EVERYTHING MOVES. NOTHING STANDS STILL. SOMETHING ABOUT THE ECO-SOC-ECO MEGA-SYSTEM EARTH

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Summary: *One of the most important moments of starting or restarting academic activity has always been the inauguration of courses in each subject which was to be studied. On these occasions, each professor would show to the students the object of study, the place and role that the intellectual taking over of the respective object in the formation of professional competence required by the exigencies of the time. Most professors also mention important sources of knowledge that the young learners can consult and should consult. Written sources, books, magazines and other existing publications in conventional libraries are mentioned; especially nowadays, the largest library of the world, the internet, is added. In the same time, professors advise students to seek permanently for another source, too, another "book" - the permanently open book of reality that contains the most truths and what is very important - many problems waiting to be discovered and solved.*
Skimming the "first pages" of one of the prestigious "volumes" of this huge "book", I found that the "Everything moves. Nothing stands still" paradigm, just as the "Motion is absolute. Rest is relative" paradigm, is far from exhausting the complete knowledge of "everything". But knowledge can be enriched by investigating the yet unknown issues, too. Substantially reducing the dimensions of the unknown, we sign up for the word, touching upon several aspects of the object as follows:
the continuation of the examination of the development concept's main contents;
the nomination of a limited number of motion forms in the "kingdom" of the Eco-soc-eco Mega-system;
the continuation of investigating the causes of the motion;
the rythm and pace in which the different forms of motion take place;
what are the directions towards which the different froms of motion are evolving.

Keywords: *movement, economic movement, ecological movement, eco-economic movement, economic expansion, economic growth and declining local economy, microeconomics, mezoeconomics, global economics, globalization, industrialization, deindustrialization, accumulation, economic development, revolution, counterrevolution, enrichment, eco-economic evolution and involution, economic and eco-economic making, eco-economic organization and disorganization, structuring, eco-economic destructuring and restructuring, eco-economic making, eco-soc-economic integration and disintegration.*

I. Raising the problem

Aristotle was convinced that "all men by nature desire to know". H. Taine, in turn, observed and noted that "The big problem of the human spirit, may it take any road, is everywhere the knowing of the laws and causes; it is not satisfied until it has found the permanent and generating forces that cause and renew the changing hustle around him in the multitude of scattered events. It wants to achieve the two or three eternal passions which master man, the few primary faculties that make up the race, the few circumstances that shape society and the century."
Very shortly after their birth, human beings observe without understanding certain things in the environment in which they live. With the flow of time, senses grow and multiply and, as a result, they begin to "know" and to "recognize" more and more of the things they come in contact with. Simultaneously, the *natural desire* to know that Aristotle was talking about intensifies and expands. Moreover, their desire to learn is proving to be a *need*, a *necessity* for their lifestyle. Advancing into the *unknown* man meets a *paradox,* which instead of diminishing becomes ever more emphasized. By learning and research, man discovers, understands and endorses

(appropriates) new truths that mean taking possession of new intellectual territories (areas) of the empire of the unknown. But - and we say, *paradoxically* - he notes with a certain uneasiness and even bitterness that the number of unresolved issues is also *growing*. It is known and recognized that the *speed* with which science has grown and developed in the modern and contemporary era exceeded by far the rate recorded in the evolution of society, economy and other structural links of our planet in earlier times. At present, humanity as a whole is covered by a deep technical-scientific and technological revolution, a deep and comprehensive information and communication revolution. The processes of the invisible revolution and its consequences are felt more and more deeply. More clearly than any, after coming down from the "ivory tower", science foresees and precedes the course of the other components of human activities and has become the "compass" that mankind uses to determinate the cardinal points of the universe in which it lives, is oriented within it and governs its ship more and more rationally and efficiently on the insurgent waves of time. And yet despite this, it is at least as true as this that mankind, throughout its history, has never had so many problems unsolved and unresolved. Not incidentally, some of the great scholars of ancient Greece said that *they know so much that they know nothing.*

In the universe in which humanity exists, lives, thinks, acts and evolves, there are many things, many obstacles that reduce the power of science, of objective truth. In our perception, there are two large fields, two major areas in the structure of the universe that coexist. One is the *area of science*, illuminated by its rays; this area is limited spatially and temporally, even though it has expanded and enriched continuously in time. The second is the area of *not knowing*, the area of darkness and the great thickets that obstruct, hinder the penetration of rays generated by science. Arriving here, we, too, feel the need to say what others have said long before us, that this area – *the area of not knowing is unlimited*, that is *infinite.*

The universe has *its history*. In its pages moments and thoughts, paradigms and ideas, viewpoints and other constructions are included, and so they can be read and remembered, and which, as it turned out subsequently, were residing in the "Republic of Science", produced from a fake "passport" or on any other basis, eventually proven false, inaccurate on a cognitive level and damaging on the applicative level. Conversely, some objective truths were dressed in false clothes for different reasons in the past false and switched over to the area of ignorance. And it does not stop here.

