



Stigma and Service Robots

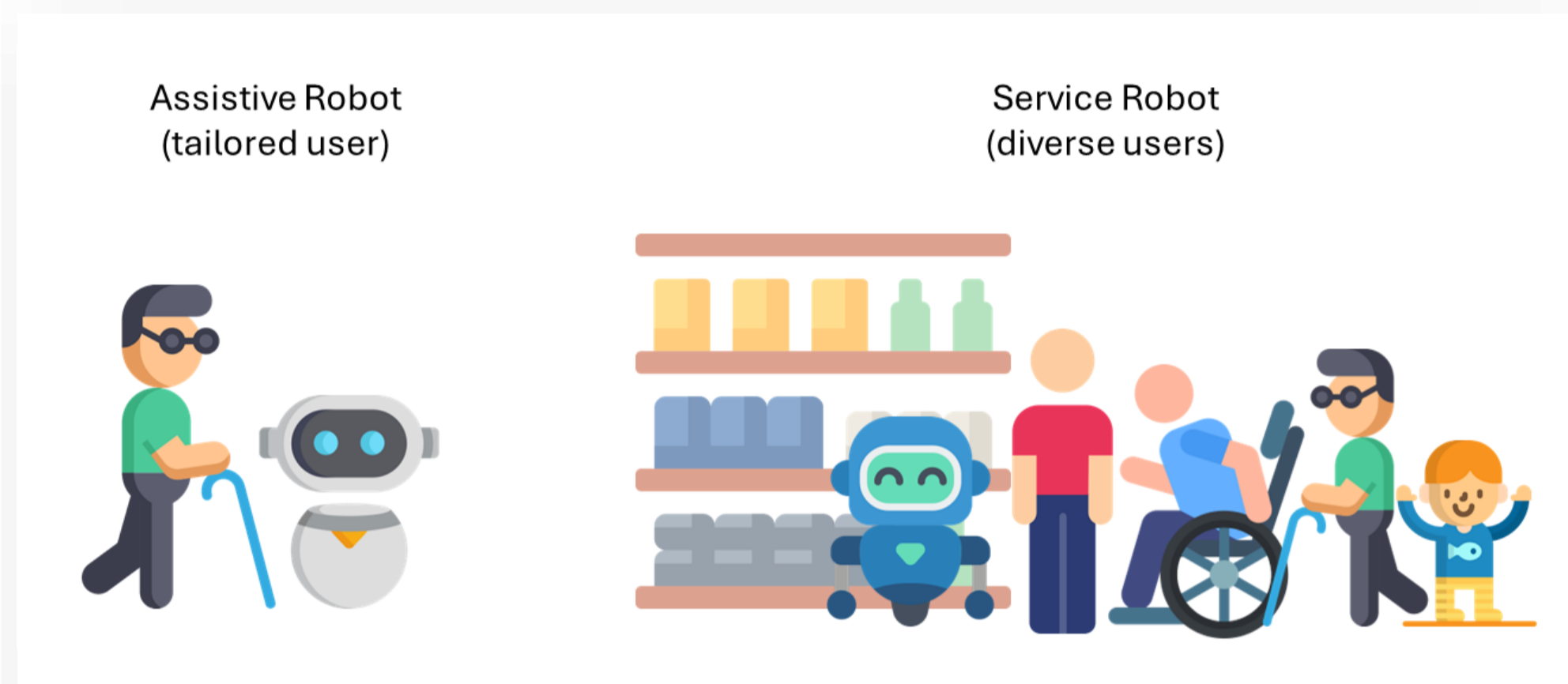
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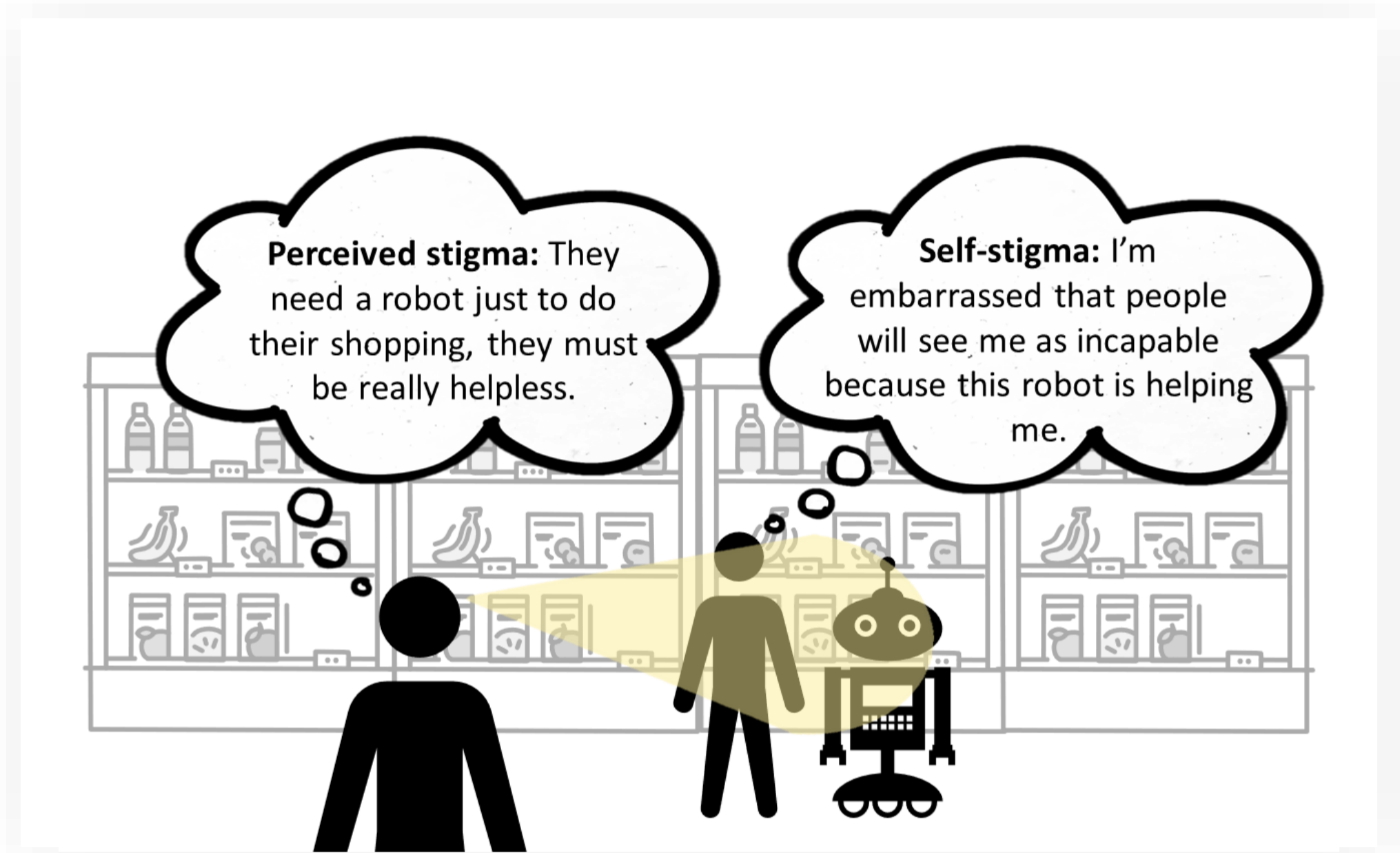
Background: As service robots become more common in daily life, it is important to rethink our assumptions about their purpose and who they serve. They can range from personalized aids to public domain assistants like greeters. With the growing number of people with disabilities, inclusive design and innovation are crucial. To serve the majority in the future, service robots must draw lessons from the domain of assistive technology (AT) in their design.

