



Bringing Progress In2 a Multi-Paradigm Reality

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Our Space - Bringing Progress In2 View



Many Worlds in One

Goals of this presentation are to:

- Present the multi-paradigm phenomenon and its tools (p.1-4)
- Discuss patterns of social behavior in connection with the paradigms in which we live (p.5-9)
- Introduce a systems approach to explain social transformations and dynamics (p.10-16)
- Show of benefits of understanding the strengths and weaknesses of each paradigm and the social behaviors reflected in, as well as advantages of transformations in XXI century (p.17-22)



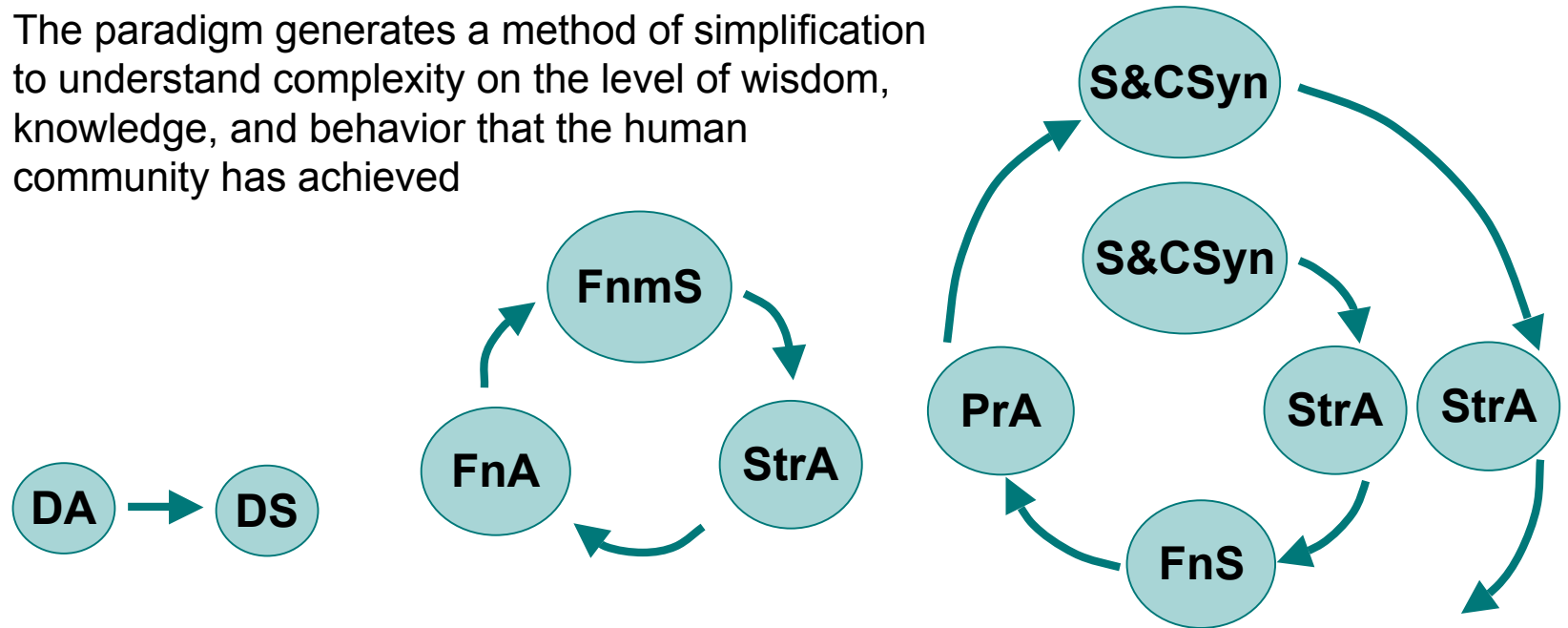
Paradigm Phenomenon: Simplification of Growing Complexity

The paradigm we live in is expressed through the language we use to explain our thoughts and emotions, the language we use to share and communicate, to create our mental models, and to open ways to achieve the desired future

- Thomas Kuhn [Kuhn, 1962]: The paradigm is constellation of achievements – concepts, values, techniques, etc. – **shared by a scientific community** and **used by that community to define legitimate problems and solutions**
- Fritjof Capra [Capra, 1986]: The paradigm is a constellation of concepts, values, perceptions, and practices **shared by a community**, which **forms a particular vision of reality** that is the basis of **the way the community organizes itself**

Three Paradigms and Methodologies

The paradigm generates a method of simplification to understand complexity on the level of wisdom, knowledge, and behavior that the human community has achieved



Paradigm	Mechanistic Linear	Organismic	Systems Paradigm of Evolutionary Synthesis
Methodology	Causal, deterministic	Structural and functional analysis, later phenomenological synthesis	Iterative (Gharajedaghi, 2004)
Management	Expansion management	Management of self-maintaining and excluding deviations	Management of evolution

