## ПРИМЕНЕНИЕ ТЕОРИИ ЭКО-КИНЕМАТИЧЕСКОГО ТРЕУГОЛЬНИКА (ТЭКТ) — СИНЕРГЕТИЧЕСКОЕ ВЛИЯНИЕ НА ПРАВА ЧЕЛОВЕКА ПАРАДИГМЫ «ЭКОЛОГИЯ, ЗДРАВООХРАНЕНИЕ И ЭКОНОМИКА»

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## Application of the «Triangular Eco-Kinematics Theory» (Tekt) (Part I) – the Paradigm of Ecology, Public Health and Economy as a Synergistic Effect Upon Human Rights

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Законы естественного экономического потока рекомендуется использовать в качестве модели для устойчивой антропогенной экономики. Жизнь не может быть монополизирована. Биоразнообразие имеет первостепенное значение для устойчивого развития. Эта статья - одна из первых в серии прикладных работ, основанных на теории эко-кинематического треугольника (ТЭКТ), предложенной здесь как основы для глобальных механизмов сотрудничества. Это срочный призыв к глобальным антропогенным экономическим реформам. Планета Земля может выдержать максимальную нагрузку населения, если она надлежащим образом распределена и управляется. Всеобщая декларация прав человека нуждается в пересмотре. Предлагается эталон эквивалента жизни (ЭЭЖ) в качестве универсальной оценочной категории. Ключевые слова: естественные права, эталон эквивалента жизни золото, энергия, белок, организация теории равновесия, денежная система, энтропия, анти-энтропия, негэнтропия, синтропия, ЮНЕСКО.

The laws governing natural economic flow are recommended to be used as model for a sustainable anthropogenic economy. Life can't be monopolized. Biodiversity has a paramount importance to sustainable development. This article is intended to be the first in a series of applicative works based on the Triangular Eco-Kinematics Theory «TEKT» proposed here as foundation for global cooperation mechanisms. It is an urgent call for global anthropogenic economic reforms. Planet Earth can sustain a maximum population load if it's properly managed. The Universal Declaration of Human Rights needs to be revised. A Life Equivalent Etalon [LEE] as currency reference is proposed. *Key words*: natural rights, Life Equivalent Etalon, LEE, gold, energy, protein, organization equilibrium theory, monetary system, entropy, anti-entropy, negentropy, syntropy, UNESCO.

### Introduction

Ecological issues should not be separated from economic issues or from public health concerns as they correlate. The global crises have their beginnings back in the history of mankind. Lately they are acutely identified and discussed as our natural resources are depleting visibly. Furthermore, the strong polarization of wealth, abusive exploitation of natural resources and excessive material accumulation do not just hinder the free economic flow, but are also unethical. It conducts to social segregations and conflicts; the expanding «occupy movement» is just one of the latest examples. With this paper, I am also calling for an urgent and closer look at Human Rights principles. Human Rights need to be a section of a future Universal Declaration of Natural Rights.

This paper (as part 1) is an attempt to address several interconnected issues in a fashion such as an overture to an upcoming series of work (work is in progress) with the belief that readers have a fairly strong natural inducement to co-operate [20] with the author in order to build and consolidate the proposed model, the presently included applications and the upcoming ones as well.

Fighting Nature is a historical human endeavor for which we just recently started to see the beginning of its outcome. Public health, ecological systems and global economics, being intimately interconnected, undergo a cycle of crises that I take the freedom to call «The Bermuda Triangle of Human Endeavors». Planet Earth offers us as Humanity the means to support our very material existence. Health and ecology together are the primary life supporting elements that form the structures of a sustainable social and economic development. Deprivation of proper living conditions represents an acute denial of Human Rights. No one has the right to deprive others from the inherited Natural Rights, the rights to exist. The economic principles need to be brought up to date and restructured such as to observe the non-monetary values going beyond Human Rights. For the economic system to be sustainable it needs to use a currency that has a sustainable etalon as reference. Life Equivalent Etalons (LEE) can assure economic and international stability as they are fixed and indispensable.

Each one of us is responsible for the global economy as it is an expression of human endeavor and its dynamics, more so in the context of globalization. I'll tailor my work in a way to make it accessible to most people. It does not matter how good are whatever ideas one may have if they are not well understood by the intended audience, in this particular case, Humanity at large.

The M. A. Sholokhov Moscow State University of Humanities is a great place to present this paper addressing ecological issues; such subjects are only about Humanity and concerns Humanity at large. What can be more human than human activity and its overall outcome?

### The World as seen from a tiny little can

On my way from Cluj-Napoca to Budapest in route to Moscow, at this early morning hour when the Sun was not even struggling to welcome our existence, the little airplane of some 26 people was making its way to reach the cruising altitude with all its power I could hear. We were dependent on this vulnerable situation, limited resources for a limited time, on our way to a predefined destination. On our way to an intermediary or final destination, we were all sharing the moment, the air and welcoming on board juice to drink.

I have never been in an emergency landing situation and I have no such desire, but I was exposed to the instructions a countless number of times. If such emergency were to occur, the first to exit the plane would be the passengers, then the crew, the captain being last. A very small airplane, very limited resources, lots of people interacting within the micro-ecosystem, we were all sharing at the moment; it reminded me about our relatively small planet that becomes more and more pale due to the «load» it carries, namely Humanity and its behaviors.

A question was born: If we are to go down, who will be cared for first, the passengers of our World or the captains, the governing elite, the financial holders and their families? As you are to exit the airplane using the nearest exit without belongings, will our leaders leave behind their holdings in the interest of the consumer's interest as to facilitate saving the World?

Thermodynamically, life is in a permanent disequilibrium, as entropy has the tendency to decline; the degree of organization is increasing, energy is being accumulated within structural entities. Resources are being used and recycled. Energy flows through the system as the materials suffer transformations. In all this disequilibrium, there is a relative organizational equilibrium to assure enough energy, prime materials and a constant flow of transformations respecting basic physical and natural laws which prevent the system's overload and its «suffocation».

I need to mention a great movie. Out of respect I will not label it as science fiction but rather as an educational film. The James Cameron 2009 Avatar movie conveyed in its entirety powerful upscale messages for the public at large. Out of the countless statements, we are reminded: «our great mother (Nature, Eywa) does not take sides Jake! — she protects only the balance of life» [6].

### Anthropogenic economy vs. natural economy

The fact that Earth's natural resources are limited and severely depleted warrants the urgent re-evaluation of «need» for re-engineering human endeavors; a tune up of mankind expectations needs to be severely limited in order to reduce the anthropogenic impact upon Earth's ecosystem. The anthropogenic economy as I see it, as we are accustomed to describe the trends of human endeavors and «growth», is driven by consumer markets, the never ending «needs and desires», demand (mostly manipulated by financial interests) and supply. The anthropogenic economy describes and involves exchanges that do not follow any natural laws but rather a few sets of financial interest, private and personal impulses that turn into political powers. The economy serving and involving humans with life supporting resources, in order to be sustainable should be regarded as a vital characteristic of the living, and the anthropogenic economic data should describe its health status and vitality. Real values need to be used as opposed to virtual values in order to reflect reality as opposed to made-up, «look and feel good» data. Unhealthy data indicates trends towards potential life threatening status. Humanity is directly dependent on other forms of life. Using life as to sustain life, the flow of energy engaging material resources to serve mankind is to be viewed as integrate part of life, a key characteristic of the living and must be treated with the adequate respect. The anthropogenic economy in order to be sustainable and serve the interest of Humanity, it must be adapted as to respect by all means a natural economic policy. The entire human activity and evolution is strictly dependent upon Life sustaining resources. It is to be viewed as bioeconomy, a biological function of our complex living system that we all share.

I must take the opportunity to cite a great Romanian-born economist Nicholas Georgescu-Roegen that in 1972, during a conference held at Yale University, used the term «bioeconomics». The term continued to be at the base of his works as an economics scholar. He stated: «Policy recommendations of economists were doomed to failure unless they were based upon an understanding of the biophysical and social context of consumption and production» [9]. Georgescu-Roegen insisted that «descriptions of economic phenomena, especially mathematical descriptions, must go beyond relative market prices; they must be grounded in reality, that is, in the physical and social universe of which humans are embedded» [9]. The term «bioeconomics» was initially suggested to Georgescu-Roegen by the Czech philosopher Jiri Zeman, a term already used in 1925 by the Russian biologist T. I. Baranov and in Romania by Grigore Antipa in a few studies published around 1934 by the Romanian Academy [15]. Here I have to mention that Baranov and Antipa interpreted the biology from the economic aspect whereas from Georgescu-Roegen's point of view the economy with all the economic aspects must be interpreted biologically.

Not long ago, during 2009 and 2010, aimed by my interest in capturing high entropy ambient free energy and its structural encapsulation, lower entropy and ready to use means, I conducted a fairly simple experiment obviously without having as main objective the study of limited resource and its effect upon life's support. Like it very often happens in the scientific research, the scientist looks for some specific answers, more questions rise while some unexpected clues may redirect researcher's attention. The simple experiment did not just indicated the need for further detailed investigations (vacuum pressure level, osmotic pressure threshold, plant's development stage threshold, noise effect, etc.) it offered some staggering outcomes with meaningful applications in the bioeconomy area or the inter-dependent natural economics of a complex living system. It contributed to the birth of the Triangular Eco-Kinematics Theory (TEKT), described here more as an introduction note, using a visual helping tool, a circumscribed Euclidian triangle model, shortly a TEKT triangle circumscribed by a TEKT circle. I will mention, the angles found in the bottom half of the TEKT circle refer to anti-entropy, negentropy, or negative entropy whereas the angles found within the top half will refer strictly to entropy.

