

HOW CAN THEY KNOW THAT?

A STUDY OF FACTORS AFFECTING THE **CREEPINESS** OF RECOMMENDATIONS

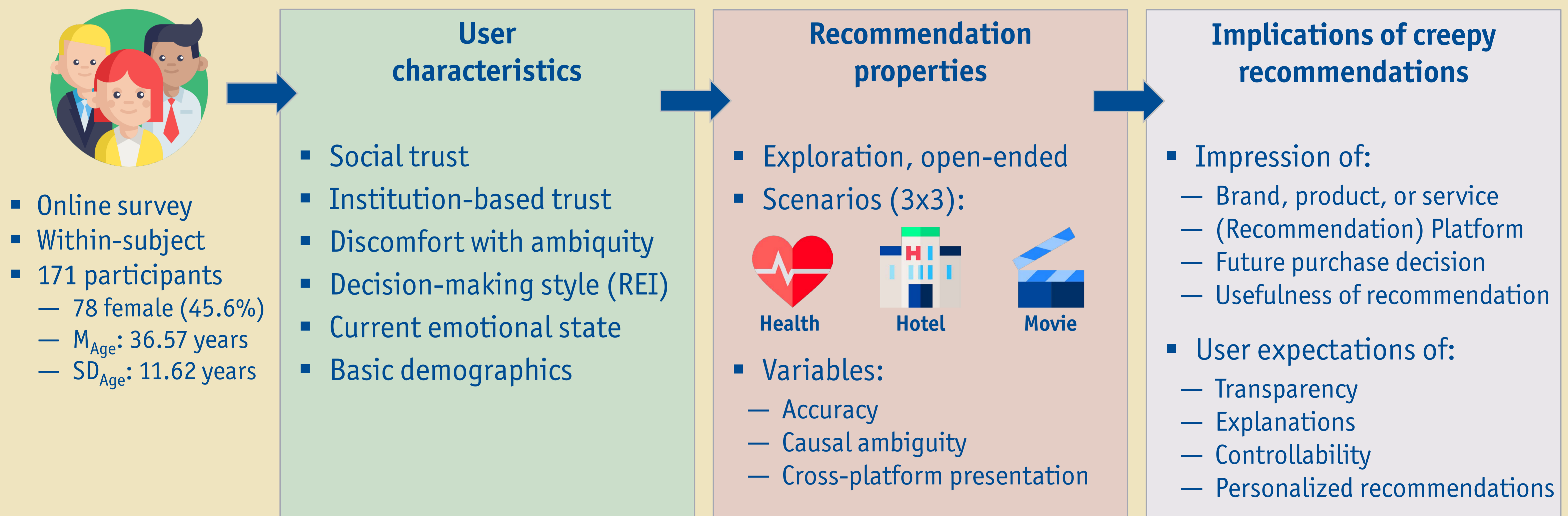
MOTIVATION

- Modern algorithms used by recommender systems (RS) to increase **prediction accuracy** are often **opaque** to users
- If people cannot work out the **reasoning** behind it, they will sometimes feel that certain recommendations are **“creepy”**
- This mixed emotion of **fear, anxiety, surprise**, and **discomfort** is familiar; but what are its implications in the context of RS?

