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# Social skills training tool in Virtual Reality, intended for managers and sales representatives

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## INTRODUCTION

- Social skills: "The ability of an interactant to choose among available communicative behaviors in order that he may accomplish his own interpersonal goals during an encounter while maintaining the face and line of his fellow interactants within the constraints of the situation" (Wiemann, 1977) [1]
- Widely used in managerial and commercial professions
- Today managers and sales representatives training → role-playing sessions with an instructor

## ROLEPLAYS LIMITS

- Human and financial costs
- Lack of realism and contextualization:
  - Actors: peers or instructors
  - Different actors = differences in ways to play
  - Learners expect to be pushed into a difficult position
  - Difficulties to offer varying profiles and environments
  - Not made in real context
  - Limits in the emotional dimension
- Objectivity's importance for assessment:
  - Currently assessment is subjective → based on instructors observations & feelings
  - Important for roleplays debriefings

## RELATED WORK

- Virtual characters tend to induce a social presence for learners [2] → favor learning [3]
- Uses of "Wizard of Oz" approach [4]:
  - Control remotely virtual characters
  - Avoid voice recognition & AI problems
  - Let study how users interact [5,6]
  - Explore automaton conception trails [7,8]
- Effects of gender during human-machine interactions [9]
- Limit variability effects by confronting subjects with same-gender characters [7,10]
- HMD integration [11-15]

