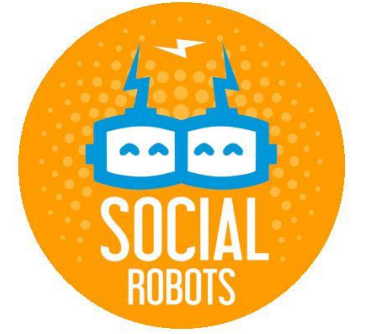# Teammates First:
Favoring Ingroup Robots over Outgroup Humans

Fraune, M.R., Šabanović, S., & Smith, E.R.

Presented by: Dorina de Jong

Human robot teams

———

Military

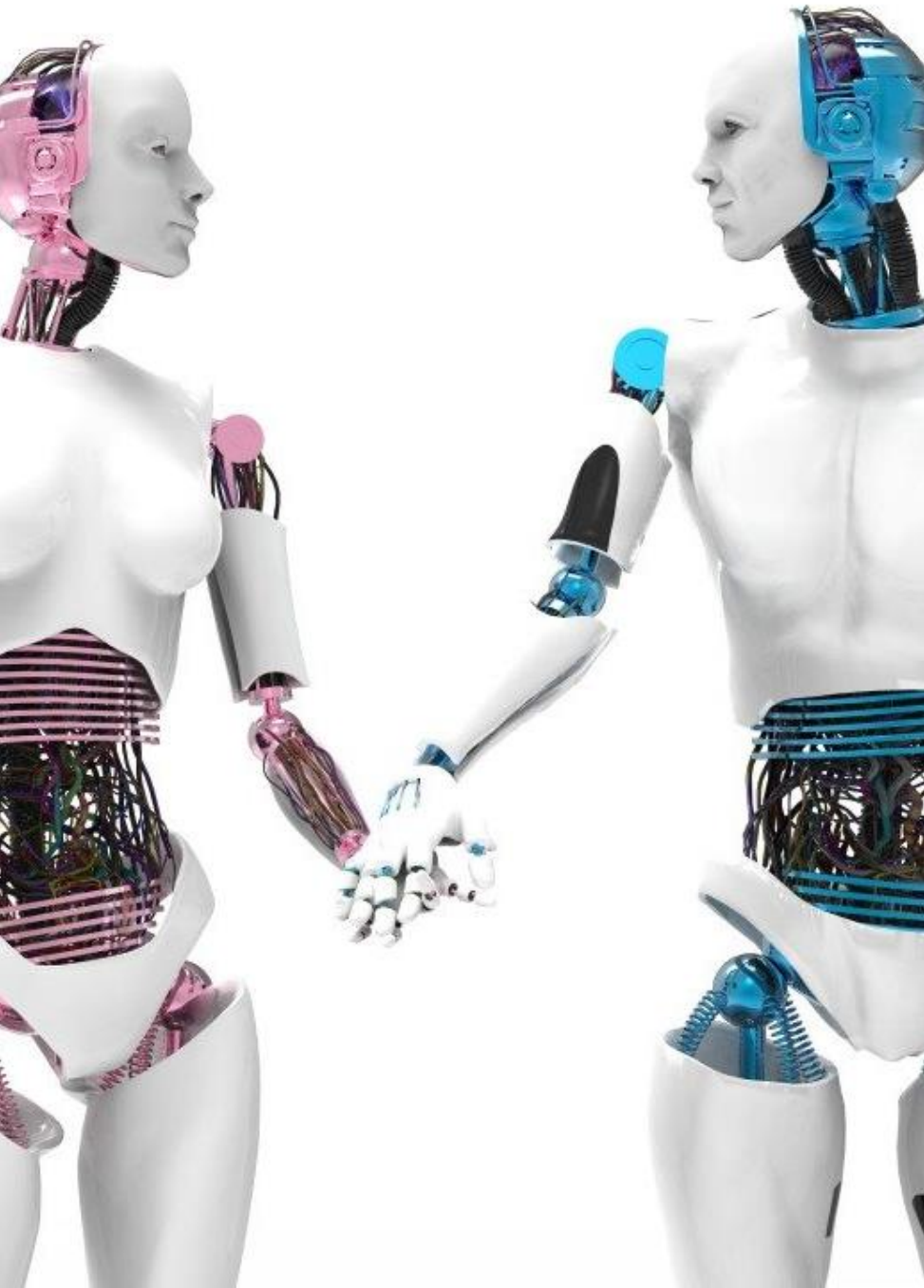Not seen as tools, but as teammates[1]

