

# **FUTURE ECONOMICS: CREATIVE DESIGN OF UNIFIED ECONOMIC THEORY**

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## **Introduction**

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

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

The solution to the current global civilization crisis is interconnected with the creative design of the new syntropic theory of economics. Such a 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 models of the information age economy in the works and the theories of R. Buckminster

Fuller<sup>48</sup>, Luigi Fantappie<sup>49</sup>, Albert Szent-Georgyi<sup>50</sup>, Erwin Schrödinger<sup>51</sup>, Ilya Prigogine<sup>52</sup>, Isabelle Stengers<sup>53</sup>, Ossip K. Flechtheim<sup>54</sup>, Robert Rosen<sup>55</sup>, David

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- <sup>48</sup> Fuller, R. Buckminster (1981): *Critical Path*. St Martin's Press, New York; Fuller, R. Buckminster (1982): *Synergetics. Explorations in the Geometry of Thinking*. Collier Books, Macmillan Publishing Company, New York; Fuller, R. Buckminster, McHale, John (1963): *World Design Science Decade 1965–1975. Five Two Year Phases of World Retooling Design Proposed to the International Union of Architects for Adaptation by World Architectural Schools. Phase I (1963). Document 1. Inventory of World Resources Human Trends and Needs. World Resources Inventory*, Southern Illinois University, Carbondale, Illinois.
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- <sup>50</sup> Szent-Gyorgyi, Albert (1972): *The Living State: With Remarks on Cancer*, Academic Press, New York; Szent-Gyorgyi, Albert (1977): *Drive in Living Matter to Perfect Itself*. In: *Synthesis 1*, Vol. 1, No. 1, page 14–26.
- <sup>51</sup> Schrödinger, Erwin (1992): *What is Life? With Mind and Matter and Autobiographical Sketches*. Cambridge University Press, Cambridge.
- <sup>52</sup> Prigogine, Ilya, Stengers, Isabelle (1984): *Order out of Chaos. Man's New Dialogue with Nature*. Heinemann, London; Prigogine, Ilya (1997): *End of Certainty*. The Free Press, New York.
- <sup>53</sup> Prigogine, Ilya, Stengers, Isabelle (1984): *Order out of Chaos. Man's New Dialogue with Nature*. Heinemann, London.
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- <sup>55</sup> Rosen, Robert (1985): *Anticipatory Systems. Philosophical, Mathematical and Methodological Foundations*. IFSR International Series on Systems Sciences and Engineering. Volume 1. Pergamon Press, New York; Rosen, Robert (1999): *Essays on Life Itself*. Columbia University Press, New York.

Bohm<sup>56</sup>, Nicholas Georgescu-Roegen<sup>57</sup>, Alfred Korzybski<sup>58</sup>, Fritjof Capra<sup>59</sup>, Hazel Henderson<sup>60</sup>, Alvin Toffler<sup>61</sup>, Barbara Marx Hubbard<sup>62</sup>, Antonella Vanini<sup>63</sup>, Ulisse Di Corpo<sup>64</sup>, Leon S. Fuerth<sup>65</sup> and many others.

<sup>56</sup> Bohm, David (1980): *Wholeness and the Implicate Order*. Routledge and Kegan Paul, London; Bohm, David (1995): *Thought as a System*. Routledge, London, New York.

<sup>57</sup> Georgescu-Roegen, Nicholas (1971): *The Entropy Law and the Economic Process*. Harvard University Press, Cambridge, Massachusetts; Georgescu-Roegen, Nicholas (1976): *Energy and Economic Myths*. Pergamon Press, New York.

<sup>58</sup> Korzybski, Alfred (1995): *Science and Sanity. An Introduction to Non-Aristotelian Systems and General Semantics*. Fifth Edition. With New Preface by Robert P. Pula. Institute of General Semantics, Englewood.

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<sup>62</sup> Marx Hubbard, Barbara (1998): *Conscious Evolution. Awakening the Power of Our Social Potential*. New World Library, Novato.

<sup>63</sup> Di Corpo, Ulisse, Vannini, Antonella (2009): *An introduction to Syntropy*. [www.syntropy.org](http://www.syntropy.org), [www.syntropia.it](http://www.syntropia.it); Vannini, Antonella (2005): *From mechanical to life causation*. In: *Syntropy 1 / 2005*, page 80-105, [www.syntropia.it](http://www.syntropia.it), [www.syntropy.org](http://www.syntropy.org); Vannini, Antonella (2005): *Entropy and Syntropy: From Mechanical to Life Science*. In: *NeuroQuantology 2005, Issue 2*, page 88–110; Vannini, Antonella (2006): *Entropy and Syntropy: causality and retrocausality in psychology*. In: *Syntropy 3/2006*, page 1–268, [www.syntropia.it](http://www.syntropia.it), [www.syntropy.org](http://www.syntropy.org).

