

A Functionalist Approach to Science

Researching the Functionality of the Real World

Research of the functionalist principles in
the social, economic, and business fields



The Unicist
Research Institute

Pioneers in Research since 1976

The Functionalist Principle

The functionalist principle explains the functionality of the universe and allows managing the functionality of things

The functionalist principles are based on the functionalist approach to science. Scientific knowledge is not a matter of opinion. It is true or false.

The functionalist principle defines that there is nothing in the universe, which is part of a system, that does not work with a purpose, an active and entropic function, and an energy conservation function. Their interaction defines the functionality of the binary actions that produce results.

Binary actions are two synchronized actions that, on the one hand, open possibilities establishing a functional context and, on the other hand, close processes to generate results.

The functionalist principles of things are defined by the intrinsic concepts that manage their functionality and the extrinsic concepts that manage their use. They are based on the ontogenesis of evolution that was discovered by Peter Belohlavek.

The discovery of the functional structure of binary actions made the systematic design of synchronized binary actions possible, which simplified and ensured the results of processes of any kind.

The Basics of the Functionalist Principle

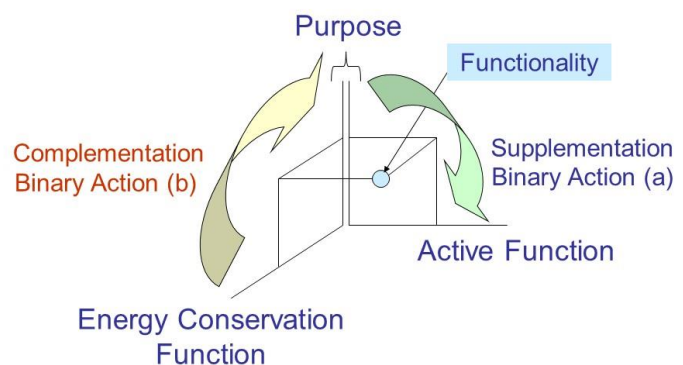
The functionalist principle defines that there is nothing in the universe, which is part of a system, that does not work with a purpose, an active and entropic function, and an energy conservation function.

These elements are integrated by the complementation and supplementation laws established by the unicist logic.

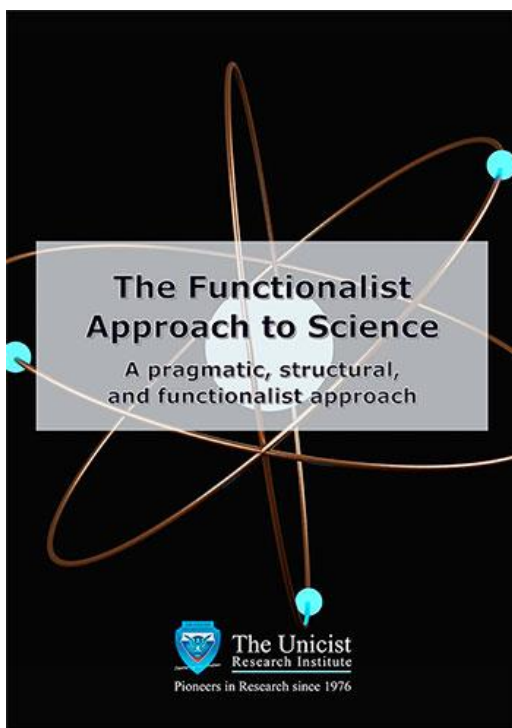
This structure works through unicist binary actions (UBA) that produce the functionality of any entity or process, whatever its kind.

The Functional Structure of Things

Ontogenetic Map in Unicist Standard Language



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The 4th Industrial Revolution introduced the functionalist approach based on managing the functionality of processes to make them adaptive. This document gives access to the basics of the functionalist approach that is necessary to manage functionality in the 4IR.

The functionalist approach to the real world is based on the unicist functionalist approach to science. The purpose of the development of the unicist functionalist approach to science and its application to the real world was to define the actions that make “things” work.

It is based on the use of functional knowledge to manage the real world that integrates the know-how and the know-why of “things”.

The Functionalist Principle: A Bridge between the East & the West

Both the Unicist Logic, which is a double dialectical logic, and the TAO deal with the functionalist principles that define the functionality of things.

As it was said, the functionalist principle defines that there is nothing in the universe, which is part of a system, that does not work with a purpose, an active and entropic function, and an energy conservation function. Their interaction defines the functionality of the binary actions that produce results.

