Complexity Sciences

Future Research

The 10-Year Future Scenario of Global Consumer Markets

The reach of one's globalization is defined by the limit of the pronoun "WE"…

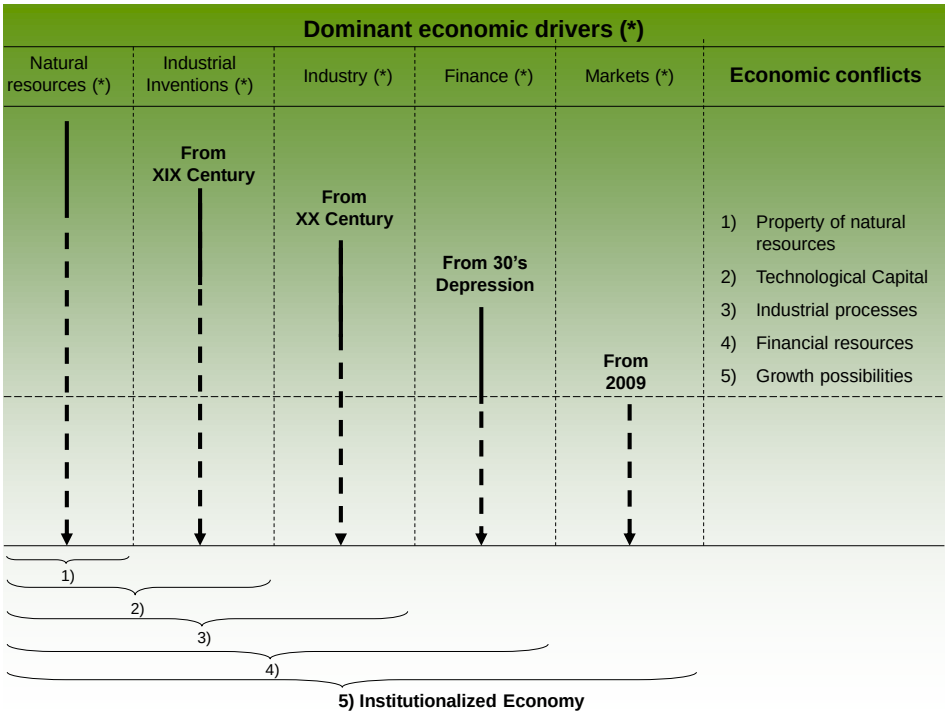
The Unicist Research Institute
Pioneers in Complexity Science Research since 1976

The 10-Year Future Scenario of Global Consumer Markets 2018 - 2028

This is a synthesis of the future scenario development, led by Peter Belohlavek, that was triggered by the research on global behaviors www.unicist.org/research_project3_en.pdf and was upgraded due to the stagnation of the growth of countries in the EU since 2008. It included the following countries: Argentina, Australia, Brazil, Canada, Chile, China, England, France, Germany, India, Japan, Mexico, Spain, Sweden, USA and Venezuela. To access the basics on Unicist Future Research please enter: www.unicist.org/sdp.shtml

Consumers and clients were the victims of the XXth century

The XXth century was strongly influenced by the battle between capitalist consumerism and communist anti-consumerism. Paradoxically, both positions are the two faces of the same coin: the transformation of consumers into survivors which drove them towards over-adaptive behaviors and addictions.



Ideologies prevailed over functional behaviors. Capitalism used the myth of "design globally, operate locally" to justify their actions on markets while Communism brought about the theory of the "Superior Human Being" in order to justify their lack of productivity.

Consumers paid the bills which drove to side effects that were extremely functional for this period while the understanding of the functional needs of consumers was left aside and money driven or ideology driven manipulation prevailed.

The lack of knowledge to develop an empathic relationship with consumers inevitably made materialistic or ideological justifications prevail in decision making. The less an individual knows about the true drivers of consumers' behavior the more he needs to use manipulation to influence.

The knowledge of the drivers of buying decisions and the possibility to develop predictive interfaces to build adaptive automation allowed leaving behind behaviorism that worked as a palliative for almost 100 years.

