WCSA 2022 Presidential Address

SOCIAL SYSTEMS: A GAME NOT FOR SCRABBLE AMATEURS

The Complex Systems Approach and its Evolutionary Horizon

1. **Prologue**

The complex systems approach is a largely research-based theoretical and epistemological mindset and vision for global policy modeling in the area of political, social, economic and legal studies. A systemic vision implicates the awareness that there is not (yet?) just one unified epistemology for just one science and that, on the other hand, there are no specific, autonomous, independent disciplines or sciences, as there is too high a degree of interconnection to allow this merely bureaucratic distinction.

In brief, a complex systems approach is used in A) both physics and biology (much less complex the former ̶ which still tolerates some degrees of elementary inductive reductionism, untenable in social systems ̶ much more complex the latter), with chemistry and mathematics serving as formalized codes, which is not at the core of my speech today.

B) We find a paradox in the humanities, where the complex system approach does not exist unless it comes from epistemology, thus philosophy / theory of scientific knowledge, which belongs to humanities. Nor is this paradoxical topic pivotal in my talk today, either.

I will probably address A and B in the future. Today I will focus on C) i.e the complex systems approach in political, social, economic and law sciences to provide a unified epistemology, theory and policy modeling for global governance. In brief, we’ll call type C) a Social System.

At a very general level, a social system is an intangible constellation of self-referential and autopoietic meaning shaped as communication (thus interconnection) through codes and programs, whose borders are totally moveable as they are fully intangible. Nothing physical is a social system.

This definition is an evolution from Niklas Luhmann’s revolutionay paradigm shift (1927-1998), considering that Luhmann’s general theory “changed it all” between the mid 1980s and the 1990s (three key volumes of the revolutionary paradigm shift:

<https://www.amazon.it/Social-Systems-Niklas-Luhmann/dp/0804726256>

<https://www.sup.org/books/title/?id=1234>

<https://www.sup.org/books/title/?id=16878>)

The complex systems approach to social systems practically started with him, which does not mean there is no *Aufhebung* of Luhmann’s thinking, but rather that most of the authors theorizing systems linked to older cybernetics (Boulding, Beer among the others) or to culture /ethics (Parsons, J. C. Alexander of *Theoretical Logic in Sociology*) are nowadays deemed, falsified and obsolete.

1. **The Risks and Opportunities of being Fashionable**

Some keywords of the complex system approach are becoming popular in public opinion (politicians, consultants, journalists, ecc.) without a systemic *Bildung,* which is fun and risky at the same time.

Fun, because it bears witness on how common sense is “aware” that its semantics are obsolete for the purpose of trying to «understand the world» but at the same time it is risky because syntax logic and semantics are one and cannot be separated: if politicians, journalists and consultants use a systemic semantics outside of the epistemological and syntax logic context of the complex systems approach and they are taken seriously by uneducated voters / shareholders etc., the result could turn into pure noise…and disaster.

Some systemic words which have become fashionable among amateurs are system (used as a synonym of thing / item), complex (as a synonym of hard, difficult, complicated), self-referential (used as egoist, narcissist, closed to communication), among others, and these improper uses can lead to disaster by letting common-sense beliefs appear more scientific when they are merely pseudoscientific.

Some tips on how to detect the tricks of fashionable but empty semantics are as follows:

- In epistemology and methodology, a system-based research focused on cases is nonsense, as a “case” has no systemic properties and no “emergence” per se.