Some of the deviations mentioned may have behind them premeditated intentions and interests, and they should be treated as such. Others may be unintended *errors*, they may simply be mistakes and these should also be treated as such, according to the ancient wise paradigm "errare umanum est, perseverare diabolicum".

People express thoughts, truths and non-truths, their points of view with the help of words (concepts). Articulated speech, human language, represents one of the essential characteristics that distinguish human beings from the rest of the animal kingdom. As Mark Twain said in his writings "The history of the written word started 6000 years ago. The words say, the words explain and give advice. The words change, the words win. Nothing is more powerful than *the right word at the right time*" (the emphasis belongs to us AN). But what is the right word at the right place? This is the word that embodies (incorporates) in itself the objective reality or parts of it, i.e. is consistent with this. In case the words with the help of which speech is built are at odds with the reality that is expressed by the bodies, it is an obstacle, a hindrance to finding and expressing truth. This truth, formulated already since Socrates, is, in our opinion, more current than it was when it was originally formulated by the wise Socrates.

The correct presentation of reality also requires, among other things, that the understanding of the *what is seen and what is not seen* to be as accurate and true as possible. This aspect of scientific knowledge and of the efficient and inefficient economic action was deeply examined by Frédéric Bastiat in the mid nineteenth century. For building ideas we quote below. "In the economic

sphere, an act, a habit, an institution, a law will *not* only give rise to an effect, but a series of effects. Only the first of these effects is instant, it is immediately manifested simultaneously with its cause, it *can be seen*. The others only take place sequentially, *they cannot be seen*; we should be happy when they *can be foreseen*. Here is the whole difference between a bad economist and a good one: the first looks only at the visible effect, the second takes into account the effect that we see and the ones we have to
foresee.[1]
In the end of the problem's analysis, the author writes in black and white: "So, you can see from the many topics we covered, not understanding political economics is to let yourself be blinded by the immediate effect of a phenomenon; understanding it is to embrace the entirety of effects in your thinking and foreseeing."[2]
The above show and prove how right Plato was when he wrote that the "supreme" truth is hidden behind the appearances and pointed out that in our journey through life we only see the *shadows of truth*.
A remarkable actor in the fields of science, of knowledge, Aristotle always gave great attention to the role that reasoning plays in legitimizing truth. The great scientist detached two distinct moments of accurate and almost complete thinking, namely "what is" proven by analysis, rigorous judgment and reasoning, and "what can be" established through constructive, creative thinking, and "conceiving the step forward".

II. The Cosmos – existence, functioning and evolution
At the beginning of our intervention we currently bring Aristotle's belief that all men, by nature, desire to know. And we added to this the rigorously elaborated opinion of H. Taine on the *object* of the most comprehensive knowledge: *the universe - its existence and evolution*. Science supports with credible arguments that "the world (in the philosophical meaning of the term AN) has no beginning in time and has no end in space."[3] "Eternity in time, infinity in space, signify from the start, and in the simple meaning of the words, that there is no end in any direction, neither forwards nor backwards, upwards or downwards, to the right or to the left. This *infinity* is something *quite different* from that of an infinite series, for the latter always *starts* from one, with a first term."[4] At this point we note again an indication that belongs also to F. Engels, according to which "the basic forms of all existence are time and space, and an existence outside of time is as great an absurdity as an existence outside of space."[5]
To note, however: saying this we consider not the world in the most comprehensive sense of the term- cosmos-universe; because it is inconceivable, infinite, it - the world, it - the cosmos has no beginning in time and no end in space. The form and mode of existence of the cosmic world is motion. Motion is therefore the form of existence, functioning and evolution of the universe, i.e. of all there is. As scientists tell us, "that has no purpose in itself ... a galaxy's behavior does not require it to carry out a certain purpose"[6] The major sciences that it studies are Astronomy and Physics.
"The universe has a history. Stars form, evolve, radiate energy and change their size. Galaxies move away. The universe is expanding. We do not see the stars or galaxies as they are now, but *how they were* at the moment when they radiated the light that we see now."[7] "For example, light from the Andromeda galaxy takes about 2300000 years to reach Earth. So now and here we see

[1] Frédéric Bastiat, Statul.Ce se vede şi ce nu se vede şi alte eseuri, Editura Institutul European, 2011, p.29
[2] Op. Cit., p.74
[3] Friedrich Engels, Anti Dühring in Marx –Engels, Opere, vol 20, Editura Politică, Bucharest, 1964, p. 48
[4] Friedrich Engels, Op.cit., p.49 (our subtitles AN)
[5] Ibidem (our emphasis AN)
[6] Felix Pironi, Christine Roche, Câteva despre univers, Editura Curtea Veche, Bucharest, 2001, p.77
[7] Op. cit. p.8 (the subtitles belong to us AN)

the Andromeda galaxy as it was 2300000 years ago, the Andromeda galaxy is 23000000 light years away."[8]