RESEARCH QUESTIONS

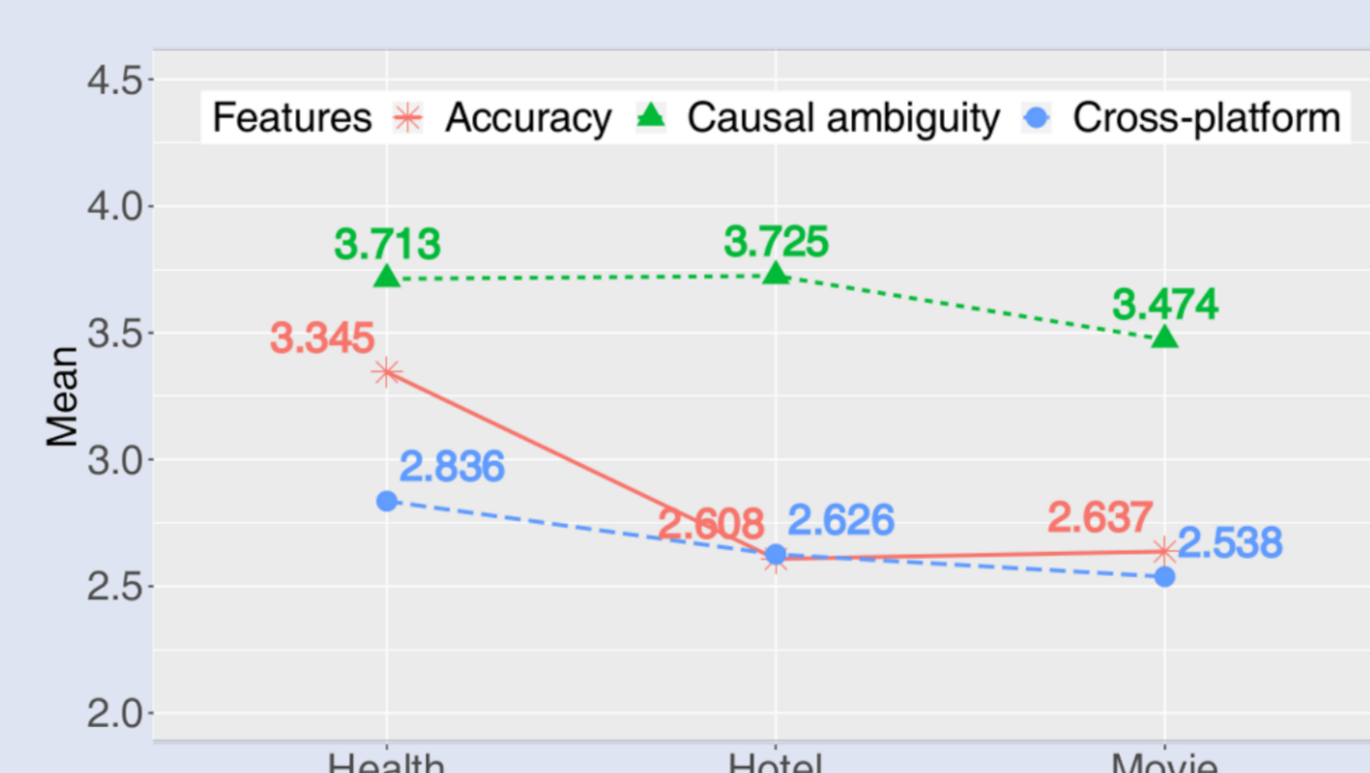
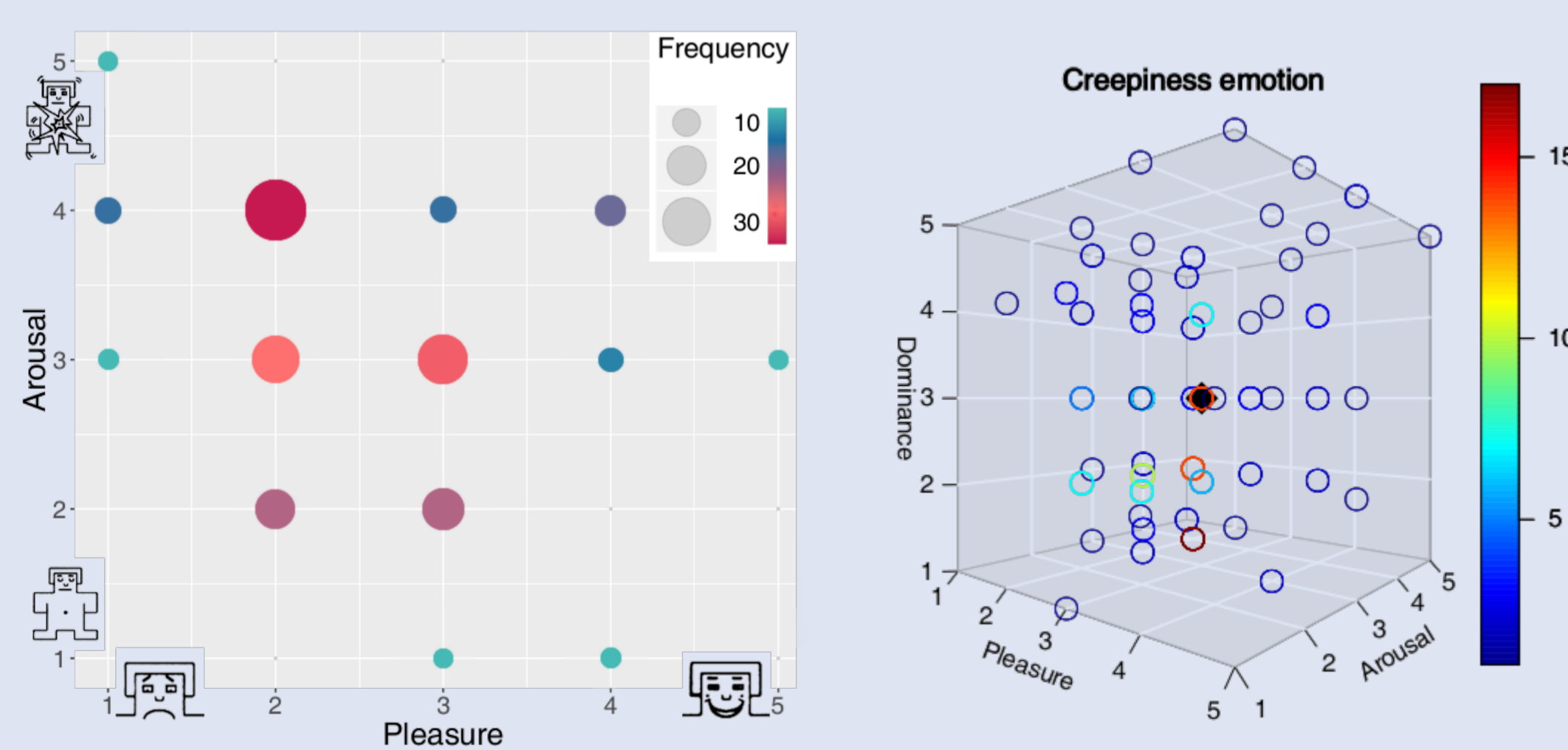
- RQ1.** How can we describe the creepiness of a recommendation using **emotional dimensions**?
- RQ2.** Which **user-** and **system characteristics** influence the creepiness of a recommendation?
- RQ3.** How does receiving a creepy recommendation influence users’ **purchase intention** and **brand attitude**, **expectations** about the platform, and **trust** in the RS?

