Unicist Future Research Lab

The 4th Industrial Revolution

Conceptualization made adaptive processes possible

The Unicist Research Institute
Pioneers in Complexity Science Research since 1976

The 4th Industrial Revolution

The Era of Conceptualization establishes the framework that allows introducing Industry 4.0 in the business world.

Since the beginning of the XXI Century, the 4th Industrial Revolution establishes the context for the design of business models.

Industry 4.0, as a concept, is already here, and can be synthetically defined as the "revolution of adaptive business processes". Adaptability requires managing the concepts of the business functions to be able to integrate different people, technologies, processes, systems, objects and tools.

Adaptive solutions can only be managed by structured flexible processes with a high level of productivity and quality.

Adaptability requires managing the concepts and fundamentals of the business functions which allow managing the root causes of market behavior, the root causes of businesses processes and the root causes of industrial processes to ensure customer satisfaction, productivity and quality.

As the previous industrial revolutions, Industry 4.0 will coexist with the previous stages, providing a significant competitive advantage for those who can enter this stage.

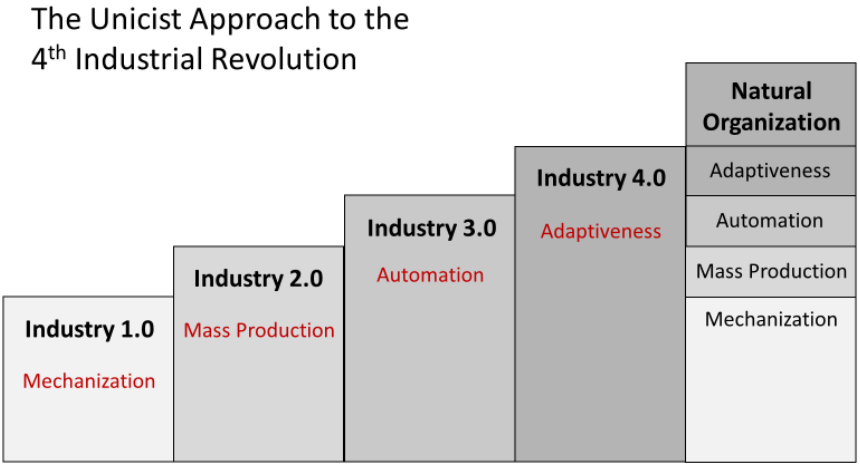
The conceptual knowledge allows simplifying the pathway towards this new stage and avoids paying the price of long empirical learning curves.

Content

The Unicist Approach to the 4th Industrial Revolution

Introduction to Industry 4.0

Industry 4.0 implies introducing adaptiveness in organizations. Business functions are adaptive when their functionality is feedback dependent. The Unicist Research Institute was one of the precursors of Industry 4.0 through the development of complexity sciences to deal with adaptive systems and environments.



This concept applied to business requires managing the root causes of processes to ensure their reliability.

This requires managing the concepts of the business functions involved. The level of industrialization depends on the outputs that need to be produced by the business functions. Therefore, different levels of industrialization coexist in most organizations.

Industry 4.0 became possible due to the evolution of IT technologies, conceptual management and artificial intelligence. Its goal is to develop businesses as adaptive systems, which implies customer orientation and improving productivity and quality that naturally foster market growth and profit improvement.

The implementation of Industry 4.0 in business processes might include:

- The use of a strategic approach and business intelligence to plan and manage growth.
- The use of tools with artificial intelligence to manage adaptive environments.
- The use of conceptual management to define business functions.
- The use of conceptual design to develop business processes.
- The use of business objects to ensure the productivity and quality of business processes.
- The use of client centered management to ensure customer orientation.
- The use of market labs to monitor markets.
- The use of root cause management to ensure the reliability of results.
- The use of adaptive IT solutions.

The introduction of adaptiveness in organizations is a step by step process, that needs to generate economic benefits from the beginning. It needs to follow two basic rules:

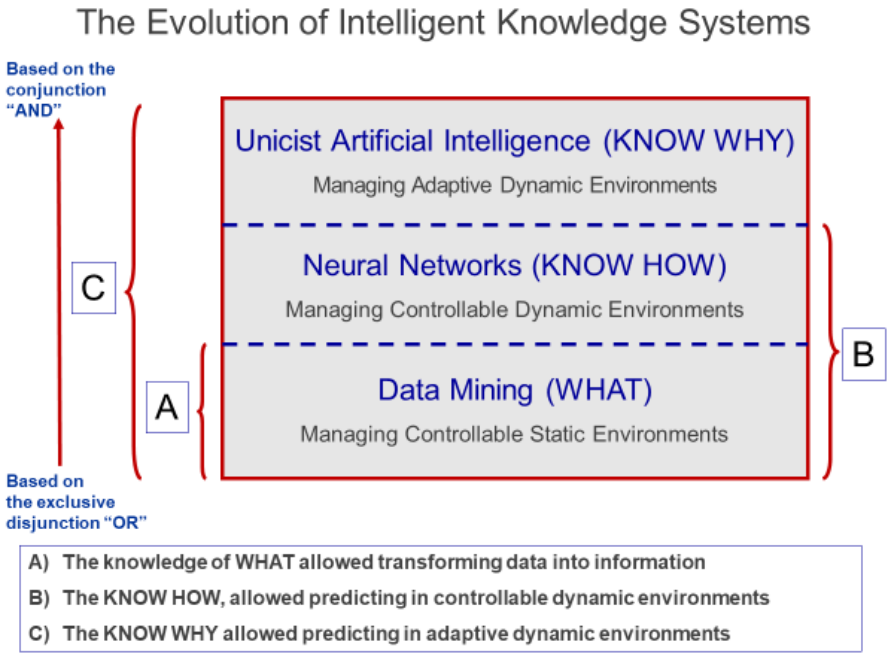
- It has to be introduced from "the outside to the inside", from the external needs to the internal needs, which implies starting with the functions that influence the environment.

- It needs to be managed from "top to bottom", which implies the commitment of the management in this change.

Intelligent Systems to deal with Adaptive Environments

The concept of Industry 4.0, applied to a business as a whole, is necessary to produce sustainable growth. It is based on the use of intelligent systems to simplify the approach to adaptive environments.

The 4th Industrial Revolution introduced adaptiveness in the industrial and business world. The Industry 4.0 concept proposes to manage businesses as adaptive systems increasing customer orientation, productivity and quality.



It has to be considered that the Unicist Theory and its applications were a precursor of the Industry 4.0 concept.

This theory was developed to understand the evolution of adaptive entities and to manage adaptive systems and environments.
https://www.unicist-school.org/complexity-sciences/the-paradigm-shift

The Unicist Approach became mature in the market when the hard technologies allowed developing adaptive industrial processes and gave birth to Industry 4.0.

If you are not aware of the concept of Industry 4.0, you can begin by entering the Wikipedia at: https://en.wikipedia.org/wiki/Industry_4.0

Industry 4.0, as a concept, can be synthetically defined as the "revolution of adaptive business processes". Adaptability requires managing the concepts of the business functions in order to be able to integrate different people, technologies, processes, systems, objects and tools.

As the previous industrial revolutions, Industry 4.0 coexists with the previous stages, providing a significant competitive advantage for those who enter this stage.

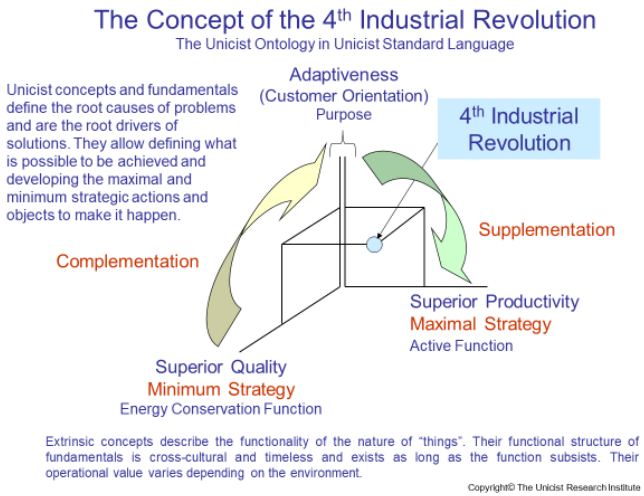
The Concept of the 4th Industrial Revolution

The birth of an industrial revolution is triggered by new technologies, which produce a new industrial stage when they are able to satisfy latent needs of a society.

The history of industrial revolutions show that they expand as such in environments where they satisfy the needs of an "establishment" of a culture.

As soon as they begin to have a viral expansion, the industrial revolutions demonstrate their true value and the underlying concepts can be perceived. In the case of the 4th Industrial Revolution, it becomes evi-

dent that its purpose is to introduce adaptiveness into industrial and business processes.



It has to be considered that adaptiveness, the concept that underlies flexibility, was always a goal in industry but could not be solved without increasing costs and affecting the quality of the produces. Industry 4.0, due to the now available technologies, introduced adaptiveness but also increased the productivity and quality of the produces.

This opened a new stage that was based on industrial processes, although it deals with businesses as a whole. It introduces adaptiveness by managing the concepts and fundamentals of business functions. This allows managing the root causes of the functionality of processes to increase their productivity and quality and to ensure their reliability.

A Revolution for Growth

The evolution of IT, Internet and Artificial Intelligence finally allowed transforming adaptiveness into the 4th Industrial Revolution. Growth and business expansion is the effect produced by the introduction of this

revolution. Growth is the consequence of adaptiveness, which allows empowering customer centricity while increasing productivity and quality.

Unicist Artificial Intelligence

Unicist artificial intelligence was developed to manage adaptive systems and environments. It is a core tool when dealing with the concept of "Industry 4.0" applied to businesses.

https://www.unicist.org/conceptual-thinking/unicist-artificial-intelligence

It allows monitoring adaptive solutions by using the unicist logic that emulates the intelligence that underlies nature. It provides a tool for root cause management, unicist business strategy building and conceptual management.

When dealing with big data it is complemented with neural networks to develop reliable big data analytics.

The unicist artificial intelligence allows developing monitors to manage business intelligence, business strategy, marketing and designing business functions and business objects. It allows emulating and supporting the development of solutions in the mind of deciders.

The unicist artificial intelligence allows building monitors to emulate and develop adaptive systems in social, economic and business environments.

Industry 4.0

Adaptive solutions can only be managed by structured flexible processes with a high level of productivity and quality.

Adaptability requires managing the concepts and fundamentals of the business functions, which allow managing the root causes of market behavior, the root causes of businesses processes and the root causes of industrial processes to ensure customer satisfaction, productivity and quality.

The following technologies are part of Industry 4.0:

1) **Unicist Business Strategy:** to develop maximal strategies to grow and minimum strategies to ensure profits.

2) **Unicist Conceptual Management:** to manage businesses as adaptive systems and organize using business objects.

3) **Unicist Root Cause Management:** to manage the root causes of business problems based on the knowledge of the fundamentals of the business functions.

