

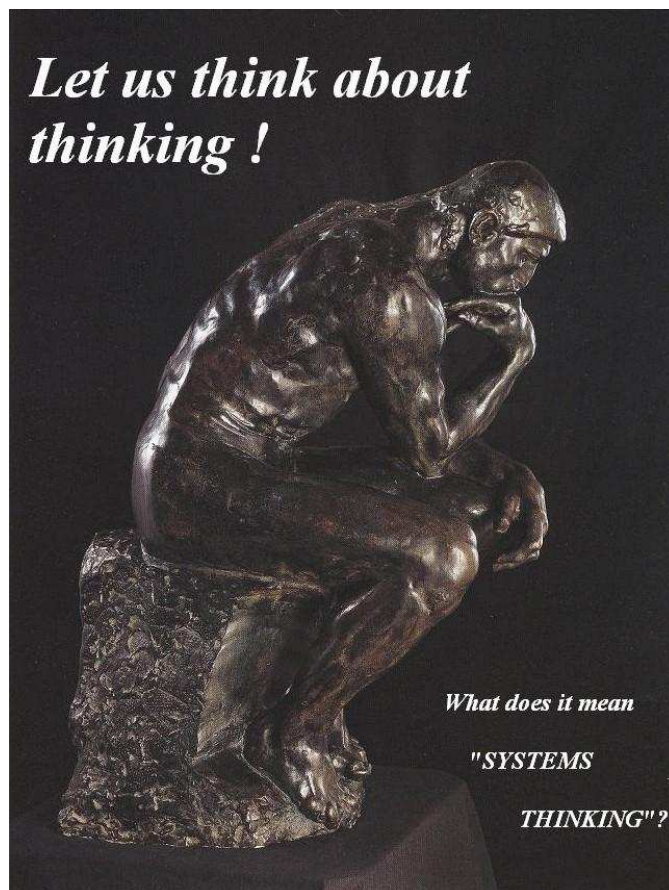
**Latvia University of Agriculture
Faculty of Engineering
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SYSTEMS THINKING

within our modern life and education



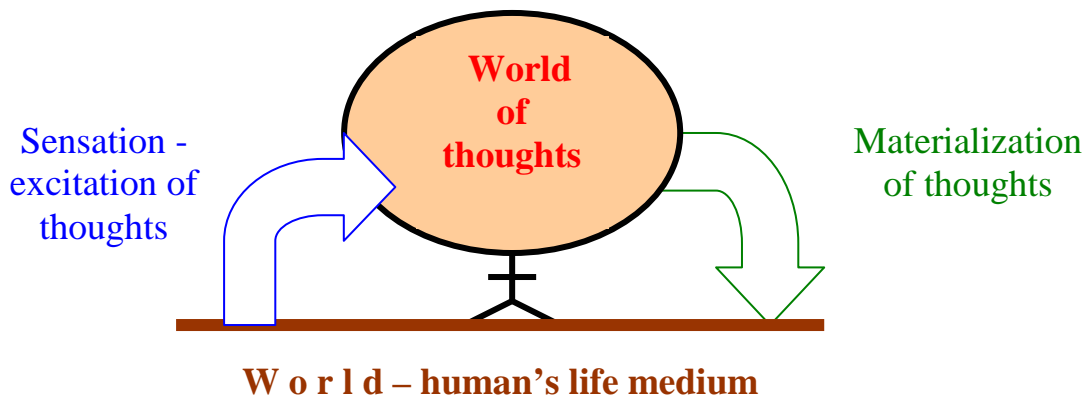
There are three main questions today :

1) what does it mean “THINKING”?

2) what does it mean “SYSTEM” and “SYSTEMS THEORY”?

3) what does it mean “SYSTEMOLOGY”?