Paradigm, Metaphor, Method

Mechanistic	Organismic	Systems
<p>The mechanistic (linear) paradigm with a clock-work metaphor and deterministic methodology was first proposed by Rene Descartes in 1637(1). This paradigm is still being used, even after in 1986, the President of the International Union of Theoretical and Applied Mechanics, Sir John Lighthill, was forced to apologize collectively for all physicists spreading ideas about determinism, which were based on their forebears' enthusiasm for achievements of Newtonian mechanics; the ideas which, in 1960, were proven false</p>	<p>The organismic paradigm was declared by Herbert Spenser in 1873 (2), early proposed in governance by Hobbes, 1651(3). Political, philosophical and social scientific communities have developed concepts, values, and perceptions in and for this paradigm for over three centuries through structuralism, functionalism and phenomenology</p>	<p>The systems paradigm describes complex evolving systems which are able to learn and change their behavior through transformation and adaptation, i.e., complex living systems, Bertalanffy, 1937 (4), including human socio-cultural systems, Bogdanov, 1912 – 1926 (5). Systems paradigm reflects at metaphor of social and cultural dynamics (P. Sorokin), open systems (K. Popper, N. Luhmann, F. Capra), fields (P. Bourdieu), transformations (R. Collins), effectiveness (R. Ackoff and Wharton School several generation of scientists)</p>

Source: (1) Rene Descartes, *Discourse on the Method of Rightly Conducting the Reason, and Searching for Truth in the Sciences*, 1637

(2) Herbert Spenser, *Descriptive Sociology*, 1873

(3) Thomas Hobbes, *Leviathan*, 1651

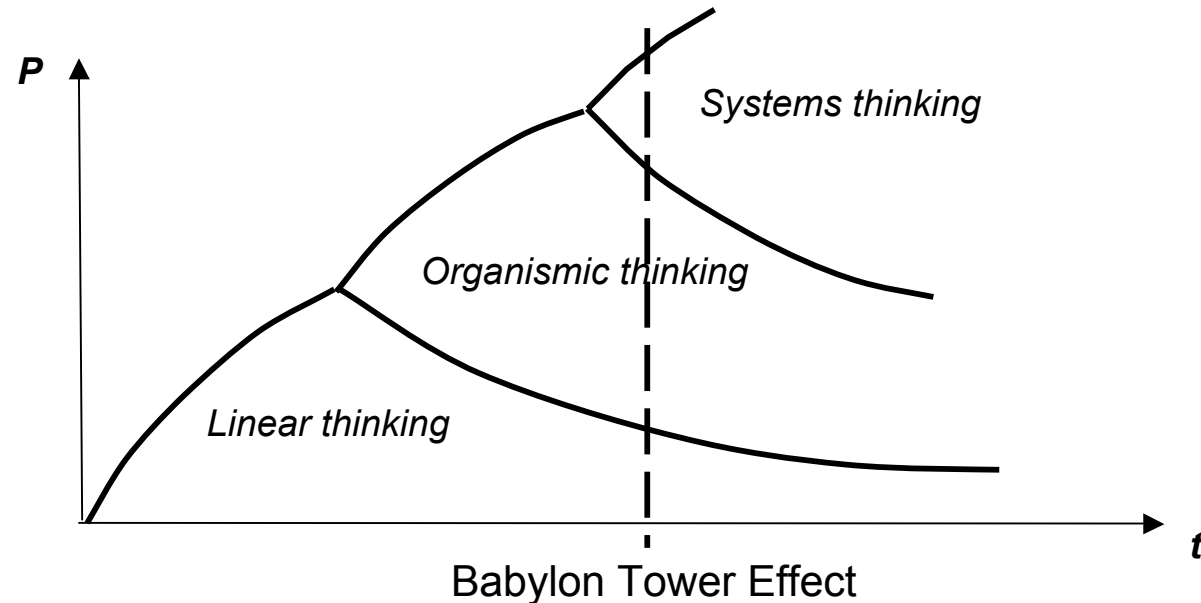
(4) Ludwig von Bertalanffy, *General System Theory*, 1937

(5) Alexander Bogdanov, *Allgemeine Organisationslehre (Tektologie)*. Bd. I. Berlin, 1926; Bd. II. Berlin: Hirzel, 1928

Paradigm Context for Socio-Cultural Systems

Scientific paradigm			
Attribute at Governance / Management	Classical linear paradigm	Non-classical organismic systems paradigm	Post-nonclassical systems paradigm of sociocultural systems
Metaphor	Mechanistic	Living systems	Sociocultural systems
Methodology	Linear: deterministic, causal	Close loop: phenomenological synthesis and structural / functional analysis	Iterative interactive open loops designing (Gharajedaghi, 2004) or transformative evolution with System and Context synthesis
Social system mission	Expansion	Autopoiesis	Evolution through adaptation
Social system characteristics	Goal-seeking (Ackoff, 1999)	Self-maintaining (Ackoff, 1999)	Useful, purposeful, evolutionary (Checkland, 1981)
Interaction with the environment	Conquest	Closeness, semi-permeability	Openness
The purpose of governance	Linear growth of production, territories, influence	Phenomenologically ordered samples support (Parsons, 1968)	Supporting variability
Model of governance	Autocratic, proactive, entropic	Democratic, reactive, negative synergetic, directed to social reformation and support of the reference samples by "at any cost"	Democratic, interactive, positive synergetic, directed to transformations for effective use of resources
Governance characteristics	Hard, high-cost and resources-spending	Hard, high-cost	Soft, high-cost
Interaction of authorities and civil socium	Ignoring	Suppress social self-organisation as deviations (Smelser, 1985)	The civil socium rise as social actor
Social self-consciousness	Finalism	Fatalism	Futurism