<sup>64</sup> Di Corpo, Ulisse, Vannini, Antonella (2009): *An Introduction to Syntropy*. [www.syntropy.org](http://www.syntropy.org), [www.syntropia.it](http://www.syntropia.it); Di Corpo, Ulisse (2005): *Syntropy: the energy of life*. In: *Syntropy 1 / 2005*, page 77–79, [www.syntropy.org](http://www.syntropy.org), [www.syntropia.it](http://www.syntropia.it); Di Corpo, Ulisse (2005): *Syntropy: a third possibility in the debate on evolution*. In: *Syntropy 3 / 2005*, page 66–68, [www.syntropy.org](http://www.syntropy.org), [www.syntropia.it](http://www.syntropia.it).

<sup>65</sup> Fuerth, Leon S. (2009): *Foresight and anticipatory governance*. In: *Foresight*. Volume 11, Issue 4; Fuerth, Leon S. (2007): *Congress and the Climate Research: A Case for Forward Engagement*. Research Brief – Number 3, NYU Wagner, Robert F. Wagner Graduate School of Public Service, John Brandemas Center

The evolution of the economic theory can lead to new understanding of our rapidly changing economic reality. We can understand the ongoing transition to a global civilization and solve the emerging problems via new understanding of the emerging global economic reality. The new syntropic economic theory can make it possible to overcome the struggle between individual economic theoretical schools and can also enable the creation of the base for unified economic theory.

### **Outline of the Syntropic Theory of Economics**

The new syntropic paradigm of economic theory is interconnected with redirecting economic systems towards the future and with overcoming the present division within economic theory by establishing an unified economic theory.

The main characteristics of the syntropic theory of economics can include the following:

- Reorientation of the economic theory and economic systems towards the future. Implementation of the concept of syntropy in economic models and economic theories. Implementation of long-term horizons in policymaking with a positive impact on the 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 time and space. The plurality and not the struggle is the basis for the syntropic theory of economics.
- Understanding economic laws as evolving similarly to the economic reality is emerging. The basic law of the syntropic theory of economics can be the information theory of value instead of the industrial age working theory of value.
- The creative design of economic theory is necessary for the design of economic solutions for global civilization, as well as for local economies and communities.
- Understanding the global economy as a field. Disruption of the field in one area leads to the instability of the whole global economy. The field theory of economy is key to understanding the current global crisis.

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for the Study of Congress, March 2007; Fuerth, Leon S. (2006): Strategic Myopia. The Case for Forward Engagement. In: The National Interest. Number 83, Spring 2006; Fuerth, Leon S. (2004). Creation of a National Commission for Strategic Planning under the direction and guidance of Leon Fuerth. In: Futures Research Quarterly. Winter 2004, Volume 20, Number 4.

- Redefining the basic core of the theory of economics on the basis of the theory of syntropy according to Luigi Fantappie and R. Buckminster Fuller and implementing the concept of syntropy in the model of economic reality.
- Understanding the evolution of civilization as a change of the civilization attractors. We can understand economic productive factors as the civilization attractors. The change of such attractors in the information age is the main cause for the transformation of the whole of civilization around information and information networks. 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 the civilization in the form of the main principles of the civilization. The evolution of the economy is therefore part of the holomovement of the whole civilization.
- Understanding the role of humans within the economic systems, as a part of the collective body and also the individual. The human can act as the individual or as part or the member of the collective body. It depends on the free will of the human.

### **Economy as an Anticipatory System**

Reorientation of economic systems towards the future is interconnected with the implementation of long-term horizons in economic models, economic theory and also in policymaking. The economy has to be transformed into the anticipatory system, in the words of Robert Rosen. The economy as an evolving system can be understood as a living organism with a permanent transformation of its structure, organization, laws etc.

Luigi Fantappiè described the concept of syntropy as the opposite of entropy. He published the book *Principles of a Unitary Theory of the Physical and Biological World Based on Quantum Mechanics and Special Relativity*<sup>66</sup>.