**T H I N K I N G – it is spiritual process
as processing of information within human’s brain -
it is human’s consciousness in action**



World of thoughts – human’s reflection of sensed world

Reflection of sensed world in human’s consciousness

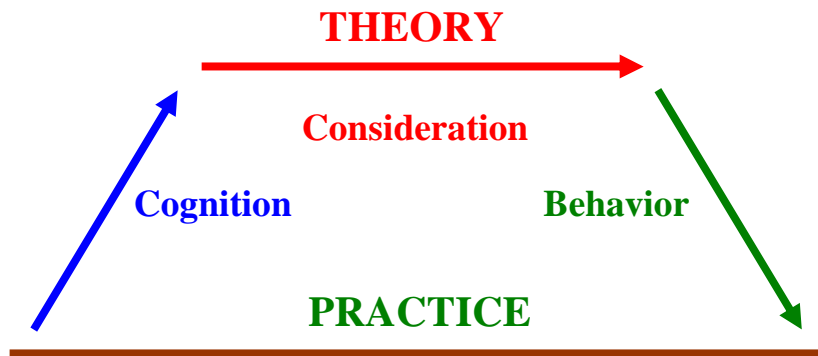
**– it means building systems of thoughts,
it is systems thinking process
as human’s conscious spiritual life.**

Systems thinking – it’s universal or general form of human’s thinking,
what is independent of concrete content of definite thinking process.

Systems thinking - reflection of sensed world by human –
it means reflecting world by parts, comparing and connecting them together
in definite systems

Systems theory – general theory of human’s systems thinking!

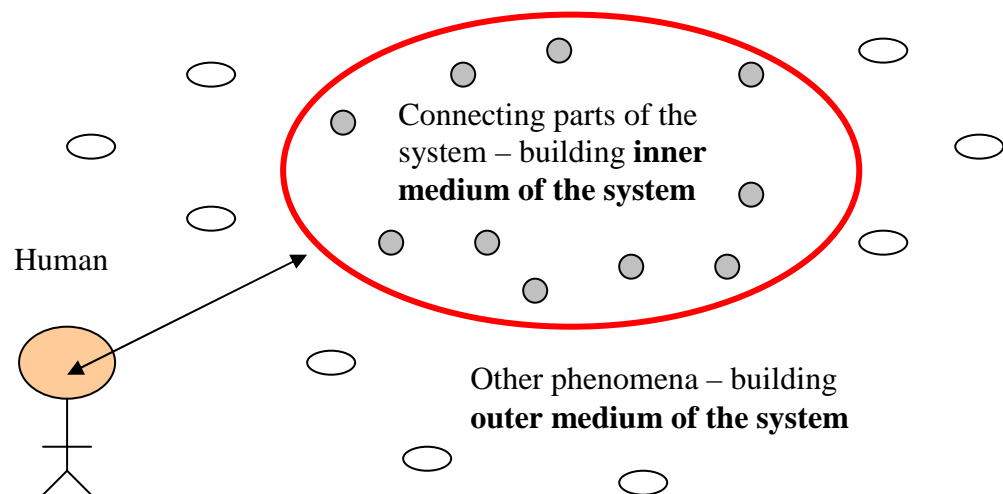
World of thoughts – it is **SYSTEM** of thoughts



Reflection of real world – systems thinking

SYSTEMS THEORY – general theory of thinking:

reflected **phenomenon** as a **system** in human's consciousness

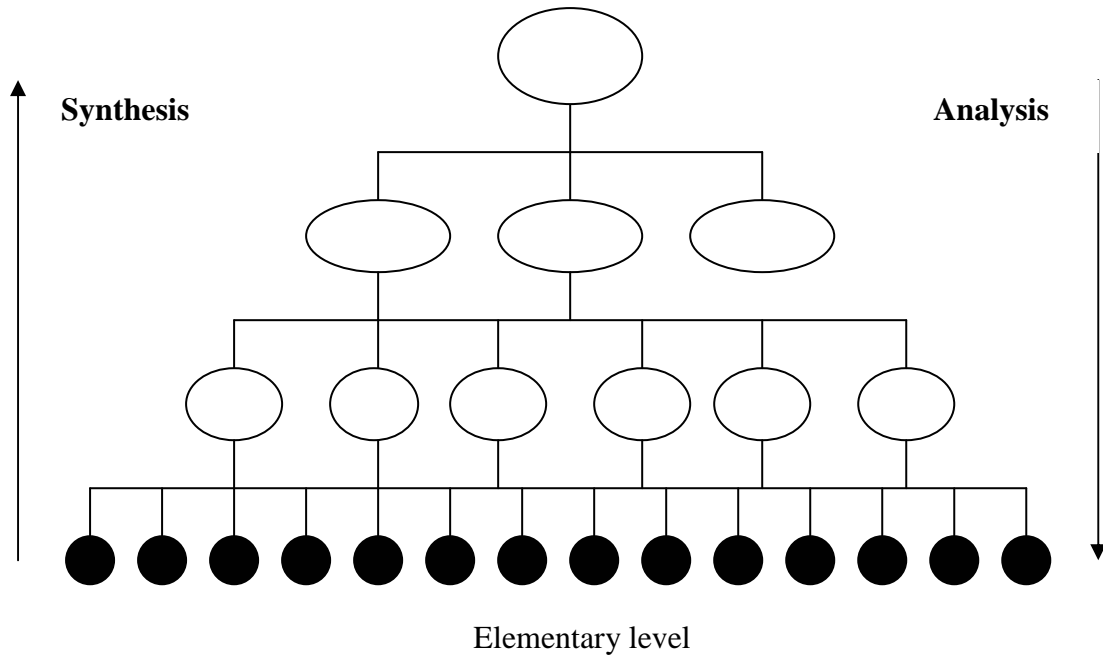


System – it is selected by human from other phenomena definite phenomenon (body or process) as a definite set of interrelated (connected, joined) parts of this phenomenon.

All phenomena are reflected in human's consciousness **as systems!**

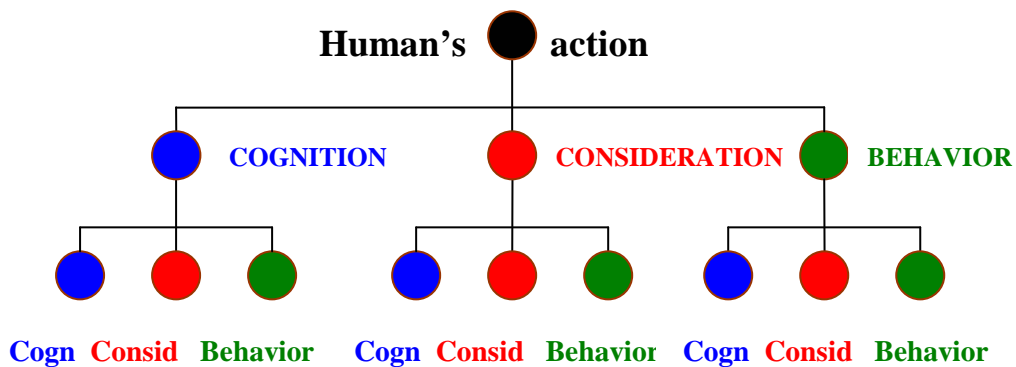
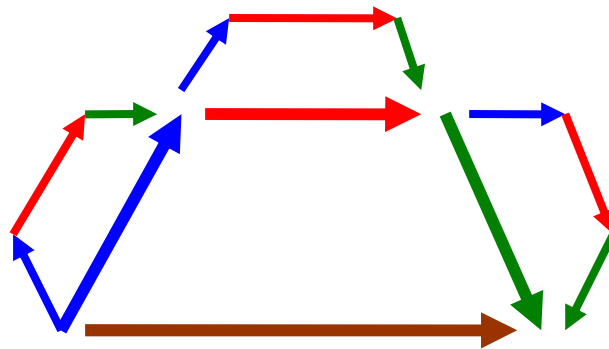
Any thought is a system, built from other thoughts and building other thoughts. Thinking means systems thinking - analysis, comparison and synthesis of systems.