The integration of the binary actions defined by Yin and Yang make the triadic structure of the unicist logic work. Both the TAO and the Unicist Logic explain the structure of the unified field of the functionality of a specific reality including its dynamics and evolution.

*Tao gives birth to One,
One gives birth to Two,
The Two gives birth to Three,
The Three gives birth to all things.*

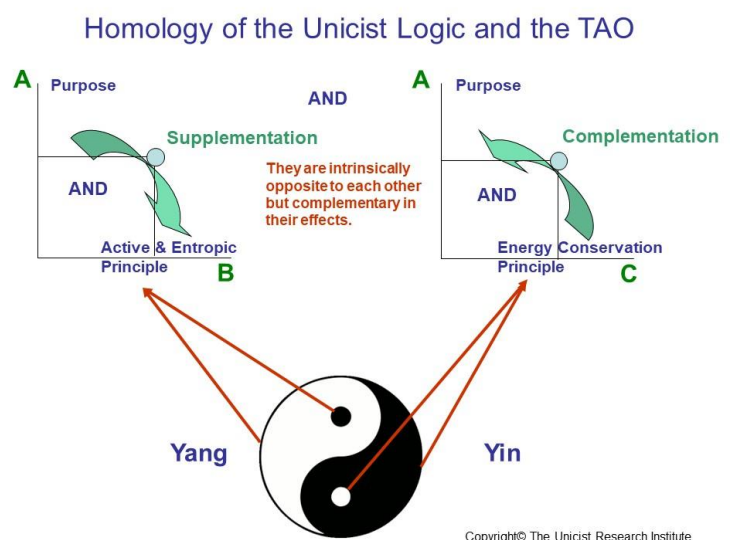
Chapter 42 of the Tao Te Ching

Both the TAO and the Unicist Logic are based on the use of the conjunction "and" excluding the use of the exclusive disjunction "or".

Yang is one of the binary actions that is homologous to the dialectics between the purpose and the active principle. It defines the active functionality of an entity.

Yin is one of the binary actions that is homologous to the dialectics between the purpose and the energy conservation principle. It defines the energy conservation functionality.

The conjunction of both actions is defined by the triadic structure that integrates the ultimate functional purpose of an entity with the active principle and with its complement, defined by the energy conservation principle.



The Unicist Functionalist Approach to Research

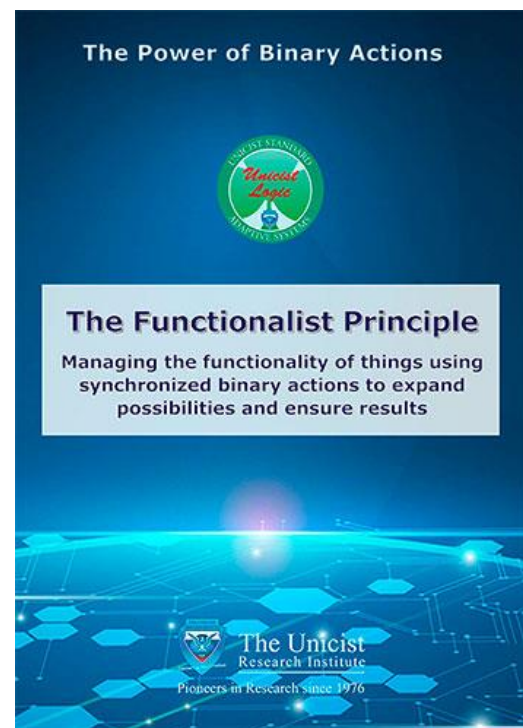
The unicist functionalist approach expanded the frontiers of sciences by defining that there is nothing in the universe, which is part of a system, that does not work with a purpose, an active and entropic function, and an energy conservation function. Their interaction defines the intelligence of things.

Paradoxically, this is a breakthrough and a back to basics. On the one hand, it is a breakthrough because it changed the paradigms of scientific research. On the other hand, it is a back to basics because it drives sciences to deal with the nature of reality.

The functionalist approach to research emulates the triadic intelligence of nature and making the scientific approach to any kind of systemic or complex adaptive environments possible.

This approach manages the functionality, dynamics and evolution of functions and processes and is necessary to:

- Research and develop the functionalist design of adaptive processes
- Research and develop strategies
- Research and develop binary actions to ensure results
- Research and develop intelligent systems and applications
- Research and develop R&D processes of products, devices, and processes
- Research and develop objects and catalysts to manage processes
- Research and develop process improvement, innovations, and changes



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The functionalist design process begins with the existence of a solution that needs to be built and ends with the installation of the solution.

