

HRI Reading Group

@ Instituto Superior Técnico

Meeting #8 (4 May 2018)

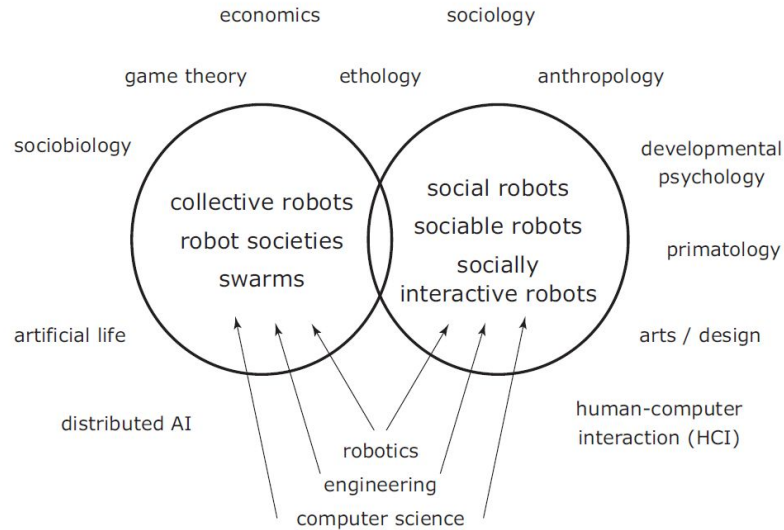
Welcome!

Paper

Fong, Terrence, Illah Nourbakhsh, and Kerstin Dautenhahn. "**A survey of socially interactive robots.**" *Robotics and autonomous systems* 42, no. 3-4 (2003): 143-166.

Social robots?

HRI without social robots?



Social robots?

HRI without social robots?

From paper:

- Socially evocative
- Social interface
- Socially receptive
- Sociable

- Socially situated
- Socially embedded
- Socially intelligent

Discussion:

Your actions affect and take into account the actions of the others.

Need ToM.

Most current social robots are not socially intelligent.

It seems like the ideas discussed in the paper generalize to social agents.

- express and/or perceive emotions
- communicate with high-level dialogue
- learn/recognize models of other agents
- establish/maintain social relationships
- use natural cues (gaze, gestures, etc.)
- exhibit distinctive personality and character
- may learn/develop social competencies

Required Perceptions / Actions of Social Robots

Perceptions

- Recognize agency or other agents
- Social cues, signals, emotions
- Actions and their outcomes of the other agent

Cognitive

- Estimation of latent variables + appraisal
- Prediction of other's actions and outcome of own actions on other's state
- Social motivations and goals
- Multi-agent planning with social constraints
- ToM capabilities (possibly > 1st order)

SOCIAL REALITY

Actions

- Execute required task
- Legible communication (verbal, non-verbal) of information and STATE or reasoning process
(illusion of consciousness communicated through actions , lying is a powerful one)

Affective computing

What is a robot emotion?

- Internal state that influences decision-making, learning, perception, ...
- A control on a model
- Synthetic emotions don't necessarily have to match human labels (e.g., pos, neg)
- Two components: cognitive and physiological
- Appraisal
- Feelings?

What about ethics?

- Sociality is placed in a body that is artificial and raises expectations, artificiality may be a problem.
 - Depends on the population
 - User models requires data
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- Social motivations and goals

**Who is bringing the
refreshment next week?**

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Meeting #9 (11 May 2018)