

Mulej's Dialectical Systems Theory – a proven next step after Bertalanffy's General Systems Theory

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What is a system?

15 groups of definitions of contents in Webster

-Any object

-A complex entity

-Any entity having components and relations

-Mental picture of the object under consideration from the selected viewpoint

What do you mean: what it means? It means what I mean it to mean.'

THE SELECTED PROBLEM AND VIEWPOINT OF CONSIDERATION IN THIS CONTRIBUTION

Systems Theory and Cybernetics – known after WWII

→ (UNO)

→ EU (2000): „**innovation - ‘systemic’ view**, in which innovation is seen as arising from complex interactions between many. Support for this view has deepened.“

→ again under the label of **social responsibility** (UNO, EU, ISO, ..): concepts of ‘interdependence’ and ‘holistic approach’, i.e. systemic behavior

→ **against over-specialization and resulting crisis**

Social responsibility: 7 core subjects



* The figures denote the corresponding clause numbers in ISO 26000.

ISO 26000: 7 contents, 2 linking concepts:

1. Governance, management, organization
2. Labor practices
3. Environment
4. Fair business practices
5. Customers
6. Human rights
7. Broader community

2 linking concepts:

- 1) Interdependence
- 2) Holism

Questions that arise

- Are we humans **capable of the interdisciplinary co-operation** that we need almost every moment?
- What is the theoretical basis for those, who are not capable of it, **to learn**?

specialists teach specialists to be specialists →

- **respect for other** specializations & need for each other?
- interdisciplinary creative co-operation?
- **courses on methods** of holistic approach?

THE GENERAL SYSTEMS THEORY – INSUFFICIENT BASIS FOR HOLISM AND WHOLENESS

General systems teaching/theory = **wholeness**, but:

– many users: description inside a single viewpoint/
discipline rather than holism = consideration of
everything →

Interdisciplinary creative co-operation → **synergy** of
insights → *dialectical system*

Essential = authors' choice/responsibility → impact over
humans' **knowledge & values** → DST

The Dialectical System Theory (DST)

1. LAW OF REQUISITE HOLISM
 2. **LAW OF ENTROPY**
 3. *LAW OF HIERARCHY OF SUCCESSION AND INTERDEPENDENCE*
 4. GUIDELINES **FOR DEFINING** STARTING POINTS
 5. *GUIDELINES **FOR REALIZING** STARTING P.-S*
 6. **USOMID – APPLIED DST**
- **APPLICATION OF USOMID x 6 THINKING HATS**

A system is *at the same time*:

- 1) From the viewpoint of *the mathematical formalism*: a round-off whole, i.e. a network of any/no content; and
- 2) From the viewpoint of *its content*: a partial (one-sided) picture / representation (mental and/or emotional) of an *object, which is considered* from either a selected viewpoint or a number or even a system of viewpoints. →
= holistic, formally, and one-sided, in content, at the same time.

A dialectical system

A dialectical system is
a system (formally, i.e. synergetic network) of
all essential systems (in content)
presenting the same topic / object
from different viewpoints, which
are therefore interdependent → interactive;
they make a synergy of essential attributes of the object.

The selected level of holism and realism of consideration of the selected topic between the fictitious, requisite, and total holism and realism

←-----→		
Fictitious holism/realism (inside a single viewpoint)	Requisite holism/realism (a dialectical system /DS/ of all essential viewpoints)	Total = real holism/realism (a system, i.e. network, of all viewpoints)

WHAT VIEWPOINTS AND NETWORKS ARE ESSENTIAL?

= authors' definition, decision and responsibility →

impact over humans' attributes (knowledge and values – K&V)

K&V - not necessarily requisitely holistic (= a DS), neither is so **motivation** alone or **creation** of preconditions for life and work alone.

K&V and outer conditions are all **inter-dependent** → starting points of every human activity

A SHORT PRESENTATION OF THE DIALECTICAL SYSTEMS THEORY: 1. ESSENCE

Peculiar

= **tries to impact** human thinking and feeling, too, not tools only

= fights the fictitious holism of over-specialists

by **inter-disciplinary approach** as a precondition of (the requisite) holism

Bertalanffy's and Wiener's groups / teams = interdisciplinary and **practicing synthesis**

A SHORT PRESENTATION OF THE DIALECTICAL SYSTEMS THEORY: 2. reality considered as the basis of DST

Humans **apply** *subjective starting points* (K&V), which are
in turn subject to influence &

influence further processes of **definition** of objectives and
their **attainment**, in which many **features and attributes** are
interdependent, rather than simply linearly dependent.