Multilevel or hierarchical structure of systems



Order and disorder of structures – arrangement of system's structure

Systemic visualization of two levels human's action

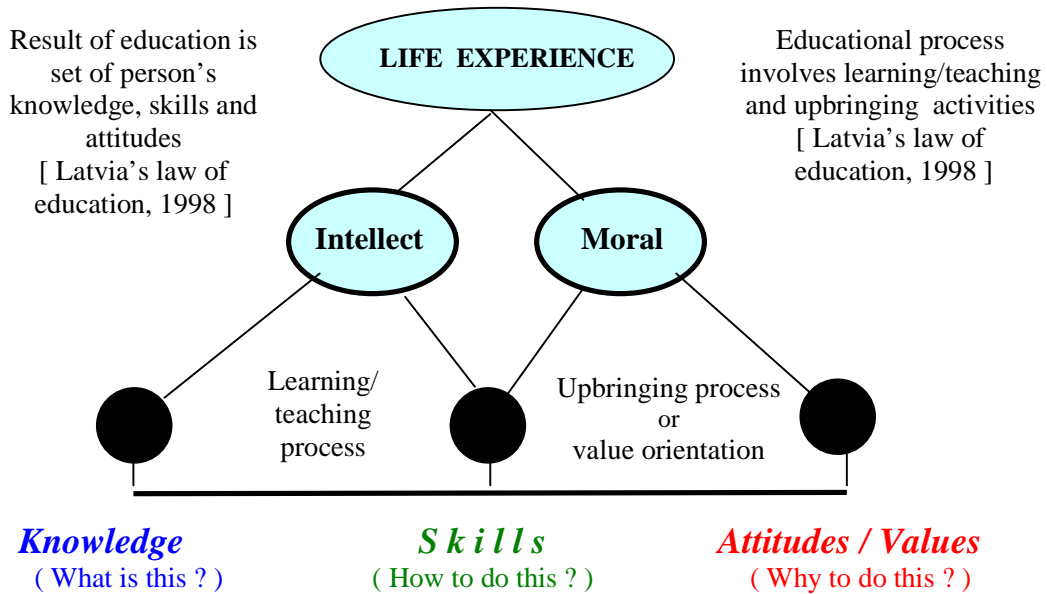


SYSTEMOLOGY – applied systems theory

For example - SYSTEMOLOGY OF EDUCATION

Education – it is specially organized gaining of life experience for life.

General structure of human's life experience



The principal core structure of humans' educatedness - life experience (*knowledge, attitudes, skills*) for life (*cognition, consideration, behavior*)

	COGNITION (sensations, coding, description)	CONSIDERATION (valuation, goal defining, decision making)	BEHAVIOR (planning, providing resources, execution)
SKILLS - realization of abilities	Skills of gaining information and its' analysis and synthesis	Evaluation, goal defining and decision making skills	Skills of planning, providing resources and execution
ATTITUDES - value orientation	Cognition of values (creation of sample values - what is good?)	Development of attitudes	Practical realization of attitudes
KNOWLEDGE - facts and causality relations	Obtaining knowledge (what is it and why is it so ?)	Processing of knowledge (critical thinking)	Use of knowledge in practice

Concluding notes.

There are always many problems in our life and education -

(what means specific state of our consciousness
when we do not know what, why and how to do)

To solve our problems - we need to develop our thinking abilities -

we need to develop OUR SYSTEMS THINKING

WE ALL NEED TO STYDY SYSTEMS THEORY

To have better life -

we need to make our people better!

Good luck to all of us, dear colleagues!

Some references:

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