Motion is defined by the authors of the Romanian Encyclopedic Dictionary as "all changes, transformations, processes taking place in the universe, in and between material systems, the interaction in general, the mode of existence of matter, its essential attribute. Movement is *absolute,* eternal, uncreated, it takes place in space and time, has an endless qualitative variety of its shapes, from simple, inferior (e.g. displacement in space), to the complex, superior (e.g. social movement, reflection ... thinking), between which there is a genetic and structural link. The source of motion is therefore *self-motion*."[9]

III. The Earth – our home

A picture of the realities that make up Earth show most clearly that people, all humanity, human society and all its components - economic, technical and technological, the social, the cultural and moral – have their headquarters and space of manifestation within it. *Earth* is *home* to all of us. Earth itself is alive, forming a unique community of life and it is a vast universe of life. Science has discovered that our planet- Earth or geosphere - is a global system in which four shells - atmosphere (gaseous cover), hydrosphere (the water cover - seas, oceans, rivers, ice caps, groundwater), lithosphere (covering soil), biosphere (living cover that includes all living things, plants and animals) that together make up the *natural environment.*[10]

Our blue planet is a *natural open system* that has a *self-regulating* capacity both in space and in time. It has a physical-chemical and biological-human structure conditions favorable to the existential and developmental conditions of human society. Each of the planetary shells has its *own particular role and functions*. Also, in their connections, they provide the existence, protection and development of life, of the various cycles, of social-human activities. The *most important* of all shells is and remains the *biosphere* which, together with the space in which it manifests – the biotope, is what scientists have called the *ecosystem.*[11] There is "proof that the Earth is 4.5 billion years old."[12]

As history attests, *our home* has hosted and maintained human beings, has contributed substantially to their growth and development. For illustration, we mention that according to statistics, in the year 400 before our era, Terra hosted 153 million people; in the year 1 it hosted 252 million; 461 million people in 1500; 2530 million people in 1950 and over 7 billion human souls at present.[13]

The history of our home, of planet Earth is long in the structure and composition of the universe, there have been many, many changes, transformations, structurings and restructurings, increases and decreases, progresses and setbacks that gave content and form to the continuous motion recorded in history. The French writer Edmund About said a noteworthy fact when he wrote: "Remember in every place and at all times that the Earth is a floating island for which cold, heat, hunger, thirst, disease and a thousand unseen powers struggle fiercely, day and night for the destruction of man. Thus, you will understand that you are the natural companion of all people who live regardless of color, language or country; that the *union* of all individual effort is the *only tactic* that can beat the common enemy; that your powers, your resources, your lights merged with those of all your allies will barely get you to win victory" (our emphasis A.N)

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[8] Op.cit., p. 9

[9] Dicționar enciclopedic, vol. IV, Ed. Enciclopedică, Bucharest, 2001

[10] Vasile Stănescu, Globalizarea spre o nouă treaptă de civilizație, Cluj-Napoca, Ed. Eicon, 2009, p.131 (the emphases belong to us)

[11] Aurel Negucioiu, Economia şi mediul înconjurător, in Cunoaştere, interes, responsabilitate, Vasile Marian (coordonator), Ed. Risoprint, Cluj-Napoca, 2012, pp. 128-129

[12] Felix Pirani, Christine Roche, op.cit., p.58

[13] Vladimir Trebici, Populația Terrei, Ed. Ştiințifică, Bucharest, 1991, p.53 -54

Referring only to the *natural environment* - we will call it the *ecological system*; human society as a whole - we will call it the *societal system*, the structure and composition of which includes the economic system, the technical system, the political system, the cultural system, the social system and the moral system. In turn, the *ecological* system includes in its structure and its composition the organic system, and on another level, the systems and subsystems of the animal populations, plant systems and subsystems.

IV. Ecology and economics – two sides of the same coin. The eco-eco Megasystem.

So far we have looked at the ecological and economic (the ecological system and the economic system) mainly *in itself* and *for itself*. We proceeded similarly with the examination of the economy as a science, more precisely a *branch* of science, and with the examination of ecology as a science, more precisely as a *branch* of science.

Scientific knowledge of reality will expand and deepen with the extension of research to the natural relationships between the ecological and economic, between economy and ecology. Moreover, the bibliography of the subject provides the interested reader with many examples proving that such steps were taken early on and that successes have already begun to be visible.

