

EMULATING NATURE

Complexity Science Research

The 100 Major Unicist Discoveries

**Based on the Unicist Paradigm Shift
in Sciences**



The Unicist Research Institute
Pioneers in Complexity Science Research since 1976

The Unicist Research Institute

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The Unicist Paradigm Shift: The Path towards Double Dialectical Actions

The objective of the research works developed at The Unicist Research Institute has been the development of solutions to influence complex environments in order to foster their evolution. This research drove to a paradigm shift in science, which is based on emulating the maximal and minimum strategies that are implicit in the intelligence that underlies nature.

This allowed discovering the double dialectical behavior of nature and transferring this knowledge to its application to deal with adaptive environments in order to ensure the results that are being fostered.

The core application of the paradigm shift in sciences was the development of maximal strategies to grow and minimum strategies to ensure survival using double dialectical actions to manage functions in complex environments in order to ensure results.

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The Unicist Paradigm Shift in Sciences

The paradigm shift of the Unicist Theory is based on the discovery of the ontogenetic intelligence of nature, which is the intelligence that underlies nature. It establishes the basic structures of behavior in nature. The understanding of the unicist paradigm shift is necessary to accept the validity of the resulting applied technologies.

Giving Birth to Complexity Sciences

The final goal of the Scientific Research developed by Peter Belohlavek at The Unicist Research Institute was find a structural solution for complexity as a universal problem.

The Unicist Theory gave birth to Complexity Sciences, providing both their epistemological structure and their integration with Systemic Sciences. This allowed developing a scientific approach to adaptive environments.

At an operational level the objective was to deal with complex adaptive systems. These systems might be natural systems or artificial complex adaptive systems like cultures, institutions or information systems.

This drove to the development of the Unicist Theory and the shift it generated in sciences. This approach allowed integrating systemic sciences with complexity sciences.

Dealing with Living Beings and Complex Adaptive Entities

The Unicist Theory explains the dynamics and evolution of living beings and complex adaptive entities. It substituted empiricism by a pragmatic, structuralist and functionalist approach and replaced knowledge falsification processes with destructive testing processes.

The four pillars of the paradigm shift developed by Peter Belohlavek are:

1. **The unicist theory**, which explains the dynamics and evolution of living beings and complex adaptive entities.

2. **The unicist theory of evolution**, which allows developing future research.
3. **The epistemological structure of complexity sciences**, which allows managing the complex aspects of reality.
4. **The unicist theory of the unified field in nature**, which allows managing the unified field of complex adaptive systems.

The paradigm shift of the Unicist Theory allowed the emulation of nature in the field of complex adaptive systems and allowed integrating the “know why” with the “know how”.

This theory is based on the discovery of the intelligence that underlies nature. It permits, besides apprehending the knowledge of how things occur, managing the “know why” of the occurrence of events.

In the social field and in the business field, this emulation of nature is materialized in conceptual management, the organization driven by the use of objects and the organization by roles.

The Unicist Theory

The Unicist Theory explains the evolution and dynamics of complex adaptive entities whether they are natural beings or artificial entities. This theory is based on the discovery of the triadic structure of the ontogenetic intelligence of nature.

The purpose of this theory is to provide a framework to forecast the evolution of adaptive entities considering their restricted and wide contexts.

This theory describes the universal structure of the unified field in nature that is applicable to all complex adaptive entities whatever their kind. It needs to be considered that the unified field has a triadic structure that is homologous to the structure of the ontogenetic intelligence of nature.

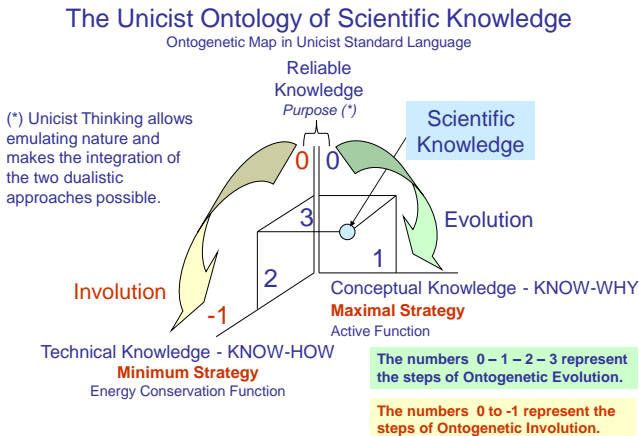
Such emulation is based on the discovery of the ontogenetic intelligence of nature that regulates the evolution of living beings and natural entities.

This ontogenetic intelligence underlies the actions of human beings, which are driven by the concepts individuals have.

The concepts that guide human actions, which are homologous to the ontogenetic intelligence of nature, allow understanding the evolution of things and adapting in an environment.

The emulation of nature requires having an adaptive behavior in the environment. Adapting requires: 1) exerting influence in the environment; 2) managing the influence of the environment. It requires using the conjunction “and” without using the disjunction “or”.

The Paradigm Shift in Sciences



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The unicist paradigm shift is based on the integration of the “KNOW-HOW” that underlies the empirical sciences with the “KNOW-WHY” introduced by the Unicist Theory.

It defines that to access reliable knowledge it is necessary to know the concepts that underlie facts, which confirm the “KNOW-WHY”, and the justifications that confirm the “KNOW-HOW” of those facts.

The paradigm shift in sciences made the complex adaptive systems become reasonable, understandable and predictable. This paradigm shift allowed defining what is possible to be achieved and not only approaching reality with a probabilistic approach.

The shift in sciences is a pragmatic, structural and functionalist approach that subordinates the preexisting empirical approaches. It integrates the observable facts with the “nature of things”.

Expanding the Boundaries of Sciences

As it is known, the management of complexity has been an unsolved challenge for sciences.