### The mystery of Life — Its thermodynamic ability

Referring to biogenesis some authors explain «Life comes from Life». Such «explanation» with all due respect and honesty does not satisfy me by far. Nevertheless, at this time I am not in the position to postulate the existence of God; still that should not stop us to live and to observe Life and its emergent ontogenetic properties. Coming back to the simple experiment that I just mentioned earlier, Life continues to talk to us, we just have to listen.

The term «entropy» as is known describes the degree of disorganization whereas the term negentropy will refer to the degree of organization of not living matter (as opposed to negative entropy not used here). To describe the degree of Life's organization the term anti-entropy was adopted as it was found to be more descriptive [4]. Anti-entropy is sensitive to coding of the knowledge within DNA for instance, it depends on the size of embedding manifolds, on geometry of folds, on vital particularities [23]. I kindly ask you as interested readers to exercise some patience for a few minutes and follow the next few pages. I thank you in advance.

Just as planet Earth offers us limited material resources while the Sun's energy supplies us enough in order to sustain Life and its organization, for the experiments I used an improvised micro ecosystem much smaller (Fig. 1 - A, B, C) than the airplane mentioned above.

As volumetric quantity, a 750 ml glass bottle served as housing and materially isolating the experimental ecosystem from the rest of us with the exception of the energy factor. The ambient energy was received as heat thru the walls of the bottle. In order to explain the experiment's kinematics Fig. 2 (A, B, C, D, a, b, c, d) is here provided.



## Fig. 1. Seed germination and plant development experiment in an isolated limited material resources micro ecosystem and open energetically.

A — Glass bottle with internally inflating pharmaceutical grade rubber; B — Growing Plants; C — Rubber pushing against the walls of the bottle, all air being consumed, plants becoming slime.



## Fig. 2. Kinematics of seed germination and plants' development experiment in an isolated limited material resources and energetically open micro ecosystem. The Triangular Eco-Kinematics Theory (TEKT).

1 — Glass bottle; 2 — Paper soaked in water; 3 — Seeds ready for germination; 4 — Rubber membrane pharmaceutical grade; 5 — Plants (growing and dying young); 6 — Air becoming depleted of  $CO_2$  and  $N_2$  totally consumed inside the bottle; 7 — Fresh atmospheric air pressure pushing the rubber into the bottle. (A) (Area TEKT) — Accumulated Tissue; (5—6) (Base of TEKT) — Total population (molar) load (5-NE) (edge of TEKT) —  $O_2$  (molar)load; (NE-6) (edge of TEKT) — Plant (molar)load (RIppl) — Resources & impact per total population (molar) load; (angle with vertex 5) — Plant anti-entropy; (angle with vertex 6) Oxygen ( $O_2$ ) negentropy; (NE) — Natural Economic flow, total system anti-entropy.

The experiment took place under very low light conditions while the ambient heat temperature varied from  $+10^{\circ}$ C to  $+30^{\circ}$ C. Inside (Fig. 2) the bottle (1), a folded sheet of paper towel (2) served as substrate after being impregnated with 40 ml potable water.

Six grams of red radish (*Raphanus sativus*) seeds (3) were distributed relatively uniformly on the wet substrate of each bottle. Immediately the glass bottles (1) were hermetically closed using pharmaceutical grade rubbers (4), enforced with rubber bands as to assure a tight fit around the bottleneck (Fig. 1 A). Using 5 different repetitions during the experiment, the bottles were placed in an opaque corrugated cardboard box that was kept with the leads closed and stored outdoors in a shaded area. The bottles were briefly inspected at approximately 7 days interval for observations, time when pictures were taken to obtain records of the experiment's progress.

The box was kept closed most of the time, keeping the bottles away from strong direct light sources allowing this way the ambient free energy to play the main role as energy source under a very dim natural light. The seeds, in the presence of proper conditions of medium started to germinate as seen in Fig. 2 (A, a, B, b). As it is well known, seeds do respond by initiating their internal mechanism using the stored reserve material and energy to initiate the germination process.

Soon enough, the seeds' own resources deplete, the newly formed plants (Fig. 1B) depicted (5) in Fig. 2 (B, b), have the ability to detect and use the dissipated free high entropy ambient energy. New structures are created using the captured heat energy and the inorganic material resources found locally in the enclosed bottles, namely the water ( $H_2O$ ) found in the substrate (2) and carbon dioxide ( $CO_2$ ) found as part of the atmosphere (6) inside the bottle (1) before and immediately after its closure with rubber (4). Assimilation of  $CO_2$  into organic matter and oxygen ( $O_2$ ) production determine to a high degree the composition of Earth's atmosphere [25].

Plants are food-independent; by synthesizing their own food they generate  $O_2$  into the air. The concentration of  $CO_2$  in Earth's atmosphere is known to be approximately 392 ppm (parts per million) by volume as in was recorded in 2011 [42], concentration that increased by 2.0 ppm/yr between the years 2000 and 2009. In 2009, the  $CO_2$  global average concentration was about 0.0387% by volume, or 387 ppm the evidence shows [42], [14]. Such a small quantity of  $CO_2$  in the air from the quantitative aspect is the main raw material for living entities (5), Fig. 2.

Plants are using the energy not just to entertain the need of their own functional mechanisms but that function itself represents the ability to slowly, little by little encapsulate the entire energy captured from surroundings. Energy is used by the young plants for  $CO_2$  (available as of yet in the internal atmosphere) (6) dissociation into carbon and oxygen atoms as well as for water (H<sub>2</sub>O) dissociation into hydrogen (H) and oxygen (O) atoms. Basically, the C and H atoms now ready to combine are used for building structures, while the oxygen atoms (O) are liberated as waste products (Fig. 2b, c) of plants (5) into the internal atmosphere (6) increasing its O<sub>2</sub> concentration.

Therefore, by using carbon dioxide  $(CO_2)$  and water  $(H_2O)$  as raw material resources, the ambient heat energy is encapsulated forming carbohydrates and other macromolecules needed to build the living structures, reaction widely known [41] and empirically expressed such as:

## $6\text{CO}_2 + 12\text{H}_2\text{O} + \text{Energy} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2 \uparrow$

In Fig. 2 (a, b, c, and d), using a circumscribed Euclidian triangle (TEKT triangle), is depicted the evolution of organization levels. The plants (5)(dependent factor) anti-entropy increases (angle with the vertex 5 becomes larger) as the plants develop. The internal gas (6) (independent factor) negentropy decreases (angle with the vertex 6 becomes smaller). The overall natural economy (angle with the vertex *NE*) anti-entropy remains constant (as sustainable interdependent factor), but larger than the sum of the other two since the dissipated ambient free energy is being accumulated. Such process is the mechanism that increases plants' (5) degree of organization. The energy is concentrated; it is «pumped» into the growing plants forming  $C_6H_{12}O_6$  highly energetic structures.

The plants' (5) waste product, as the  $O_2$  is put free from the  $CO_2$  and from  $H_2O$  dissociations, continues to grow reaching a higher concentration level in the internal atmosphere (6) of the bottle that as consequence creates products of oxidation as waste ( $NO_x$ ) increasing as seen in Fig. 2b and Fig. 2c. Inside the bottles (Fig. 1, Fig. 2)  $O_2$  concentration rises to high levels offering us, to some degree, the opportunity to take a glimpse at what the atmosphere conditions could have been about 2.4 billion years ago (2.4 Ga) on Earth [17].

During the morphogenetic process proteins are indispensable bio-compounds indispensably situated at the base of all known living entities. Therefore, proteins must be also formed by using the nitrogen atoms (N) from the atmosphere (6) inside the bottle (1). To mention, in this particular case, Raphanus sativus builds its own glucosinolates, an organic compounds that contain nitrogen. Very large macromolecules, the proteins, encapsulate within their entangled bonds large quantities of energy (unlimited free energy supply plenty available from surroundings) and atoms, using in this way all the limited material resource available within the bottle (1). Now, our micro ecosystem experiences a major decrease of its air supply (Fig. 2B, C, b, c), known to initially consist of about 78% dinitrogen (N<sub>2</sub>) and 21% O<sub>2</sub>. In this time the developing plants (5) are much larger.

We are now in the position to witness a very harsh environment being at the stage where enlarged vegetative cells are present [44]; the medium is favorable for spore development with aerobically fixation of dinitrogen ( $N_2$ ) as well as awakening of the akinete dormant cells [44][33], the resting cell of cyanobacteria [40] and unicellular filamentous green algae. As food-independent living entities, cyanobacteria and the green algae ecologically obligate their associations with symbiotic fungi [31]. One life ends, another begins [6]; but not for too long.

We are witnessing an increase of the anti-entropy (sometimes called negentropy, syntropy or negative entropy), a partial «solidification» of gases found in the bottle (Fig. 2C), as long as we accept the fact that plants are solids with a high water content. Still, plants have a higher degree of organization, a lower entropy. I am not referring to a dry construction usable piece of wood but epistemologically we are in the same area. Such solidification encapsulates a fair amount of energy that was actually «pumped» into the growing living entity creating an energetic structure within.

While gases deplete inside the bottle, the atmospheric air pressure (7) is inflating the rubber (4) as seen in Fig. 2B, C. The gases (as I have hard time to call air at this point) found in the micro-ecosystem are way far from being able to sustain the life form of a plant (Fig. 2C, c).

Looking at (Fig. 2b) the  $O_2$  population molar load (edge 5-NE), from a very high level closer to the total population molar load (edge 5—6) is decreasing as the anti-entropy of  $O_2$  decreases (see Fig. 2c) so its contribution in *NE* is decreasing as well. If we imagine such decrease continuing, angle with the vertex in 6 further lowering,  $O_2$  population molar load (edge 5-NE) decreases towards zero letting the plant population (NE-6 edge) coming extremely close to the total population, plant's anti-entropy (angle with the vertex in 5) reaching a maximum. At this point the maximum possible plant's development has been reached as a maximum population threshold load has been reached.