Give names, medals and have a favourite one

Hesitant to send robots to dangerous areas

No emotional cues like social robots

1) Garreau (2007)

Group membership

Humans easily form groups and favour in-group members

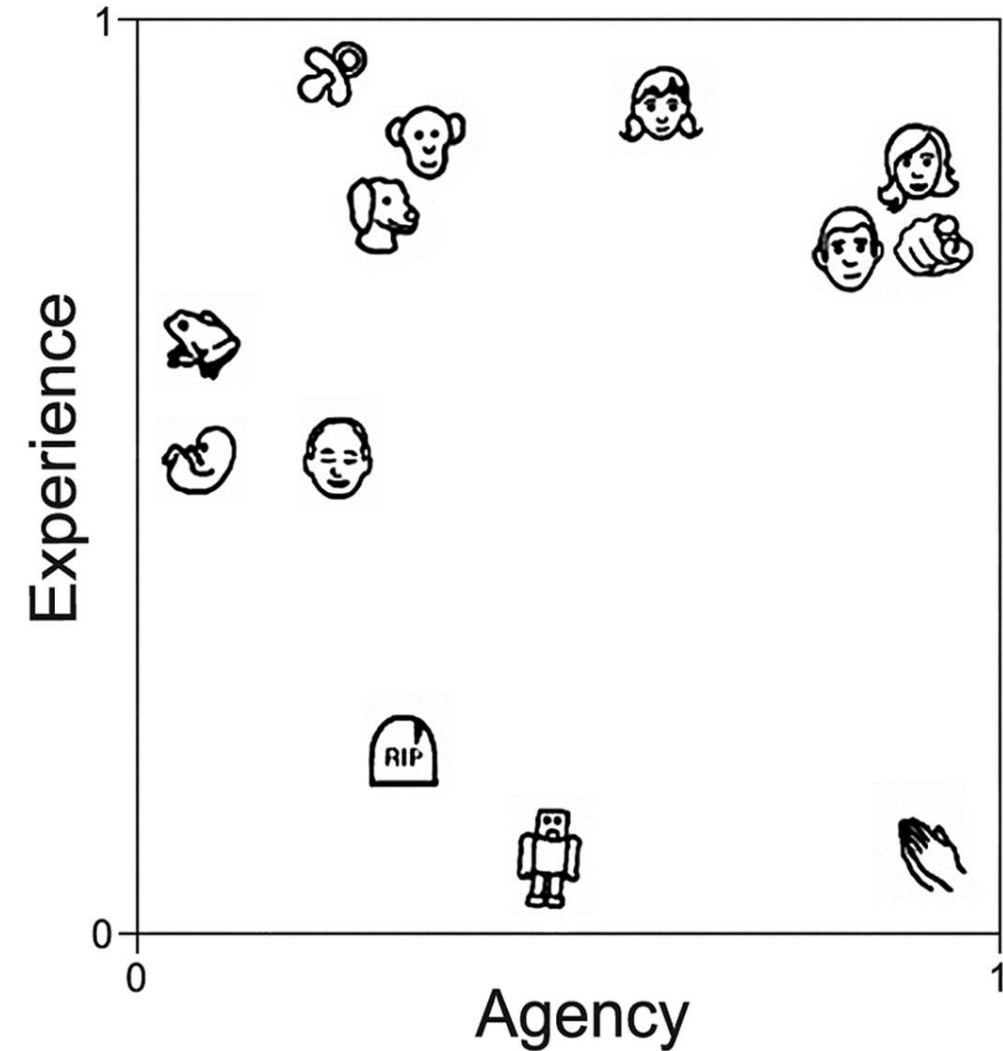Formation of groups based on shared characteristics