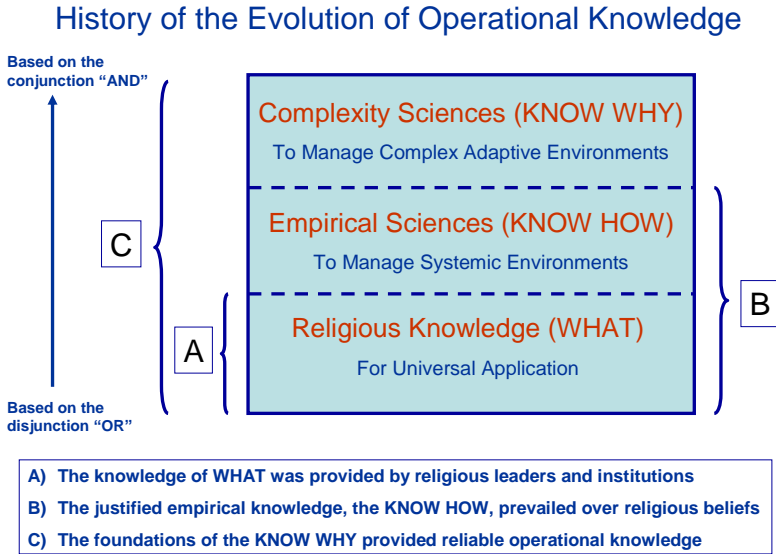
This challenge was faced in 1976 by The Unicist Research Institute that was a pioneering organization in finding a solution for complexity without using artificial palliatives.

The paradigm shift, based on the emulation of nature, was developed to solve the need of having reliable knowledge to deal with complex adaptive systems. It was provoked by the fallacy of considering empirically-justified knowledge as reliable knowledge.

It allowed managing complex environments as a unified field.

The paradigm shift was triggered by the need to understand complex adaptive systems.

The shift implies having changed the empirical approach to sciences replacing it by a pragmatic, structuralist and functionalist approach to deal with complex environments that integrates, at an operational level, the preexisting empiricism.



This is a superior level in sciences that integrates complexity sciences with systemic sciences using the double-dialectical logic to emulate the ontogenetic intelligence of nature and using objects to emulate the organization of nature.

The paradigm shift was developed at The Unicist Research Institute where more than 5,000 unicist ontological researches have been developed since 1976 in the field of individual, institutional and social evolution.

It became a paradigm shift in 2015, when the Unicist Epistemology was published, after having been used, in its final version, for more than 15 years.

The History of the Shift in Sciences:

A) The first stage of collective knowledge was covered by religions, that provided the “WHAT” was acceptable as necessary knowledge.

The unicist approach to Epistemology is based on the development of logical foundations and empirical justifications to sustain human knowledge.

This epistemology is a pragmatic, structural and functionalist approach that allows building reliable knowledge that replaced the processes of the falsification of knowledge by destructive testing processes.

It is based on the Unicist Theory which is a paradigm shift of the scientific approach to complex adaptive systems.

This theory provides an approach to complexity based on the use of the unicist logic that emulates the intelligence that underlies nature. It integrated complexity sciences with systemic sciences in a unified field.

The paradigm shift is based on the integration of the “know-how” that underlies the empirical sciences with the “know-why” introduced by the Unicist Theory.

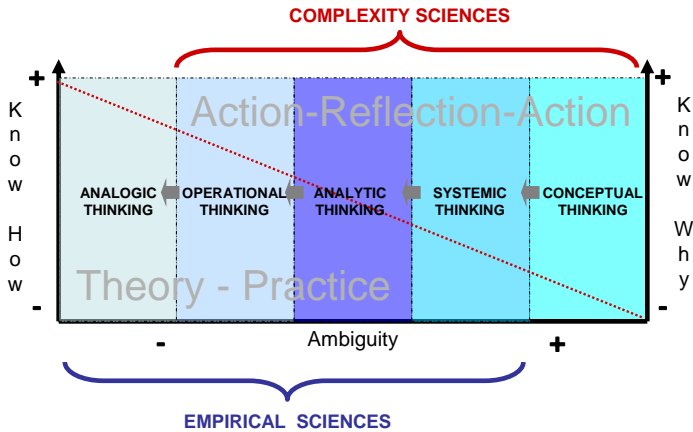
The “know why” is needed to deal with the concepts of complex adaptive environments.

It defines that reliable knowledge implies knowing the concepts that underlie facts, which confirm the “know-why”, and the justifications that confirm the “know-how” of the facts.

The integration of the unicist approach to complexity with the empirical sciences requires changing the Theory-Practice learning approach to an Action-Reflection-Action approach that allows apprehending the concepts that underlie facts and transforms them into value adding actions.

This approach integrates the “know why” required to understand complexity with the “know how” needed to generate value.

Functionality of Logical Thinking to deal with Sciences



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The personal experience needed to apprehend the paradigm shift

Human Adaptive behavior requires influencing the environment and managing the influence of the environment.

The decisions of mature people naturally have a purpose, a maximal strategy in order to influence the environment to generate growth and a minimum strategy to ensure survival.

This behavior is the natural behavior of wise people who always have a maximal strategy and a minimum strategy to achieve a purpose.

The knowledge of both strategies allows people to have the concepts of what needs to be done. Concepts are the drivers of human actions. Wisdom implies having conceptual knowledge in order to generate value for others.

This wisdom is possible because it has its origin in the intelligence that underlies nature. This intelligence also has a maximal strategy to expand the boundaries and has a minimum strategy to survive. Mature people naturally tend to emulate this intelligence of nature without even knowing that it exists.

The Core of the Paradigm Shift

The paradigm shift in sciences is based on the discovery of the ontogenetic intelligence of nature, which regulates its evolution.

This discovery allowed making a shift in sciences based on introducing a pragmatic, structuralist and functionalist approach that subordinates the preexisting empirical approach to deal with adaptive processes and complex adaptive systems.

The Unicist Ontology belongs to the field of Complexity Sciences

It has to be considered that ontology describes the nature of beings and is part of metaphysics.

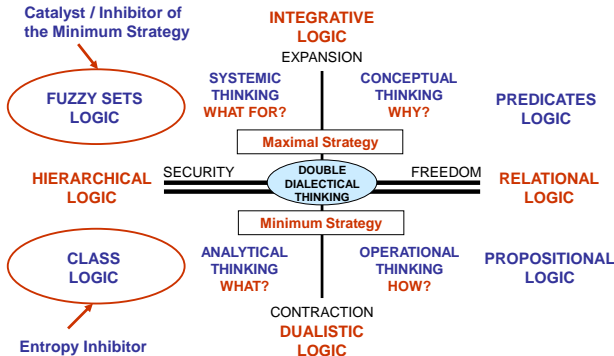
The ontogenetic intelligence of nature provided the basics to define the nature of things and allowed developing the unicist ontology.