The Functionalist Principles in Everyday Life

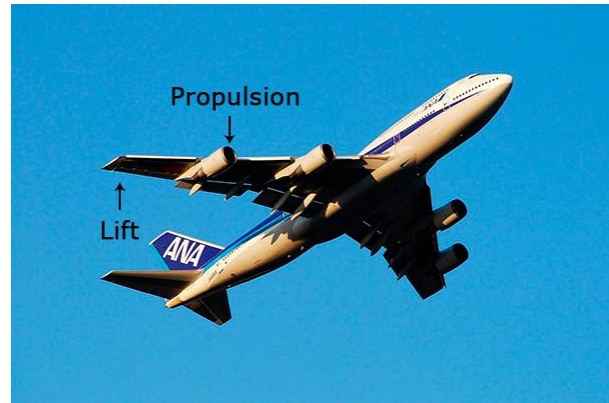
A description of the Functionality of Things

The Functionalist Principle of Airplanes

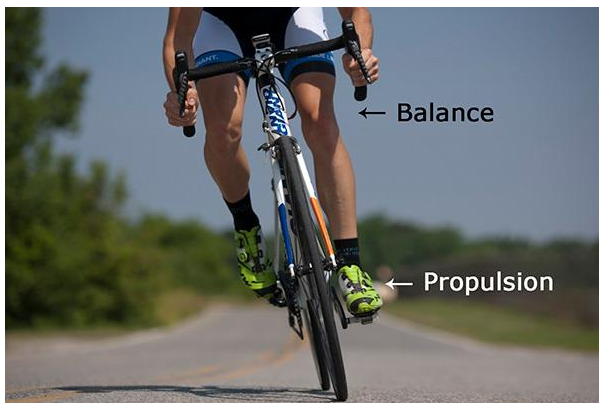
The purpose of flying an airplane can be considered to move from one airport to another.

The active function is given by the propulsion and the energy conservation function is given by the lift provided by the wings.

The binary actions to make an airplane fly begin by producing the propulsion that generates the necessary speed of the airflow on the wings of the airplane to generate the lift.



The Functionalist Principle of Bicycling



The purpose of riding a bicycle is to travel from one place to another.

The active function of the riding of bicycles is given by the actions on the pedals while the body of the rider is the energy conservation function that sustains the balance to ensure their functionality.

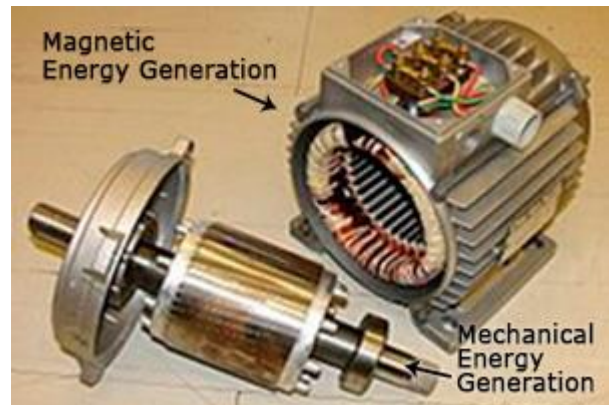
The binary actions of riding a bicycle begin by producing the propulsion to be able to balance on it.

The Functionalist Principle of Electric Motors

The purpose of an electric motor is to convert electrical energy into mechanical energy. DC motors and AC motors are based on the same essential principles that define their triadic structure.

Their active function is based on transforming electrical energy into magnetic energy. The energy conservation function transforms the magnetic energy into mechanical energy.

The binary actions of the process are, on the one hand, the transformation of electrical energy into magnetic energy and, on the other hand, the transformation of the magnetic force into mechanical energy. These processes happen within the rotor and the stator of an electric motor.



Applications of the Functionalist Principles

To experience the binary actions that make things work

Manage the Functionalist Principle of Leadership



The purpose of leadership is ensuring the authority of a leader by driving people towards the achievement of something. It applies to all kinds of leaderships, whether they are in familiar, social, or business environments.

The active function is given by the participation of the members of a group who aim at achieving their goals while they challenge the authority.

The energy conservation function is based on the non-exerted power the authority has to sustain the functionality of the participation and the achievement of goals.

