

Complexity Sciences Research

Homology between Unicist Concepts and Stem Cells, Biology, Atoms, the TAO and Electricity

The function of stem cells in the human body is homologous to the function of concepts in the field of human actions. While stem cells can give rise to specialized cells and thus organs, essential concepts allow building unicist objects.

Two entities are homologous when they are regulated by an essentially analogous concept. Homologies allow defining conceptual benchmarks that define the limits of applicability of a specific knowledge.

Here we present five homologies that allow discovering the unicist logical approach as self-evident in other fields. These homologies deal with the field of physics and biology. They are:

- 1) Homology between Unicist Concepts and Stem Cells
- 2) Homology between the Unicist Ontology and the structure of Biological Entities
- 3) Homology between atoms and the unicist ontological structure
- 4) Homology between the Unicist Theory and the TAO
- 5) Homology between thinking processes and the functionality of electricity

The objective of this synthesis is to provide the framework of the consistency between concepts and the unicist ontological approach and hard sciences to demonstrate not only that they are compatible but also their homology.



The Unicist Research Institute
Pioneers in Complexity Science Research since 1976



Brief on the Homology between Unicist Concepts and Stem Cells, Biology, Atoms, the TAO and Electricity

An Introduction

*This introduction is an excerpt from the publications
on Unicist Concepts and their homologies based on the researches
led by Peter Belohlavek at The Unicist Research Institute.*



Concepts

Concepts describe the living creatures' essences and their evolution laws. That is what we call their ontogenetic intelligence.

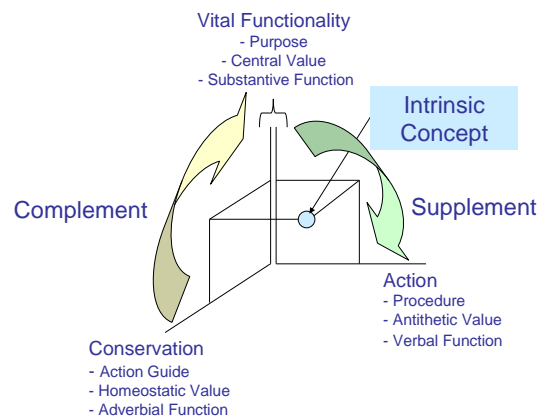
Living creatures possess intrinsic concepts. This means that these concepts exist in themselves and only need to be discovered.

On the other hand, inanimate beings have extrinsic concepts, which are deposited on them according to their functionality.

Concepts determine the ontological behavior of living creatures.

As there is a generic concept for each species that defines its purpose, its expansion action (entropy) and its conservation function, such concept is cross-cultural and timeless, as long as the species does not become extinct.

The Unicist Logic of the Intrinsic Concept



Copyright© The Unicist Research Institute

The Unicist Ontology

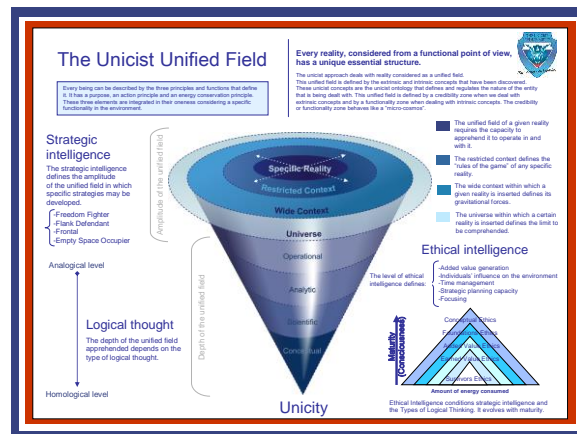
The unicist ontology describes the nature of reality with the structure and rules of the ontogenetic intelligence of nature. It describes the nature as a unified field.

Thus it has a logical structure that allows guiding the individual in the search of the nature of something and providing the necessary language to describe it.

The ontogenetic maps describe the unicist ontological structures of the functions of some reality. These maps define the essential drivers, catalysts and inhibitors which define the natural actions of these functions.

The Unified Field

Whenever we describe an evolution theory we refer to universal laws that are applicable to actual fields. In order to apprehend actual fields man bears his own perception capacity restrictions. That is why different people are able to apprehend different realities.



http://www.unicist.org/unicist_unified_field_en.pdf

From an objective point of view, there is only one reality. We define this reality as a unified field restricted by an arbitrary decision, though functional to man.

