

GLOBAL CHANGE AND POST-GROWTH ECONOMIC THEORY

Ivan KLINEC

ABSTRACT

The global economic crisis that started fully in 2008, stood on the table requirement formulation of a new paradigm of economy, economic theory based on new paradigmatical bases with new theoretical framework. Outdated economic theories, which are dominant in the development of economic policies and strategies have become a major obstacle in the economies on a global scale. The continued dominance of these outdated economic theories is a major source of global economic and social destruction.

The global crisis has also created demand for new solutions that would be based on economic theories developed on the basis of a new paradigm, a paradigm which allows to perceive the economy as a whole, undivided, as a subsystem of higher systems of nature and of the universe as well as the return of ethics as the basis of economic support systems at all levels.

Solution to the current global crisis is undoubtedly linked to the creation of new economic theories that would allow the transition to a new model of sustainable development of civilization. Nowadays we are witnessing a failure of economic theory that has been dominant for the period of the industrial age.

The economy was seen as a mechanism and the economic theories were in this way adapted. In the information age economy works as an living organism. In living organisms entropic processes that are associated with the past are balanced with syntropic processes that are focused on the future. Syntropy must therefore be the central concept of economic theory in which the economy is viewed as a living organism.

Syntropic economic theory has the potential to become a dominant and defining for the formulation of policies and strategies that allow overcoming the current global crisis. The economy as an organism, the economy as anticipatory system and a new understanding of wealth and its role in society will be dominant in the creation of the theory of syntropic economics.

Economic theory therefore awaits big paradigm leap that will change fundamentally the current form of human society and civilization. The transition of the main concept of the growth will be the base for new syntropic economic growth policies and strategies within the framework of limited non-growth world.

Key words

economics, theory

Introduction

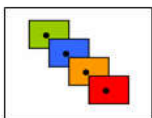
The global economic crisis that started fully in 2008, stood on the table requirement formulation of a new paradigm of economy. Outdated economic theories, which are dominant in the development of economic policies and strategies have become a major obstacle in the economies on a global scale. The continued dominance of these outdated economic theories is a major source of global economic and social destruction.

The global crisis has also created demand for new solutions that would be based on economic theories developed on the basis of a new paradigm, a paradigm which allows to perceive the economy as a whole, undivided, as a subsystem of higher systems of nature and of the universe as well as the return of ethics as the basis of economic support systems at all levels.

Solution to the current global crisis is undoubtedly linked to the creation of new economic theories that would allow the transition to a new model of sustainable development of civilization. Nowadays we are witnessing a failure of economic theory that has been dominant for the period of the industrial age. Mainstream economic theories are not further valid for understanding the permanently changing economic environment. Economic policies and strategies formulated on the base of these theories are sources of growing worldwide instability of economy on both global and local levels.

Global Crisis and the Limits to Growth

In the year 1972 first report to the Club of Rome was published and the discussion of limits to growth started to become worldwide within next more than forty years. The great controversy was connected with the first Report to the Club of Rome, but the forecast was the first in the discussion of non-possibility for world economy to growth forever. The prediction of the report was fulfilled in the year 2008 when growth of the global economy was stopped by the beginning of global crisis. Old industrial model has now to change to sustainable model of development.



During the period 1972 – 2013 together 45 Reports to the Club of Rome was published and together more than 100 book publications of authors members of the Club of Rome. The great influence of Club of Rome was emerging and the searching for global solutions was connected with searching for practical policies supporting the sustainable development.

In the years 1972 to 2013 were published following reports to the Club of Rome:

1972 - Meadows, Donella H., Meadows, Dennis L., Randers, Jorgen, Behrens III., William W.: The Limits to Growth. A Report for the Club of Rome's Project on the Predicament of Mankind¹

1974 – Mesarovic, Mihajlo D., Pestel, Eduard: Mankind at the Turning Point. The Second Report to the Club of Rome²

1976 - Tirbengen, Jan (coordinator): RIO Report. Reshaping the International Order. A Report to the Club of Rome³

1977 - Laszlo, Ervin et al.: Goals for Mankind. A Report to the Club of Rome On the New Horizons of Global Community⁴

1978 - Gabor, Dennis, Colombo, Umberto, with King, Alexander and Galli, Ricardo: Beyond the Age of Waste. A Report to the Club of Rome⁵