At this particular point (further detailed investigations are needed) the plants (5) reach a very low entropy level, a stage were no further development is feasible. The sustaining resources for the initial Life form, namely plants, are being depleted and the show is taken over by other actors (Fig. 2D d). The field is now inviting other games to be played, other type of reactions as the quantity of chlorophyll is visibly decreasing. The total population molar load (depicted by the 5—6 edge as the base of the TEKT triangle in Fig. 2a, b, c,) decreases in time (Fig. 2d).

The initial Life form now decays. Anti-entropy *NE* consistently decreases towards zero, while entropy of 5mod and 6mod increases, energy of the system is dissipating, oxidative processes take place with further gas absorption phenomena being in effect (Fig. 2D). More likely cyanobacteria, green algae and symbiotic fungi are now the living acting players [31] but not for too long. The entire gas (once air) has been completely consumed inside the bottle (Fig. 1C).

It is the moment to mention and observe the bottom half of the TEKT triangle and circle depicts the players' anti-entropy while the top half is to be associated with the entropy evolution.

The atmospheric air pressure is constantly pushing the rubber (4) into the bottle as to replace the available space due to air displacement. The rubber being so pushed against the walls of the bottle squeezes the remains of our living beings (Fig. 1C) looking and feeling as slime by now. Continuing the observations under approximately same temperature conditions, no gas is formed as the decay continues. A low-oxygen condition obviously induces extinction due to anoxia stage, not due to some extraterrestrial intervention, asteroid bombardment or volcanic activity [14] [43].

## Very likely this simple experiment may take us back in time, may reflect how 250 million years ago Life on Earth almost ended [14].

The slimy contents inside bottle reach 6.09 to 6.77 pH levels. Upon rubber's removal, the smell is profoundly unpleasant and why not potentially dangerous. Strong coughs were provoked and lasted for many weeks. For the next experiments, I will exercise caution as I recommend it to you as well if you intend to verify the above findings.

Once being plants (5) growing into atmosphere (6) dominated by a high anti-entropy of the natural economic flow (angle with the vertex *NE*) we are witnessing (Fig. 2D, d) a different game being started in bottle (6) between different players now  $5_{mod}$  (modified 5) and  $6_{mod}$  respectively with a decreasing anti-entropy of the initial Life form (as plant 5). It is a decreasing natural economic flow (angle with the vertex *NE*<sub>dec</sub>) as the formed slime replaces the entire space once occupied by plant 5 and air 6. We are witnessing an extinction phenomenon (Fig. 1C and Fig. 2D, d). The entire content of a slimy mixture, living green algae and cyanobacteria, chemically a precisely unknown mixture but fair to empirically label it as  $C_yN_zH_wO_x$  (further research is due) it occupies the bottle. The new structure took over the initially accumulated structure (A) (Fig 2a, b, c). The entire content became a decayed structure ( $A_{dec}$ ) (Fig 2d) of slime, an environmental incident prone for speciation [8]; all activity will come eventually to a stand still, a permanent state reached as a maximum entropy will instate in the system as death inevitably occurs [33].

It is fair and enough at this point to state the fact that overgrowth, expanding out of the permissible and ready available natural material resources it drives a living system to a total collapse. Such process is faster and with an accentuated trend as the heat energy is abundant; much more so if the climatic stress is higher than the natural possibilities can offer.

The depicted phenomenon is not limited to *Raphanus sativus*. Experiments were also conducted using seeds of Lentil (*Lens culinaris*); basically similar results were obtained. The speed of plants' development is directly dependent upon the available ambient heat energy.

It is not the place and the time to engage into the metaphysics of «what is in there» or ontologically to admit the existence of God. In mean time, we are certain of the fact that minuscule seeds are readily responsive to environmental stimuli such as humidity and heat temperature. From the ontogenetic aspect, we are also certain that under the proper material and energetic conditions seeds will germinate and develop into plants regardless of their dimensions and capacity. They accumulate energy and consume material resources for the benefit of their own structure and well being with the capacity and internal drive to procreate and perpetuate the species.

Did anything go wrong within the micro ecosystem in the above described experiment? Perhaps too many seeds were used in rapport to available material resources found within the bottle. Perhaps the lack of the proper biodiversity to contribute as resource regeneration / recycling conducted to the excess of oxygen while the carbon dioxide's and nitrogen's complete depletion took place. We can assert being a fact the lack of a relative equilibrium in the micro ecosystem, the absence of a rich biodiversity [25] regardless of the availability of abundant free energy is the cause of our intended (*Raphanus sativus*) little young world's total exhaustion [41].

### Primary conclusions – Life's properties and limitations

1) Acute and severely disastrous possible outcomes are due, a total collapse of the system is expected if one living entity is lowering its entropy (increasing anti-entropy) and comes too close to exhausting its own life support, regardless of the energy that may be available. Outgrowing life's support capacity induces the destruction of the entire system, its entire collapse to decay possibly into lifeless while keeping the energy tightly locked into a stinky slime form of existence.

2) If our planet was to be populated only by forests and plants, cyanobacteria and green algae, Earth could have exhausted its life support and its destiny would have been limited to a continuous energy and structural accumulation up to the point when a total decay would have follow, perhaps a slimy world. Strange as it may appear my statement, we've seen in the above experimental example that as long as there are living entities consuming oxygen, ready synthesized sugars and proteins, having  $CO_2$  as waste on which the plants can feed on, the cycle of life can continue as long as the relative organizational equilibrium is being kept to a sustainable level or why not a sustainable rapport as represented by TEKT.

- 3) Based on the above, the biological classifications are forming two major groups:
  - a) The self-sustaining, food independent living entities (i.e. cyanobacteria, plantae),
  - b) The by-sustaining, food dependent living entities (i.e. animalia, etc.)

4) Thermodynamically, utilization of energy is not a mere «emerging property» of life, it is Life itself. Utilization of energy by living forms of existence is a self organizing and a conducting mechanism that «knows» to use energy efficiently. It knows when and how to accumulate the dissipated free energy, to «pump it» in the re-assembled structures. It concentrates energy reserves; it creates protective resistant ergonomic structures. The Life forms of material existence have as main property (as opposed to emerging property) the thermo-dynamical ability to act as heat energy pumps; Life forms of material existence are structures of concentrated energy ready to be used. A small seed has the ability to act as a heat energy pump concentrating dissipated free energy into a chemical structure with energy ready to use (i.e. burning wood producing heat).

5) The minerals and vitamins play a key roll in the kinematics of the Life phenomena, the energy, the dynamics of it, but the mother of all dynamics is the mystery of Life, the low entropy or high anti-entropy of information encoded in the DNA folds confers the ability to use and further concentrate more energy into a structural body, into the high anti-entropy of the newly grown living entity, the plants, the trees with their fruits and byproducts holding enormous incorporated energy as well. The high anti-entropy of information has the ability to concentrate low negentropy (high entropy) into high anti-entropy, ready to use concentrated forms of energy, a real gift of Life.

The ability to self-acquiring, holding, using and transmitting information we can also identify it as being a main property of Life.

## Model within model — Micro worlds and natural micro-economics

The Earth's ecological system is a living entity where all Life forms synergistically contribute to what we call Earth's Life support. Living organisms are characterized by a high degree of organization, high anti-entropy [23]. The ecological system can be described as an integrative level [26] of organization allowing us to describe the evolution «from inanimate to the animate and social worlds» as mentioned by Novikoff, 1945 [21].

Organisms are units that form populations. Furthermore, populations with their diversity form biospheres building up greater levels of complexity [21] as opposed to the experimental example depicted in Fig. 1 and Fig. 2 where no prominent diversity was involved.

Continuing this time with a non-experimental theoretical scenario, the Triangular Eco-Kinematics Theory (TEKT) is used with the help of TEKT triangle and circle as seen in Fig. 3, followed by Fig. 4. Here is used different kinematics; a variety of possible scenarios can be visualized. It describes the interaction between members populating of a given ecosystem that does not have to be entirely isolated from other ecosystems. In this non-experimental theoretical graphical model both players are food dependent.

We can for the moment identify the large disk defined by circle as the potential material and energetic source our micro ecosystem communicates with. The circle with the incorporated Euclidian triangle is a graphical representation of the Triangular Eco-Kinematics Theory (TEKT). It describes the interdependency rule between tow different loads and their states of organization (angles of the triangle). In Fig. 3 and Fig. 4 the playing factors are P, HB and their synergism *NE*.

The interdependency is reflected between each player's anti-entropy level (angle with the vertex P and angle with the vertex HB) in our micro ecosystem and the cumulative complex system's anti-entropy or we can call it the system's natural economy (angle with the vertex *NE*) formed synergistically by the two players P and HB as result of their interaction. *NE* is also an expression of the energy flow into the system. In the particular case model as is seen in Fig. 3 and Fig. 4 the interactive players are living entities, pathogen agents (P) such as bacterial infections / populations, free radicals (ready to combine), viruses, cancer cells etc., and the Human Body (HB) as being their host and source of materials and energy (food).

The anti-entropy of P combined with the anti-entropy of HB builds up greater levels of complexity and organization as it absorbs energy. Therefore we can observe to the sum of angle P and angle HB being smaller than angle NE;



# Fig. 3. The parasite activity & human body as Life's support as seen from the perspective of the Triangular Eco-Kinematics Theory (TEKT).

(A) — Total accumulated energy and tissue resources & impact; (P-HB) — Total population (molar) load; RIppl) — Material and energetic Resources & impact per total population (molar) load; (P-NE) — HB cell population (molar) load; (NE-HB) — Pathogen population (molar) load; (angle with vertex P) — Pathogen anti-entropy; (angle with vertex HB) Human Body anti-entropy; (angle with vertex NE) — Natural Economic flow, total system's anti-entropy.

that is the P and HB combined anti-entropic effect expressed by the angle *NE* is higher. The *NE*'s higher anti-entropy is due to a higher degree of organization [21] [26]; it's due to energy absorption and accumulation. Graphically, the angle *NE* is larger than the mathematical sum of angle P plus angle HB as long as *NE* is opposed to the triangle's edge smaller than the diameter of the circumscribing TEKT circle of the TEKT triangle.