4) **Unicist Root Cause Marketing:** to expand markets based on the management of the root causes of buying processes.

The Unicist Approach: A Precursor of Industry 4.0

The unicist approach is based on the Unicist Theory, which introduced a paradigm shift in sciences that allowed managing complex adaptive entities, systems and environments. The multiple applications of the unicist theory allowed developing the paradigm shift in business to manage businesses as adaptive systems to generate sustainable growth.

The organizational aspects are sustained by the following discoveries:

1) The functionality of concepts as drivers of human actions.
2) Unicist Strategy, that emulates the intelligence of nature, to develop maximal strategies and minimum strategies.
3) The structure of the concepts of economic, social, political and market behavior to develop Business Intelligence.
4) Unicist Object Driven Organization, that emulates the organization of nature, to build business objects.
5) Unicist Artificial Intelligence that allows managing the root causes of business processes.

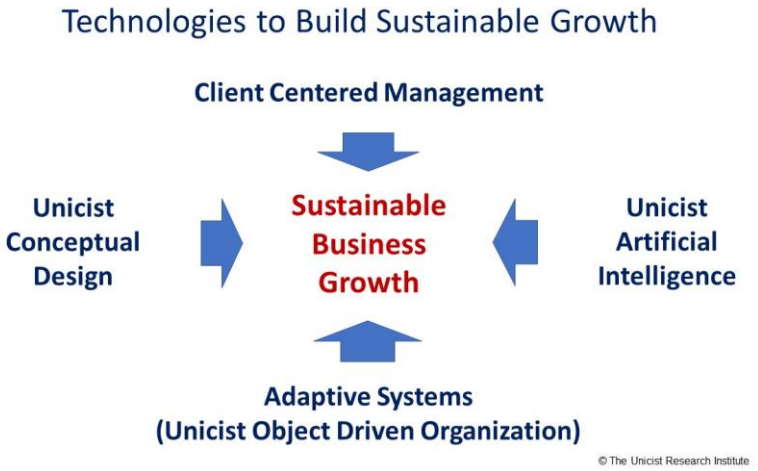
The market oriented aspects are sustained by the following discoveries:

1) The roots of human intelligence and their functionality.
2) The functionality of concepts as triggers and root causes of buying decisions.
3) The structure and functionality of collective intelligence.
4) The structure and functionality of marketing objects.
5) Unicist Artificial Intelligence that allows managing the root causes of buying processes.

The unicist paradigm shift was developed at The Unicist Research Institute, which has been, since 1976, a pioneer in complexity science re-

search, that is fully focused on developing solutions to deal with adaptive entities, systems and environments.

The focus on sustainable growth drove to the development of the Unicist Conceptual Management approach to manage businesses as adaptive systems. It allows introducing the concept of Industry 4.0 and applying it beyond productive processes. Unicist Conceptual Management was developed to manage sustainable growth.

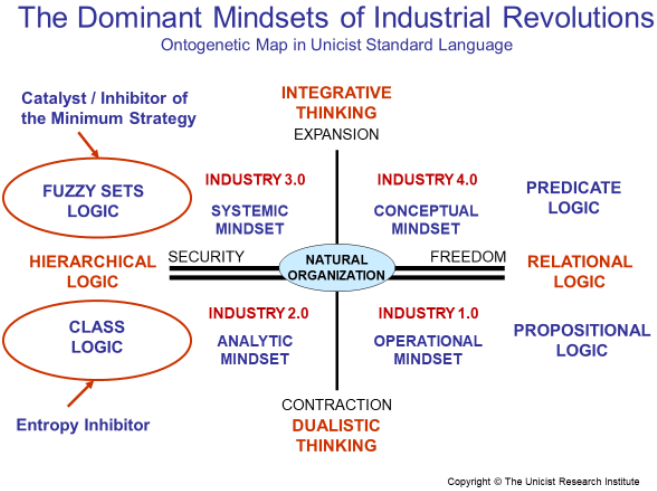


Considered from the point of view of the industrial process maturity it requires the use of:

- **Client Centered Management** to ensure customer orientation, value generation and results.
- **Conceptual Design** to manage the unified field of business functions and define the functionality of the adaptive systems.
- **Unicist Artificial Intelligence** to manage the dynamics and evolution of adaptive systems.
- **Unicist Object Driven Organization** to install business objects, working as adaptive systems, within the business processes to increase their productivity and quality.

Industrial Revolutions and Mindsets

Industrial Revolutions foster and establish dominant mindsets to fulfill their purposes. These mindsets include the preceding mindset as complementary approaches.



Operational thinking is the dominant mindset in the 1st Industrial Revolution. Mechanization requires operational thinking and the solutions provided by this stage deal with the operation of things.

Analytical thinking is the dominant mindset in the 2nd Industrial Revolution. The analytical approach allows managing mass production in a meaningful way by dividing these masses into manageable entities.

Systemic thinking is the dominant mindset in the 3rd Industrial Revolution. Automation requires envisioning the unified field of the operation and its components in order to build the automated processes.

Conceptual thinking is the dominant mindset in the 4th Industrial Revolution. The Industry 4.0 stage is based on improving the adaptiveness of processes by being fully consumer/user/buyer oriented, increasing the

productivity, which implies improving the cost-value relation and increasing the quality to become fully reliable.

The Unicist Logic to Deal with Adaptive Environments

The unicist logic is an emulation of the logic that underlies nature that allows understanding and managing adaptive systems and environments. It has to be considered that systems are adaptive when their produces are feedback dependent.

This logic allowed defining the structure of the concepts and fundamentals that define the root causes of the functionality of adaptive systems making them reasonable, understandable and predictable.

The resulting artificial intelligence allows ensuring the results of adaptive systems and provides the conceptual structure of business functions, of business scenarios and for big data analysis.

Thus, the unicist logic provided the structure to define, design and manage adaptive processes and the necessary knowledge of the concepts and fundamentals that underlie business functions. This ensures the adaptive behavior in markets which naturally generates growth.

The Unicist Paradigm Shift: The DNA of Businesses

The Unicist Paradigm Shift in Business establishes the framework of the unicist approach to the 4th Industrial Revolution. It defines the different technologies and methodologies to be used to manage businesses as adaptive systems.

The discovery of the intelligence that underlies nature allowed emulating it, emulating its organization and emulating its evolution.

This drove to the discovery of the structure and functionality of concepts and fundamentals that drive human behavior and underlie things which define the root causes of adaptive environments.

This structure of concepts defines the DNA of organizations and adaptive systems that allowed managing the root causes of their functionality.

This upgraded business management, introducing a new stage in business diagnostics, future research, business strategy, business architecture and applying it to business process design. This approach established the conceptual structure of Industry 4.0.

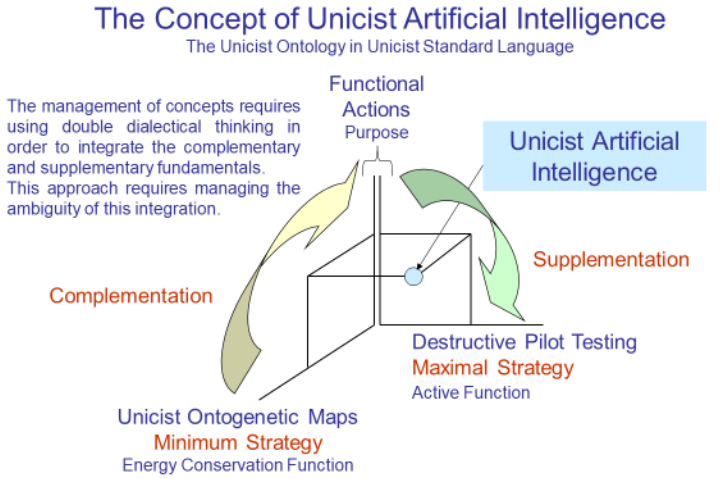
Unicist Artificial Intelligence

Managing Complex Adaptive Environments using AI

Unicist artificial intelligence was researched and developed to manage complex adaptive systems and environments dealing with the root causes and root drivers of their functionality. It is a core tool when dealing with the concept of "Industry 4.0" applied to businesses.

Complex adaptive environments or systems have open boundaries, which hinder the existence of observers because they become part of the system.

The use of unicist artificial intelligence empowers the management of systems with open boundaries by making the intelligent function become part of the systems while individuals manage the feedback working as observers. This is what has been named "deep supervised learning".



Humans cannot fly as birds". But humans learned functional flying when "lift" could be separated from "propulsion". Dualization allowed humans to fly.

Humans have a great difficulty to apprehend and deal with reality when it is complex and adaptive, because they are part of it and cannot observe it.

The management of complex adaptive systems became possible due to the dualization of the management of the ontogenetic maps of reality and the feedback obtained through pilot testing in the real world.

While the management of the ontogenetic maps allows understanding the underlying concepts, the application process of the pilot tests allows learning from the feedback until the actions become fully functional.

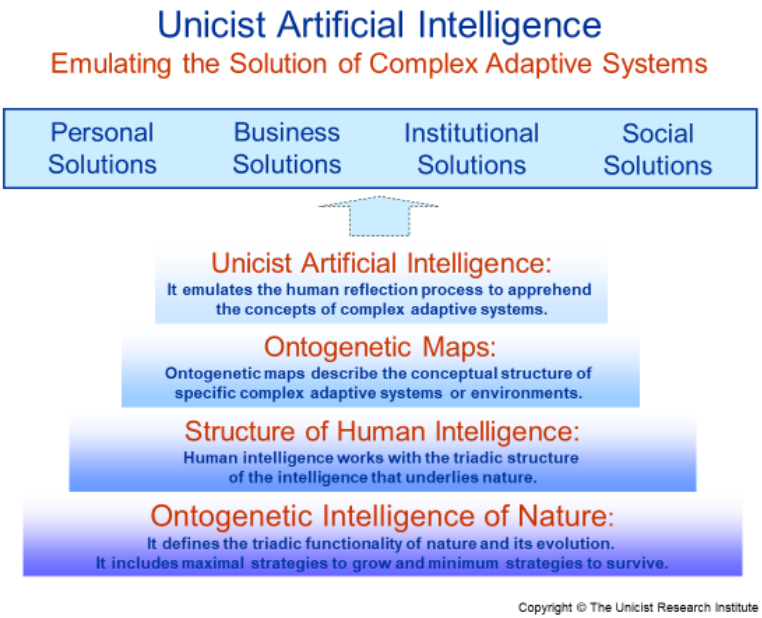
The Basics Behind Unicist Artificial Intelligence

Unicist AI allows monitoring adaptive solutions by using the unicist logic that emulates the intelligence that underlies nature. It provides a tool for root cause management, unicist business strategy building and conceptual management.

When dealing with big data, it is complemented with neural networks to develop reliable big data analytics.

