Can We Augment Reality with "Mental Images"? Pretend Play Elicitation for Children with Autism
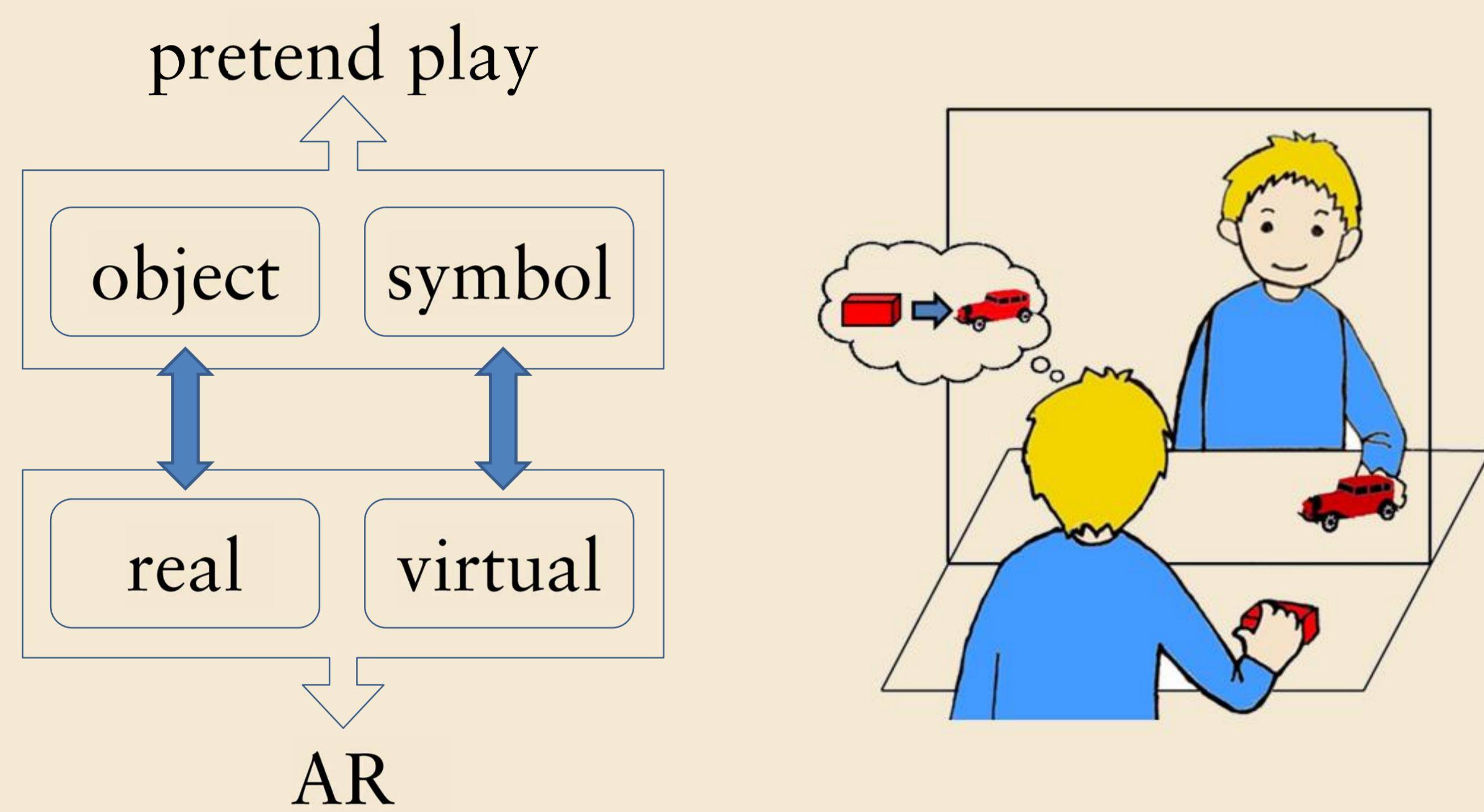
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We investigate the potential of Augmented Reality (AR) as a specific external representation to stimulate internal mental imagery and play activities involving pretense for young children with autism.
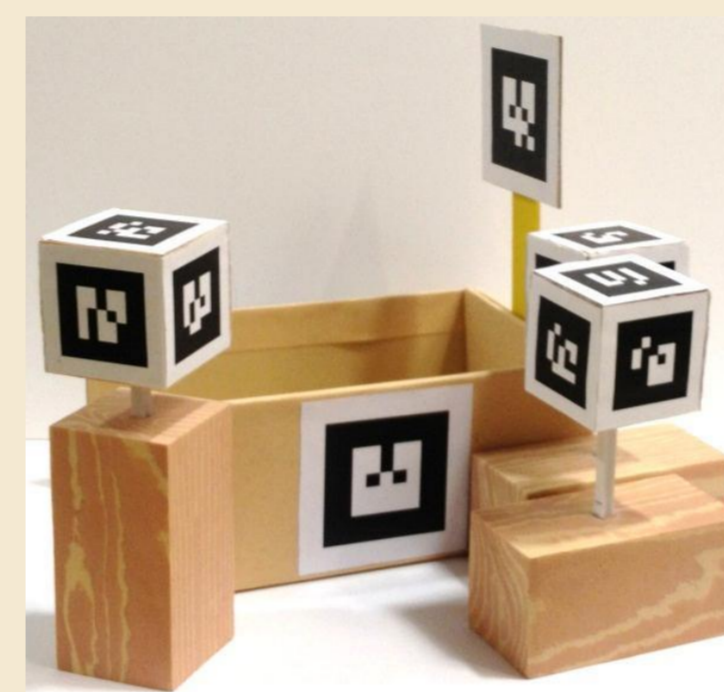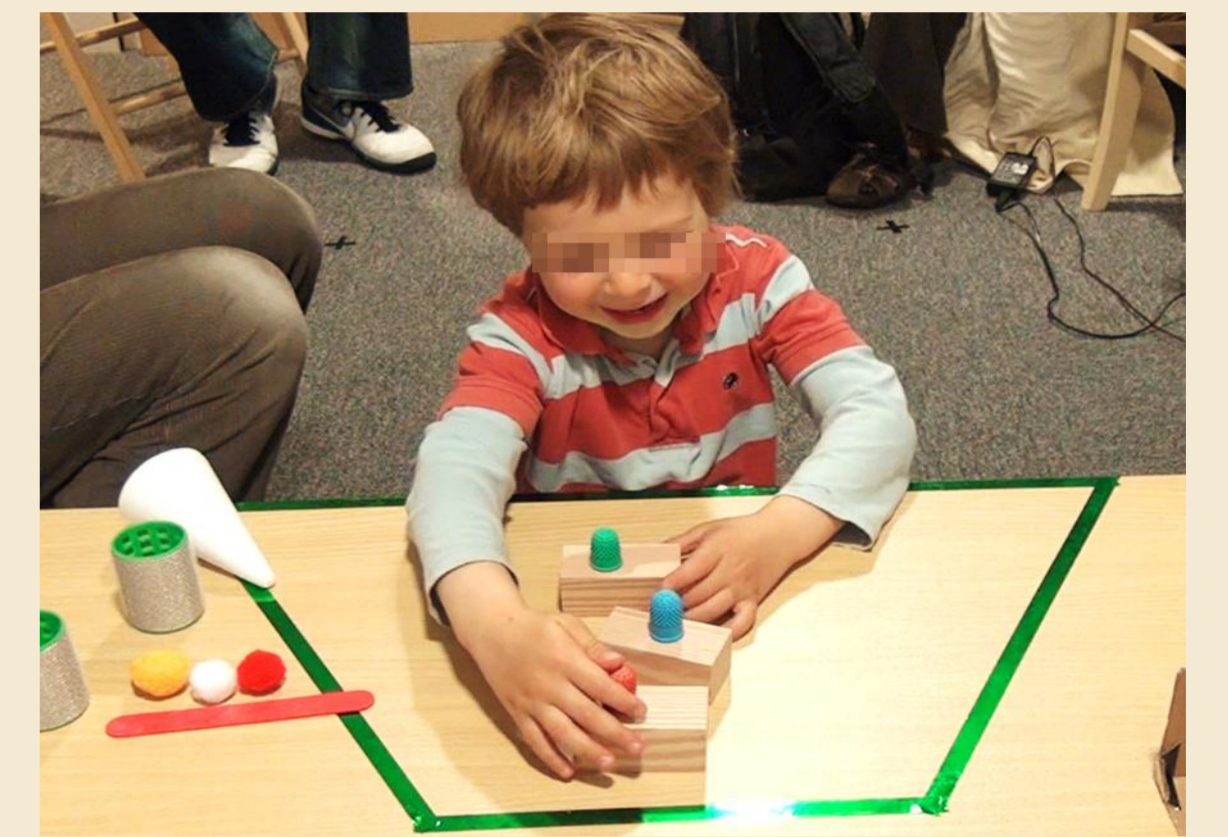
Motivation

System Design

basic vehicle manipulation | context appropriate manipulation | novel object substitution

Experiment Design

Can the AR system promote children's pretend play in terms of *frequency*, *complexity* and *engagement*?

AR condition   non-AR condition

blocks and box with AR | props without AR | blocks and box without AR

Pilot Study Results

Four neurotypical children, two male and two female, aged 4-5 (average 59 months).

Question	Results
usability	all participants are able to interact with the AR system with minimal guidance
frequency	comparable between the two conditions
engagement	participants are highly engaged in both conditions

Conclusion and Future Work

The pilot study has confirmed that neurotypical children above 4 years old can interact with the AR system and produce various situationally appropriate pretend play activities. Future work will be a formal evaluation with autistic children of similar age.

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