Undoubtedly, the economy (economic system) and the ecological (ecological system, ecosystem) as components of the object-material reality *have their own ontological status* and therefore their motion, functioning and evolution is governed by natural laws of the universe and by their own laws (specific laws). These parts have their relative autonomy and independence. Economy includes in its structure and its contents the *entirety of productive forces* by which people act on the substance (matter) and the forces of nature to obtain the goods necessary to meet various needs and desires of the people and *all the relationships* that are established between people when they act on nature for the stated purpose. The entirety of productive forces and of economic relations in their interaction makes up the *economic system* in the wide sense of the term.

In turn, the ecological system represents the entire biocenosis and biotope. Both systems are *capable of self-preservation, autogeneration and autoprogress*, through their own mechanisms. Not accidentally, the two systems - the economic and ecological system - are the subject of various (distinct) branches of science - economics and environmental science.[14]

The things said thus far, are far from exhausting the systemic configuration of realities that give content and shape to planet Earth. Radiographing it again, or reexamining the radiographs we have, we find other particularly important systemic compositions also. Thus, the contours of the configuration, which we call in full compliance with reality *human society*, are clearly distinguishable, within which the following systems (systemic subdivisions) have their headquarters and space of manifestation: economics, politics, culture, societal and ethical (moral) subdivision. Taken in their unity and interaction, these components are the *societal supra-system* of our planet; and together with it, the *ecological* supra-system (ecosystem) – the environment – consisting of organic and inorganic subdivisions. Both the unity and the interaction between these two components make up the most comprehensive systemic compilation, planet Earth, which we call economic-socio-ecological planetary system: *eco-soc-eco*.

V. Something about the structure and content of the eco-eco system[15]

A deeper understanding of eco-eco system, its comprehensive explanation involves not only descriptive presentation of the two key components - the economy and the environment (ecology), but also at least the examination and explanation of the mutual, genetic, morphologic-

[14] Aurel Negucioiu, Economie şi ecologie, identitate şi deosebire, raporturi de independență, dependență şi interdependență, in Mediul-Cercetare-Protecție şi Gestiune , prof.dr. Iustinian Petrescu (editor), Presa Universitară Clujeană, 2003, pp.353-356 (the emphases belong to us AN)

[15] The interested reader will find more comprehensive approaches in Aurel Negucioiu (coordonator), Economie politică vol II, Ed.Gheorghe Barițiu, Cluj-Napoca, 1998, pp. 482-525

anatomical and functional relations. Without going into details, we mention that the simple observation of reality shows at least the following major groups, namely:

a) relations of identity and differentiation;
b) relations of autonomy and relative independence;
c) relations of mutual dependence;
d) relations of interdependence.

Identity and difference[16]

The simple observation of reality highlights the fact that the ecological system and the economic system are not separated from each other by borders and insurmountable walls. Moreover, there are few situations where the economic and the ecological, more precisely parts of the economic are in the same time ecological components and parts of the ecological have the status of economic components. So, the economic is ecological and the ecological is economic. What does that mean? Simple – people, like all living beings, belong to nature, to the ecosystem, they are part of the animal kingdom. And that is not all. Man is the highest product, the highest creation of nature. In the same time, people capable of work are the most important factor of production, one of the most important forms of goods and then one of the most important forms of capital - human capital. Also man, regarded as subject and / or actor of the economic life has acquired other economic codeterminations also, depending on the place it occupies and the role it fulfills in the economic system. Thus he is the owner and non-owner, manufacturer, distributor, merchant, creditor or debtor, supplier, seller and / or buyer of goods, he is the agricultural farmer, industrialist, small craftsman, he is an apprentice, journeyman, employee (worker) foreman, technician and engineer. The very process of breeding human beings is a complex biological, economic and social process.

Simultaneously, other elements of nature become real *components* of the economy when placed into the economic circuit, in material the economic flows. Wood cut from a virgin forest becomes raw material for furniture factories as well as for factories that produce pulp and / or paper; and that is not all. Things are the same when it comes to the other materials and natural substances such as coal, oil, natural gas, extracted and introduced into the economic as capital goods or consumer goods. *Land* itself becomes part of the economy as an *object* of labor, a *means* of work and *material condition* of conducting the production process. Moreover, the Earth has been and continues to be the *first store* of supplies of human society and its *first arsenal* of means of work. As K. Marx emphasized early on, the Earth is "a general means of work" because it gives the worker the locus standi and the space of action for his process."[17]

The *economic*, in turn*, is included* in the natural, the ecologic; and it is ecological when man and human society use natural resources, conserve nature and its balances, *protect it, rebuild it, restore* damaged balance, help it to develop. Cereals crops, fruit farming, technical plants crops, viticulture, protection plantations, afforestation, and so on, are some of the most obvious examples. To this the works to improve the soil and many more are added. Designed, built and maintained rationally, i.e. in accordance with the principles and laws of the ecosystem, branch or sub-branch activities which we call the *protective economy of nature* give a positive, progressive *nature* to human attitude towards the environment. Conversely, when human behavior is of a *consumptive-destructive nature*, this behavior is the *immediate cause* of the natural environment's degradation, of the disturbance of its operating mechanisms.