* Quantitative-statistical data and qualitative sources, like images, can be nevertheless adopted in systemic research, as was shown by the masterful lessons in construcivism for systemic thinking by Jean Piaget:

[https://www.amazon.it/Genetic-Epistemology-Jean-Piaget/dp/0231033869/ref=sr\_1\_1?\_\_mk\_it\_IT=%C3%85M%C3%85%C5%BD%C3%95%C3%91&crid=2909P4LW67LUY&keywords=genetic+epistemology&qid=1641123795&s=books&sprefix=genetic+epistemology%2Cstripbooks%2C132&sr=1-1](https://www.amazon.it/Genetic-Epistemology-Jean-Piaget/dp/0231033869/ref%3Dsr_1_1?__mk_it_IT=%C3%85M%C3%85%C5%BD%C3%95%C3%91&crid=2909P4LW67LUY&keywords=genetic+epistemology&qid=1641123795&s=books&sprefix=genetic+epistemology%2Cstripbooks%2C132&sr=1-1),

Heinz von Foerster:

* [https://www.amazon.it/Observing-Systems-Heinz-Von-Foerster/dp/0914105191/ref=sr\_1\_1?\_\_mk\_it\_IT=%C3%85M%C3%85%C5%BD%C3%95%C3%91&crid=1VURSCWJ1XCYK&keywords=heinz+von+foerster+observing&qid=1641122919&s=books&sprefix=heinz+von+foerster+observing%2Cstripbooks%2C121&sr=1-1](https://www.amazon.it/Observing-Systems-Heinz-Von-Foerster/dp/0914105191/ref%3Dsr_1_1?__mk_it_IT=%C3%85M%C3%85%C5%BD%C3%95%C3%91&crid=1VURSCWJ1XCYK&keywords=heinz+von+foerster+observing&qid=1641122919&s=books&sprefix=heinz+von+foerster+observing%2Cstripbooks%2C121&sr=1-1)) and Ernst von Glasersfeld: [https://www.amazon.it/CONSTRUCTIVISM-Mathematics-Education-Glasersfeld-1996-06-03/dp/B01FKUDGP0/ref=sr\_1\_12?\_\_mk\_it\_IT=%C3%85M%C3%85%C5%BD%C3%95%C3%91&crid=2RNH6FFWMPUVE&keywords=ernst+von+Glasersfeld&qid=1641122967&s=books&sprefix=ernst+von+glasersfeld%2Cstripbooks%2C224&sr=1-12](https://www.amazon.it/CONSTRUCTIVISM-Mathematics-Education-Glasersfeld-1996-06-03/dp/B01FKUDGP0/ref%3Dsr_1_12?__mk_it_IT=%C3%85M%C3%85%C5%BD%C3%95%C3%91&crid=2RNH6FFWMPUVE&keywords=ernst+von+Glasersfeld&qid=1641122967&s=books&sprefix=ernst+von+glasersfeld%2Cstripbooks%2C224&sr=1-12).
* No systems scholar could seriously believe that statistical data can describe reality, whatever it is. A systems scholar copes with different kinds of constructions, which are constructions nonetheless; that is why the formalization of a conceptual, abstract, general, symbolic metalanguage linking numbers, images and words in a consistent syntax is pivotal for viable systemic research.
* A couple or a group of people are often presented as a system. Nothing physical is a social system.
* For the same reason, computers, TVs, radios, cars, trains, airplanes, cameras, mobiles, buildings, sculptures, monuments etc. are not systems.
* Interactions are not systems: John and Isabel sharing a pizza are maybe flirting but are not a system.
* Organizations are not systems (companies or states, for example), thus talking about the Amazon system or the French system is nonsense.
* From the perspective of Social Systems, nature and its physical entities (animals, plants, oceans, “territories”, mountains, etc.) is/are also not system/s; this is why in political, social, economical and legal terms, it is nonsense to talk about “ecosystems” and every “ecological policy” is destined to fail.
* “Public Administration” is too self-referential (thus it is again, systemically speaking, nonsense: Public Administration is Public Administration, no way it can be something else, a cat for example. Moreover, Public Administration is an organizational shape, not a system).
* “This situation is too complex (hard, difficult), let’s simplify it!” This can lead to disaster, as complexity allows contingent reductions only. Simplification can lead to implosion and self distruction.
* Taxation is called a system but is not; it is a formal function of the legal system).

The list is longer but I trust these examples are a viable alert.

