Artificial Intelligence in a Historical Perspective

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Topics of talk

Nils J. Nilsson, The Quest for Artificial Intelligence: A History of Ideas and Achievements, 2009.

Here: AI's history from a European perspective:

beginnings, persons, events etc.

AI's responsibility for bettering the impact of humankind on the entire globe

Zusean thinking

Truly radical change brought about by invention of computer:

prezusian → zusean

Affecting literally all sectors of society

... and our thinking:

AI a (meta-) science about sciences

Woody Bledsoe:

in the end AI will be the only science

Central thesis or zusean vision

Humankind can cope with enormous challenges – global warming, financial crisis, billions of people suffering from famine, disease or war, etc. – *and overcome the destructive weaknesses in our human way of problem solving only by completing the historical step initiated with the foundation of AI*

Some individual thinkers

- Konrad Zuse: first computer 1941, Plankalkül (first AI progr. language) and first chess program 1945/46

- Andrew Donald Booth, U. of London: initiated Language Translation 1946

- Alan Mathison Turing: Turing Test paper

- Norbert Wiener, MIT: cybernetics etc.

- Karl Steinbuch, KIT: Lernmatrix etc.

Conferences and institutions

- 1958 "Mechanisation of Thought Processes", Teddington, England
- 1959 IFIP, Paris (eg. Prawitz)
- 1964 AISB study group formed
- 1965 Donald Michie: Department of Machine Intelligence and Perception
- 1965 Bernard Meltzer: Meta-mathematics Unit, both Edinburgh U.

Visiting US AI institutions

- Eric Sandewall: 1966f Stanford and MIT
- Alain Colmerauer: 1967f U. of Montreal
- Gérard Huet: 1969f Case Western Reserve U.
- Wolfgang Bibel: 1970f Wayne State U.
- Luigia Carlucci Aiello: 1973f Stanford
- Bob Kowalski: 1966 Stanford

AI-related conferences

- IJCAI-71, London
- IJCAI-75, Tbilisi, USSR
- 1975 first German AI meeting, Bonn
- 1976 CADE-2, Oberwolfach, Germany
- 1976 first Logic Programming Meeting, London
- Panel "AI in W. Europe" at IJCAI-77, Boston

Steps towards ECAI

- 1978 AISB/GI Conference, Hamburg, Hans-Hellmut Nagel Conference Chair

- 1979 letter arguing for ECCAI/ECAI

- AISB-80 Amsterdam, Bob Wielinga General Chair

- ECCAI-sponsored ECAI-82 Paris

- Thereby ECCAI officers elected, statutes approved

Consequences of ECCAI

- Foundation of new AI societies across Europe, currently 29 members
- Lobby at EU Commission
- 1984 ECCAI newsletter, 1987 AIComm
- 1985 first ACAI
- Strengthening Europe's AI community
- Celebrate in 2012:
  30th anniversary of the first ECAI proper, 20th ECAI, and 25th of AIComm

Context

- 1980 Japan announced Fifth Generation Computer Systems project (FGCS) in IT

- 1983 Commission of the European Communities (CEC) launched European Strategic Programme for Research in Information Technologies (ESPRIT)

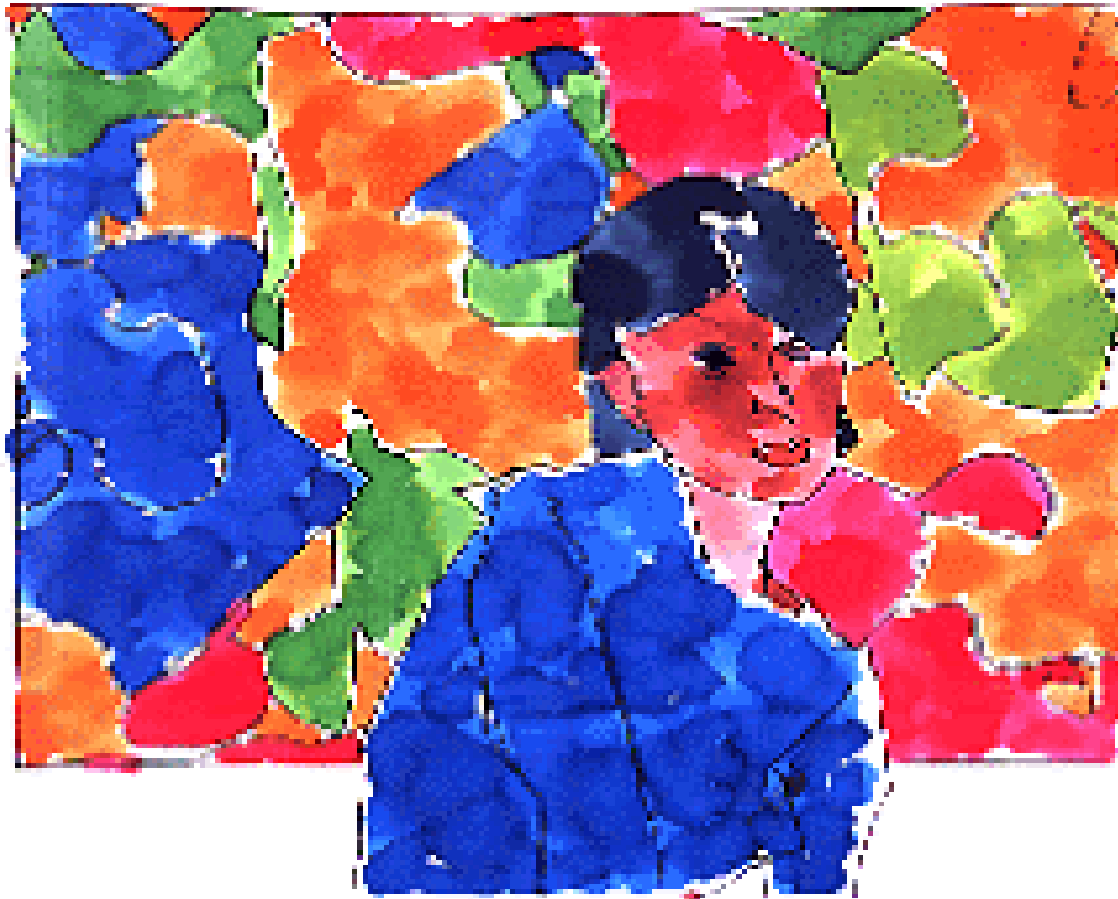- 1988 Deutsches Forschungszentrum für Künstliche Intelligenz (DFKI) founded

How to realize zusean vision?

- Split: AI $\in$ IT/CS vs. Cognitive Science, Psychology, Neuroscience $\rightarrow$ Intellectics

- Artificially intelligent and rational agents (AIRA) with super-human intelligence rather than simulating (often irrational) human intelligence

- Who will drive the zusean vision?

- AI should continue to take the lead

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