A turning point

This future scenario implies a turning point. It is a turning point to increase the level of empathic influence on the markets in order to increase the adaptiveness of commercial processes.

Paradoxically, this turning point is a consequence of the same drivers that led to the stagnation which now triggers the next step. This next step appears in a context of new technologies that allowed the development of automated adaptive solutions to build empathic approaches with consumers.

The drivers to the turning point were:

1. Growth stagnation
2. Unemployment
3. Financial crises and the change of the role of banks as monetary circulation administrators
4. The massification of social virtual networks
5. The massification of personal communication
6. The increase of individualism

The new technologies that made the turning point possible were:

1. The discovery that in nature there only exist stable relationships based on complementation and supplementation opened a new perspective on the management of complex adaptive systems. It allowed managing the integration between consumers, products and providers, and confirming the validity of mathematic analyses of consumers' behavior when complementation or supplementation had been confirmed.
2. The discovery of the double dialectical logic that allows emulating the dynamic of consumers' behavior.
3. The development of commercial, semiotic and semantic objects to build empathic relationships with consumers.
4. The discovery of the drivers of consumers' actions that allowed developing the functional, psychological, conceptual and lifestyle segmentation.

5. The development of adaptive automated IT solutions to manage markets
6. The discovery of behavioral predictors and the development of predictive interfaces for IT solutions.
7. The use of structured commercial communities.

What will have happened within the next 10 years?

The following aspects will be the standards in consumer market management within the next 10 years:

1. The segmentation of potential customers – including the hard, functional, psychological, conceptual and lifestyle segmentation – will have been used as a standard based on observable predictors to influence consumers with a more empathic approach.
2. Cross-cultural segmentation will have been used to manage adaptive empathic influence worldwide.
3. Object Driven Marketing will be a standard marketing approach.
4. The use of commercial catalysts will have been applied in all the cases where they work.
5. Client Centered Management and Object Driven Organization will have become standards in business architecture.
6. Co-marketing and commercial alliances will have been multiplied
7. Brand management will have become significantly more important to build product/service synergy.
8. Hyper-segmentation will have been used in all those niches where there is no direct relationship between the value of products and their variable costs.
9. The social networks will have become a commercial channel for complementary and supplementary products/services
10. The aesthetics of products/services, in the sense of completing clients' needs, being desirable, harmonic and having unreachable aspects, will be the exclusive trigger to access the mind of the consumer.
11. Customer Relationship Management Systems will have become adaptive automated solutions.
12. Market Labs will be regularly used to monitor markets using predictive interfaces.

"Empathic adaptiveness is the name of the new era"

The paradoxical results of behaviorism

Behaviorism (John B. Watson) can be considered perhaps the earliest approach to complexity science considering human behavior as a complex system where the unique results subject to measurement are the observable behaviors of individuals. It was a functional palliative for empathic adaptiveness for almost 100 years.

The use of behaviorism to define adaptive actions to markets drove to the development of hard segmentations that are extremely simple to measure but at the same time have only a hypothetical relationship with the true drivers of the consumer's actions. Statistics of results prevailed over the knowledge of the behavior of consumers.

A natural consequence of the use of behaviorism to segment markets, was the fact that people needed to use additional tools to influence the potential buyers. Manipulation became a professional disease of salesmen/women.

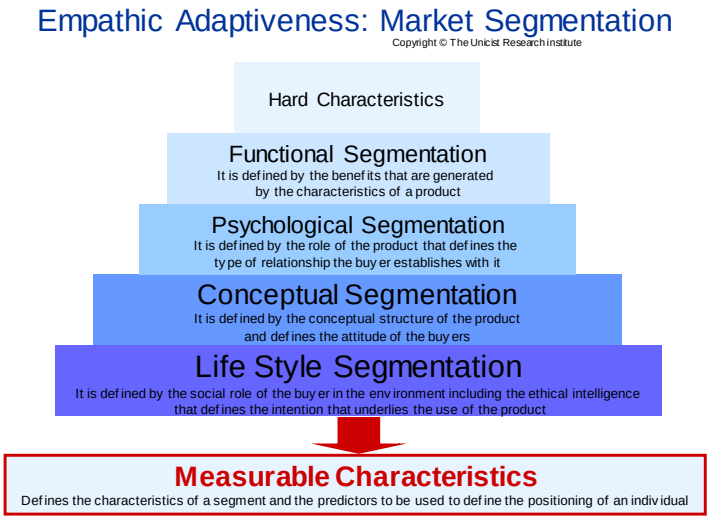
Manipulation is the palliative to avoid adapting

