

Unicist Corporate University

Pilot Testing

Unicist Reflection Driven Education

For Teaching Hospitals in Business

Purpose



The Unicist Research Institute
Pioneers in Complexity Science Research since 1976

The Unicist Theory: A Paradigm Shift in Science

The Unicist Theory, developed by Peter Belohlavek, is a paradigm shift of the scientific approach to complex adaptive systems. It substituted empiricism by a pragmatic, structuralist and functionalist approach and replaced knowledge falsification processes with destructive testing processes.

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 Unicist Theory allowed understanding and influencing the evolution of living beings and artificial complex adaptive systems. This influence is exerted by using unicist logic based and object driven technologies, which is now a worldwide trend.

Some of the companies that use objects are: Airbus, Amazon, Apple, BBC, Boeing, Dassault Systemes, Dupont, Ericsson, Facebook, General Electric, Google, Hilton, Honda, Hyundai, LinkedIn, Lufthansa, Mapfre, Mayo Clinic, Michelin, Novartis, Open Text, P&G, Pfizer, SAP, Siemens, Tata Motors, Toyota, Unilever, Walmart, Walt Disney World and Youtube.

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*The cost of a glass is in its solid;
its value is in its hollow.
Its cost has no value.
Its value has no cost.
But both of them are within the glass...*

Peter Belohlavek

*The cost of education is given by teaching;
its value is given by learning.
Teaching has no value.
Learning has no cost.
But both of them are within education...*

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Technical Knowledge is needed to Administrate.
Conceptual Knowledge is needed to Manage.

The unicist paradigm shift in sciences integrates the “KNOW WHY” required to apprehend complexity with the “KNOW HOW” provided by empiricism. It made complex adaptive systems become reasonable, understandable and predictable. The inclusion of the “KNOW WHY” required the comprehension of the nature of things and was provided by the unicist approach to complexity sciences.

Difference between Professional and Superior (Adaptive) Education

Unicist education is based on learning processes that are analogous to “teaching hospitals” based on real complex problem solving. The unicist educational model is a superior education model that deals with the learning of logical tools and business objects.

A comparison between Superior Education and Professional Education will clarify the guiding idea, and the difference between the Unicist Education and the Professional Education:

Aspect	Unicist Education	Professional Education
Educational Framework	Teaching Hospital / Clinics	Workshops / Seminars / Courses
Educational Model	Complex Problem Solving	Systemic Problem Solving
Learning Approach	Action-Reflection-Action	Theory-Practice
Problem Solving Approach	Results Driven	Tasks Driven
Future Forecasting	Logical Inferences / Delphi Groups	Projections / Delphi Groups
Knowledge	Logical & Empirical Approach	Empirical Approach
Type of Tools	Unicist Logical Tools	Operational-analytical tools
Business Planning	Strategic Approach	Analytic Approach
Dominant type of Analysis	Fundamental Analysis	Technical Analysis
Risk Management	Ambiguity	Certainty
Business Processes	Adaptive Systems	Operational Systems

Adaptive Education

Introduction

The human body is by definition a complex adaptive system. That is why medical practice can be considered a paradigmatic example of complex problem solving. Therefore, medical education can be used as a benchmark in the education of complex problem solving.

There is also no doubt that businesses, when successful, are intrinsically complex and adaptive. Therefore the management of the complex aspects of businesses is homologous to medical practice and the educational models should be homologous too.

Unicist Teaching Hospitals for Business in the Real World

The activities of Unicist Teaching Hospitals for Business are developed through Business Residencies and need to integrate three roles and one object. The three roles are:

- 1) **The Chief-Resident** is the coordinator of a Business Residency that has the full responsibility for the diagnoses and for achieving the results that have been defined as being possible to be achieved. The participants of the residency also have full responsibility for the results after they agreed that such results are possible.
- 2) **The "Fallacy-Shooter"** is the person responsible for guiding the action-reflection-action process in order to improve the accuracy of the diagnoses and of the work processes. This guidance is based on the development of destructive tests to

confirm the limits of the validity of knowledge and non-destructive tests to validate solutions.

- 3) **The "Ombudsman"** is responsible for monitoring that the proposals respond to the functional needs of the solutions that are required; she/he is the business coach. The role represents the client as a "function" that is responsible for generating value to the environment. The responsible officers are the "owners" of the functions.

Learning by Teaching

The learning process of the Business Residencies is developed in micro clinics that are based on a "Learning by Teaching" model. This model is based on the use of unicist debates where a group of participants debate while the rest poses questions.

Unicist Debates

They are debates based on the conjunction "and" and not the disjunction "or".

There are four principles implicit:

- 1) Assuming that our fellow is right
- 2) Assuming that one might not have all the elements of a certain reality
- 3) Accepting that the participants knowledge must include experiencing
- 4) Accepting the oneness of a given functional reality

When those debating disagree, a higher level of knowledge must be achieved. At this level the disagreeing affirmations are partially true but integrated.

Thus debate happens while a reality is being constructed.

The depth of the knowledge of participants and their humbleness defines the limits of the possibilities of a unicist approach to debates.

Counseling based on Virtual Collaboration

The residencies are based on virtual collaboration. As conceptual knowledge is cross-cultural, it allows integrating counselors and experts of different parts of the world to ensure effective solutions and provide the necessary learning context and support to drive and catalyze the activity of the learners.

This requires following the technologies to deal with the nature of each problem and using the unicist superior education technology to manage the learning process of the participants.

Seen from the outside, the process appears extremely simple, because concepts are rationally obvious and the nature of a learning process responds to the nature of human evolution. From the inside, it requires following strict steps without making shortcuts.

These residencies are in fact productive business units that foster the learning of the participants. **They are solutions and knowledge factories.**

The Unicist Education

The unicist educational approach has been developed to provide a methodology for superior education.

It is based on the goal of providing a learning process to allow individuals to deal with complex problems in adaptive processes. Adap-

tiveness is defined as the capacity of an entity to influence an adaptive environment while it is being influenced by it.

The unicist education model is based on five pillars:

- 1) A learning context is required before a learning process begins. Learning processes in adults require the existence of a real problem to be solved.
- 2) An adaptive learning contract that defines the guiding idea of the learning process and the conditions of the teaching and learning activities.
- 3) The development of business residencies, which are homologous to medical residencies, where the unicist reflection methodology is used to develop solutions.
- 4) The use of learning objects that allow managing the personalized learning program of participants.
- 5) The teacher's role that is focused on ensuring the development of solutions while driving learning activities.

