

## REVERSE SIDE OF ECOLOGY

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### ABSTRACT

*The paper deals with the problem of nature and civilization coexistence. It is shown that unsettled questions which are propagated to the next generations are able to deprive mankind of its future. The author revises the concept of "ecology" in the context of evolution and entropy theories. The concept of "ecology" was mentioned for the first time, at least in contemporary world, by Charles Darwin in the following statement: „When the number of the representatives of certain species, thanks to the exceptionally favorable conditions, excessively increases over a small area – at least, this seems to happen to the animals we hunt – epidemics often outbreak. It is namely here, that we have a restrictive control mechanism, independent of the struggle for survival”. Today, the solution of the overpopulation problem does not differ a lot from that of the primitive societies. Overpopulation is treated in six (6) meanings, three (3) old and three (3) new ones. Old ones: infanticide, genocide, expansion into new territories. New ones: destruction of competitive animal species, creation of artificial techniques of survival, expansion to other planets. In conformity with the stated hereinabove and within the meaning of the natural selection we obtain the following definition: “Ecologist is the person who is to die at the end of his reproductive age, i.e. after the age of 35 to 40!” And, it seems, there are no ecologists in the World! It may be seen in the scheme given herein below that the civilization may belong to three (3) systems: 1 – Sun, Earth (civilization, nature); 2 – Earth (civilization, nature), 3 – Sun, Civilization.*

**Keywords:** *ecology, civilization, nature, entropy, overpopulation*

### Introduction

The objective of this conference is to present a critical review of the theories of environment, of the philosophical concepts and of the movements of ecological nature with regard to their metaphysical, political and moral aspects and, if possible, to create a philosophical frame which will be able to direct the process of planning ecological problems.

That is why, to attain the set objectives, first we have to define the concept of “ecology” and the place of the human being – as an animal and a civilized creature – in nature.

### Ecology in nature and in civilization

I dare say the concept of “ecology” was mentioned for the first time, at least in contemporary times, by Charles Darwin in the following statement: „When the number of the representatives of certain species, thanks to the exceptionally favorable conditions, excessively increases over a small area – at least, this

seems to happen to the animals we hunt – epidemics often break out. It is namely here, that we have a restrictive control mechanism, independent of the struggle for survival.” [1].

Evidently, the quote hereinabove refers to nature, where the principle of natural selection is valid. With regard to civilization, the statement mentioned hereinabove is not valid. On the one hand, the number of the human population has excessively grown and, on the other - culture contributes to the struggle with epidemics. Therefore, the sole person in charge of the control of overpopulation is the human being itself. Even in primitive societies, where the problem of ageing did not exist, a solution of the overpopulation-related problem was found. It was infanticide and territorial expansion.

As to infanticide, the number of population was maintained constant through infanticide but culture development rate was delayed. Redundant children were killed, starting from those with disorders and going on with girls.

In respect to territorial expansion, the natural growth of the population was met via the creation of the new sites by the members of the group for whom there was no place in it any longer. It was namely the new members of the group who were called upon to fight with other people, animals and nature. Thus, via the war for conquering new territories, cultural development rate was accelerated.

- Eurasia (1),
- North America (2),
- South America (3),
- Africa (4) and
- Oceania (5).

Obviously, the conquering of new territories was easier in the direction E(ast) – W(est) owing to the climatic conditions, which did not change and rendered assistance to the adaptation of human beings. The possible courses E-W are (See Fig. 1):

