

# Speaking and Listening with our Eyes

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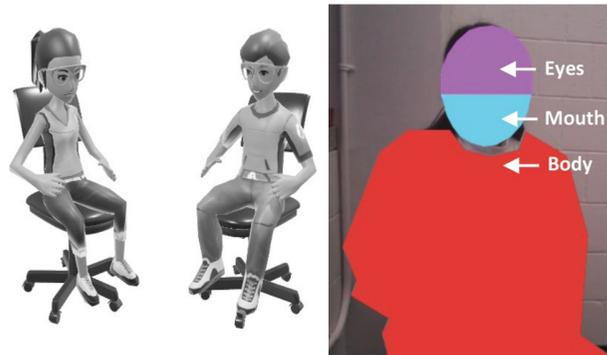
## Introduction

- People display unidirectional and bidirectional nonverbal gaze behaviours during social interactions such as:
  - a. Mutual engagement
  - b. Social referencing
  - c. Participation
- Speech has an effect on the location and duration of fixations
- Looking while listening vs. looking while speaking alters gaze behavior

### Research Questions:

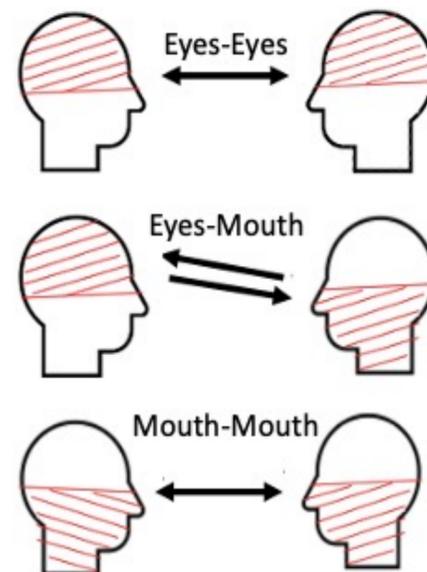
1. Does speech affect gaze behaviours such as mutual engagement, participation and social referencing?
2. Does speech affect the perception of the partner in the dyad?