[16] Aurel Negucioiu, in Iustinian Petrescu (editor), op. cit., pp.355-356
[17] Karl Marx, Capital vol. I, în Marx, Engels, Opere, vol. 23, Ed. Politică, Bucharest, 1966, p.193

Here, we must stress that the identity between ecology and economy is neither complete, nor absolute, only partial and relative. Among them there have been many important differences. For illustration, we mention just a few:

[a] - Man is a being endowed with the ability to think. In one of his musings, B. Pascal said: "Man is but a *reed*, the tenderest of nature, but *he is a thinking reed*. There is no need for the whole universe to set itself against man to crush him. A vapor, a drop of water is enough to kill him. But even if the whole universe would crush him, *man would still be more noble* than that which killed him, because *he knows that he dies and he is aware of* the advantage that the universe has on him, *from the fact* that it knows nothing"[18]

"All our dignity lies in our thoughts. From it we must vindicate ourselves and not from the space or the time that we could fill. So, let us work for our thinking: this is the principle of morality"[19]

" Thinking reed. We must look for dignity not in space, but in the order of our thinking. We will have no gains from the command of land: the space, the universe includes me and swallows me as a point; through thought I understand it."[20]

[b] - " The use and creation of the means of work, although there are seeds in some of the animal species too, characterize the labor process specific to man, reason why Franklin defines man as <<a tool making animal>>.[21]

Highlighting the *importance* of these tools, Marx added the following to the above: "Leftover means of work have the same importance for the study of vanished socio-economic formations that fossils have for the understanding of extinct animal species. Economic eras are distinguished not by what is produced, but by how it is produced, with the help of which means of work"[22]

[c] - Another essential difference is articulated speech. Joint speech is the means by which people form and express thoughts, the means which enables communication to people, their collaboration and cooperation. Articulated speech also has ensured intergenerational dialogue. Its absence makes communication and understanding between people impossible with all the negative consequences for humanity. Let us remember the unpleasant experience of Noah's descendants who started to build an impressive tower that would reach to heaven and whose construction was stopped when God confounded their languages.

Relative independence

As said before, on their own, the economy and the natural surroundings, are *independent* systemic compositions, each with its *ontological, anatomic-morphological and physiological status*, each governed, above all, by their own objective laws.

Economic independence from nature may increase and grow in one way or another, by using techniques and technologies, by the rational allocation of natural resources and by inputs savings.

The independence of the ecological system from the economic system is more pronounced than economic independence. In the relationships between these systemic compositions, most often, the ecological environment was the independent variable. However, a more comprehensive and thorough examination of the two systems shows that their independence is neither absolute, nor total, only partial and relative.

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[18] Blaise Pascal, Cugetări, Ed. Aion, Oradea, 2000, p.215-216

[19] Blaise Pascal, op. cit., p.216

[20] Idem

[21] Karl Marx, Capitalul, vol. I, in Marx-Engels, Opere, vol 23, Ed. Politică, Bucharest, 1966, p.192 (the emphases belong to us)

[22] Karl Marx, op.cit, p.192 (the emphases belong to us AN)

Mutual dependence

The economy depends on the natural environment that offers man, human society and their economy:

1. The physical conditions, materials of their existence - water, air, soil, the living environment of people, economy and society.
2. Substance, material for processing and production of goods. Nature is the largest warehouse of items of work.
3. Means of work. Nature is a huge arsenal of work tools.
4. Important energy carriers.
5. Big quantities of food and non-food goods.
6. Planet Earth provides the <<locus standi>> for man and for his spaces of action.
7. Large numbers of intangible services, very rich in content and very useful for life. These include:
   7.1. Biological services– quiet, fresh air, relaxing atmosphere etc.
   7.2. Aesthetic services– enjoyment and pleasures offered by stunning landscapes, natural monuments with which the environment provided its space and has asserted itself as the unsurpassed creator of artistic values.
   7.3. Scientific and educational services. Our terrestrial universe is a giant book open permanently in the pages of which there is information gathered and ordered about itself, about its anatomic-morphological structure, about the physiology "machines" operating it, about its evolution throughout history, and so on.[23]

Nature, in turn, depends on the economy and is heavily influenced by it. As we already said in our intervention, environmental components introduced in the economic flows, in the economic circuit become components of the economy, they become economic. As a result, practically and factually, they *break out* of the body of the surrounding nature.