This unicist ontology does not belong to the field of metaphysics but to the world of complexity sciences.

This knowledge provided the information that is necessary in order to build the ontogenetic maps and ontogenetic algorithms of specific aspects of the real world in order to operate with the nature of things using their unicist ontological structures.

Scientific Approach vs. Philosophical Approach to Logic

The Unicist Ontology of the Type of Logical Thinking
 Ontogenetic Map in Unicist Standard Language



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The discovery that the logical models are patterns of human intelligence that allow solving problems in the real world, changed the category of logic, which in the past belonged to the field of philosophy, and now belongs to the field of sciences.

It has been confirmed that the logic that an individual is able to use spontaneously in the real world depends on her/his type of intelligence. This transformed the philosophical approach to logic into a scientific approach to logic.

This knowledge provided the functionality of logical models to apprehend the nature of things by emulating the logic that underlies nature. This allows apprehending the structure of concepts making them reasonable, understandable and provable.

Introduction to the shift generated by the Unicist Theory

The access to a paradigm shift in sciences requires accessing it with a different mind-set. It is necessary to have a personal experience in

the field of adaptive behavior in order to categorize this paradigm shift.

The previous paradigm was based on an empiric framework that uses a dualistic logic to deal with reality. It is functional to deal with static systemic environments but does not allow managing complexity.

The paradigm shift apprehends complex environments using a triadic approach that allows managing the dynamics of complex adaptive systems.

The scientific evidences of the Unicist Theory that confirm its functionality to deal with complex systems are:

- The functionality of amino acids
- The structure of atoms
- The structure of biological entities
- The nervous system
- Similarity between natural and social objects
- Unicist concepts as stem cells
- Thinking processes and the functionality of electricity

It has to be considered that dualistic thinking is an instinctive process that is driven by the fact that the neural process is binary (the neurons are ON or OFF). A triadic approach requires using a conscious approach to integrate two pairs of binary processes united by a common “purpose” that is being achieved.

A Synopsis of the Paradigm Shift in Science (Before and After the Unicist Theory)

As it was mentioned:

The objective of the Scientific Research developed by Peter Belohlavek at The Unicist Research Institute was to deal with complex adaptive systems.

These systems might be natural systems or artificial complex adaptive systems like cultures, institutions or information systems. The final goal was to find a solution for complexity as a universal problem.

The origin of the Unicist Theory is the discovery of the Ontogenetic Intelligence of Nature, which is implicit in all the aspects of reality.

This synopsis describes the “before” and “after” the development of the unicist approach to complexity.

The Unicist Theory changed Sciences as they are known

Before: Sciences were based on an empirical cause-effect approach that was functional in systemic environments but dysfunctional to deal with complex adaptive environments that have open boundaries and bi-univocal relationships among their components.

After: The unicist approach to sciences is based on a pragmatic, structuralist and functionalist framework that allows integrating the scientific approach to both complex and systemic environments. It subordinates the empirical approach to deal with operational aspects after the complex aspects have been managed using a unicist onto-

logical approach. It integrates systemic sciences and complexity sciences in a unified field.

Example in Economics: The knowledge of the unicist ontogenetic maps allow defining the structural economic solution for an entity and the use of the technical-analytical tools allows defining and monitoring the operation.

Development of the Epistemological Structure of Complexity Sciences

Before: The category of complexity sciences was inexistent as such. The understanding of complexity was simplified by using artificial palliatives, to generate pseudo-systemic structures of variables.

This implies using a dualistic empirical approach to reality.

After: All fields of reality where their evolution depends on the feedback from the context belong to the field of complexity sciences. Complexity Sciences provide solutions for adaptive environments.

Natural or artificial complex adaptive environments are approached as unified fields that are defined and regulated by their ontogenetic structures and are constituted by processes and objects that work as complex adaptive entities.

This approach implies using a triadic, pragmatic, structuralist and functionalist framework.

Example: This is the case of natural sciences, life sciences, social sciences, economic sciences, political sciences, anthropology, behavioral sciences, etc.

Discovery of the Ontogenetic Intelligence of Nature

Before: The structure that regulates the evolution of nature was unknown.

After: The structure of nature that regulates its evolution is given by the triadic structure of the ontogenetic intelligence of nature.

This intelligence is defined by a purpose, an active principle and an energy conservation principle that are integrated in their oneness defining the functionality of the entity. The active principle drives the evolution while the energy conservation principle sustains the purpose.

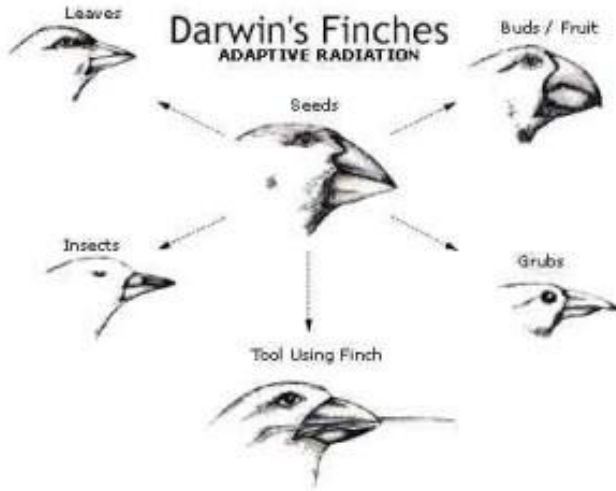
Example: 1) The structure of the human nervous system where the purpose is defined by the vital function, the active function is given by the motor system and the energy conservation is given by the sensitive system. 2) The structure of the atom where the purpose is given by the protons, the active function is given by the electrons and the energy conservation function is given by the neutrons.

Discovery that the Evolution of Living Beings is driven by a Purpose

Before: The evolution is random.

After: Evolution is purpose driven to sustain the survival of the species.

Example: The evolution of finches explained by Charles Darwin. The beak of the finches evolves to ensure the survival of the species.



