

Sentential context impacts bilingual speech-in-speech recognition

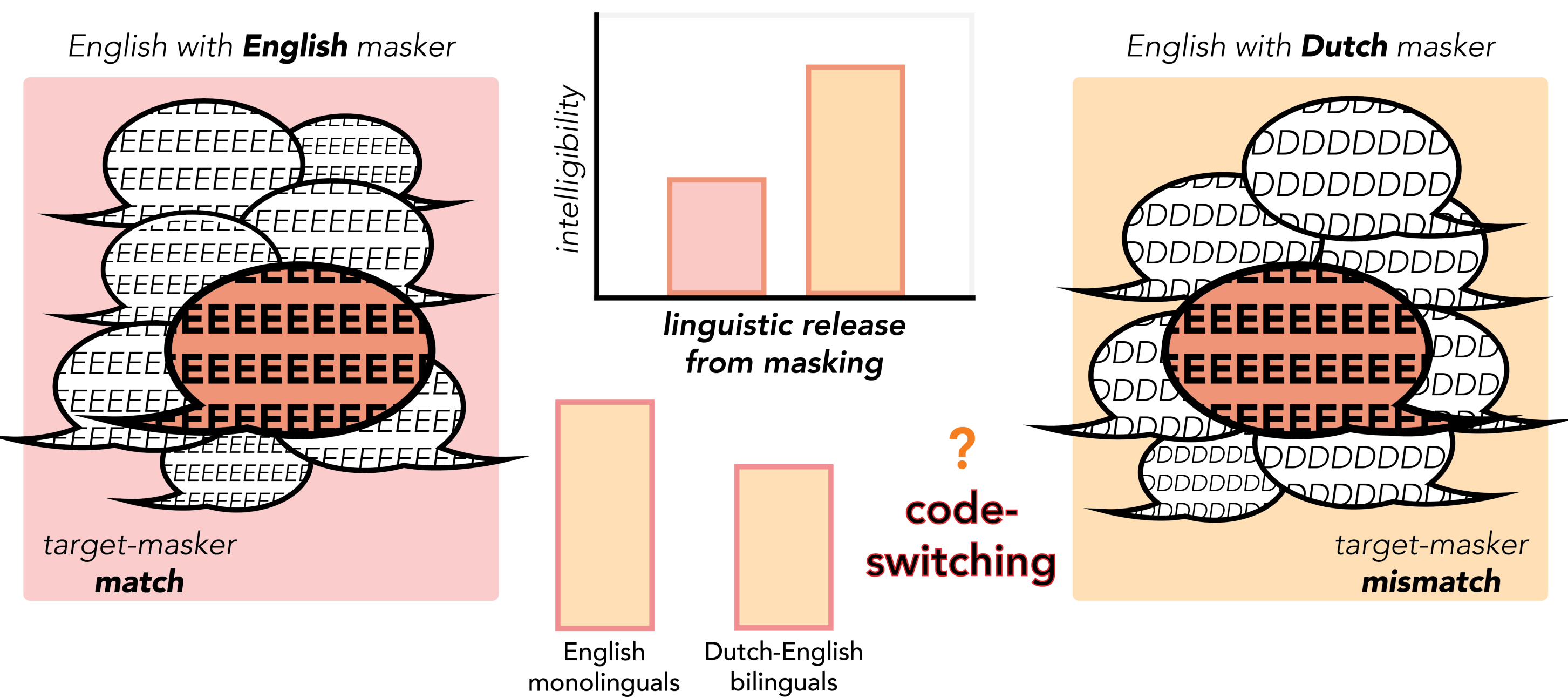
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