The unicist artificial intelligence allows developing monitors to manage business intelligence, business strategy and marketing and designing business functions and business objects. It also allows managing the root causes of business processes and emulating and supporting the development of solutions in the mind of deciders.

The unicist artificial intelligence allows building monitors to emulate and develop adaptive systems in social, economic and business environments.



Unicist Artificial Intelligence: An Emulation of the Intelligence of Nature

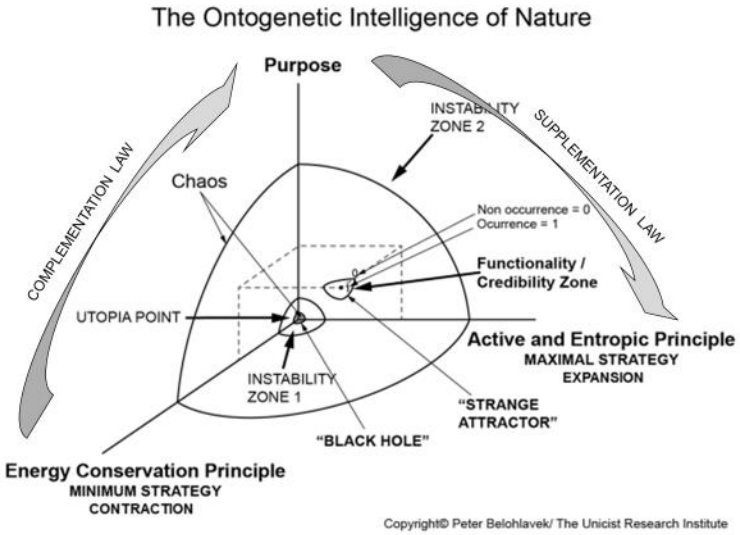
Unicist Artificial Intelligence is based on the ontogenetic maps of the functions of the adaptive systems or environments that are being managed.

These ontogenetic maps describe the underlying concepts and fundamentals that define the root causes of the functionality of an adaptive system.

They are an emulation of the triadic ontogenetic intelligence of nature and define the structure of the unicist artificial intelligence.

In the human brain, the knowledge of concepts and fundamentals is stored in the episodic, procedural and semantic long-term memory and their use is triggered by the conceptual short-term memory. The unicist

artificial intelligence emulates this process by storing the information in an intelligent knowledge base.



This intelligence is structured by the unicist logic, that emulates the intelligence of nature, and establishes the rules of the functionality and evolution of the ontogenetic maps, which define the unified field of the adaptive system, including the restricted and wide contexts.

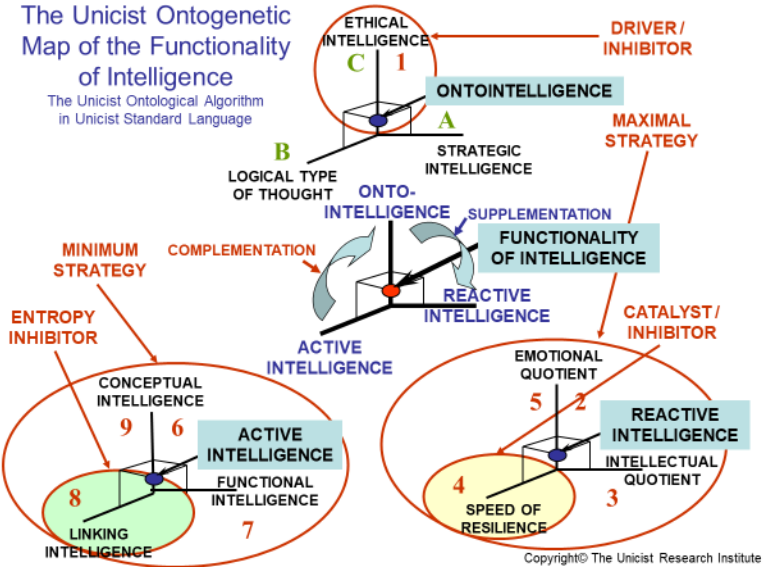
Emulating the Structure of Human Intelligence

Human intelligence works with the triadic structure of the intelligence that underlies nature.

The adaption process of humans is sustained by the ontointelligence that drives the intentions of individuals, the reactive intelligence that drives the reactions of individuals to the stimuli of the environment and the active intelligence that drives the functionality of the actions necessary to adapt.

The reactive intelligence is driven by the emotional intelligence that defines and controls the purpose of the reactive behavior that it materialized in rational actions driven by the IQ.

The entropy inhibitor of reactive intelligence is the capacity to overcome frustration, named "speed of resilience", that defines the timing of the actions that drive the success of the use of this intelligence.



Active intelligence is managed by the concepts individuals have that drive their actions. It is transformed into functional actions by the necessary functional intelligence while the entropy inhibitor is given by the intra-personal intelligence that allows emulating the external reality in mind.

Ontointelligence is the deepest intelligence humans have and allows apprehending the nature of things to better adapt to the environment. It is integrated by ethical intelligence, strategic intelligence and the logical type of thought.

The triadic structure of conscious intelligence integrates the ontointelligence, the reactive intelligence and the active intelligence to define, implement and monitor adaptive actions in the environment.
Learn more: www.unicist.org/conceptual-thinking/the-roots-of-intelligence

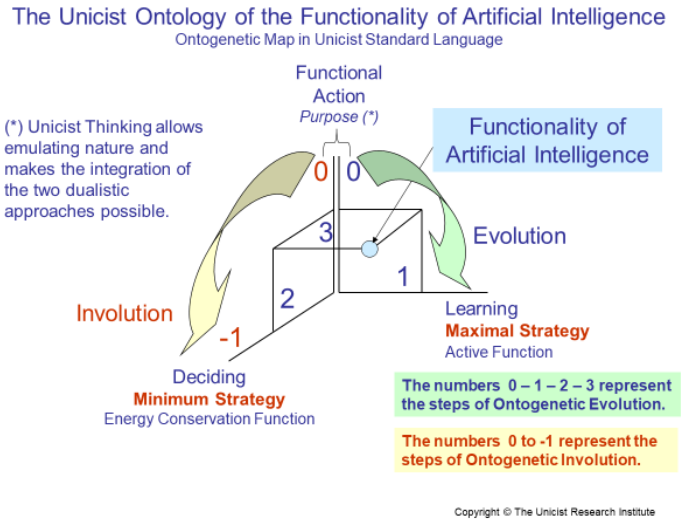
Unicist Artificial Intelligence Emulates the Human Reflection Process

The purpose of conscious intelligence is the development of functional actions that allow adapting to an environment.

The use of conscious intelligence in complex adaptive environments requires using unicist reflection to apprehend the unified field of a system including its restricted and wide contexts.

This requires an action-reflection-action process to apprehend the functionality of the system considering that the individual is part of it.

Unicist Artificial Intelligence emulates the reflection process of human intelligence requiring two functions to make this possible: The learning function and the decision function.



The **learning function** allows confirming the functionality of actions based on the feedback of pilot tests.

Learning begins when the functionality fails. The learning function drives the resilience of the system and expands its boundaries towards a better adaption to the environment.

This learning function uses the application of the ontogenetic maps and the evolution rules to define and monitor the functionality of hypothetical actions, which are monitored through pilot testing that provides the learning of the system.

The unicist artificial intelligence based learning allows building intelligent knowledge systems to manage and monitor complex adaptive environments.

The **decision making function** of a Unicist AI approach to reality, allows making automated decisions that work as conscious decisions based on the recycling though the learning function.

Artificial Intelligence: The Analogical and Homological Approaches

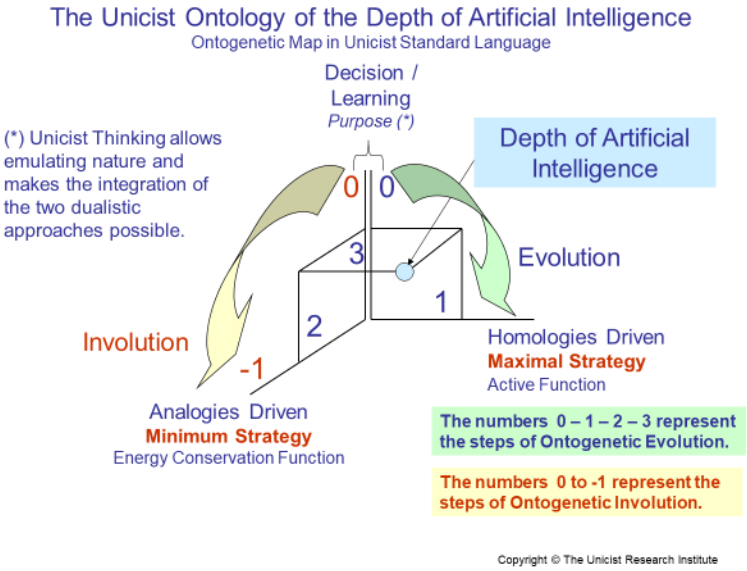
The goal of human conscious intelligence is to deal with the root causes of things to adapt to the environment. Conscious intelligence has two possible approaches: an analogical approach or a homological approach.

The Analogical Approach

The analogical approach to reality deals with the observable facts and actions that are the consequences of the underlying concepts and fundamentals that define the root causes of their functionality.

The artificial intelligence approaches that deal with observable facts and actions can only learn empirical knowledge and make analogical deci-

sions. This is an emulation of the human reactive intelligence approach that is functional when the goal is to develop operational reactions.



The Homological Approach

The unicist artificial intelligence approach is needed to manage homologies when the goal is to influence complex adaptive environments. Two entities are homologous when they share the underlying concept.

This homological approach deals with the concepts of things, which define the ontogenetic maps of the unified fields and establish the rules of their dynamics and evolution. The unicist homological approach includes the analogical approach but not vice versa.

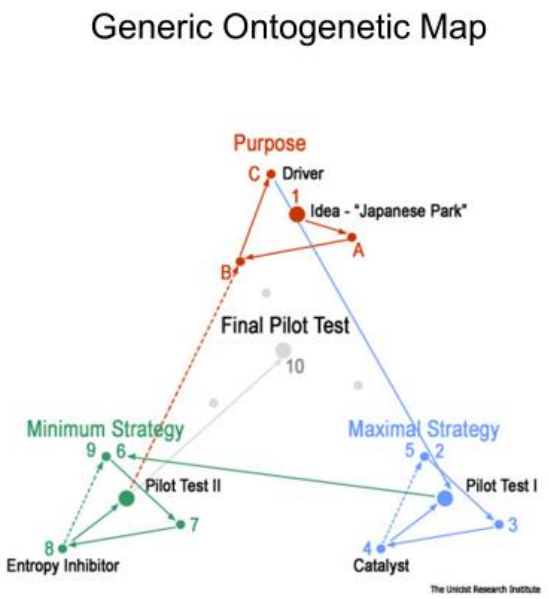
The unicist artificial intelligence is based on using a homological approach that allows defining the necessary actions to influence a complex adaptive environment and measure the consequences of these actions to learn from them.

