

*Unicist Conceptual Anthropology*  
*A Complexity Science Approach*

**Future Research**

# **The 20-Year Future Scenario of Adaptive Leadership**

Conceptualization: the Core of Adaptive Leadership



**The Unicist Research Institute**  
Pioneers in Complexity Science Research since 1976



# The 20-Year Future Scenario of Adaptive Leadership 2017 - 2037

## *Conceptualization: the Core of Adaptive Leadership*

*In April 2011 the Unicist Future Research Lab began a process to define which will be the possible evolution of the types of leadership in the world. The objective of the research was to find the trends in leadership that are driven by the upgrade of technologies.*

*The unicist approach to future research applied to leadership is based on an inferences based methodology to describe possible scenarios based on the knowledge of the concept of leadership and the laws of social evolution considering the evolution of the technologies and their consequences.*

To access the basics on Unicist Future Research please enter: [www.unicist.org/sdp.shtml](http://www.unicist.org/sdp.shtml)

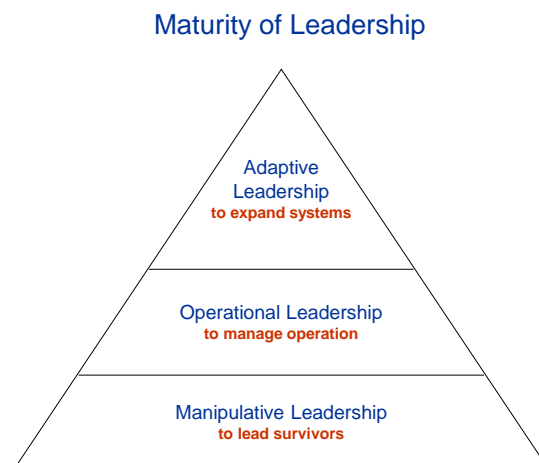
## *Trends in Leadership*

*The influence of technology generates a strong segmentation of leadership. This segmentation implies a differentiation of cultures and activities based on the dominant collective intelligence.*

*Three different levels of functional leadership are expected to evolve which will establish differentiated habits that make them work as clusters. This means that there will be dominant types of leadership based on the culture and the available technologies.*

*The three dominant clusters will be:*

- 1) Manipulative Leadership*
- 2) Operational Leadership*
- 3) Adaptive Leadership*





## *The Cluster of Manipulative Leadership*

*This cluster is functional to segments that are driven by the need of survival. This segment is based on over-adaptive behavior which implies rotating the roles of dominance, opposition and submission.*

*The acceptance of over-adaptiveness as a habit requires a strong subjective support for the participants that naturally drives towards manipulation in order to sustain the integrity of groups and avoid disgregation.*

## *The Cluster of Operational Leadership*

*This cluster is functional for the massive operational activities in all fields. It is based on the development of two alternative leadership styles: the charismatic and the authoritarian roles. These roles are functional and accepted to influence operational environments.*

*Both roles are implicitly conservative and therefore functional to lead in stable environments where there is no need for change, innovation or expansion. The integration of both roles sustains the integrity of groups and avoids disgregation.*

## *The Cluster of Adaptive Leadership*

*Adaptive leadership begins to be the "star" based on the need of assuming a role that supersedes the use of technology and allows expanding activities towards a superior level of productivity. It is driven by the need to save energy to develop sustainable groups and organizations.*

*This cluster is based on having the concepts of what needs to be done in order to use the available technologies or develop new technologies integrating peopleware with software and hardware to generate added value. They are constructive and creative leaders in their environment.*

*This role is basically occupied by doers who exert their leadership based on the functionality of their solutions and the building of peopleware to build sustainable groups and organizations.*

