

HOW ARE HUMANISTIC RESEARCH METHODS RELEVANT FOR HUMAN- ROBOT INTERACTION RESEARCH?

Gitte Rasmussen

Professor of Social Interaction

Faculty of Humanities

University of Southern Denmark

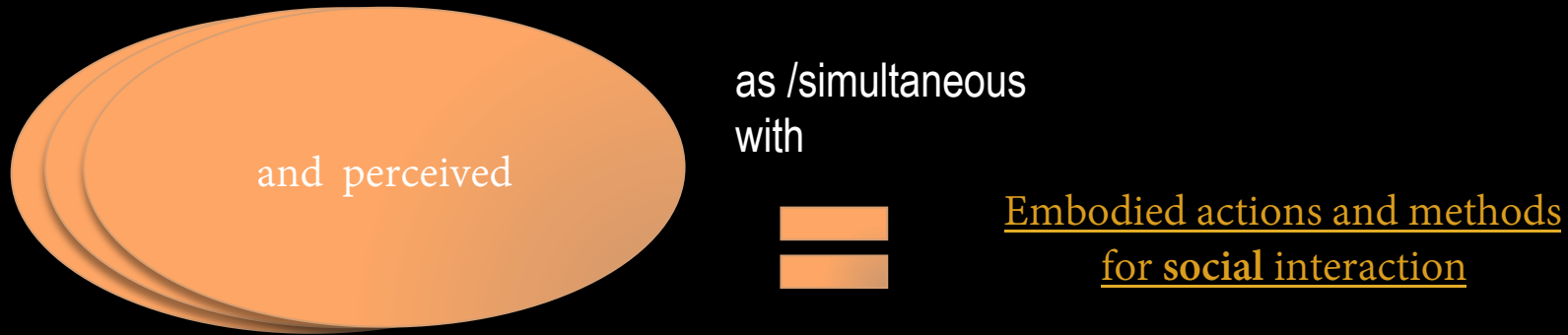
HUMANITIES AND *HUMAN*-ROBOT INTERACTION RESEARCH?

- The human being
 - How the human being understands the world
 - How does the human being achieve a specific understanding of the world/
life - **together with other human beings** and create what human beings amongst themselves call 'social life' and 'society', 'cultures'
 - Mothers and fathers, daughters and sons
 - Students and researchers
 - Users
-

A SDU collaboration between Faculty of **Humanities**
and Faculty of **Engineering** and Faculty of **Health**
Sciences to develop better robots for **physical** training
and rehabilitation

A SDU COLLABORATION BETWEEN FACULTY OF HUMANITIES AND FACULTY OF ENGINEERING AND FACULTY OF HEALTH SCIENCES TO DEVELOP BETTER ROBOTS FOR PHYSICAL TRAINING AND REHABILITATION

- Embodiment
- EMCA interaction research





Production/
perception/
typification



Embodied
actions and
methods

RoBody





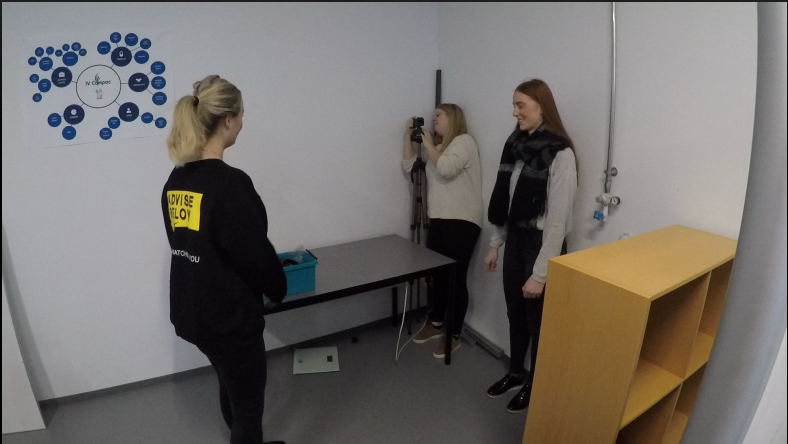
Broth, M., & Mondada, L. (2013). Walking away: The embodied achievement of activity closings in mobile interaction. *Journal of Pragmatics*, 47, 41-58.

Rasmussen, G., Hazel, S., & Mortensen, K. (2014). A body of resources - CA studies in social conduct. *Special Issue for Journal of Pragmatics*, 65, 156.



Robody

BODILY KNOWLEDGE OF 'BEING LED BY SOMEONE/SOMETHING: "HOW ARE PEOPLE INDICATE BODILY 'LEADING' AND 'BEING LED'?"



Courtesy to **Cecilie Faden** and **Cecilie Wang Justesen**, Faculty of Engineering, University of Southern Denmark.



Methods for analysis of physical HR-Interaction

- Video-recordings of embodied interaction with the robot
- Registration of numerical data through a device
- Analysis of both types of data and the relation between them.





METHOD FOR ANALYSIS OF PHYSICAL HR-INTERACTION

Bodily pattern of 'how to move' pivots on the first movement(s) in relation to position of the rope and the size of the body

Upon having established a routine in terms of a combination of structure of movement, velocity and their time derivatives, change of bodily position occurs not till after 3-4 pulls

- Where we make it possible for people to start will have an influence on how they proceed
- 3-4 pulls establish a routine in terms of in terms of force and bodily position
- Robotic indications of change not until after 3-4 pulls

Rasmussen, G. (2014). Inclined to a better understanding: The coordination of talk and 'leaning forward' in doing repair. *Journal of Pragmatics*, 65, 30-45.

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ROBODY

1. The study of human bodily knowledge
 2. How human bodily knowledge may be
 - used when using robots for training and rehabilitation purposes probably in modified versions
 - useful knowledge when programming robots for physical HR-interaction.
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THANK YOU FOR YOUR ATTENTION

Gitte Rasmussen

Professor of Social Interaction

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