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PRISME panel discussion
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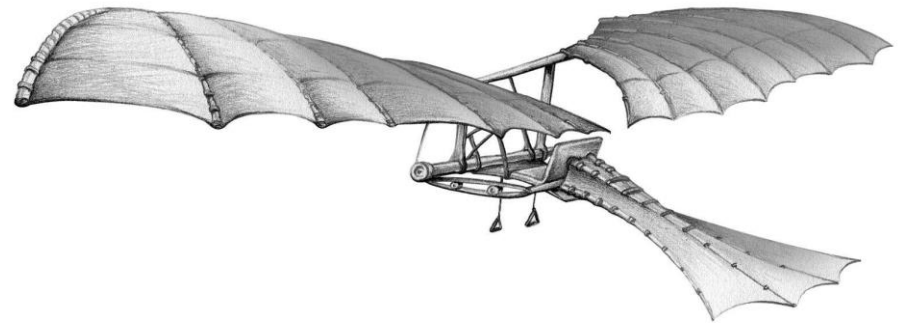
„From Search to Cognition – Are we there yet?"

Definition „Cognition": the set of mental abilities related to knowledge: attention, memory, judgment, reasoning, decision making, comprehension …
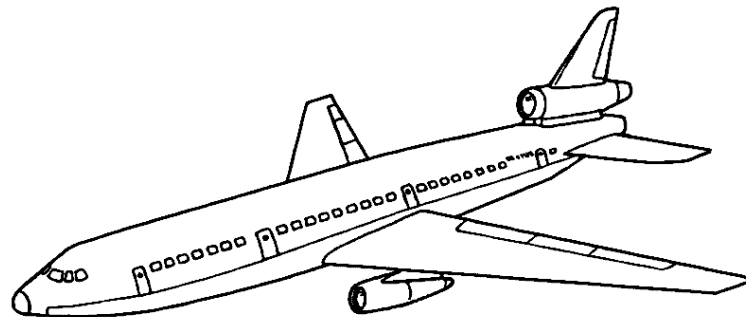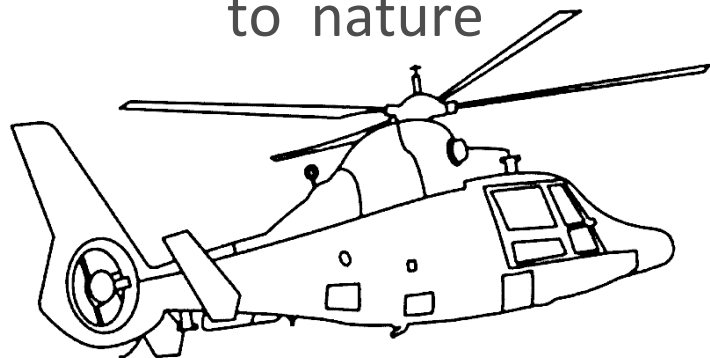
No!

(we are not)

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❖ Example: Flying

- Do we fly like birds?

- No, but our „flying machines" are in many respects superior to nature

❖ Example: Document categorization

- What kind of reasoning does it take to properly assign a piece of text to the proper category (e.g. „politics", „sports", „culture", „military", …)

- Common popular belief: True language understanding, knowledge of syntax, domain knowledge, …

- But in reality: $P(A|B) = \dfrac{P(B|A)P(A)}{P(B)}$

  it is often not so easy to be better than a simple classifer that uses the theorem of Thomas Bayer (1701-1761), basically just counting words (very far from the way humans solve this task!)

❖ True „Cognition" often not needed to address real-world and demanding requirements in Text Analytics

❖ Examples: Selected TEMIS deployments

- Support physicians in their search from a radiology finding to the diagnosis and therapy (at Thieme in Stuttgart)

- Support Deloitte in accelerating the analysis of legacy banking data to ensure compliance with regulatory legislation

- Support Merck in analysing large amounts of social media data to identify trends and issues

- Support the US ministry of agriculture to automatically index the content of the National Library of Agriculture