Mixed up Paradigm Languages



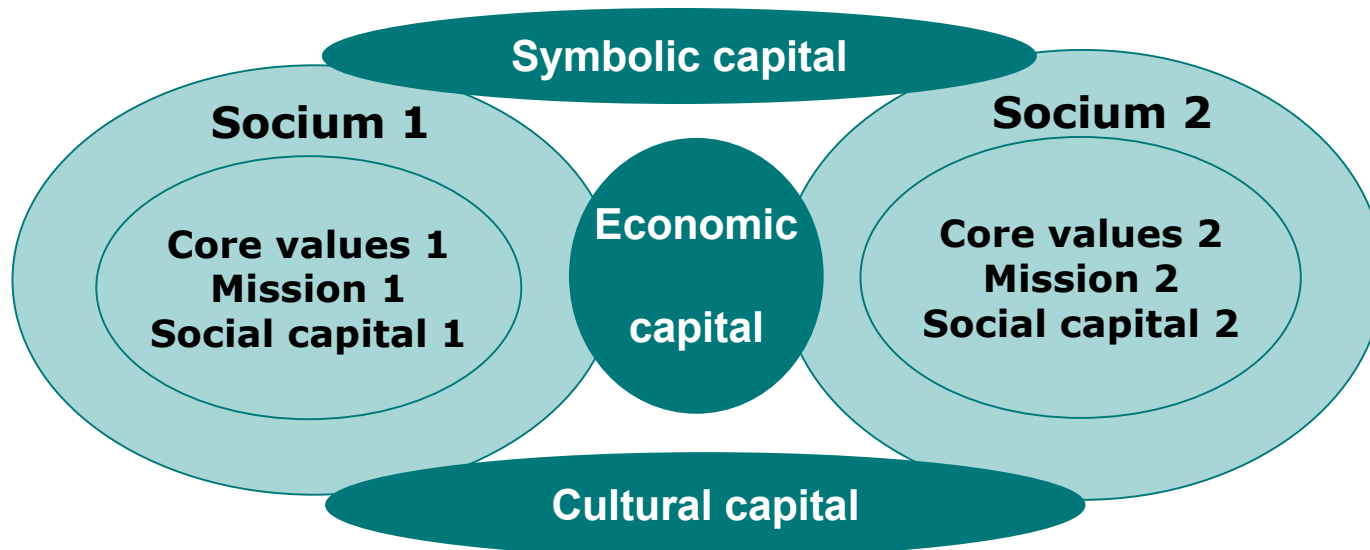
Source: N. I. Mironova, *Metamorphoses of Self-organization and Governance*, 2005

- (5) And the Lord came down to see the city and the tower, which the children of men built.
(6) And thze Lord said, “Behold, the people are one, and they have all one language; and it was so: and now nothing they imagine will be restrained from them.”
(7) Go to, let us go down and there confound their language that they may not understand one another’s speech.

Source: Genesis 11

Multi-Dimensional Behavior of Socio-Cultural Systems: new perusal

- *Socium* – socio-cultural generality (system) interconnected by “soft socio-cultural field...formed and transformed by activity of the man” (N.I.Lapin, 2000)
- *Society* as an ensemble of social fields (symbolic, cultural, social, economic capitals), generated by social agents with its habitués and space (P.Bourdieu). More complex societies have more fields
- *Polyarchy (polarchy)* – the term introduced by Robert A. Dahl to describe a form of government in which power is vested in three or more persons



Challenge of the Power Elite

- A *power elite* in political and sociological theory, is a small group of people who control a disproportionate amount of wealth, privilege, and access to decision-making of global consequence. The term was coined by Charles Wright Mills in his 1956 book “The Power Elite”
- “These hierarchies of state and corporation and army constitute the means of power; as such they are now of a consequence not before equaled in human history-and at their summits, there are now those command posts of modern society which offer us the sociological key to an understanding of the role of the higher circles in America” (C. Wright Mills, 1956)



Leviathan, The Matter, Forme and Power of a Common Wealth Ecclesiasticall and Civil, commonly called Leviathan, is a book written by Thomas Hobbes



