Dartboard or Spider web?:
Memory and audience design when speakers' representations conflict

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INTRODUCTION

- **Audience Design(AD):** Speakers adjust referential expressions to the listener's knowledge

- **Successful AD requires access to the partner-specific representation in memory. AD is less successful when the memory representation is less accessible (e.g., when the information shared with two partners is similar, Horton & Gerrig, 2015).**

- ❖ **We examined 1) how memory representations of common ground contribute AD during conversation and 2) whether interlocutors can develop multiple distinct representations, flexibly access and use them when designing utterances.**

EXPERIMENT

- **Participants: 24 young adults**
- **Task: Entrainment trials → Test trials with 2 confederates (C1, C2) → Memory test**
  - Entrainment trials: sorting pictures with 2 confederates (repeated 4 times each)
  - Test trials: alternating instructions C1 or C2
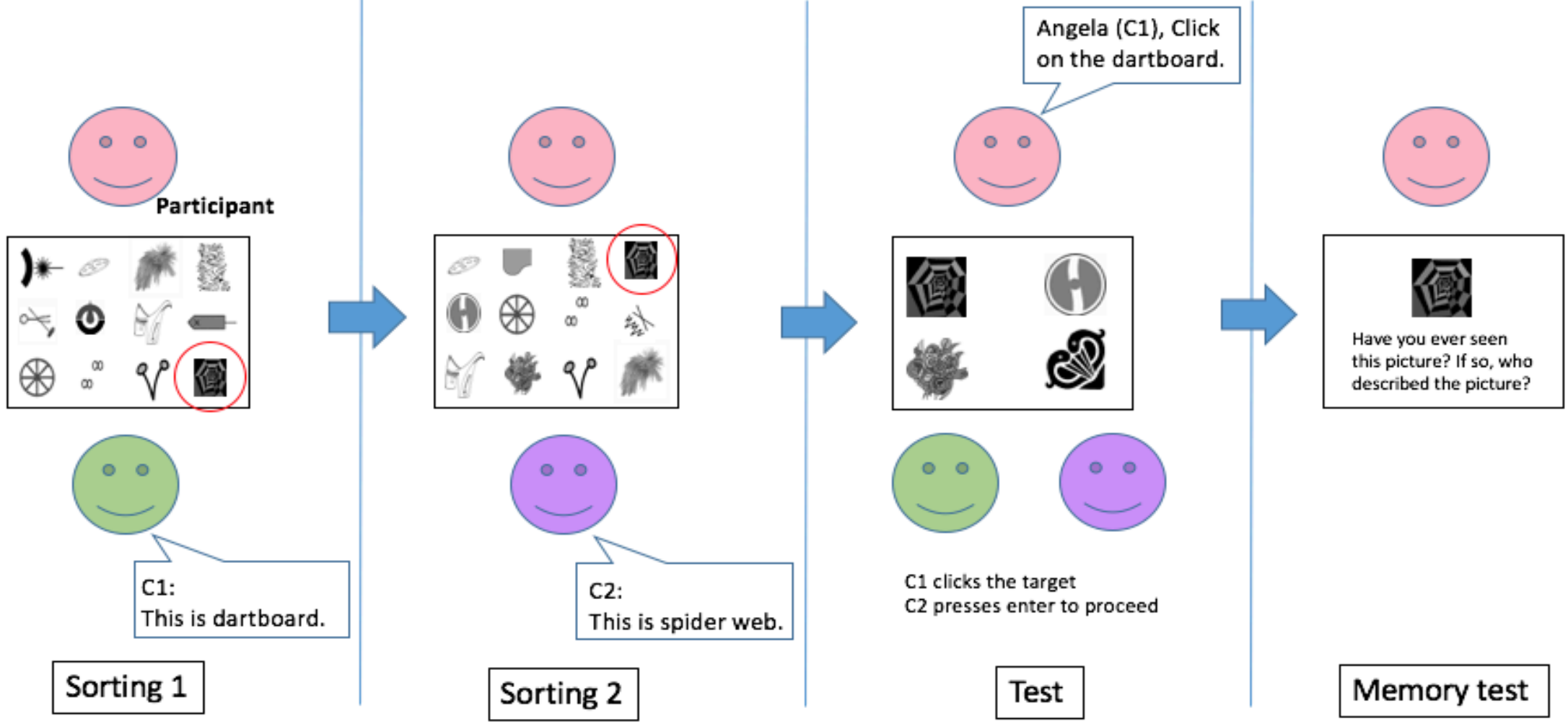 - Memory assessment: explicitly recall who described what

Figure 1. Experimental Procedure

- **Critical manipulation during entrainment:**
  - ☐ 1 representation shared with either C1 or C2
  - ☐ 2 representations shared with both C1 and C2, but *different labels*

RESULTS

- The length of the participants' referential expressions at TEST:
  interacting with knowledgeable partner (1 & 2 representations) < naïve partner