The binary actions are, on the one hand, the participative activities between the leader and the members and, on the other hand, the existence of the necessary power to influence people without needing to exert it.

Manage the Functionalist Principle of Relationship Building

The purpose of relationship building is to establish a complementation between two or more people. This applies to all types of relationships, whether they are familiar, personal, business, or social relationships.

The active function of relationship building is the demonstration of the existence of a functional value, which means that the participation of the person who is building a relationship is necessary.



The energy conservation function is the existence of a personal common space that can be shared.

The binary actions of the process are, on the one hand, the demonstration of the value that is being added and, on the other hand, the finding of a personal common goal that integrates the participants.

Manage the Functionalist Principle of First Choice Marketing



The purpose of first choice marketing is to achieve the perception of superior subjective value propositions.

The active function is defined by the differentiation and the energy conservation function is given by the satisfaction of the needs of the client.

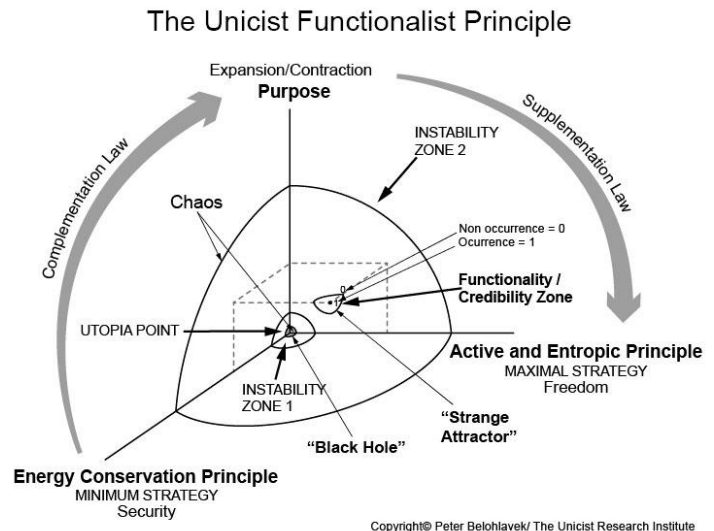
The basic binary actions are, on the one hand, generating expectations and then having fully segmented value propositions and, on the other hand, managing the differentiation of the segmented value propositions.

**We suggest that you recognize the functionality
of the binary actions you already use**

Mathematics of the Functionalist Principles

The mathematics validates the use of functionalist principles. It is provided by the mathematics of the unicist logic that allows measuring the functionality of things. It allows measuring the intrinsic functionality of things and credibility of things in the environment.

There are functionalist principles that define the intrinsic functionality of things and explain how they work and functionalist principles that define the extrinsic functionality of things that explain their use value in the environment. The mathematics of intrinsic functions defines their possibility of working and the mathematic of extrinsic functions defines the possibilities of their use.



As it can be seen on the description of the functionalist principle, it is composed by the conjunction of a purpose (P), an active and entropic function (AF) and an energy conservation function (ECF).

This implies that the mathematics that defines the functionality of something requires the multiplication of the values of P, AF and ECF. The value of the functionality of things varies between 1 and 0.

Intrinsic Functionalist Principle (IFP) = P*AF*ECF

This defines the different values of each element of the triadic structure of a functionalist principle. The values of the elements are defined by the value generated by the operational components of things.

The instability zones 1 and 2 define the influence of the wide context, which works as a gravitational force (GF) that makes things possible. The displacement of the functionality or credibility zone is influenced by the restricted context, which works as a catalyst (C) to open possibilities and accelerate processes.

$$\text{Functionality} = \text{GF} * \text{C} * \text{IFP} / \text{EFP}$$

Mathematics to measure Functionality

Measure of the Functionality of

	Substitute	Wide Context	Restricted Context	Function	Concept of the system that transforms qualitative and quantitative indicators into mathematical algorithms.
0					1 Indicator
					2
.25					3 Indicator
					4
.50					5 Indicator
					6
.75					7 Indicator
					8
1.					9 Indicator

Substitute		
Wide Context		
Restricted Context		
Function		

Contributions of the Unicist Functionalist Approach to Science

In Scientific Research - 1980: Development of a unicist ontological methodology for complex systems research, substituting the systemic approach to research adaptive systems. **2014:** The integration of the unified field of macro and micro behavior. **2015:** Development of the destructive and non-destructive tests to research adaptive environments. **2021:** Discovery of the universal functional structure of things.