Liberty Leading the People, Eugene Delacroix, 1830

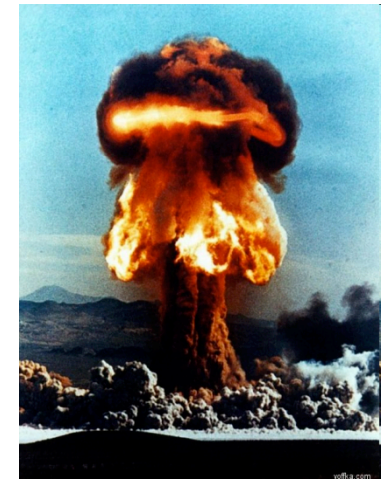


Photo courtesy National Nuclear Security Administration / Nevada Site Office



Tools of Political Discourse

- Costs of the *efficient* political governance exhaust national resources and decrease social *effectiveness* of governance, which leads to government and country crises
- Artifacts of the power elite support the “Right to give death” whereas the artifacts of the civil socium support the “Right to give life”
- The “Right to give death” is expressed through the State Security metaphor

Comparing Core and Proclaimed Values with Artifacts

	Core Values	Proclamation Values	Artifacts
Power Elite Socium	Absolute power	State security	Stockpiles of weapons of mass destruction, terrorism
Civil Socium	Human safety	Human safety	Antiwar, Human rights and Environmental movements

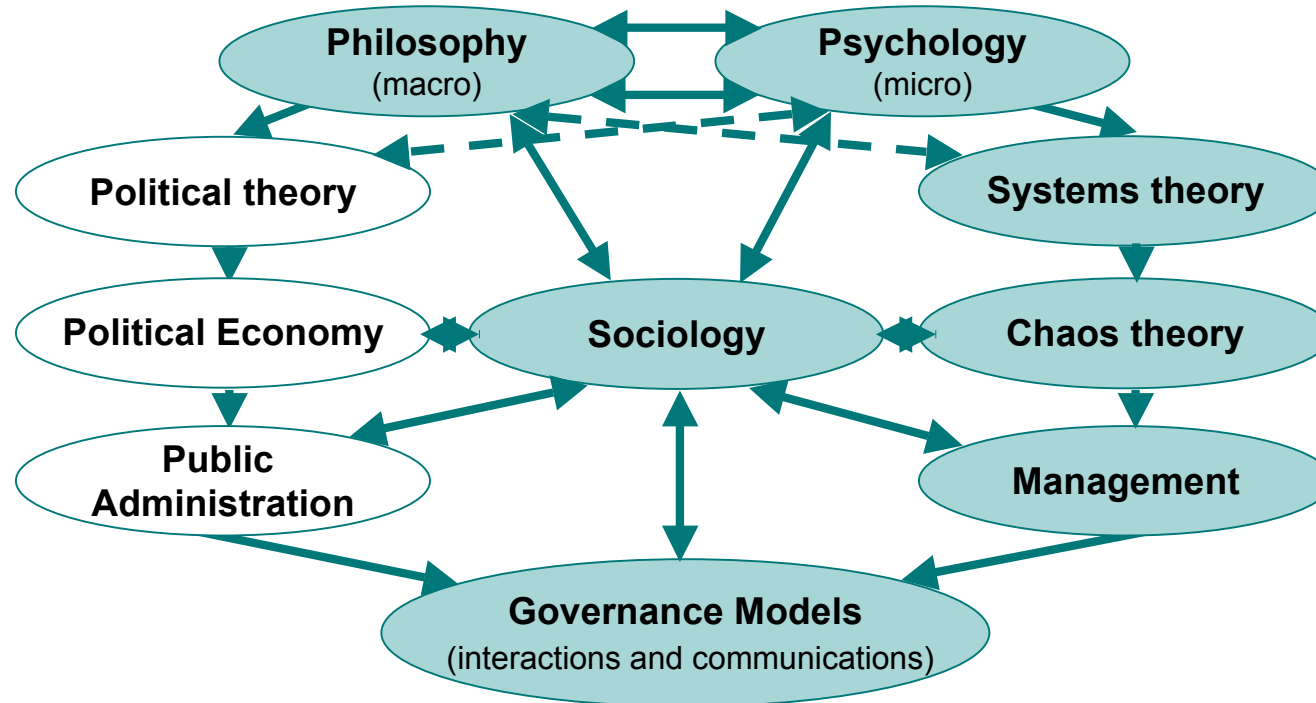
Source: N.I. Mironova, *Metamorphoses of Self-organization and Governance*, 2005

Natalia Mironova, Bringing Progress in2 a Multi-Paradigm Reality.
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Political Discourse vs. Social Discourse

New Disciplinary Synthesis

- Social discourse examines the paternalistic model through “social *effectiveness*” not through “political *efficiency*”



Source: N.I.Mironova, *Civil Socium in Modern State Governance*, 2007

Discourses' Generic Features in Patterns

Political Discourse	Social discourse
Mental behavior	Mental behavior
Analyses	Synthesis
Similarity	Diversity
Normative	Creative
Causality	Probability
Human behavior	Human behavior
Deterrence	Emergence
Knowledge	Understanding
Informational flow 50 GBt per year	Informational flow 1 Bln GBt per year
Crisis archetype	Risk archetype
Priority of <i>individual profit</i>	<i>Profitable community</i> priority
Organizational behavior	Organizational behavior
Fragile	Plastic
Organizational homeostasis protection, boundary	Openness, transformational energy penetration
Cluster's competition for resources splitting	Joining autonomies cooperation resources
Crisis management	Risk management
Industrial/Postindustrial	Postindustrial/Informational
Clusters' interdependence in hierarchies	Networks interdependence of autonomies
Revolution	Transformation