Discovery of the Structure of the Unified Field in Nature

Before: The apprehension of the Unified Field has been an unsolved problem in sciences. The apprehension of nature was considered as part of intuition and an evidence of wisdom.

After: The Unicist Theory gives access to the triadic structure of the unified field in nature that defines the concept that regulates its evolution.

The discovery of the triadic functionality of ontointelligence allowed apprehending the unified field in nature. It solved the problem of the integration of solutions that are incompatible at an operational level.

This intelligence, which is used by individuals to apprehend the nature of a reality, is integrated by the ethical intelligence, the strategic intelligence and the logical thought. It requires being able to deal with the ambiguity implicit in any complex environment.

It opened the possibility of making the emulation of nature reasonable, understandable and provable. It defines the possibility of managing different levels of complexity in the real world.

Example: The ethical intelligence is the deepest intelligence of human beings that evolves with their maturity and defines the true intentions of individuals when dealing with the environment. It is functional when it is consistent with the ethical intelligence of the environment.

The Unified Field of Reality

The Unicist Theory allows dealing with complex environments considered as a unified field. It defines that every entity can be described by the three principles and functions that define it. It has a purpose, an action principle and an energy conservation principle. These three elements, integrated in their oneness, define the nature of a complex adaptive system.

A logical approach to complex adaptive systems using the unicist double dialectical logic

Complex adaptive systems need to be managed as a unified field in order to avoid changing their nature. This requires knowing the concepts that define their essential functionality. The double dialectical logic allows managing an adaptive environment by apprehending it as a unified field integrating its specific functionality with the restricted and wide context. This approach allows simplifying the generation of value in the environment.



Strategic Intelligence

The strategic intelligence defines the amplitude of the unified field in which specific strategies may be developed.

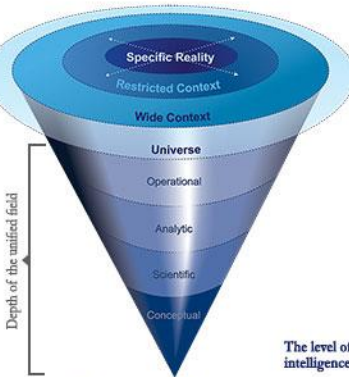
- Freedom Fighter
- Flank Defendant
- Frontal
- Empty Space Occupier

Logical Thought

The depth of the thinking process defines the capacity for assuming responsibilities.

- Operational Thinking allows assuming the responsibility for tasks
- Analytical Thinking allows assuming the responsibility for rational decisions
- Systemic (Scientific) Thinking allows assuming the responsibility for managing variables
- Conceptual Thinking allows assuming the responsibility for generating results
- Unicist Thinking allows generating results in the short and long run

Amplitude of the unified field



- The unified field of a given reality requires the capacity to apprehend it to operate in and with it.
- The restricted context defines the "rules of the game" of any specific reality.
- The wide context within which a given reality is inserted defines its gravitational forces.
- The universe within which a certain reality is inserted defines the limit to be contemplated.

Ethical Intelligence

Ethical Intelligence defines the true intentions of an individual. It conditions the strategic intelligence and the types of logical thinking. It evolves with maturity.



The level of ethical intelligence defines:

- Added value generation
- Individuals' influence on the environment
- Time management
- Strategic planning capacity
- Focussing

Discovery of the Basic Law of Evolution

Before: The structure of nature was unknown therefore there were no laws of evolution

After: The evolution implies that the active principle drives the evolution of an entity while the energy conservation sustains the status quo.

When the energy conservation principle prevails, the entity becomes stagnated in order to survive.

Example: 1) The change of the beak of finches is an example of evolution. 2) The encystment of microorganisms is an example of the prevalence of the energy conservation principle.

Application of the Unicist Ontology of Evolution to Future Research

Before: The evolution of living beings or complex adaptive environments was forecasted based on experiential benchmarks, the consensus of expert opinions or the use of intuition (Nostradamus and others).

After: The unicist approach to evolution is based on discovering the unicist ontological structure of an environment and using the signs and symptoms in order to infer the future using the principles of evolution. The opinions of experts are used as destructive tests, while pilot forecasts are used as non-destructive tests.

Example: The development of county future scenarios or business long-term planning.

Discovery of the Organization by Objects of Nature

Before: The Complex Adaptive Systems were managed as systemic systems to manage their processes and functions.

After: Complex adaptive systems, being natural entities or artificially created, are integrated by objects, which are integrated in a unified field.

Each object is an interdependent autonomous entity that fulfills a function and has a quality assurance that ensures its functionality.

Example: 1) The human body is integrated by objects that are evident to everyone and other objects that are not. The organs of the body are objects that are evident and the amino-acids belong to the category of not evident objects.

2) Countries are social entities organized by objects that function as institutional roles.

3) Institutionalized businesses are complex adaptive entities that are organized by objects and functional roles to ensure their permanence.

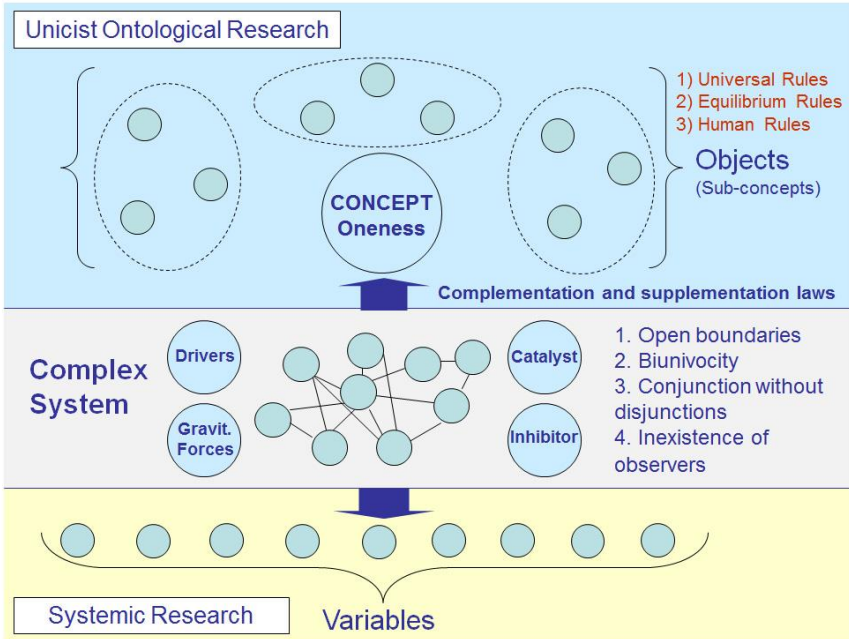
Development of the Research Framework for Complexity

Before: The Empiric frameworks were used in order to falsify hypotheses.