Humans react to *influences* **differently** ← their role:

-To define objectives, or

-To realize (imposed?) objectives → **holism???**

DST: The law of entropy

permanent natural tendency of everything
to change into something else, i.e. to be destroyed,
and to help create something else, simultaneously.

Entropy requires people to be
requisitely holistic and creative
in order to succeed, rather than
one-sided and routine-loving/addicted →

DST: The law of requisite holism

need for a DS when a
one-sided system is **not a holistic enough** picture of reality
and a total (Bertalanffian) one **cannot be attained** →

responsibility for decision-makers' **selection** of
what **enters** the DS, and what is **omitted**

(**omitted facts/factors** influence process & outcomes!!) →

DST: The law of hierarchy of succession and interdependence - 1

processes cause results &

cooperation makes processes happen →

start with the **definition of salient objectives** →

process depends on **subjective and objective starting points**

They are **interdependent**, so are the phases following later

DST: The law of hierarchy of succession and interdependence - 2

*Needs \leftrightarrow knowledge \leftrightarrow values \leftrightarrow possibilities

DS of viewpoints

Perceived needs and possibilities

Preferential needs and related possibilities

Objectives

Tasks to meet them

Processes to execute tasks

Outcomes \rightarrow^* and others

DST: The ten guidelines on how to form the subjective starting points of persons defining the objectives

used before the definition of objectives, in order to support requisite holism and creativity & IIDP/innovation in this phase of the work process

decision makers must be rather broad and synthesis-oriented

not alone in the entire work process →

DST: The ten guidelines on how to form the subjective starting points of persons realizing the objectives

must be used after the definition of objectives, in order to support requisite holism and creativity and IIDP/innovation in this phase of the work process.

co-workers - narrowly specialized and analysis-oriented, with responsibility for single details; & understanding + supporting a broader definition of requisite holism; creative co-operation with specialists of other skills; →
tools to behave in a systemic way implicitly →

DST: USOMID (DST-based applied methodology of interdisciplinary creative cooperation)

→ **consider and use** the three laws and both dialectical systems of guidelines, even **without knowledge of their theoretical background**

= Creative Co-operation of Many for an Innovating Work

Now, we combine it with **'6 Thinking Hats'**.

The latter enables **implicit systemic behavior**, too.

DST: Guidelines about the subjective starting points before definition of objectives - 1

1. **Purpose of work in contemporary conditions** = success based on requisitely holistic innovation →
2. **Approach**: systems thinking, e.g. by DST methods →
3. Trouble, objective(s) and tasks = **dialectical system** →
4. **The procedure of work on tasks**: Application of the (D)ST in practice →
5. **Consideration of everything crucial**: all crucial professionals are **involved in the team** →

DST: Guidelines about the subjective starting points before definition of objectives - 2

6. Capacity of requisite holism: a human **attribute** - inter- and trans-disciplinary approaches of single-disciplinary specialists →
7. **Dialogue in team**: Teamwork is an **organizational possibility** for co-operation →
8. Continual updating of knowledge and values →
9. **Interdependence** of knowledge and values →
10. **Evolution and path dependence** - the old experience?
→ 1.

DST: Guidelines on how to form the subjective starting points of persons realizing the objectives - 1

1. Requisite holism throughout the entire work process: narrower **specialists** have their turn (!) →
2. **Openness**: specialists must be open to each other, because they **differ** from each other →
3. **Dynamics, adaptability**: accept proofs that are based on **another viewpoint** (ethics of interdependence!) →
4. **Interdisciplinary approach**: harder for many - **Capacity to listen to and hear the disagreeing ones**; '6 thinking hats'
→

DST: Guidelines on how to form the subjective starting points of persons realizing the objectives - 2

5. **Probability**: not holism, but the **requisite holism** →
6. **Interaction** based on interdependence and flexibility: **ethics and practice** of interdependence →
7. **Clear delimitation** of roles, jobs, viewpoints and resulting systems: **nobody's irresponsibility** →
8. **Realism in generalization** of conclusions: simplification vs. **requisite** holism →
9. **Application of a dialectical system** →
10. Interdependence of **analysis** and **synthesis** → 1 etc.