In the following pages you will find a brief description of the structure of Unicist Education in order to have the concept of what it introduced in the world of learning.

1

The Learning Context: The Definition of the Guiding Idea

The Learning Context

Introduction to a strategic approach to learning processes

This document is about the nature of the human learning process. When students, pupils or disciples really need to learn in order to find and construct their place in their environment, the problem of learning is simple for counselors or professors.

Understanding the learning process of an individual enables counselors to manage the learning process.

Parents and professors may teach better or worse, but children will grow in spite of their parents, and pupils will learn in spite of their teachers.

But there is a great difference between those that grow based on their parents and on their teachers and those who grow in spite of them.

In the first case, “parents’ and teachers’ achievements become their children’s / pupils’ starting point”.

On the one hand, operational teaching processes are functional to “starving” learners. In this case, if both the basic stages of communication and the thematic taxonomy of the subject to be learned are fulfilled, results are excellent.

But, on the other hand, when learners are barely hungry, there is a need for a conscious strategic approach to the learning process.

Conscious strategies require the knowledge of the nature of the reality one is influencing.

The nature of the learning process of humans will be described in the following pages to help those who design learning processes. The nature is described by the unicist ontology of human learning.

The ultimate purpose of a learning process can be defined as a better adaptation to reality by adding more value to the environment and by earning the corresponding counterpart.

Minimum and maximal strategies in an individual's learning process

A learning context is required before a learning process begins. Learning processes in adults require the existence of a real problem to be solved.

When there is no real problem to be solved, the learning process has no substance and the “knowledge” cannot be stored in the long term memory because it is meaningless.

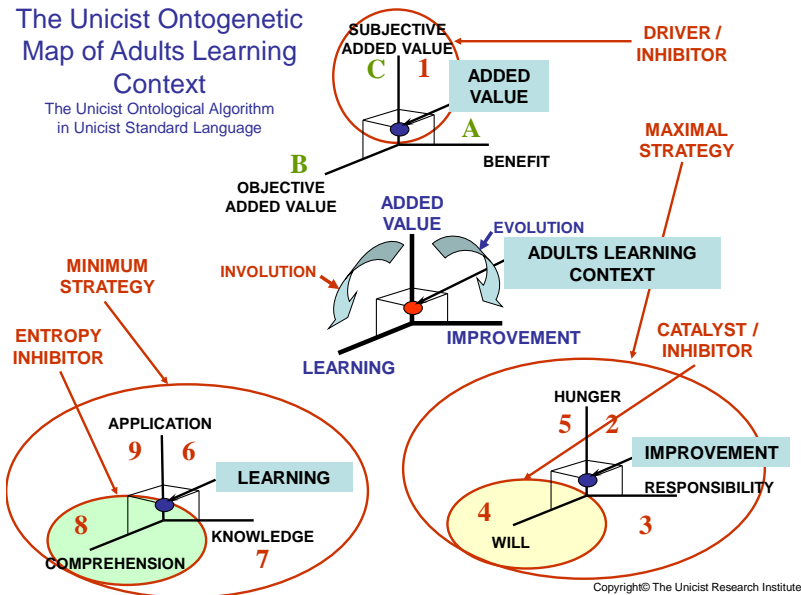
The maximal strategy of a learning process is given by the need of improvement. The existence of a driver and the real need for improvement provides the will the individual “uses” as a catalyst in order to face and solve the problems of his/her learning process.

Achieving the minimum strategy implies paying the prices to ensure learning. The price to be paid is that the individual needs to leave things aside in order to access the comprehension of a new approach.

Learning implies leaving things aside. If the problem can be solved using the preexisting knowledge there is no need for learning because the problem does not exist.

Therefore it is implicit in a learning process for unsolved problems that the individual leaves aside the preexisting approach and enters

the comprehension of the new approach without cutting it down to what s/he knew.



Adults only do so when they really need to solve a problem. Improvement is the active function and learning the energy conservation function.

Only people who need to improve will be able to learn. People who enter in a learning process without having a real need to improve in order to solve real problems just enter in self-fulfilling activities.

Evolution – “I can solve it”

Evolution implies assuming the responsibility of a personal improvement. The learning process occurs when an individual considers that s/he is responsible to add value, has the will to assume the consequences of this responsibility and at the same time is “starving” for having the capacity to be able to do so.

Learning processes may begin once individuals feel the need to improve. An “extreme” need to improve is basic for any learning process.

Hunger means “starving” and implies having the need to overcome the feeling of extreme scarcity.

It requires:

- 1) Self-confidence on one’s capacity to overcome extreme scarcity.
- 2) A deep need to improve the added value delivered.
- 3) Having the ambition to change in order to adapt better to an environment.

In order to assume responsibilities individuals have to:

- 1) Consider themselves capable to solve the problems they are facing.
- 2) Feel the “internal duty” to do so. External obligations hinder true learning processes.
- 3) Have the “ambition” to solve the problem.

The unicist ontological structure of the necessary “will” to improve is composed by:

- 1) An exemplarity behavior in the field one is improving
- 2) The necessary energy to overcome the unavoidable difficulties. Paying prices implies having the energy to do so.
- 3) An ideal to achieve.

Conclusions

When these conditions are unfulfilled, learning processes are driven by evaluation and qualification systems, substituting the goal of improving real actions by overcoming an obstacle in order to obtain a personal benefit.

When these conditions are given a genuine learning process can begin.

2

Definition of the Learning Contract

Learning Contract

Ms/Mr.
(the participant) and Ms/Mr
representing the Unicist Corporate University (UCU), agree on the
following learning contract:

1) The participant has decided to develop the Program on

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and proposed the following objectives to be achieved:

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....., based on real solutions to the following problems:

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2) The participant is aware that the activities of the UCU are learning
focused and homologous to medical residencies, which means that
the main goal to be achieved is the solution of the real problems and
that the teaching process has been minimized considering that the
participant has all the necessary technical-analytical knowledge to
deal with the problems.

