philosophical understanding of its $Si=Te$ dual Principle of relativity, which Poincare defined latter clearly when he said that 'we cannot distinguish motion from stillness'. An example is quantum/relativity duality. In detail quantum space has 'dark energy' because it has expansive motion that extends into a plane of space, but when seen at larger scales without detail its entropic motion seems static space - a dual area of scattering length and width. So in the galaxy we see either dark energy motion or expanding space: $T=S$. A motion of time is equivalent to a dimension of space: Distance and motion cannot be distinguished so they must be taken as two side of the same being, a space=time Dimotion (ab. Dimensional Motion):

$$S= T; Dimension-Distance = Time-motion = ST \text{ Dimotion}$$

Earth moves in time, but we see it as a still form in space because reality is a constant game of ∞ motions, but the mind focus those motions and measures them at still distances. For huminds, motion is relative to our systems of measure and perception, which are light-based; hence a fixed c-rod speed/ distance. Reason why Einstein's

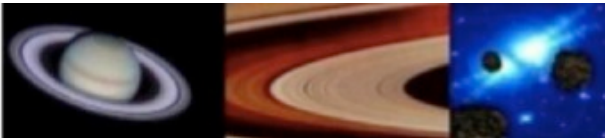
relativity postulates a maximal $T:c$ -speed, measured as if observer and observable were still to each other (Constant S); which at our scale we correct with Lorentz Transformations.

But physicists just substituted the Earth's still distances for motions, and it took another 300 years for Einstein to realize the relativity of motion and its measure made essentially time and space, motion and form two sides of the same coin. Still this realization was not explored philosophically and so it gave birth to a series of ill-understood dualities between 'states of measure and form' (particles, head gauging form, in-form-ation) and 'states of motion' (wave states).

Motion and form co-exist as 2 different states: Minds perceive Motions depending on 5D scale and detail as cyclical in-form-ation or still distance. So if we see slow motion in the night, a car's headlight seems a long distance line 'still' picture. But this means also that the 3 'Euclidean still dimensions' must have motion; they are 'bidimensional ST-holographic, topologic dimotions'. So we have 3 Space + 1 Time + 1 5th dimension of scales = 5 Dimensional motions. None of them is a Dimension of pure spatial form or a pure time motion but a combination of both. Even if mentally we tend to reduce motion and focus on forms, all has motion=time, and form =space: this is the meaning of 'spacetime', the messing of both into 5 dimotions, the fundamental element of all realities.

Relativity states 'we cannot distinguish motion=time from position=space'. So all what exists is a composite of both, undistinguishable $Si=Te$, 5 'Dimensional motions' (Ab. Dimotions), broken in infinite fractal, vital time space organisms, composed of topological Dimotions: height=information; length=locomotion; width=reproduction; form=social evolution of parts into wholes & entropy=dissolution of a whole into its parts in a lower scale of the fifth dimension (term we keep for the whole range of scales of the Universe); whose study is both mathematical, the main science that studies how those 5 Dimotions entangle in simultaneous Space, connected to each other topological adjacent parts, which create superorganism, and Logic; the main stience of time that observes how those pentalogic, entangled superorganisms move and evolve, change in sequential relational time, living a worldcycle of life and death.

As all is time&space, the 2 experimental primary mirror-stiences of time&space become the most important to extract the Disomorphic=equal laws of those 5 Dimotions that all systems have in common. Since while those Dimotions are broken, in vital organisms, separated by cyclical time membranes, they are the same.

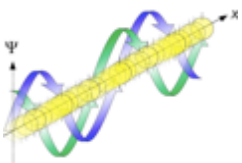


In the graph below Galilean relativity was ill understood, as the true question about time-change is why 'the mind sees space as a still, when in detail is made of smaller self-similar quanta, in motion. The paradox defines mental spaces as still simplified views of the more

complex whole. The 3 jlogic paradoxes of **space** topology (closed in-form-ative curved-O vs. |-open, free entropic lineal forms), **time**-motion (stillness vs. motion) and **Δ -scale**, (continuous whole vs. discrete forms; single scale vs. multiple ones), are essential to the perception of a simplified 'spatial mind universe' in a single flat still plane vs. the full, more detailed complex picture in time, of a curved, discrete and moving Universe. Those paradoxes resume the 5 elements of reality, Space=form, time=motion, scales and the mind that measures them, within its own entropic limits.