The amplitude of the unified field depends on the capacity to adapt to environment. The adaptation capacity belongs to the individual participating.

When the individual merely seeks to flow through environment and subordinates to it, adaptation is not possible. The same holds true when he intends to dominate it.

Fallacies are mechanisms that avoid apprehension of a unified field in all of its depth.

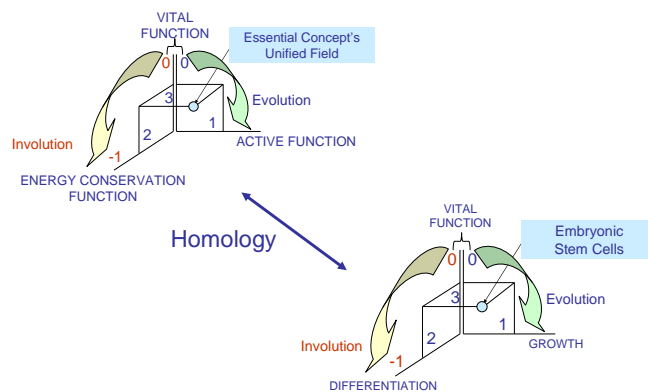
When one is overwhelmed by a given reality there are two possible paths: accept it, hence seeking to apprehend it or not, or “solve” the conflict through fallacies.

Homology between Unicist Concepts and Stem Cells

The function of stem cells in the human body is homologous to the function of concepts in the field of human actions. While stem cells can give rise to specialized cells and thus organs, essential concepts allow building unicist objects.

Homology between Concepts and Embryonic Stem Cells

The Unicist Ontology in Unicist Standard Language



Copyright© The Unicist Research Institute

Unicist objects are adaptive systems that have a concept and generate added value within a quality assurance system to fulfill the purpose of the concept. Unicist objects are interdependent entities that integrate a complex adaptive system.

The knowledge of the essential concepts is basic to build unicist objects because these objects are the materialization of a concept.

Under certain conditions, organs can be transplanted and this is also the case of unicist objects that can be replicated as long as they belong to homologous and analogous entities.

Objects are inserted into processes to produce specific results. The same way stem cells have the potential capacity to give birth to human organs, concepts can give birth to objects to produce results.

The knowledge of the Unicist Theory allows using a double dialectical approach to reality to emulate the organization of nature using an object driven organization.

Nature is organized by objects which can be observed in the ecosystem. The human body is an example of the organization of nature, where organs are homologous to unicist objects. That is why the transplantation of organs became possible.

While the structure of the different organs of the body derives from the stem cells, the unicist objects derive from the essential function of an entity that is defined by its concept.



Properties of Stem Cells and Concepts

Stem Cells	Concepts
They are unspecialized	They are universal
They are capable of self-renewal	They are timeless
They can give rise to specialized cells	They allow building operational functions

Thus, stem cells and concepts are homologous. While essential concepts allow the construction of objects to insert into human adaptive processes, stem cells allow the building of organs that work as unicist objects to sustain the functionality of a complex adaptive system such as the human body.



Homology with Biological Entities

The unicist ontology of a “biological entity” defines its structure and functionality in an environment.

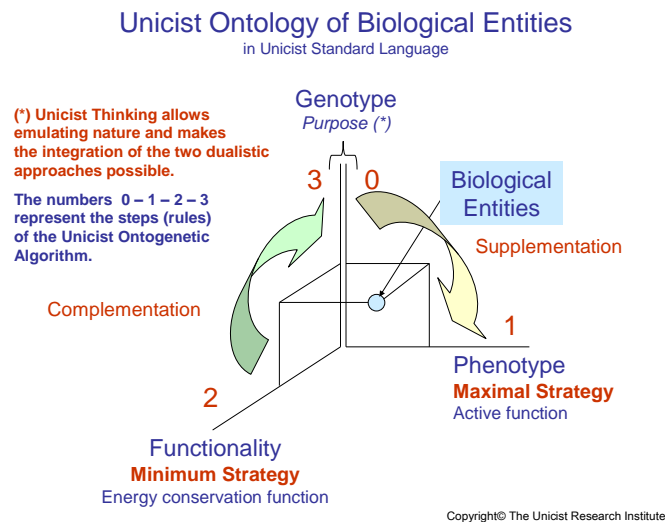
The genotype defines the genetic structure of the entity that rules its evolution and generates the phenotype of the being.

