

Intelligence without representation

Rodney A. Brooks (1987)

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19th january, 2009

Outline

1 Introduction

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- 1 Introduction
- 2 Incremental Intelligence

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- 3 Subsumption architecture

Criticism on traditional AI

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- *problem*: we still do not know the right interfaces between them
- we still perform the abstractions for our programs

A different approach

- build up the capabilities incrementally

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- build complete intelligent systems at each step

Creatures

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- a Creature should be robust with respect to its environment
- a Creature should be able to maintain multiple goals
- a Creature should do something in the world

in theory

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- from very simple system to complex autonomous intelligent system
- at each step a tested system

in practice

Methodological maxims:

- test the Creatures in the real world

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- test each layer in the real world

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in practice

- lowest layer: avoid hitting objects

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- second layer: wander around

in practice

- lowest layer: avoid hitting objects
- second layer: wander around
- third layer: try to explore

some links

- Homepage of Mr. Brooks : <http://people.csail.mit.edu/brooks/>
- Nice video about/with Brooks and the subsumption architecture:

http://noolmusic.com/google_videos/rodney_a_brooks___subsumption_architecture.php