



Intelligent Information Systems

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Lecture Notes: Anex 1



HUMAN CAPITAL
HUMAN – BEST INVESTMENT!

EUROPEAN UNION
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A not-Complete List of Reasoning Methods

Annex 1

Terms

Terminology

- **Thinking**
- **Reasoning**
- **Making Conclusions**
- **Inferencing**

Thinking



Reasoning

“Reasoning is an action that allows one to create new knowledge on the basis of the available knowledge.”

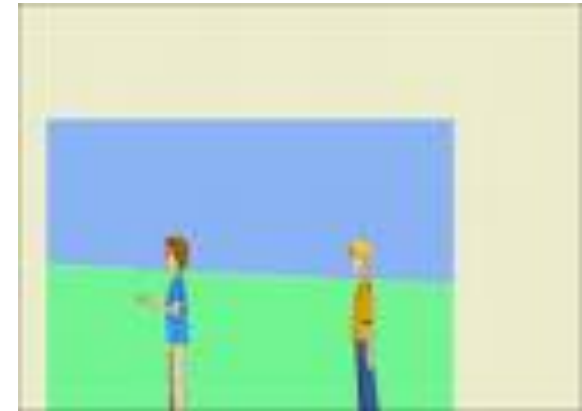
Tools of Reasoning



- Memory
- Experience (personal or external)
- Associations
- Differentiation and recognition
- Common reasoning (generalization, induction, extrapolation, deduction, hypotheses building, ...)
- Ideas generation and filtering (models, theories, ...)
- Experimenting (physical, virtual),
- Intuition
- ...

Types of Reasoning/Inference

- **logical**
 - deduction
 - Induction
- **statistical**
(Warning: correlation is not causation)
- **probabilistic**
- **by analogy**
- **by comparision**
- **by examples**
- **by associations**
- **cause-result**
- **by „contradictions”**
- ...



Would You Agree?

***“Reason is a
harmonizing,
controlling force rather
than a creative one”***

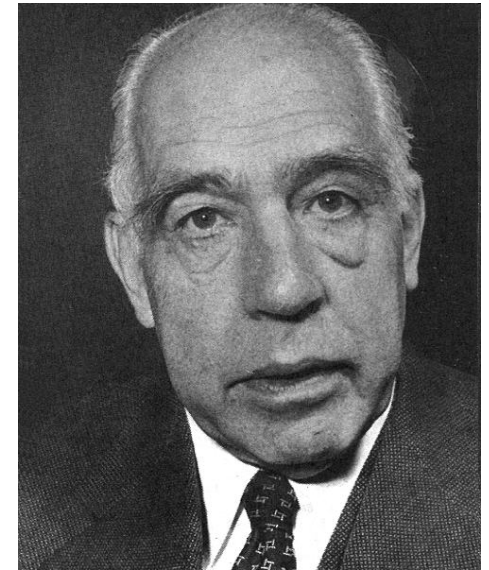


—Bertrand Russell

The Answer

***“No, no, you're not
thinking; you're just
being logical.”***

– Niels Bohr





WARSAW UNIVERSITY OF TECHNOLOGY
DEVELOPMENT PROGRAMME



Thank you!



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