The objective of the genotype is to ensure the permanence of species, its reproduction and production.

The phenotype defines the morphologic, behavioral and materialistic characteristics of the entity.

It defines the functional characteristics, the functional power of the entity and the functional assurance.

Functionality defines the effectiveness of the phenotype measured as the consequence of the adaptation of the biological entity to the environment.



Functionality is measured in the capacity of adapting and growing on the one hand, and surviving, on the other hand.

The understanding of the ontology of “biological entities” helps to follow the laws of nature when dealing with genetic engineering processes and use it to apprehend the nature of beings with “artificial life” such as institutions.

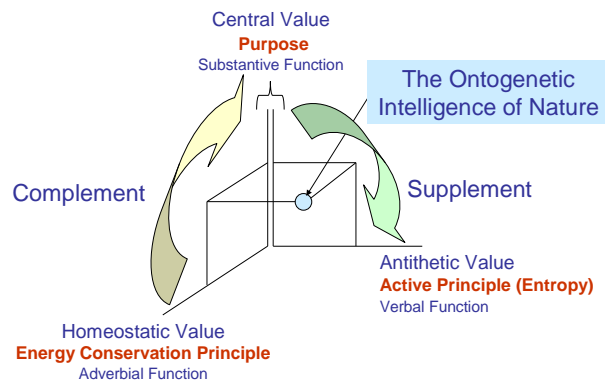


Homology with the Atomic Structure

The ontogenetic intelligence of nature defines that every living being has a purpose, an active principle and an energy conservation principle.

Learn more at: <http://www.unicist.org/repo/#Basics>

The Ontogenetic Intelligence of Nature The Implicit Axiom of the Unicist Ontology of Evolution

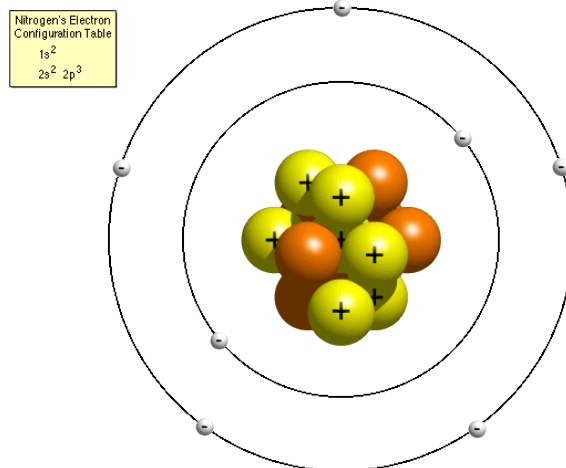


Copyright © The Unicist Research Institute

The purpose can also be defined as the substantive function, the active principle as the verbal function and the energy conservation principle as the adverbial function.

In physics atoms are defined by having a central nucleus, composed by positively charged protons and neutral neutrons, surrounded by negatively charged electrons.

Atomic Structure



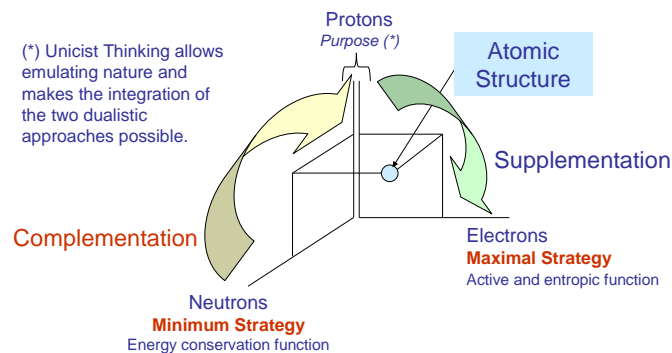


The positively charged protons are homologous to the substantive function, the neutral neutrons are homologous to the adverbial function and the negatively charged electrons are homologous to the verbal function.

An atom, having an equal number of protons and electrons, is electrically neutral.

Unicist Ontogenetic Map of the Atomic Structure

The Unicist Ontology in Unicist Standard Language



Copyright © The Unicist Research Institute

Living beings are continuously evolving and involving which implies that there is always disequilibrium between their purposes and their active functions which is homologous to the disequilibrium of protons and electrons.

This disequilibrium is what defines the energy and the influence of an ontogenetic structure in the environment.

The active function and the purpose are antithetic and supplementary implying that both are charged with energy.

The energy conservation function and the purpose have a complementary relationship which is evident in atoms where the neutrons allow the integration of the protons.