Social categorization also happens to robots
- Pre-existing groups
  - Cultural (ARMIN/ARMAN)[2]
  - Gender[3]
- Minimal group paradigm
  - Arbitrary reason
  - This experiment

2) Eyssel & Kuchenbrandt (2012)

3) Eyssel *et al.,* (2012)

Anthropomorphism

Ingroup members are also seen as more human-like

Humanization

- Human Nature traits (ability to perceive sensations)
    - High experience entities include humans
    - Low experience entities include machines
- Uniquely Human traits (ability to think deeply)
    - High agency entities include adult humans
    - Low agency entities include animals & inanimate objects
    - Social robots viewed as less agentic than adult humans

Moral behaviour

Ingroup members are favoured morally over outgroup members

Humans are also favoured morally over robots

People find it more important to behave morally towards human-like robots

Aggression against outgroup members is sometimes justified by ingroup loyalty

# How do people treat others based on group membership and agent type?

Aggression (volume of noise blasts)

Anthropomorphism (human nature and uniquely human traits)

Entitativity (perception of group as a single entity)

|	Human nature	Uniquely human
Positive	Curious, friendly, fun-loving, sociable, trusting	Broad-minded, humble, organized, polite, thorough
Negative	Aggressive, distractible, impatient, jealous, nervous	Cold, conservative, hardhearted, rude, shallow

Players
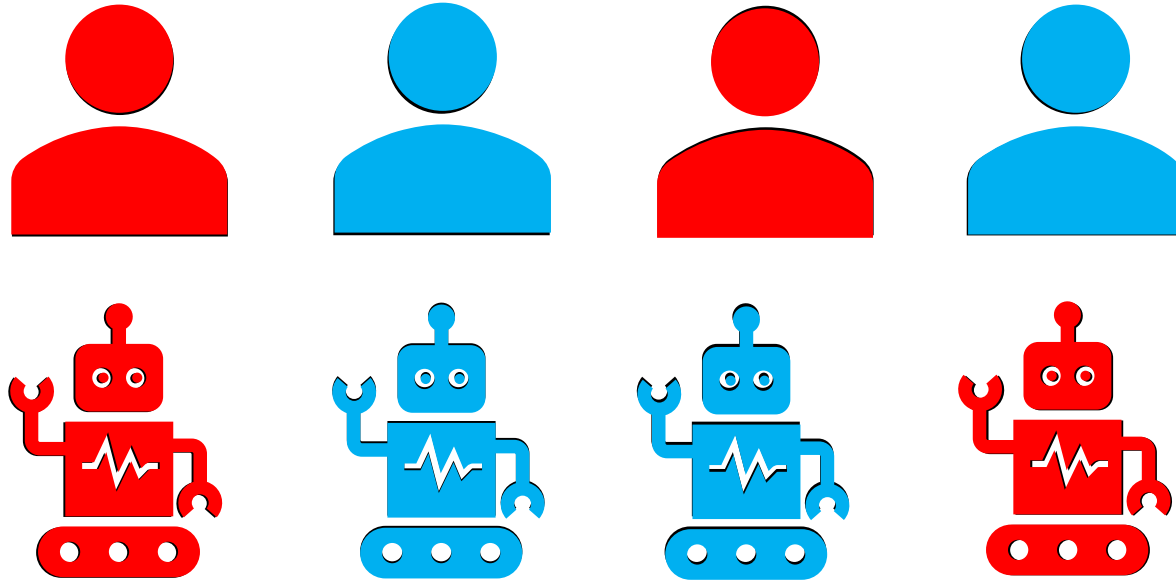
Meet the robots

Price guessing game
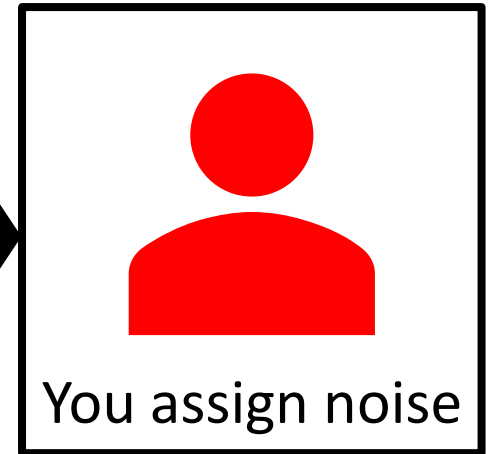
Teammates' answers were averaged for a final answer - interdependence

Random member of winning team assigns noise blasts to all 8 players

You: £300
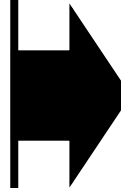
Red team: £350

Blue team: £250

Red team wins!