As we've seen in the above experimental example (Fig.1 and Fig. 2), Life takes opportunities to increase the degree of organization by absorbing energy and not only by simply using it but in essence is «pumping it», concentrating it into structures of greater order during the give and take process (*NE*) as to serve its purpose, the purpose of Life itself as higher degree of organization. Such organization is the result of constant interactions, it is the flow of information handling material resources fueled by limited chemical energy and of course limited by the availability of raw materials needed for growing process.

The parasites P (Fig. 4A) if would increase in anti-entropy, becoming more active and stronger, would lower the HB anti-entropy, HB becoming weaker, the natural economic flow *NE* remaining the same. The HB cell population molar load (edge P-NE) is very close to the total population molar load (edge P-HB) whereas the population molar load of the parasites (edge NE-HB) such as viral load, bacterial load, etc. is at a minimum.

As it is expected, Pwaste (shown as circular segment in the TEKT triangle) is low as well. It will increase while HBwaste (also shown as circular segment in the TEKT triangle) decreases due to lower HB activity, HB being taken over by P. The player P being now more organized and stronger, very likely would better and faster reproduce such to increase their population NE-HB (Fig. 4B) to a molar load reaching towards the size of the total population molar load P-HB.

A larger NE-HB (TEKT edge) pathogen population as seen in Fig. 4B stresses and limits the available overall potential resources of the body HB. In a such theoretical scenario (Fig. 4C), we can imagine P and HB adapting, tending to improve themselves, increase anti-entropy by fighting and struggling for survival, producing therefore more (see circular segments areas becoming larger) Pwaste and HBwaste respectively. Such scenario is possible since our complex system is open, HB can still feed itself from external resources producing in the same time material and energy resources for P to develop as well.

Both P and HB now still with a positive *NE* are slowly tending to reach the maximum population threshold load with their total population molar load. Such maximum population threshold load (matching TEKT circle diameter) can be reached for a moment when the anti-entropy *NE* reaches maximum. The higher level of activity the higher the waste will be. Such higher activity will promote population growth potential, as seen in this circumscribing TEKT cycle with open resources, up to the maximum population threshold load level. With the P-HB total population molar load growing, the impact on the resources is becoming higher. The overall structural (material) and energy (chemical in the



#### Fig. 4. Kinematics of the parasite activity & human body as Life's support as seen from the perspective of the Triangular Eco-Kinematics Theory (TEKT).

(A) — Total accumulated energy and tissue resources & impact; (P-HB) — Total population (molar) load; RIppl) — Material and energetic Resources & impact per total population (molar) load; (P-NE) — HB cell population (molar) load; (NE-HB) — Pathogen population (molar) load; (angle with vertex P) — Pathogen anti-entropy; (angle with vertex HB) Human Body anti-entropy; (angle with vertex NE) — Natural Economic flow, total system's anti-entropy.

case of human body HB) potential slowly depletes. Regardless of the increase of anti-entropy of the pathogens P (Fig. 4D) or HB, the overall natural economic flow *NE* decreases.

Now the complex system's anti-entropy is slowly decreasing tending towards a still, were the synergetic process would not have the potential to further grow. The stage for decay is being soon installed, energy liberated, system's entropy is increasing. The complex system is now suffering as it is situated on the verge of a total collapse (Fig. 4C, D). Once the resources' depleting process continues the total population load P-HB decreases and what remains of P and HB tends to increase their entropy as the system comes to a lower energy. The anti-entropy *NE* decreases as well. The edges P-NE and NE-HB are increasing reflecting the HB population molar load increases as well as P population molar load increases respectively; molar populations of totally different identities than the initially existent population in the system as of result of decay and chemical transformations that take place. So, here it is to understand again that on the lower half of the TEKT circle we are discussing anti-entropy with reference to the angles of the TECK triangle whereas on the top half the angles reflect entropy, specific to Life's decay, reduction of the structural form of energy's build up. Up to the levels coinciding with the diameter of the TEKT circle, the *NE* is greater or equal with the sum of P and HB, calling for growth, decreasing as it reaches the diameter.

The structural accumulation A lowers as well (see decreasing area A from Fig. 4E, F) with a higher distribution RIppl per population capita now lower due to decay along with a consistently decrease in *NE* level (the angle tending to reach zero) as the natural economic flow decreases towards zero, the system coming to a stable thermodynamic state of no interchanges taking place. The entire living complex came to exhaustion and the entire initial living complex system is extinct. A permanent thermo-dynamical state is about to be reached as maximum entropy will instates in the system as death inevitably occurs [33]. The TEKT triangle's area (A) simply tends towards zero, soon no mass of the original Living populations will be in effect.

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In this final stage (Fig. 4F) the living population P-HB tends to zero while the total accumulated structure A depletes as well towards zero, a timely process during which the distribution RIppl is further polarized towards the continuously decreasing surviving few. It is just like a huge tumor that takes over all resources, possible up to the moment when there is neither living population P-HB nor accumulated structural complex A (the tumor can't feed itself) nor *NE* existent (decreasing its anti-entropy) as the entire A decays into non living basic substances, a cumulus of waste of what used to be Life.

Since thermodynamically there is plenty of dissipated free energy, the anti-entropy is therefore limited by the availability of material resources, as described in the experimental example (Fig. 1). Once we are on the upper half of the TEKT circle decay processes prevail; one world ends and other forms of existence emerge up to the point when the maximum entropy is being reached.

When there are two or more players, individuals or species belonging to a complex Life community, the variation of one player's anti-entropy affects the other player's anti-entropy the other way but their cumulative anti-entropy still larger than their mere summation as long as the complex is synergistically cohabiting and using the limited material resources by respecting the laws of relative equilibrium depicted here as Triangular Eco-Kinematics Theory (TEKT). In other words, one player must be providing in an equitable manner usable material resources for the other involved player. If not the system will come to a total collapse, total irreversible decay.

Each player's population must be well kept in equilibrium as their synergistic cohabitation must provide means for a positive natural economic flow (*NE*). Once one player over develops it will be at the cost of the other, in time eliminating the other player from the game. The complex living system tends then to come to a still due to lack of synergistic mutual contribution to the *NE* while exhausting the overall structural (material) and energetic potential offered by the micro-ecosystem. Once the demanding market vanishes as player, the supplier has no purpose and it will vanish as well.

Used as a complex living system example, the human body (HB), as we know, it is often invaded by other living organisms (P); therefore HB's sophisticated internal organization is being threatened by deadly bacteria, by viruses or by less organized entities (non living organisms) such as toxic chemicals or diverse type of radiations. In many situations variety of tumors can develop taking over the human body, a shift of entropy from the host to the newly formed parasite (P) invader. If the body's immune system with its defeating mechanisms is to fail, soon enough decay follows inviting other forms of life. The decay continues letting free the once accumulated energy. Such event may represent a learning opportunity for the human body HB to bust-up its defense system. If the learning and adaptation process fails the path of the systems' anti-entropy would decline (system's entropy increasing). Soon enough all activity will come to a stand still, a permanent state is reached as maximum entropy instates within the system and death occurs [33].

### Model within model – Macro Worlds and economics

Humanity with its social organization governed by sets of laws, rules and policies, spoken or unspoken, written or not, often just implied and widely open to interpretations it forms a higher degree of interactive level with unique emergent properties of each unit that combined it forms what we call «Humanity». Novikoff in his 1945 published works mentioned: »...living substance must still be recognized as matter on a higher level, with new, unique properties which have emerged on combination of the lower-level units» [26]. Schneirla, cited by Novikoff (1945), relates the results of his studies on army-ant and the ant population as colony underlining: «Any social organization represents a qualitatively new emergent level not equivalent to that which might be attained through a mere summation of the properties of its constituent individuals» [26].

Here we move forward to another specific example. I would like to remind the reader about the outstanding intellectual and psychological abilities of just about every member of our society, topped by the self-organizing capacity due to the collective behavior [35].

More so is the case as the intellectual abilities are being further amplified by the synergistic effect of human mind's activity that overpasses the summation of our individual mental abilities; abilities to process, produce, store and use information.

Such a superior level can regulate each body's attributes, act constructively or destructively upon each constitutive inferior levels of organization including «selective elimination» or selectively limiting participatory attributes. It does influence the constitutive bodies to the whole superior level. Selection often it fails the regulation process expressed often in the denial of the fundamental Human Rights or the achievement of equilibrium thru quality education due to the formation of influential conglomerates of interest. Interests with and for financial power are often mirrored into political power as well. Some see it as evolutionary, I see it as corruption and in long run devolution; it is a social self-destructive luring success that is based on collective behavior [35].

As an example, it is common to observe the expansion of financial interests being painted by green projects. Environmental friendly campaigns such as «greenwash» are common in the political and corporate world pursuing variety of development projects [37].



**Fig. 5. Humanity & Earth as Life's Support as seen from the perspective of the Triangular Eco-Kinematics Theory (TEKT).** (A) — Accumulated global wealth & impact; (H-E) — Global total Life population count; (WIapc) - Wealth & impact, average per capita all species; (H-NE) — Environmental population load; (NE-E) Humanity population load; (angle with vertex H) — Humanity antientropy; (angle with vertex E) Environment anti-entropy; (angle with vertex *NE*) — Natural Economic flow, total system's anti-entropy.

Referring to Fig. 5, as we are accustomed from the previous two TEKT examples, it should be easy to finally see some light at the end of our tunnel.

Respecting the second law of thermodynamics that applies for living systems as well, a new entity, Humanity (H) is here to gain energy out of the host, namely the environment (E). At a higher level, the human society as a living system (H) interacting with the environment (E) follows same natural laws of thermodynamics. Human civilization as a cumulus of organizational experiences can be viewed as acting upon environment just as parasitic living species from the previous example. Here the socio-economical tumor and parasitic character is easy to be identified, with all the regret.