Thus psychopathic manipulation substituted de understanding of the buying processes transforming salesmen/women into forced manipulators because of their lack of knowledge of the buying drivers to influence the prospects.

See: http://unicist.net/economics/manipulation-is-a-long-term-business-killer

How do buying processes work?

All buying processes imply the integration of emotions (desires), ideals or limits and conveniences. This integration varies depending on the needs that are being satisfied, the characteristics of the buyer and the characteristics of the seller.



Simultaneously, there are different decision levels in the mind of the buyer. These are used consciously or unconsciously to make a buying decision.

These levels are interdependent complex systems that are integrated hierarchically and include the following aspects of the products or services: 1) the hard characteristics, 2) the functionality, 3) the role for the buyer, 4) the concept and 5) the social role.

Depending on the concept of the product/service, some of these levels can be considered as given or as limits to develop an empathic adaptive approach to the buyer. Every individual has a predefined position at each level which defines her/his segment.

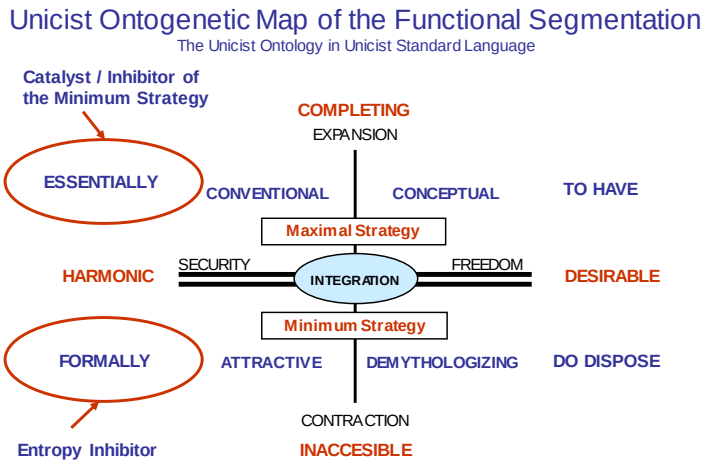
Each segment is a universe in itself composed by those people who have similar structural beliefs in a buying process. This knowledge is used to build empathic relationships to influence the buying processes.

In the following lines, you will find a description of how these segmentations work in order to be used to increase the adaptiveness of the value propositions.

There is no need to make a description of the hard characteristics of a product or service. That is why we start with the description of the functional segmentation.

Functional Segmentation

Functionality is defined as the capacity of something to fill an individual's need. Functionality is homologous to aesthetics. When talking about functionality we refer to the perceived functionality which defines what we call the hard segmentation.



The functional segments are:

Demythologizing

This segment considers the attributes of products without "anesthesia". It eliminates apparent superfluous attributes not considering any complementation.

Attractive

The "Attractive" segment buys the products/services based on their hidden inaccessible attributes that make them attractive. This segment is a buyer of utopias. It often falls in the trap of over-promises.

Conventional

This segment perceives functionality based on benchmarking. This implies a classic approach with little space for unconventional attributes. It is a segment that buys classic functionality with little sophistication.