The mass of an element is basically given by the nucleus of an ontological structure meaning that the mass is given by the purpose and its complementary energy conservation function. But the evolution of a living being is given by the power of the active function in the environment.



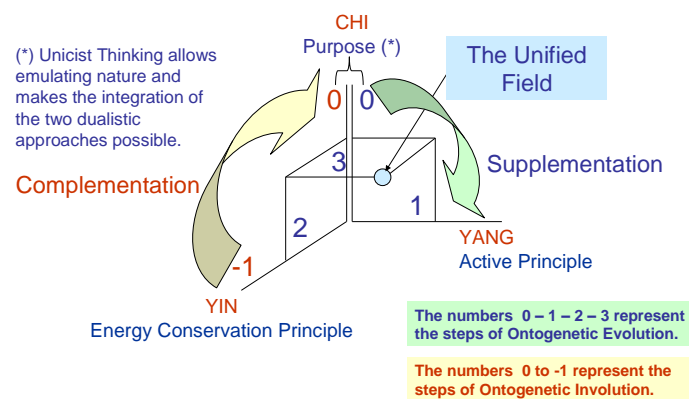
Homology between the Unicist Theory and the TAO

The homology between the Unicist Theory and the TAO allows understanding the level of integration that needs to be achieved to adapt to an environment to generate value.

This integration of the double dialectical logic that emulates the intelligence that underlies nature is the core of transforming movements into actions.

The energy is generated when the purpose is being achieved integrating the active principle and the energy conservation principle. This integration defines, at an essential level, the unified field of a given reality.

Homology between the Unicist Theory and the TAO Ontogenetic Map in Unicist Standard Language



Copyright© The Unicist Research Institute

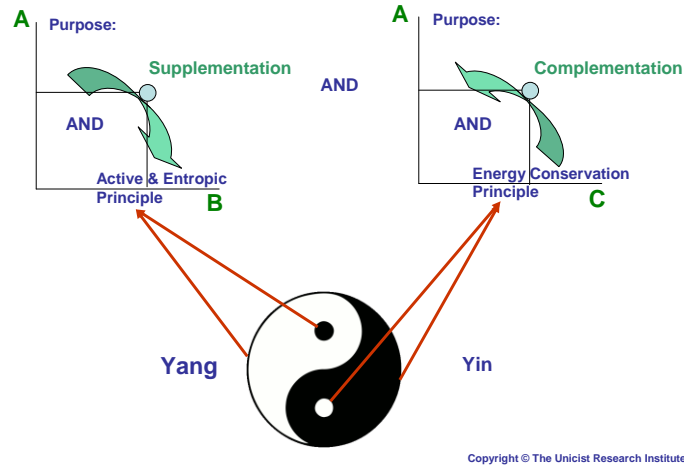
Apprehending reality as a unified field requires accepting that one is part of that reality and that there are no observers but participants when dealing in an adapted way with complex adaptive systems.

The Unicist Logic and the TAO

Both the Unicist Double Dialectical Logic (Unicist Logic) and the TAO deal with the principles that underlie nature.

The integration of Yin and Yang builds the triadic structure of the Unicist Logic. Both the TAO and the Unicist Logic explain the structure of the unified field of the functionality of a specific reality including its dynamics and evolution.

Homology of the Unicist Logic and the TAO



Yang is homologous to the dialectics between the purpose and the active principle. It defines the active functionality of an entity.

Yin is homologous to the dialectics between the purpose and the energy conservation principle. It defines the energy conservation functionality.

The conjunction of both dialectics is defined by a triadic structure that integrates the ultimate functional purpose of the entity with the active principle and with its complement, defined by the energy conservation principle.

Both the TAO and the Unicist Logic are based on the use of the conjunction “and” excluding the use of the disjunction “or”.

If you are not aware of the scientific use of the TAO, we recommend reading the book “Tao of Physics” by Fritjof Capra.

Double Dialectical Thinking to deal with Triadic Structures

To approach a reality integrated by three elements with a dualistic mind it is necessary to consider it as a dualistic integration of binary elements.

To perceive dialectics it is necessary to have a high abstraction capacity.