They are also essential to all the elements of calculus and mathematics at large and its methods of solutions; specially the inversion between finitesimal lineal steps (as a step between two points is NEVER curved) and the cyclical form of longer 'integral paths'. So lineal approximations are the essential tool of calculus and mathematics to resolve many equations.

Locomotion as reproduction of form solves the Paradoxes of Zeno and the meaning of discontinuity. As motion is reproduction of information, of form, since particles are knots of perception of form, fractal points, monads, which move by reproducing through a lower plane of the 5th dimension, as Δ -1 waves, its information, as forms-in-action. So all forms of change can be reduced to the ultimate function of existence, reproduction, a back and forth travel through 2 scales of the fifth dimension, as a form



becomes a seed that reproduces, evolves socially and forms its whole again. Change thus has a final feature: it is change reproduced in a lower plane as a seed that evolves into a whole. So beings with a lot of information, reproduce very slow and we can hardly see them moving. The limit of it being complex life superorganisms on Earth, whose reproduction takes 9 months. It happens 'inside' the reproductive mother, and it reproduces in the adjacent space after 'tearing' the topological knot of the umbilical chord. A similar very slow process of reproduction happens in physics with the weak interaction that reproduces a form with even more information evolving the mass of particles, so the range of the force is minimal and the new particle appears adjacent to the one that disappears, dying for the new hatched 'baby' to be born.

It is not so much in physics but in calculus where we find the strongest experimental proofs of the laws of 5D as a reproductive process of form. As calculus: finds a finitesimal part of reality and then integrates it as a sum, whereas the function of existence of the form displaces and reproduces its orthogonal parameters of form and motion. *So physical forms are constantly reproducing, 'calculating' and the equivalence between the tools of calculus as mirror of the process of reproductive locomotion become crystal clear.*

The 2 main conservation laws of the Universe, are the conservation of those stœps or 'beats' of existence, $S=T$ in relative present, eternal balance, as MOTION becomes the REPRODUCTION OF FORM IN STOP AND STEP STATES. And conservation of the 'volume of space-time' of each plane of the Universe, by virtue of the 5D metric equation $SxT=C$, which justifies all the procedures regarding scales – solution of differential equations by separations of scales, renormalization procedures (Wilson), and harmonizes those scales allowing constant but balanced transfers of energy and information, $St=Ts$.

COSMOLOGY: WORLDCYCLES OF PHYSICAL SYSTEMS: SCALAR BIG-BANGS

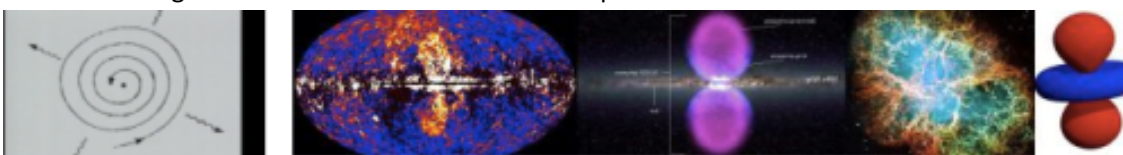
In the fractal model a big-bang is the entropic death of physical matter. But the Universe is also scalar and it has information, a dimension of form, signified by the gravitational informative force, physicists ignore in their calculus of its expansion, happening in galaxies that balance the dark energy between them, we shall find both, balances of forces that make the Universe wobbling, and big-bangs and informative forces in multiple scales of the Universe, talking of multiple big-bangs balanced with big-crunches.

Scalar entropic big-bangs in a balanced immortal Universe. The Galatom.