The history shows us the ability as well as the imperfections in our ways to organize (Fig. 5 and Fig. 6) and cohabit our planet sharing one common life support. Human endeavors (H) can be viewed as an opportunity for knowledge and life experience acquisition. One of the major lessons Humanity (H) needs to learn is the fact that evolution process follows the laws of thermodynamics. Ontogenesis, the Life form's evolution and its organization indicate that material and energetic exchanges are tending to lower their entropy (increase their anti-entropy) due to accumulation of energy within their structures during the natural economic flow (*NE*) process.

From the socio-economic aspect, Humanity (H) as a super living organism supposes to increase its anti-entropy as well while decreasing environment's (E) anti-entropy in exchange.

If we follow the population load (Fig. 6A) as we are accustomed from the previous examples, the Humanity (H) population load (edge NE-E) has a very low contribution to the total Life population count (edge H-E) as opposed to Environment's (E) population load contribution (edge H-NE). Such trend is changing as we move our attention to Fig. 6B and Fig. 6C where the contributions are dominated by H-NE tending to match (Fig. 6D) the maximum population threshold load level, the *NE* coming to a stand still and entering an era of decay, decomposition. When Humanity overgrows finds itself in the position when the natural economic flow (*NE*) moves more towards a purely human economics were the human population relies on a service based economy, a virtual economy surviving in the virtue of inertia, feeding itself on the Environments remains, and reprocessed waste.

Humanity can be seen in the position when one person is servicing the other, rewarding each other with virtually perceived values. «I scratch your back you scratch mine» type economy while we dig for energy and print currency to lure ourselves with prosperity. We as society engage in luxurious activities, luxury automobiles, dream vacations, private planes, private boats, private islands, internet games and chatting, tobacco and other substances, face lifting, moral lifting, armed conflicts, expensive weddings, fashion, dig a hole so we are busy to fill it back up.

Embracing a virtual life, loss of intimate contact with Nature alienates us from it and from each other [16]. Such process perpetuates in a destructive fashion as the collective behavior [35] phenomena has an echo effect, a multiplication of cause and effect as the effect becomes the cause of further effects. Our today's society at large is entering a coma state due to a defectuous social metabolism as result of digesting virtual anthropogenic metabolites; it still survives squeezing what is still left in the Environment.



## Fig. 6. Kinematics - Humanity & Earth as Life's Support as seen from the perspective of the Triangular Eco-Kinematics Theory (TEKT).

A) (Area) Accumulated global wealth & impact; (H-E) (Base) Global total Life population count; (WIapc) Wealth & impact, average per capita all species; (H-NE) — Environmental population load; (NE-E) Humanity population load (angle with vertex H) — Humanity antientropy; (angle with vertex E) Environment anti-entropy; (angle with vertex NE) — Natural Economic flow, total system's anti-entropy.

As seen in the previous two TEKT examples, such entropic matter-energy transformations must follow a trend as not to decrease the environment's anti-entropy to the level of becoming a total useless waste beyond self-recovery point. Furthermore we are to consider the fact that Humanity holds a huge treasure of knowledge, a rainbow of information having a direct impact upon energy's concentration, creating anti-entropy whereas ignorance creates entropy, low level of organization [34]. As mankind's history tells, such anti-entropy growth was on one hand created in the favor of a few lucky ones due to geographic coincidences and climatic favorable fields; on the other hand entropy increased for the majority of population experiencing diseases, war, economic depressions, environmental distress and death [11]. Polarization of wealth was born, economic and political influence become excellent tools for the creation of high anti-entropy social segments conducting to community conflicts and expanding to a large scale World armed conflicts.

If we observe and learn from the above examples we may conclude that in order for Humanity to survive and develop in a sustainable fashion, above TEKT rules should apply as well in order to maintain anti-entropy growth of the anthropogenic economy (global economics) since they serve a living system as well, a system called Humanity and Earth's Life Support (Fig. 5, Fig. 6). TEKT rules supports dynamics as well as ways to quantify phenomena. Further work is in progress and interested researchers are invited for debate and contributions.

Humanity, in the material and energetic exchange process called anthropogenic economy, invented and engaged an intermediary form of accountability and measurement, the monetary system, as opposed to other life forms that function by natural economic laws. Soon enough, such a convenient and widely adopted system, the monetary system, became a real industry were numbers are crunched, commodities are virtually valued and traded, markets are being controlled, political powers are gained, international influence and disputes are reaching armed conflict levels.

The monetary system is an invention that, from my humbled point of view, is constantly misused and abused; it became more anti-human and brought more international distress than Alfred Nobel's dynamite or the WW II if we

are to make an inventory. As Graeme Smith, one of my collaborators on ResearchGate network [46], qualified «money as the major bullets of power».

I have to mention majority of people would agree with such statement as I personally endorse it as well. I would add, the bullets are real and are becoming bigger and more dangerous.

As opposed to other life forms where the material and energetic exchanges take place right on the spot maintaining give and take equilibrium, Humanity engaged in virtual value exchanges. Such trades most of the times are not on the spot and a cumulus of such virtual values as interest is instated. The equilibrium is lost, the consumption of real resources take place building up higher dues of virtual values due to added interest and furthermore due to inflation. Is it here room to refer to volatilities as in connection with virtual values? It would be just like expecting a ghost to stand still or a night dream to remain tangible; there is no much difference.

The creation of such financial facilitation as we find in the anthropogenic economy eased access to real natural resources encouraging consumption, increased commodity trade and increased revenue. Increased consumption produces side effects of different nature (Fig. 4) such as public health, elevated carbon foot print and excessive potable water utilization. A major direct effect of increased consumption is the obesity and related problems, tobacco and alcohol related ailments, a resulting display of social collective behavior [35]. Widely discussed, the excess of animal farming has a huge negative impact upon the ecological system. The direct impact consists of the farming technology toxic by-products affecting the underground waters. Also the additives used to produce the animal forages such as antibiotics are affecting the public health. One other aspect regarding animal farming represents the vast spread of the major killers of Humanity shown along our history — cholera, measles, malaria, plague, smallpox, flu and tuberculosis are diseases that evolved from animal diseases, now very adapted and confined to humans only [11].

It has been said that «one global financial regulator and one currency are not feasible», as it was presented at the Conference held in New York City on November 24—25, 2008 by the Reinventing Bretton Woods Committee [30]. I strongly agree with such conclusion based on the actual conditions. Nevertheless, I am convinced that such measure is not just possible but rather ideal only if the respective currency will have as reference a Life Equivalent Etalon (LEE). Such approach will offer banks the opportunity to introduce real valuable incentives to private economic actors; it will discipline the market assuring stability [30]. Using a LEE for currency will stabilize prices and overall financial stability, therefore reducing arbitrage incidences between countries.

The price stability has a profound Human Rights type impact reducing social distress, and possibly eliminating incidences such as suicidal [7]. Financial interests' powerful influences on markets and governments pave the way for corruption. Economic crises inflict huge losses as a domino effect, causing job losses and destroying industries. National bank-ruptcies are paving the way for wars just about as the Great Depression added as motivation for the World War II. [32].

Didier Jambou, in our correspondence, puts an accent on the impact of economy upon Human Rights: «Material progresses are good if they improve human life, not if they destroy some life for the benefit of others» [46]. That can also be modeled and described using TEKT.

It is clear to me that expressed in one way or another, from sophisticated bank statements to huge capital investments, from luxurious automobiles and personal aircrafts, from countless number of servants to endless lawsuits, the wealthy financial holders consume natural resources as if the Nature chose them over others since their birth time.

### The modern slavery

In a World of the 3-rd millennium when people still practice slavery, still kill one each other on international armed conflicts or street and domestic violence, in times where we are facing natural disasters influenced or not by mankind, in a place where people die of hunger while others fly private jets and pock out of their pants (Fig. 7) while rushing to the doctors for liposuction or face-lifting, on a planet where fires destroy forests and agricultural fields while in some places overproduction of harvest is being thrown away just to keep the prices high, not only that I'll have a very low chance to make myself heard but many may completely discredit my works. Still, I believe it is worth trying as in this ugly planetary game we are all involved. It will be no winners in a long run unless a major immediate step back calling for total global reform will be taken seriously by all power holding nations and private entities.

The tobacco paradigm is just another simple aspect that I can use as an example confirming the stubbornness that dominates the financial greed, the hunger for power and influence and the corruption our World society is facing at all levels. Advertising campaigns are triggered to alter the perception about tobacco by associating smoking with freedom, love, good time, self confidence, social acceptance; the ecological psychology [10] of the public is therefore manipulated by clever marketing campaigns. I remember Albert Ivor Morin commenting during our extensive dialogs as he said «Marketing and Advertising as propaganda campaigns are used to herd the population via brainwashing» [46]. Yes in did, it is all about money and here I'll attempt to prove that in fact, no matter what the numbers can depict, money are value-less in essence.





Ignorance maximizes entropy [34] all the way to Human Civilization Total Collapse (HCTC) [36]. At any given time, money can be printed but still we would not have enough for our medical bills nor to keep our promise to assure a peaceful retirement.

At any given time money may not be accepted in exchange for products or services as trust in states and governments is sharply declining.

Please let's imagine for just few seconds huge piles of dollars, yuans, euros, pesos, ruble, gold, diamonds (structurally the last having the highest negentropy as I will not refer to it as the highest anti-entropy since is lifeless). If we find ourselves in front in one or all of those piles, considering the today's economic environment, surely most of us perhaps will tend to grab the pile of gold or diamond or whatever trades the most. I have no idea if anybody will consider the inflation rate that average 5% per year for the past 90 years. Well, without much delay, I would like to invite you to consider a pile of grains, legumes, fruits and perhaps a few books with the results of Humanity's findings for the past thousands of years. Definitely in our piles I intentionally excluded crude oil or any energy source. As a special for the first few interested I would include productive agricultural fields, an as a gift perhaps some fine arts as desert.