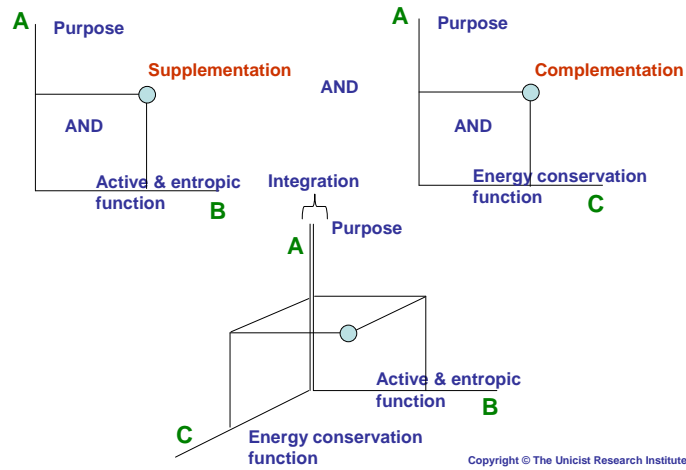
Those who do not have the abstraction capacity consider the dialectical behavior based on observable facts of reality. They cannot differentiate essential correlations from cause-effect relations.

The Unicist Dialectics allows dealing with human adaptive systems managing the integration of their double dialectical behavior.

With this double dialectical approach (purpose - active function, purpose - energy conservation function) one can understand the structure of an adaptive system and its evolution.



Unicist Double Dialectical Thinking



Unicist Dialectics is based on the emulation of adaptive systems, emulating the ontogenetic intelligence of nature (purpose, active principle, energy conservation principle).

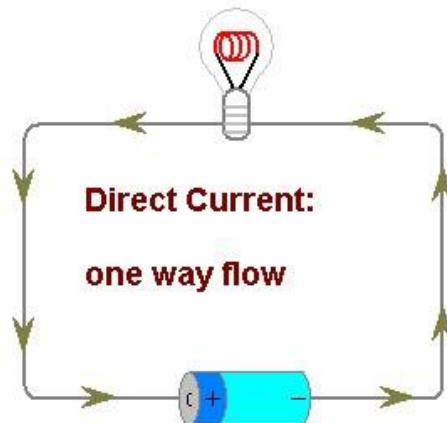
Its application to human adaptive systems made the emulation of individual, institutional and social evolution possible.

Individuals who have the necessary functional intelligence and the will to add value to an environment, and are able to see the double dialectics, develop two different actions to ensure results: on the one hand, they impulse action and on the other hand, they develop actions to inhibit entropy.

Homology between Thinking Processes and the Functionality of Electricity

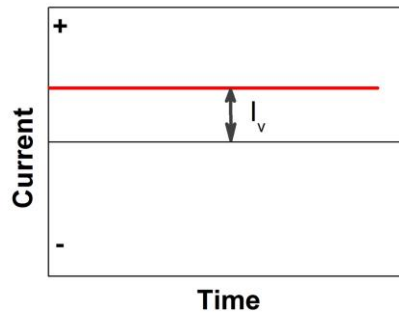
Direct Current

An electric current that flows continuously in a single direction is called a direct current, or DC.





DC (direct current) is the unidirectional flow or movement of electric charge carriers. The intensity of the current can vary with time, but the general direction of movement stays the same at all times.



The positive end of the battery is always positive relative to the negative end, and the negative end of the battery is always negative relative to the positive end. This constancy is what pushes the electrons in a single direction.

To transform the voltage of direct current it is necessary to change its nature.

Dualistic Thinking (Logic)

Dualistic thinking is functionally homologous to direct current and is ruled by analogous principles.

Dualistic thinking is based on moving in a single direction to avoid the influences of the environment. It requires using the disjunction “or” to avoid changing the direction of the action.

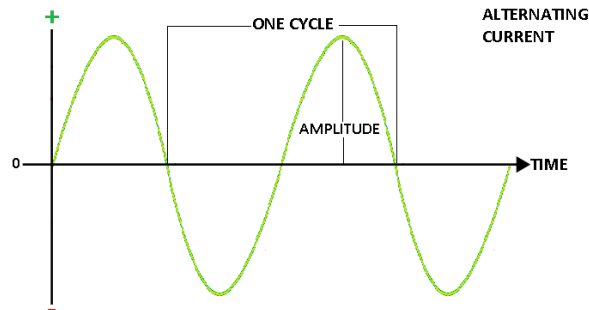
Dualistic thinking cannot be modified during the process if a change to improve the production of results was necessary. Dualistic thinking is functional to follow operational methods. Without the use of dualistic thinking operational behavior cannot exist.