- 3) The learning program follows the rules of the Unicist Standard to deal with the Ontology of Learning.
- 4) The teaching of the unicist object driven technologies is minimized because it has been replaced by the learning through real problem solving using the consultation library. Teaching will be exclusively based on virtual lectures.
- 5) UCU assumes the responsibility of a personal guidance of the participant based on permanent written counseling, live and batch, to solve the problems s/he is solving. The counseling is provided exclusively on real cases and includes the counseling of the technologies to be used to solve the problems.
- 6) It is agreed that the participant will use the Unicist Library to consult the necessary fundamental knowledge objects and will follow strictly the proposals of the counselor.
- 7) Both parts agree to achieve these goals within the limits of the duration of the program assuming the commitment to invest the necessary effort to solve the problems defined. The learning is the consequence of the real solution of the problems.

Date:

.....
Participant

.....
Unicist Corporate University

3

Development of Business Residencies

Unicist Business Residencies use the Unicist Reflection Process to Develop Solutions

Unicist Business Residencies (UBR) are programs where the participants solve a problem of a client. The experts who participate in the Unicist Business Residencies provide the quality assurance to ensure the provision of the necessary solutions.

Participants use the Unicist Reflection Process and its implicit pilot testing technologies to develop solutions in the business residency.

Business Residencies work as Medical Residencies

The resident participants of this program build a business model and the corresponding business processes while they learn to manage unicist logic based and object driven technologies.

Business modeling processes, at an operational level, need to integrate the diagnosis, strategy and architecture of a business.

Designing a business model requires being aware of the concept of the business itself, its restricted context (the market) and the wide context (the environment).

Resident participants start with a hypothetical (provisional) business solution that is used to develop the necessary destructive tests and end with a business model and the operational business processes after the non-destructive tests have been finished.

Unicist Reflection

Unicist reflection is an approach to complex human adaptive systems to understand their nature, define the possibilities to influence them, apprehend the algorithms that allow exerting influence and generate added value.

Unicist reflection has no relationship with other introspective approaches like religious introspection, transcendent meditation, yoga or other technologies that have been developed for different purposes.

Unicist Reflection has been developed to deal with complex human adaptive systems, such as businesses, to develop scenarios, diagnoses and strategies to achieve possible results.

The reflection process can be synthesized in the following steps:

0 - Focus on the solution

1 - Dealing with projections

- Beta brainwaves suffice
- Destructive pilot tests

2 - Dealing with Introjections

- Alpha brainwaves are needed
- Non-destructive - Destructive pilot tests

3 - Dealing with integration

- Theta brainwaves are needed
- Non-destructive pilot tests

4 - Dealing with communion

- Gamma brainwaves are needed
- Results validation

5 - Dealing with the unified field

Unicist Reflection requires having a final picture in mind. It requires positive thinkers; individuals who see the bottle half full, not half empty.

From an essential point of view, this synthesis can be described as

- 1) It reflects outside
- 2) It reflects inside
- 3) The outside vanishes
- 4) The inside vanishes
- 5) All is one

Unicist reflection implies assuming full responsibility for results.

Pilot Testing

Pilot testing provides the information of the validity of the solutions and the results that can be expected when using the solutions. There are two different types of tests:

- **Destructive tests** are the first tests that need to be developed to find the limits of the validity of a hypothesis. They require expanding the use of the hypothesis until it fails. It requires dealing with the structure of the fundamentals of the problems.
- **Non-destructive tests** imply using the information of the destructive tests and applying it to the segments that have been defined, measuring the feedback and making the final changes to confirm the effectiveness of the actions.

4

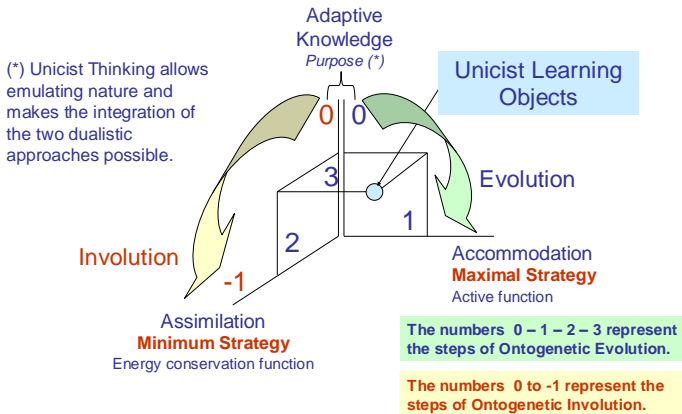
Use of Learning Objects

Unicist Dynamic Learning Objects

The Unicist Ontological Structure of Learning Objects

The purpose of a learning object is to install an adaptive knowledge object in the mind of the learner. This implies that the learning objects drive the accommodation process to accept new aspects that were not managed before and integrate these new aspects in mind through an assimilation process which requires storing this integration in the long term memory of individuals.

Unicist Ontogenetic Map of Dynamic Learning Objects
The Unicist Ontology in Unicist Standard Language



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Learning objects are complex adaptive systems that have been designed to drive the learning processes of the learner without needing external support when working within functional learning environments.

A functional learning environment exists when there is a need of a specific knowledge to do something, the necessary capacities of an

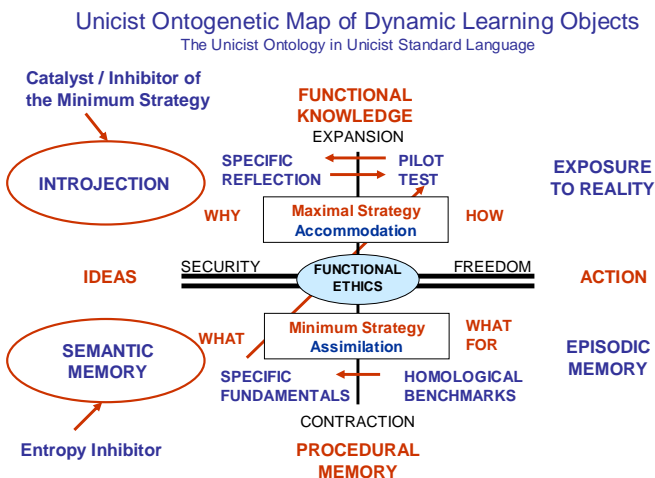
individual are available and accessible and the objects have the necessary authoritative role to be accepted.

Learning objects cannot work when these conditions are exceeded and then the participation of a counselor becomes necessary to substitute these objects by personal action.

This is homologous to the autopilot of an airplane (paradigmatic example of an object) which needs to be substituted by the pilot when the conditions of the external environment exceed the possibilities of the object.