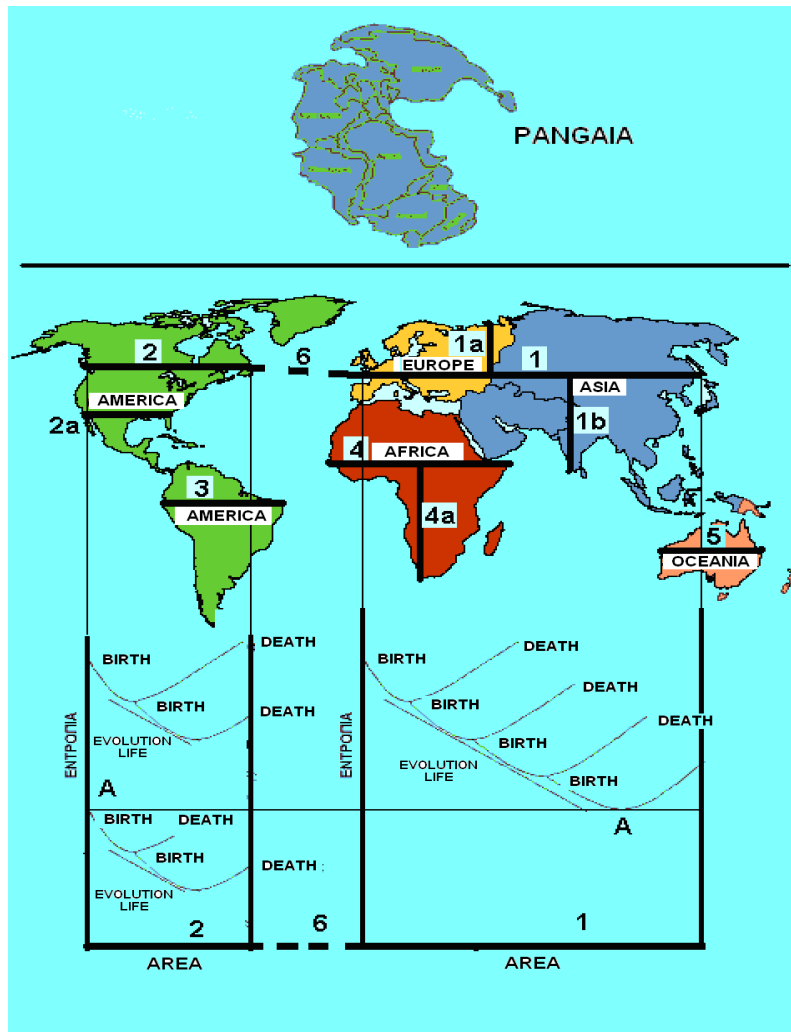


Figure 1: The possible courses E-W

From them, the march to Eurasia was the biggest (1). That was why the culture there developed with the fastest rates. The points of maximal civilization are the two end destinations, which the march got to:

- the East – the maritime empires of England and Spain and
- the West – Japan.

The migrations to the other continents were significantly smaller, as a result of which, the development of culture was less intensive. The same was valid for the perpendicular N(orth) – S(outh) marches 1a, 1b, 4a and so forth, in which there was a great problem with the adaptation to the climatic conditions.

The development of navigation, however, provided the inhabitants of Eurasia with the opportunity to continue along the straight line (1) across the Atlantic Ocean (6) to North America (2). In practice, straight line 2 is a continuation of straight line 1. That is why, nowadays, North America (the USA and Canada) are the most developed countries on Earth.

An even better example in support of this theory is the conflict between Athens and Sparta: the Peloponnesian War. With the development of civilization the problem with overpopulation was solved differently in Athens and Sparta. Athens decided to conquer new lands from the world known at that time. Sparta decided to apply infanticide. The ancient Spartans used infanticide as a method for control of the growth of the population. They threw out not only the sick and crippled babies into Keada Abyss, but also the surplus of girls which the Polis could not support.

Logically, Athens was the final winner in the war.

### **Overpopulation in past and present**

Let us apply Darwin's statement to the entire world in modern conditions: "The Earth cannot support its inhabitants. If nowadays our planet 'is hardly in a condition to support its 6.5 billion inhabitants', as the British Sociological Association states, how will it meet the needs of 7.5 billion in the year 2012 and 9 billion, which according to data from the United Nations, the population of the Earth will add up to in the year 2050? There is no answer to this question, simply the United Nations supply data which can be called everything but soothing. Thus, in spite of the

gradual drop of the fertility index from the seventies to date, in most underdeveloped countries, a woman gives birth to five children on average, which means that by the middle of this century the demographic growth will be mainly due to the developing world, which will become a witness of the increase of its population headlong from 5.6 billion nowadays to 7.9 billion (more specifically, the population of the 50 most underdeveloped countries will increase more than two-fold, reaching 1.7 billion in the year 2050 from about 0.8 billion nowadays). Just the opposite, the demographic changes, which will be observed in the developed regions of the planet, will be limited, as for a period of 50 years their population will increase by several dozens of millions. In fact, if the developed world did not have to accept the big migration waves from the Third World countries, its population would be reduced by 8 million till the year 2050. The United Nations have calculated that, counted from today, the number of people aged over 60 will triple, reaching 2 billion, i.e. a quarter of the population on Earth. This constant growth of the share of aging people will create problems, especially if the number of the working population decreases simultaneously. There are three reasons due to which the last decade evaluations about the global growth of population have been of an ascending nature: the longer life expectancy; secondly, the emergence of more effective treatment of AIDS, as well as perfection of the prevention methods, especially on the African Continent; and thirdly, the "slower than the expected drop of the fertility index, i.e. of the average number of children one woman gives birth to." [4]

Today, the solution of the overpopulation related problem does not differ a lot from that of primitive societies. Overpopulation is treated in six ways, three old and three new ones.