* “Your research work is a construction, mine describes reality” is a trick statement by a cheating amateur.
1. **The Political Survival of Obsolete Scientific Paradigms in 4 Myths, Part I**

Deconstructing four myths which damage every attempt to design effective, win-win policy is the focus of these two paragraphs:

1. The illusion of a “Welfare System”: systemically, there is no such thing. According to evolutionary complex social systems theory, welfare is just a form/shape which belongs to the system *politics*, which is intefarced by structural coupling with its welfare form to the system *economics,* which interfaces its “public expense” form with the welfare form to develop a structural coupling between the system politics and the system economics. In no way does welfare have the properties of a system.

2. The illusion of a multidimensional systemic strategy to cope with ecological challenges. From Luhmann’s *Ecological Communication* book on:

[https://www.amazon.it/Ecological-Communication-Niklas-Luhmann/dp/0226496511/ref=sr\_1\_1?\_\_mk\_it\_IT=%C3%85M%C3%85%C5%BD%C3%95%C3%91&crid=2B87P6Y1HXTQ2&keywords=ecological+communication+luhmann&qid=161084454&sprefix=ecological+communication+luhmann%2Caps%2C116&sr=8-1](https://www.amazon.it/Ecological-Communication-Niklas-Luhmann/dp/0226496511/ref%3Dsr_1_1?__mk_it_IT=%C3%85M%C3%85%C5%BD%C3%95%C3%91&crid=2B87P6Y1HXTQ2&keywords=ecological+communication+luhmann&qid=161084454&sprefix=ecological+communication+luhmann%2Caps%2C116&sr=8-1)

To experts, this seems clear enough, whereas in the fields of politics, business and plain common sense, this strategy is still claimed to be possible, while instead it is not, as can be clarified by providing an examplary case of methodological deconstrucion of the *Limits to Growth* book and video saga, demonstrating how environmental policies on sustainability have often generated “bubbles”, to borrow a financial metaphor. The matter of bubbles derived from rights is a topic we have been working on for years. We are not denying climate change (climates have always changed throughout the ages, as climate conditions are not a constant); we are going to unveil the gigantic epistemolgical misunderstanding behind it. Climate change and ecological rights: I am not saying that they do not exist, I am saying that a true ecological strategy, valid and viable, should be formulated without taking into account political aspects (ecologism, the new face of totalitarian communism/fascism? Totalitarian dictatiorships usually begin with and empower the rationing of everything, from space to food, from time to beverages, which is exactly what is at the heart of ecologism) or economic interests (ecologism as a new capitalist trap, making more money by adding “bio” or “ eco” to the brands?). The creation of products which are hardly innovative but which, labeled with the prefix “bio” or “eco”, cost three times as much as their previous versions, like artisanal products with territorial certification sold at very high prices -- as if a territorial certification were a certification of quality). Thus, ecological rights to protect health and the environment could soon reveal themselves to be empty expressions of economic or, above all, political demands. Even the most sensible hypothesis is never more than a hypothesis, hence science and predictions ̶ on which ecological policies are based ̶ are mutually exclusive. When smoke detectors and extinguishers are installed in a hospital, it is not to predict when there will be a fire, but what to do and how to do it in the event of one occurring. That is why it makes sense, for example, to activate a new technology that makes a certain productive process cleaner or to invest in renewable energies that satisfy real needs in a cleaner way, but all those prophetic speeches about “imminent” catastrophes lack scientific and ecological sense; not by chance are they are always placed in very indefinite geotemporal horizons so that the prophecy can never be falsified but only postponed.

In short, ecological policies at the systemic and global level are very unlikely to work because they rely on a whole/parts conception that any complexity systemic scholar knows is no longer viable. And what the typical yoga-related mysticism of ecological activists shows is that ecological policies are often New Age or Woodstock Concert re-entries whose impact is mere metaphysics, and that such metaphysics invokes an integrated cosmic unity between the human species and a highly idealized and benign view of nature, which as we have seen at least from Darwin on is, at best, quite indifferent to the human species (see Pitasi, 2021 International Systemic Seminar, University of Guadalajara <https://www.youtube.com/watch?v=vxEBC4EcQuM>

The limits to Growth “Saga” (as it created a kind of epics of environmetalism

<https://systemdynamics.org/product/affiliate-limits-to-growth-the-30-year-update/#:~:text=chorus%20of%20sustainability.-,Limits%20to%20Growth%3A%20The%2030%20Year%20Update%20is%20a%20work,using%20the%20link%20to%20Amazon>.) can be easily reframed, deconstructed and reconstructed.

