# ETHICAL CONSIDERATIONS

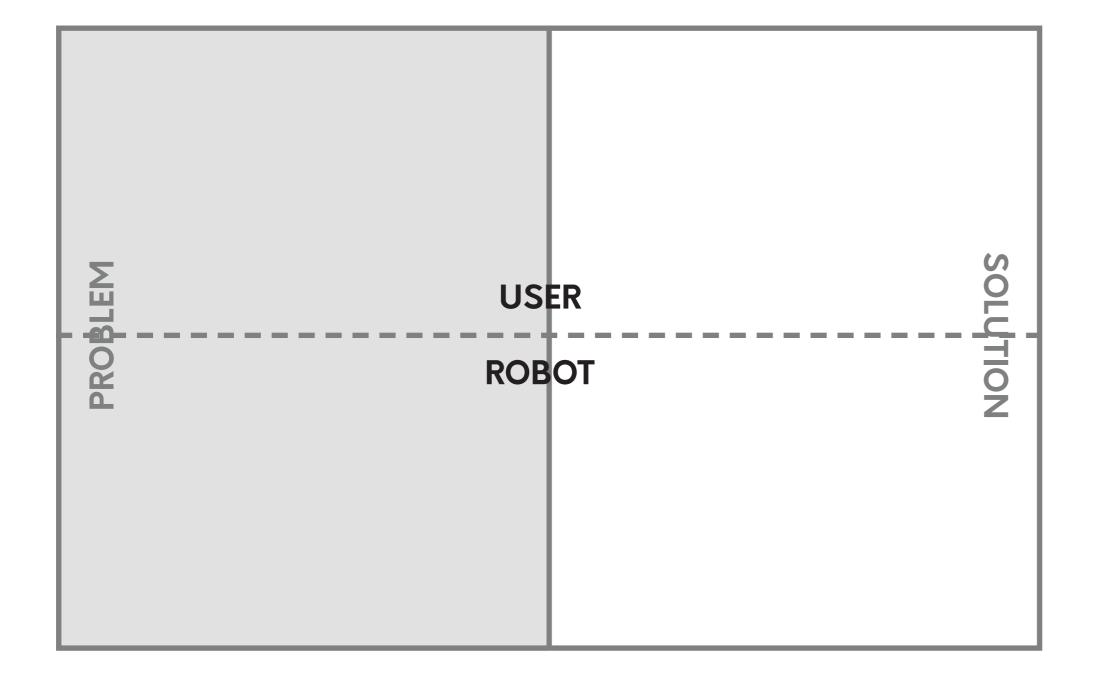
SOCIAL ROBOT CO-DESIGN CANVASES

Consider potential ethical problems, and potential solutions —both from the user's and robot's perspectives.

Consider the boxes to be guidelines: you don't need to fill each one.