Old ones:

1. Infanticide.
2. Genocide.
3. Expansion into new territories.

New ones:

1. Destruction of competitive animal species.
2. Creation of artificial techniques of survival.

### 3. Expansion to other planets.

I would like to pose some arguments concerning the infanticide. It is applied nowadays as well! Not through the physical destruction of children but through their incitement to activities destroying their mentality – sports, Eurovision, Big Brother and so forth. In most events of infanticide in the history of mankind, girls were the victims, not because of phalocracy, but out of the fear that they would also give birth to children some day, a threat not only directed to them but also regarding the provision of subsistence for their descendants. Further to that, under normal conditions the prospects of boys dying either in quarrels amongst themselves or in intertribal collisions have always been higher.

And the Olympic Games are one of the best ways for that: By the year 1980 only sports gymnastics had been included in the Olympics. Rhythmic gymnastics, a purely feminine kind of sport, both individual and in groups, was included in Los Angeles in 1984. Description of the competitions:

Rhythmic gymnastics: the gymnasts compete on a mat with dimensions 13x13m, always under the accompaniment of music and combinations with a rope, hoop, ball, clubs and band. The combinations last 1.15”–1.30” in the individual program and 2.15”–2.30” in the group program.

Gymnastics: the program includes six (6) competitions for women – four (4) individual competitions on sports equipment (side-horse, mixed parallel bars, balance beam, floor gymnastics), individual mixed and group mixed programs.

Each gold Olympic medal means that ten thousand women (10.000!!!) will not be reproduced. They will remain either disabled or uneducated in the periphery of society.

This is modern infanticide! The real destruction of girls!!!

In this way, the number of the population remains stable, but the rate of growth of culture decreases. A phenomenon, whose witnesses we are nowadays...

### Definition of Ecology

Let us have a look at what “ecology” means at this moment. Desmond Morris says: “In principle, the end of the sexual enchantment should be related to or

should at least notify the biological end of the male individual” [3].

After the end of the “sexual enchantment” the male individual is no longer needed. His further life is deprived of all sense.

In conformity with the stated hereinabove and within the meaning of natural selection, we obtain the following definition:

An ecologist is the person who is to die at the end of his reproductive age, i.e. after the age of 35–40!

And, it seems, there are no ecologists!

If all people lived up to the age of 35–40, there would be no problems generated by the overpopulation and everything would be natural.

To see the future of civilization, we will have to start from the epoch when the human being as an animal and element of nature trod on the road to civilization, gradually separating from nature. In lieu of being influenced by nature, he commenced to exert impact over it. And “the impact of the human being over the environment started to grow, 400,000 years back, with the discovery of fire.” [5, p. 58]. That was the beginning...

### Ecology and Entropy

I would like to say a few words in connection with the concept of “entropy”. Entropy refers to a body or a closed system of bodies. It is usually designated by the letter  $S$ . It is a dimensionless magnitude, i.e. it describes the transitory position of the body or of the system. It is also an additional variable, as the internal energy, i.e. its values depend on the mass of the system. The unit of measure is .

In the course of a certain phenomenon, for instance isothermal change, during which the temperature is constant, the change of entropy (the difference between the entropy independent indexes in the initial and the end condition) shall be determined by the following equation:

$$\Delta S = -\frac{Q}{T} \quad (1)$$

where:

$Q$  – the heat, which enters or emits from the system during the course of the phenomenon  $Q = Q_2 - Q_1$  and

$T$  – value of the constant temperature.

If you direct heat from the environment to the system, then  $Q > 0$ , the entropy of the system decreases, i.e.  $\Delta S < 0$ . (Life...)

If the system emits heat into the environment, then  $Q < 0$ , the entropy of the system increases, i.e.  $\Delta S > 0$ . (Death...)

After the definitions provided hereinabove, we may formulate the definition of life and death as follows (See Table 1):

Death	⇒	Increase of entropy $\Delta S > 0$	Emission of energy $\Delta Q < 0$
Life	⇒	Reduction of entropy $\Delta S < 0$	Acceptance of energy $\Delta Q > 0$

It is clear from the above mentioned that, to live we have to eat. We die not solely because of age, but also due to the increase of the body entropy, of the living system entropy.

But civilization is a living process too, directed against nature, as well as a process limiting the increase of entropy. On the other hand, nature itself follows the entropy increase law. Therefore, the preceding table may be finished as follows (See Table 2):

Table 2

Death	Nature	Increase of entropy $\Delta S > 0$	Emission of energy $\Delta Q < 0$
Life	Civilization	Reduction of entropy $\Delta S < 0$	Acceptance of energy $\Delta Q > 0$

Therefore, in order to survive, civilization has to find another body or system to receive energy from, so that the increase of the entropy of the other system compensates for the decrease of the entropy of civilization, in a way that the second law of thermodynamics is implemented.

