

Background

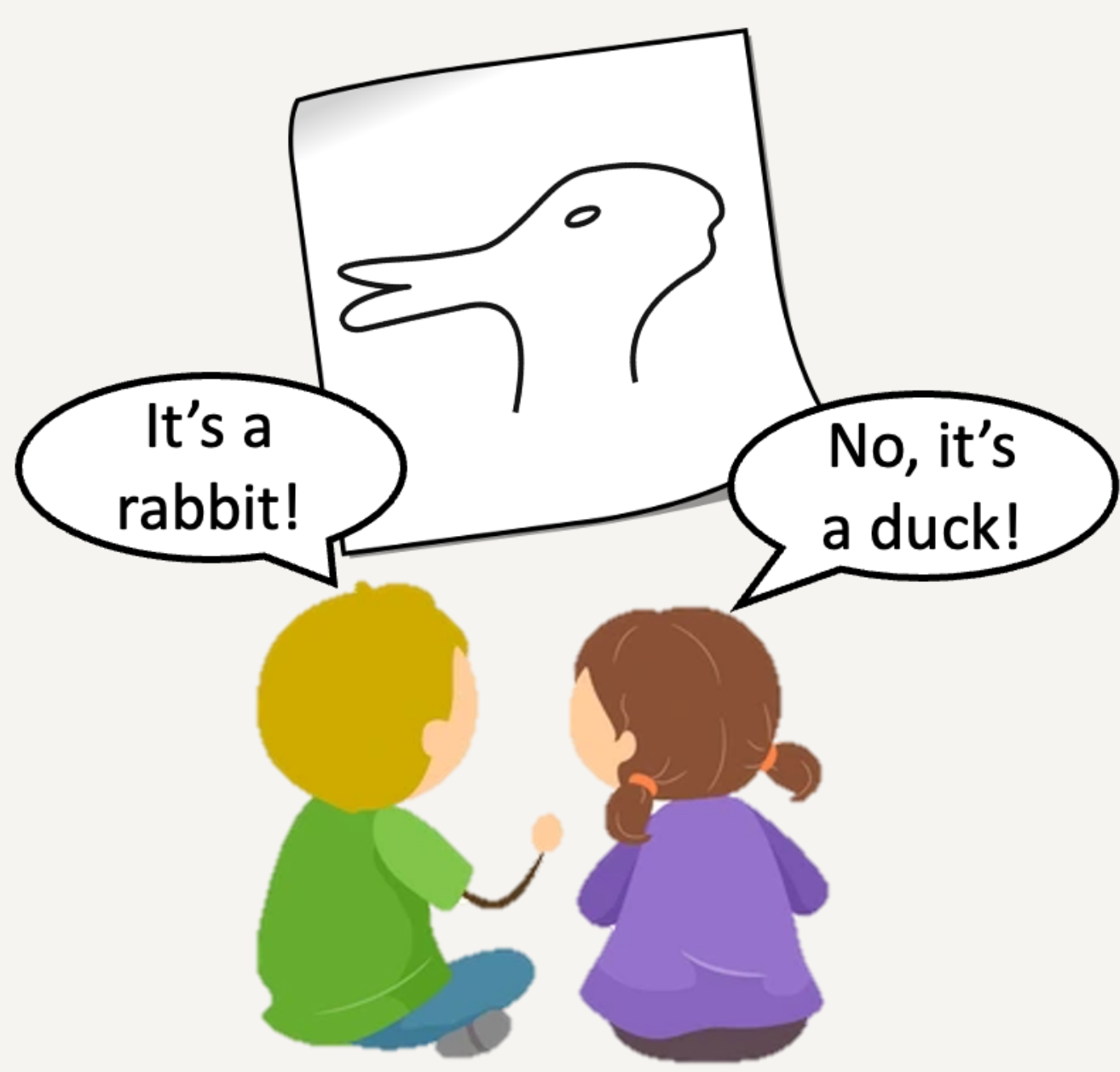
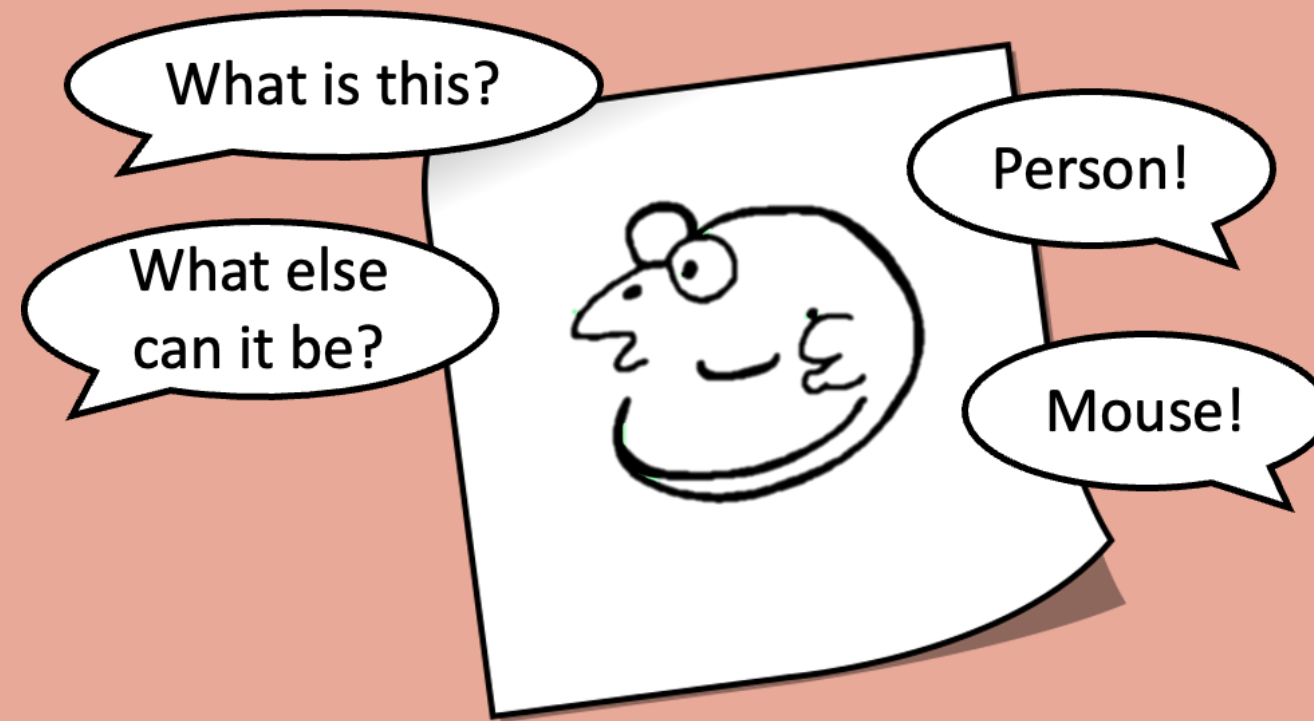
Studies suggest a **bilingual advantage on components of thinking skills** (mental abilities that control one's behaviour in order to achieve a specific goal) such as:

- **Selective attention** (Wimmer et al., 2021): ability to focus on specific stimuli while filtering out irrelevant ones.
- **Working Memory** (Bialystok et al., 2014): system that temporarily holds and manipulates information needed for tasks.
- **Mental imagery** (McLeay, 2003): ability to manipulate information in one's mind in the absence of sensory stimuli.

However, other studies do not support the existence of a **bilingual advantage**

(Duñabeitia et al., 2014; Anton et al., 2014).

Suggesting that **thinking skills may be influenced by factors beyond bilingualism.**



THE IMPACT OF BILINGUALISM ON THINKING SKILLS

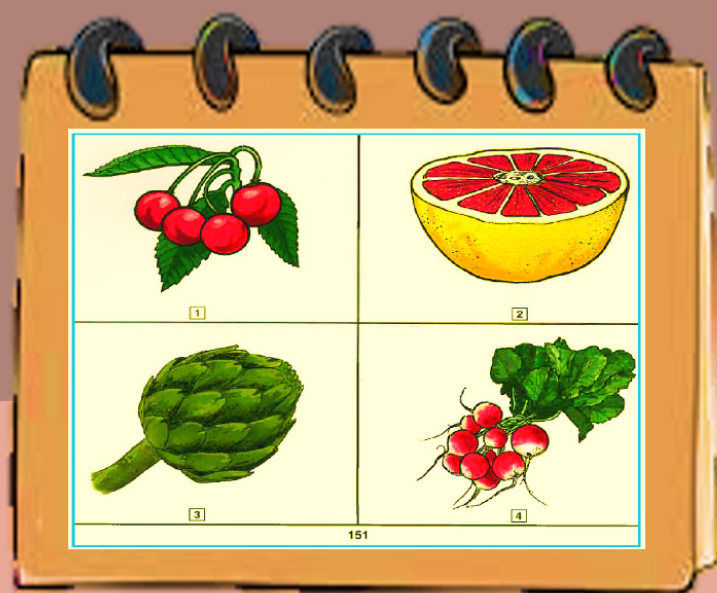
Exploring Memory, Selective Attention and Mental Imagery Development in Preschool-Aged Children

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Methods

Used four age-appropriate tasks to assess 60 participants' thinking skills aged 3 to 5 years:

- Selective attention: **Ambiguous figures tasks**
- Memory: **Robot sequencing imitation tasks**
- Mental imagery: **Rotation task**
- Vocabulary: **British picture vocabulary scale**

