PAPER REVIEW NR 3

Paper:

S. M. Siedl and M. Mara, “Am I still human? Wearing an exoskeleton impacts self-perceptions of warmth, competence, attractiveness, and machine-likeness”, Johannes Kepler University Linz, Linz, Austria, 2024

Reviewer:

Giovanni Filomeno

I confirm that I have read the paper and written the following texts myself ☒

1. Thematic focus

The paper investigates the psychological effects of wearing occupational exoskeletons, focusing on how they influence self-perceptions of warmth, competence, attractiveness, and machine-likeness. It explores the potential dehumanizing effects of integrating such technologies into everyday work routines, particularly concerning human identity and social interactions within the workplace.

2. Foundations

- Exoskeleton
- Dehumanization
- Self-perception

3. Method

The method employed was a within-subjects laboratory experiment where participants performed tasks with and without an exoskeleton. Self-perceptions were quantitatively measured using questionnaires after each task to capture changes in warmth, competence, attractiveness, and machine-likeness.

4. Key results

- Wearing the exoskeleton decreased the perception of warmth and attractiveness.
- Perceptions of competence and machine-likeness positively affected the willingness to continue using the exoskeleton.

5. Practical implications for AI or robotics

The study's practical implications go into the direction of considering the psychological impact on users when designing wearable robots and not only on functional attributes. Additionally, the paper suggests considering also ethical aspect in robot design to diminish the sense of dehumanization.

6. Strengths of the paper

The paper's strengths lie in its innovative approach and robust methodology, using direct measurement techniques through questionnaires to capture the psychological impacts of exoskeleton use accurately.

7. Weaknesses of the paper

The weakness of the paper mainly consist in the poor generalizability since the study is conducted in a controlled laboratory with a specific type of exoskeleton and a defined number of participants. This environment set may not fully replicate the real-world applications where different conditions and complex dynamics occurs.

Additionally, the sample size of participants may not be representative of the broader population that could be affected by these technologies.

8. Personal learnings

I gained insights into the interplay between human self-perception and wearable technologies as well as read about a topic I didn’t consider before.