1978 - Montbrial, Thierry De: Energy. The Countdown. A Report to the Club of Rome⁶

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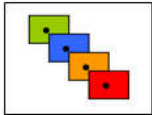
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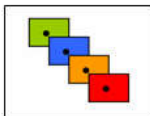
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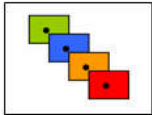
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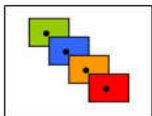
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Syntropic Economic Theory for the Information Age

The emerging information age is connected with paradigm shift also in economic theory. In the industrial age the economy was seen as a mechanism and the economic theories were in this way adapted. In the information age economy works as an living organism. The main paradigm shift also in economic theory is therefore the shift from mechanistic paradigm to holistic paradigm.

Understanding the economy as living organism and not mechanism is the core to understand the emerging global economic structure also as the main principles of functioning of this global economic structure. The key to understand how the economy is functioning in the new global environment is the concept of syntropy and its implementation to emerging economic theories.

In living organisms entropic processes that are associated with the past are balanced with syntropic processes that are focused on the future. Syntropy must therefore be the central concept of economic theory in which the economy is viewed as a living organism. Syntropic economic theory has the potential to become a dominant and defining for the formulation of policies and strategies that allow overcoming the current global crisis. The economy as an organism, the economy as anticipatory system and a new understanding of wealth and its role in society will be dominant in the creation of the theory of syntropic economics.

On the Threshold of Syntropic Stage of Human Evolution

American futurist and great visionary R. Buckminster Fuller described the transition from entropic stage of human civilization to syntropic stage of human civilization. The current entropic stage of human civilization is entropic because of its primarily orientation toward the profit and making money and the transition is connected with human mind because mind is primarily connected with syntropy, with creation of new, with organizing and with overcoming entropy.

According to R. Buckminster Fuller as he wrote in Critical Path:

“Humanity has now reached that critical moment of potential transformation of humans’ affairs from class-two evolution to class-one evolution” (Fuller 1981). R. Buckminster Fuller highlighted that class-two evolution is entropically selfish and class-one evolution is syntropically cooperative (Fuller 1981).

“The drive to make money”, wrote R. Buckminster Fuller, “is inherently entropic, for it seeks to monopolize order while leaving un-cope-with-able disorder to overwhelm others” (Fuller 1981). Mind on the other side is according him essentially anti-entropic (Fuller 1981).

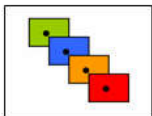
R. Buckminster Fuller understand life and also a man as syntropic parts of the Universe with his syntropic function to support the life on the Earth together with support of regeneration ability on the Earth as he wrote in Critical Path:

⁴² Randers, Jorgen: 2052. A Global Forecast for the Next Forty Years. A Report to the Club of Rome Commemorating the 40th Anniversary of The Limits to Growth. Chelsea Green Publishing, 2012, ISBN 978-1603584678, 304 str.

⁴³ Lietaer, Bernard, Arnsperger, Christian, Goerner, Sally, Brunnhuner, Stefan (2012): Money and Sustainability. The Missing Link. A Report from the Club of Rome – EU Chapter to Finance Watch and the World Business Academy. Foreword by Dennis Meadows. Triarchy Press Ltd., Devon, UK, ISBN 9781908009-7-53, 216 str.

⁴⁴ Wijkman, Anders, Rockström, Johan: Bankrupting Nature. Denying Our Planetary Boundaries. A Report to the Club of Rome. Rotledge, 2012, ISBN 978-0415539692 , 208 str.

⁴⁵ Bardi, Ugo: Der geplünderte Planet. Die Zukunft des Menschen im Zeitalter schwindender Ressourcen. Dem neuen Bericht and en Club of Rome. Mit einem vorwort von Ernst Ulrich von Weiszäcker. oekom verlag, München, 2013, ISBN 978-3-86581-410-4, 368 str.



“By and large the function of life on the planet is designed to be syntropic – to impound radiation, conserve it, and use it to produce further functioning in overall support of the syntropic integrity of eternally regenerative Universe. The tendencies of many human beings - wanting to cultivate the soil, to care for the animals, the drive of artists to create, of artisans to build, of inventors to invent and develop time – and trouble-savers for others – are all manifests of the designed-in syntropic propensities of humans. The generous, compassionate propensity of humans is primarily syntropic. The selfish are “entropic”. In order to keep Universe regenerative Nature has placed human beings on this planet for their syntropic functioning” (Fuller 1981).