In a sense they are *exits* of the "natural assets" and *entrances* in the balance sheet of the economy. This is an objective necessity which is not only independent of human will and human community, although man and people are, above all, essential components of the nature of animals. It is an undeniable fact, but it is more, much more than that. Man is a homo faber, a laborans animal, a socialis animal, a politicus animal and much more. Here and now, we are interested mainly in homo socialis – a reality with its own ontological status in extremely numerous and extremely varied mutual relations with the surrounding nature. The history of these relations recorded at some point the emergence of phenomena, disturbances, imbalances and contradictions - wasteful use of natural components, materials, objects, energy, water, air, oil, gas, various metals, coal, etc.

Due to the limited character of Earth, on the one hand, and to quantitatively significant and rapid growth in demand for such items, on the other hand, the rarity of these sources has increased steadily and their sufficiency became more visible. Contradictions between human communities, between society and its economy, on the one hand, and the natural environment, on the other hand, have increased and aggravated continuously. Things have gotten so far that the question "man or nature?" has been on the agenda since the early 70s of the last century. "Man or Nature" is the title of a remarkable work in the early '70s –its author being Edouard Bonnnefous - published in 1970. As the author writes "An economy broken by nature could not survive without the earth's resources. But systematically destroying and degrading its natural environment and his own planet, the man of the twentieth century acts with the most flagrant recklessness. Far from facilitating the unceasing progress that the continual momentum of science should bring, we risk, unless there is a profound change in our behavior, to see the prediction of Louis Aronard entitled

[23] After Aurel Negucioiu, in Iustinian Petrescu (editor), op.cit., pp.367-368

"the future is coming against us" come true. The most urgent task is therefore to reconcile man with nature.[24]

VI. Economic movement – contents, forms, consequences

The concept of "*movement*" was used explicitly and implicitly many times during this "speech". We will conclude with it. People know a lot about movement. Most truths were discovered by scientists, the real producers of knowledge about movement. Movement, whose main content lies in change, transformation, is present *everywhere and always*. Nothing stands still, everything moves, changes, transforms.

These truths are therefore present in the structure and the whole *eco-economic* assembly (the whole system) as well as in the economic system itself. Planet Earth attests by its very existence, functioning and evolution that movement is an objective law independent of the will and consciousness of human beings; it is both a *form* and a way of functioning and evolution of the eco-eco mega-system. In addition, *motion*, maybe it would be more accurate to say *self-motion*, is one of the most important components, if not the most important component of the operating and evolution *mechanism* of the super-system that we call the *eco-eco mega-system*.

What is the *path* or what are the *paths* on which "movement occurs"? Or, perhaps, it would be more accurate to say: which are the directions of movement (movements) that have an *eco-economic (ecolo-economic*) content? When referring to the *time factor*, the eco-eco movement has and may have only *two directions: backwards (into the past)* and *forward (into the future)*. If we compare the eco-eco movement (movement) to *the space factor*, the directions of movement (movements) on the *horizontal* level are: to the right, left, front and back. *Vertical* movement is directed upwards and / or downwards.

Also on the horizontal spatial level, movement may also have other directions: the movement from the periphery to the center, from a center to another center and movement from the center to the periphery. The theory of movement in space, even if this is less discovered than in reality, is moving from a periphery to another periphery.

Things do not stop there. Space and time are still forms of existence, functioning and evolution. Multiple mutual relations between the two forms mentioned are found in the *spatial-temporal* nature of movements, they always have a mixed content.

The understanding of eco-economic movements are completed if it widens its scope to include the *forms* and / or types of movement focusing especially on content, on character, on the place that they occupy and on the role they fulfill in the eco-eco system, as well as on the effects, their consequences in the present and in the foreseeable future.

An extremely poor and incomplete *list* of the eco-economic movement classification *criteria* taken into consideration should include the positive or negative character of the movement, the helpful or unhelpful character, the progressive or non-progressive character, individual and collective character, national and international character, global character and many more.

Also for the purpose of illustration, we present a list of eco-economic movement in the following, that is also very incomplete, where we include: eco-economic growth, sustainable eco-eco growth, eco-eco stagnation (zero growth), eco-eco reduction (zero eco-eco growth), positive eco-eco growth, eco-eco making, eco-eco development, eco-eco progress, eco-eco regress, eco-eco expansion, eco-eco restriction, eco-eco evolution, eco-eco involution, eco-eco organization and/or disorganization, eco-eco structuring/destructuring, eco-eco integration/disintegration, eco-eco crisis, eco-eco cycles of evolution.

Stopping with the examples here, we note that the mere listing of forms and types of movement can play an important role in the scientific understanding of reality only when and to the extent that there is an *accordance* between word, concept and reality.