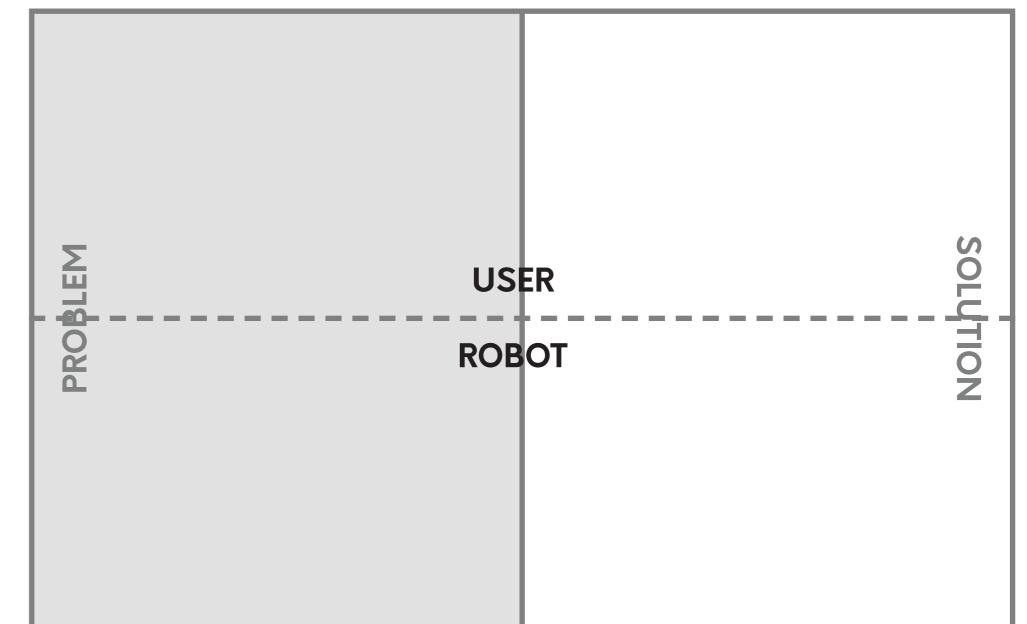
# Physical safety

Machines can pinch or crush the user. How is this mitigated?



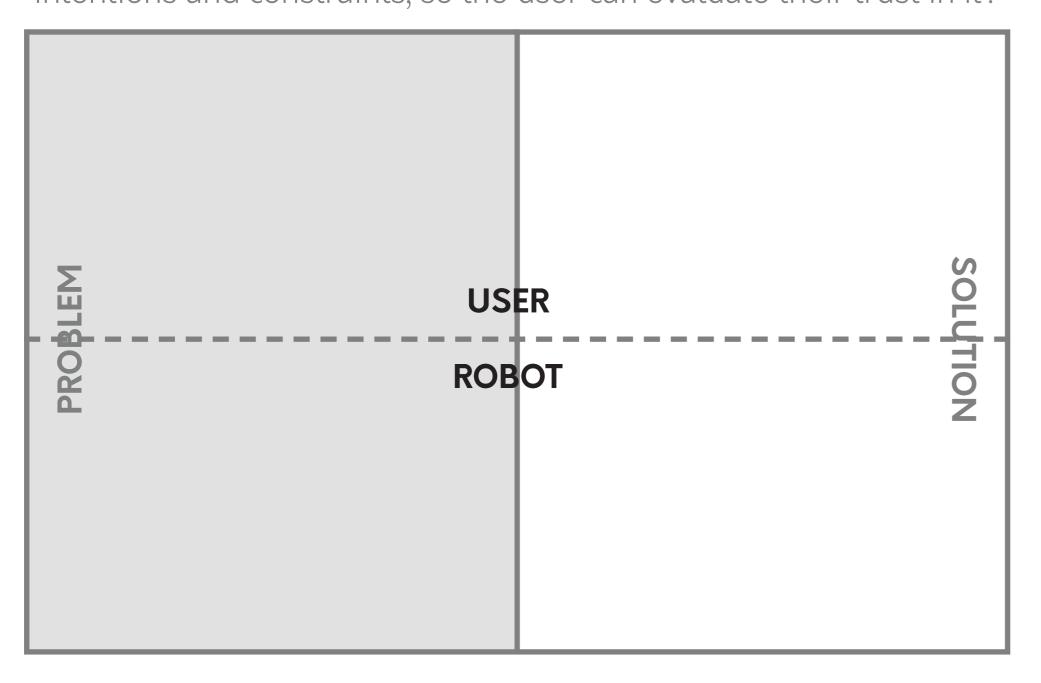
# Data security

Is the robot in a unique data collection position? How is the user's data protected?



