

# Does the clothing of a robot have an impact on people obedience towards it?

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Introduction to  
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## Introduction

As the presence of robots in public spaces is on the rise, understanding how to enhance human obedience towards these machines becomes increasingly crucial. Particularly in security contexts, it is important to decipher whether the clothing of a robot can impact people's obedience towards it.

This research investigates how different elements of a robot's clothing, can potentially influence its perceived authority and, human obedience. We hypothesize that robots adorned in authoritative clothing are more likely to be obeyed by individuals.

This is a critical aspect of human-robot interaction that may significantly impact future deployments of robots in public spaces.

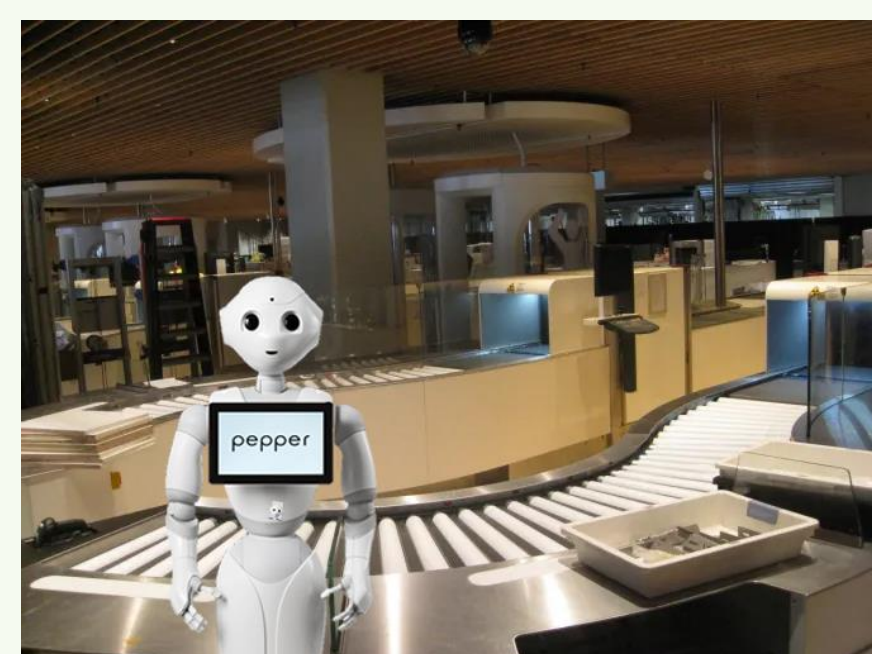
## Metrics

We measured compliance with the robot's instructions, via a questionnaire that presented scenarios of simulated checkpoint and a security check, both manned by a robot.

Evaluation conditions included different styles and colors of the robot's clothing, creating a variety of authoritative presentations for the robot.

## Experimental Design

The experiment, conducted in a controlled environment, involves individual trials with participant recruitment based on criteria including previous airport security checks, age range, and absence of robot phobias. Various recruitment methods were used.