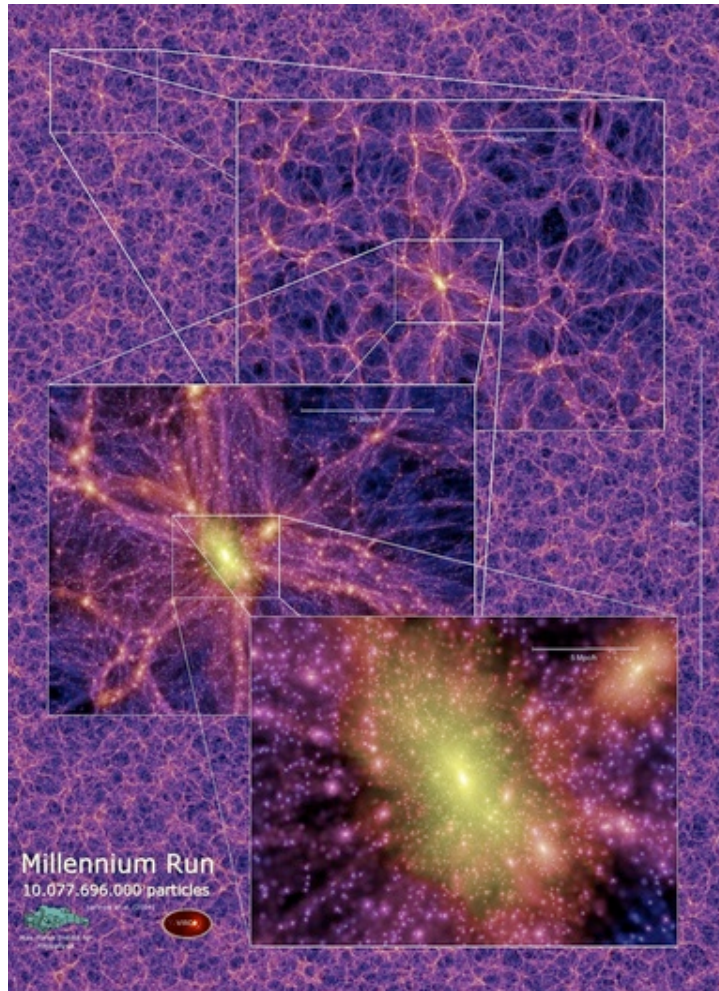
Discourses' Generic Features in Patterns

Political Discourse	Social discourse
Power behavior	Power behavior
Proactive / Reactive	Reactive / Interactive
Command and control	Supportive algorithmic leadership
Efficient	Effective
Autocracy / Democracy	Democracy / Civic
Leader of changes is power elite	Civil socium is leader of changes
Masculine culture	Feminine culture
Hierarchy/Holarchy	Holarchy/Poliarchy
Moral / Immoral	Moral / Immoral

- Both discourses provide tools. Real politics' cynicism and immorality are corrupting society. Ethics of decision making establishes the level of transformability
- *"I just watched ... news conference. What a manipulative scammer. He blamed everyone possible for standing in the way of all of his wonderful proposed legislature. He stated that all he wants to do is help people, and stated that because he wants to help people, he is being impeached. No mention of No mention for.... Just a crafty fox who is acting out a very bizarre act "(1)*
- Who is this hero of real politics? - It may be any state's politician who uses "Pay to play" principle

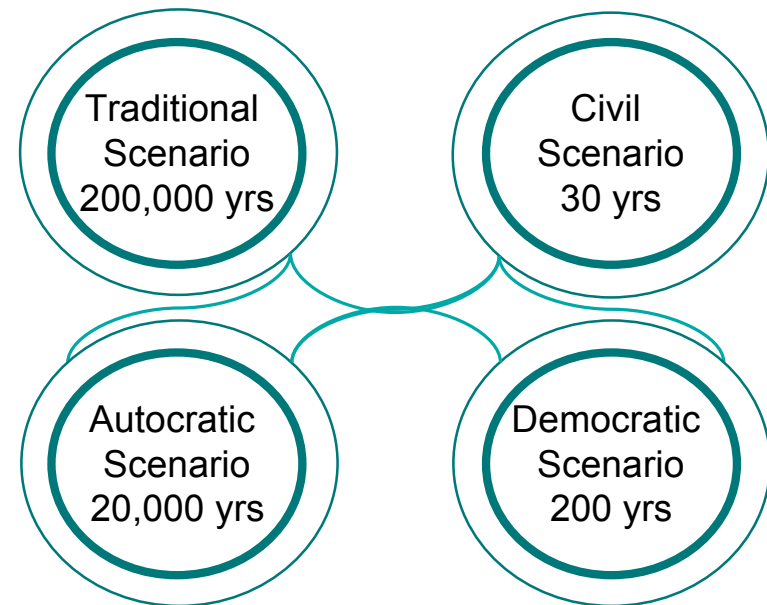
Source: (1) Personal comment on *New: Illinois House impeaches Gov. Rod Blagojevich* at Daily Chronicle website, January 13, 2007