EXPLORATORY STUDY DESIGN

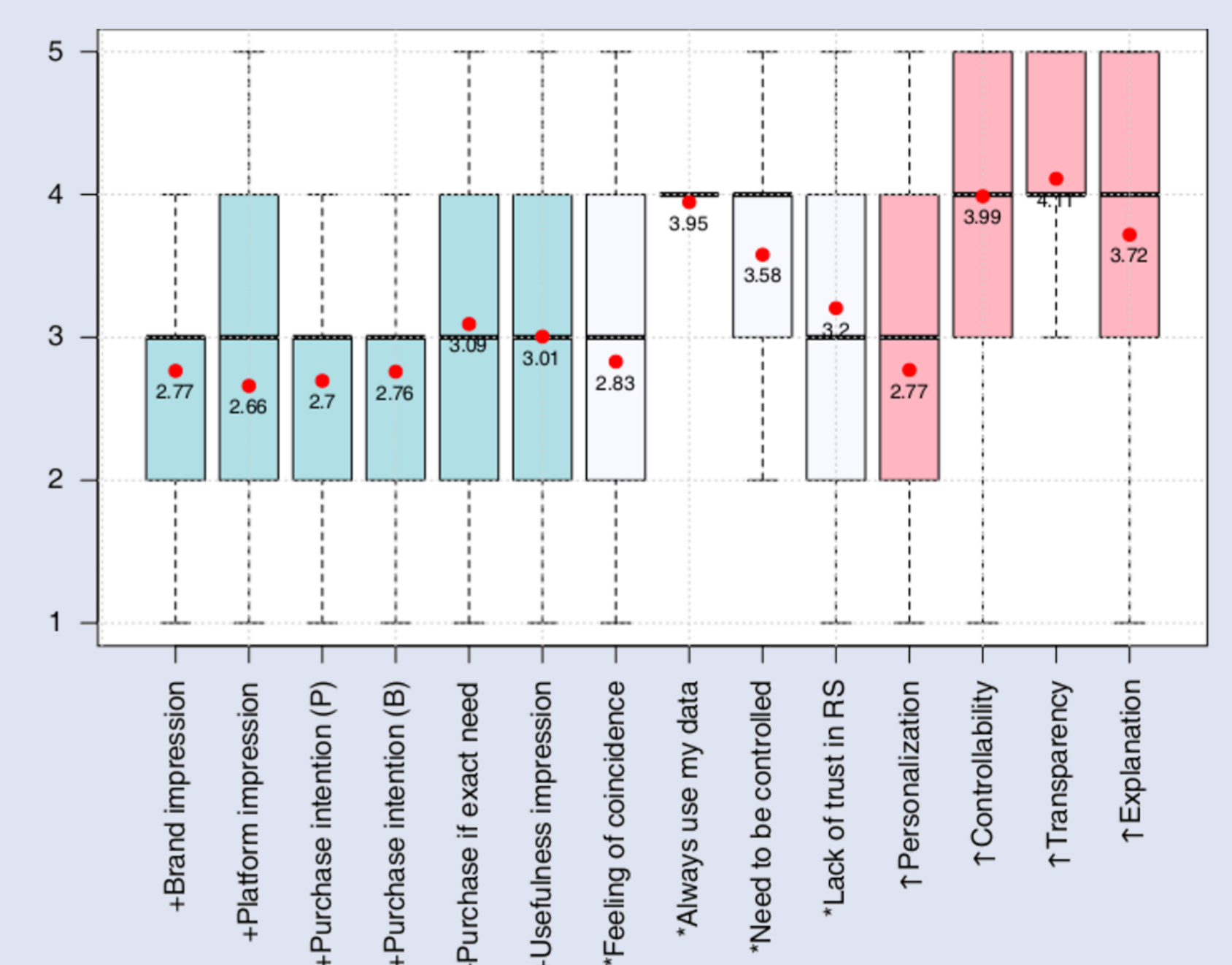


RESULTS AND DISCUSSION

- Creepiness from a recommendation is **unpleasant** & characterized by **high arousal**
 - Creepiness has **55 distinct tuples** out of 125



- Creepy recommendations affect users’ **expectations** and **attitudes** towards RS



- Conducive to feelings of **creepiness**:
 - Causal ambiguity**
 - Very high **accuracy**
 - Delicate **topics** (e.g., health)
 - Wrong **context** (e.g., alone)
 - Temporal** preferences or limited **past interaction** with the RS

CONCLUSION

- Creepy recommendations can cause **intense negative feelings**, which affect users’ **perception** of and **trust** in the RS
- RS evaluation should include an **affective** dimension as well
- Implicit preference elicitation**, when not explained sufficiently, can contribute to the feeling of creepiness
- Transparency** and **control** can help mitigate recommendation creepiness