The Economic (anthropologic economy) and Environmental Crises that we are facing are just forming a mirror image of our Human behavior. We agreed with the currency, credits, and banks (we all have at least one credit card or so), abused them and now we are ought to recognize the fact that the Economic system is obsolete and Mother Nature tells us what to do, we just have to listen. The solution is as simple as it is uncomfortable in the same time to many wealthy people. Well, the wealthiest people and the highest ranked financial holders should be the most interested parties to look for a Global Reform based on real values. I would ask: Will you settle for a few percentages of something or you aiming for 100% of nothing?

One segment of population keeps busy digging large and deep holes in the ground while another well intended segment will spend resources in feeling them back, leaving room for other larger holes and much deeper to be made. Sure, people keep busy, money is being «made» and spent. The market moves and jobs are being created. Is in did, jobs are «created». What type of jobs? People are being occupied doing what? Serving whom and what is exactly cause?

It is like not just having slaves working on the cotton fields but rather provide them with defective tools expecting them to perform, punish and even execute them if they fail.

The all you can eat restaurants (Fig. 7A) make money, and surely proportional quantity of garbage. Life became expensive so, if someone is to spend eating out then should eat the most for the same price. Soon enough the opportunity builds up for hospitals to make money so the doctors and the pharmaceutical industry can build structures, very high negentropic structures. Surely some structures are for very private use, many for public use, while countless of people have no place to live and hardly anything to eat.

## Energy based anthropogenic economy

Some may have the energy but can't build without bricks; why build anyway? Lowering the entropy of our life all the way to the level of a diamond [5]? Soon enough all activity may come to a stand still, a permanent thermodynamic state is being reached as maximum entropy builds up in the system as death will occur [33].

An «energy based economy» will create a demand for energy. Apparently it is an innovative concept but an increase of energy consumption will become not just a waste of energetic potential but also an accumulation of energy within structures such as constructions, body fat [22], excessive waste products (see figures with TEKT examples). An «energy based economy» will encourage consumption of products for the interest of financial powers. Spending ener-

gy will be the base of financial benefits rather than Humanity's sustainable economic benefits. The adepts of energy oriented economics are the energy holders (oil etc.) and such measure will only benefit them not necessarily the Humanity at large. The impact of energy oriented economics upon environment would not necessarily be the carbon footprint. The energy can be produced from alternative sources (wind, water, tidal waves). If carbon credit becomes a real trading business, the agricultural fields will be used to capture carbon dioxide to produce energy (biofuel) rather than food to feed the population. The food crises will rise, as the prices increase.

Using exosomatic instruments [15] free mankind and improve quality of life if such instruments are not being abused for overproduction. The exosomatic instruments may have a destructive fingerprint upon the natural resources. Microchip identification has the tendency to control population and infringe upon our freedom.

Nanotechnology promises new developments in the electronics area as well as the medical field. Nanorobotics shows the promise of the future. Being rooted in biological-based inspirations, the swarm-bots or swarm robots are autonomous mobile robots having the ability to self-assemble and self-organization, a process based on artificial evolution able to display a «productive» collective behavior [35].

As multi-agent systems are increasingly used in industrial applications the productivity improves with such innovative technological advances but here I have some words of caution. As I mention earlier, overproduction matching consumption of goods puts a heavy stress upon the environment from the natural resources perspective but also from the perspective of waste production (please see TEKT models). Also, the «little robots» may become too intrusive and become real bugs in our daily life. Do we really need another virtual invasion? The money and the Internet gaming and social networks aren't enough?

Great care must be exercised before applying technological innovations. We must think ahead of time about all possible implications such developments may have in a log run. We can't limit ourselves questioning the possible impact the GMO may have upon us.

As humans, we are having major problems in coordinating our activity to benefit Humanity. Coordination behavior [35] studies and applications should find their place directly among us through proper education. Coordination behavior studies can offer the platform for a better and profound collaboration at spiritual level as we all have one God and purpose. We need to enter in harmony with Nature by respecting the natural economics of our life support. We need to coordinate our behavior such as to become sustainable, healthy and be able to enjoy a decent quality of life as community.

As technology offers solutions more products will be produced and more energy will be used; more money will be made, more virtual values gained while real natural values will be spent becoming legends. The danger is over accumulation, the social fatness with its unhealthy outcomes such as social diabetes, deregulating the social organization as maximizing its entropy. Excessive accumulations such as buildings, transportation and communication means will conduct, ironically, to an irreversible alienation (Fig. 7B), as the extensively misused internet gives us a clue.

Very young children and teenagers spend extended amount of time in front of television sets, computers and electronic games as their parents are busy making a living on the run and many perhaps also accumulate. Accumulating building and automotive structures is not much different then body fat deposits. They are storing wealth not just for themselves (Fig. 7C) but for their sedentary computer passionate children too. Such stage can easily be iden-



Fig. 8. TEKT empirical model.

tified as being similar to neurodegenerative disorders, neuropathic syndrome now magnified at social level.

A general distrust due to extensive alienation of each individual will induce depression, unhappiness, lack of self confidence. Wanting more and more it will create «the ever growing need» for more; it is a dangerous «financial drug» that is never enough. It is a chronic addiction with deep social ramifications.

### The TEKT rules and what does it tell us

The Triangular Eco-Kinematics Theory (TEKT) as we've seen being applied with reference to the experimental and theoretical models presented earlier (Fig. 2 to Fig. 6), it takes an empirical form for the purpose of future discussions presented in Fig. 8, form that needs extensive improvements paving the field for adaptation and variety of Life related applications and activities.

It is important to remind you the top half of the TEKT circle is the entropy area. All activities that are rep-

resented in the upper half present building entropy as opposed to the activities depicted in the bottom half that are building anti-entropy for living matter.

Surely the combination may depict a decrease of anti-entropy on the bottom half while entropy is being produced on the upper half. When such activity passes the diameter portion of the TEKT circle, our universe is changing, the nature, the composition, the activities, the type of biochemical reactions and the energy flow are all changing.

In essence, in such situation, energy is liberated out of the system, entropy reaching a maximum. Such situations as we've seen are associated with of the playing factors overgrowth. Being either the dependent or the sustaining factor, overpopulation conducts to resource depletion and decay follows. Referring to the empirical TEKT model (Fig. 8), for anti-entropy to exist, the two players, namely  $AE_{df}$  as dependent factor and  $AE_{sf}$  as sustaining factor synergistically produces the energy flow, the natural economic flow  $AE_{sid}$  (NF) as sustainable inter-dependent resulting product:

$$AE_{df} + AE_{sf} + AE_{si-d (NE)} = \pi$$
, and  $\pi/2 < AE_{df} + AE_{sf}$ , and  $AE_{si-d (NE)} > \pi/2$ 

Here the total population's molar load ( $P_t$ ) should be larger than any other individual player's population while being smaller than the maximum population threshold load (max $P_{TL}$ ), level that if is crossed, entropy of the system builds up, and therefore the following condition must be met:

$$0 < P_{sf} < P_{t} > P_{df} > 0$$
 and  $P_{t} < maxP_{TL}$ 

The accumulated energy-material structure **R** is growing as energy is absorbed, a constant give and take  $AEs_{i-d (NE)}$  process that an ideal system is driven by. The system's survival tendency participates in the evolution process of the system.

$$R = 2P_T h$$

We may find ourselves at a very crucial point in the complex living system as TEKT exposes here; it is the critical point. Similar to the maximum population threshold load, in this case the population of one player factor (just as example regardless of the players) for instance  $P_{df}$  is overgrowing the other player's  $P_{sf}$ , population. That will increase  $AE_{df}$  anti-entropy at the cost of the other player's anti-entropy, and so  $AE_{sf}$  is decreasing. Proportional and specific to  $AE_{df}$  activity, the waste ( $W_{df}$ ) increases as well while the accumulated resources that include energy structurally encapsulated (R) is decreasing, further growing the  $W_{df}$  waste. The critical point is approaching as the degree of organization respectively  $AE_{df}$  is increasing building anti-entropy. The population  $P_{df}$  will outgrow and monopolize the game tending towards equaling the ( $P_t$ ) total population molar load, as seen in Fig. 8.

At this point, the TEKT triangle's area **R** is aiming towards zero and the structural energetic-material value distribution per capita of  $P_t$  load, respectively «h» is dropping towards zero as well. Similar situation we've seen in the experimental model as exposed in Fig. 2D and Fig. 2d when the entropy was installed, the system entered a decay stage, and all Life was extinct reaching thermodynamic stability.

## When $P_{df} \rightarrow P_t$ then $R = 2P_t (\lim_{h \rightarrow 0} h)$

Similar to the above scenario, we have the situation when the maximum population threshold load can be reached. The total population's molar load ( $P_t$ ) reaches maximum permissible total load (max $P_{TL}$ ) by the system due to the resource capacity, situation when the natural economy of the system,  $AE_{si-d (NE)}$  respectively is becoming unsustainable, growth comes to a standstill:

### $P_t = maxP_{TL}$ and $AE_{si-d (NE)} = \pi/2$

Once the maximum population threshold load (maxP<sub>TL</sub>) is reached, the system enters the decay state and it starts to build entropy while decreasing anti-entropy  $[AE_{si-d (NE)}]$ :

$$E_{df} + E_{sf} > AE_{si-d(NE)} < \pi/2$$

The previously built energy-material structure **R** is entering the new stage as **R**', a specific stage to the new created environment. What it used to be Living matter with low entropy is in the decay stage, outputting energy, aiming to maximum entropy, scenario that can be represented:

$$R' = (\lim_{Pt' \to 0} 2hPt')$$

As regards to the population molar loads  $P_{sf}$  and  $P_{df}$ , their molar count is growing due to the ongoing  $P_t$  molecular fragmentation. Decomposition into simpler chemical matter process is taking place. Energy is dissipated and so entropy is reaching a maximum.