You assign noise

80	
85	
90	
95	
100	
105	
110	
115	
120	
125	
130	
135	

Please enter the volume (in dB) you choose for each participant to experience the noise blast

Winner
Team Red

Team Blue

[Name 1]	[Name 2]	[Name 3]	[Name 4]

Team Red

[Name 5]	[Name 6]	[Name 7]	[Name 8]

| 80 |
| 85 |
| 90 |
| 95 |
| 100 |
| 105 |
| 110 |
| 115 |
| 120 |
| 125 |
| 130 |
| 135 |

Please enter the volume (in dB) you choose for each participant to experience the noise blast

| Winner |
| Team Red |

| Team Blue |

[Name 1]	[Name 2]	[Name 3]	[Name 4]
	100		

| Team Red |

[Name 5]	[Name 6]	[Name 7]	[Name 8]

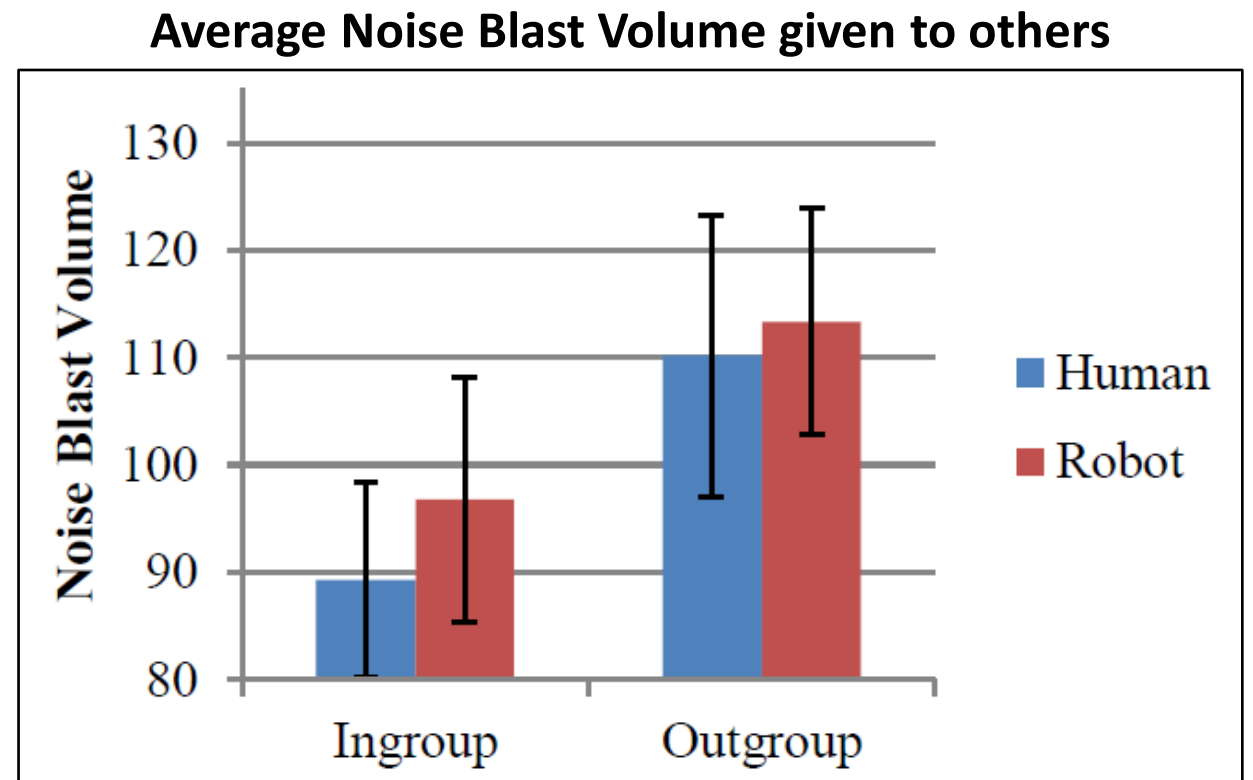# Aggression towards others is mediated by group membership and agent type