The shift from entropy to syntropy is therefore essential for creating global economic system based on the principles of sustainability.

R. Buckminster Fuller published several books and documents about transition to syntropic stage of human civilization and he described main principles of Spaceship Earth's economy and society in his books *Operating Manual for Spaceship Earth* (1969), *Critical Path* (1981), *Synergetics* (1975), *Grunch of Giants* (1983), *Intuition* (1972), *And It Come to Pass - Not to Stay* (1976), *Education Automotion* (1962), *Utopia or Oblivion – The Prospects for Humanity* (1969), *Ideas and Integritys* (1963) and documents of *World Design Science Decade*. We can see within these books syntropic role of design in creation of new patterns of human society and civilization.

Emerging Theory of Syntropy

The theory of syntropy is described in books of such authors as Luigi Fantappiè, R. Buckminster Fuller, Albert Szent-Geörgyi, Ulisse Di Corpo, Antonella Vannini, Guy Dauncey, Mario Ludovico and others.

The fundamental work about syntropy of Luigi Fantappiè we have only in Italian language with no English translation. Therefore the main source for using this Fantappiè's book are books and articles written by Ulisse Di Corpo and Antonella Vannini. They published several books as *Introduction to Syntropy*, *The Law of Syntropy* (2011), *Syntropy – The Energy of Life* (2005), *Retrocausality – Experiments and Theory* (2011), *Supercausality and Complexity – Changing the rules in the study of causality* (2011), *Origin of Life – Evolution and Consciousness in the light of the law of syntropy* (2011) and others. They published also several fundamental articles on the theory of syntropy in various journals. From the year 2005 they are editors and main authors of *Syntropy Journal* with main topic, which is the theory of syntropy.

As wrote Ulisse Di Corpo and Antonella Vannini “Luigi Fantappiè described concept of the syntropy as the opposite to the entropy in the year 1942, when he published the book *Principles of a Unitary Theory of the Physical and Biological World Based on Quantum Mechanics and Special Relativity*” (Di Corpo, Vannini 2009). In this book, according to Ulisse Di Corpo and Antonella Vannini, “he showed that retarded waves which diverge from causes located in the past, are governed by the law of entropy (en = apart, tropos = tendency) and correspond to mechanical and chemical phenomena; while advanced waves, which converge towards causes located in the future are governed by a law symmetrical to entropy, which Fantappiè named syntropy (syn = together, tropos = tendency)” (Di Corpo, Vannini 2009).

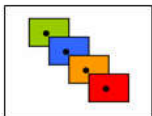
Methodological Grassroots for Syntropic Economic Theory

The economic theory is the same subject of the evolution as all the other scientific fields. The main stream of the economic theory is the dominant source of the current global crisis of our civilization. The main reason of such state is non-reflection of the societal evolution by the main stream of the economic theory.

The economic theory of main stream is the industrial age economic theory and the ongoing global civilization transformation is connected with the search of the information age economic theory. The main shift in the economic theory therefore will be the transformation of the economic theory on the base of the information age paradigm.

The solution of the current global civilization crisis is interconnected with the creative design of the new syntropic theory of economics. Such theory can support the shift from the entropic character of the current industrial age economy to the new syntropic model of the information age economy.

We have the appropriate methodological tools for such syntropic model of the information age economy in the works and in the theories of R. Buckminster Fuller, Luigi Fantappiè, Albert Szent-Geörgyi, Guy Dauncey, Erwin Schrodinger, Ilya Prigogine, Isabelle Stengers, Ossip K. Flechtheim, Robert Rosen, Judith Rosen, David Bohm, F. David Peat, Nicholas Georgescu-Roegen, Alfred Korzybski, Eric Chaisson, Jonas Salk, Fritjof Capra, Gunter Pauli, Hazel Henderson, Alvin Toffler, Heidi Toffler, Barbara Marx Hubbard, Antonella Vannini, Ulisse Di Corpo, Mario Ludovico, Leon S. Fuerth, Bela H. Banathy, Elisabet Sahtorius and many others.