## Which is the Concept of Leadership?

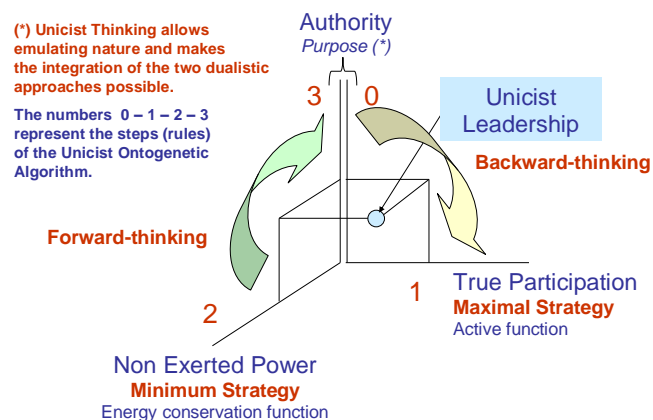
Learning about the concept of leadership provides the basics to understand the trend that is already installed in the world.

Influential leaders are doers in their field. They may be artists, football players, businessmen/women, politicians or whatsoever. Their common characteristic is that leaders need to make things happen.

The Unicist Ontology of Leadership describes the natural way an individual is able to exert leadership maximizing results and minimizing conflicts.

The Unicist Standard for leadership is based on establishing procedures to foster a leadership style that is functional to the goals that need to be achieved. Essentially, leadership implies the integration of authority, participation and power. This is self evident.

### The fundamentals of Unicist Leadership in Unicist Standard Language



But when entering in the details of the Unicist Standard, the participation implies a true participation and the power implies non-exerted power.

True participation exists when the members of a group or community assume full responsibility for the actions they are doing or proposing. True participation implies the existence of a democratic driver.

Democracy in work implies that the validity of arguments is based on their objective foundations and not on the subjective value of the individuals or the weight of the votes of a majority. Every context has a different concept of democracy and the one that prevails is the one that corresponds to it.

Non-exerted power implies that there exists a dissuasion power that is not being used. This is one of the core differentiations of the unicist standard in leadership: the avoidance of the use of power to influence a group or individual.



## Understanding the Unicist Ontology of Leadership

The unicist ontology of leadership describes the nature of leadership in order to be able to use the adequate leadership for any situation.

Understanding the nature of leadership is basic to find the natural place to develop one's activities. It also helps to understand how to influence people and how to respond to the influence of others.

### The Basics of Leadership

Leadership is based on the need to sustain one's authority. The participation of others is a condition of leadership. A leader is such because s/he is followed.

Therefore, in terms of the unicist logic, participation is the active function of leadership and the energy conservation function is given by the power a leader has to impose her/his authority. But this is a sort of paradox.

The energy conservation function is given by the power the individual "does not use". If the power is used it consumes energy and, in fact, a double amount of energy, because:

- 1) To impose something there is a need to exert power and consume energy.
- 2) When power is exerted, authority is being lost, because it means that the authority of the individual has not been accepted. And in this case, an additional amount of energy must be invested to reconstruct the value of the authoritative role.

Participation poses another paradoxical dilemma:

- 1) When the authority of the leader is extreme, for example a religious leader, the participation is not possible.
- 2) When the participation is extreme, there is no possibility to accept an authoritative role.

### The Nature of Leadership

The nature of leadership can be described using unicist logic:

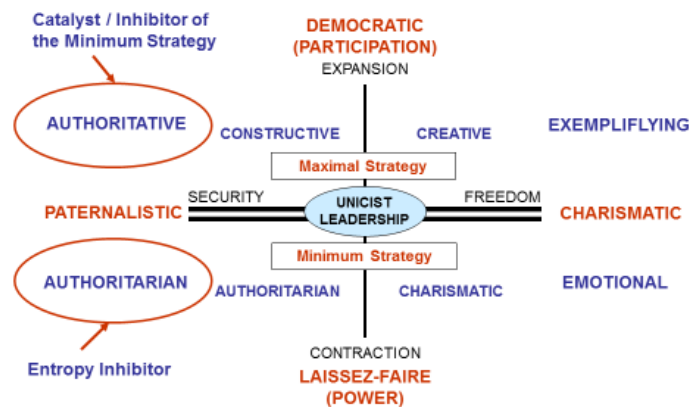
Leadership can be described using the natural structure as defined by four basic drivers of leadership:

- 1) Democratic driver
- 2) Charismatic driver
- 3) Paternalistic driver
- 4) Laissez Faire driver



## Unicist Ontology of Leadership

Ontogenetic Map in Unicist Standard Language



Copyright © The Unicist Research Institute

Democracy means consensus and/or the prevalence of a majority. Democracy implies a high level of responsibility of the members of a group. It is required that they have the necessary knowledge and awareness of what is happening in order to exert a valid decision.

Charismatic means that a leader is followed because s/he is “attractive”. Leaders are attractive because of two different reasons.

On the one hand, they are attractive because they preach by example and, in this case, people follow exemplarity. And on the other hand, people also follow those who cover their emotional needs.

Paternalistic means that the leaders represent a parental role.

The parental role can have two different aspects: the authoritative role, represented by those who have the necessary knowledge to lead and the authoritarian role, represented by those who have the power to impose their leadership.

The Laissez faire leadership implies being in power of doing what is wanted and letting others do the same.

It is the leadership role of those who are in power. It is ego and pleasure driven and supposes that what one and others want is what is necessary to be done.

## Leadership Styles

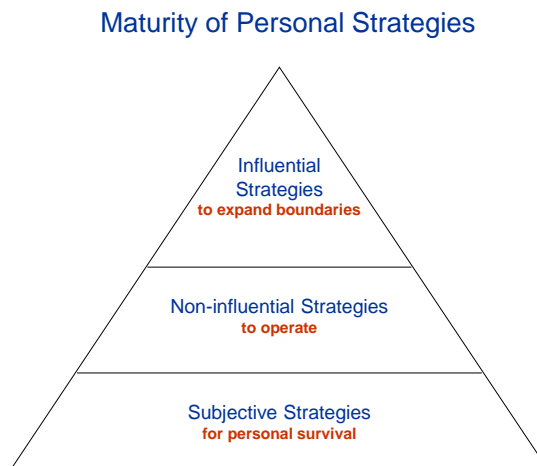
Based on the natural leading attitudes, four leadership styles can be defined:

- a) Charismatic
- b) Authoritarian
- c) Constructive
- d) Creative

## Leadership in Action

*Leadership is an adaptive role which implies that all leaders have a strategy to exert their function.*

*The success of leadership is based on the maturity of the strategies leaders have. The collective intelligence of cultures fosters three types of strategic approaches that are consistent with the corresponding leadership clusters.*



*Subjective Strategies are functional to deal with survivals and are consistent with manipulative leadership.*

*Non-influential strategies are functional to manage operational processes and are consistent with operational leadership (operational – non-influential strategies).*

*Influential strategies are functional to expand activities that allow designing expansive groups and organizations (specific – universal strategies).*

## Understanding the Nature of Strategies

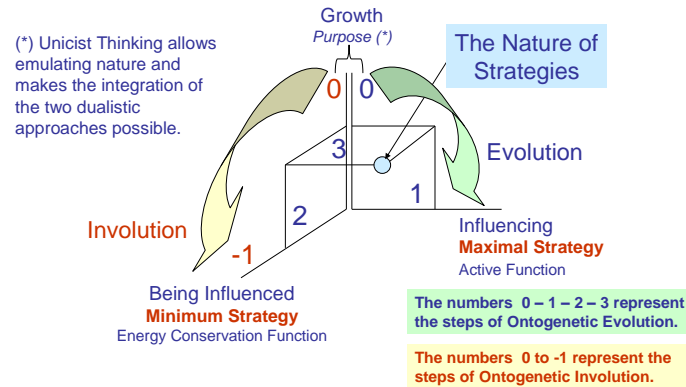
Essentially, it can be said that a Unicist Strategy is a conscious process to influence the environment in an adapted way.