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BELOW, Left, when we add the gravitational force that warps 1D space into 3D mass in galactic vortices, they balance the expansion of 1D space in entropic vacuum as light dies into dark entropy lines between them. As mass warps 3 1D flat-vacuum into a 'high volume' its 3 times more powerful in its warping, hence the 75-25% Balance of mass to dark entropy. Thus the fractal Universe is immortal. On the right its scales all suffer similar $e=mc$ dual processes of warping through gravitational forces of cyclic momentum that create those galaxies, and expansive big-bangs of lineal momentum balanced in combined cycles of energy - the 3 conserved quantities of each fractal spacetime physical organism, which put together give birth to the 3 conserved laws of nature the Big Bang totally ignores - among many other known-known laws.

So the use of a fractal space and cyclical time arrows fully accounts for the immortal Universe and its balanced 3 arrows of space-time, conserved in its infinite reactions; energy, information stored in the cycles and frequency of those systems of angular momentum, whose minimal constant form is h , and lineal speed, conserved in the constancy of light. Why those obvious facts of SOUND physics are then 'reduced' to ænthropic creationist big-bangs in a single plane of space-time despite evidence? It is the ego paradox: what the big bang does for science is a religious 'closure' with man and its simplest mathematical lineal functions at its center, which added to the



denial of organic sentient properties to physical reality allows to feel the high popes of science a sensation of absolute knowledge, as the religious person feels that all is known in the mystery of god - a word eerily similar to the lineal function of the big-bang ' $V=Hod$ '.

5D models do acknowledge sound science void of egocy, which in physics corresponds to the equations NOT the teleological omissions – meaning we respect 4D physics and quantum realist models (Broglie->Bohm's $\hbar B^2$), which corresponds to the study of 5D in the limits of $\Delta-3$ scales (quantum), $\Delta+3$ (special relativity) and $\Delta+4$ (general relativity) and shall explain easily why $\Delta-3$ quantum physics is easier to model with time probabilities in the 0-1 complex sphere, due to its faster time clocks of maximal information but that does not make it different from the equivalent formalism, by virtue of the S=T equivalence on the $1-\infty$ entropic plane that cast molecular thermodynamics ($\Delta-2$ plane) with statistical populations.

The errors of physicists though are due to the misunderstanding of the ΔST elements of reality: its fractal scales of multiple big-bangs, its cyclical time processes and its fractal points that make impossible the existence of a singularity, reduce cosmic big-bangs to quasar bangs & balance lineal equations with cyclical ones, in the galaxy balancing the vacuum lineal space with the cyclical time clocks of masses & galaxies:

RECAP. 5D metrics describe organic properties because it balances the survival symbiotic existence of all parts of the Universe in any of its fractal super organisms, made to the image an likeness of the whole, as the smaller beings 'code information' with faster clocks, and the larger wholes enclose and protect the smaller parts with its greater energy- establishing an organic 'harmony' in all the scales of the Universe, and explaining its fundamental constants, which are ratios between spatial volumes enclosed by membranes and angular momentums of informative clocks of temporal energy.

A consequence of the scalar Nature of reality is that points have parts, which grow in size as we come closer to them, peering in the inner regions of its fifth dimension. So a star from a point becomes a world, and so should a point-particle if we could peer inside its form – to the 'point' that the closest self-similarity of scales happens between galaxies and atoms, stars and photons, in a potentially infinite scalar Universe. What this means is that an absolute zero does NOT exist. So 0 becomes 0', a 'finitesimal unit', which will always remain as the fractal Universe abhors vacuum. Thus in any parameter we find a residual amount, even if it is undistinguishable from a larger scale. There is no absolute 0K, but always remains a bit of motion=temporal energy. This, means also in terms of h , that vacuum space has always a reminder, h -uncertainty unit, no longer an abstract concept but the minimal unit of light space-time, we shall call h , 'Planckton', the minimal fractal organism which feeds or becomes the 'cellular unit' of all other species of the Galaxy, as Plankton is the minimal unit of the biologic Universe which starts the trophic pyramid of life or as a cell starts the evolution of multicellular organisms.

