



LIFE  
EXPERIENCE  
(knowledge,  
attitudes,  
skills)  
for LIFE  
(cognition,  
consideration,  
behavior)

University of Latvia  
Prof. emer., Dr.phys.

**A N D R I S B R O K S**

E-mail : [andris.broks@lu.lv](mailto:andris.broks@lu.lv)

Blog: <http://blogi.lu.lv/broks/>

<https://blogi.lu.lv/broks/category/materials-in-english/>

## SYSTEMOLOGY of SCIENTIFIC RESEARCH

(Lecture course for study program  
“Management of Education” 2015/2016)

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### *PREFACE (General characteristic of study course)*

Research as a problem solving – gaining new Life experience for Life

### **INTRODUCTION** (Basic Concepts of the Course)

Systems Thinking (Systemic reflection of observed phenomena in human’s consciousness, Systems Theory and Systemology as applied systems theory for Practice : cognition, consideration, behaviour)

- **Scientific Research** (cognitive/fundamental, behavioural/applied and educational research as gaining Life experience for Life)
- **Education** (management and execution of educational activities – organization and execution the processes of gaining Life experience for Life)

### **PART 1** – Philosophical and Psychological background of Human’s life activities: *square of Mankind’s Great Thoughts - World, Human, Life, Society*

**World** as manifold set of interconnected phenomena (changing bodies)

**Human** as alive spiritual body

**Life** as manifold set of interrelated human’s activities

(cognition, consideration, behaviour)

**Society** as manifold set of interactive humans

Education as Life experience (knowledge, values, skills) for Life  
(cognition, consideration, behaviour)

**PART 2** – **Systems Theory** (systemic reflection of sensed world  
in human's conscious world of thoughts)

**PART 3** - Systemic Management of Education (Educational  
activities)

## CONCLUSION

*EPILOGUE (Final evaluation of study process results)*

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### List of recommended study materials

- **A.Broks** Selected study materials available in internet :

Systemology of Scientific Research 28-29.10.14

<https://failiem.lv/u/uep8vsdh>

Systemology of Scientific Research 3.02.16

<https://blogi.lu.lv/broks/category/materials-in-english/>

- **E.B Agoshkova**. SYSTEMS THINKING IN THE TWENTY-FIRST CENTURY. <http://web.bu.edu/wcp/Papers/TKno/TKnoAgos.htm>  
(accessed 6.09.2015)
- **Heylighen, F., Joslyn, C. (1992)** WHAT IS SYSTEMS THEORY?  
<http://pespmc1.vub.ac.be/SYSTHEOR.html>  
(accessed 1.02.2016)
- Wikipedia **Systems (thinking, approach, science etc.)**  
[http://en.wikipedia.org/wiki/Systems\\_thinking](http://en.wikipedia.org/wiki/Systems_thinking)  
(accessed 1.02.2016)
- **Systems Thinking**  
[http://www.hent.org/world/rss/files/systems\\_think.htm](http://www.hent.org/world/rss/files/systems_think.htm)  
(accessed 1.02.2016)

- **Usage of Systems Thinking**  
<http://www.crossroad.to/Excerpts/community/system-theory.htm>  
(accessed 1.02.2016)
- Center of Ecoliteracy **Systems thinking**  
[\[http://www.ecoliteracy.org/nature-our-teacher/systems-thinking](http://www.ecoliteracy.org/nature-our-teacher/systems-thinking)  
(accessed 1.02.2016)
- **Mind maps** <http://www.mindmaps.com/>  
(accessed 1.02.2016)
- **Lars Skyttner. GENERAL SYSTEMS THEORY – PROBLEMS\*PERSPECTIVES\*PRACTICE.** (2nd Edition - World Scientific Publishing Co.Ptc.Ltd., **2005** (524 pages)  
[https://books.google.lv/books?id=tG6QKNgYs9sC&pg=PR3&hl=lv&source=gbs\\_selected\\_pages#v=onepage&q&f=false](https://books.google.lv/books?id=tG6QKNgYs9sC&pg=PR3&hl=lv&source=gbs_selected_pages#v=onepage&q&f=false)  
(accessed 1.02.2016)
- **Basic Concepts of the Systems Approach**  
<http://pespmc1.vub.ac.be/SYSAPPR.html> (accessed 1.02.2016)

## Video materials

- \* Meeting with Peter Senge  
[http://www.youtube.com/watch?v=b1G0Fs\\_u4g](http://www.youtube.com/watch?v=b1G0Fs_u4g)
- \* A Theory of a System for Educators and Managers  
<http://www.youtube.com/watch?v=2MJ3IGJ4OFo>
- \* Systems Thinking  
<http://www.youtube.com/watch?v=RQpirPgfkYk>  
<http://www.youtube.com/watch?NR=1&v=XAI85rSLfPY&feature=endscreen>  
<http://www.youtube.com/watch?v=pEIXE9DI9e4>  
<http://www.youtube.com/watch?v=97KnG2Q4U6Q>  
<http://www.youtube.com/watch?v=OhbhaN3IGP4>