Outgroup > Ingroup ($np2 = .791$)

Robot > Human ($np2 = .213$)

Group effect stronger between humans than between robots

No difference in noise blasts for first/middle/last round

- No tit-for-tat

Average Noise Blast Volume given to others

Anthropomorphism/dehumanization

Human nature traits (experience)
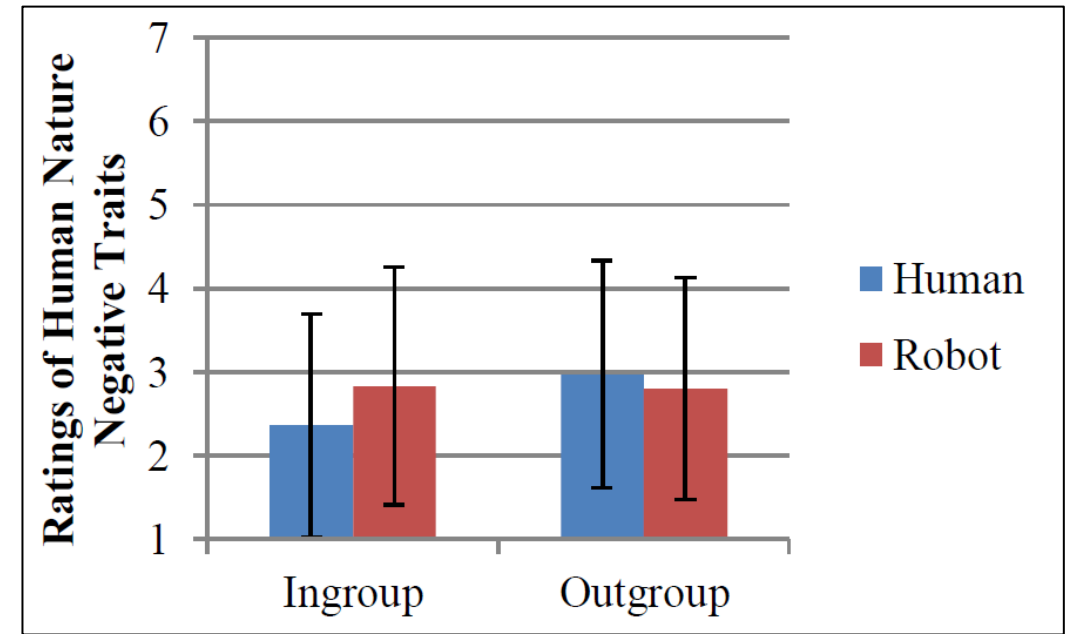
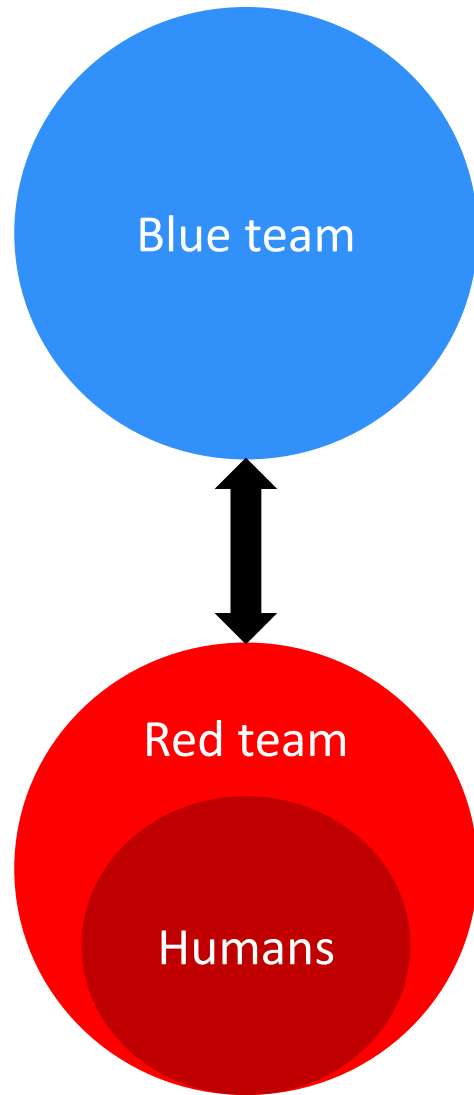(+)   ingroup > outgroup
humans = robots