5D metrics is a law of balance between 2 elements of reality, scalar space akin to information and cyclical time akin to conserved energy. Yet as humans have disconnected their concepts of space and time of its 'broken parts', bits of information and bites of energy, equalizing all the time cycles of reality with a lineal equation, $v=s/t$, and a single mechanical clock, and have pegged all the bits of information of its puzzles of space; and finally compressed all the planes of space-time into a single 'space continuum'; and then separating them as the constitutive elements of reality we need to reconstruct both terms in its more complex reality nature, as *ultimately we are all made of those organic vital fractal scales of space & its moving time cycles*. The fifth dimension is made of the 'different co-existing scales', which from the simplest forces through particles, atoms, molecules, matter, organisms, super organisms, planetary systems and galaxies, create an 'organic network structure'. *Yet science cannot advance in its principles unless the 5D formalism is accepted and used to fully understand the cyclical, repetitive patterns=laws of science of each discipline that studies a scale of 5D n and its species.*

5D METRICS AND MIND MIRRORS. ITS FUNCTION: $0 \times \infty = C_i$



But the biggest of all 'unknown' discoveries that Galileo missed was the mental nature of space – the finding that we see reality still because the mind perceives in stillness, and reduces motion to form. Space IS always born in the mind's simultaneous perception of events (something Einstein's relativity will help us to calculate) and this will give birth to the proper understanding of motion as reproduction of form, of the duality particle in stop form and wave in motion, of the Lorentzian transformations and its paradoxes and a long etc. of distortions the mind effects on reality.

But it will allow us to define the mind in mathematical and logic terms with a clarity never achieved before. As the mind is the linguistic still space we see – the other extreme of reality, being time motions in its TT-entropic inner and outer motion of scattering disorder and death. So we can philosophically consider reality a tug-of-war between time in its continuous motion and still minds, fractal, non-Euclidean points that hold a world in themselves (Leibniz) trying as monads to fix reality into its subjective self-centered point of view.

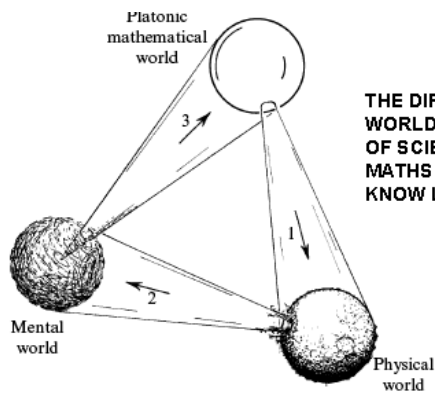
Indeed, those two functions do give origin to all phenomena of reality. So first we shall consider the most important consequence of relativity – the function of the mind which is the system that creates the spatial forms by reducing the information of time motions to still simultaneous mappings, and the function of survival in biology that all systems including physical ones (maximizing its equivalent parameter, momentum) follow regardless of how we describe them, with Hamiltonians and Least time principles in physics, with evolution in biology, with the drives of life in sociology.

Mind sciences study the sentient properties of every type of superorganisms' mind.

The Galilean Px. Si=Te explains the existence of mind-spaces based in linguistic forms, whose function is the basis of the psychology of the mind – the ego paradox, and the processes of creation of scales (seeds, minds, genetics, etc.) Minds are monads, non-Euclidean points that hold information, in still mappings, projected on its territory of order, as linguistic mirrors of a fractal reproductive Universe.

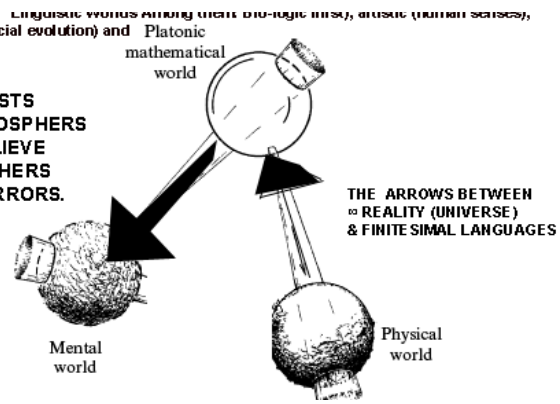
The mind or 0-point is, the relative frame of reference that maps the ∞ cycles of time of the Universe, reducing them to a 'World', to fit them into the infinitesimal volume of the brain.

The mind though believes to be the center of the Universe in the 'ego paradox' as he sees every thing turning around its infinitesimal point, which hosts inside all the linguistic perception of reality, or 'world' it confuses with the universe. So the mind is a fractal point •, but believes to be it all.