Types of Dynamic Learning Objects

The researches conducted in the field of human learning led to the development of four types of dynamic objects to deal with the learning of complexity.



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- 1) Homological Benchmarks – WHAT FOR
- 2) Specific Fundamentals – WHAT

- 3) Pilot Tests – HOW
- 4) Specific Reflection – WHY

Homological Benchmarks – WHAT FOR

These objects drive the definition of what is needed to be achieved. They might have different shapes:

- 1) Benchmarks in homologous fields
- 2) Pre-pilot tests (Japanese Parks)
- 3) Pre-established standards because the action field belongs to a superior complex system that has to be managed.

The participants need to find the picture of other experiences they had to work as homological benchmarks. By definition there is no possibility to transfer experiences. An experience is necessarily subjective.

Specific Fundamentals – WHAT

After the WHAT FOR has been defined, the approach to the learning objective can begin. This is necessarily focused on specific relevant aspects of a reality.

Relevant aspects of reality are the ones that behave as an object within the unified field of a complex adaptive system. The goal of this object is to provide the fundamentals of the specific relevant aspects of reality.

It defines the WHAT is being learned. It appears to be analogous to a teaching process but in fact it is just a messaging process. It can be done by a “teacher” assuming the role of an informant.

Pilot Test – HOW

The pilot tests are real applications in the specific action field that is being learned or in homologous fields when the full real application is too risky.

Pilot testing allows learning HOW the knowledge works and is transformed into actions. These pilot tests are developed to confirm that the fundamentals have been apprehended in their true application amplitude.

Specific Reflection - WHY

This object is a systemic object that needs to produce improvements in the application process of what is being learned. It requires having a personal value adding approach in order to seek for improvements.

The reflection process begins by exposing the pre-concepts the learner has to achieve the goals of the learning process in order to confront them with the real world and open the possibilities of confirming them, expanding their boundaries or change them.

5

The Role of the Teacher

The Role of the “Teacher” in Dynamic Learning Processes

Teachers have two roles in the unicist object driven learning process.

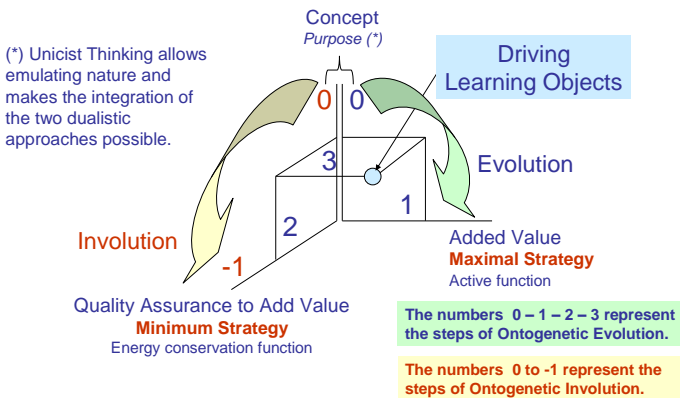
On the one hand, their role is being a “driving object” to provide information and, on the other hand, they exert a catalyzing role that accelerates the learning process by empowering the reflection process of the participants.

The Driving Role

As a driving object teachers work as informants of the fundamentals of the specific reality that are being learned. They are messengers of this information that is the input to allow participants to rediscover its content. To do so they need to generate added value and have a quality assurance system that ensures the value they add.

Unicist Ontogenetic Map of Driving Learning Objects

The Unicist Ontology in Unicist Standard Language



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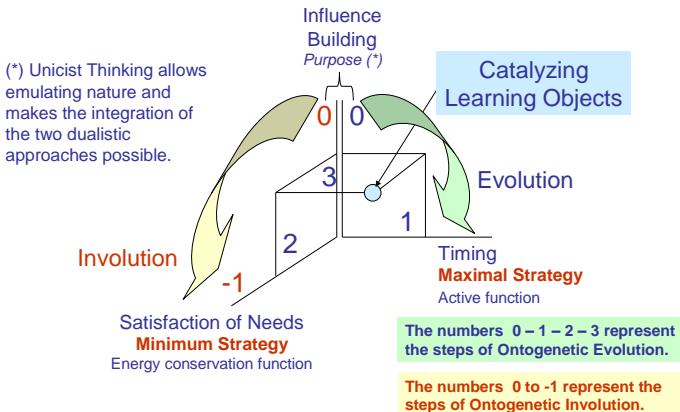
This personal teaching activity can be substituted by virtual messengers that use natural spoken and written language to provide the fundamentals.

The Catalyzing Role

In object driven learning the core activity of teachers is to catalyze learning processes. The catalyzing role of the teacher is based on upgrading the reflection process of participants. This allows ensuring the learning process and drives it towards an upgrading process of the learning attitude.

Unicist Ontogenetic Map of Catalyzing Learning Objects

The Unicist Ontology in Unicist Standard Language



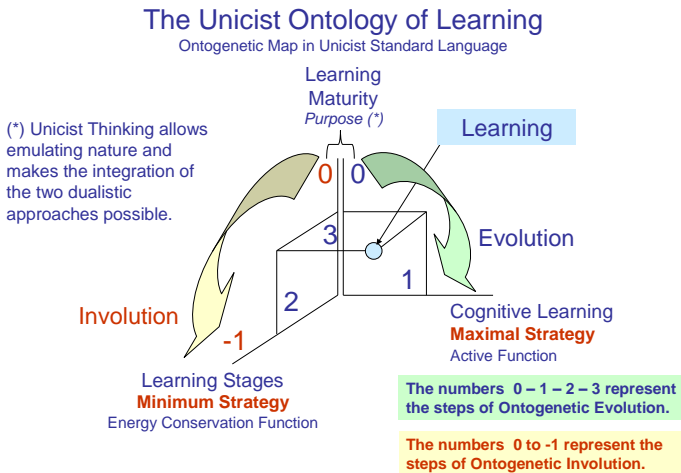
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Teachers as catalysts need to exert influence to ensure the focus of the learner towards the value that needs to be added to the environment. Their main characteristic is that they need to have the necessary synchronicity, acceleration and speed to work when they are needed.

Annex I:
The Unicist Ontology of Learning

The Unicist Ontology of Learning Processes

The structure of the “unicist ontology of learning processes” describes that the purpose is to achieve maturity so as to be able to learn based on the feedback of reality.