**The future of civilization**

It can be seen in the plan given herein below that civilization may belong to three systems (See Fig. 2):

- System 1 – Sun, Earth (civilization, nature)
- System 2 – Earth (civilization, nature),
- System 3 – Sun, civilization

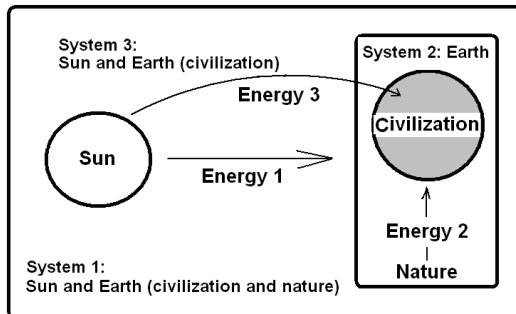


Figure 2: The three systems

### Analysis of the systems:

System 1 – The decrease of the entropy of civilization is counterbalanced by the more significant increase of the entropy of the Sun and nature. For this reason, civilization draws energy both from the Sun and nature.

System 2 – The decrease of the entropy of civilization is counterbalanced by the more significant increase of the entropy of nature. For this reason, civilization draws energy from nature. Until 1859 civilization received a small quantity of energy and did not exert any tangible impact over the environment. Since 1859, when the first oil drilling was made in Pennsylvania, USA, the drawing of energy from nature has sharply increased.

Therefore, as a result of the sharp increase of the energy, which civilization obtains from nature (1859 – first oil drilling), its entropy sharply drops (the average life expectancy increased from the age of 40 in 1870 to the age of 70 in the year 2000) and respectively the entropy of nature sharply increases (destruction of the environment).

The connection between energy, life expectancy and the number of population is seen in the following reference: “In late Paleolith (about 10,000 B.C., i.e. after the Ice Age) new settlements were created and human activities became more intensive. The population of the Earth increased and it is deemed that in the year 8000 B. C. it numbered 5,000,000 people. It has also been calculated that from 8000 B.C. to 4000 B.C. the population of the Earth increased sixteen-fold. It is mentioned for comparison that, in the year when our era began, the

population of the Earth was calculated to add up to 240 – 350,000,000 people. An indicative example of the impact of human beings on the environment is the consumption of energy per capita. It is considered that the consumption of energy in the year 8000 B.C. added up to about 2,000 to 4,000 kilocalories per day (Kcal/d). 75% of this consumption corresponded to the energy potential of foods and the rest to the energy from fuels (heating, food production and so forth). It is mentioned for comparison that a modern man in Western Europe and the USA consumes over 245,000 kilocalories per day.” [5, p. 60-61].

Everything mentioned hereinabove is illustrated in the following diagram (See Fig. 4):

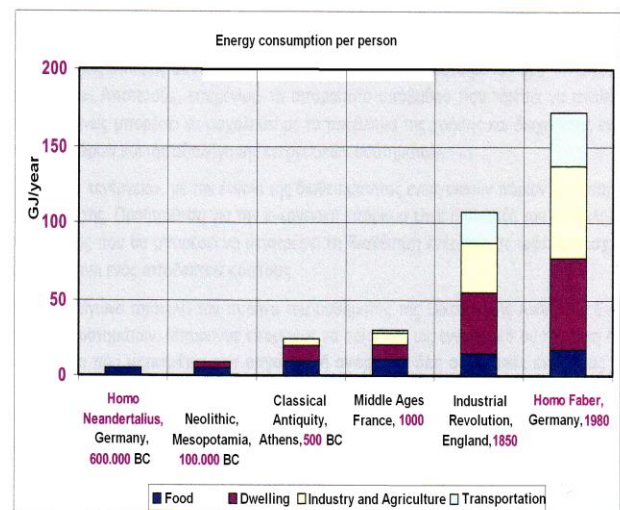


Figure 4: From year 600000 BC to the Industrial Revolution, England 1850, the average life expectancy increased from the age of 20 to the age of 40. After the Industrial Revolution the average life expectancy increased from the age of 40 to the age of 75.

Further to oil, civilization receives energy from nature in other forms, such as natural gas, coal, nuclear and hydroelectric energy.

Therefore, to survive, civilization must destroy nature, exhausting its energy potential. The death of nature, however, would mean death for the mankind as well.

System 3 – The reduction of the entropy of civilization is counterbalanced by the more significant increase of the entropy of the Sun. For this reason, civilization gets energy solely from the Sun. If it manages to build up a system with the Sun and use only solar energy, then not only civilization but nature too will survive. Nature itself uses solely solar energy to exist. Why can civilization not do the same as well?

The decision depends on us!!!

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