Step Out to Have a Better View

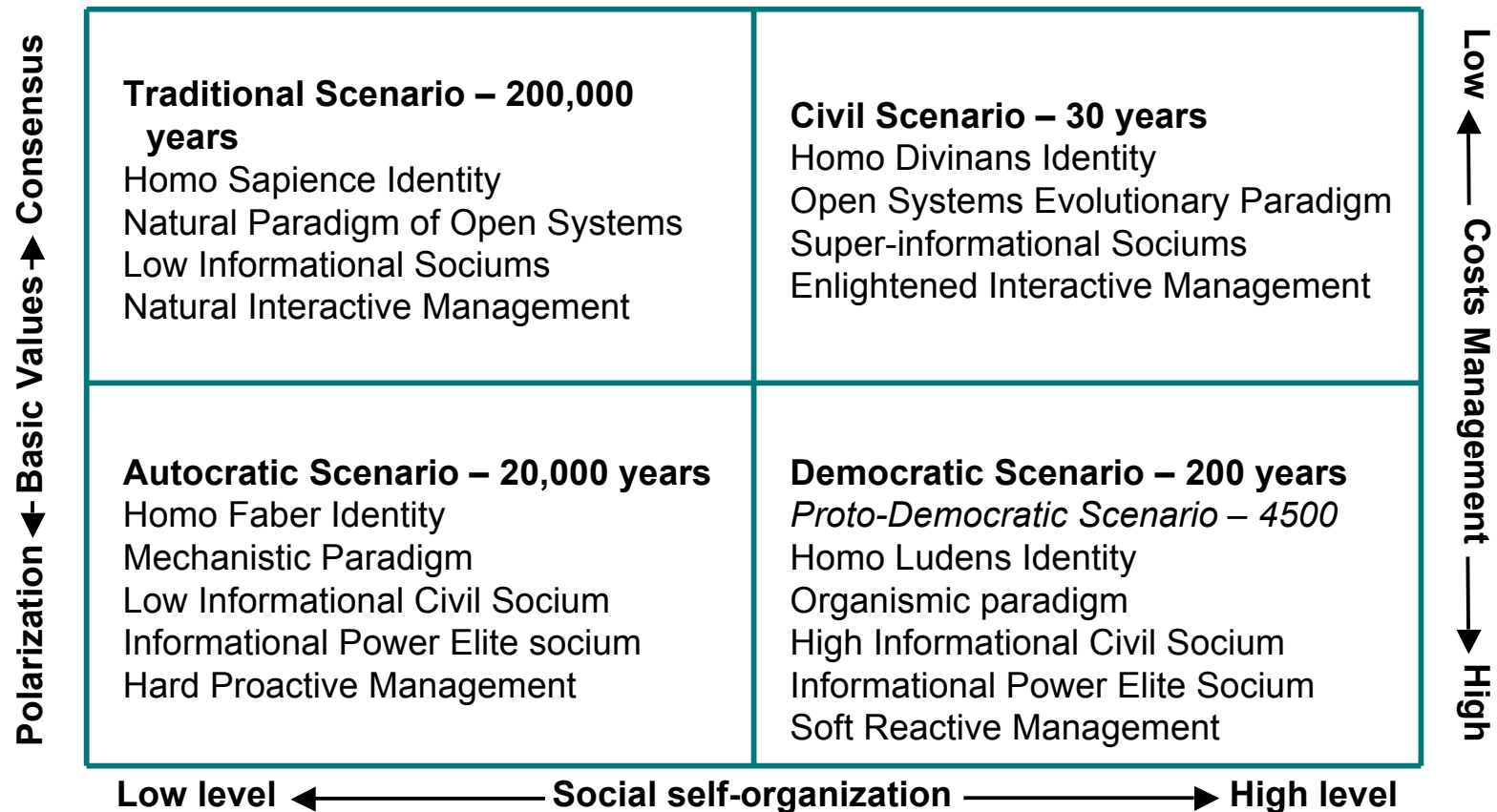


Source: *Simulating the joint evolution of quasars, galaxies and their large-scale distribution*, astro-ph/0504097

The systems paradigm helps us step out of the system to better understand multi-face and multi-dimension socio-cultural space



Diversity of socio-cultural behavior: Social Scenarios Matrix



Social application of Glansdorff-Prigogine Universal Principle of evolution helps explain evolution as fluctuation between scenarios