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The active learning process is based on a cognitive action and the energy conservation function is based on the integration within the natural stages of development an individual is able to manage.

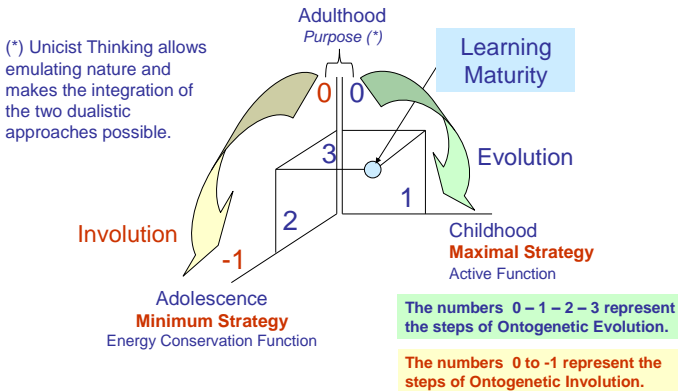
The Unicist Ontology of Learning Maturity

The learning process is analyzed in light of man’s natural evolution, considering as a hypothesis that man’s evolution of learning regarding a certain subject could not differ from man’s evolution as a whole.

Thus, the concept of Childhood-Adolescence-Adulthood evolution was taken as applicable to all learning processes. After analyzing a number of cases and experiences it was inferred that this natural law was applicable to the affective relationships of men with the objects of learning.

The Unicist Ontology of Learning Maturity

Ontogenetic Map in Unicist Standard Language



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Childhood

Childhood is defined as a stage in learning in which the individual acts, fundamentally subordinated, because of his own decision, to his teacher's guidance.

Childhood ends when the pupil-trainee, whose main goal is to resemble his teacher, already manages to operate fluently the object of learning.

At this moment the adolescence of learning begins.

Adolescence

The adolescence of learning is the period in which the trainee breaks up with the figures of authority he had internalized during his childhood. This break up is necessary to continue his path toward the development of his own identity.

Adolescence is a period in which the master's role is not that of conducting but that of trying to influence in the reflection so that it might be used as a starting point for maturity in learning.

In this period, it is necessary to count on the master's "permission" for the pupil-trainee to "break the model". The larger the permission to break it, the lesser the breakage and the smaller the loss of learning will be.

There is great fear, in the educational reality, of allowing the student to reach such stage. That is why most of the educational processes end in childhood.

Adulthood

The real learning stage begins in adulthood/maturity, which is when the adult-adult relationship between master/teacher-counselor and student is achieved.

This stage allows beginning with the learning of complex adaptive aspects of reality.

The master here is definitely a counselor in the process and the student is the responsible decider on the topic of learning.

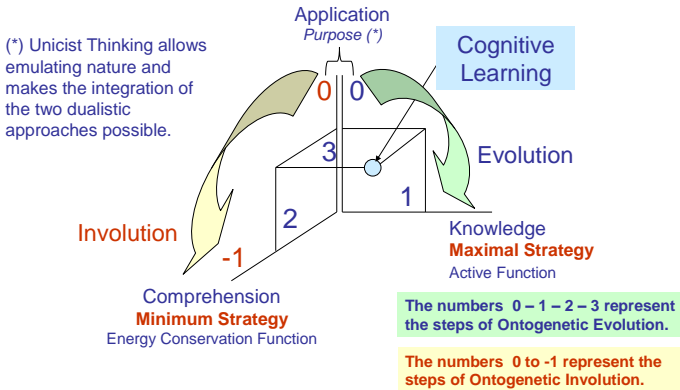
This stage never ends, but teaching is no longer needed, there is pure learning.

Unicist Ontology of Cognition

Cognition integrates three components as follows:

1. Knowledge
2. Comprehension
3. Application

The Unicist Ontology of Cognitive Learning Ontogenetic Map in Unicist Standard Language



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Knowledge

Knowledge is the awareness of the variables that define the problem. There is an analysis of the first variables related to the problem and of their interrelationship.

This stage is reached when the individual is able to analyze the primary elements of the objects of learning as of their similarity to those in which he is involved.

Comprehension

Comprehension is the taxonomic stage in which cause-effect relationships of all the variables and its interrelationships are developed.

Comprehension implies, in terms of the taxonomy of Unicist Personalized Education, that the problem is analyzed in all its rational and emotional components, regardless of the possibility of its actual application.

Application

Application is the stage in which the individual adapts what he has learnt to reality. It is an objective that is accomplished outside the place where the learning was made and implies the management of the variables of context where what has been learnt is applied.

It is obvious that the teacher's/counselor's role here is that of a tutor that does not intervene or interfere in the individual's relationships with his environment.

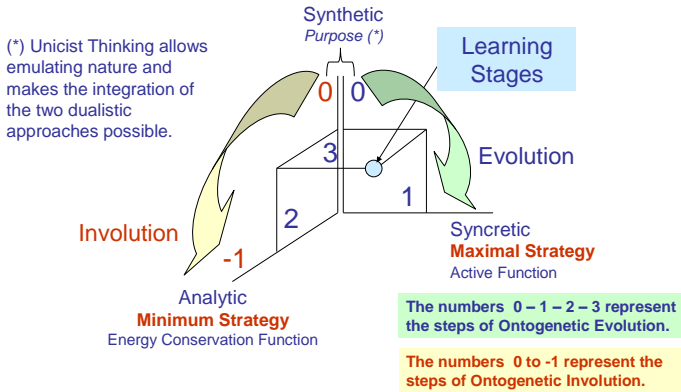
Unicist Ontology of Stages of Development

Functionally speaking, reality is but one. When we are teaching individuals it is necessary to accept that the reality that the person perceives is the only one there is for him.

If we try to juxtapose a different reality, even when we have elements allowing us to ascertain that we are closer to the "truth", we will generate a resistance to that different perception in that person.

The Unicist Ontology of Learning Stages

Ontogenetic Map in Unicist Standard Language



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Syncretic stage

The starting point of all learning process is the syncretic perception that the pupil-trainee has of that subject, however distant that may be from the reality.

The first thing the teacher needs to do is to know which the global perception of that trainee is in order to understand the student's-trainee's reality and evaluate the diversions from that "reality".

The syncretic stage is aimed at organizing the global perception of the problem as truthfully as possible.

Analytical stage

Once the trainee succeeds in getting a realistic view, the analytical stage aims at dividing reality into its constituting parts.