I) Let us consider the social context of the beginning of the Saga. The first book appeared in 1972, although it had been written before, of course, thus the context ̶ both in Western Europe and USA ̶ is that of the 1968 student movements, of the Woodstock Concert, of the hippy communities in search of a more natural life style, whatever that may mean. *Limits to Growth* is not a mere mirror of those times, of course; however, the book does not share a science-based “universal message”.

II) Epistemologically, the book emerged from an MIT systemic dynamics research group in partnership with the Club of Rome, originally stemming from research using the systemic approach, which, however, in the late 1960s early 1970s, was based on the whole/part paradigm, and in fact, “Limits” tried to belong to it in many ways. In any case, the systems approach subsequently went through at least three key systemic shifts (see the table below). In 2003, *The Limits of Growth 30 Years Later* still based its data work-out on the same obsolete whole/part paradigm, totally ignoring the great kuhnian revolutions inside the systemic approach:

**Table 1**. Systemic Paradigms

| **THE SYSTEMIC APPROACH PARADIGM** **SHIFTS** |
| --- |
| **PARADIGM (P)** | **KEY AUTHORS** | **KEY CONCEPT** |
| P1) Whole/Part | R. Ashby N. WienerT. ParsonsL. von BertalanffyA. Stafford Beer E. LászlóD.H. MeadowsD.L. Meadows | Culture, control, personality, integration, homeostasis, stability, wholeness, structures, parts. |
| P2) System/Environment | H. von Forester N. Luhmann | Functional differentiation system, communication, order from noise |
| P3) Autopoiesis | H. Maturana F. Varela N. Luhmann | Self-production of inner components, rhizome, complexity, functional equivalent fluctuation, horizon. |
| P4) Enormous Constellation System | R. Normann D. Dennet (2004) N. Luhmann | Fluctuating constellation, autopoietic reconfiguration, memetic complexity, catalog, global platform, enormity. |

[https://www.amazon.it/Systemic-Shifts-Sociology-Essays-Design/dp/3659284270/ref=mp\_s\_a\_1\_7?\_\_mk\_it\_IT=%C3%85M%C3%85Z%C3%95%C3%91&qid=1547036179&sr=8-7&pi=AC\_SX236\_SY340\_FMwebp\_QL65&keywords=pitasi+Andrea&dpPl=1&dpID=41h450TH4HL&ref=plSrch#](https://www.amazon.it/Systemic-Shifts-Sociology-Essays-Design/dp/3659284270/ref%3Dmp_s_a_1_7?__mk_it_IT=%C3%85M%C3%85Z%C3%95%C3%91&qid=1547036179&sr=8-7&pi=AC_SX236_SY340_FMwebp_QL65&keywords=pitasi+Andrea&dpPl=1&dpID=41h450TH4HL&ref=plSrch)

III) For love of obsolescence, perhaps, the “Limits” Saga continues to reproduce a key mistake made in the first book in all of those that follow: the claim that social change is exponential, while technological change is linear. Although this “Limits” statement has been falsified by Huang’s Principle, digitization, artificial intelligence and, since at least the mid 1980s, by the Gegnet, nevertheless its authors have shown no concern and have gone on telling the same old and mostly obsolete story.

IV) The “Limits” Saga has generated two conflations:

IV. 1) one between science and politics, as in the saga it is impossible to understand *when* is *what.* Very far away from any systemic pattern of structural coupling.