After: The use of a Pragmatic, Structuralist and Functionalist framework was the basis for the development of destructive tests to define the limits of knowledge and non-destructive tests to confirm the functionality.

Example: 1) The research of complexity has to be done in a real environment and not in artificial environments. 2) The research of complex environments requires an ontological research focused on the objects that integrate a complex adaptive system.

Complexity Science Research



Development of the Unicist Epistemology to Build Reliable Knowledge

Before: Empiric knowledge is validated by confirming its justifications.

After: Reliable knowledge of complex systems is validated using “foundations” to confirm the functionality of their concepts and justifications to confirm the operational aspects.

Example: The statistical validity of human behavior needs to be applied based on considering that each conceptual segment of a population is an independent universe.

Discovery of the Relationships between Elements in Nature

Before: There was no knowledge about the conceptual structure of the relationships in nature.

After: The relationships between the elements that integrate a unified field are complementary or supplementary.

There are no other types of relationships among the elements that integrate a unified field than those of complementation and supplementation.

Example: The purpose and the active function of a concept have a relationship of supplementation. The relationship between the purpose of the concept and the energy conservation function is based on a complementary relationship.

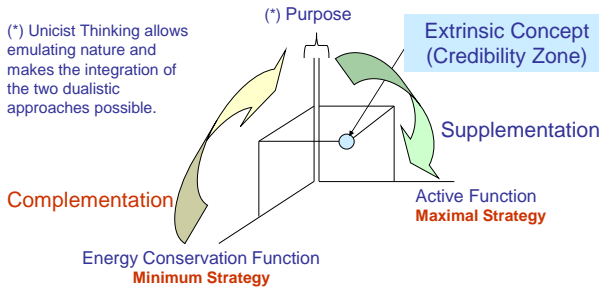
Discovery of the Structure of Extrinsic Concepts and Mental Concepts

Before: (1724 – 1804) Immanuel Kant defined that concepts have a functional meaning that is the framework of any action.

After: The concepts of non-living entities have the same structure of the ontogenetic intelligence of nature, defined by a purpose, an active function and an energy conservation function that define the extrinsic concepts.

These functions work as a unified field that drives human action. The extrinsic concepts define the functionality of things and are deposited by humans in order to manage their nature.

The Unicist Ontology of an Extrinsic Concept
 Ontogenetic Map in Unicist Standard Language



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The structure of extrinsic concepts is timeless and cross-cultural; their credibility zone is defined by the environment and its conjuncture. They exist as long as the function exist. The mental concepts are the concepts that guide the actions of individuals and are stored in their long term memory.

Example: The concept of leadership is integrated by a purpose, which is to sustain the authority of an individual, its active function is given by the participation with the group and the energy conservation function is given by the power that an individual has to influence the context.

Development of the Unicist Ontology

Before: Ontology was an approach to apprehend the nature of reality, which belonged to the field of philosophy.

After: Unicist ontology is a structured approach to apprehend the nature of complex adaptive systems using an emulation of the ontogenetic intelligence of nature.

The unicist ontology is necessary to deal with Complexity Sciences because it allows defining the concepts that guide actions.

Example: The nature of any strategic approach to reality implies an emulation of nature meaning that there is a purpose to be achieved, the active function is given by a maximal strategy that drives beyond existing boundaries in order to provoke evolution, and the energy conservation function is given by a minimum strategy that ensures survival.

Discovery of the Structure of Complex Adaptive Systems

Before: The complex adaptive systems were considered as systemic systems. They were managed considering their functional elements as variables.

After: A complex adaptive system is considered as an open system, in which the conjunction of objects and/or subsystems determines the functionality of the unified field.

These systems have no variables but objects that are integrated by the conjunction “and”. In complex systems there is no “or” in the relationships of their objects.

Example: The human body is a paradigmatic example of a complex adaptive system that has no variables. It has objects that fulfill functions and processes that establish the relationships between these objects. The organs of the body are evident objects.

Discovery of the Intelligence to deal with Complexity

Before: The use of analogical thinking was dominant and critical thinking was a superior approach to adapt to the environment.

After: The ontointelligence to deal with the unified field of complex environments was discovered. This drove to the integration of analogical thinking, critical thinking and unicist thinking that allows apprehending the unified field and fundamentals of a given reality. Analogical thinking is spontaneous and based on genetic intelligence, critical thinking requires an analytical thinking process and unicist thinking demands the use of a unicist reflection process.

Example: The design of solutions of complex problems.

Development of the Double-dialectical Logic

Before: The logical approach to deal with sciences was based on empiricism, which requires the use of a dualistic approach in order to disregard the unified field of complex adaptive systems.

Dualism has two main justifications that sustain the artificial isolation of aspects of reality. On the one hand, the “Truth Tables” (True or False) are an example of dualistic logic that is functional to manage systemic functions. But they are dysfunctional to deal with the unified field of complex adaptive environments. On the other hand, “Ceteris Paribus” is a fallacious solution to isolate variables or aspects of reality that is based on defining all other aspects of a prob-

lem as constants. It is used to confront adaptive environments without needing to adapt.

After: The double-dialectical logic is an integrative logic based on the use of conjunctions to define the structure of the unified field of complex adaptive systems using double-dialectical thinking.

The elements included in complex environments are not true or false. They are defined by their levels of functionality. Their functionality is defined by the value generated by the integration of their triadic functions that require the use of the logic of double-dialectics in order to be understood.

Example: Both the dialectics of Hegel and Marx have a dualistic basis using a thesis-antithesis model that drives to a resulting synthesis.

But cultures have homeostatic elements that participate in the social process which implies a triadic dialectical approach defined by a thesis-antithesis-homeostasis model.