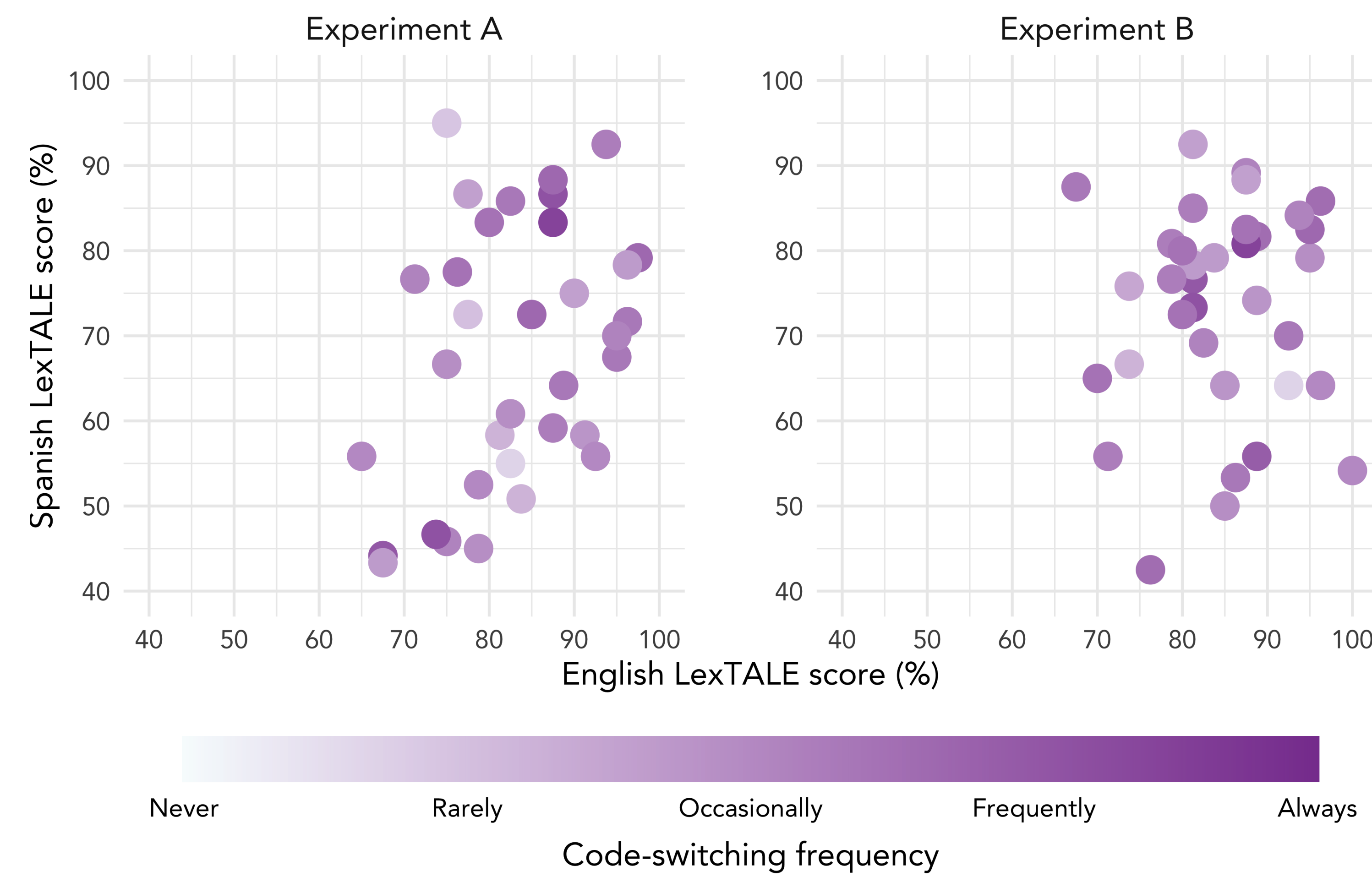
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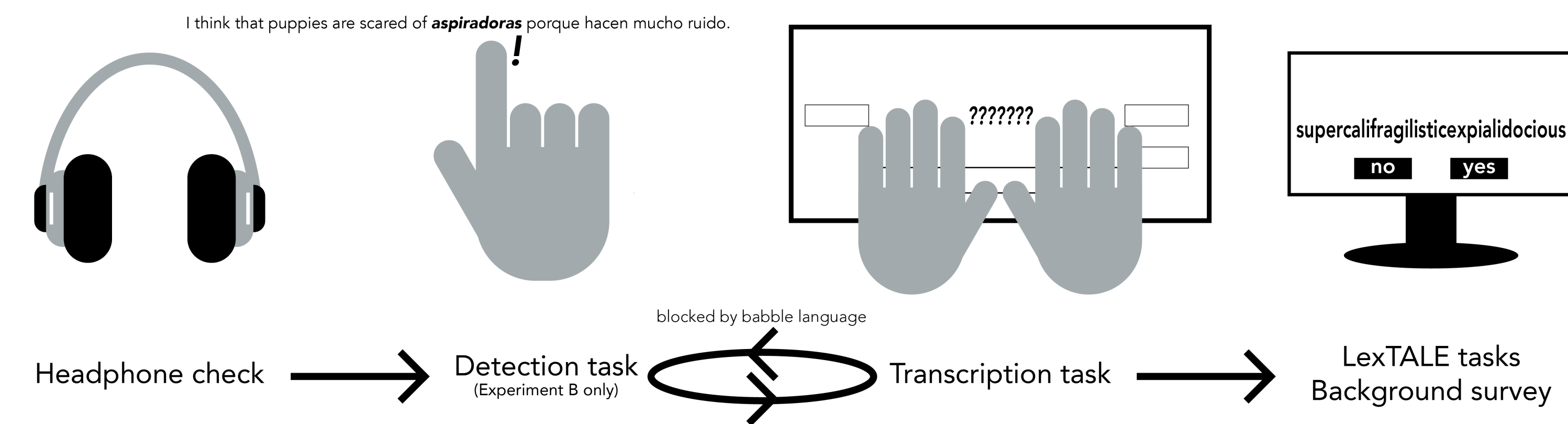
Research background