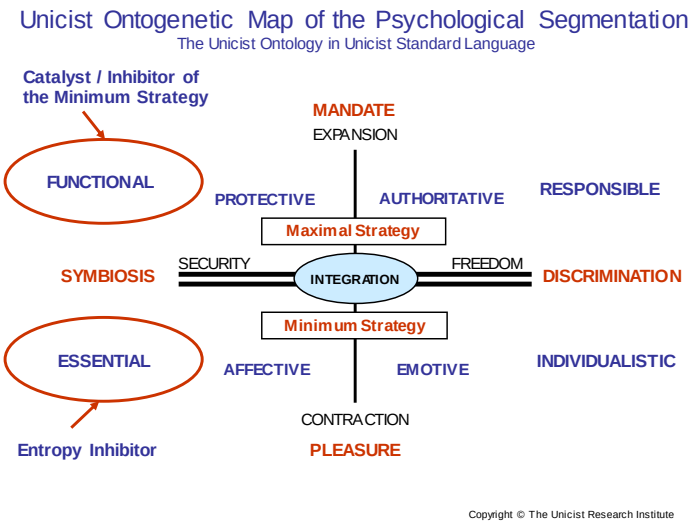
Conceptual

The conceptual segment seeks the essential complementation of the products and needs. This segment's final approval occurs when the products/services are used.

Psychological Segmentation

It is the segmentation that defines the type of relation an individual has with a product/service. An individual adapts to reality within limits. Psychology established the limits of an individual's context.

Psychology defines the personal myths of individuals. Fallacious myths produce stereotypical behaviors. True myths describe human typologies.



The psychological segments are:

Emotive

This typology establishes emotional relations with products and services. These relations are naturally unstable. When "emotive" individuals are in the expansive cycle they establish pleasure-driven relations. When they are in the contractive cycle they establish a "child-child" relation with products.

Affective

The affective typology seeks stable caring relations with products and services. There is an implicit fear of abandonment. They cannot let go. When they are in the expansive

cycle they establish interdependent relations. When they are in the contractive cycle they establish a “child-parent” relation with products.

Protective

“Protective” individuals protect the goods they buy. They care about them. When they are in the expansive cycle they establish dominant relations. When they are in the contractive cycle they establish a protective “mother-child” relation with the product. They need to possess products so they feel they are in charge of them.

Authoritative

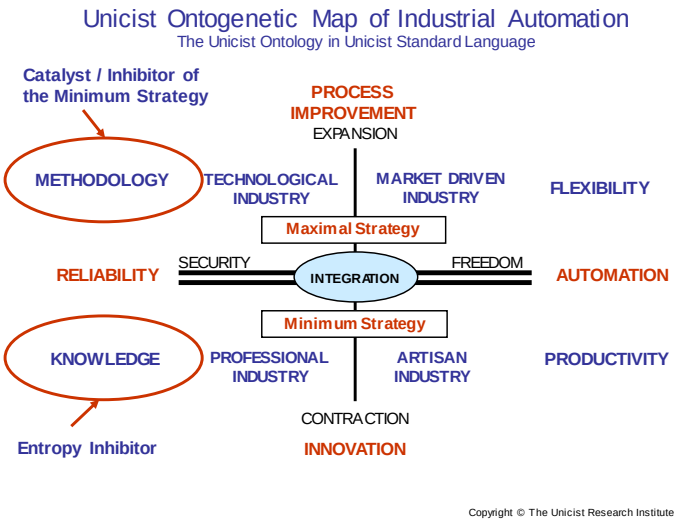
They use products and services functionally and carefully. They respect the identity of objects. When they are in the expansive cycle they establish functional relations. When they are in the contractive cycle they establish a “father-child” relation with products. They change the products/services when they do not fulfill the implicit promises.

Conceptual Market Segmentation

The conceptual market segmentation describes the nature of a product as perceived by the market. Conceptual market segmentation describes the concept implicit in a product or service, which is based on:

1. Its purpose: being the final functional objective of the product/service as seen by a user.
2. The procedure: being the verbal function that materializes the purpose in a concrete added value. This is the active function that necessarily produces entropy.
3. The action guide: being the adverbial function that limits the actions of the procedure to ensure the fulfillment of the purpose of the product. This is the energy conservation function that limits the entropy of the verbal function.

An application will illustrate this case through the conceptual segmentation of industrial process automation.



In this case, the purpose of the automation of an industrial process is defined as: Process Improvement.

The procedure or verbal function is the Automation itself, which generates entropy within this system.