During the analytical stage the individual analyzes all the variables that make up the problem. When this stage is over, the individual understands the problem in its parts and manages to solve, at a simulation level, similar problems to those he is involved in.

Synthetic stage

The individual experiences the learning process by elaborating permanent syntheses on the subject under analysis.

These syntheses, which are the object of work in the relationship trainee-trainer/counselor, end up in a final synthesis that replaces the synthetic vision that the individual had at the beginning of the subject.

This synthesis is the way the individual has managed to integrate it to his reality.

Annex II: About Complexity

The Unicist Logical Approach to Complexity

(a unicist ontological approach)

The unicist logical approach to complex problems

The most primitive complex problem is given by two elements that have a biunivocal relation (loop). For example:

- The lack of credibility of an innovation inhibits its use and the absence of use impedes credibility.
- The absence of production causes inappropriate distribution and dysfunctional distribution causes a lack in productivity.

Until the appearance of the solution given by the unicist approach, there were four palliatives:

- Intuition
- More or less subjective arbitrary models
- Fallacies to avoid the perception of complexity
- Ceteris paribus

Complexity is self-evident in the field of social, institutional and individual evolution. It can be said that evolution is a complex problem itself.

The Unicist approach transforms complex problems into simple solutions, and these simple solutions into “easy” actions.

We define a complex system as an open system, which determines the functionality of a unified field through the conjunction of objects and/or subsystems.

A complex system has the following characteristics:

- 1) It is an open system, meaning that the energy flows to and from the system itself.
- 2) The external limits of the unified field (its globality) behave as the ones of a fuzzy set.

- 3) Functionality is determined by the “conjunction” of elements that influence each other, generating “loops” of cause-effect relations.
- 4) The “disjunction” does not exist in a complex system.
- 5) The sum of the results of the subsystems is not equal to the result of the total complex system.
- 6) Relationships among subsystems are not linear; they respond to the double dialectics laws (purpose-antithesis / purpose-homeostasis).
- 7) Complex systems generate their own energy transformation using their own energy and the energy from the environment.
- 8) Complex systems are composed of subsystems, which are also composed of other subsystems, until reaching a descriptive level that is functional to their purposes.
- 9) Complex systems cannot be observed. The observer is part of the system.
- 10) Complex adaptive systems can only be measured in their results.

“The Unicist Theory of Evolution”, the “Unicist Logic” and the “Logic of Fallacies and the Anti-concepts”, made the conceptual modeling and operation of complex adaptive systems possible.

Some examples of complex adaptive systems can be found in the social, economical, political and cultural aspects of reality as well as in management, marketing, strategy (of countries, institutions and individuals), learning processes, continuous improvement and interpersonal relations.

Transforming complex systems into simple systems is making them operational in a univocal way, with cause-effect relations that permit

to influence the environment. This means transforming strategy, which, by definition, is a complex system, into operational tactics.

Transforming them into an easy task implies materializing these tactics through well defined actions, using a language that could be understood by all participants and the proper tools that could be used by all of them.

Nevertheless, even though we operate with simple solutions, in their essence, these problems remain complex.

The Unicist Logical Approach to Applied Complexity Sciences

The complexity of a specific aspect of reality is objective. This means that it is impossible to deal with it using cause-effect research without changing its functional nature. This indicates the existence of complexity.

The unicist approach to complexity sciences implies the discovery of the ontological structure of a reality and the objects that integrate it, defining the ontological algorithm and then the actions that can be done to influence such reality.

This approach starts with the finding of the nature of a specific element of reality and ends with the definition of the actions that can influence such reality.

The unicist ontology is a specific type of ontology that is structured emulating the ontogenetic intelligence of nature. It considers that the nature of living beings and their actions is defined by a purpose, an active principle and an energy conservation principle which are integrated following the rules of the supplementation law (between the purpose and the active principle) and the complementation law (between the purpose and the energy conservation principle).

The ontology of a functional aspect of reality is unique, being therefore timeless and cross-cultural. Its application integrates unicist ontology, with unicist logic and the unicist ontology of evolution.

Things in real life might have different functionalities. Each of these functionalities has its ontology. For example, the same type of boat can be used as a fishing boat or a survival boat. A fishing boat has “one” ontology and the survival boat has another.

Human Complex Adaptive Systems

Human individual, institutional, businesses and social behavior are also paradigmatic complex adaptive systems. The application fields of the unicist approach to complexity science are the human complex adaptive systems.

Examples of Human Complex Adaptive Systems:

Cultural Behavior and Archetypes

Cultures have to be considered as a unified field, which implies that they have a structure of taboos, utopias and myths to face the external reality in a defined way that has to be considered as a limit for any human complex adaptive system.

Economic Models

As economic models have to be redundant with the social values included in a cultural archetype, the use of non-consistent economic rules will produce paradoxical effects because it cannot be recognized as valid.

Educational Models

One of the objectives of an educational model is to socialize people’s behavior making it consistent with a cultural archetype. The introduc-

tion of alien educational models produces necessarily paradoxical results.

Businesses

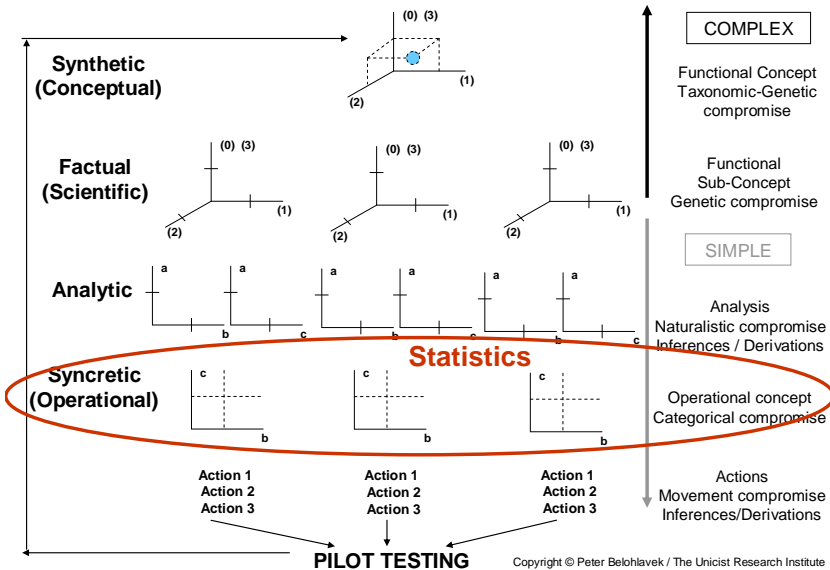
Businesses are, by definition, complex systems that need to deal with the market, going beyond the present boundaries of the activity. Therefore they need to be defined considered as part of the unified field of the market they work with.