- Rate of entrainment at TEST:
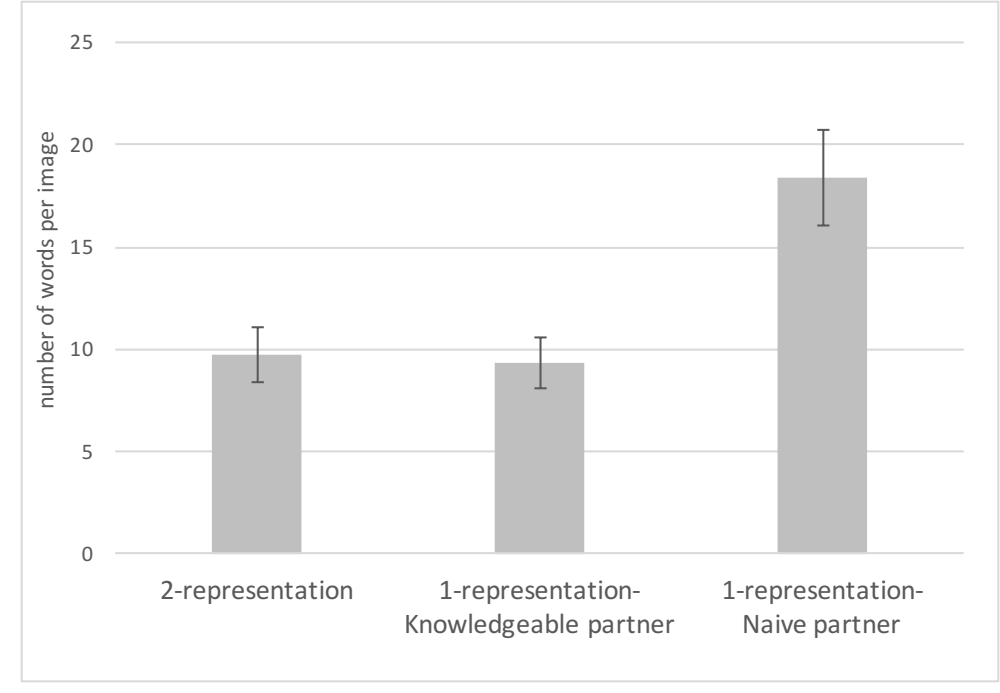 interacting with knowledgeable partner (1 & 2 representations) > naïve partner

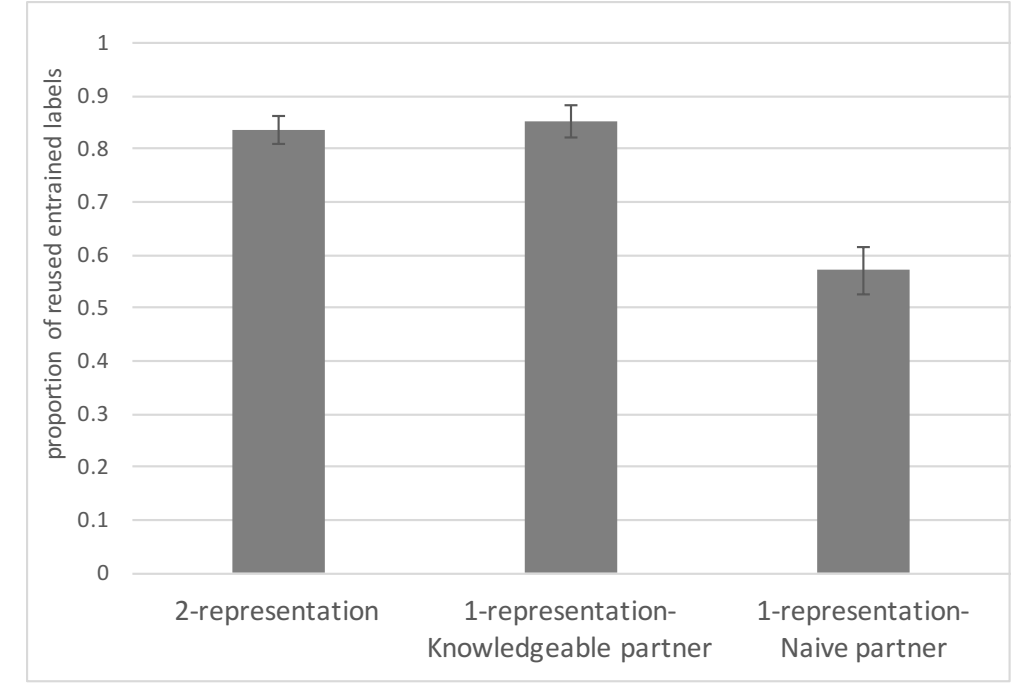Figure 2. Average number of words used by participants on test trials

Figure 3. Proportion of entrained expressions to describe each image on test trials

- Memory assessment: high accuracy for item (e.g., Is this old or new?) – 100%, accuracy of source (e.g., who described it for you?) – 92.1% (2-rep) vs. 87.8% (1-rep)

CONCLUSIONS

- ➢ **Speakers simultaneously adjust utterances with respect to the current addressee's knowledge state.**

- ➢ **They establish two distinct (conflicting) representations associated with specific partners and flexibly alternate them in 3-party conversation.**

- ➢ **This successful audience design was supported by notably good item and source memory, and highlight the role and contribution of memory in utterance design.**

- ➢ Our current results expand on the previous findings examining multiparty conversations; speakers maintain and use complex partner-specific common ground when memory representations are easily assessed. Further research is required to study the interplay between memory and language use particularly when memory is weakened (e.g., old adults) to fully understand the contribution of memory representations in audience design.

o Reference: Horton, W. S., & Gerrig, R. J. (2005). The impact of memory demands on audience design during language production. *Cognition, 96,* 127–142.