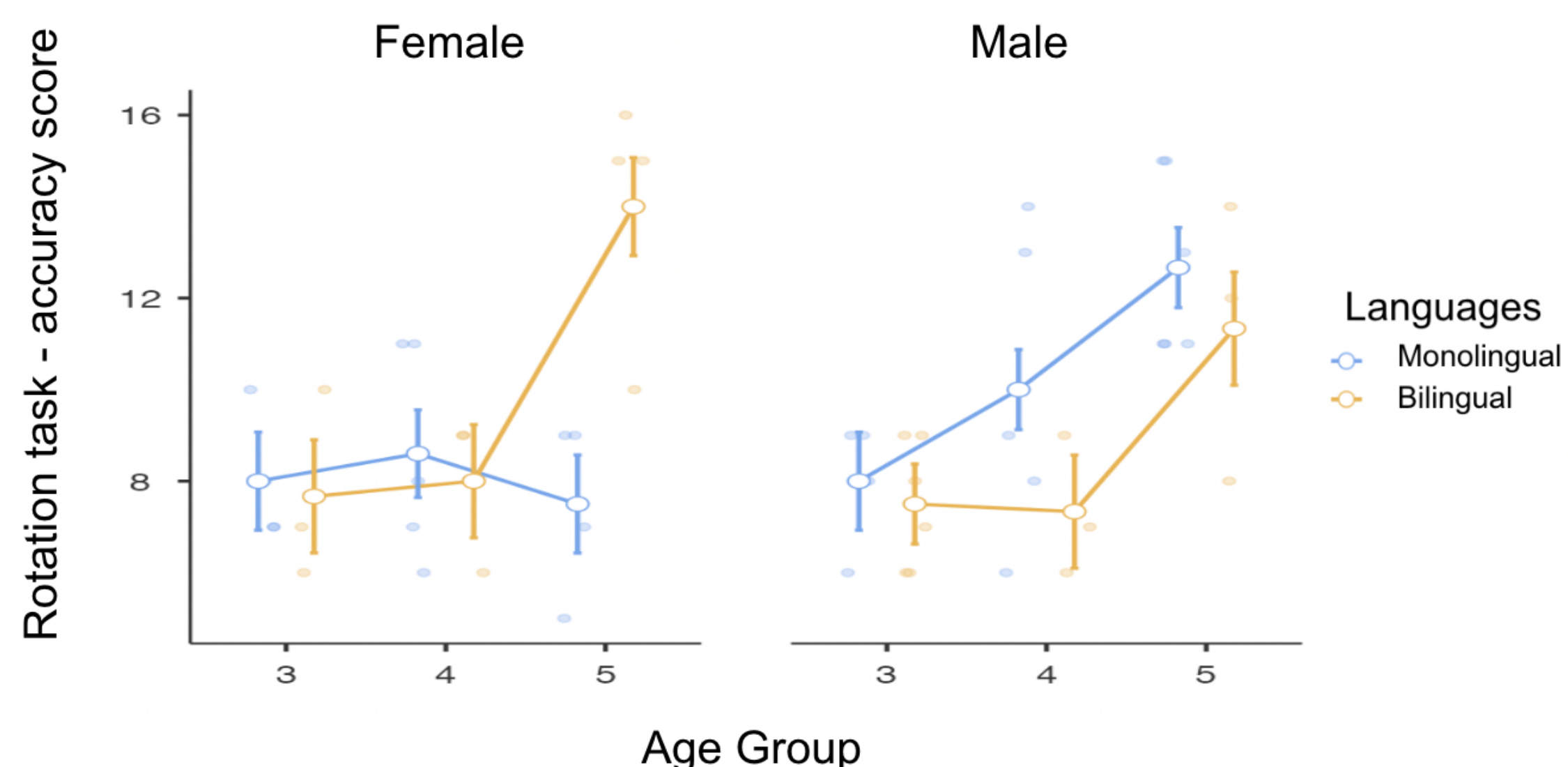


Aims

Investigating the effect of **Bilingualism** on thinking skills.

Results

- **Selective attention:**
 - No effect of language or gender.
 - 5-year-olds performed better than the two younger age groups.
- **Memory:** no significant results.
- **Mental imagery:**
 - 5-years-old scored significantly higher than the two younger age groups
 - Some significant interactions between gender, age and language background:
 - 5-year-old monolingual males outperformed monolingual females;
 - however, bilingual females outperformed monolingual females (see graph below).
- **Vocabulary** was positively correlated with memory and selective attention tasks.



Conclusion

- Overall, **no evidence was found for a bilingual advantage** on working memory or selective attention.
- **However**, in the **mental imagery task**, **only female participants showed a bilingual advantage**, adding complexity to the debate.

This highlights the need for further investigation into the true impact of bilingualism on children's development.



References

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