Dualistic thinking cannot be transformed into double dialectical thinking. To transform dualistic thinking into double dialectical thinking it is necessary to change the environment. Unicist reflection, the process of action-reflection-action, is the context needed to transform a dualistic approach into an integrative, double dialectical, approach.

Alternating Current

In electricity, alternating current (AC) occurs when charge carriers in a conductor or semiconductor periodically reverse their direction of movement.

An AC waveform can be sinusoidal, square, or sawtooth-shaped. Some AC waveforms are irregular or complicated. An example of sine-wave AC is common household utility current (in the ideal case).



Square or sawtooth waves are produced by certain types of electronic oscillators, and by a low-end uninterruptible power supply (UPS) when it is operating from its battery. Irregular AC waves are produced by audio amplifiers that deal with analog voice signals and/or music.

The electrons in an AC circuit don't really move along with the current flow. Instead, they sort of sit and wiggle back and forth. They move one direction for $1/60^{\text{th}}$ (for example) of a second, and then turn around and go the other direction for $1/60^{\text{th}}$ of a second. The net effect is that they don't really go anywhere.

Alternating current can easily be transformed towards higher or lower levels of voltage and rectified in order to be changed into direct current.

Double Dialectical Thinking (Logic)

The double dialectical thinking is homologous to the functionality of the alternating current and works in an analogous way.

It is based on the integration of two dualistic pairs, purpose-active function and purpose-energy conservation function, which move back and forth following the cycles defined by the synchronicity with the context.

These cycles have to be unperceivable by the context in order to work. This is achieved when the cycles are fully synchronic with the environment. In the field of human adaptive systems the alternation is between expansion and contraction and freedom and security (see anthropological invariables).

The double dialectical thinking can easily be transformed into dualistic thinking in order to sustain operational actions.



Conclusion

This homology is just a demonstration that beginning with physics, continuing with biology and ending with human behavior the essential structures of these fields are necessarily compatible and homologous.

This implies that any modeling, emulation or simulation of an entity has to be based on this triadic structure integrated by the complementation and supplementation laws. The functionality of the DNA is an evidence of this structure.

Dualistic approaches are essentially fallacious because they are necessarily based on a *ceteris paribus* condition which can only be used in stagnated environments. The more adaptive a “system” is, the more paradoxical the results of using dualistic approaches are.

The Unicist Research Institute



Access the application of the Unicist Logical Approach to Complexity:



www.unicist.org/repo/#Unicist

Books by Peter Belohlavek that refer to Complexity Sciences and their application. You can access them at the Unicist Library: www.unicist.com

1. Australia's archetype
2. Brazil's archetype
3. Butterfly Companies & their cure
4. Complexity Science: Unicist Research & Design of Human Complex Adaptive Systems
5. Design of complex systems research
6. Development of Consciousness through Action
7. Dualistic Logic vs. Unicist Logic
8. France's archetype
9. Fundamentalism
10. Germany's archetype
11. Globalization: the new tower of Babel?
12. Growth Crisis 2008-2010
13. Influencing Nature
14. Innovation
15. Institutionalization
16. Introduction to the nature of perception and credibility
17. Introduction to the unicist ontology of evolution
18. Introduction to Unicist Business Therapeutics
19. Introduction to Unicist Diagnostics
20. Introduction to Unicist Econometrics
21. Introduction to Unicist Market Segmentation
22. Introduction to Unicist Object Driven Entrepreneurship
23. Introduction to unicist thinking
24. Knowledge, the competitive advantage
25. Mind Traps that hinder personal evolution
26. Natural Organization of Outsourcing and Insourcing
27. Ontointelligence
28. Peopeware: The Integrator of Hardware and Software
29. Real Diagnostics vs. Paradoxical Diagnostics
30. RobotThinking
31. Social Critical Mass in Business
32. Sweden's archetype
33. The Book of Diplomacy
34. The Ethic of Foundations
35. The Nature of Big Change Management
36. The Nature of Democracy
37. The Nature of Developed & Developing Countries
38. The Nature of Diplomatic Power
39. The Nature of Dissuasion Power
40. The Nature of Doers
41. The Nature of Economic Power
42. The Nature of Ideologies
43. The Nature of Social Power
44. The Nature of Unicist Business Strategy
45. The Nature of Unicist Object Driven Business Growth
46. The Nature of Unicist Object Driven Change Management
47. The Nature of Unicist Object Driven Institutional Immune Systems
48. The Nature of Unicist Object Driven Leadership
49. The Nature of Unicist Object Driven Management
50. The Nature of Unicist Object Driven Marketing
51. The Nature of Unicist Object Driven Organization
52. The Nature of Unicist Reverse Engineering for Object Design
53. The Ontogenesis of Evolution: The Unicist Ontology of Evolution
54. The Ontogenesis of Knowledge Acquisition: The Unicist Ontology of Human Learning
55. The Origin of Human Fallacies
56. The Path of the Architect
57. The Power of Nations
58. The Unicist Approach to Businesses
59. The Unicist Ontology of Ethical Intelligence
60. The Unicist Ontology of Evolution
61. The Unicist Ontology of Family Businesses
62. The Unicist Ontology of Human Capital Building
63. The Unicist Ontology of Network Building
64. Unicist Anthropology
65. Unicist Business Architecture
66. Unicist Business Diagnostics: The Compendium of Ontologies for Business Diagnostics
67. Unicist Business Objects Building: An Ontology based and Object driven Technology
68. Unicist Business Strategy
69. Unicist Business Strategy: Ontology based and Object driven Business Strategy
70. Unicist Business Therapeutics: Ontological based and Object driven Therapeutics
71. Unicist Confederation: Cooperation in Diversity
72. Unicist Country Archetypes