As we can see, there are two likely possible scenarios for a complex living system to self-destruct. One is outgrowing its counter player's contribution to the system. The other one is outgrowing the maximum permissible total capacity offered by the limited material resources.

Both scenarios are independent of the available energy to the system. Furthermore, if we are to examine closer the TEKT system, the two scenarios are about identical; the TEKT triangle disappears.

One player's monopoly and overdevelopment devolves to a meaningless virtual flat segment. Anytime we can draw another circle having that segment as diameter, a maximum population threshold load  $(maxP_{TL})$  is already reached before any other kinematics can take place.

### How much can Earth sustain?

Using the Triangular Eco-Kinematics Theory (TEKT) applied on the virtual model presented in Fig. 5 and Fig. 6, it is just normal for someone to ask: What is the actual «maximum population growth count» that Earth can sustain without self suffocation and starving to death. There is no quick answer but the proposed way to look at it is relatively simple.

Based on the available census data, the basic individual needs to sustain life along with the production potential of food and green energy on Earth are fairly well estimated. We are not to forget the wilderness as to keep Earth biogenesis in balance. All animals are food-dependent, relying directly on the food «prepared» by plants and by other animals as well.

From the food aspect we are strictly dependent on the available organic nitrogen sources, respectively the available protein. The protein needs to be synthesized by the ecosystem (plants, trees, bacteria, animals, etc) that constitutes our life support. Earth has a protein production capacity limited not only by the available dinitrogen  $(N_2)$  but also by the ecosystem's ability to do it.

The rapport between the sum of protein production potential  $(Pro_{pp})$  and the average basic individual protein need  $(Pro_{bin})$  during a one year cycle as to include all seasons, will offer us a starting point to determine the protein satisfaction condition  $(Pro_s)$  for all Earth's animals.

The rapport between the sum of energy production potential  $(Kcal_{pp})$  and the average basic individual energy need  $(Kcal_{bin})$  as to sustain life will offer further insight, namely the energy satisfaction condition  $(Kcal_s)$  for all Earth's animals.

Therefore we can consider:

$$Pro_s = \sum fs \ (Pro_{pp} / Pro_{bin}) \text{ and } Kcal_s = \sum fs \ (Kcal_{pp} / Kcal_{bin})$$

Since humans are omnivores, the protein produced by plants and trees as well as the protein produced by animals can be consider relatively transitory so here the condition

#### $Pro_s \ge Hmc \le Kcal_s$ should be met.

Both  $Pro_s$  and  $Kcal_s$  should be produced including factor of safety (*fs*). I propose a *fs* of 1.3 to maximum 2 as to assure food storage for emergency to satisfy a number of years; the agricultural production vary from one year to other. The smaller number will bring us closer to the «maximum population growth count» from which the maximum Human (population) maximum count (Hmc) that Earth can sustain should be estimated, depicted in Fig. 1 as diameter (D) or generally named maximum population threshold load.

The above formulation is offered just for a general understanding of the concept. Further research is due. Natural disasters, weather instabilities are to be taken into account as to assure proper food reserves for a few years, and that not just for Humanity but for the entire animal kingdom to assure maintaining Life's balance and its organization.

### HCTC and the apparent economy

Slowly but surely we are witnessing Human Civilization's Total Collapse (HCTC) following the same pattern as the great civilizations of mankind [36]. Our planet's life support needs to be protected, immediate steps needs to be taken; an international wide spread commitment would benefit Humanity and its life support.

Nature itself works following the natural economy laws, matter-energy going through entropic transformations, offering our basic life support including the conditions to extensively produce the necessary food and housing, trading

commodities as the global economy is based on. The consumption must be drastically reduced. The principles of market economy are fairy-tales offering nothing but an empty dream, a nightmare for the majority as the natural resources are consistently depleting. There are a variety of participating qualitative factors in this equation. Weather conditions may lower the supply of agro-products raising the prices as a result, or the anticipations of the traders may conduct to anticipated price adjustments [2], just mentioning a few.

Price adjustment is a strategically designed method to control the market; it works more under command from the financially involved parties in attempt to keep the balance in their favor increasing profits, virtual profits as I just mention and deducted from the above TEKT examples. The Consumer Society is often viewed as the heartbeat of economics. The demand for products and services and their supply strictly correlated.

Great scientific discoveries are embedded in the history of mankind. Product developments, manufacturing and supplying market's demand are offering many business oriented members of our society the means for wealth accumulation. From the aspect of financial and real property holdings to protected intellectual properties, all the way to political powers, mankind competes in achievements. Definitely a treasury of knowledge has been accumulated by trial and error. Are all of those elements rewarding to Humanity? Or maybe they are just apparently rewarding and for just a few of us while the majority will collect the remains if anything are left. I would like to stress the term «apparently rewarding».

Do all humans have equal rights since the time of birth, or we are guilty for our existence? Are the provisions of the Universal Declaration of Human Rights [39] fully respected since they were adopted by the General Assembly of the United Nation on December 10, 1948? Definitely they are not respected, as we very well know.

It should be highest priority to encourage a sustainable economical development while assuring for all people a decent and humanly so called «quality of life». Minimum living standards, nutrition, housing, health care and education can be established while the States and Governments can adapt and assure the implementation of such standards. The banks should closely participate in such programs as they serve the interest of all; or at least that is the way it should be.

### Nature has solutions for its survival – We are Nature.

We may choose to observe two distinctive aspects of the globalization process. The natural globalization needs to refer to the migration of species and its imposing character upon the rest of the environment; then the process of mutual adaptations and evolution it follows. The environment has no frontiers. The Human expansionism can be viewed also as being natural or as a forced globalization process; it is just a matter of reporting the events to the time factor.

One World Government may appear as a viable solution to solve global problems as to manage resources wisely, but in the same time it is a very dangerous solution as it appears to me. Humanity is not mature enough for such step. Mankind comports as being vulnerable to corruption as of yet, therefore instauration of dictatorial practices can rise. One global currency is still feasible but in order to have stability mankind needs to give up the fiat money and the virtual anthropogenic metabolites. A sustainable currency and accounting in the anthropogenic economy should have as reference Life equivalent Etalons (LEE).

A relationship between the natural economics, our Life's support as sustaining factor and Humanity as dependent factor its on the works as to present a viable solution to the global crises, a proposal to assure World stability, sustainable development while respecting Human Rights.

As any ontogenetic adjustment a temporary disorder is expected, anti-entropy growth involves the construction and reconstruction of new organization, produces entropy [22] temporarily. Educators and spiritual leaders need to have a direct participation as to lower social entropy [34]. It is not an easy task; we owe it to our future, to our children and to ourselves.

Education starts from home as a main Human Rights obligation towards children. It is an obligation imperatively attributed to be respected by parents first of all, as part of a process to be continued by qualified institutions such as schools and universities. A wise natural resources management, including human resources, depends directly on the quality and the degree of education. The human mind with all its capacity, creativity potential and intellectual abilities produces anti-entropy [34] but in the same time it appears that misdirected information (similar to a virus implanted in a computer) it may produce entropy, a total disorganization such as armed conflicts and their outcome. The human mind with its wide range decisions, up to now proved to be the most polluting aggregate of all [36].

Marx referred to fertility as being altered by human intervention [1]. We are in the 3-rd millennium and humanity had great opportunities to learn and experience in this area from cross fertilization to weeds and pest control, from in vitro fecundation all the way to genetically modified organisms (GMO). I will allow myself to comment on it. On one hand, the lack of intervention hinders the qualitative «fertility» of the «Human civilization», the overall Life's quality and social development. On the other hand, too much intervention definitely compromises said fertility

conducting to an overloading of the system with suffocation effects if I may. Therefore we are ought to follow the models that Nature thought us by trial and errors in the course of our history.

It is about time to learn from our historical mistakes and adopt a sustainable equilibrium of Life, explained by TEKT, so we can enjoy our time and transmit the enjoyment to others along with the same opportunity we can start to create now for ourselves. The HCTC can still be prevented.

The most valuable capital investments Humanity builds are not the material or the monetary means nor statues and monuments but rather the non-monetary values such as a sustainable Life support of our planet managed by the capital of knowledge that we can't ignore [34], with love and respect to our Mother Nature.

### The economic fitness

Building structures of any kind the Humanity tends to become a huge conglomerate of very high order structures; how high can it get, what is in fact our aim? The diamond for instance, has the lowest known molar entropy of any structure, 2.4 J mol<sup>-1</sup>K<sup>-1</sup> [5]; structures full of richness and brightly shades aiming towards the lowest entropy as highest organization, highest negentropy. For the moment it appears to me that the key point of all our aim is definitely lifeless, just like the mighty diamond, a beautiful bright and lifeless stone.

In mean time, most of us are collateral or direct victims of the «chosen ones» that more or less «accidently» inherit the power of steal and gun powder [11], the luring of gold and diamonds with «the need of crude oil's speed». It appears that some of us are born with more Human Rights, some with less and the Nature does not have any Natural Rights.

The dark interests, such the ones targeting the Gold Mines in Rosia Montana, Romania, have historical roots and continue nowadays. Gold mining as i.e. is using low entropy life resources such as human resources while destroying the low entropy of living environment due to applied technologies [23]. In exchange is being produced a very low entropic structure such as the pure gold but in fact a lifeless with no evolutionary roll other than destruction. In essence it is not just useless but rather dangerous to the entire living system. For example, at the end of January 2000, the gold mine from Baia Mare, north-central Romania, sent 100,000 cubic meters of cyanide-laden waste into Lapus River that feed the Danube River [13]. So, we may ask then, what is the purpose of life? Is it «All that Glitters» [13]? As I realize, Life is an experimental lesson as to learn our boundaries, and what levels of material accumulations we as Humanity at large can afford.