Source: N.I. Mironova, *Metamorphoses of Self-organization and Governance*, 2005



Systems Paradigm: Socio-Cultural System Dynamics in Multi-Disciplinary Synthesis

- To grasp the social matter in its dynamics we need to use a combination of imaginary parameters of order and control (Pierre Bourdieu and Ilya Prigogine)

$$F \sim = E, P, A \{Y [I, C, S]\}$$

- When we following the trends of meaningful social factors, we find ourselves in deep and thoughtful discourses on emergence and growth of Informationality, Self-organization, and Consensus of a culture built on basic values - parameters of social order (I, C, S)
- Philosophy and cognitive sciences add perspectives on changes of Paradigms and Ethics, or control parameters (E, P)
- Management provides an insight on effectiveness and costs of management – and is also a control parameter (A,Y)



Social Application Glansdorff - Prigogine Universal Principle of Evolution

- Peter Glansdorff and Ilya Prigogine proposed the Universal Principle of evolution, based on the principle of minimization the rate of entropy production, for non-equilibrium inhomogeneous system which evolves through bifurcation from one unstable state with one ensemble of parameters of order to another state with another ensemble of those parameters
- Social application of Glansdorff-Prigogine Principle helps explain evolution of the social system through bifurcation with minimization costs of governance (Roman, Byzantine, Soviet Empires, and so on)
- Costs of management model (Y) is synergy of governance entropy (S) and self-organization neg-entropy (N). Each quasi-stable scenario fluctuates within the scenario of the attractor of management costs (Lim A)

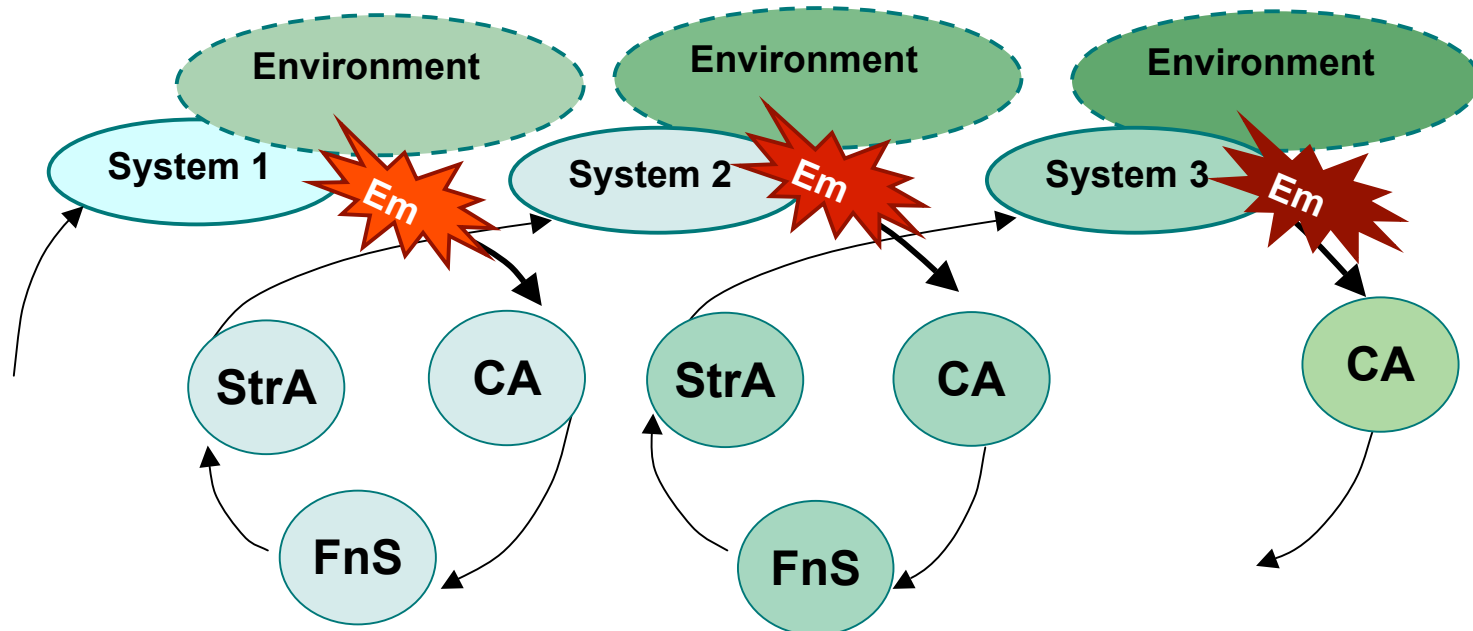
$$Y = (S,N) < \text{Lim A}$$

- The Social Systems evolve through bifurcation from one quasi-stable state to another when costs of management overcome the attractor (Lim A) of costs of management

$$Y > \text{Lim A}$$

Focus on Social Emergences

Systems paradigm method to explain social evolution



Source: N.I.Mironova, *Civil Socium in Modern State Governance*, 2007

- Imagination helps seeing emergences, understanding complementarities created by combinations of emergences, and comprehending new functions of social actors and structural transformations of institutions to open systems for the next synthesis