## Methods

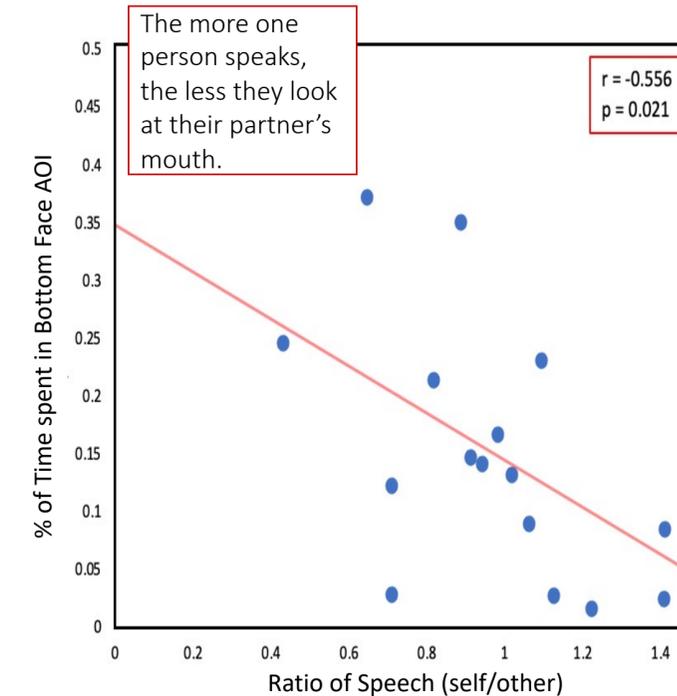
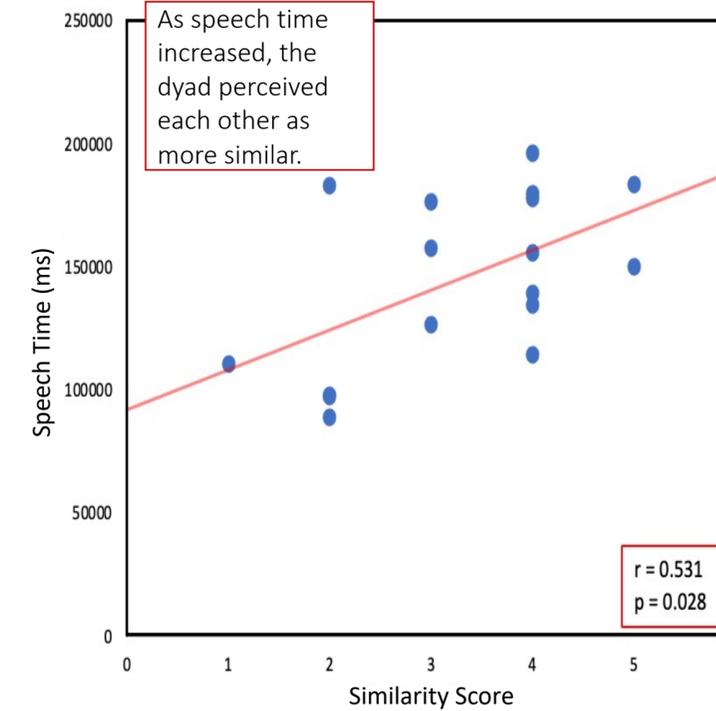
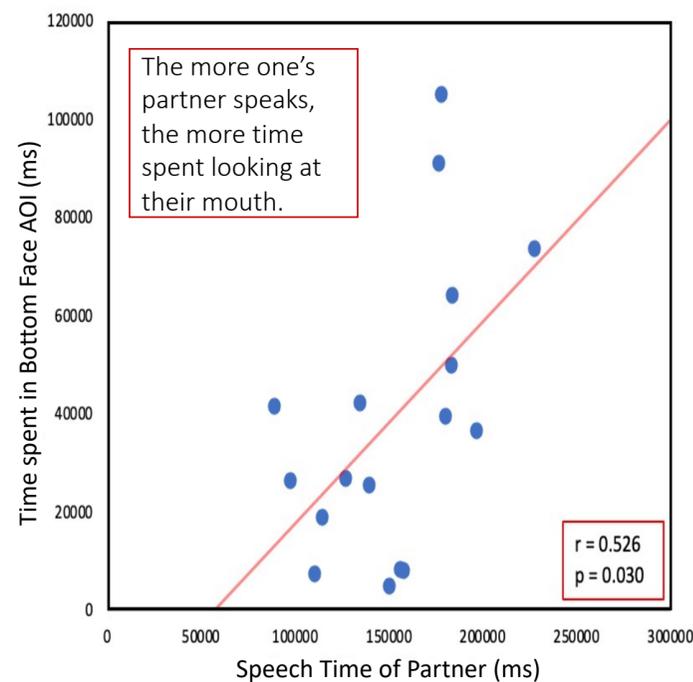
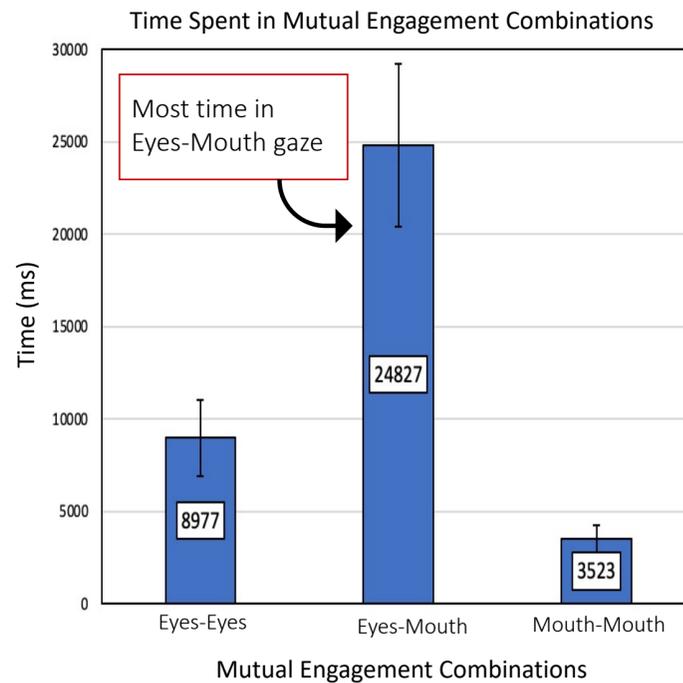


- 9 dyads (N = 18)
- 20-minute interactions
- Eye Movement recorded using Tobii Pro Lab
- Speech analyzed using BORIS
- Questionnaire post-interaction

### Mutual Engagement AOI Combinations



## Results



## Discussion

- During an interaction, there is significantly more time spent in top-bottom/bottom-top mutual engagement.
- When one is speaking, there is more fixation to the bottom of their face.
- Therefore, the more one talks over their partner, the less likely they are to look at their partner's bottom face.
- Verbal communication is crucial in one's perception of their partner in a dyad. Nonverbal communication is not sufficient.

## References

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- Buchan, J. N., Paré, M., & Munhall, K. G. (2008). The effect of varying talker identity and listening conditions on gaze behavior during audiovisual speech perception. Brain research, 1242, 162–171. <https://doi.org/10.1016/j.brainres.2008.06.083>

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