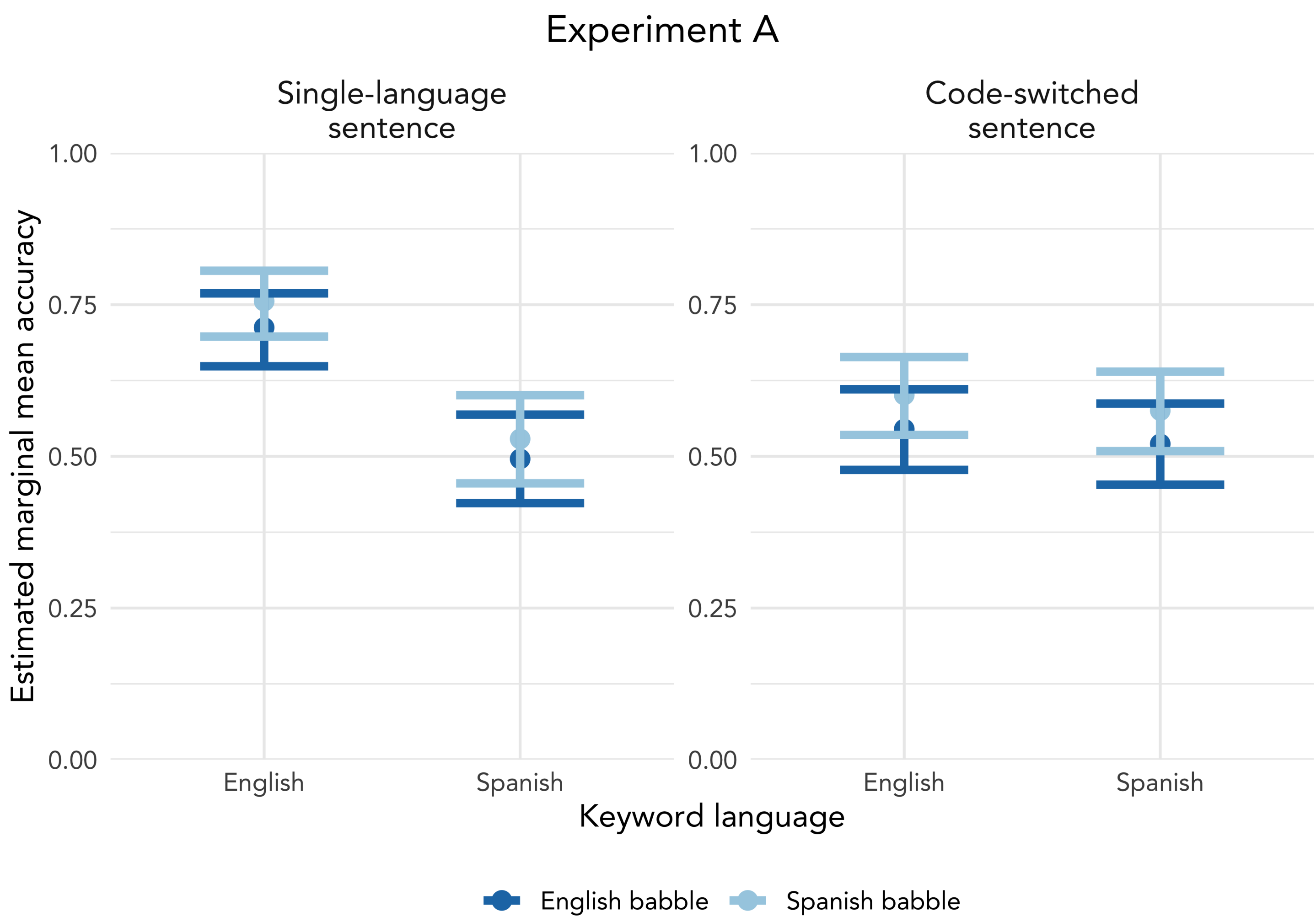
Participants



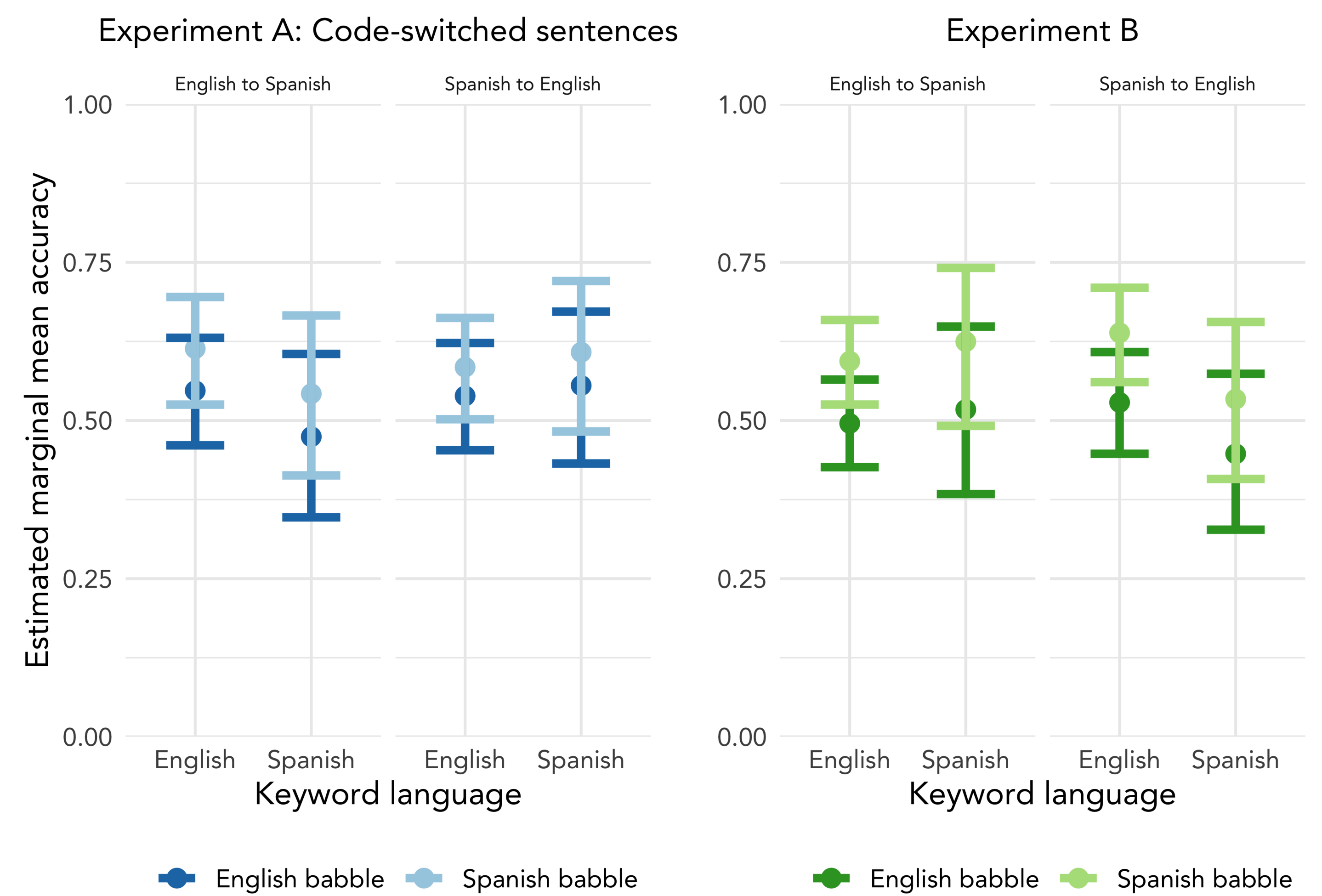
Procedure



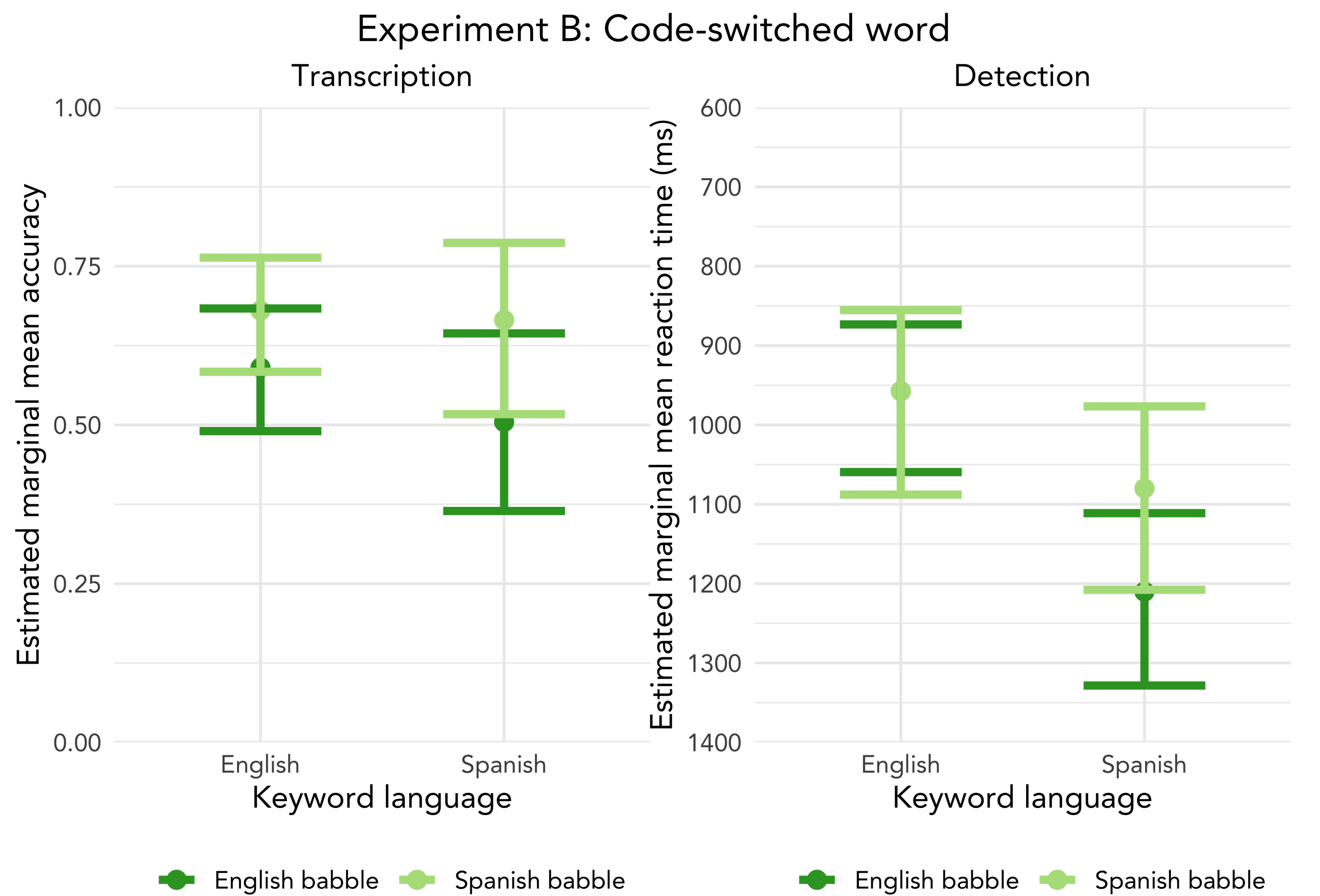
Accuracy benefit for English versus Spanish decreases by ~20% in code-switched versus single-language sentences



Removing single-language stimuli shifts transcription advantage from pre-switch to post-switch keywords



Code-switched Spanish words are more susceptible to masker language than code-switched English words



Stimulus examples

| Experiment | Sentence type | English critical word | Spanish critical word |
|------------|-----------------|---|--|
| A | Single-language | I think that puppies are scared of vacuums because they are loud. | Creo que los cachorros tienen miedo de las aspiradoras porque hacen mucho ruido. |
| B | Code-switched | Creo que los cachorros tienen miedo de los vacuums because they are loud. | I think that puppies are scared of aspiradoras porque hacen mucho ruido. |

Result summary

| Experiment Analysis | | | Measure | Level | Context | Prediction | Observation |
|---------------------|---|------|--|-----------------------------------|---|--|---|
| A | | 1 | Transcription (accuracy) | Sentence | Single-language versus Code-switch | Incongruent Target-Masker benefit attenuated by code-switching | Target-Context interaction with Masker main |
| | B | 2-3 | | | | | |
| 4 | | Word | Spanish-English versus English-Spanish code-switches | Incongruent Target-Masker benefit | Congruent Target-Masker benefit for Spanish | | |
| 5 | | | | | | Detection (RT) | |

References and acknowledgements

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