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<sup>66</sup> Fantappie, Luigi (1993): *Principi di una teoria unitaria del mondo fisico e biologico*. Di Renzo Editore – *Principles of a Unitary Theory of the Physical and Biological World Based on Quantum Mechanics and Special Relativity*. Cited by Di Corpo, Ulisse, Vannini, Antonella (2009): *An introduction to Syntropy*. [www.syntropy.org](http://www.syntropy.org), [www.syntropia.it](http://www.syntropia.it); Vannini, Antonella (2005): *Entropy and Syntropy: From Mechanical to Life Science*. In: *NeuroQuantology* 2005, Issue 2, page 88-110; Vannini, Antonella (2006): *Entropy and Syntropy: causality and retrocausality in psychology*. In: *Syntropy* 3/2006, pages 1–268, [www.syntropia.it](http://www.syntropia.it).



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. On the other hand, 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)<sup>67</sup>.

Economy – as the anticipatory system – has to deal with the causes located in the future which are the new attractors that form the economic, social and societal systems. Leon S. Fuerth created the concept of Forward Engagement<sup>68</sup> which is oriented toward the implementation of long term horizons in policymaking and can be the tool for reorienting the economic systems towards the future. The implementation of long term perspectives in policymaking is one of the fifteen global challenges of the biggest future oriented project in the world The Millennium Project<sup>69</sup>.

### **Economics as a Mental Map – The Plurality of Economic Theory**

The view of partial economic theories and the economic theoretical schools as partial maps of the economic reality and as the fragmentary views of one undivided reality enables the view of economics as one science consisting of a great number and diversity of partial economic theories, which all have their own time, space, purpose and limits. And no economic theory is capable of being absolute in any time and any space.

Economic theory is not the economic reality as all theories are only maps of the reality, as described by Alfred Korzybski in his works on general

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it, [www.syntropy.org](http://www.syntropy.org).

<sup>67</sup> Ibid.

<sup>68</sup> Fuerth, Leon S. (2009): Foresight and anticipatory governance. In: Foresight. Volume 11, Issue 4; Fuerth, Leon S. (2007): Congress and the Climate Research: A Case for Forward Engagement. Research Brief – Number 3, NYU Wagner, Robert F. Wagner Graduate School of Public Service, John Brandemas Center for the Study of Congress, March 2007; Fuerth, Leon S. (2006): Strategic Myopia. The Case for Forward Engagement. In: The National Interest. Number 83, Spring 2006; Fuerth, Leon S. (2004). Creation of a National Commission for Strategic Planning under the direction and guidance of Leon Fuerth. In: Futures Research Quarterly. Winter 2004, Volume 20, Number 4.

<sup>69</sup> Glenn, Jerome C., Gordon, Theodore J., Florescu, Elizabeth (2010): 2010 State of the Future. The Millennium Project, Washington, D.C.

semantics<sup>70</sup>. Economic theory must therefore be a puzzle of the individual economic theories with the possibility of innovation or change regarding the individual pieces of such a puzzle.

### **Evolution of Economic Laws – Information Theory of Value**

Understanding economic laws as evolving similarly to how the economic reality is evolving can enable the incorporation of the aspect of the dynamics and irreversibility into economic theory.

The basic law of the syntropic theory of economics can be the information theory of value. During the industrial age the dominant law of economics was the working theory of value, which was the subject of discussions between the various economic theoretical schools.

The concepts of entropy and syntropy and their implementation in economic theory can help with the creation of the information theory of value as the main antientropic law of the syntropic stage of human evolution. Information is the main source of value in the information age as compared to work as the main source of value in the industrial age.

### **Creative Design of Economic Theory**

Creative design of economic theory is necessary for the design of economic solutions for global society. Totalitarization of economic theory during the period of communism and also during the last decades of the free market utopia show us that creative design and new solutions for the global economic system are necessary and that the only exit from the current global crisis is the design of a new economic system with respect to the higher laws of nature and the universe.

The creative design of economic theory can be an important part of the transition of humankind toward conscious evolution. The creative design of economic theory is therefore the conscious design of economic theory and its transformation to a tool of conscious evolution.

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<sup>70</sup> Korzybski, Alfred (1995): *Science and Sanity. An Introduction to Non-Aristotelian Systems and General Semantics*. Fifth Edition. With New Preface by Robert P. Pula. Institute of General Semantics, Englewood.

