

# ***Design and Human Factors***

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Mid-term surveys, grades and what they mean...

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## Functionally Adaptive Robotics

Cooking  
Eyesight  
Communication  
Story-creation  
Piano!  
...

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Manipulate the World

Externalize Memory

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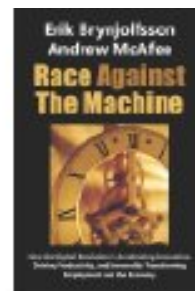
## Forlizzi, DiSalvo, Gemperle

Balanced and imbalanced ecologies  
reminding family to call; communication  
social networking  
social AI agent

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## Sheridan

Automation and underemployment  
history  
facts of life: must get along  
supervisory roles  
RABA-RABA



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## What is Intelligence?

Levels of Deception (Mitchell 1988)

Camouflage

Programmed but active

Tailored responses

Awareness of other mental processes

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## The Goal

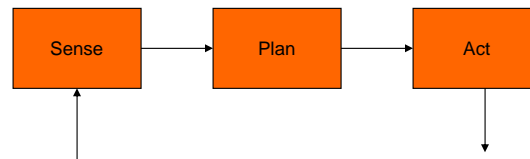
Given initial conditions and goal constraints,  
design a robot automata such that the robot-  
environment system satisfies the goal  
constraints.

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## Sense-Plan-Act

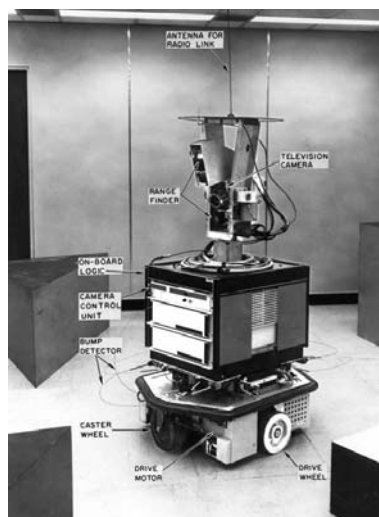
Nilsson



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## Origins: Shakey



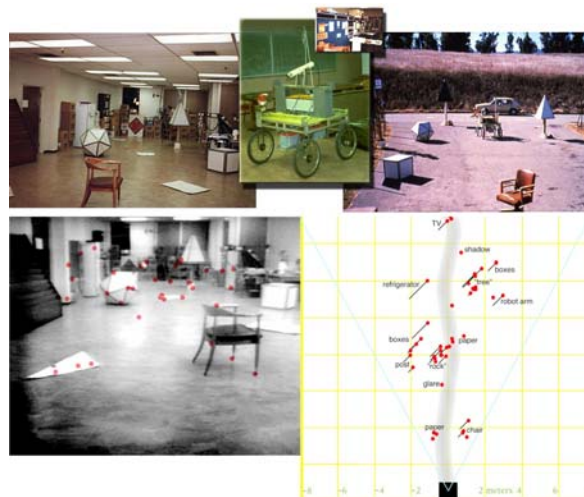
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## Origins: The Stanford Cart



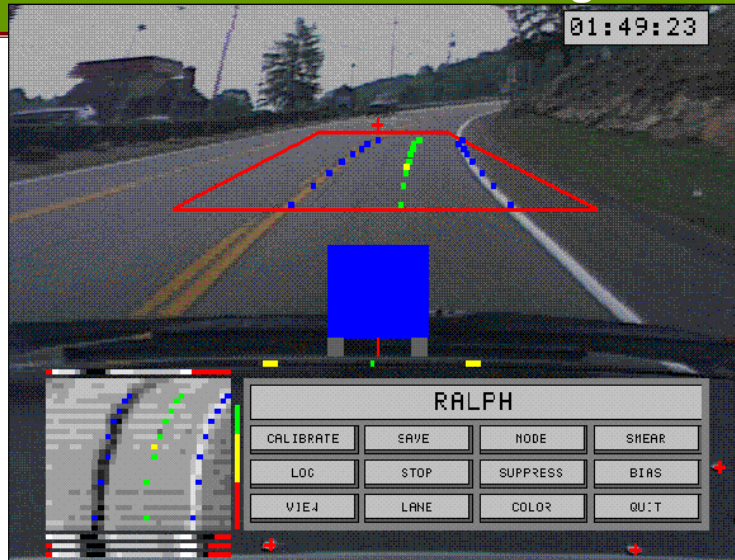
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## Origins: The Stanford Cart



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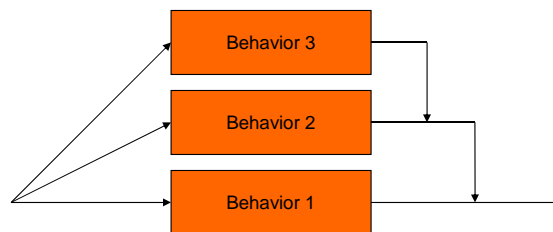
## RALPH Autonomous Driving



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## Layered Subsumption Brooks



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# Tiered Architecture

*everyone else!*