Assistive vs. Service Robots

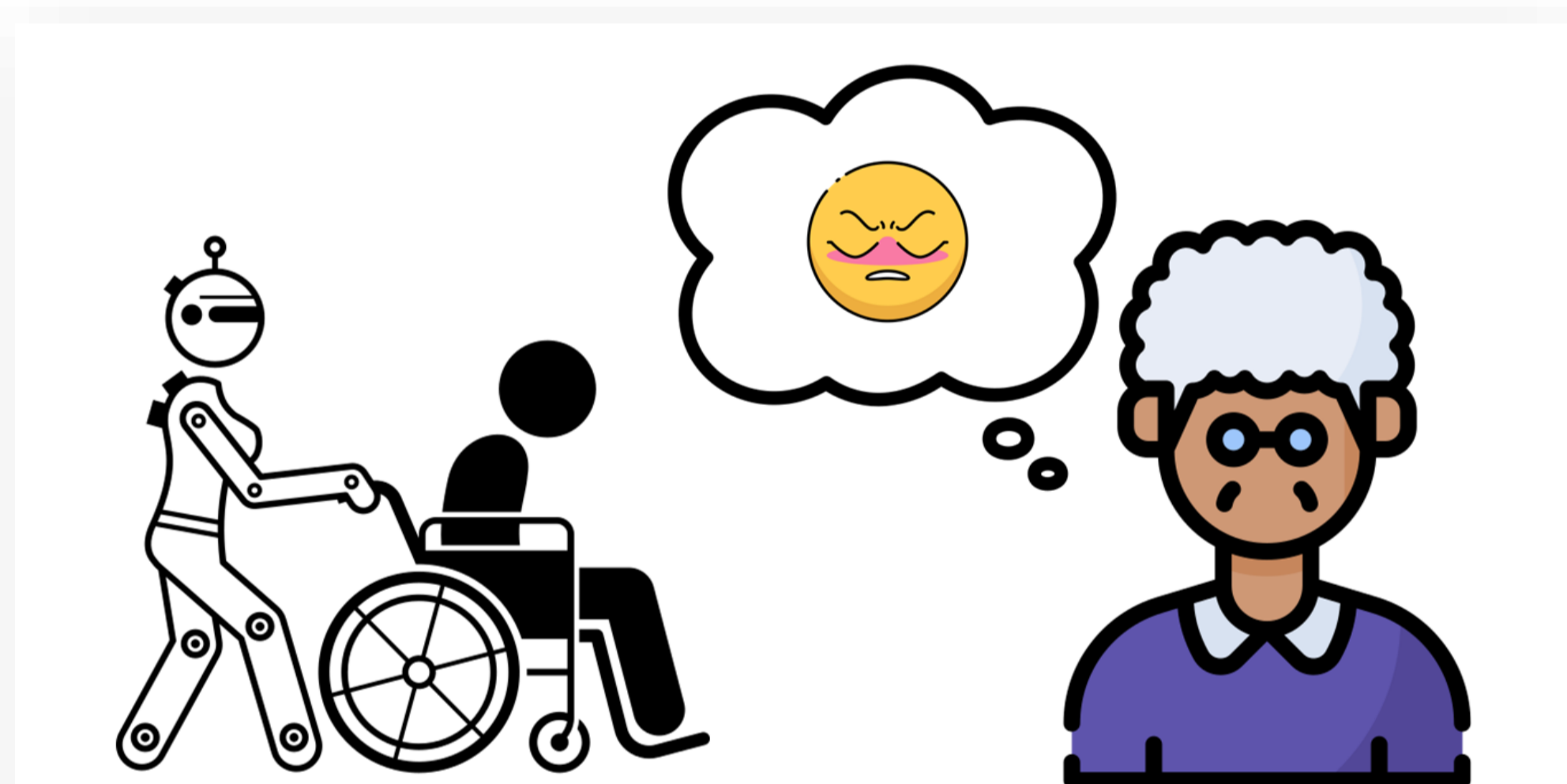


We can think of service robots as public-facing robots that have assistive features.

Perceived vs. Self-Stigma



Stigma in Robotics



Stigma linked to the utilization of AT and assistive robots has been well-documented. Older adults often perceive the use of assistive robots as a symbol of dependency, which they consider an insurmountable barrier to accepting robots.

Stigma Assessment in Robotics

In the Technology Acceptance Model (TAM), stigma is not accounted for although it is a significant factor. The Unified Theory of Acceptance and Use of Technology (UTAUT) does include a stigma category. However, there's room for refinement, particularly in differentiating between self-stigma and perceived stigma. Psychology offers more comprehensive methods for evaluating stigma, and investigating their relevance to robotics and HRI is warranted.

How do we mitigate stigma?

1 Universal Design

Universal Design makes systems accessible to individuals with diverse abilities. This approach reduces the necessity for specialized adaptations and has the potential to normalize the use of service robots while discreetly minimizing the visibility of disability-related accommodations.

2 Hiding technology

Another approach involves integrating robots inconspicuously into the environment. While this tactic addresses perceived stigma, it may not effectively tackle the primary issue of self-stigma, which holds significant importance for technology adoption.

3 Marketing strategies

Additionally, marketing strategies have been proposed to destigmatize images of assistive robotics, particularly targeting older adults to increase acceptance.

Future Work

- ❖ Investigate how service robots can be effectively designed to cater to a diverse user group.
- ❖ Quantify the degree of stigma associated with service robots.
- ❖ Develop standardized metrics to evaluate stigma with robots
- ❖ Explore optimal strategies for reducing stigma.

By addressing these questions, we can foster acceptance and integration of service robots into our society.

