



Robotics for Society

Introduction

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Robot

- ✦ embodied agent
- ✦ has a *body*, physical, virtual or at least metaphorical (even an Internet bot “crawls” or “spiders” the Web)
- ✦ possesses *agency* - capacity to act in a world
- ✦ physical agency - anthropomorphic or zoomorphic
- ✦ mental agency - the “true” agency, thus...
- ✦ can the most essential problem of robotics be rephrased as a problem of Artificial Intelligence?

Emergence of mental agency

- ✦ clockwork car is not a robot
- ✦ what about a mechanical clockwork ladybug that doesn't fall off the table?
- ✦ and other reactive agents? (e.g. potential nanobots)
- ✦ and their communities?

Robotic Morality

- ✦ should the robots be moral agents?
- ✦ safe answer - yes...
- ✦ but - how can a reactive agent be also (im)moral agent?
- ✦ and most importantly - how shall we teach the robots morality?
- ✦ GOfAI doesn't work - will morality emerge by itself? Is there then any difference in "morality acquisition" between robot and human?

Roles of Robots

- ✦ ... for/in society
- ✦ are these everything, or there can be more?
 - ✦ “soldier”
 - ✦ “rescuer”
 - ✦ “explorer”
 - ✦ “carer”
 - ✦ “human body mender/enhancer”
 - ✦ “pervasive companion”

March of the Machines?

- ✦ we want the robots to be as much autonomous as possible and with the highest mental agency - yet we still want them to be under our full control (just like human slaves?)
- ✦ How can we control swarm intelligence packs of reactive or mildly intentional agents? Should we allow them?
- ✦ safe answer - no...
- ✦ ... but they might prove useful (e.g. nuclear disaster aftermath)