The Unicist AI approach includes both learning and deciding actions based on a homological approach that deals with the essential concepts of functions that have been transformed into operational solutions. The feedback from the environment defines the functionality of actions or drives the learning of the system until the results become functional.

Unicist Artificial Intelligence and Ontogenetic Maps

Unicist Artificial Intelligence is based on the use of ontogenetic maps and their pilot testing process to ensure their functionality and learning.

Ontogenetic maps describe the conceptual structure of a specific complex adaptive system or environment. They define the "DNA" of a specific function by defining the concepts and fundamentals that drive the root causes and root drivers of the system.



The unicist ontogenetic maps are built using the double dialectical logic that emulates the ontogenetic intelligence of nature and its evolution.

They were developed to deal with universal solutions in order to be cross-cultural and timeless. Therefore, they need to be transformed into operational structures to deal with specific solutions that are adapted to a

specific environment. These specific ontogenetic maps are used in the development of solutions using artificial intelligence.

Therefore, the ontogenetic maps of specific functions are part of the Unicist AI Monitor. Based on the laws of evolution, that have been transformed into logical rules, they allow managing the functionality and evolution of the adaptive function they describe and define.

The Learning Process

The ontogenetic maps define the different objects that integrate the adaptive system that allow developing the necessary pilot testing process that drives the learning of the monitor.

The analogical learning is based on the learning from the observable facts. But as the Unicist AI monitor deals with homological learning, a supervised learning process is necessary to ensure the expansion of the boundaries to find solutions.

The learning process is driven by unicist destructive tests, where a solution that is initially functional is tested beyond its actual use until the expanded boundaries of this use become dysfunctional to learn the limits of its functionality.

The process needs to be restarted when the tests do not begin by being functional.

The Unicist Artificial Intelligence Monitor in Business

The Unicist Artificial Intelligence Monitor is an intelligent interface that allows organizing adaptive systems and environments and finding the root causes of their functionality.

It is based on the use of the ontogenetic maps of business functions that have been researched.

This monitor can work as an artificial substitute for the mental emulation of processes when dealing with adaptive environments. It is also a facilitator of the mental emulation of processes when human management is needed.

Unicist Artificial Intelligence emulates the human reflection process to apprehend the concepts of complex adaptive systems and environments.

The Unicist AI Monitor allows developing solutions and learning from the pilot tests of their implementation until their functionality has been confirmed.

Its intelligence allows emulating solutions based on the unicist ontological structure of business functions using the rules of the unicist double dialectical logic that allow managing the dynamics and evolution of complex adaptive systems and environments.

The monitor is an intelligent interface that defines the concepts and fundamentals of a business function as objects and establishes their relations and functionality.

The system defines the value the objects produce and establishes a pilot test system to learn from the feedback until the goal of the business function has been achieved.

The solutions are based on the ontogenetic maps of business functions that define their concepts and fundamentals. This information allows defining what is needed and comparing it with the actual state to define the actions that are necessary to achieve the established goals.

The unicist artificial intelligence allows emulating the solutions of a complex adaptive system to build structural adaptive solutions.

The use of the monitor requires managing the unicist strategy model, that emulates the intelligence of nature, to build maximal strategies to grow and minimum strategies to ensure results.

The main business applications are: Strategy Building – Business Intelligence – Business Process Management – Root Cause Management – Market Laboratories – Conceptual Design – IT Architecture Design – People Management – Business Scenario Building – Future Scenario Building – Business Education.

Unicist Logic applied to Reality

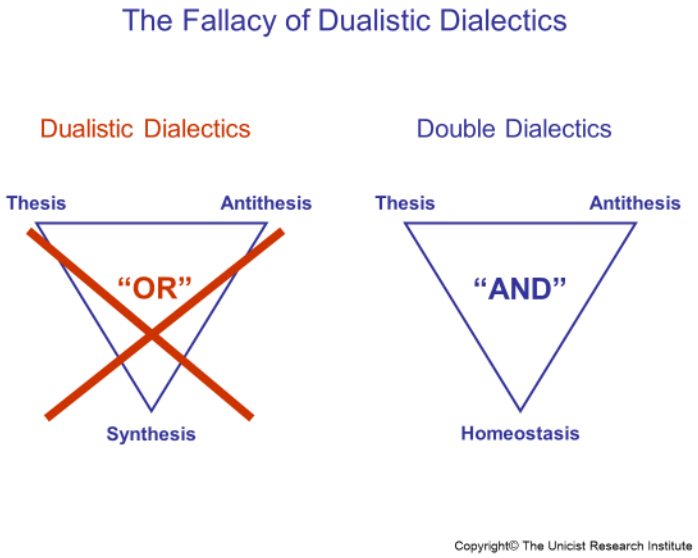
The dialectical logic of Hegel and Marx follow the natural dualistic operation of neurons (on/off). It is functional to rationalism.

The unicist double dialectical logic uses the dualistic operation of neurons to build a mental emulation of the structure of nature that allows dealing with the adaptive aspects of reality.

Unicist thinking is the name given to the process that allows building the double dialectical logic.

Unicist thinking allows emulating in mind the structure of adaptive aspects of reality in order to manage them. It provides the necessary oper-

ating system to manage adaptive systems to expand the boundaries of an activity and infer future scenarios in order to adapt.



Unicist thinking allows defining the nature of reality in a reasonable and provable way. It is based on double dialectical thinking in order apprehend nature emulating the ontogenetic intelligence of nature.

It is necessary to diagnose, build strategies and design architectures. It provides the structure to understand the fundamentals of an activity and integrate the fundamental knowledge with the technical analytical knowledge to make decisions.

The discovery of the unicist thinking approach is based on:

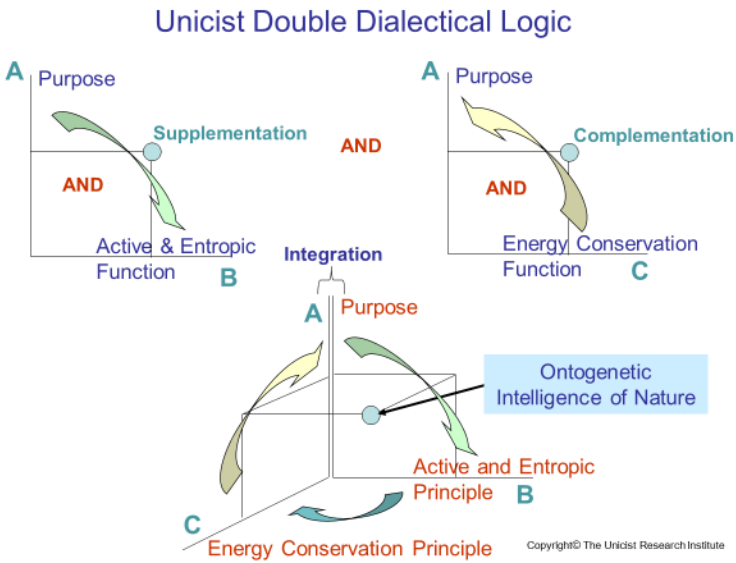
1) The discovery of the ontogenetic intelligence of nature that drives the evolution of living beings.
2) The discovery of onto-intelligence which is the human intelligence to adapt to the environment and is integrated by the

ethical intelligence, the type of thought, and the strategic intelligence.

Unicist Thinking allows emulating the ontogenetic intelligence of nature using the double dialectical thinking. It is a demonstration that the dualistic dialectical approaches that Hegel and Marx developed to explain the evolution of human behavior are fallacious.

The functionality of double dialectics

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



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

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

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

To approach a reality integrated by three elements with a dualistic mind it is necessary to consider it as a dualistic integration of binary elements. To perceive dialectics it is necessary to have a high abstraction capacity.

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

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

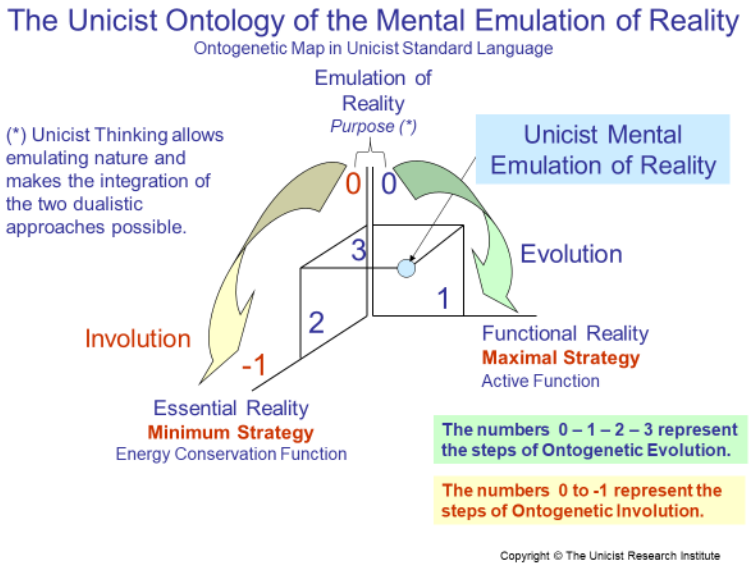
Individuals who approach reality using unicist thinking define strategies based on taxonomies and planed actions to influence the environment.

Unicist AI allows Emulating Adaptive Systems

The objective of emulating an action in mind before doing it, is to be able to have a maximal and a minimum strategy to ensure results.

The emulation process is based on apprehending the concept of the activity in order to have a behavioral object that is stored in the long-term memory to be used when necessary. It is based on the use of the unicist pilot test driven reflection process.

This reflection process is what allows emulating in mind the functionality of the actions to ensure the results.



The risk of this approach is the building of fallacious structures, which can be avoided using destructive and non-destructive pilot tests.

Therefore, the key to emulate secure action processes in mind is to be able to develop the pilot tests to ensure that the root causes of the problems are being managed.

Every person needs to imagine action processes to develop them. There are two natural approaches when a person emulates action processes in mind:

1) The use of an instinctive approach using dualistic logic.
2) The use of a conscious approach using integrative logic.

The dualistic logical approach is driven by the needs of an individual, which transform the pilot tests into trial and error processes that cannot emulate a homology of the actions to be developed and substitutes it by an analogical approach.

This approach does not allow accessing the root causes of problems or defining secure solutions.

The integrative logical approach, on the other hand, requires designing the pilot tests based on the functional aspects of reality and the essential aspects that are defined by the concepts, fundamentals and root causes of the problems.

It allows emulating the structure and content of the action processes achieving a level of reliability of results that depends on the level of emulation that can be achieved based on the functional and essential knowledge that is being managed.

The emulation needs to end as a simple system that establishes univocal cause-effect relations and actions that can be developed without needing the knowledge of the strategy behind the operational aspects of the solution.

The Basics Behind Artificial and Mental Emulation

1) **The discovery of the ontogenetic intelligence** of nature allowed discovering the concepts that underlie natural and artificial adaptive entities and explain their evolution. It provided the basics for secure strategy building and for the management of the root causes of things.