To access a triadic approach with a dualistic mind-set (the neurons are on or off) it is necessary to use a double-dialectical model that integrates thesis and antithesis in the active function with the thesis and homeostasis in the energy conservation function.

The double-dialectical logic is a mind-set that needs to be used to emulate the ontogenetic intelligence of nature in order to manage concepts to deal with complex adaptive systems.

The 100 Major Scientific Discoveries

The Unicist Research Institute was the pioneer in using the unicist logical approach in complexity science research and became a private global decentralized leading research organization in the field of human adaptive systems. It fosters a logical approach to complex adaptive systems with a strong focus on economics, businesses, globalization, cybernetics and future research.

It is the major research organization in its specialty. More than 5,000 unicist ontological researches were developed since 1976 in the field of individual, institutional and social evolution. The main countries that originated these researches were: US, DE, UK, FR, JP, SE, CA, CH, IN, BR, AR, CAT, RU, CN, AU. It required changing the systemic approaches to manage the open boundaries and the conjunction of the elements that integrate the adaptive systems.

Its applications are based on Conceptual Economics, Conceptual Anthropology, Conceptual Psychology and Conceptual Management.

The unicist logic based technologies were developed to forecast and influence the evolution of human adaptive systems based on the knowledge of their nature.

Complexity Sciences have been defined as the scientific approach to complex adaptive systems. Since 1976, the research has been led by Peter Belohlavek.

The discovery of the Ontogenetic Intelligence of Nature gave birth to the unicist approach to complexity.

This research provided a methodology to research complexity as a unified field, which erased the barriers between philosophy, science and action.

Acknowledgements

The development of these researches was possible due to the participation in the research of hundreds of institutions and companies and thousands of individuals since its beginning in 1976.

As it is known, complexity research has to be developed in the “real world” and doesn’t allow making artificial experimentation. Thus, the researches on unicist ontological structures of reality gave birth to the Unicist Standard which is based on the discovery of the ontogenetic intelligence of nature and the consequent Unicist Theory.

Basic Universal Discoveries

1) Unicist Ontogenetic Intelligence of Nature

It defines the intelligence that underlies nature and regulates its evolution. It allowed discovering and modeling the ontogenetic structures of the elements that integrate nature.

2) Complexity Science Research

It defines the research process to deal with adaptive aspects of reality. It allowed researching and defining the ontogenetic structure of adaptive systems.

3) Unicist Double Dialectical Logic

It defines the logic that allows emulating nature. It allowed establishing the functional rules of adaptive systems based on possibilities (beyond probabilities).

4) The Unicist Ontology of Evolution

It defines the pathway of evolution and involution and the laws that regulate this process. It allowed dealing with the future of the adaptive aspects of reality.

5) The Ontogenetic Structure of Adaptive Systems

It defines the nature of adaptive systems. This discovery established the structure that needs to be built when they are human made systems.

6) Mathematics of the Unicist Logic

It defines the mathematics of the world of possibilities. It allowed defining a mathematics to define the possibilities of influential actions.

7) The Structure of the Unicist Ontology

It defines the nature of a specific reality. It allowed defining and describing complex adaptive systems to make them manageable.

8) The Ontogenetic Structure of Anthropological Invariables

It defines the nature of human societies. It allowed defining the structure of human complex adaptive systems.

9) The Ontogenetic Structure of Credibility

It defines the nature of human credibility. It allowed defining objects that empower credibility in order to influence the environment

10) The Ontogenetic Structure of Concepts

It defines the nature of facts, actions or ideas. It allowed defining the extrinsic concepts that are deposited to an entity by humans based on the double dialectical logic.

11) The Ontogenetic Structure of Pre-concepts

It defines the nature of human intuitive actions. It allowed defining the starting point of learning processes and the limits of human actions.

12) The Ontogenetic Structure of Anti-concepts

They are homologous to antimatter. Their discovery allowed developing the necessary protective actions to avoid them and avoid the destruction of the concepts they deal with.

13) The Ontogenetic Structure of Complementation

It defines the nature of complementation and of how individuals are able to use an intrapersonal complementation process and establish complements with the environment.

14) The Ontogenetic Structure of Supplementation

It defines the nature of supplementation and of how individuals are able to supplement their weaknesses and compete with the environment.

15) The Ontogenetic Structure of Conflicts

It defines the nature of conflicts. It allowed defining how to deal with evolution conflicts, involution conflicts, authority conflicts and the absence of conflicts.

16) The Ontogenetic Structure of Social Critical Mass

It defines the nature of the generation of value. It allowed designing the necessary aesthetics, influence and credibility to establish critical masses in adaptive systems.

17) The Ontogenetic Structure of Objects

Understanding nature's organization by objects allowed discovering their nature and emulating it building objects to install in human adaptive systems.

Life Sciences

18) The Scientific Foundations of Medicine

It provides the scientific foundations of the two curing principles established by Hippocrates, “*contraria contrariis curantur*” and “*similia similibus curantur*”, provided the information of the structural functionality of cures.

19) The Ontogenetic Structure of Amino-acids

It defines the nature of the functionality of amino-acids which follows the structure of the ontogenetic intelligence of nature.

20) The Ontogenetic Structure of Health

It defines the nature of human health integrating the biological with psychological and energetic aspects.

21) The Ontogenetic Structure of Universal Diagnoses

It defines the nature of diagnoses. It allowed defining the necessary destructive and non-destructive tests to validate diagnoses.

22) The Ontogenetic Structure of Universal Therapeutics

It defines the nature of therapeutics. It allowed defining the structural approach to therapeutics and the possible consequences.

23) The Fallacy of Organs and Chronic Diseases

It defines the nature of the fallacies of organs. It allowed defining the structural drivers to chronic diseases.

24) The Ontogenetic Structure of Viruses

It defines the nature of viruses. It allowed defining viruses as non-living beings and their unicist ontological structure in order to avoid their dysfunctional consequences.

25) The Ontogenetic Structure of Healing Processes

It defines the nature of health management. It allowed developing the segmentation of diseases, healing roles, therapeutics, remedies and prevention.

26) The Ontogenetic Structure of Universal Cures

It defines the nature of cures. It allowed diagnosing the possible consequences of therapeutics based on how it deals with cures.