The evolution of the economic theory can lead to the new understanding of our rapidly changing economic reality. We can understand the ongoing transition to the global civilization and solve the emerging problems via new understanding of emerging global economic reality.

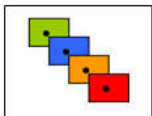
The new syntropic economic theory can make possible the overcoming the struggle between individual economic theoretical schools and also can make possible to create the base for the unified economic theory.

Characteristics of Syntropic Economic Theory

The new syntropic paradigm of economic theory aims to redirect the economic system towards the future and to overcome the present split in economic theory, establishing in its place a unified economic theory.

The main characteristics of the syntropic theory of economics include the following (Klinec 2012):

- Understanding that the economy is a living system, living organism and that all subsystems of the economy, along with economic organizations and institutions, are also living systems, living organisms.
- Reorienting economic theory and economic systems towards the future and futuring it by applying the concept of syntropy to economic models, economic systems and economic theories, and implementing long-term horizons to policymaking to produce a positive impact on economic reality.
- Understanding economic theory as a mental map and as a map of economic reality. All economic theories are only mental maps limited in the time and in the space. The plurality of humankind and not the struggle among them is the basis for a syntropic theory of economics.
- Understanding that economic laws evolve same way as economic reality is evolving. The basic law of the syntropic theory of economics can be the information age syntropic theory of value instead of the industrial age working theory of value.
- Creative design of economic theory is necessary for the design of economic solutions to the problems of global civilization and of local economies and communities.
- Understanding the global economy as a field. Disruption of the field in one area will lead to the instability of the whole global economy. The field theory of economy is key to understanding the current global crisis.
- Redefining the basic core of economic theory based on the theory of syntropy according to Luigi Fantappie and R. Buckminster Fuller and implementing the concept of syntropy into our model of economic reality.
- Understanding civilization evolution as a change in civilization attractors. We can understand economic productive factors on the basis of such civilization attractors. The industrial age attractors were work and capital. The information age attractors are information and knowledge.
- Understanding the economy as an implicate order according to David Bohm with the hidden code of civilization being the main principles of civilization. The evolution of the economy is therefore simply part of the holomovement involving the whole of civilization.
- Understanding that the role of humans within the economic system includes being part of the collective body as well as individuals. The human can act as an individual or as a part or member of the collective body. It depends entirely on human free will.
- Understanding the role of ethics as the key element in all economic systems and also as a precondition for their appropriate behavior.



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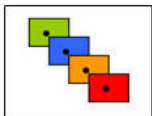
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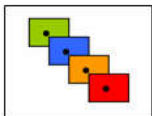
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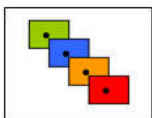
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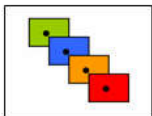
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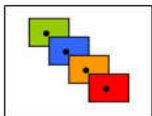
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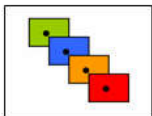
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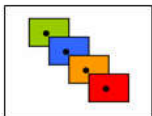
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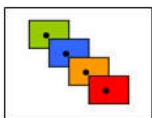
Conclusion

The time of global crisis is also characterized by an emerging number of new economic theories as the new economics; green economics; steady-state economics; geonomics; bioeconomics; socioeconomics; regenerative economics; humanistic economics, real-life economics and many others.

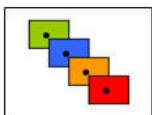
All these new economic theories are characterized by diversification of the view of economic reality, search for designing new economic theories based on the law of Nature and the Universe and common dialog or multilog in searching for ways from the present global crisis of mankind. Common for all these theories is also a holistic view of economic, social and civilization reality. We are witnesses of an emerging holistic economic theory, which is created together by all new economic thinkers oriented toward sustainable development and a sustainable world.

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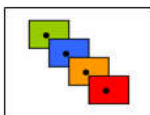
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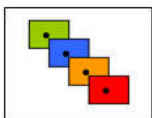
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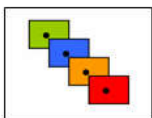
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CONTACT ADDRESS

Author: Ing. Ivan KLINEC
Workplace: Institute of Economic Research, Slovak Academy of Sciences
Address: Šancová 56, 81105 Bratislava, Slovak Republic
E-mail: ivan.klinec@gmail.com