2) **The discovery of the triadic functionality** of human conscious intelligence allowed emulating nature to develop strategies to influence the environment. It provided the basics to understand and influence individual actions.

3) **The discovery of the triadic functionality of collective intelligence** allowed understanding the evolution of groups, institutions and societies. It provided the basics to understand and influence social behavior.

These basics sustain the emulation of the concepts and fundamentals of an adaptive environment that allow managing its root causes and the development of unicist strategies to ensure the generation of results.

The models that are emulated in mind

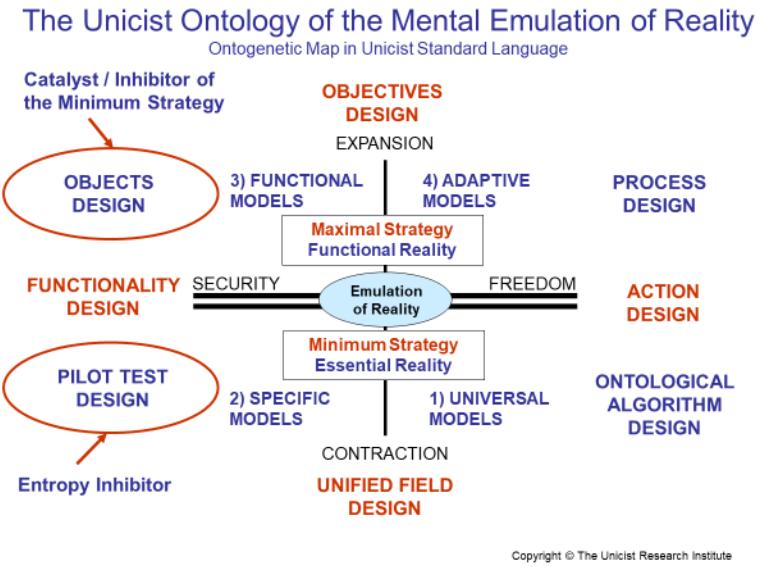
There are four types of structural models that can be emulated:

Level 1 – Universal models

Level 2 – Specific models

Level 3 – Functional models

Level 4 – Adaptive models



Level 1 – Universal models

These models define the category of an activity. They are based on the pre-concepts that are stored in mind and respond to the beliefs of the person who is emulating actions. They imply universal actions that are

fully dependent on the existence of successful experiences and their applicability. These models are extremely rigid because they have subjective empirical groundings.

Level 2 – Specific models

These models are based on the universal models an individual has in mind. They can be built when the level of consciousness of the individual allows her/him to accept that the specific characteristics of the environment might change the structure of the solution. These models are based on the development of pilot tests of the universal models that define the boundaries of their applicability. These models are generic but not universal.

Level 3 – Functional models

These models are based on the specific models an individual has in mind. They are based on the knowledge of the technical and operational aspects of their implementation that allow going beyond generic approaches and entering functional solutions. They are dominantly efficiency driven and are based on approaching processes with operational and functional objects that allow organizing processes in controlled environments.

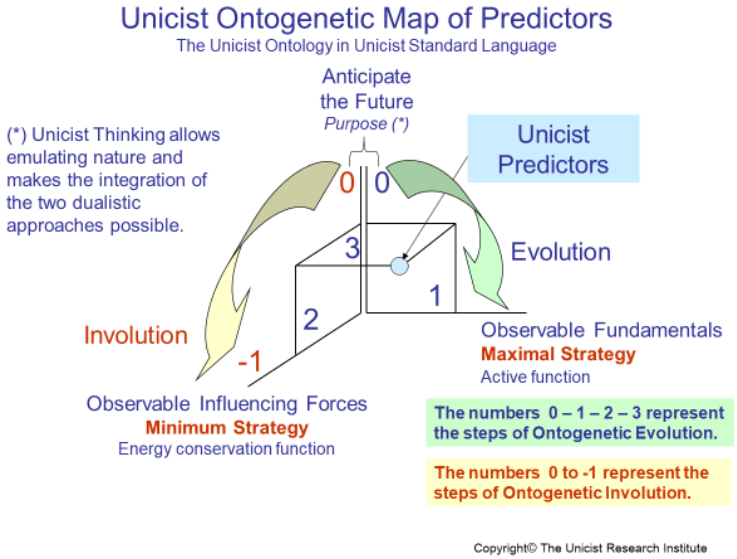
Level 4 – Adaptive models

These models are based on the existence of functional models in mind. They are based on the integration of dynamic approaches to define processes. They imply having future scenarios that allow emulating the dynamic of the processes to define an adaptive model. These models include the existence of maximal and minimum strategies for each function included in the field. They include the wide and restricted contexts and their evolution. This allows establishing a dynamic approach to reality.

Unicist Artificial Intelligence: The Use of Predictors

Predictors are signs that can be read to anticipate the future. They are ambiguous signs that require to be read considering the conditions of the restricted and wide contexts.

Predictors are observable events that make the fundamentals of specific aspects of reality observable.



The fundamentals of a specific reality are able to define a concept if there is a catalyst or a gravitational force that is influencing it.

Everyone uses predictors to interpret actions. For example, a smile is a predictor of what can be expected. Non-verbal communication necessarily includes the observation of "predicting signs" in order to act or react.

The rational use of predictors requires being aware of the structure of fundamentals that rule a given reality and the external forces of the restricted and wide contexts that influence it.

It is necessary to use predictors to deal with complex adaptive aspects of reality.

The unicist algorithms and the unicist ontogenetic maps provide the structure of predictors to be observed and measured to anticipate the future in order to react or exert influence to make things happen.

The Era of Conceptualization is Here

Introduction

The Era of Knowledge ruled the evolution of the central world for decades, almost a century, and expanded marginally to the peripheral world, except for the "emerging" countries, where it became installed. It implied the prevalence of science and technologies over ancestral cultural values.

The expansion of political democracy in the world triggered the introduction of the Era of Participation that finally exploded driven by communication technologies. Cell phones, Internet and Social Networking were the milestones of this new stage.

This explosion occurred generating immediate paradoxical side-effects. "To be liked" began to prevail over "being functional"; apparent consensus became more important than true consensus.

The generation "Y", the Millennials, is the one who pays the price of this transition which is accelerated by the introduction of artificial intelligence that gives access to infinite data and operational knowledge but requires a conceptual mind to filter this information and transform it into value generating actions.

This paradox was a parallel phenomenon to the expansion of information technologies based on the use of artificial intelligence, which triggered the development of computer games. The use of these games drove people towards a comfort zone in a parallel world, where individuals found the conditions that validated the use of addictions to find a place in the world.

All types of games became functional to have a comfortable place. Thus, participation was displaced by pseudo-participation, that required no responsibility, which degraded the functionality of the Era of Participation.

The Loss of Freedom

People became computer/technology-dependent, both in the social life and in the business life. This drove to another paradox, where people began to lose the freedom they had earned through democracy, beginning to be fully dependent of two masters:

1) The master "like", that demonstrates acceptance and recognition.

2) The master "technology", that does not require thinking before doing.

This loss of freedom expanded the segment of "over-adaptive" people who try to avoid managing the influence their culture exerts on them, to avoid assuming an adaptive role.

These people feel satisfied because of the "likes" they obtain, which work as the "Snow White's stepmother's mirror" that confirms their role.

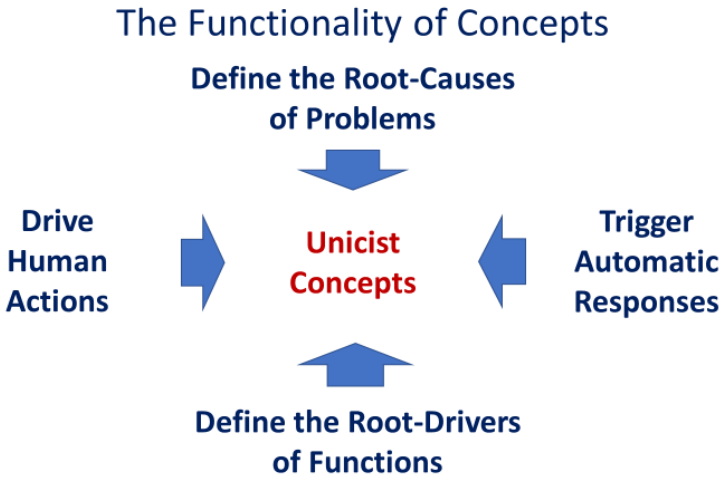
It became necessary to find a way to avoid the destruction of the values of freedom due to the dysfunctionality of the prevalence of "likes" over "functional actions".

Fortunately, a parallel phenomenon occurred that generated the birth of the "Era of Conceptualization".

The Birth of the Era of Conceptualization

The Era of Conceptualization began when individuals were able to manage the root-causes of things in order to develop structural solutions. This Era was triggered by two discoveries:

On the one hand, the discovery of the intelligence that underlies nature allowed defining the structure of the intrinsic concepts that regulate the evolution of living beings and the structure of the functional (extrinsic) concepts that define the functionality of things, which made the management of concepts possible.



On the other hand, the research on human intelligence drove to the discovery that "mental concepts" drive human actions and that the conceptual short-term memory triggers the reactions of individuals.

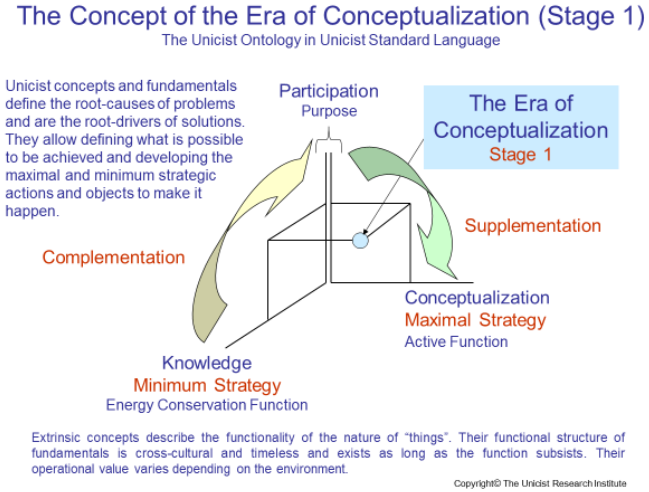
This implies that human actions follow the concepts people have. The integration of the knowledge of functional concepts and the functionali-

ty of human intelligence allowed understanding the concepts of processes that allows understanding their nature and develop structural solutions.

It has to be considered that the structure of functional concepts is cross-cultural and timeless but their functionality is environment dependent.

Conclusions

The Era of Conceptualization is the Era of functional actions that ensure the functionality of participation integrating the need of knowledge as a complement to ensure the social value of actions.