In Life Sciences - 1988: Discovery of the functional structure that regulates evolution and the unicist ontological structure of living beings as a unified field. **2006:** Discovery of the unicist ontological algorithm of evolution and involution. **2008:** Discovery of the two types of integration, complementation and supplementation, of elements in complex adaptive systems. **2012:** Discovery of the unicist ontology of biological entities. **2013:** Confirmation of the unicist ontology of viruses. **2014:** Discovery of the ontological structure of chronic diseases. **2014:** Discovery of the structure of therapeutics. **2015:** Discovery of the ontological structure of health. **2016:** Development of the Scientific Foundations of Medicine. **2021:** Discovery of the unicist ontology of the DNA.

In Complexity Sciences - 1998: Development of the unicist ontology emulating the ontogenetic intelligence of nature. **2003:** Discovery of the anti-concepts that work as antimatter. **2006:** Development of objects to manage human adaptive systems emulating the structure of nature. **2011:** Discovery of the unicist ontology of complex adaptive systems. **2014:** Discovery of the behavior of objects in complex adaptive systems. **2015:** Discovery of the essential opposition but operational complementation between the active function and the energy conservation function of concepts. **2017:** Discovery of the unicist ontology that integrates the wide and restricted contexts. **2017:** Discovery of the origin of root causes in adaptive environments.

In Information Sciences - 2002: Development of unicist ontogenetic based ontologies replacing the empirically structured ontologies. **2014:** Development of unicist adaptive robotics. **2015:** Development of prototypes. **2016:** Discovery of the nature of conceptual design. **2018:** Discovery of the ontogenetic map to emulate the unified field of adaptive environments. **2018:** Development of the unicist cognitive systems. **2019:** Development of XD-Expert Systems. **2021:** Development of business cobots.

In Future Research and Strategy - 1984: Modeling of the ontological structures that allow inferring the evolution developing the ontogenetic maps of human adaptive systems. **2014:** Confirmation of the functionality of ethical intelligence in future research. **2015:** Discovery of the unicist ontology of personal strategies. **2016:** Discovery of the nature of entrepreneurial strategies. **2017:** Discovery of the double dialectical tactics. **2019:** Discovery of business catalysts.

In Logic - 1986: Development and formalization of the integrative and the unicist logic. **2013:** Functionality of Dualistic Logic in complex environments. **2013:** Discovery of the structure of aprioristic fallacies.

In Anthropology - 1986: Discovery of the "invariables" of human behavior. **1997:** Discovery of the double dialectical behavior. **2008:** Discovery of the anthropological lifestyles. **2010:** Discovery of the institutional and social viruses. **2012:** Discovery of the integration of ontogeny and phylogeny. **2012:** Discovery of the stagnant survivors' role in societies. **2012:** Discovery of the unicist ontological structure of aptitudes, attitudes and intentions. **2013:** Development of the unicist ontology of cultural adaptiveness & over-adaptiveness. **2014:** Synthesis of Conceptual Anthropology. **2014:** Discovery of the Cultural, Institutional, Individual and Social Archetypes. **2015:** Discovery of the functionality of rationalism and subjectivism as social and individual addictions. **2016:** Discovery of the nature of innovation processes. **2017:** Discovery of the context of social dysfunctional utopias. **2019:** Discovery of social catalysts.

In Economic Science - 1989: Discovery of the unicist ontological structure of Economics. **1998:** Discovery of the unicist ontological algorithm of the price elasticity of demand. **2004:** Discovery of the ontogenetic structure of economic models and their functionality. **2011:** Discovery of the ontology of currency and inflation. **2012:** Discovery of the ontology of the industrialization level. **2012:**

Discovery of the unicist ontology of the overcoming of scarcity. **2012:** Pricing of Futures and Options. **2012:** Discovery of the unicist ontology of speculative manipulation. **2014:** Synthesis of Conceptual Economy. **2015:** Discovery of the unicist ontology of economic freedom.

In Political Science - 1990: Development of the ontological algorithm and the ontogenesis and phylogeny of ideologies and their functionality. **2013:** Development of the unicist ontology of Social, Economic and Political Democracy.

In Social Sciences - 1993: Discovery of the collective unconscious and the unicist archetypes of cultures. **2012:** Discovery of the role of stagnant survivor elites in the stagnation of segments or cultures. **2016:** Discovery of the nature of social networks. **2020:** Discovery of the unicist ontology of evolutionary constructivism. **2020:** Discovery of the nature of counter cycle building.