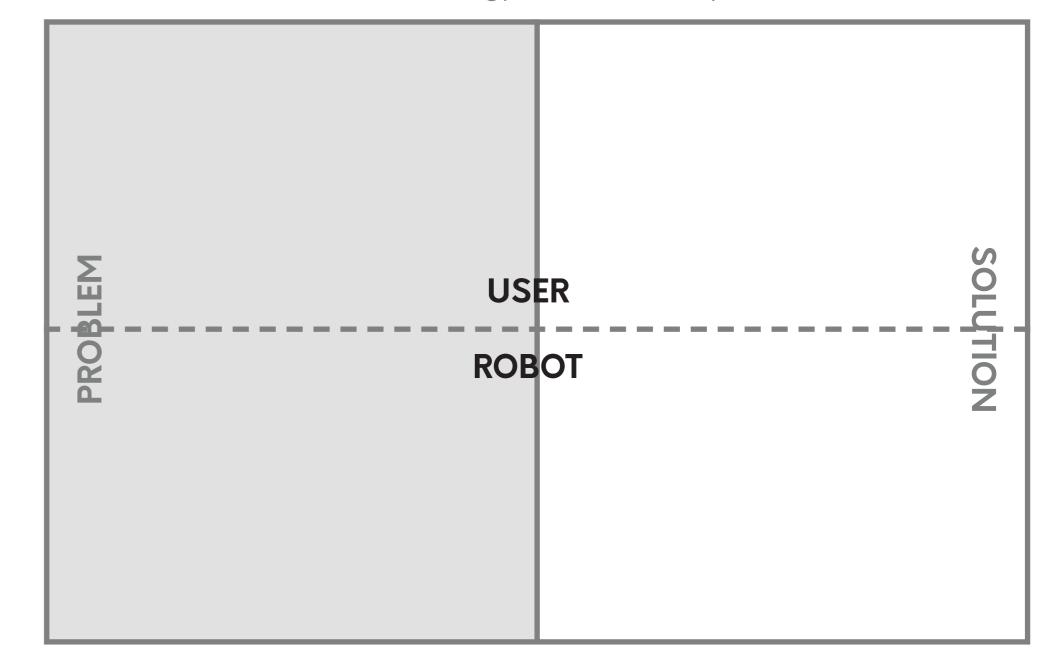
### Transparency

How does the robot share an accurate perception of its abilities, intentions and constraints, so the user can evaluate their trust in it?



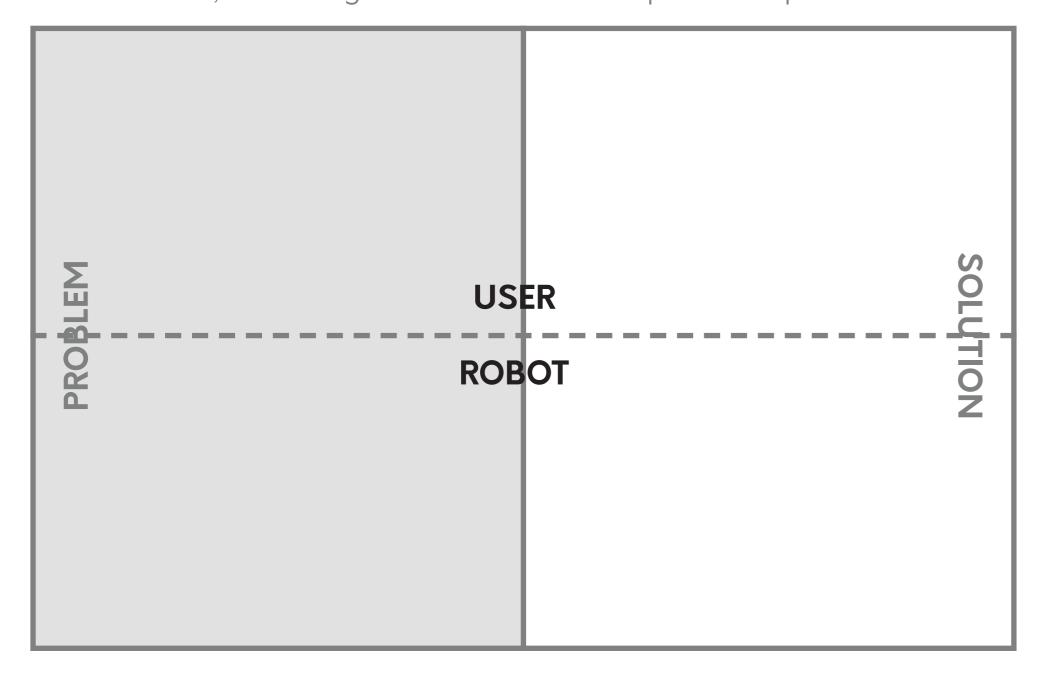
# Equality across users

Robots' algorithms can be biased. A robot's appearance could reinforce harmful stereotypes. What are potential issues?