THE DIFFERENCE BETWEEN PHYSICISTS WORLDVIEW (Left-Penrose) and PHILOSOPHERS OF SCIENCE (Right): PHYSICISTS BELIEVE MATHS CREATE REALITY, PHILOSOPHERS KNOW LANGUAGES ARE LESSER MIRRORS.

Fig. 1.3 Three 'worlds'—the Platonic mathematical, the physical, and the mental—and the three profound mysteries in the connections between them.



The paradox of the Ego – who make each mind to feel so important – is then rooted in the self-centered structure of the mind, which selects information from its point of view, creating, an infinitesimal linguistic mind-mapping of reality - which then it confuses with the whole universe:

0-linguistic mind \propto *Universal space-time cycles* = *Constant World mapping of reality, with @mind at its center.*

The ∞ information of the Universe is reduced into the relative infinitesimal volume of our mind gives us a constant mapping, where we expel all the properties that are not interesting to us and our self-centered view.

The mind is a singularity or infinitesimal 0-point, a relative frame of reference that maps the ∞ cycles of space-Time of the Universe, reducing them to a World to fit selected useful information into the finitesimal volume of the brain. The mind function is the origin of the Ego paradox, the key to psychology, subjective human cultures, religions & 'ænthropic' science: 'Every mind measures reality from its biased p.o.v. confusing the ∞ Universe with its 'finitesimal self-centered world'

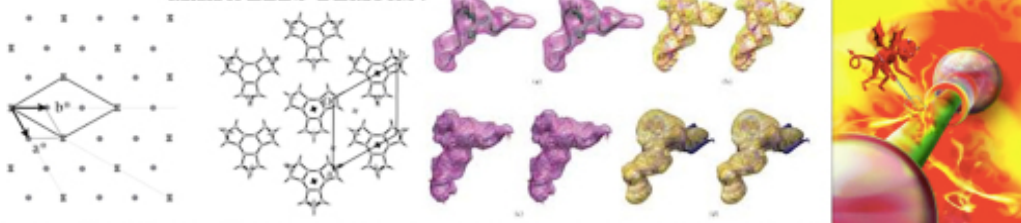
The universe has infinite such mind-mirrors depending on the forces used to gauge the external world, which bounces on a limited quantity of its scales of spatial information. Humans perceive the range of scales of the frequency of light between red and blue social density of colors.

∞ other minds with different detail according to the quantitative pixels they absorb (max. S=Min.t) maximal for smaller sixes will determine the intelligence of the system. *Mind languages map reality into spatial forms. It is the 'intelligent' still spatial limit of reality, as all what exists are disordered entropic motions=forces and 'minds', particles-heads whose logic & mathematical languages create a territorial body order that forms of reality. 'Vital motions and perceptive minds' make up a 'vital, perceptive, intelligent' Universe. Since particles have all the 5 Dimotions, gauging information, decoupling=reproducing & evolving social with magnetic fields.*

How can we formalize the concept of a mind as a fractal point, whose infinitesimal volume hold a world in itself? Through one of the many 5D revolutions– the upgrading of the principles of non-Euclidean geometry.

The creation of scales of reality is then a simple game in which a point mind reduces reality to its infinitesimal form and then projects into its local territory of order, which will reflect at scale, the larger whole or world, which the linguistic image reduced and then enlarged back into its territorial form: Fractal points unlike Euclidean ones are points with parts, as we come into its scale grow in size and display the 3 minimal parts of all of them, its area, frequency of angular momentum, and central Active Magnitude, the 'singularity' - focus of

MAXWELL'S DEMONS:



Tf singularities in solid crystals and DNA in liquid biology reproduce & evolve form; only entropic gas doesn't have Maxwell demons. It is an idol-ogy of physics, science of pure motion, to deny the ST-reproductive and Tf informative arrows of Nature



Maths exist because self-centered reference frames mirror the Universe from the 3 distorted points of view of each 'organ' of the Space-time Generator (T-spherical, ST-cartesian, S-cylindrical coordinates). Thus Descartes & Leibniz postulate ∞ mind worlds, mapping, reflecting, acting, ordering its territorial world, to the image and likeness of its selfish world view; in any system that obeys math laws