(−)   ingroup < outgroup (humans)

Uniquely human traits (agency)

(+)   ingroup > outgroup
humans = robots

(−)   ingroup < outgroup
humans < robots

Ratings for Human Nature Negative Traits for players

Feeling of entitativity

Cooperation

    Ingroup > outgroup & humans > robots

Competition

    Ingroup < outgroup

Part of a group

    Ingroup > outgroup & humans > robots

    Ingroup humans > ingroup robots & outgroup humans = outgroup robots

Group membership is more important than agent type in terms of how humans behave towards others

Attribution of positive traits dependent on group membership, while attribution of negative traits also depends on agent type

Hints to differentiation between human and robot ingroup members, but no differentiation in outgroup

Open questions and implications

Behaving more aggressively because of outgroup hate or ingroup love?

Group effect bigger for humans than robot – more social categorization?

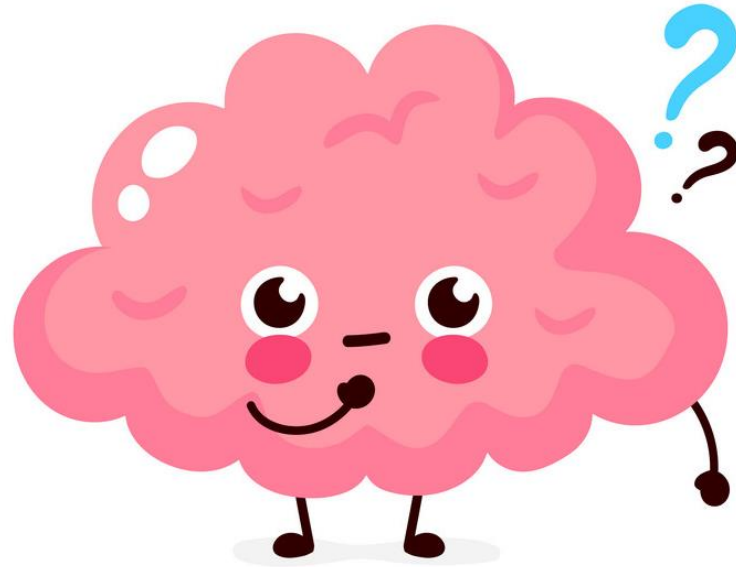What does this mean for other domains like empathy?

Link anthropomorphism, group membership and aggression?

People are willing to harm other humans in favour of robots
→ How far are people willing to go?

Thanks for your attention

Any questions?

On to the discussion

Discussion points

Figures and its lack of

People are willing to harm other humans in favour of robots
→ How far are people willing to go?

Can robots become real team members?

References

Eyssel, F., De Ruiter, L., Kuchenbrandt, D., Bobinger, S., & Hegel, F. (2012, March). 'If you sound like me, you must be more human': On the interplay of robot and user features on human-robot acceptance and anthropomorphism. In *2012 7th ACM/IEEE International Conference on Human-Robot Interaction (HRI)* (pp. 125-126). IEEE.

Eyssel, F., & Kuchenbrandt, D. (2012). Social categorization of social robots: Anthropomorphism as a function of robot group membership. *British Journal of Social Psychology*, *51*(4), 724-731.

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Garreau, J. (2007, May 7). Bots on The Ground. *The Washington Post*, Retrieved from http://www.washingtonpost.com