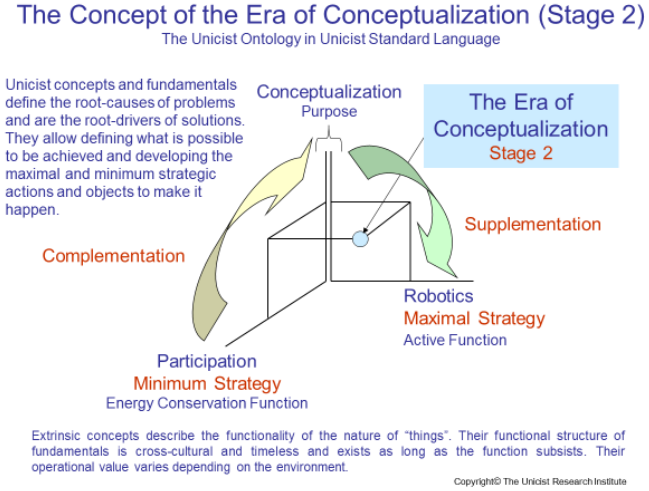


This Era separates the people who prefer to follow the "Big Brother" from those who adopt an autonomous interactive role in their environments.

It separates people who follow, judging and blaming others and the environment for what does not work, from people who use their self-criticism to make things happen.

The Era of Conceptualization sustains participation, making it functional by recovering those aspects of the Era of Knowledge, that allow people to assume an adaptive role in the environment. This Era expands the gap between adaptive and over-adaptive cultures, increasing the violence of the clash that occurs between them. It also separates the roles in micro-cultures and institutions.

The second stage of the Era of Conceptualization will be giving birth to the Era of Robotics, which has already begun in the laboratories of different countries, specially Japan and the USA. This new Era will introduce structural changes at work and in social life.



It will be based on the management of the nature of processes and will introduce robotics as the most effective way to generate reliable goods at low costs.

The Proposal

Growth is the challenge in the world to provide a safe framework for the following generations. Growth requires managing the concepts of what

is being done to ensure that it is possible and to know how to make it happen.

That is why a change in College Education needs to be promoted to go from the traditional theory-practice model, which is functional to develop tasks at an operational level, to an action-reflection-action model that allows every person to deal with the generation of value in their field of expertise.

Unicist Conceptual Management is part of the Era of Conceptualization. It applies both to personal management and to business management.

It is the synthesis of the nature of management. It includes the management of the future scenario that allows designing a strategy, the knowledge of the root-causes of problems and the root-drivers of solutions, the development of the conceptual design to define these solutions and the development of the maximal and minimum strategy actions to ensure results.

Without managing concepts, "like seeking" and comfortable "automatisms" will prevail over value generation. It is time for having the structure of the concepts of what one is doing to ensure results and to ensure being "on the same" page when things are done in teams. Our responsibility is to make this happen in our area of influence.

Future Research Lab

(*) This is a synthesis on the results obtained from the research led by Peter Belohlavek.

Annex:
Conceptualization

Conceptualization
The Pathway towards Adaptiveness

Abstract

In plain language, conceptualization implies knowing what one is truly doing having the concepts of the actions, which includes having their functional structure and being able to transform the concepts into value adding actions.

Conceptualizing implies being able to have an adaptive behavior driven by the capacity of apprehending the nature of what one is doing while being able to apprehend the operational aspects of the actions.

The discovery of the ontogenetic intelligence of nature allowed finding the roots of evolution, involution and mutation.

This intelligence drives the purpose of the living entities in nature based on an active principle that sustains growth, change and mutation and an energy conservation principle that saves energy while it sustains the purpose controlling the entropy produced by the active function.

Conceptualization deals with any proactive action in the field of adaptive behavior. That is why it applies to individual, institutional and social behavior.

Conceptual thinking is an abstract thinking process that is based on discovering the concept at an operational level, emulating their structure in mind, and transforming this emulation into value adding actions.

The research on how the human logical thinking process works, allowed defining four levels: operational thinking that deals with the "HOW", analytic thinking that deals with the "WHAT", scientific /

systemic thinking, that deals with the "WHAT FOR" and conceptual thinking that deals with the "WHY".

The objective of any thinking process is to be able to emulate in mind the models that underlie the tangible aspects of the world that can be accessed through sensory experiences. The objective of conceptual thinking is to emulate the nature that underlies specific aspects of reality in order to influence the environment.

Functional concepts are cross/cultural and timeless. They remain unchanged as long as a function exists.

Having the concepts of what one is doing allows being extremely effective and flexible. An individual can adopt new operational technologies without needing to change because the concept remains the same.

Conceptualization enhances the human condition.

Why Go Beyond Dualism?

The neural functionality is dualistic. Neurons are “on” or “off”. Dualistic Dialectics vs. Double Dialectics is the battle between the disjunction “OR” and the conjunction “AND”.

The dualistic dialectics of Hegel and Marx transformed this dualistic approach into a social myth that provided an oversimplified perception of reality and a way to influence it. Both dialectics are fallacious because they do not emulate the structure of nature.

The dualistic thinking necessarily fosters a non-adaptive behavior that is driven by idealistic, ideological, materialistic, spiritual or egocentric needs. Dualism is necessary when personal needs prevail over functional adaptation.

The consequence of dualistic thinking is that people believe in a dialectical behavior. Adaptation becomes impossible when using dualistic thinking.

But dualistic dialectics has proven to be fallacious to understand and influence evolution.

The unicist double dialectical logic allowed using the dualism of neural functionality but emulating the functionality of nature. In the short run, the benefit of using dualistic dialectics is that it transforms humans in judges of reality instead of responsible participants.

The Unicist Logical Approach to Manage Concepts

The Unicist Logical Approach was developed to deal with adaptiveness. It is necessary to emulate the dynamic structure of adaptive systems in order to influence them. It allows dealing with living beings or any complex adaptive system.

It is based on the discovery of the intelligence that underlies nature and of the roots of human intelligence which allowed discovering and emulating the structure that underlies living beings and complex adaptive systems and drives their evolution. This structure was named concept.

Concepts define the intelligence of an adaptive system and are integrated by a purpose, an active function and an energy conservation function. The active function defines the maximal strategy of an entity to sustain growth, reproduction and change while the energy conservation function defines the minimum strategy to ensure the individual survival.

The knowledge of the concept and the maximal and minimum strategies allows dealing with living beings or any complex adaptive system. The Unicist Logical Approach was developed to deal with life sciences and personal, institutional and social behavior in order to develop strategies to influence the environment.

Adopting the Unicist Logical Approach to deal with the adaptive aspects of systems implies managing their concepts and using maximal and minimum strategies. The approach to conceptual structures of reality requires going beyond dualistic thinking to apprehend the dynamics of complex adaptive systems.

The Unicist Logical Approach

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

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

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

To approach a reality integrated by three elements with a dualistic mind it is necessary to consider it as a dualistic integration of binary elements. To perceive dialectics it is necessary to have a high abstraction capacity.

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

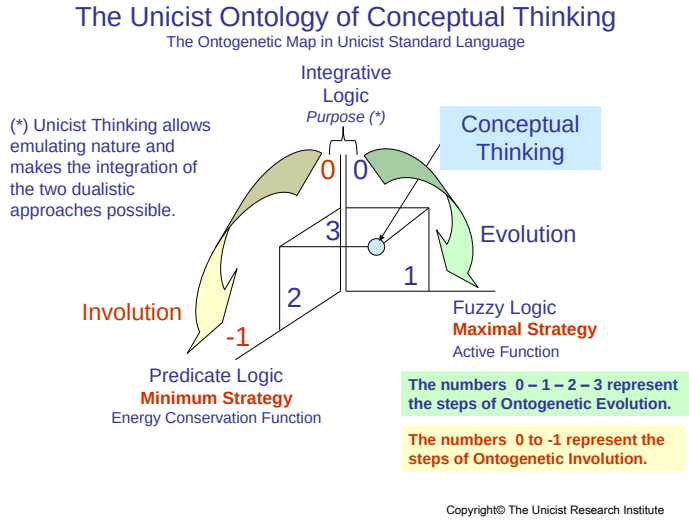
Individuals who have the necessary functional intelligence and the will to add value to an environment, and are able to see the double dialectics, develop two different actions to ensure results: on the one hand, they impulse action and on the other hand, they develop actions to inhibit entropy.

Unicist Conceptualization

Introduction: About Conceptual Thinking

Conceptual thinking is the most abstract thinking process. The research on how the human logical thinking process works, allowed defining four levels: operational thinking that deals with the "HOW", analytic thinking that deals with the "WHAT", scientific/systemic thinking, that deals with the "WHAT FOR" and conceptual thinking that deals with the "WHY".

The objective of a thinking process is to be able to emulate in mind the models that underlie the tangible aspects of the world that can be accessed through sensory experiences. The objective of conceptual thinking is to emulate the nature that underlies specific adaptive aspects of reality in order influence them.



The purpose of conceptual thinking is to integrate with the environment in an adapted way. It implies establishing a symmetric comple-

mentation which allows influencing the environment while being influenced by it.

About the Fuzzy Logical Approach

An extrinsic concept has a credibility zone that defines the limits of its functionality. The active function of conceptual thinking deals with the fuzzy aspects of reality which require accepting that there are aspects that are certain but that conceptual knowledge has a limit where it becomes false.

The approach to the credibility zone of a concept needs to be done using a "fuzzy approach". It requires knowing that at some level of the integration of the elements of a concept reality becomes "functionally absolute". This means that it produces the results in all the cases where it is used.

But the limits of the zone are fuzzy because the concept has different levels of probabilities to function when the values included are subtly changed until the change exceeds the level of functionality and the credibility zone ceases to exist. Concepts cannot be addressed without having a "fuzzy approach" in mind.

About the Predicate Logical Approach

The energy conservation function of conceptual thinking is the predicate logic that sustains the action of the purpose in order to make concepts functional.

People tend to perceive concepts as "fixed assets", as nouns. Therefore they tend to talk about concepts, on the one hand, and about the real world, on the other. A predicate logical approach is needed to perceive concepts as the "intelligence" that drives the actions of living and inanimated entities.

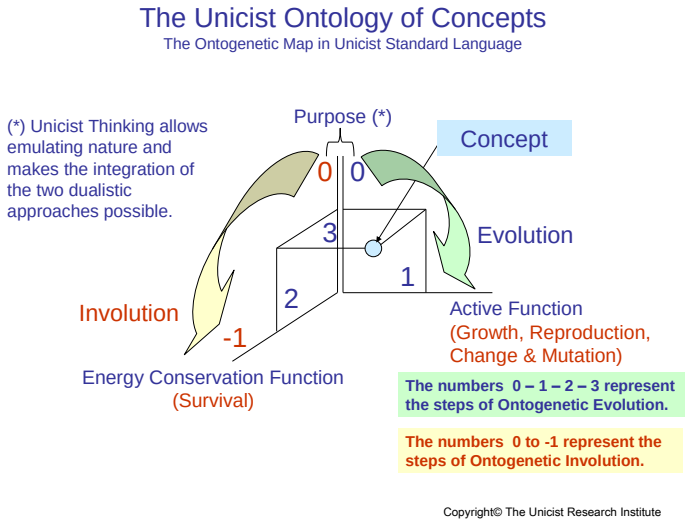
The most frequent fallacy is approaching concepts with a propositional logic approach which does not require actions.

