

# Comparing Hypothetical and Realistic Privacy Valuations

Joshua Tan, Mahmood Sharif, Sruti Bhagavatula, Matthias Beckerle, Michelle L. Mazurek\*, Lujo Bauer

## Introduction

Understanding users' willingness to share personal information can help inform both policy and system design. But, users' preferences are difficult to understand:

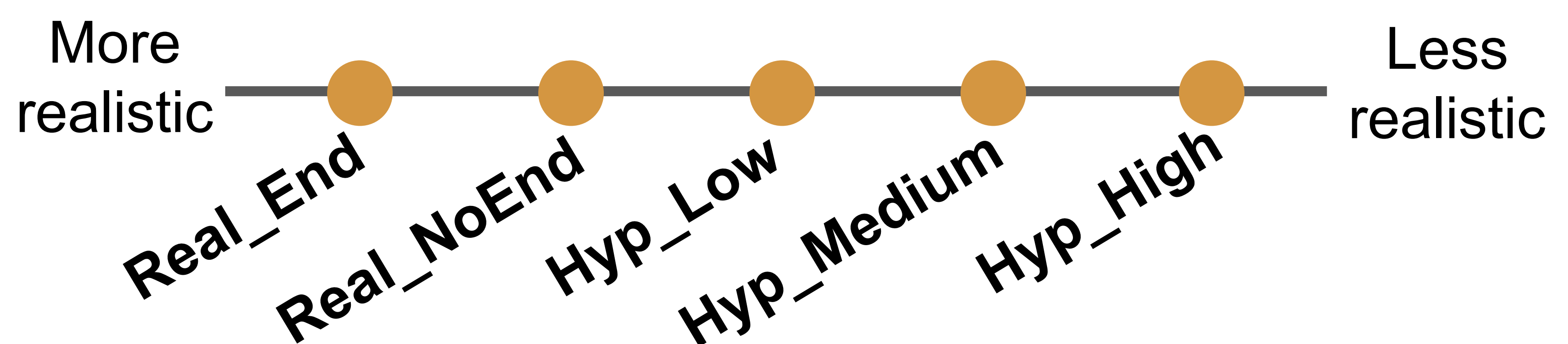
- Users' willingness to share personal attributes depends on many factors
- Valuations influenced by whether selling is hypothetical (*hypothetical bias*) and whether a good has been shared already (*endowment effect*)
- Stated privacy attitudes often do not align with actual behavior (*privacy paradox*)

## Research Questions

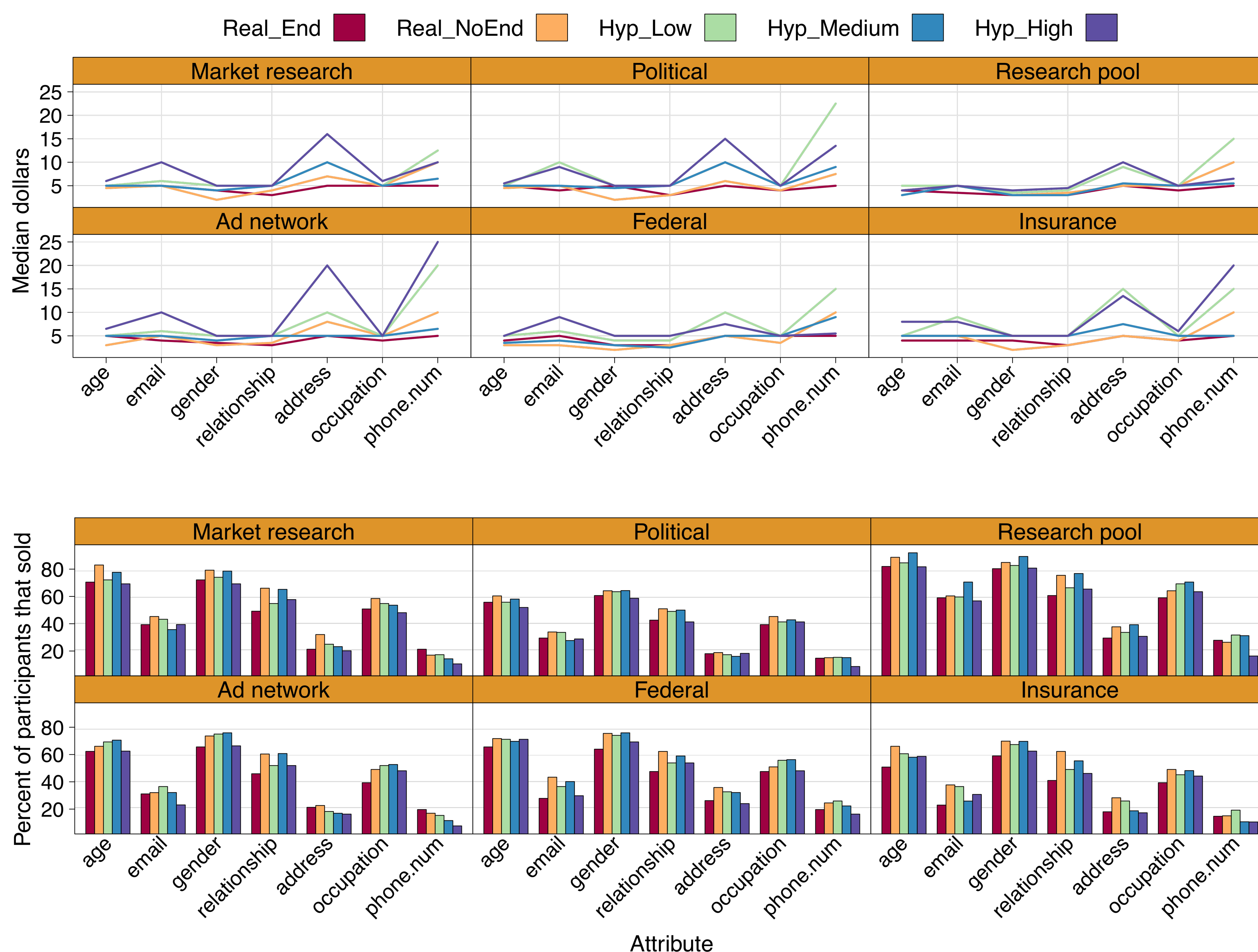
- Does hypothetical bias explain the privacy paradox?
- Can valuations of attributes be predicted (e.g., given knowledge of scenario realism, attribute type, and receiving party)?

## Methodology

- Online study with 434 Prolific participants
- Participants asked to assign selling prices to personal attributes in the context of an information marketplace
  - Seven attribute types and six receiving parties
- Five experimental conditions:



## Results



- Privacy paradox often doesn't hold
  - Likelihood of selling and selling prices were not generally higher in hypothetical compared to realistic scenarios
- Scenario realism, attribute type, and receiving party insufficient for accurate prediction of absolute valuations
  - *Relative* valuations (i.e. attribute rankings) were stable across individuals
- Subset of attribute rankings for hypothetical scenarios sufficient to accurately predict full rankings in realistic scenarios