[24] Edouard Bonnefous, Omul sau Natura?, Ed. Politică, Bucharest, 1970 (the emphases belong to us AN)

Unfortunately, this is where things are not satisfactory and existing shortcomings must - it is a *necessity* the ignorance of which is becoming more and more expensive.
In a study published in 2001[25], we argued that *the domination of nature by man* is an important compound of the relationship between man and nature. There were four forms of power that we considered: economic domination, technical domination, intellectual domination, social domination. In the content and structure of these forms there are identity, relative independence, dependence and interdependence relations.
Now and here, we are interested specifically in *intellectual domination*. In our opinion, intellectual domination "lies in the most comprehensive understanding of the natural universe, in its anatomical and morphological structures, in its mechanisms of operation and development, in its laws that govern the evolution of the universe and in its relations with the economic, technical and social universe."[26] The *way* of intellectually dominating nature is scientific understanding seen as a *process* and a *result* – i.e. *science*. It is the "compass" by which man determines the cardianl points of the universe in which he lives, sets the directions for action and governs his ship on the insurgent waves of time.
The form of existence, action and evolution of science as well as that of the entire universe have been and will be *movement, change,* and transformation. This is why the "*science of today*", preserves many of the same and similar components with those of the "*science of yesterday*." However, radiographing the "science of yesterday and the science of today in the two strokes" shows that there are many and profound differences between them. Hannah Arendt writes in her remarkable work "Human condition" that " There is a deep *chasm* between those before us, who knew that the Earth revolves around the Sun, that not one and nor the other is *the center of the universe* and concluded that man has lost both his home and his privileged place within the creation, and ourselves, who perhaps are still and will always be earthbound creatures, *dependent on* the metabolism of terrestrial nature and who found ways to trigger processes of cosmic origin and perhaps even cosmic dimensions. If someone wants to *draw a line between modern times and the world we have come to live in*, they could very well find it in the *difference* between a science that looks at nature from a universal point of view and thus acquires *full domination* over them and a truly "universal" science, which introduces cosmic processes into nature, even with the obvious risk of destruction and *destroying* with it the mastery over nature."[27]
As it has been said before, domination of nature by man takes many forms - economic, technical, intellectual and social. They affect in an important manner the nature of many relations that are established between the two components of the eco-eco mega-system.
Their analysis has revealed and confirmed the truth according to which these relationships can usually have a positive or negative character depending on the consequences, the influences they have on each other, on economy and nature, as well as on the co-eco mega-system viewed as a whole.

The character of man's domination over nature

The question of man's mastery, domination over nature is among the thorniest and most contradictory issues of our day. According to more than an opinion, according to a concept eagerly supported and pushed to the limit by the Frankfurt School, domination of nature by man has a *violent, destructive* character to it. And that is the result of technology.
It is not necessary for one to be a great scholar to understand that the economy depends to the highest degree of ecological systems with multiple relationships that are taking place in the eco-

[25] Aurel Negucioiu (coordonator), Probleme actuale ale gândirii, ştiinţei şi practicii economice, vol. IV, Ed. Ecoexpert, Cluj-Napoca, 2001, pp 25-32
[26] Aurel Negucioiu, op.cit., pp.360-361
[27] Hannah Arendt, Condiția umană, Ed. Casa Cărții de Ştiință, Cluj-Napoca, 2007, p. 221 (sublinierile de apartin)

eco mega-system; virtually everything that has been created by the economy based on using nature - its substances and forces. The environment in which the economy exists and evolves is nature. In a sense,the economy is part of the natural universe. It is true that, in turn, the ecological system depends to a large extent on the attitude and behavior of the economic actors of the society and its members. A correct attitude and a rational behavior on their behalf have been an important factor of storage (conservation), protection, maintenance and strengthening of the environment, of restoration and consolidation of its states of equilibrium. Conversely, negative attitudes and irrational, or worse, human anti-rational behavior on nature have very harmful effects on the natural environment.

Man and mankind are the authors of taking possession of the surrounding nature and the establishment of its domination over it. Man came to measure the level of development in terms of the possession and domination of the natural environment. The greater are more pressing the mastery and domination, the higher the level of development. They say the man and mankind, came through the progress of scientific knowledge, technique and technology, economy, culture, communications, and so on, to rule and dominate in a high degree the surrounding nature. A situation and state of affairs like this would attest, almost undoubtedly that the economy has become to a very large extent *autonomous and independent*. "The very rapid development, especially in the second half of the twentieth century of science, information and communication technologies, the astounding increase in the speed of vehicles and especially the speed with which information is transmitted, the dismantling of space and moving to measuring distances in units and sub-units of time; the industrial creation, production by people of products useful for economic progress in a structure, composition, in a structure and composition that not found in the natural environment and other equally remarkable developments created for many, very many of our fellow humans the illusion of acquiring *total and absolute independence from nature and its forces*. Therefore, man has subordinated nature and the *economy* is the "*body*" which is at the *center* of our planetary universe, around which all other systems revolve - ecological, social, cultural, political, ethical, etc."[28]

Flaunted with, or, perhaps more accurately, adorned with many and varied successes and the role played by them in the functioning and development of the eco-eco mega-system, we share the opinion that this center of this mega-system is not the economy, but ecology. The truth is that man, regardless of his embodiment - an economic actor, fabor homo, homo sapiens, homo socialus, homo culturalis, laborans animal, rational animal, etc.