IV. 2) another between prediction, foresight and preparedness.

IV.2.A) prediction is a form of inductive inference, not bereft of symbolic allegorical tones, at times even metaphysical, which can border on divination. For the ancient Greeks, as an example, the sight of crows in flight in the skies the day before a battle was a divinatory sign that they were going to be defeated. Today’s version of such inferences comes in other forms:

- Buy gold and real estate: their value will always increase.

- At the beginning of the championship bet on team X, who will certainly be the winners.

- We must implement certain ecological emergency measures by the year X; if we do not do so, the end of the world will be upon us, a deadline which is punctually postponed from decade to decade, century to century, millennium to millennium.

IV.2.B) In foresight, the inferential-allegorical character is still present but it is reduced by an important process of modeling; however, even the most accurate scenario hypothesis is still just a scenario hypothesis.

IV.2.C) The example above about smoke detectors and fire extinguishers in a hospital describes preparedness in its most basic form.

The three are quite unclear as well as overlapping in the “Limits” Saga.

**4. The Political Survival of Obsolete Scientific Paradigms In 4 Myths, Part II**

4.1 The Myth that social equality is always good and social inequality is always bad. Moral judgements, political / common sense beliefs and ethics are always slippery slopes for scientific research. We will debate the Leddet Cycle and the HSI Kuznets-Deaton Theorem.

Showing the conditions under which equality is (dys) functional. And inequality is (dys)functional.

The link between knowledge and preparedness can be shaped into a theorem we call the Kuznets-Deaton Theorem as a tribute to Angus Deaton’s *The Great Escape-health, wealth and the origins of Inequality* (Deaton, 2013):

[https://www.amazon.it/Great-Escape-Health-Origins-Inequality/dp/0691165629/ref=sr\_1\_2?\_\_mk\_it\_IT=%C3%85M%C3%85%C5%BD%C3%95%C3%91&crid=3CLKFWVK6YUCX&keywords=deaton+escape&qid=1641125167&sprefix=deaton+escape%2Caps%2C205&sr=8-2](https://www.amazon.it/Great-Escape-Health-Origins-Inequality/dp/0691165629/ref%3Dsr_1_2?__mk_it_IT=%C3%85M%C3%85%C5%BD%C3%95%C3%91&crid=3CLKFWVK6YUCX&keywords=deaton+escape&qid=1641125167&sprefix=deaton+escape%2Caps%2C205&sr=8-2).

This is the key book systematizing Deaton’s research, which was the recipient of the 2015 edition of the Nobel Prize for Economics. This theorem is also a tribute to Simon Kuznets (1973):

[https://www.amazon.it/Population-Capital-Growth-Selected-Essays/dp/0393334511/ref=sr\_1\_8?\_\_mk\_it\_IT=%C3%85M%C3%85%C5%BD%C3%95%C3%91&crid=3AYPBOHM4S745&keywords=simon+kuznets&qid=1641125254&sprefix=simon+kuznets%2Caps%2C240&sr=8-8](https://www.amazon.it/Population-Capital-Growth-Selected-Essays/dp/0393334511/ref%3Dsr_1_8?__mk_it_IT=%C3%85M%C3%85%C5%BD%C3%95%C3%91&crid=3AYPBOHM4S745&keywords=simon+kuznets&qid=1641125254&sprefix=simon+kuznets%2Caps%2C240&sr=8-8)),