This implies that the nature of a personal strategy requires an adaptive attitude in order to influence the environment and profit from it. Therefore, over-adapted people cannot develop but subjective strategies that work as anti-strategies.

It has to be considered that individuals or institutions grow if the energy they appropriate is higher than the energy they consume. That is why developing a strategy requires being able to increase the value of what is delivered while reducing the cost of producing it.

## The Concept of the Nature of Strategies

The Unicist Logical Approach in Unicist Standard Language



Copyright© The Unicist Research Institute

The purpose of developing strategies is to grow in an environment. Individuals or institutions either grow or involve.

There is no possibility of being fixed at a level because the environment is evolving and that transforms any “inaction” to remain at the same level into an involution process.

Growing requires influencing the environment to deliver something and profiting from the counterpart.

Influencing implies being able to develop an asymmetric complementation, with a negative slope, with the environment in which the strategy is being developed.

Adaptiveness requires that this influence occurs within the limits of the rules of the environment. These rules regulate both adaptive and over-adaptive aspects of the environment.

## Different Levels of Strategies based on their Maturity

Five levels of strategic maturity have been defined:

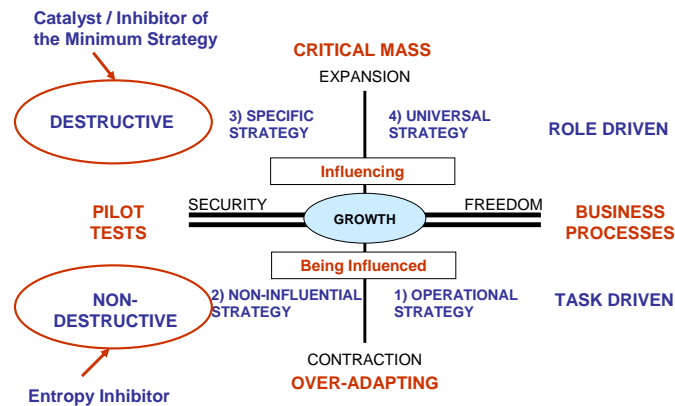
- 1) Operational Strategies
- 2) Non-influential Strategies
- 3) Specific Strategies
- 4) Universal Strategies





## The Concept of the Nature of Strategies

The Unicist Logical Approach in Unicist Standard Language



Copyright © The Unicist Research Institute

## Maximal Strategy

The maximal strategy of this approach is driven by the building of the necessary critical mass that allows influencing the environment.

The design of the critical mass, which includes defining the aesthetics of the value proposal, designing the influential process and confirming the available credibility, is the first step to be developed.

Critical mass is the minimum amount of energy that is needed to influence the environment to produce predefined results.

After this process has been designed it becomes necessary to define the roles of the business processes. Unicist Strategy is driven by the roles of the functions that are needed to achieve the critical mass.

The role driven business processes are what make the maximal strategy possible considering that each role is an adaptive system in itself that assumes the responsibility for results.

After the roles have been organized, it is necessary to develop the destructive pilot tests to confirm the limits of their functionality. Destructive tests are designed beginning with the application in known environments and expanding the use of the critical mass that has been organized beyond the known boundaries until it becomes dysfunctional.

The destructive tests can work either as the catalysts or the inhibitors of the strategy building process. They accelerate the process when their results are within the scope of what is needed. But, on the other hand, they can inhibit the process when they are not done or the results demonstrate that the critical mass is not reliable.

The maximal strategy is confirmed when these destructive tests have demonstrated that the vital space expansion, that needs to be produced, is within the limits of the available critical mass.



## Minimum Strategy

The next process after the critical mass has been proved is the confirmation of a minimum strategy to ensure survival.

This minimum strategy requires defining where the activities will happen within the rules of the environment. It requires defining the category of the business that fits into the environment.