Supporting this view, we are assisted primarily by the following arguments:

Earth provides human beings with the "locus standi" and with the space for activities.

The surrounding nature, Terra gives people matter, substance, energy and other resources without which economic life and beyond it, human life in general is unthinkable.

People have not influenced and cannot influence the circular motion around the sun.

Human beings on earth could not – truth to be mentioned, they have not even attempted to influence the movement of the planets of the infinite cosmos.

Coming back to Terra, we note that people, regardless of their qualities, functions performed and the roles interpreted on the world stage , could not stop and cannot stop the seismic phenomena and processes - volcanic eruption, the seasons. This is compounded by great floods, major storms (regardless of the names they bear).

And another argument: the growth and development of the economy and human society can progress only as far as the ecological, surrounding nature *will allow*, or, perhaps, more accurately, only *to the extent that nature can and will be able to bear*.

" Ecologists understand that all economic activity, indeed all life, *depends on the planet's ecosystem* - the complex of individual species living together, interacting with each other and

[28] Aurel Negucioiu, în vol. Iustinian Petrescu (editor),op.cit, p.362 (the emphases belong to us)

their physical habitat."[29] " Just as the recognition that Earth is not the center of the solar system laid the premises for the development of astronomy, physics and related sciences, recognizing that the economy *is not the center of our world* will create the conditions for maintaining economic progress and improve the human condition."[30] " The trouble is, however, that this fact was not realized until very late and only by a very small number of people. For many of the actors and representatives of economic theory, which was primarily for the purpose of gain, the prophet and therefore mastery of nature, their domination over it, as long as she has unfortunately had a strong colonialist, *destructive and usurper* character."[31]

VII. Man again or nature?

Here, we learn again that the eco-eco mega-system is a very complex composition. We also note that it represents the *unity* of two subsystems (systems) – the economy and the natural surroundings that *are assumed* objectively and *reject* each other in the same time.

The history of nature and human society registered and maintained in its pages many moments of deepening and worsening contradictions and imbalances between the two components of the eco-eco mega-system. To our knowledge, it seems that people actually had a history of *paradoxical trend*. As time has passed and progress has been made, there has been a noticeable emphasis of contradictions between the two main components of the mega-system.

The new composition called by us the eco-eco mega-system exists in the *terrestrial system* (the supra-system of planet Earth). The eco-eco mega-system is not only very complex but also deeply contradictory. Its *fundamental* contradiction is that between the economy and the natural environment (between economy and ecology). Its expression is general, being present both in the center and at the periphery and constant in time. It - the eco-eco mega-system is, in this vision and understanding, a *unity of opposites* which is in constant motion. Each part (term and factor of contradiction) - economy and ecology are components of the mega-system. They imply each other mutually, attract and repel each other. Attraction and rejection are their forms of manifestation, being both forces and the *source of motion*.

The Earth Charter opens with the following preamble: "We are at a *turning point* in the history of the Earth, a time when humanity must *determine its future*. As the world becomes increasingly interdependent and fragile, the future can also reserve us *great dangers and unexpected opportunities*. To move forward we must recognize that in the midst of a magnificent diversity of cultures and life forms we are *one human family* and *one Earth community with a common destiny*. We must join together to build a *global sustainable society*, based on *respect for nature*, universal human rights, *economic justice* and a *culture of peace*. To this end it is imperative that we humans on Earth to declare this responsibility to one another, to the greater community of living beings and to future generations".

Also The Earth Charter demonstrates convincingly that "the *dominant mode of production and consumption* causes environmental *devastation*, the *depletion* of resources, and a massive *extinction of species*. Local communities are undermined - the benefits of development are not shared equitably and the *gap* between the rich and the poor widens. Injustice, poverty, ignorance, and violent conflict are widespread and cause great suffering. An unprecedented rise in human population has overburdened the ecological and social systems. The fundamentals of global health are threatened. These trends are *dangerous but they are not inevitable*."

Here's an idea that lights up the hope of reconciliation between man and nature.

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[29] Lester Brown, Eco-economie. Crearea unei economii pentru planeta noastră, Ed. Tehnică, Bucharest, 2001, p.2 (the emphases belong to us)

[30] Lester Brown, op.cit., p.3 (the emphases belong to us)

[31] Aurel Negucioiu, în vol. Iustinian Petrescu (editor), op.cit., p.362 (the emphases belong to us)

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