1971 Nobel Laureate, whose theoretical and empirical research on economic growth and cycles was pivotal in shaping the LEDDET Cycle, whose Legislative Expansion Function (LEF) leverages demography, development and technology. The wider and higher the scale of the LEF, the stronger, faster and more effective the LEDDET Cycle is. Nevertheless, at this stage we need to walk our talk one step further, dealing with a topic which is very popular and very often misunderstood among political, social and economical scientists: inequality. We will link Kuznets’ and Deaton’s key concepts and vision, rethinking inequality and upgrading the LEDDET Cycle into what we call here the HSI Kuznets-Deaton Theorem. Inequality is often assessed politically, morally and ethically, which is very often misleading. Inequality is a measure of the distance between mankind and the Malthusian Trap. Inequality measures how far away mankind was able to run in the great escape. In Deaton’s words: «the great escape of this book is the story of mankind’s escaping from deprivation and early death, of how people have managed to make their lives better and led the way for others to follow» (Deaton, 2013: IX); as a matter of fact «life is better now than at almost anytime in history. More people are richer and fewer people are living in dire poverty. Lives are longer and parents no longer routinely watch a quarter of their children die. Yet, millions still experience the horrors of destitution and of premature death. The world is hugely inequal» (Deaton, 2013: 1). Despite the COVID-19 pandemic, which has placed mankind a little closer again to the Malthusian Trap, we are still far away from it and it will be so again and again if we do not allow opinion to replace knowledge. HSI is an evolutionary tool for expanding knowledge. By HSI we mean High Speed Inequality. HSI is pivotal to social change and evolution as shown previously by E.M. Rogers (1956),

[https://www.amazon.it/Diffusion-Innovations-Everett-M-Rogers/dp/0743222091/ref=sr\_1\_1?\_\_mk\_it\_IT=%C3%85M%C3%85%C5%BD%C3%95%C3%91&crid=32IKM04S8XJ9W&keywords=rogers+diffusion&qid=1641124288&sprefix=rogers+diffusion%2Caps%2C176&sr=8-1](https://www.amazon.it/Diffusion-Innovations-Everett-M-Rogers/dp/0743222091/ref%3Dsr_1_1?__mk_it_IT=%C3%85M%C3%85%C5%BD%C3%95%C3%91&crid=32IKM04S8XJ9W&keywords=rogers+diffusion&qid=1641124288&sprefix=rogers+diffusion%2Caps%2C176&sr=8-1)

later updated in Pitasi, 2003

[https://www.amazon.it/Universi-paralleli-amministrazione-cambiamento-cittadini/dp/8846447948/ref=sr\_1\_17?\_\_mk\_it\_IT=%C3%85M%C3%85%C5%BD%C3%95%C3%91&keywords=andrea+pitasi&qid=1641124133&sr=8-17](https://www.amazon.it/Universi-paralleli-amministrazione-cambiamento-cittadini/dp/8846447948/ref%3Dsr_1_17?__mk_it_IT=%C3%85M%C3%85%C5%BD%C3%95%C3%91&keywords=andrea+pitasi&qid=1641124133&sr=8-17)

in his *Diffusion of Innovations* in which the innovation cycle begins with the innovators, immediately followed by the early adopters and then by N majorities of adopters and lastly by a niche of marginals. The cycle from the innovators to the niche of marginals can take several centuries, decades, years or sometimes months, according to the speed or velocity (V) of the cycle. Television took, on average, about 40 years from its invention to land in citizens’ living rooms. Faster in the USA, a bit slower in Western Europe, even slower in Eastern Europe and Africa, for example. Mobiles spread relatively faster worldwide, depending, however, on the leverage and scale power of the global markets to speed up the business; it was not a matter of democratic access. The rapid access to COVID-19 vaccines in the USA and Europe tells a different story than in other areas of the planet, despite the attempts of the USA and Europe to facilitate its diffusion in Africa, for instance. The diffusion of innovation velocity can be formalized as follows: V= R/W, where V is the velocity of the Roger’s cycle, R is the specific Rogers’ cycle itself and W are the so-called Williamson’s costs (organizational, economical and legal ones). From the perspective of this paper, LEF downsizes W Costs (less bureacracy, less tariffs and customs, less no added value, white collars at work, etc. ), and thus speeds up R. In case of a vaccine, a new pharmacological therapy or a dramatically new surgical technology, it is logical that they spread from the elites, who immediately take advantage of these innovations, after which the Rogers’s cycle becomes wider and wider, until all the majorities of the population at the X velocity benefit sooner or later from this innovation (Harris, 2007):