This implies defining the processes that ensure the profit generation that is needed as part of this strategy. It requires organizing the processes based on tasks, transforming the roles into programmed work processes that allow ensuring results.

To develop the minimum strategy it is necessary to test these work processes and the results they produce using non-destructive tests.

The non-destructive tests are done to confirm the productivity and quality of the processes that were designed to ensure profit generation and results.

## Subjective Strategies

The Subjective Strategies are those strategies that are developed by solopreneurs and entrepreneurs who run a business based on their personal beliefs in response to conjunctural needs.

These are the strategies developed by “butterfly companies”, which are driven by the subjectivity of the owners. They survive based on the subjective influence the owners have in a market. Their survival is continuously endangered. Subjective strategies are sustained by the stagnant survivor’s ethics.

This level of maturity is exceeded when the subjective approach allows establishing structural (institutional) relationships with the market.



## Conceptualization to Deal with Adaptiveness

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 deal 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”.

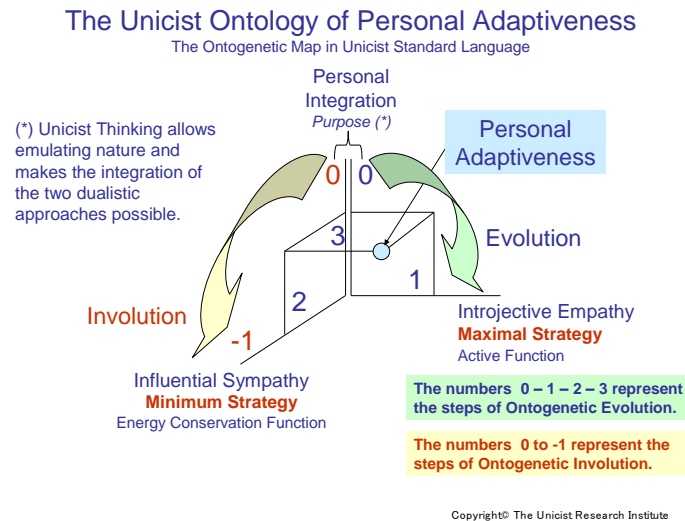
The objective of any thinking process is to be able to emulate in mind the models that underlie the tangible aspects of the world that can be accessed through sensory experiences. The objective of conceptual thinking is to emulate the nature that underlies specific aspects of reality in order to influence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

## 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 integration 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.

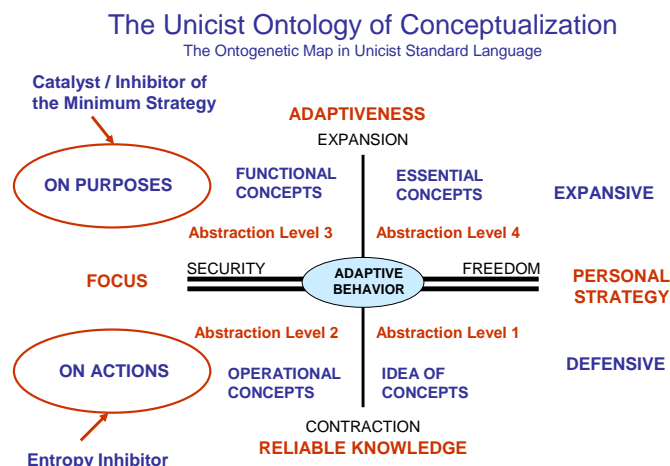
## Adaptiveness: The Era of Conceptualization is Here

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



Copyright © The Unicist Research Institute

### 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

### *Adaptive Leadership: The Next Generation of Leaders*

*In 20 years the technologies that are now incipient will have become mature and will have changed the way leaders have to exert their role.*

*Technology is making the operational aspects fully transparent, which implies the appearance of a new scenario in which there is a need of having the personal reliability and the capacity of adjusting the behavior to the requirements of the problems that are dealt with. This is the definition of adaptive leadership.*