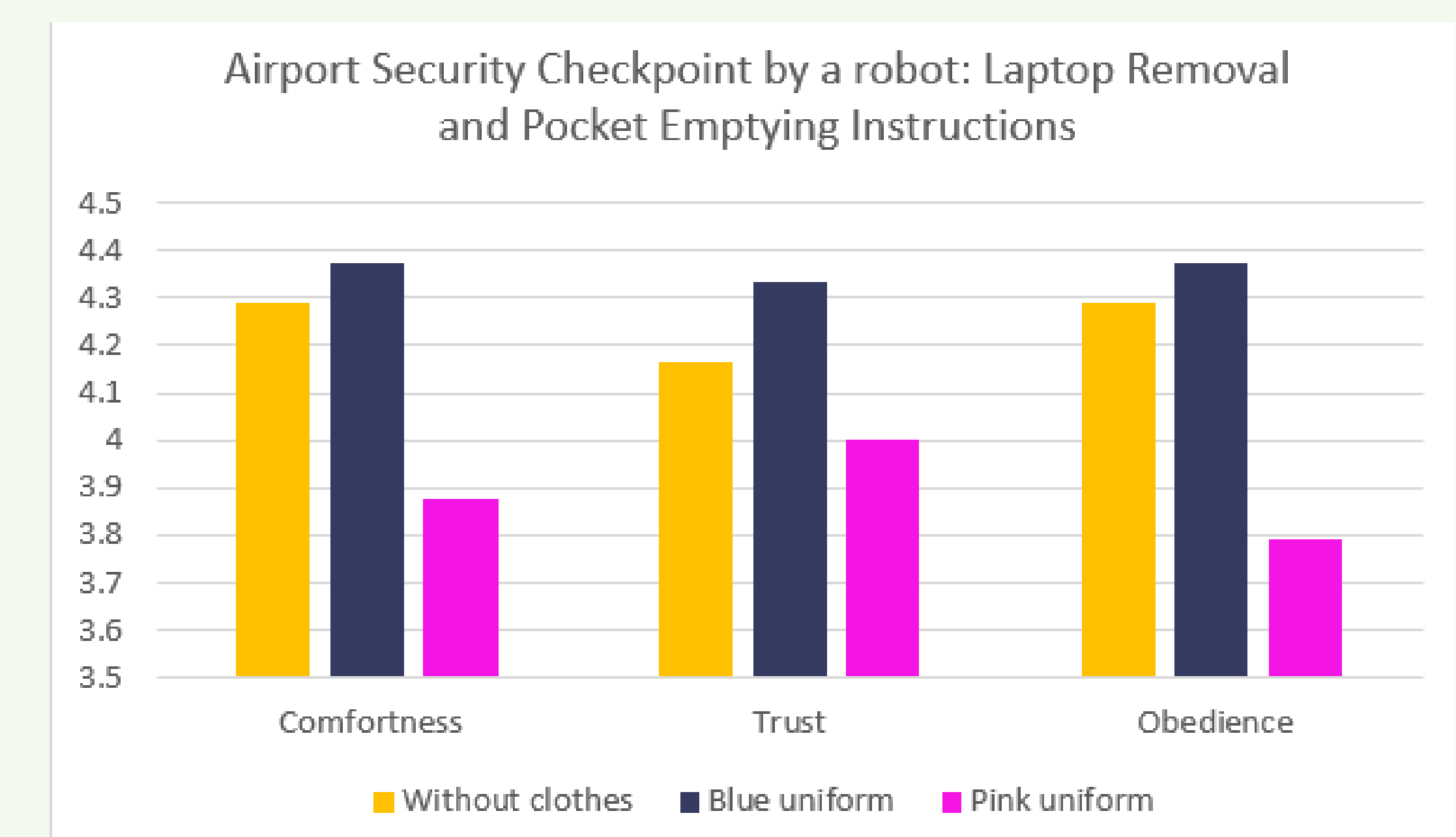
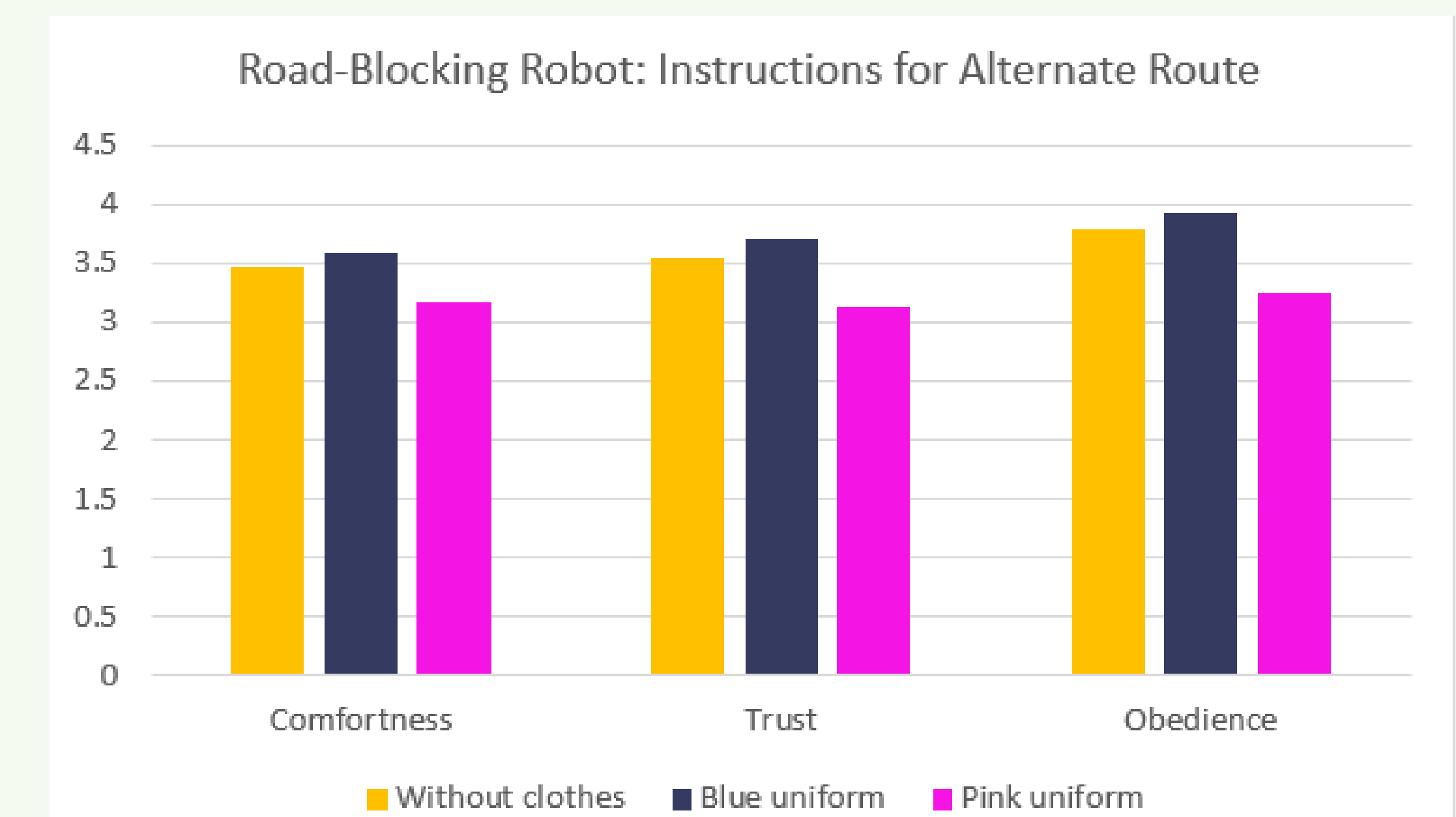


*Forget power suits for humans; it's all about power outfits for robots! Obedience never looked so fashionable.*



## Results

- This study involved 24 participants, we encountered various challenges, including participant bias, a limited sample size, difficulties in generalizing to real-world settings, potential confounding variables, and the subjective nature of constructs like obedience, trust, and comfortness.



**X-axis:** Constructs (Obedience, Trust, Comfortness)

**Y-axis:** Average ratings on Google Forms questions.

Interesting results: Robot clothing increased obedience and trust ratings compared to no clothes, with the blue uniform generally receiving the highest ratings. Comfortness varied across scenarios. Clothing do influences human perceptions in HRI.

## Conclusion and Future Work

- Researchers can learn the impact of clothing on robot obedience, emphasizing the importance of appearance in designing effective human-robot interactions.
- Future questions include exploring specific clothing styles/colors, non-verbal cues in authority perception, and long-term effects of clothing-based authority signaling in human-robot interactions.