DST: Holism as a dialectical system

Systemic: attributes of the whole, complexity, synergies &

Systematics: attributes of the single components, complicatedness, details &

Dialectics: attributes of relations, interdependence, and resulting interaction &

Materialism = realism = the smallest possible deviation from reality in behavior, i.e. observing, thinking, decision making, communication and action.

Application of USOMID/Six Thinking Hats Synergy

- 1

SREDIM USOMID	1. SE- LECT	2. RE- CORD	3. EVA- LUATE	4. DET. & DEVEL.	5. IMPL- EMENT	6. MAI- NTAIN
1. BRAIN WRITING	ALL 6 HATS	WHITE HAT	RE, BL, GR, YE	RE, BL, GR, YE	ALL IN PREP.	ALL IN PREP.
2. CIRCU -LATION	ALL 6 HATS	WHITE HAT	RE, BL, GR, YE	RE, BL, GR, YE	ALL IN PREP.	ALL IN PREP.
3. BRAIN STORM.	ALL 6 HATS	WHITE HAT	RE, BL, GR, YE	RE, BL, GR, YE	ALL IN PREP.	ALL IN PREP.
4. CONC- LUSIONS	ALL 6 HATS	WHITE HAT	RE, BL, GR, YE	RE, BL, GR, YE	ALL IN PREP.	ALL IN PREP.

Application of USOMID/Six Thinking Hats Synergy

- 2: Essence of Each of The Six Thinking Hats

White = neutral, objective, facts without interpretation, like a computer;

Red = feelings, emotions, intuition, irrationality, unproved feelings, no justification;

Black = watching out, caution, pessimism, search for danger, doubt, critique; it all works well against mistakes and weak points of proposals;

Application of USOMID/Six Thinking Hats Synergy

- 3: Essence of Each of The Six Thinking Hats

Yellow = optimism, search for advantages of proposals, search for implementation ways, sensitivity for benefit of the idea, constructive approach;

Green = energy, novelty, creation, innovation, in order to be able to overcome all obstacles;

Blue = organization, mastering, control over procedure, thinking about thinking.

INFORMAL APPLICATION OF DST VIA SOCIAL RESPONSIBILITY MODEL

the two concepts that **connect all of them** and all participants of the process of any work:

- Interdependence, and
- Holistic approach.

EU (2011): SR = way out from the crisis; support for economic reasons; member states and big enterprises urged to be **role-models of SR = systemic behavior**

UNO: similar (Global Compact) etc.

SR Principles (ISO 26000)

(1) Accountability, (2) **Transparency**, (3) Ethical behavior*, (4) **Respect for stakeholder interests**, (5) Respect for the rule of law, (6) **Respect for international norms of behavior**, and (7) Respect for human rights.

*Ethical behavior = values of **honesty, equity and integrity**

=

- concern for **people**, and the **environment** and
- commitment to address the **impact** of its activities and decisions on **stakeholders'** interests.

Some Conclusions

the current crisis is extremely serious due to a critical lack of systemic thinking of the influential persons

for an accelerated transition to a **requisitely holistic society**, one **starts best in K&V of the government** by a well-organized **invention-innovation-diffusion process** backed by systemic behavior VIA SR

Apply EU Action Plan (Oct. 2011) for SR

Strategy of promotion & implementation of SR

- Consumers – less/no greed, just real needs, pressure &
- Organizations: (1) suppliers, (2) customers, (3) public awareness makers and users, (4) pressure &
- Nations: support competition and fight monopolies: the best in SR, Business Excellence & Innovation – may supply public sector
- & world-wide democracy
- Scientists, educators, media: knowledge, VCEN

Action or wait & see tactic?

Survival of humankind ← requisite holism ← involvement of many in interdisciplinary cooperation ← businesses and politicians alone with current K&V = not enough

New EU etc. initiatives = the way out from the blind alley of the current civilization

The short-term dilemma: SR with or without war (global)

STOP HATING YOUR (GRAND)CHILDREN!

THANK YOU FOR WORRY & ACTION!