## PROTOTYPE



"Wizard of Oz" control panel



Managers' scene



Sales representatives' scene

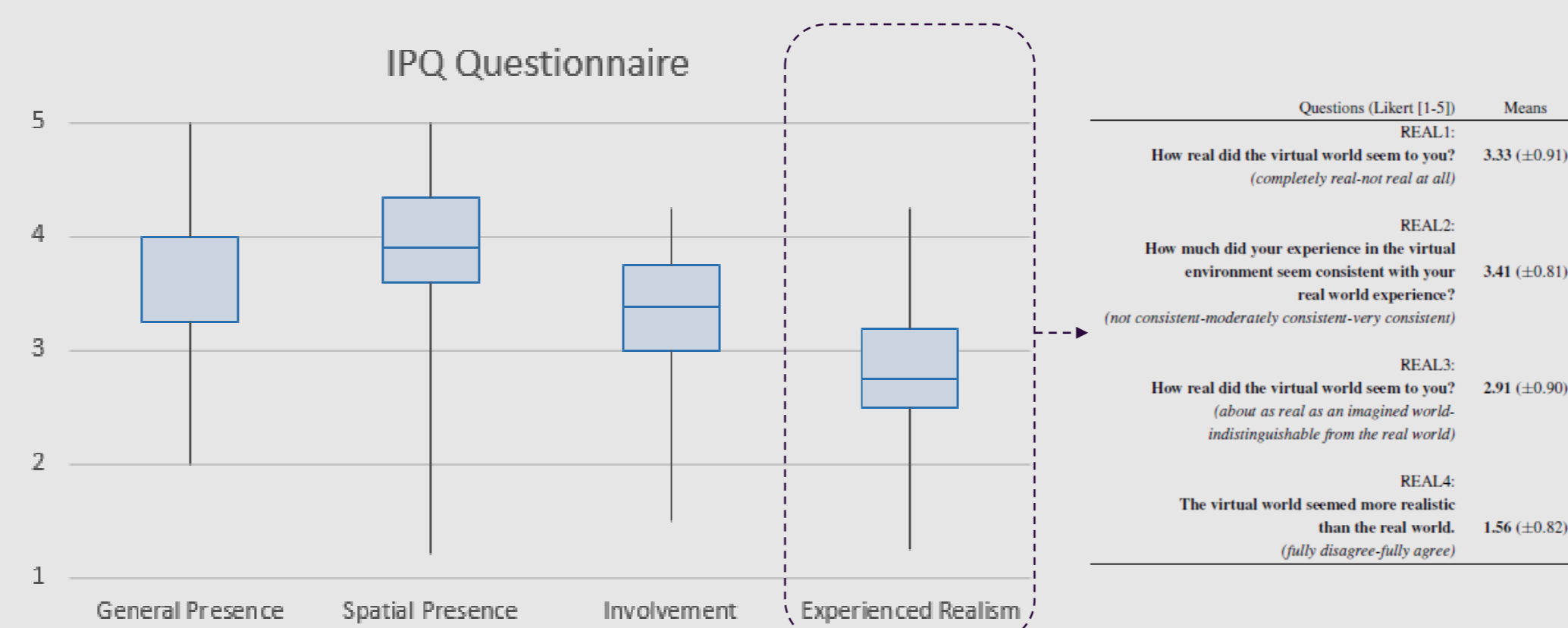


Real objects tracking

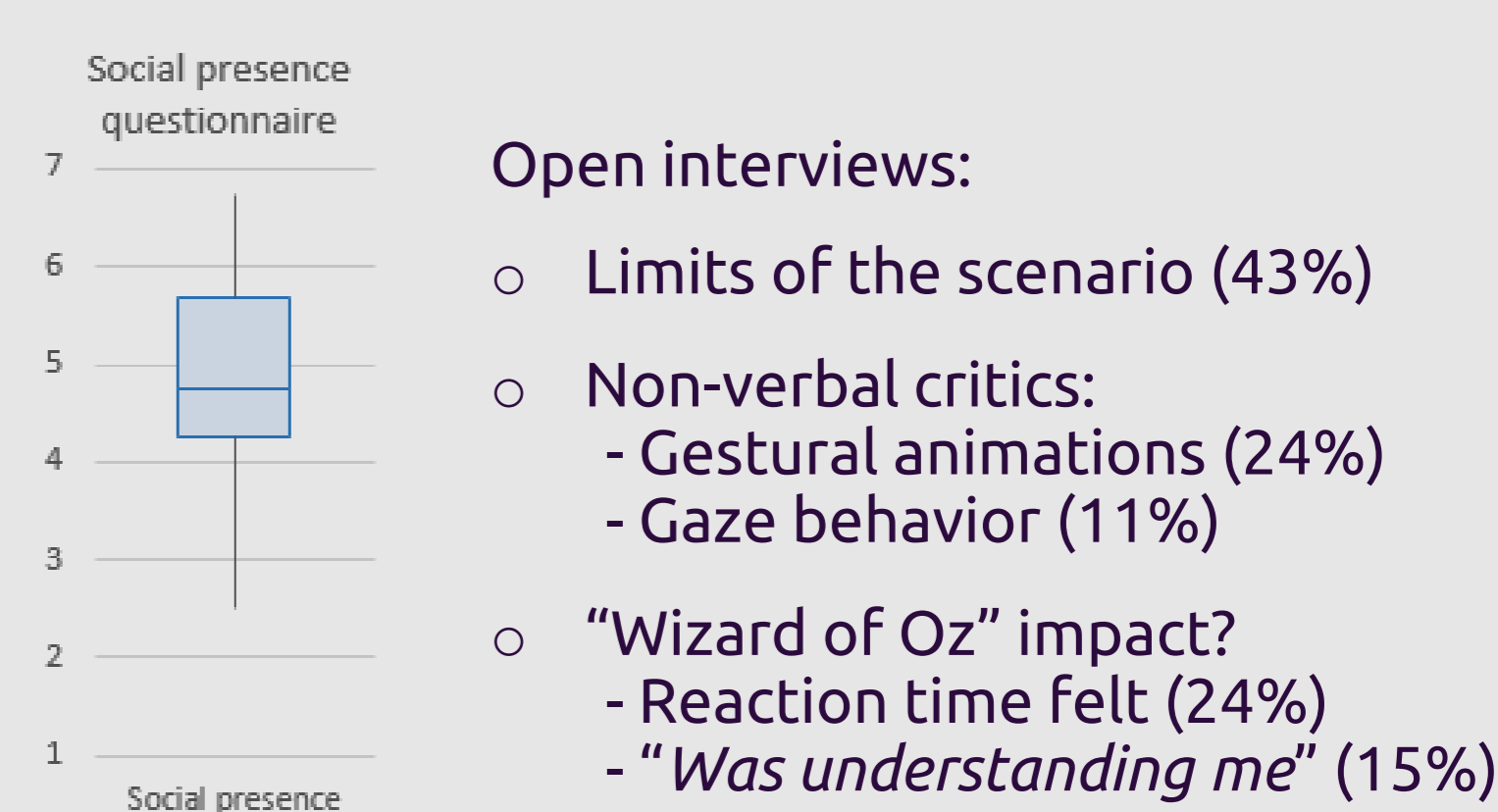
## EXPERIMENTS

- To validate :
- How users feel social interaction ?
  - How users feel present in the virtual environment ?
- Generic scenario: restaurant-choice negotiation
- Reuse of sales representatives' scene
  - With a single virtual character → same gender
- Process:
1. Prototype test
  2. IPQ presence questionnaire [16]
  3. Social presence questionnaire [17]
  4. Open interview
- 54 co-workers:
- 63% men, 37% women
  - Average age: 36(±10)

## RESULTS



- Open interviews explanations:
- "Cartoon style"
  - "Simplistic rendering style"
  - Improving Experienced Realism → impact on learners' attention ?



- Limits:
- Carried out inside an open space → potential negative impact on presence
  - Software engineer population
    - 56% have been aware of works (52% discussions, 13% presentation video, 7% prototype test)

## CONCLUSIONS

- ✓ Encouraging results about the prototype design:
  - General & Spatial Presence
  - Involvement
  - Social Presence
- Areas of improvement noticed:
  - Non-verbal behaviors
  - Scenario content
  - Environment realism

## FUTURE WORKS

- Analyze impacts of Experienced Realism on learners' attention
- Experiments on end-users (managers & sales representatives):
  - Tool's usability
  - Learning contributions: verbal & non-verbal behaviors
  - Learners' motivation
  - Mistakes awareness
  - Self-confidence
  - Added value

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