Institutions and Businesses

27) The Ontogenetic Structure of Natural Organization

It defines the nature of organizations. It allowed defining the natural organizational processes and the business architecture in global and local environments.

28) The Ontogenetic Structure of Institutions

It defines the nature of institutions. It allowed defining institutions and institutionalization processes to support evolution and growth.

29) The Ontogenetic Map of Institutional Archetypes

It defines the essential structure that drives institutions. It allowed defining what is possible and what is not when developing business strategies.

30) The Ontogenetic Structure of Enterprises

It defines the nature of transcendent enterprises. It allowed defining diagnoses, strategies, architectures and business processes to sustain personal and transcendent goals.

31) The Ontogenetic Structure of Entrepreneurs

It defines the nature of entrepreneurial processes. It allowed developing entrepreneurial strategies and using personal instead of institutional archetypes.

32) The Principles of Organizational Equilibrium

They define the rules that need to be considered when building organizations. This discovery allowed developing stable growth plans in institutions.

33) The Ontogenetic Structure of Businesses as Adaptive Systems

It defines the nature of adaptive businesses. It allowed developing business architectures transforming their complexity into systemic, simple business processes.

34) The Ontogenetic Structure of Universal Strategy

It defines the nature of universal strategies. It allowed developing adapted strategies including maximal and minimum strategies to achieve predefined goals.

35) The Ontogenetic Structure of Family Businesses

It defines the nature of family businesses. It allowed designing different approaches based on business driven or family driven organizations.

36) The Ontogenetic Structure of Continuous Improvement

It defines the nature of continuous improvement. It allowed developing approaches that include updates, upgrades and innovation in the business processes.

37) The Ontogenetic Structure of Change Management

It defines the nature of changes. It allowed developing different change strategies according to the type of change: small, medium and big.

38) The Ontogenetic Structure of Quality Assurance

It defines the nature of quality assurance. It allowed installing quality assurance in business processes and in business objects to introduce automation.

39) The Ontogenetic Structure of Object Driven Organization

It defines the nature of object driven organization. It allowed introducing driving, entropy inhibiting, catalyzing, inhibiting and gravitational objects to empower results.

40) The Ontogenetic Structure of Business Objects Design

It defines the nature of objects design. It allowed designing operational, functional, systemic and cognitive objects to sustain business processes.

41) The Ontogenetic Structure of Object Driven Management

It defines the nature of management. It allowed optimizing the integration of peopleware, software and hardware in the business processes.

42) The Ontogenetic Structure of Marketing Mix

It defines the nature of the marketing process. It allowed developing a logical approach to marketing and developing object driven marketing processes.

43) The Ontogenetic Structure of Functional Segmentation

It defines the nature of the observable level of segmentation. It allowed including “aesthetics” into the marketing process to influence buyers.

44) The Ontogenetic Structure of Psychological Segmentation

It defines the nature of the relationship segmentation. It allowed including intrapersonal and interpersonal aspects into marketing processes to influence buyers.

45) The Ontogenetic Structure of Conceptual Segmentation

It defines the nature of the segmentation of attitudes. It allowed including the attitudes of buyers in the marketing processes.

46) The Ontogenetic Structure of Lifestyle Segmentation

It defines the nature of lifestyles. It allowed considering lifestyles as a possibility and as a limit for marketing processes.

47) The Ontogenetic Structure of IT Architecture

It defines the nature of information technology. It allowed integrating peopeware with software and hardware to optimize results and introduce adaptive systems.

48) The Ontogenetic Structure of Robotics

It defines the nature of robotics. It allowed developing flexible robots to manage adaptive systems using business objects to drive and catalyze these processes.

49) The Ontogenetic Structure of Peopeware

It defines the nature of human work processes. It allowed developing business processes managing efficacy, efficiency and an adequate automation level to produce results.

50) The Ontogenetic Structure of Business Growth

It defines the nature of microeconomic growth. It allowed defining the fundamentals that need to be managed to generate growth in businesses.

51) The Ontogenetic Structure of Business Synergy

It defines the nature of universal synergy. Its application in organizations allowed developing work synergy, product synergy and business synergy.

52) The Ontogenetic Structure of Market Confrontations

It defines the nature of confrontations/wars. It allowed defining structural strategies according to the needs of the business, the products, the markets and the competitors.

53) The Ontogenetic Structure of Business Architecture

It defines the nature of architecture. It allowed defining the structure of processes that allow providing the necessary utility, aesthetics and solidity to the projects.

54) The Ontogenetic Structure of Client Centered Management

It defines the nature of client orientation. It allowed defining a meta-model to be used to develop composite business objects to generate market orientation.

55) The Ontogenetic Structure of Organizational Immune Systems

It defines the nature of immune systems. It allowed defining the institutional procedures in order to ensure their capacity to manage adaptive environments.

56) The Ontogenetic Structure of Ontological Reverse Engineering

It defines the nature of reverse engineering. It allowed developing a methodology to consider facts as an input to find the concepts and fundamentals that underlie them.

57) The Ontogenetic Structure of a Unified Field in Businesses

It defines the nature of a Unified Field. It allowed managing adaptive systems in their oneness to produce the results that are needed.

58) The Ontogenetic Structure of Pilot Testing

It defines the nature of testing. It includes both destructive and non-destructive tests ending with pilot activities that allow confirming the validity of solutions.

59) The Ontogenetic Structure of Leadership

It defines the nature of leaders. It allowed developing an object driven leadership approach that saves energy and maximizes results.

Cultures, Countries & Globalization

60) Unicist Conceptual Economy

It defines the nature of economic processes. It allowed defining which macro and micro economic approach is functional considering the archetypes that are involved.

61) Unicist Conceptual Anthropology

It defines the nature and evolution of human organizations. It allowed defining the structural solution for human adaptive systems.

62) The Ontogenetic Structure of Country Archetypes

It defines the nature of cultural archetypes. It allowed understanding the possibilities and limits of countries based on the cultural archetype they have.

63) The Ontogenetic Structure of Countries' Evolution

It defines the nature of social evolution. It allowed forecasting the future of countries based on the use of unicist logical inferences.

64) The Ontogenetic Structure of the Collective Unconscious

It defines the nature of the collective unconscious. It allowed defining the essential drivers of social behavior and its possibilities and limits.