In Linguistics - 2004: Discovery of the unicist ontological algorithms of natural, ambiguous and figurative languages and the unicist ontology of words. **2014:** Development of semantic objects. **2015:** Discovery of the ontological structure of subliminal communication. **2020:** Discovery of the unicist ontology of the evolution of languages.

In Mathematics - 1996: Development of the conceptual basis of interdependent, dependent and independent variables. **2014:** Development of the mathematical foundations of reality indicators.

In Philosophy - 1994: Development of the unicist ontology integrating philosophy, science and action in a unified field. **1997:** Refutation of Hegel's and Marx's dialectics and the formulation of the laws of the double dialectics.

In History - 2000: Development of a historical analysis methodology based on the unicist double dialectics.

In Cognitive Science - 2001: Development of a methodology to construct knowledge with existing information through an integrative logic. **2002:** Development of the unicist reflection methodology to deal with the nature of reality. **2006:** Discovery of the object driven organization of mental processes and the development of cognitive objects. **2008:** Development of the ontological algorithms of fundamental analysis. **2013:** Development of the unicist ontology of erudition and wisdom (observers vs. participants). **2014:** Discovery of the structure of the emulation of reality. **2015:** Discovery of the unicist ontology of conceptualization. **2018:** Discovery of the triadic functionality of conscious intelligence. **2018:** Development of the Unicist Artificial Intelligence. **2020:** Discovery of the Unicist Ontology of Functionalist Knowledge. **2021:** Development of the unicist theory of functionality.

In Education - 1979: Discovery of the ontogenetic algorithms of learning which has given scientific sustainability, amongst others, to Piaget. **2014:** Discovery and development of learning objects. **2015:** Development of Reflection Driven Education. **2016:** Discovery of the nature of learning by teaching.

In Psychology - 1984: Discovery of human ontointelligence to deal with adaptive systems. **2003:** Discovery of the unicist ontological structure of fallacies, the functionality of anti-intelligence and anti-intuition. **2004:** Discovery of the double dialectical thinking process. **2005:** Discovery of the unicist ontology and evolution laws of human essential complexes. **2011:** Discovery of the ontology of conscious behavior. **2012:** Discovery of the ontology of complementation of thinking processes. **2012:** Discovery of the unicist ontology of psychopathy. **2014:** Discovery of the structure of subliminal decision-making. **2014:** Synthesis of Conceptual Psychology. **2015:** Functionality of concepts as behavioral objects. **2016:** Discovery of the nature of human metamorphosis. **2016:** Discovery of the functionality of thinking processes. **2017:** Discovery of the context of personal dysfunctional utopias. **2017:** Discovery of the nature of self-criticism. **2021:** Discovery of the functionality of neurosis.

In Semiology - 2012: Discovery of the unicist ontology of semiosis as a complex adaptive system. **2015:** Development of semiotic role objects. **2017:** Development of the semiotic research groups.

Learn about The Unicist Research Institute

Since 1976, The Unicist Research Institute has been the world-leading research organization that introduced the functionalist approach to science to research and develop the functionalist principles of the real world.

The screenshot shows the homepage of The Unicist Research Institute. At the top left is the logo with the text "The Unicist Research Institute" and "Pioneers in Research since 1976". To the right are icons for Social Responsibility, YouTube, Facebook, and the Collaboration Center. A blue navigation bar contains links: Research, Academic Arm, Business Arm, Intelligent Systems, Testing Lab, Scientific Contributions, News, About us, and Contact. The main banner features a green background with a network of pink nodes and lines. It includes the text "Unicist Confederation The Business Arm" on the left, "Basic & Applied Research A Functionalist Approach to Science and Technologies" in the center, and "Unicist Corporate University The Academic Arm" on the right. Below the banner is a box titled "The Power of Binary Actions" with a paragraph about the functionalist approach. Further down are two buttons: "Translate this page" with a language dropdown, and "Search & Compare" with a "Click Here" link. At the bottom is a large red button labeled "Access the Research Center".

Websites

Research Center: <https://www.unicist.org>

Collaboration Center: <https://www.unicist.org/scientific-collaboration>

Business Arm: <https://www.unicist.net>

Intelligent Systems: <https://www.unicist-systems.com>

Academic Arm: <https://www.unicist.org/academic>

Phone: +1 315-506-6720

Contact us: n.i.brown@unicist.org