*Conceptualizing and having a mature strategic approach are the core aspects that are needed to be adaptive. Conceptualizing allows focusing on solutions and the mature strategic approach allows transforming concepts into reliable results.*

*Adaptiveness requires having the concept of what one is doing. This concept, installed in the long-term memory allows integrating the information received from the outside and transforming it into adaptive actions within the functional concept of the situation.*

*The new role of leadership requires going beyond the “preaching by example” approach, because now it is necessary to have the concept of what is being done and have the mind open to the different alternatives the available technologies enable.*

*It implies dealing with the complex aspects that are implicit in any conceptualization and transform them into simple operational processes that can be either automated or handcrafted.*

*When dealing in developed or emergent environments, adaptive leadership needs to be focused on organizing peopleware, software and hardware using a role driven model that allows establishing responsibilities for results while the technology generates most of the operational solutions.*

*But there will be always room for operational and manipulative leadership in the world depending on the culture and type of activities. These types of leadership will remain dominant in many regions of the world.*

The Unicist Research Institute





## Annex

# 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.

Complexity is implicit in the core of the business world. Those who can apprehend it and influence the environment are successful. Those who cannot influence complexity, fail. The unicist approach is necessary for those who need to manage complex problems to transform them into simple solutions, easy to be implemented.

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 ac-



tions 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 introduction of alien educational models produces necessarily paradoxical results.

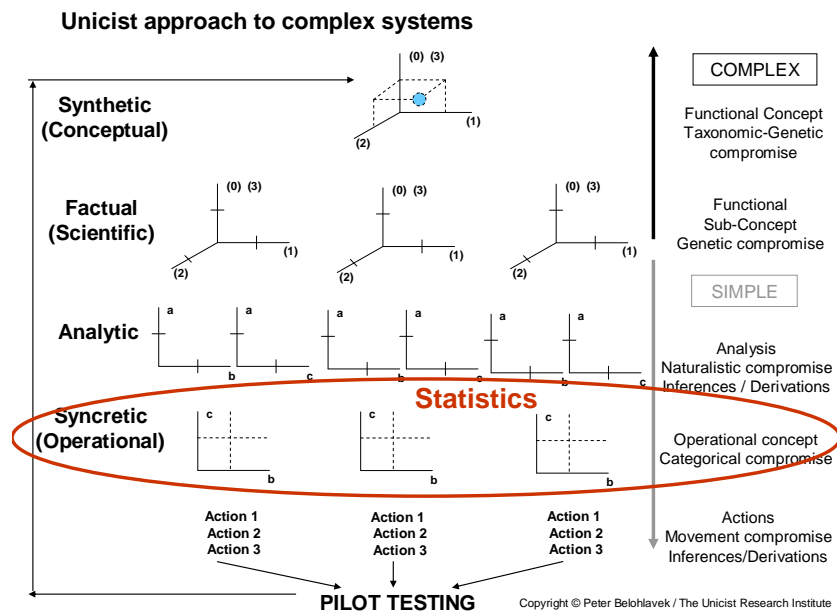
#### Businesses

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



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

<b>Aspect</b>	<b>Peter Belohlavek’s approach to Complexity Sciences (*)</b>	<b>Preexisting approaches: Bateson, Förster, Lorenz, Maturana, Morin, Prigogine and others</b>
Field of Study	Complex adaptive systems	Complex adaptive systems
Approach	Pragmatic - Structural - Functionalist	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 / undefined
Structure	Double Dialectics Dynamics Purpose - active function - energy conservation function	Variables
Relationship between the elements	Following complementation and supplementation laws	Undefined
Evolution / Involution	Based on the evolution/involution laws of the ontogenetic intelligence of nature	Undefined
Processes	Object driven processes	Undefined
Certainty	Dealing with possibilities and probabilities	Dealing with probabilities
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, inhibiting, entropy inhibiting, catalyzing and gravitational objects.	Based on actions
Validation	Destructive and non-destructive tests (real applications)	Systemic research validation methods