65) The Ontogenetic Structure of Collective Intelligence

It defines the collective intelligence and synergy of a culture. It allowed defining the different approaches that need to be managed to adapt to different cultures.

66) The Ontogenetic Structure of Economic Behavior

It defines the nature of economy. It allowed defining the economic possibilities and their evolution or involution.

67) The Ontogenetic Structure of Economic Ideologies

It defines the nature of economic ideas. It allowed defining the consistency of economic models with the cultural and social scenario.

68) The Ontogenetic Structure of Wealth and Poverty

It defines the nature of wealth. It allowed defining the fundamentals that drive countries towards a superior level of productivity and wellbeing.

69) The Ontogenetic Structure of Political Scenarios

It defines the nature of political structures. It allowed defining the fundamentals that drive political actions in different types of States and governments.

70) The Ontogenetic Structure of Democracy

It defines the nature of democracy. It allowed forecasting the evolution of country scenarios based on the natural alternations of democratic power.

71) The Ontogenetic Structure of Political Ideologies

It defines the nature of ideologies. It allowed forecasting the evolution of countries driven by absolute and non-absolute ideologies.

72) The Ontogenetic Structure of Social Scenarios

It defines the nature of social evolution. It allowed forecasting social evolution, involution and stagnation depending on the archetypes of a culture.

73) The Ontogenetic Structure of Lifestyles

It defines the nature of lifestyles. It allowed adapting to the lifestyles of cultures based on the knowledge of the archetypes and consequent habits of a country.

74) The Ontogenetic Structure of Ideological Change

It defines the nature of ideological changes. It allowed developing strategies to influence the evolution of ideologies in micro and macro environments.

75) The Ontogenetic Structure of Educational Culture

It defines the nature of education. It allowed defining the functionality of educational systems and its consistency with the archetypes of cultures.

76) The Ontogenetic Structure of Sustainable Globalization

It defines the nature of globalization. It allowed forecasting the influence of cultures in the international environment and its consequences.

77) The Ontogenetic Structure of Diplomacy

It defines the nature of diplomacy. It allowed forecasting the conflict management of cultures and the triggering of extreme conflicts.

78) The Ontogenetic Structure of Negotiations

It defines the nature of negotiations. It allowed developing an object driven negotiation model to minimize energy and maximize results.

Conceptual Psychology and Learning

79) Mental Concepts as Behavioral Objects

It defines that the concepts individual have in mind drive all their actions. They might be conscious concepts that drive functional actions, pre-concepts that drive analogical behavior or unconscious concepts to avoid assuming responsibilities.

80) Unicist Conceptual Psychology

It defines the essential drivers of human behavior. It allowed defining the way individuals establish intrapersonal and interpersonal relationships to adapt to the environment.

81) The Ontogenetic Structure of the Logical Type of Thought

It defines the nature of the logical approach of individuals. It allowed diagnosing the functionality of the type of thought and fostering its evolution.

82) The Ontogenetic Structure of Conceptual Thinking

It defines the nature of the conceptual approach of individuals. It allowed developing methods to transform conceptual knowledge into systemic (dualistic) solutions.

83) The Ontogenetic Structure of Strategic Intelligence

It defines the nature of the strategic style of individuals. It allowed forecasting how individuals deal with conflicts and negotiations.

84) The Ontogenetic Structure of Ethical Intelligence

It defines the nature of ethics. It allowed fostering its evolution, which drives individuals towards a higher level of functionality and use of their intelligences.

85) The Ontogenetic Structure of Reflection

It defines the nature of reflection. It allowed developing an action-reflection-action process that uses destructive and non-destructive pilot tests as an input.

86) The Ontogenetic Structure of Unicist Thinking

It defines the nature of adaptive behavior. It allowed developing the double dialectical approach to complex adaptive systems in order to produce results.

87) The Ontogenetic Structure of Learning Processes

It defines the nature of learning. It allowed developing learning models and learning objects in the field of superior education to deal with the adaptive aspects of reality.

88) The Ontogenetic Structure of Adults Learning Context

It defines the nature of any learning context. It allowed developing a system that begins with the context and ends with value generation.

89) The Ontogenetic Structure of the Oedipus Complex

It defines the nature of evolution complexes. It allowed managing the driver of evolution inhibition using the necessary immune systems and defensive structures.

90) The Ontogenetic Structure of the Individual Complexes

It defines the nature of inferiority and superiority complexes. It allows managing the driver of individual self-destruction to avoid its social consequences.

91) The Ontogenetic Structure of Consciousness

It defines the nature of conscious behavior. It allowed defining the limits of individuals to add value to an environment by providing solutions.

92) The Ontogenetic Structure of Languages

It defines the nature of a language. It allowed developing semiotic and semantic objects and a method to deal with the essences of communication and reasoning processes.

Future Research

93) The Unicist Logic to Infer the Future

It defines the nature of double dialectical inferences. It allowed developing a method to use the structure found in the past and the information of the present to infer the future.

94) The Ontogenetic Structure of Social Evolution

It defines the nature of social evolution. It allowed developing the unicist theory of evolution that allowed defining the stage in which a culture is developing.

95) The Ontogenetic Structure of Cultural Evolution and Involution

It defines the nature of cultural evolution. It allowed developing adaptive approaches to foster cultural evolution based on fully reliable diagnoses.

96) The Ontogenetic Structure of Social Mutation

It defines the nature of mutations. It allowed understanding mutations in order to mitigate their effects in cultures or install catalysts to accelerate them.

97) The Ontogenetic Spiral of Human Evolution and Involution

It defines how the spiral of evolution and involution works. It allowed forecasting both the evolution and involution of human actions.

98) The Ontogenetic Structure of Cultural Adaptiveness

It defines the nature of adaptiveness. It allowed understanding the level of adaptiveness of cultures to empower it and minimize over-adaptive behaviors.

99) The Ontogenetic Structure of Cultural Stagnation

It defines the nature of stagnation. It allowed understanding the paradoxical behaviors of cultures that appear to be evolving while they are stagnated.

100) The Ontogenetic Structure of Time Management

It defines the nature of time management. It allowed understanding people and cultures that are driven by the past, the present or the future and the natural consequences.

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: www.unicist.org