CS344M
Autonomous Multiagent Systems

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Good Afternoon, Colleagues
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Are there any questions?
Logistics

- Office hours
Logistics

- Office hours
- Reading responses
Logistics

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- Reading responses

- Programming assignment
  - How’s it going?
Logistics

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- Programming assignment
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  - Important: 3D code is only for this class
Logistics

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- Reading responses

- Programming assignment
  - How’s it going?
  - Important: 3D code is only for this class
Logistics

- Next week’s readings up
  - Multiagent Systems – an overview
    - Another overview (optional)
  - Pushing Brooks’ approach to MAS
Logistics

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  - An early successful RoboCup team
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  - Free-form response
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Writing Assessment

● What did you think of these readings?
● What was good about them?
● How could they have improved?
Writing

- Direct, articulate responses
  - Thesis sentence
  - Supporting argument
  - Demonstrate that you know what you’re saying
One way that TCA departs from Rodney Brooks’ design principles is that TCA employs a central control module. TCA’s central component routes messages to the various connected modules and maintains control information. Brooks’ designs, on the other hand, connected perception directly to actions, bypassing any form of central control and also any central representation of the world.
Reactive vs. deliberative (3 senses)

- Respond in a timely fashion
- No complex representation
- No state at all (respond to current percepts)
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From the book:

- \( \text{action} : \mathcal{P} \rightarrow A \)
- Decision based entirely on the present
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From the book:

- $\text{action} : \mathcal{P} \rightarrow \mathcal{A}$

- Decision based entirely on the present
  - True of Brooks’ “reactive” agents?
Brooks’ Goals
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- Autonomous mobile agents that are seen as intelligent
- No interest in applications
- Timely, robust, do something
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  – What are their stances towards modeling biology?
  – Which is more biologically plausible?
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Subsumption Architecture
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Subsumption Architecture

(journal article, page 2)
Merkwelt
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• *Merkwelt* $\sim$ “perceptual world”

• Every agent has its own *Merkwelt*. 
**Merkwelt**

- Merkwelt ~ “perceptual world”
- Every agent has its own Merkwelt.
- Why should robots use a representation based on our Merkwelt?
- Do we know our own Merkwelt?
“When researchers working on a particular module get to choose both the inputs and the outputs that specify the module requirements I believe there is little chance the work they do will fit into a complete intelligent system.”

Does this apply to 3T?
Could the 3T apps have used subsumption?

- Why or why not?