[https://www.amazon.it/Enhancing-Evolution-Ethical-Making-Better/dp/0691148163/ref=sr\_1\_1?\_\_mk\_it\_IT=%C3%85M%C3%85%C5%BD%C3%95%C3%91&crid=36D91R0OS4HX&keywords=harris+enhancing&qid=1641124206&sprefix=harris+enhancing%2Caps%2C182&sr=8-1](https://www.amazon.it/Enhancing-Evolution-Ethical-Making-Better/dp/0691148163/ref%3Dsr_1_1?__mk_it_IT=%C3%85M%C3%85%C5%BD%C3%95%C3%91&crid=36D91R0OS4HX&keywords=harris+enhancing&qid=1641124206&sprefix=harris+enhancing%2Caps%2C182&sr=8-1)

Pitasi, 2011:

[https://www.amazon.it/Monde-hyperhumain-juridiques-changement-Harmattan-ebook/dp/B009SGBL8W/ref=sr\_1\_6?crid=1RGF8PBD98WPM&keywords=andrea+pitasi&qid=1641124078&sprefix=andrea+pitasi%2Caps%2C151&sr=8-6](https://www.amazon.it/Monde-hyperhumain-juridiques-changement-Harmattan-ebook/dp/B009SGBL8W/ref%3Dsr_1_6?crid=1RGF8PBD98WPM&keywords=andrea+pitasi&qid=1641124078&sprefix=andrea+pitasi%2Caps%2C151&sr=8-6)

Yes, there is an initial inequality gap, but speed solves the problem. A misleading idea of social justice might lead to the illusion of equality by rejecting innovation, which would be a long step closer to the Malthusian Trap, just like in the Middle Ages, when the life of a lord was as short as those of the peasants, owing to insufficient hygiene and medical conditions, which condemned them both. The toilets in a favela of our times are much safer than the toilet in the lord’s castle in the Middle Ages. Inequality in itself is an engine of evolution; the problems begin when inequaliy shapes paralyzing crystalized social orders, like the traditional caste system in India. In this case, inequality lasts forever and disaster becomes permanent. Once again, slow means lethal. Let’s update the LEDDET Cycle accordingly:

LE (LEF) D DE (development = HSI), T (evolutionary algorithmic automation, which is one more W cost downsizer). We can call it “The HSI Kuznets-Deaton Theorem”, which tells us that it can be very risky to fight against inequality per se. High Speed Inequality is an engine of evolution, low speed inequality paralyzes and destroys everything; that is why automation can be pivotal in the Theorem. We cannot automate everything, but we can automate everything which can be automated. Law, and the legislative production which originates law, are not exceptions to algorithms.

4. The Myth of innovation is the easiest to debate, by drawing a distinction between discourse and communication about innovation (overwhelming) and effective innovation policies (a very normal unlikelihood). Discourse on innovation is very often based on resilience, while effective innovation policies are based on recursive patterns of self-reference.

These four myths will eventually be interconnected into a final Supermyth: the social and political control of lifestyles by presenting as “science-based” what is mere common sense or political decisions, which are not.

**5. A Complex Systems Approach as a Strategic Vision**

WCSA committment to higher education strategic consulting, academic publishing

<https://www.wcsaglobal.org/publications>

and public engagement <https://www.wcsaglobal.org/10th-conference/>

is to be research-based to provide viable knowledge and research, which require an uncut interconnection between epistemo-Logic, methodological design and conceptual-semantic convergent univocity. Systemic research through the years from so many different paradigms is what has provided the most valuable contributions to brighten systems thinking and its methodological history, making it into true gold. For this, we have proudly created the WCSA medal, to acknowledge and celebrate these accomplishments by delivering our **Distinguished and Outstanding Lifetime Achievement Award**, with grateful thanks, to such giants as, in chronological order, Ervin László, Klaus Krippendorff, Abram De Swaan, Paolo de Nardis and Edgar Morin, <https://www.wcsaglobal.org/wcsa-medal-awards/>

The WCSA research and academic-editorial publishing agenda are going strong, and in the last years have been further reinforced by the founding of the WCSA Journal (WCSAJ), whose Editors-in-Chief are Roberta Iannone and Massimiliano Ruzzeddu. <https://www.wcsaglobal.org/wcsa-journal/>