The action guide or adverbial function is the Reliability of the system.

This conceptual market segmentation describes the nature of industrial process automation as perceived from its four segments: Technological Industry, Market-driven Industry, Professional Industry and Artisan Industry.

Unicist Anthropology: Lifestyle Segmentation

Lifestyle segmentation underlies human behavior. It establishes the parameters of normality and the "ethical mask" of a society.

Describing the lifestyles of a country permits establishing the limits within which segmentations can work. Only in the case of basic human needs lifestyles are not a limit but only a gravitational force.

The unicist lifestyle segmentation is analogous to the VALS segmentation of SRI. But, while VALS uses psychology to segment people according to their distinct personality traits, Unicist Lifestyle Segmentation uses unicist anthropological invariables and country archetypes to segment people.

Unicist Lifestyles

Lifestyles are the archetypical behavior patterns of a society and its members. These archetypes serve a group as automatisms to carry out the everyday activities that are functional to that society's purpose.

Hence, lifestyles are the result of the integration of a society's collective unconscious with its archetype, which define different ways of facing reality.

Archetypes resolve the weaknesses of a social group by turning uncertainties into assertive answers which guarantee the success of individual and social purposes.

An individual's lifestyle makes him acceptable and functional to the society's needs. It also allows him to find groups of identification across different cultures or communities.

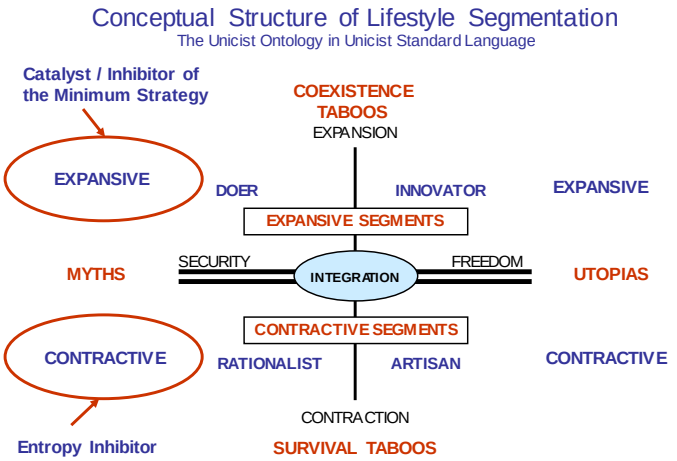
There are four main lifestyle types: "Artisan", "Rationalist", "Doer", and "Innovator".

These four lifestyles have two sub-styles:

1) One sub-style for stable or evolution stages
2) One sub-style for unstable or involution stages

Whether a society is in a stable or unstable situation or in an evolution or involution process is ultimately subjective, and results from the perception of the collective unconscious.

The lifestyle segments are:



Artisans

The Artisans live within the beliefs of a culture, relate subjectively and develop their activity based on individual efforts and significant utopias. When they are expanding, they exercise pressure to introduce new ideas within a communitarian approach. When they try to avoid contraction, they seek individual benefits.

Rationalists

The Rationalists approach reality based on judgments that make them feel dominant in their area. They are brand and image-driven and use their analytical approach to understand reality. They align based on rational ideas. When they are expanding, they align within the values of a culture. When they try to avoid contraction, they justify their individual values to adapt.

Doer

The “Doers” are driven by the values of a culture. They do what is necessary to fulfill the needs of a group. They are added value-driven and their goal is to be recognized as a VIP. When they are expanding, they add value to obtain a materialistic and spiritual benefit. When they try to avoid contraction, they add value to dominate.