## **From Entropy to Syntropy – Field Theory of the Economy**

We can understand the global economy as a field. The disruption of the field in one area leads to the instability of the whole global economy. The field theory of the economy is the key to understanding the current global crisis. The global interdependence is the other view of the global economy as the global field. The turbulences on the financial markets, security threats, poverty, climate change and many other imbalances are the processes creating a disequilibrium with a global impact on economies all over the world.

Redefining the basic core of economic theory on the basis of the theory of syntropy, according to Luigi Fantappie and R. Buckminster Fuller and implementing the concept of syntropy in the model of economic reality, can lead to the creation of a new global economic system. According to R. Buckminster Fuller, humanity has now reached that critical moment of potential transformation of humans' affairs from class-two evolution to class-one evolution<sup>71</sup>.

The drive to make money, wrote R. Buckminster Fuller, is inherently entropic, for it seeks to monopolize order while leaving disorder to overwhelm others<sup>72</sup>. Mind on the other side is according to him essentially anti-entropic<sup>73</sup>. The shift from entropy to syntropy is therefore essential for creating a global economic system based on the principles of sustainability.

## **Evolution as a Change of the Civilization Attractors – Disruptive Forces**

The key principle for understanding the societal civilization change is the view of the economy as a dissipate structure, which is dissipating energy, materials and information and creating a new structure of society and the whole civilization around the civilization attractors in the form of economic productive factors as are soil, work, capital and information and which are determining for the structure and the profile of the economy, the society and the civilization during their evolution.

We can understand the evolution of civilization as a change of civilization attractors. We can understand the economic productive factors as the civilization attractors. The change of such attractors in the information age is the main cause of the transformation of the whole civilization around

<sup>71</sup> Fuller, R. Buckminster (1981): *Critical Path*. St Martin's Press, New York.

<sup>72</sup> Ibid.

<sup>73</sup> Ibid.



the information and information networks. The industrial age attractors were work and capital. The information age attractors are information and knowledge. Therefore the new structure of global civilization is network-centric instead of being centered on the hierarchical structure of the industrial age.

### **Economy as an Implicate Order – Hidden Code**

The view of the global world economy as one undivided whole, the view of this economy as an implicit order and the view of economic development and the globalization process as a holomovement, by using the theory of wholeness and implicate order created by David Bohm<sup>74</sup>, can help us understand the processes of globalization and their impacts on individual countries and their economies.

Understanding the economy as an implicate order, according to David Bohm with the hidden code of civilization in form of the main principles of civilization, can show us how the hidden code of civilization, described by Alvin Toffler<sup>75</sup>, is changing our economy, society and civilization.

The evolution of the economy is therefore part of the holomovement of the whole civilization. The interdependence of the global economic system and the synchronicity of the economic and societal changes in individual countries, as for example in the year 1989, can be understood via the concept of the holomovement and the processes of unfolding the hidden code of civilization in the form of the implicate order.

### **Economy as a Web of Connections – The Role and Importance of Social Capital**

The view of the emerging global economy as the challenge and the chance for renewing the original significance of economics as a science about the householding. This provides an opportunity to overcome the alienation its original meaning during the industrial era and is interconnected with the

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<sup>74</sup> Bohm, David (1980): *Wholeness and the Implicate Order*. Routledge and Kegan Paul, London; Bohm, David (1995): *Thought as a System*. Routledge, London, New York

<sup>75</sup> Toffler, Alvin (1990): *The Third Wave*. Bantam Books, New York; Toffler, Alvin (1990): *Powershift. Knowledge, Wealth and Violence at the Edge of the 21st Century*. Bantam Books, New York

restoration of social capital, which has been damaged enormously during processes of globalization.

In the global economy the man has to be a housekeeper first and a manager, a businessman and a financier second. Therefore the financialization of the global economy has to be changed towards the global economic household of humanity and the economy can serve as the web of connections within communities at all levels and also as the tool for restoring social capital.

The dominant form of capital in the information age economy must therefore be social capital instead of industrial and financial capital, as in the industrial age economy.

## **Conclusion**

The design of the syntropic economic theory and the syntropic economic system can lead to syntropic class-one evolution in terms of the concept of R. Buckminster Fuller<sup>76</sup>. The design of the syntropic economic theory is in the beginning stages and must be done by a great number and diversity of economic thinkers from around the world. However, the speed of its creation is one of the main preconditions for changing the present direction of humankind toward a sustainable world and toward overcoming the emerging global crises.

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<sup>76</sup> Fuller, R. Buckminster (1981): *Critical Path*. St Martin's Press, New York.

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