In the graph, the missing element in all human self centered views of reality: mind-mirror singularities order, reproduce & form reality in all Δ -scales, limiting its entropic states.

charge, mass, forces or informative minds. Minds are thus also reproductive functions across 'scales' of the fifth dimension, which reduce and project its mirror-image in its body-territory of order:

A mind exists in all systems in which time stops to form spatial information. In galaxies happens in relativity functions in black

holes, its mind. In thermodynamic physics in the eye of an Eddie. In quantum physics in the center of an atom, or charge. Without linguistic minds that order by reflecting its smaller mind into its local territory reality would not exist. The only way to create fractals is through mirror images.

In all scales of science minds fix time motions into spatial, linguistic formal mappings that reduce the whole with its synoptic language to fit in a particle-head that acts in its world-territory after gauging information.

Thus we define 'Maxwellian's demons' of local order in all scales – physical minds as the infinitesimal points that create order in physical systems with the same Disomorphic laws that all others do in more complex scales. As each mind orders as a linguistic god a territory around itself, its fractal body and entropic world.

All minds project their biased self-centered model of reality with them at its center and the still world they stop to fit in their mind as a dead territory of order. So humans deny the existence of ∞ minds, as if they were the only 'special' sentient point of order and their languages, first the verbal form of its anthropomorphic Gods, today digital numbers, the only of the Universe. And in this manner because ∞ discontinuous minds is the generator of form, of information and order over the entropic flow of mindless time motion, the destruction of one of the two poles of reality means we will never be able to answer rationally the whys of the Universe.

The error of egocy transpires all forms of human knowledge.

All this said it is fundamental to understand the limits of human science, embedded in the mind of man, as humans do NOT see as first experience reality but the sensorial limited information perceived through our electronic eyes – natural and mechanical. And then we *do NOT really try to do what we shall do in those papers, to build the larger reality departing outwards from the mind-view, but huminds just build a deeper level of 'languages' that reduces further reality to a synoptic smaller view – faster in terms of its time clocks, according to 5D metrics, so if the smaller mirror on the smaller reality of human senses, is consistent in its grammar and focus, it does have the added advantage of being able to calculate faster sequences in time and anticipate the future 'moves' of the larger whole. Still this inward method will always miss the ultimate laws and substances of that larger reality, space and time and will therefore distort reality.*

And that is indeed what we shall find in all humind's sciences: 'gross deformations' of a reality we don't see. So I often quote Schopenhauer: 'talent hits a target nobody can, genius hits a target nobody sees'. We are out there to chase what nobody sees, behind our senses, and one we have captured an image of it, of the laws of 5D, bring back this larger view, to show the inadequacies of reducing reality to the synopsis of the humind's senses and limited languages, as we have already done with the scales of space-time, the structure of mathematical points or the multiple type of dimotions... And we are just 'heating' engines (:

Humans can't escape its direct senses that only see a spacetime continuum regardless of sheer evidence of a scalar 5D Universe of different sizes of space, each one made of ∞ non-E points (particles, atoms, molecules, cells, organisms, supœrganisms, planetary systems, galaxies, similar in structures to atoms, hence likely a new scale of a hyperuniverse) whose time clocks diminish in speed the larger a system is but its product, $S \times T = C$ remains co-invariant hence able to transfer symbiotically energy & information between scales ((geometric definition of a dimension). Those fractal points and its cyclical time-motions enclose vital spaces of smaller parts, whose faster time cycles carry the quantum, genetic and memetic information of which we are all made.

Egocy reduces sensorial, sentient survival 'rights' to nitrolife species, with a simple 7-electronic brain clock in its amino rings, and reproductive ones to its phosphorated carbon DNA helices life starts in the particles of the atom. Your mind is electronic, your information is coded in spins, and any other atom in proper liquid conditions might evolve into complementary life forms according to the laws of formal space and time motions, of topology and vital functions, described with the existential algebra of Scalar spacetime.