Conscious Personal Development

Personal evolution depends on the capacity of individuals to adapt to the environment they decided to live in. Thus it depends on the individual's capacity to apprehend the unified field of that environment and influence it.

Necessary Compromises to Manage Complex Adaptive Systems

Unicist approach to complex systems



The generic approach:

- 1) Human adaptive systems are in permanent motion. To establish a fixed point based on their oneness the ontological structure needs to be discovered. This definition includes limiting the boundaries of the system.
- 2) A taxonomic-genetic compromise needs to be done to transform the oneness into the elements that integrate its ontogenetic structure.
- 3) A genetic compromise is needed to deal with the sub-ontologies or objects included in the ontogenetic structure.
- 4) A naturalist compromise is necessary to divide the objects of the ontogenetic structure into the double dialectical elements and make the consequent inferences on their behavior.

- 5) A categorical compromise needs to be done to define the ontological categories at an operational level.
- 6) A motion compromise has to be done to define the actions that allow influencing the adaptive system.

This approach implies transforming a human complex adaptive system into a manageable system making the necessary compromises to transform its oneness into operational actions to generate results.

The knowledge of an ontological structure of a unified field defines the existence of the possibility to exert influence on it. Mathematically, a possibility exists or not (1 or 0). The success of influential actions belongs to the field of probabilities because of the multiple compromises that have been done.

The Use of Statistics in Complex Problem Solving

Statistics are only valid if the “variables” they manage describe the ontological structure of a reality. This means that the knowledge of the ontology of a complex problem must pre-exist before statistics can be used.

From an ontological point of view statistics are necessary to enter at an operational concept level to define the sizes of the segments that might be relevant.

Comparison of the Approaches to Complexity Sciences

Aspect	Peter Belohlavek's approach to Complexity Sciences (*)	Preexisting ap- proaches: Bateson, Förster, Lorenz, Maturana, Morin, Prigogine and others
Field of Study	Complex adaptive systems	Complex adaptive systems
Approach	Pragmatic - Structural - Func- tionalist	Empirical
Definition of the field of study	A specific reality as a unified field that includes the restricted and wide contexts and the emergence of the system	Based on the emergence of the system
Possibility of external observation	Inexistent	Inexistent
Research method	Unicist Ontological Research	Systemic research
Boundaries of the system	Open	Open
Self-organization	Concepts – analogous to strange attractors	Strange Attractors / un- defined
Structure	Double Dialectics Dynamics Purpose - active function - en- ergy conservation function	Variables
Relationship between the elements	Following complementation and supplementation laws	Undefined
Evolution / Involution	Based on the evolution / invo- lution laws of the ontogenetic intelligence of nature	Undefined
Processes	Object driven processes	Undefined
Certainty	Dealing with possibilities and probabilities	Dealing with probabili- ties
Demonstration	Real applications	Real applications
Emulation in mind	Double dialectical thinking (using ontointelligence)	Complex thought
Emergence	Results	Results
Chaos	Inexistent	Existent
Influence on the system	Based on actions and driving, in- hibiting, entropy inhibiting, cata- lyzing and gravitational objects.	Based on actions
Validation	Destructive and non-destructive tests (real applications)	Systemic research vali- dation methods

Access the Unicist Conceptual Design System:



www.unicist.com

The Conceptual Design System is used to support the building of the solutions that are developed at the “Teaching Hospitals” in business. The system has a library of unicist consultation books that includes:

1. Butterfly Companies & their cure
2. Commercial Critical Mass: Critical Mass Building for Marketing Processes
3. Complexity Science: Unicist Research & Design of Human Complex Adaptive Systems
4. Concepts make you Free
5. Conceptualization: The Pathway towards Adaptiveness
6. Design of Complex Systems Research
7. Development of Consciousness through Action
8. Dualistic Logic vs. Unicist Logic
9. Evolution of Intelligence
10. Expert Systems based on Ontogenetic Maps
11. Fundamentalism: The Ethic of Survivors
12. Globalization, the new tower of Babel?
13. Growth Crisis 2008-2010
14. Guidelines for Systemic Business Problems Solving
15. Influencing Nature: Analogy between the nature of concepts and the DNA
16. Innovation: The lessons of Nikola Tesla
17. Institutionalization
18. Introduction to Conceptual Anthropology
19. Introduction to Sustainable Globalization Building

20. Introduction to The Nature of Economic Freedom
21. Introduction to the Nature of Perception and Credibility
22. Introduction to the The Nature of Democracy
23. Introduction to the Unicist Ontology of Evolution
24. Introduction to Unicist Diagnostics
25. Introduction to Unicist Econometrics
26. Introduction to Unicist Epistemology
27. Introduction to Unicist Market Segmentation
28. Introduction to Unicist Object Driven Entrepreneuring
29. Unicist Business Strategy: An Emulation of Nature
30. Introduction to Unicist Thinking
31. Mind Traps: That hinder personal success
32. Natural Organization of Outsourcing and Insourcing
33. Ontogenetic Maps for Business Architecture
34. Ontointelligence
35. Patient Centered Management
36. Peopleware: The Integrator of Hardware and Software
37. Reading the Nature of Reality
38. Real Diagnostics vs. Paradoxical Diagnostics
39. RobotThinking: The Nature of Automation
40. Strategic Thinking: The Driver of Adaptiveness
41. Teaching Hospitals in Business
42. The Book of Diplomacy
43. The Ethic of Foundations
44. The Nature of Big Change Management
45. The Nature of Complementation
46. The Nature of Democracy
47. The Nature of Developed & Developing Countries
48. The Nature of Diplomatic Power
49. The Nature of Dissuasion Power
50. The Nature of Doers
51. The Nature of Economic Power
52. The Nature of Ethical Intelligence in Business
53. The Nature of Human Complexes
54. The Nature of Ideologies
55. The Nature of Intelligence
56. The Nature of Social Power
57. The Nature of Unicist Business Strategy
58. The Nature of Unicist Object Driven Business Growth
59. The Nature of Unicist Object Driven Change Management
60. The Nature of Unicist Object Driven Institutional Immune Systems
61. The Nature of Unicist Object Driven Leadership