This strategic vision will be a compass for shaping future WCSA interactions and partnerships to add to our past and current collaborations:

<https://www.wcsaglobal.org/partnership/#partners/> and

<https://www.wcsaglobal.org/wcsa-interactions/>

While WCSA is grateful for and proud of its history, we have no doubt that the present and future is where WCSA belongs. We will keep on strengthening our strengths and empowering new opportunities in complex systems higher education and strategic consulting through the near future with our recently elected 2022-2023 new Governance:

1. Alfredo Spilzinger, Lord of Brownsel: vicepresident

2. André Folloni: vicepresident

3. Andrea Pitasi: president

4. Daniela Caruso: scientific vicedirector

5. Davide Monda: scientific vicedirector

6. Edit Fabó: scientific vicedirector

7. Emilia Ferone: vicepresident, deputy president and General Manager.

8. György Csepeli: vicepresident

9. Ilaria Scarafiocca: junior vicepresident

10. Massimiliano Ruzzeddu: scientific director

11. Pablo Fudim: scientific vicedirector

12. Piero Dominici: vicepresident

13. Roberta Iannone: vicepresident

14. Romina Gurashi: scientific vicedirector

15. Rudy Aernoudt: vicepresident

16. Sara Petroccia: vicepresident

17. Sinan Mihelčič: scientific vicedirector

18. Vera Kopsaj: Chief Communication Officer

My heartfelt gratitude to Natalia Brasil Dib, Vincenzo Fortunato and Giovana Camila Portolese, who resigned from their successful service during the last governance term but who still hold a special place in our network, in our community and in our hearts.

I conclude my address here. I hope it has been sufficiently interesting, motivating and intriguing for top systemic scholars, researchers and professionals of every kind (investors, enterpreneurs, managers, policy modelers, policymakers and freelance consultants) and sufficiently boring for scrabble amateurs. A viable way to draw a distinction between meaningful systemic order and meaningless outer noise.

**6 Some Hints For the New Governance Term**

In my opinion – which is always open to considering all members’ proposals -- the next WCSA agenda might do well to focus on:

1. Shaping a stronger complex systemic paradigm and related protocols, to provide higher reliability and convergence to systemic research on a global scale by way of a key conceptural- terminological univocity, a formalized large-scale epistemology and methodology and a decisive skill in filtering meaning / noise focusing on the differences which make the difference. A WCSA task force soon to be shaped in order to set off from Luhmann’s systemic theory, removing the gigantic amount of obsolescence standing in his way.
2. To develop a research-based higher education agenda, also thanks to the will and efforts of our Vicepresident Piero Dominici who, also as Permanent Delegate to UNESCO, as always will take care to fully consider all proposals made by our members on these issues.
3. To develop a research based strategic consulting agenda, mostly thanks to the energy, efforts and vision of our Vicepresident Alfredo Spilzinger, Lord of Brownsel, who is also the President and Chairman of SFAI <https://santafe-associates.com/> a key partner of WCSA in complex systems strategic consulting
4. To develop a strong partnerships to be valued and great new friends and partners to welcome enthusiastically, thanks to the constructive dialogue between Piero Dominici and the prestigious World Academy of Art and Science, one of the most important official strategic partners - since its foundation - of the United Nations and UNESCO in numerous research projects and actions developed at global level. (<https://new.worldacademy.org/> ). Excellent relations have also been established with the WAAS President Garry Jacobs and other important Fellows.
5. As usual and better than usual, to empower our research, academic publication and high divulgation activies, looking forward to our 10th conference next April in Lisbon , and already starting to plan number 11, which will very likely be held in the autumn season of 2023 in the Northern Hemisphere. The road ahead is one of global convergence, a very turbulent one, on a micro scale, despite our complex systems approach and vision, which have been designed and developed to observe and go much further, beyond the darkest clouds , towards the highest skies.

Bologna, January 1st 2022 Andrea Pitasi