In my concept, for Humanity it remains to expand our boundaries in the intellectual area where we have space to grow creating anti-entropy [34] rather than material. Also to compliment our intellectual achievements and maintain low entropy as of result of information and good health status, proper nutrition, indulging in activities such as sports and arts are highly recommended, broadening the ecological perspective in human psychology, cognition and ecological dynamics being improved [3][18][28].

Life it is a self discovery process, of our origins and our purpose. Life is the quantum force incorporated into matter that becomes the home of its manifestation. All life forms share equally the natural resources that Humanity has the duty to recognize as being governed by Natural Rights within which Human Rights can find its role and place only.

In its endeavors, mankind was able to build exosomatic instruments [15]. Automation became an extension of the endosomatic instruments in time replacing the endosomatic instruments of other members of society, putting them not only out of jobs but often putting them out of life.

Building exosomatic instruments natural material resources were consumed taking away from all of us. So, in many aspects such instruments are by nature social property. Nobody was born condemned nobody was born enthroned but their heirs with the help of steel and gun powder forcefully [11] claimed the rights of what Nature decided long ago.

Some exosomatic instruments apparently are an extension of ourselves with the purpose to provide us with means to better interact with the environment, better communicate and better enjoy All have a measure, a boundary that it appears that in the quest for virtual values accumulation (money as a symbol of wealth) as opposed to real values (non-monetary values), using marketing strategies the television sets, the electronics, computer games and online chatting and play have a strong negative impact upon Humanity, conducting to obesity due to such associated sedentary activity, emotional and social isolation, and depression [16]. More so as night internet connections in some areas are offered for free to all users, including school age youngsters. Their school performance is affected, their health status is being compromised and cumulatively the social entropy is increasing. As alternative, sporting activities would enhance their health status, interpersonal adaptive ecological dynamics [28], and creativity [18], and confer an increase fitness of Humanity as species [19].

All this time that we've been fighting Nature should be considered an expensive learning experience by trial and error. It would be a huge mistake to ignore [34] the messages Nature provides us; just recently we started to see the beginning of what is to come. Nature is screaming at us; we all hear it but still some of us simply don't want to acknowledge it as of yet.

The nations, states, governments and the educators have a huge role in establishing the foundations for a sustainable development [38]. I encourage them to understand the principles enunciated with the help of TEKT as it applies in any aspect concerning Life and sustainable living. Sustainable living, a generalized common desire presented as being UNESCO goals as well.

Human Rights should offer the platform to Live in Peace and freedom without fear as it is described in the «Human development Report» by the United Nations Development Program [27].

### Life Equivalent Etalon (LEE) reference for currency

As it was mentioned earlier, Life on Earth is directly dependent upon the capacity to cycle carbon dioxide  $(CO_2)$  and dinitrogen  $(N_2)$ . Such capacity is strictly dependent upon the biodiversity on Earth that needs to be kept in balance.

Using a Life Equivalent Etalon (LEE) as reference for national currencies or for one global currency, it will offer stability since the conversion will be steady. It will offer a way to calculate social and welfare assistance long term programs directly related to the needs of population as inflation can be prevented by using LEE as currency reference.

For instance, the retirement plans often fail to respect their promise as the currency depreciates, the prices are growing and the retirement income hardly satisfies the needs of the elderly. The introduction of LEE currency reference will confer additional assurance concerning the contributions' value as opposed to the value of retirement income.

A basic real value for material goods and services can be established such as a «blue book of values». It will remain up to the consumer to pay the willing price based on desires, perceptions and disposable income. One of the main reasons for currency depreciation is the inflation by attribution. The inflation attributing factors are of different origins. For instance, the consumers will often pay much more for a product then the real value due to lack of information, social pressure and desires. One of the most common inflation attributing factors are easy finances obtained without personal effort such as inheritance, financial speculative ventures, most of the illegal cash generating activities, lottery winnings, and cheap credit offered by financial institutions including wrongly directed government subsidies. The inflation by attribution can be reduced as long as the currency will have LEE as reference and nominal basic real values will be established.

LEE will also encourage maintaining biodiversity and will function similar to the carbon credit with an added function that it refers to Life. LEE currency reference will be an act of Human and Natural Rights respect.

Since the anthropogenic economy serves in principle humanity, the LEE will be based on the average daily need of protein and energy intake for a healthy person. From this point on, other human needs will find their equivalent in LEE. Housing, transportation, services, health care, and others, are all products of human activity to serve directly or indirectly humanity. Such activity needs to be fueled, therefore all it comes down to protein and energy daily intake by humans.

The recommended average daily intake need is 75 grams of protein, 75 grams of fat and a total of 2700 Kcal per person. A LEE will consist of 75 grams (g) protein with a 4 Kcal/g energetic contributions, 75 (g) of fat with 9 Kcal/g energetic contributions, and the rest of 1725 Kcal it remains to be supplied by carbohydrates.

As an example if we are to consider US\$ 1 = 0.1 LEE, one person can feed in one day for US\$10 plus other food related expenses due to transportation, labor, storage, etc. Obviously, for a reference of this type, laborious calculations by using algorithms to fit the purpose are needed. It definitely appears to be a cumbersome approach, but a careful examination may change our mind.

As we can see in the above examples, the natural economy does not have provisions for credit, for interest, speculations, inheritance other then information and lottery winnings.

The system enters «bankruptcy» only when the material resources are exhausted regardless of the available energy and when the biodiversity is out of equilibrium.

### Secondary conclusions — a call to my fellow Earth co-habitants, World citizens

I call upon financial interest holders, from the Vatican to the private investor, from the oil fields holders to the expensive car passionate, from the Wall Street hungry for success to the Royal families to listen careful to our planet and pay attention to social unrest such as the new born Occupy Movement, have respect to the elderly and gain the respect from the young.

Overconsumption is a flagrant unhealthy and unethical behavior against Human Rights principles. None of us came in this world neither condemned to hunger and poverty nor blessed to «all you can have buffet». Perhaps we are not born equal but we are not born condemned either.

Overpopulation is against Human Rights, taking away the basic needs from each member of our society. Overpopulation needs to be controlled not by individual or mass sterilization but rather via extended educational, community oriented and financial incentives programs not centralized but state and government partially funded.

Technological developments and automation free mankind from physical work as to provide the daily needs [15] [35]. As result, the available saved time and our resources can be invested to improve the quality of our lives as opposed to devolve into chaos. Let's dedicate our time to better understand the meanings of our own existence. Let's discover the pleasure of real value achievements as opposed to the virtual glitter. Such non-monetary real values can be achieved thru unconditional love and care sustained by extensive education, recreation, arts and entertainment in such manner as to keep people close connected. Social activity should not be limited to the virtual world as it attracts social isolation, alienation from others and from one self.

We need to assure our future the means to grow healthy. Children are born with the right to proper nutrition, housing, health and education; a decent quality of life for all. The population segment that needs to observe first of all the provisions of Human Rights consists of parents.

Parents have the natural obligation, as natural instinct, to protect their offspring. Parents should make sure they have all the means to bring in the world healthy children and provide them the basic material needs along with love, non-material values such as proper education, and assure proper housing. Such parenting education program can be doubled by financial incentives as to promote education and proper parenting.

The Triangular Eco-Kinematics Theory (TEKT) combines the notion of information in biology (carried by DNA), extends that complex systems from the organizational aspect, observable and empirically quantifiable interdependency. The systems described in the TEKT examples, being experimental or purely theoretical are all equal in effect; it shows that every inference valid in one system is valid in the others as well, therefore I can assert TEKT can be validated as functional logic [29] widely adapted to different situations and applicable in life sciences, economics, environmental protection, etc.

The scientific finality of TEKT may also entail important epistemological consequences: it participates to the epistemological debate regarding the notion of material resource limitations, use of information, energy use, the updating views on the basis of their interactions with physics, biology, psychology, sociology, religion, economy, ecology, etc.

The Triangular Eco-Kinematics Theory (TEKT) may offer the theoretical principles of sustainable global economy and World peace as respect to Human Rights. I propose Human Rights to become as an integral subdivision of a generalized Declaration of Natural Rights, an international recognized law encompassing Nature's contributive role to Human evolution and quality of Life for all, security and freedom to all without fear. A Declaration of Natural Rights is soon to be presented and submitted to The United Nations and your support is needed.

Humanity needs to come to grips in fundamental ways and those fundaments exist as we all know, we just have to recognize them. As we've seen in TEKT example models, if one player tends to monopolize the game the entire show is over. Life can't be monopolized. As humans, we are very dependent on each other and dependent on Nature as well.

A human (as asset) based economy would be more sustainable as opposed to energy based. The more energy is going to be used, the more collateral infrastructures would be building taking over the life sustaining capacity offered presently by Earth. Economy is to serve Humanity, using Humanity for Humanity; therefore a Life Equivalent Etalon (LEE) as money reference and for measuring economic trends. Such monetary reference system would offer stable liquidity and zero volatility as the real values will replace the virtual values, including the lifeless precious metals we anyone would consider going back to (gold, etc). LEE currency reference will be an act of Human and Natural Rights respect. Also, I totally advise against energy based anthropogenic economy or a carbon credit based economy.

Monopolization is the formula to self-destruction; we may never know when the critical point is reached; perhaps we already passed it. Should we continue to take a chance and continue abuse each other? Across history Humanity reached several TEKT critical points as we all know; great civilizations collapsed all basically from inside out. We do not want a total collapse, a HCTC.

The way we live our life in relationship with others, the way we take and give, this is how we will be remembered. The pavement of our life is laid out with real values of Life time achievements; it is the actual road to our personal monument.

We will never be diamonds; we do not want to ever become diamonds. Life is beautiful! Let's not just stay alive, let's make it even better for all. All live in peace and share. Just be!

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