Life Immersed Into a Paradigm Frame

I. World View Concepts

Paradigm	Mechanistic	Organismic	Systems
Scientific metaphor	Clockwork	Human body / living system	Still no standard unifying metaphor. Three images are used: the flow image representing the dynamics of chaos and order; ecosystems image, representing the senses of emerging self-organizing; and the image of neuron or metabolic networks of information exchange or exchange of products of life
Interaction with the environment	Non-interactive	Interactive in the framework of organization homeostasis support	Interactive interaction
Energy approach	Mechanistic, entropy ignoring	Entropic	Neg-entropic
Methodology	Linear, deterministic, causal	Sustainable systems dynamics: phenomenological structural functionalism	Systems and context synthesis, complementary analysis, functional synthesis, structural analysis, systems and context synthesis, etc.
Sociocultural society metaphor	Mega-machine	From social factory to social theatre	Society of knowledge
Attitude to self-organization	Ignoring	Eliminate (as deviations), or demobilize for Systems Homeostasis support	Self-organization as the evolutionary transformations resource

II. Human Behavior Concepts

Paradigm	Mechanistic	Organismic	Systems
Identity	Homo Faber	Homo Ludens	Homo Divinans
Psychological majorant	Finalism: events of the past predetermine everything, devaluating the present and the future	Fatalism: the behavior is predetermined by social patterns and social institutes shaped thus far	Futurism: mission, identity, values, abilities and behavior which provide opportunities of interaction with the environment for further development of abilities
Tempoworld	Directed by the past	Compared to the past	Shaping the future
Dominating trend	Modernization	Adaptation/reformation	Transformation
Leading group	Modernizational	Conformational / Operational	Transformational
Type of leadership	Hard	Adaptive	Supportive
Perception of social innovations	As revolutions	As performances, social theatre of numerous masks with the unchangeable substance	As the stream of social creativity and variability

III. Organizational Concepts

Paradigm	Mechanistic	Organismic	Systems
Purpose of the organization	Linear growth: product, territory, power, etc.	Closed production cycle support	Shaping evolutionary development opportunities in the open cycle
Organizational mission	Achieving the phenomenological specified goal	Reference sample support	Transformational changes
Efficiency / effectiveness estimation	In terms of achieving the directory specified goals	In terms of the integrity support level and the phenomenological reference sample homeostasis	In terms of maintaining the evolutionary changes trends
Organizational model	Goal-seeking organization	Self-maintaining organization	Purposeful, useful organization
Organizational principle	Linear growth	Operational closeness	Operational openness, evolutionary system
Organizational architecture	Hierarchy	Holarchy	Poliarchy Networks

IV. Power Behavior Concepts

Paradigm	Mechanistic	Organismic	Systems
Distribution of power	Suppressed polisubjects	Quasi polisubjects	Interactive polisubjects
Dominating type of interactions	Proactive	Reactive	Interactive
Changes method	Modernization	Reformation	Transformation
Dealing with the problem	Directive solution	Resolution	Dissolution
Management type	Autocratic	Performance	Participative
Management mission	Linear growth	Organizational homeostasis support	Support transformations opportunities
Interactions, functions and structures	The structure determines interactions	The structure reproduces functions, and functions determine interactions	Varied interactions, multi-functionality and flexible varied structures



Features of the Current Crisis

- The current crisis is actualized by practices and paradigm approaches which are already exhausted, and lead from the economy crisis to the crisis of state management model....The fresh danger trick for excuse current fall concluded by message: “the good old guys even did not know what the new young bubbles blowers did”...
- The crisis of state management model is manifested in the increasing of the management model costs and in decreased ability of the governance institutions system to respond at:
 - Growing environmental dangers
 - Deterioration of natural resources
 - Exacerbation of demographic crisis
 - Growth of poverty for the greater part of the population
 - Escalation of military conflicts and society militarization
 - Crisis of trust to the historically (modern political history) formed institutes of Governance



Features of the Current Crisis (cont'd)

- Crisis of trust to the “historically” formed institutes of Governance is marked:
 - Increasing conflict of the meanings of development
 - Easing of a role of the states
 - Increasing conflict of the meanings Human Safety and State Security
 - Occurrence of problems of maintenance legitimacy of the subjects of authority
 - Discredit of democratic procedures legitimacy of power elite
 - Decrease of a role of cultural norms and traditions and emerging new
 - Emerging of new social factors forming identity



Bringing Progress In2 a Multi-Paradigm Reality

Epilogue for transformational minded social agents:

- We live in a multi-dimensional dynamic world that can be reflected upon with linear, organismic, and systems paradigms shared by communities
- The paradigm forms and supports mental, human, organizational, and power behaviors with its tools, metaphors, and thesauruses. The paradigm change can also change the routes of social systems
- People as social agents/*actors* grasp the paradigm through social experience and education
- The paradigm with its metaphors and thesaurus provides a key to identifying the modern social emergences and their role in social dynamics as well as a route for transformation
- New social emergences such as culture of consensus of basic values, informationality, and self-organization in some combinations may reduce costs of management and develop new effective models of decision-making interactions