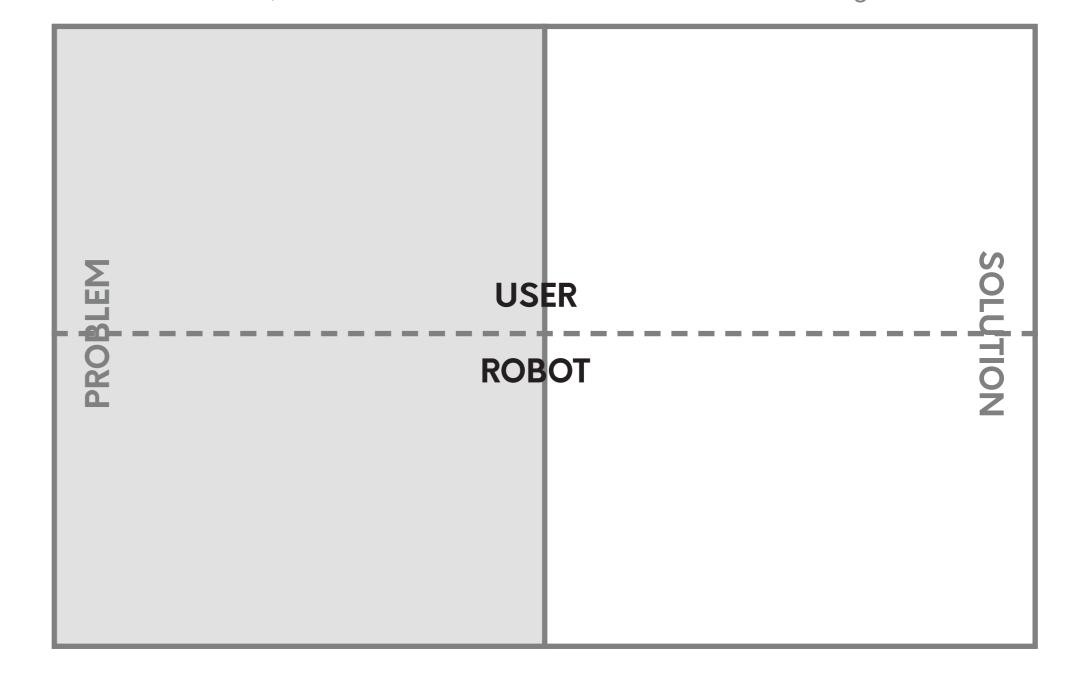
### **Emotional consideration**

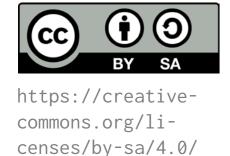
People have been shown to form emotional attachments to robots, as if they were alive. Is this a potential problem?



#### Behaviour enforcement

People could transfer their inappropriate behaviour, such as rudeness, from robots to humans. How is this mitigated?





Social Robot Co-Design Canvases free version by Minja Axelsson is licensed under a Creative Commons Attributions-ShareAlike 4.0 International (CC BY-SA 4.0) license. Sponsored by Futurice. The Social Robot Co-Design Canvases can be found at https://osf.io/jg2t8/. Questions: message minjaaxelsson@gmail.com Cite as: Axelsson, M., Oliveira, R., Racca, M., & Kyrki, V. (2021). Social robot co-design canvases: A participatory design framework. ACM Transactions on Human-Robot Interaction (THRI), 11(1), 1-39.