62. The Nature of Unicist Object Driven Management
63. The Nature of Unicist Object Driven Marketing
64. The Nature of Unicist Object Driven Organization
65. The Nature of Unicist Object Driven Talent Development
66. The Nature of Unicist Reverse Engineering for Object Design
67. The Ontogenesis of Evolution: The Unicist Ontology of Evolution
68. The Ontogenesis of Knowledge Acquisition: The Unicist Ontology of Learning
69. The Origin of Human Fallacies
70. The Path of the Architect
71. The Path towards Professional Evolution
72. The Standard for Business Growth
73. The Standard for Human Adaptive Behavior
74. The Standard for Ontological Business Diagnostics
75. The Standard for Ontological Change Management
76. The Standard for Ontological Leadership
77. The Standard for Ontological Scenario Building
78. The Standard for the Ontological Research & Development of Adaptive Systems
79. The Standard to deal with the Ontology of Learning
80. The Standard to deal with the Ontology of Personal Evolution
81. The Standard to manage the Ontology of Businesses
82. The Standard to Research the Ontology of Human Adaptive Systems
83. The Unicist 5 Why Method
84. The Unicist Ontology of Ethical Intelligence
85. The Unicist Ontology of Evolution
86. The Unicist Ontology of Family Businesses
87. The Unicist Ontology of Human Capital Building
88. The Unicist Ontology of Intellectual Capital
89. The Unicist Ontology of Network Building
90. The Unicist Paradigm Shift in Science
91. The Unicist Standard for Adaptive Systems
92. The Unicist Standard for Business Benchmarking
93. The Unicist Standard for Business Objects Building
94. The Unicist Standard for Ontological Business Modeling
95. The Unicist Theory of Social Growth
96. The Unicist Theory, its Applications and Scientific Evidences
97. Unicist “Q” Method
98. Unicist Adaptive Leadership
99. Unicist Anthropology
100. Unicist Back2Back Design
101. Unicist Business Architecture: Managing the Unified Field of Businesses
102. Unicist Business Diagnostics: The Compendium of Ontologies for Business Diagnostics

103. Unicist Business Objects Building: An Ontology based and Object driven Technology
104. Unicist Business Strategy
105. Unicist Business Strategy: Ontology based and Object driven Business Strategy
106. Unicist Business Therapeutics
107. Unicist Business Therapeutics: Ontological based and Object driven Therapeutics
108. Unicist Change Management & Continuous Improvement
109. Unicist Commercial Objects: to Drive Commercial Processes
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111. Unicist Conceptual Management
112. Unicist Confederation: Cooperation in Diversity
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122. Unicist Market Confrontation
123. Unicist Marketing Mix
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125. Unicist Mechanics & Quantum Mechanics
126. Unicist Mechanics: Business Application
127. Unicist Object Driven Business Diagnostics
128. Unicist Object Driven Learning
129. Unicist Objects Driven Market Growth
130. Unicist Ontogenetic Intelligence of Nature
131. Unicist Ontological Algorithms to solve business problems
132. Unicist Ontology of Evolution for All
133. Unicist Ontology of History: Unicist Methodology for Historical Research
134. Unicist Ontology to deal with adaptive systems
135. Unicist Organization: Object Driven Design
136. Unicist Organization: Ontology based and Object driven Organization
137. Unicist Organizational Cybernetics
138. Unicist Personal Strategies
139. Unicist Personalized Education
140. Unicist R&D for Adaptive Systems in Business
141. Unicist Reflection Driven Education
142. Unicist Reflection to focus on solutions
143. Unicist Reflection: The path towards strategy

- 144. Unicist Research & Innovation
- 145. Unicist Semantic Objects: for Innovation & Differentiation Marketing
- 146. Unicist Standard for Pilot Testing
- 147. Unicist Standard Language
- 148. Unicist Standard Language: To design, build and manage Human Adaptive Systems
- 149. Unicist Strategy for Business Architects: The Mind of the Strategist
- 150. Virtual Marketplace Building
- 151. What are Complexity Sciences?

The Unicist Research Institute

Peter Belohlavek was born on April 13, 1944 in Zilina, Slovakia. His works expanded the boundaries of sciences. He is the creator of:

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.

He is the founder of The Unicist Research Institute, a private global research organization specialized in complexity sciences, that has an academic arm and a business arm.

His basic education is in Economic Sciences. To apprehend "reality" as a complex unified field he completed his education with research driven guided studies in Psychology, Epistemology, Anthropology, Economics, Education, Sociology, Life Sciences and Management.

The Unicist Theory made adaptive systems manageable and gave an epistemological structure to complexity sciences. This theory established a new starting point in science which expanded the possibilities of human influence in adaptive environments.

The unicist paradigm shift in sciences drove from an empirical approach to a pragmatic, structuralist and functionalist approach to deal with complex environments, integrating observable facts with the “nature of things”.

This theory allowed managing the adaptive aspects from Life Sciences to Social Sciences. Its application provided the four scientific pillars to develop the unicist technologies: Conceptual Economics, Conceptual Anthropology, Conceptual Psychology and Conceptual Management.

As it is known, the management of complexity has been an unsolved challenge for sciences. Science dealt with complexity using multiple palliatives but without achieving consensus of what complex systems are.

This challenge has been faced in 1976 at The Unicist Research Institute, which became a pioneering organization in the development of concrete solutions to manage the complex adaptive systems by developing a logical approach that uses the Unicist Theory.

He discovered the intelligence that underlies nature, which gave birth to the Unicist Theory, and the ontointelligence that defines the roots of human intelligence. These discoveries and developments expanded the possibilities to upgrade education, to influence social and institutional evolution and to deal with markets.

The unicist logical approach expanded the boundaries of existing sciences. The Unicist Theory was used to develop applications in Life Sciences, Future Research, Business, Education, Healthcare and Social and Human behavior. Now complex adaptive systems became manageable and complexity science received its epistemological structure.

Among other roles, he leads the Future Research Laboratory of The Unicist Research Institute. It is a space to give access to information on country archetypes, future scenarios and trends to the worldwide community.

(More information: <http://www.unicist.org/pdf/peter-belohlavek.pdf>)

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>