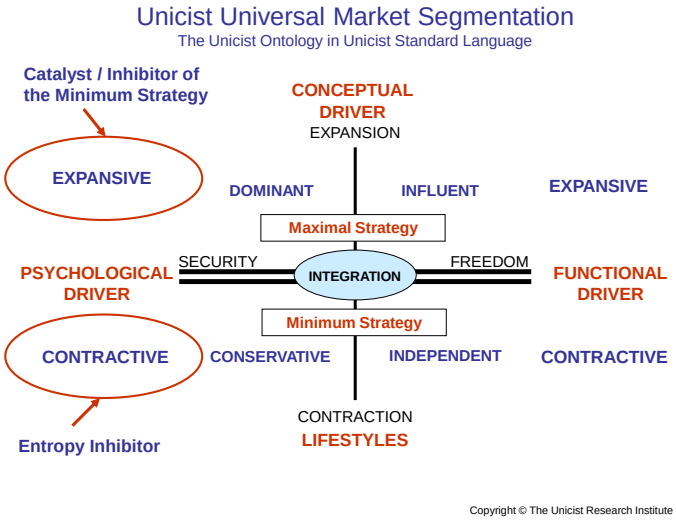
Innovators

They are driven by leading through innovation. They are risk takers and idealist. They usually try to materialize new utopias. When Innovators are driven by expansion, they

add value based on generating new ideas. On the other hand, materialistic creations are their way to avoid contraction.

Conclusion:
The Era of Empathic Adaptiveness

The use of functional, psychological, conceptual and lifestyle segmentations allows building empathic adaptive relationships with the market. There is no need to manipulate when people are understood.



The era for expansive market actions has begun. There is lots of room for small companies who do not have the capacity or possibility to expand. Manipulation will remain a natural attitude in marketing processes in spite of its paradoxical side effects.

Expansiveness implies necessarily going beyond the boundaries of the present business. It might imply expanding in width or in depth. In both cases there is a need to understand the segments that are aimed at.

This understanding implies being able to model their behavior in order to use the information to design value propositions and communication.

The understanding of the different levels that participate in a buying decision help to achieve this goal and also provides the information to build commercial, semiotic and semantic objects to influence the market.

“Design globally, operate locally” has been a motto for many years. Now it became true using segmentation and commercial, semiotic and semantic objects adequately.

This approach allows upgrading the databases by integrating universal market segmentations that allow increasing notoriously the productivity of their results.

The building of functional commercial communities is meaningless without having a true segmentation of the participants.

The 10 year Future Scenario of Global Consumer Markets,
defined as the era "Empathic Adaptiveness" is already here and has three names:
"Design, Segmentation & Adaptive Automation"

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.

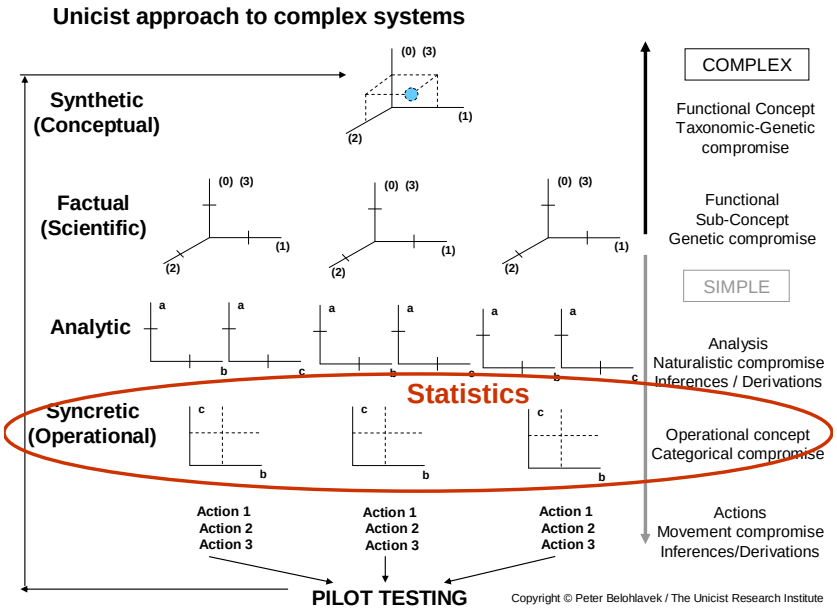
Businesses

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

Aspect	**Peter Belohlavek's approach to Complexity Sciences** (*)	**Preexisting approaches: Bateson, Förster, Lorenz, Maturana, Morin, Prigogine and others**
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