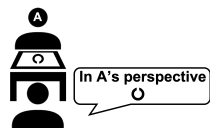


Introduction

■ The imagined shift of perspective [Zacks & Michelon, 2005]



■ Visual Perspective-Taking [Flavell et al. 1981]

The basic ability to infer others' mind.

◆ Level 1 Perspective-Taking

Whether an object is visible to another person, or not.

◆ Level 2 Perspective-Taking

How an object appears to another person.

■ Purpose

- To investigate whether the presence of the humanoid avatar as the base point of view could facilitate the imagined shift of perspective.
- To test whether the facilitation is simply due to the presence of the avatar or the perspective of the avatar.

Discussion

- The reaction time was the shortest in **"Facing"**, second shortest in **"Without"** and longest in **"Backing"**, suggesting that taking avatar's perspective facilitates the cognitive process of the imagined shift of perspective.
- The reaction time was longest in **"Back"** position. This is consistent with the previous studies; For the level 2 perspective-taking, the reaction time increases as the rotation angle between the avatar and the observer increases [Surtees, Apperly, & Samson, 2013 ; Kessler & Thomson, 2010].

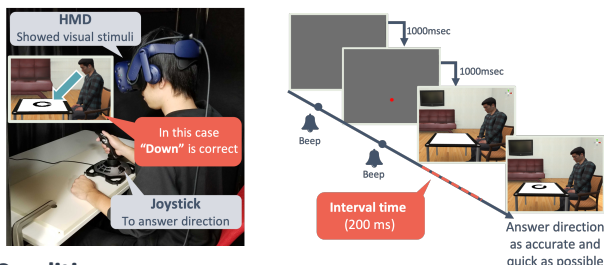
Methods

■ Participants

Twenty naïve participants (5 female, 15 male)

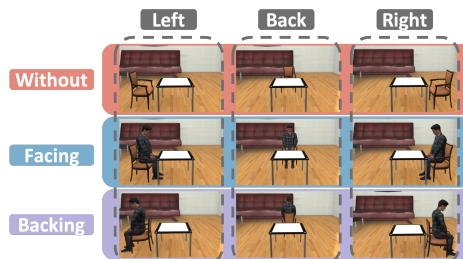
■ Procedure

Task: To judge the direction of a gap in the ring from an avatar's or chair's position.



■ Conditions

- 3 Avatar conditions (Without / Facing / Backing)
 - 3 Positions of avatar or chair (Left / Back / Right)
 - 8 Directions of the gap in the ring x 2 repetitions
- All combinations of these conditions were conducted within the same block.



Conclusion

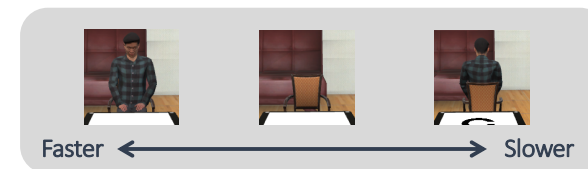
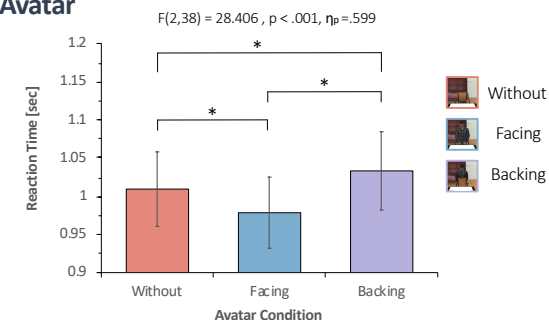
- The direction of humanoid avatar's head or body is an effective cue for spatial cognition in the imagined shift of perspective.
- Thus, the perspective taking would be critical for it.

Acknowledgements

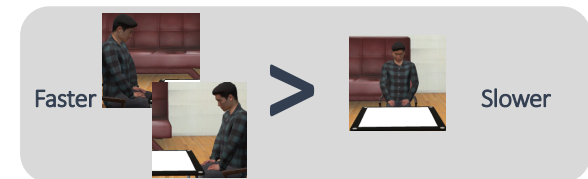
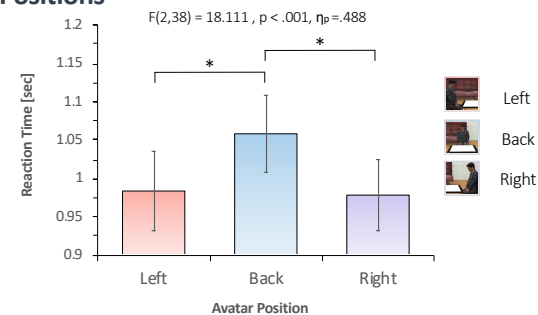
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Results

■ Avatar



■ Positions



■ Interaction (Avatar x Positions)

- No significant.

$F(4,76) = 1.0554, p = .3845, \eta_p = .0526$