73. Unicist Country Future Research
74. Unicist Country Scenario Building: Ontology based Country Scenario Building
75. Unicist Future Research
76. Unicist Logic and its mathematics
77. Unicist Marketing Mix
78. Unicist Marketing: Ontology based and Object driven Marketing
79. Unicist Mechanics & Quantum Mechanics
80. Unicist Mechanics: Business Application
81. Unicist Object Driven Diagnostics
82. Unicist Object Driven Learning
83. Unicist Object Driven Management
84. Unicist Object Driven Marketing
85. Unicist Object Driven Negotiation
86. Unicist Object driven Strategy
87. Unicist Ontogenetic Algorithms to solve business problems
88. Unicist Ontogenetic Intelligence of Nature
89. Unicist Ontology of Evolution For All
90. Unicist Ontology of History: Unicist Methodology for Historical Research
91. Unicist Ontology of Language
92. Unicist Ontology to deal with Adaptive Systems
93. Unicist Organization: Object Driven Design
94. Unicist Organization: Ontology based and Object driven Organization
95. Unicist Organizational Cybernetics
96. Unicist Personalized Education
97. Unicist R&D of Adaptive Systems in Business
98. Unicist Reflection to focus on solutions
99. Unicist Reflection: The path towards strategy
100. Unicist Standard for Adaptive System's Pilot Testing
101. Unicist Standard for Business Benchmarking
102. Unicist Standard for Business Growth
103. Unicist Standard for Business Objects Building
104. Unicist Standard for Critical Mass Building
105. Unicist Standard for Human Adaptive Behavior
106. Unicist Standard for Ontological Business Diagnostics
107. Unicist Standard for Ontological Business Modeling
108. Unicist Standard for Ontological Change Management
109. Unicist Standard for Ontological Leadership
110. Unicist Standard for Ontological Scenario Building
111. Unicist Standard for the Ontological R&D of Adaptive Systems
112. Unicist Standard Language
113. Unicist Standard Language: To design, build and manage Human Adaptive Systems
114. Unicist Standard to deal with the Ontology of Learning
115. Unicist Standard to deal with the Ontology of Personal Evolution
116. Unicist Standard to Manage the Ontology of Businesses
117. Unicist Standard to Research the Ontology of Human Adaptive Systems
118. Unicist Thinking

The Unicist Research Institute

Peter Belohlavek was born on April 13, 1944 in Zilina, Slovakia.

He discovered the Ontogenetic Intelligence of Nature that explains that evolution is purpose-driven and not random. This gave birth to the Unicist Theory of Evolution that made evolution reasonable, understandable and predictable. The Ontogenetic Intelligence of Nature allowed developing the Unicist Logical Approach based on a pragmatic, structural and functionalist framework, to research and develop complex adaptive systems. The Unicist Logical Approach he developed is based on the Unicist Double Dialectical Logic that demonstrated the fallacy of Hegel's and Marx's dialectics. (More information: <http://www.unicist.org/pb.shtml>)

The Unicist Research Institute was the pioneer in complexity science research and became a private global decentralized leading research organization in the field of human adaptive systems.
<http://www.unicist.org/turi.pdf>