But 'huminds' eliminate internal parts & external motions of timespace organisms, compressing its limited view of other scales into a continuum. We elongate time cycles of information into lineal entropy postulating a chaotic

reality where only we are intelligent - even denying that gravitational informative matter in galaxies balances entropic \forall -like expansion of space in-between, as it happens in atoms.

'I seem to be the only scientist that thinks there are ∞ time clocks in the Universe... Leibniz was right. Newtonian absolute space-time is false. But if so we have to start science from scratch', said Einstein. Both believed in panpsychism. We are all non-Euclidean fractal 'points=monads, which hold a world within '(Leibniz): 0-linguistic mind $\times \infty$ clock cycles of the Universe = Constant space world. Our world is Euclidean, drawn with the 3 perpendicular dimensions of light space-time, which appears constant (Relativity). But the 'languages of god are ∞ ' (Upanishads). Most minds seem to obey topologic, mathematical languages; and each scale is made of networks of such points. But humind's egocy (ego=Idiocy) confuses the Universe with its reduced world-view, blind to the sentient and organic properties of all other points of space-time and its organic networks. So all our theories of reality try to explain our light mind-view NOT the Universe of ∞ time cycles and points of view, whose main laws are about the relationships between small and larger scales co-existing as synchronized complex organisms of time=motion and space=information. Those are the laws studied in 5D stiences, as they organize, non-Euclidean points with 'parts' into 'waves and network' that create topological organisms of space, ruled by a non- Aristotelian logic of multiple time motions - cyclical modes of time=change. We shall thus define the formalism of 'Non- \mathcal{A} ' cyclical time and fractal space and apply it to the resolution of the questions pending in all 'stiences', developing models void of egocy in all sciences... as we are all organisms made of co-existing scales of spatial information and temporal energy (Δ St-organisms), whereas each 'stience' studies a plane of spacetime.

The Unit of life IS the atom, not the DNA ensemble, and as such we must depart in our construction of the mind from its electronic orbitals; each one a dimension of information, whose spin are the smallish apertures of our π -cycle, the eyes of the quark mind that holds a world in itself.

But physicists only care for 'mechanics', the measure of the external motions of those atoms. Even if quantum computing shows spins are the nature of minds.

We shall expand that myopic view evolving our Euclidean maths of points with 'no parts', our Aristotelian logic of a single lineal time motions to all cyclical modes of time=change and our single plane to all the scales that form a new dimension, using this enhanced 'Non- \mathcal{A} ' logic and mathematical mind mirror to resolve the questions pending in all 'stiences', as we are all organisms made of co-existing scales of spatial information and temporal energy (Δ St-organisms), whereas each 'stience' studies a plane of spacetime.

RECAP. A 5D Metric function, $S(0\text{-Mind}) \times T(\infty\text{-universe}) = \text{constant world}$ is the function of all mind languages who only perceive from its self-centered point its language mirror confused with the whole Universe (Ego paradox, basis of psychology). \mathcal{A} Entropic huminds reduce the multiple clocks of time and vital spaces of reality to the single human clock and spatial scale, rejecting the organic properties of other Universal systems.

The main laws of 5D are the metric functions of the scalar Universe, which relate the spatial size and speed of temporal clocks of all scales of Nature. Both parameters are inverted: when systems grow in size the speed of its clocks, its 'time cycles', diminish proportionally, both in biological and physical systems. And vice versa. Smaller clocks tick faster and information processing carried by the frequency of those cycles accelerates, as it happens in chips, particles or life metabolism. So we write: $S \times T = C$.

The mind thus starts it all with its linguistic 'still mapping' stopping its world in a locked 'crystal image', measure of its self. But even perception is social, linguistic. The Universe can only be explained if 'perception' exists within the language, as when you think words, you sense words, when your eye sees light and maps into an electronic mapping you are seeing. And when an atom maps a geometric image in its 'locked' 'stopped' spin, it must perceive that geometry as information. *The paradoxes of Relativity, dis=continuity of parts & wholes & scales cause minds to reduce ST-dimotions and scales to those useful for survival, eliminating all dark spaces: continuity is the result.* Of all formal languages that map out reality 3 are paramount in man, visual thought, Verbal Time jlogic & mathematics shared by all atomic species.