The predicate logical approach allows dealing with the functional actions that the concept drives and the applicability of the concept itself, considering that this concept is cross-cultural and timeless. While the structure of the concept remains unchanged, its operational actions vary based on the available technologies and the culture.

The Structure of Concepts

The discovery of the ontogenetic intelligence of nature allowed finding the roots of evolution, involution and mutation.

This intelligence drives the purpose of the living entities in nature based on an active principle that sustains growth, change and mutation and an energy conservation principle that saves energy while it sustains survival and the purpose of controlling the entropy produced by the active function.



This structure that regulates the nature of living beings was named intrinsic concept and is described by a unicist ontological structure that was named ontogenetic map. In a specific living entity the active principle becomes an active function and the energy conservation principle an energy conservation function.

This structure underlies the living beings, their actions and deeds. When dealing with inanimate functional entities the concepts were defined as extrinsic because they are deposited on them by the living entities. They are also defined as having a purpose, and active function and an energy conservation function.

These concepts are abstractions that describe the essences of the functionality of an entity. When approaching the concept of an entity it has to be considered that while the active function of a concept can be observed and measured, the energy conservation can be perceived and the purpose needs to be intuited.

As the structure of a concept in its unit is a complex system that cannot be observed, the only way to confirm conceptual knowledge is by measuring the results of the actions the concept regulates. This implies that concepts can only be confirmed by the facts they produce.

Therefore the confirmation of conceptual knowledge requires forecasting the evolution several times and measuring results produced until the forecast becomes accurate and the structure of the concept can be considered as valid. We consider that five accurate forecasts are necessary to validate a conceptual knowledge.

Concepts are Homologous to Embryonic Stem Cells

Concepts describe the living creatures' essences and their evolution laws. Living creatures possess intrinsic concepts. On the other hand, inanimate beings have extrinsic concepts, which are deposited on

them according to their functionality. Concepts define the natural behavior of living creatures and their evolution.

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

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

Properties of Stem Cells and Concepts

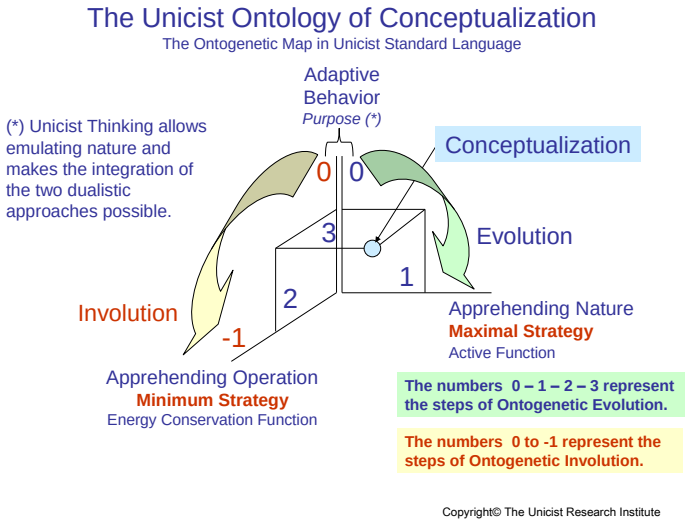
Stem Cells	Concepts
They are unspecialized	They are universal
They are capable of self-renewal	They are timeless
They can give rise to specialized cells	They allow building operational functions

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

The Unicist Ontology of Conceptualization

Conceptualizing implies being able to have an adaptive behavior driven by the capacity of apprehending the nature of what one is doing as well as the operational aspects of the actions.

Conceptualization is necessary to drive proactive actions in the field of adaptive behavior. That is why it applies to individual, institutional and social behavior. In plain language, conceptualization implies knowing what one is truly doing, having the concepts of the actions, which includes knowing their functional structure and being able to transform these concepts into value adding operational actions.



Concepts can be approached intuitively and can be approached consciously. This intuitive approach is made by recognizing a specific aspect of reality based on the preconcept one has. The first approach to a concept is necessarily intuitive.

This preconcept might be functional or stagnated. If it is functional, it allows using the feedback from the environment to transform it into a conscious concept.

If it is stagnated, it drives to innovation blindness, where all those aspects that exceed the definition of the preconcept need to be eliminated in order confirm the preconception.

Stagnated preconcepts sustain prejudices, which are fallacious myths the individual has to avoid assuming the responsibility of adapting to an environment.

In the conceptualization process, after the intuitive approach takes place, the individual needs to decide if s/he will change her/his role of observer and become a participant. The true intention of being adaptive resides on his capacity to take this role.

The extrinsic concept of an inanimated entity defines its adaptive structure. Therefore, a concept can only be apprehended by integrating the "observer" within the unified field composed by the entity and the individual, in which case the individual is transformed into a participant.

Conceptualization, from this standpoint, is defined as the conscious approach to an entity in order to exert influence in the environment. Conceptualization cannot be done as an intellectual exercise or practice. Conceptualization only works if it has been preceded by a decision to influence the environment and followed immediately by real actions to make the influence come true.

The maximal strategy of conceptualization requires apprehending the nature of the environment to define the amplitude of the credibility zone to expand the use of the concept as far as possible. The destructive tests have been developed to measure the amplitude of the functionality of a concept.

The minimum strategy of conceptualization requires apprehending the operational aspects of the entity, which require having a sound knowledge of the operation. It is based on a technical-analytical approach sustained by systemic thinking in order to apprehend the concept at an operational level.

Both destructive and non-destructive tests are needed in the conceptualization process. The non-destructive tests have been developed to confirm the apprehension of the functionality of the operational aspects within the limits that have been validated by the destructive tests.

The use of metaphors, which are universal homologies to define the nature of the concept of what needs to be done, is a natural way to confirm consensus when a group needs to share a conceptualization.

In this sense, the use of metaphors is only meaningful when individuals truly understand the metaphor and are able to make multiple essential analogies to confirm the understanding. The use of "riddles", which includes the use of metaphors that have multiple functional answers, is a way to learn to deal with the nature of entities.

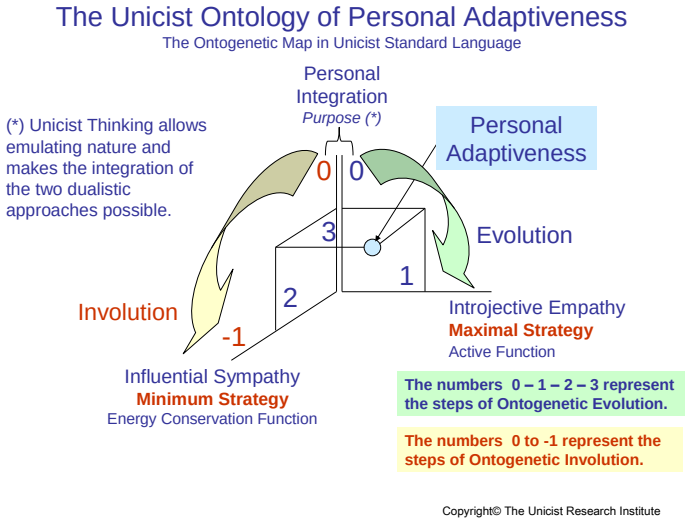
The Unicist Ontology of Personal Adaptiveness

Concepts can only be approached by people who are adaptive. As concepts cannot be observed, there is no room for observers. What can be observed are the consequences of the functionality of the concepts that regulate a living being or that are deposited on an inanimated entity.

The apprehension of concepts requires an adaptive behavior where there are no observers but participants.

Adaptiveness integrates individuals and concepts as part of the "unified field" of a solution. It requires a real adaptive personal integra-

tion with the aspects of reality that need to be conceptualized. This integration implies that the individual sees the external reality as a part of her/his "circle", which implies being integrated by the pronoun "we".



Observers cannot be adaptive because they are outside, judging the environment. Participants are those who are not outside but inside and need to have the concept that regulates the environment in order to be adaptive.

This process of personal integration requires having the necessary empathy in order to find a homology with the external reality within one's mind that allows integrating with the environment.

That is what has been named introjective empathy, which requires making a reflection process to find a homological entity "inside" that allows integrating with the external reality. An individual is able to begin to exert influence in the environment when s/he has found that s/he shares the concept of the environment.

On the other hand, an individual needs to have the necessary influential sympathy to influence the environment.

"Sympathetic resonance or sympathetic vibration is a harmonic phenomenon wherein a formerly passive string or vibratory body responds to external vibrations to which it has a harmonic likeness."

Influential sympathy implies that the individual influences the environment without exerting power on it.

Only individuals who are able to apprehend the environment based on their empathic approach and their capacity to influence without exerting power are able to adapt to it.

Personal adaptiveness allows expanding the boundaries of an individual's actions which allows her/him to be flexible.

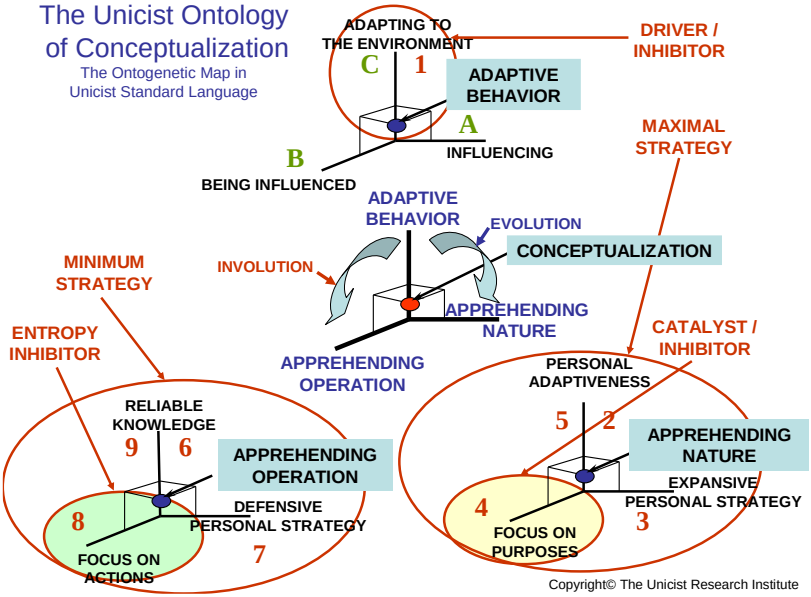
Rigidity is the consequence of being unable to expand the boundaries one has and drives naturally towards over-adaptiveness, which implies submitting, dominating or opposing to the environment.

Adaptiveness implies having a high level of consciousness in the field the individual adapts.

The Ontogenetic Map of Conceptualization

The ontogenetic map of conceptualization describes the different concepts and sub-concepts that integrate the process of conceptualizing some aspect of reality.

Concepts are only needed in complex adaptive environments where there are no univocal cause-effect relationships that can be managed with a systemic approach.



About Adapting to the Environment

Complex adaptive systems can only be influenced by having the concepts that regulate their evolution. By definition, they have (among other aspects) open boundaries and their elements are integrated by bi-univocal relationships integrated by the conjunction “and”.

As the goal of conceptualizing is to adapt to the environment, conceptualizing is meaningless when individuals do not need to adapt to the environment. Adapting, as it has been said, implies integrating with the environment to become part of it.

About Influencing

The adaptive behavior begins by exerting influence in the environment, which implies establishing a complementary relationship with

it. Complementation is what allows exerting influence in an environment without exerting power.

This complementation can be symmetric or asymmetric. Symmetric relationships are those that are established between equals and asymmetric relationships are the ones in which one of the parts has a superior level of influence than the other one.

This asymmetry can have a positive or negative slope. Being influential without exerting power requires building a complementation with negative slope in order to have an authoritative role and then establishing a symmetric relationship that makes participation possible.

About Being Influenced

The environment, working as a system, influences those who participate in it. Therefore, individuals who have an adaptive behavior necessarily need to behave within the rules of the game of the environment.

The influence of the environment naturally drives individuals towards competition. The influence of the environment fosters competition, since individuals compete with the environment in order to minimize its influence.

Competition implies establishing supplementary relationships where individuals need to be redundant with the environment while proposing a different solution in their area of influence. This competition can have a negative or a positive slope in terms of the evolution of the environment.

When individuals propose alternatives that diminish the responsibility of the members of the environment, the slope is negative and the environment is degraded. When the solution proposed simplifies the assumption of responsibilities the slope is positive and the environment evolves.

About Personal Adaptiveness

This aspect is the driver of the maximal strategy for conceptualizing. Personal adaptiveness is a condition to apprehend the nature of some aspect of reality and is naturally driven by the ethical intelligence an individual has.

The true intention of adapting is defined by the ethical intelligence an individual uses in a specific field. It drives towards the development of expansive strategies.

About Expansive Strategies

Expansive strategies are those strategies that drive actions beyond the existing boundaries of an activity. To develop expansive strategies there are two basic conditions that need to exist:

1) Have the knowledge that the environment one is expanding towards is homologous to the value propositions that are being made.

2) The existence of differentiated propositions that have more value than those existing in the environment.

Conceptualizing requires having an expansive strategic approach because it deals with complex adaptive systems, which have open boundaries that require using both a minimum strategy to survive and a maximal strategy to take advantage of the open boundaries.

About the Focus on Purposes

Focusing on purposes requires having a high level of abstraction capacity. Purposes are not observable; they underlie the actions of individuals in an environment. Personal adaptiveness needs to be sustained

by having an extreme focus on purposes in order to be able to exert influence on the environment.

This focus on adaptive purposes allows going beyond the influence that is exerted by the environment. It has to be considered that, hypothetically, the less energy consuming action is the one that is proposed by the environment. The focus on purposes proposes a superior solution for the environment that works as a catalyst for the conceptualization process.

These purposes need to have a superior functional value in order to work as a complement to the environment that fosters a positive slope for its evolution. Personal adaptiveness can be achieved when the purposes the individual focuses on, have a superior functional value.

The Minimum Strategy

The minimum strategy of conceptualization is based on apprehending the operational aspects of a specific aspect of reality. Apprehending the operation implies apprehending the system that underlies operation.

The building of a minimum strategy is an operational approach but based on apprehending its systemic structure which is based on cause-effect relationships between variables. This strategy is functional to deal with a static approach to reality within the boundaries of what is being done.

About Reliable Knowledge

Having the necessary reliable knowledge is basic to apprehend the operational concept. This knowledge requires having full technical-

analytical knowledge and having the knowledge of the fundamentals that define the limits of the problem that is being solved.

The approach based on reliable knowledge begins being hypothetic until it is confirmed by the use of non-destructive pilot tests. The knowledge begins to show its functionality when it is put into action using a defensive strategic approach.

About the Defensive Personal Strategy

Defensive personal strategies are based on developing actions to conceptualize the operational aspects to ensure results. They are driven by forward chaining driven actions that allow managing the operation of simple cause-effect relationships that ensure results using a strict control system and using standards.

The development of defensive personal strategies implies having a structural pattern driven approach that is based on the use of the patterns of the operational concepts that are used within the known boundaries, based on the knowledge where the probability of success is nearby "1".

About the Focus on Actions

Being focused on actions allows conceptualizing the operational aspects of a given reality. It requires having reliable technical knowledge in order to be able to implement adequate technologies that are available within the limits of an adequate return of investment.

The core of this process is to define the actions taking advantage of the operational concepts and the knowledge of: the "objectives to be achieved", the concept of "what needs to be done" and "how the process needs to be developed".

The full focus on actions implies that the knowledge of the concept is limited to the observable aspects and the patterns that can be identified and used. Reliable knowledge can be put into action when a defensive strategy to ensure conceptualization has been implemented and there is a full focus on actions.

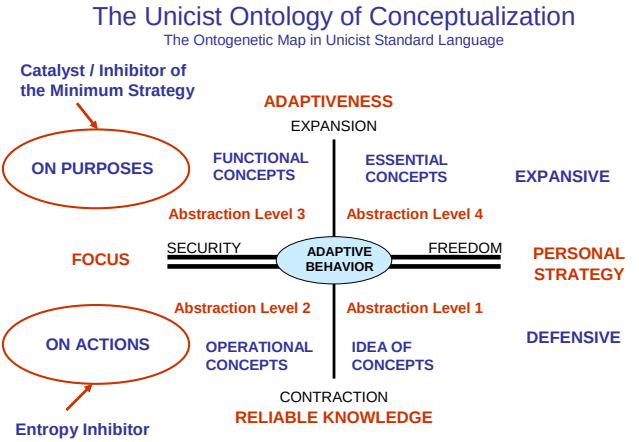
Levels of Conceptualization

Four levels of conceptualization have been defined. These levels depend on the abstraction capacity and the capacity of doing of individuals.

It has to be considered that the unicist conceptualization implies that concepts can only be accepted when they have been materialized in value generating actions.

These levels are:

1) Idea of Concepts – Abstraction Level 1
2) Operational Concepts – Abstraction Level 2
3) Functional Concepts – Abstraction Level 3
4) Essential Concepts – Abstraction Level 4



1) Idea of Concepts – Abstraction Level 1

This abstraction level requires being able to apprehend the categories of actions that are within an extrinsic concept. It requires having the necessary predicate logical and fuzzy logical approaches that allow defining the actions and being able to install them into real processes.

It requires being able to define: "WHAT" is the process?, "WHAT is the process FOR?", in order to focus on the purpose of the concept, and "HOW does the process work?", not in terms of operational actions, but in terms of categories of actions.

The idea of the concept is the first step for conceptualizing. It is based on having a sound technical-analytical knowledge and is driven by the need of ensuring results. The idea of a concept is necessary to develop a minimum strategy.

The absence of the idea of the concept of what needs to be done hinders the existence of secure operational processes that drive towards results.

The access to this level of conceptualization requires having completed the first level of the unicist reflection process.

2) Operational Concepts – Abstraction Level 2

This conceptualization level is the second level of abstraction that needs to be achieved to define operational processes. This level of conceptualization requires being able to apprehend the sub-concepts that are within the concept that is being apprehended.

These sub-concepts are more operational and make a concept "tangible". This conceptualization level is necessary to apprehend such sub-concepts using a fuzzy logical approach. This implies dealing

with diffuse boundaries that need to be apprehended to be able to emulate their functionality in mind.

The predicate logical approach allows defining the actions of these operational concepts.

The operational conceptualization is based on having a reliable knowledge of the technical-analytical aspects and of the operational processes to make the sub-concepts happen. It requires having a functional approach to reality to be able to analyze concepts.

This level is based on having an extreme focus on actions, which allows apprehending the integration of the operational emulation in mind with the real actions that happen in the environment.

The access to this level of conceptualization requires having completed the second level of the unicist reflection process.

3) Functional Concepts – Abstraction Level 3

This abstraction level requires being able to emulate in mind the functionality of an entity that is installed in an adaptive environment. It requires having an integrative logical approach to integrate the entity with the environment in which the conceptualist is included.

A high level of energy is needed in order to exert a sympathetic influence on the environment and an empathic relationship with the environment. This conceptualization level requires being able to apprehend the functional aspects considering the double dialectical processes that are implicit in the functional concept.

The adaptation capacity of the one that is conceptualizing is basic in this process. This requires having both the knowledge of the fundamentals of the environment and the technical aspects that deal with the systemic process that is included at an operational level.

It requires focusing on the purposes that need to be achieved, and not losing the focus when the functional activities expand the boundaries of the present operational concept in order to adapt to changes.

The access to this level of conceptualization requires having completed the third level of the unicist reflection process.

4) Essential Concepts – Abstraction Level 4

This level of abstraction requires having a conceptual ethical intelligence. This allows the conceptualist to be integrated in the environment that is being apprehended. The use of a mature introjective empathy and the energy of a sympathetic influence are basic conditions for this level.

It requires emulating in mind both the essential concept that is being apprehended and the restricted and wide context where this concept works. In this context, it becomes necessary to emulate the nature of reality in mind and at the same time have the capacity of transforming this abstract knowledge into concrete measurable actions.

This level of conceptualization is based on the existence of a personal expansive strategy which is based on generating value and having a high level of influence in order to be able to expand the boundaries of actions in an adaptive environment.

This level of abstraction needs to deal with the complexity of an adaptive reality, which requires being able to emulate in mind the ontogenetic intelligence of nature (purpose, active principle, energy conservation principle).

The access to this level of conceptualization requires having completed the fourth level of the unicist reflection process.

Conclusion

Conceptualization and the use of the concepts that are apprehended are a basic condition to influence adaptive environments.

This process can be accelerated by providing the structure of concepts that have been discovered which provides a guide for their rediscovery.

Another support is the use of unicist logical tools which provide the information to manage the first and second level of abstraction (idea of the concept and operational concept)

The Unicist Research Institute (TURI) has been, since 1976, the pioneer in the research of complexity where the roots of evolution and the structure of concepts were discovered. It is specialized in the research of the roots of evolution, beginning with Natural Sciences and ending with Social Sciences. In the business world, TURI developed a Root Cause Library based on the structures of concepts, which define the nature of business functions that allow managing the root causes to develop structural solutions. www.unicist.org/turi.pdf

Peter Belohlavek was born on April 13, 1944 in Zilina, Slovakia. He discovered the ontogenetic intelligence of nature that defines the root-causes of evolution. 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.
More information: www.unicist.org/peter-belohlavek.php

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