

# Mi casa es tu posá: Exploring the bilingual mental lexicon in speakers of Spanish and Palenquero

Holly A. Zaharchuk<sup>1, 2</sup>, John M. Lipski<sup>1, 3</sup>, Janet G. van Hell<sup>1, 2</sup>



<sup>1</sup> Center for Language Science

<sup>2</sup> Department of Psychology

<sup>3</sup> Department of Spanish, Italian, and Portuguese

The Pennsylvania State University

## Background

- Strong evidence for language nonselective bilingual lexical access regardless of context, similarity, and modality (Van Hell & Tanner, 2012)
- Psycholinguistic research is typically conducted in laboratory settings with WEIRD populations, limiting generalizability (Muthukrishna et al., 2020)
- Palenquero: Afro-Hispanic creole language spoken in San Basilio de Palenque, Colombia, in tandem with its lexifier language, Spanish (Lipski, 2019)

## Are Spanish and Palenquero co-active in bilingual word recognition?

### Methods

#### Bilingual Spanish-Palenquero participants

Category	Mean	SD	Minimum	Maximum	Category	N
<b>Age</b>					<b>Gender</b>	
Age at testing	32.21	8.86	19.00	53.00	Man	13
Spanish AoA	0.42	1.69	0.00	10.00	Woman	25
Palenquero AoA	3.08	3.90	0.00	10.00		
<b>Interlocutors</b>					<b>Level of education</b>	
Both Spanish and Palenquero	0.64	0.34	0.00	1.00	Secondary	13
Spanish only	0.29	0.29	0.00	1.00	Some undergraduate	4
Palenquero only	0.07	0.13	0.00	0.55	Undergraduate	20
					Graduate	1

#### Auditory mixed-language lexical decision tasks in Spanish and Palenquero

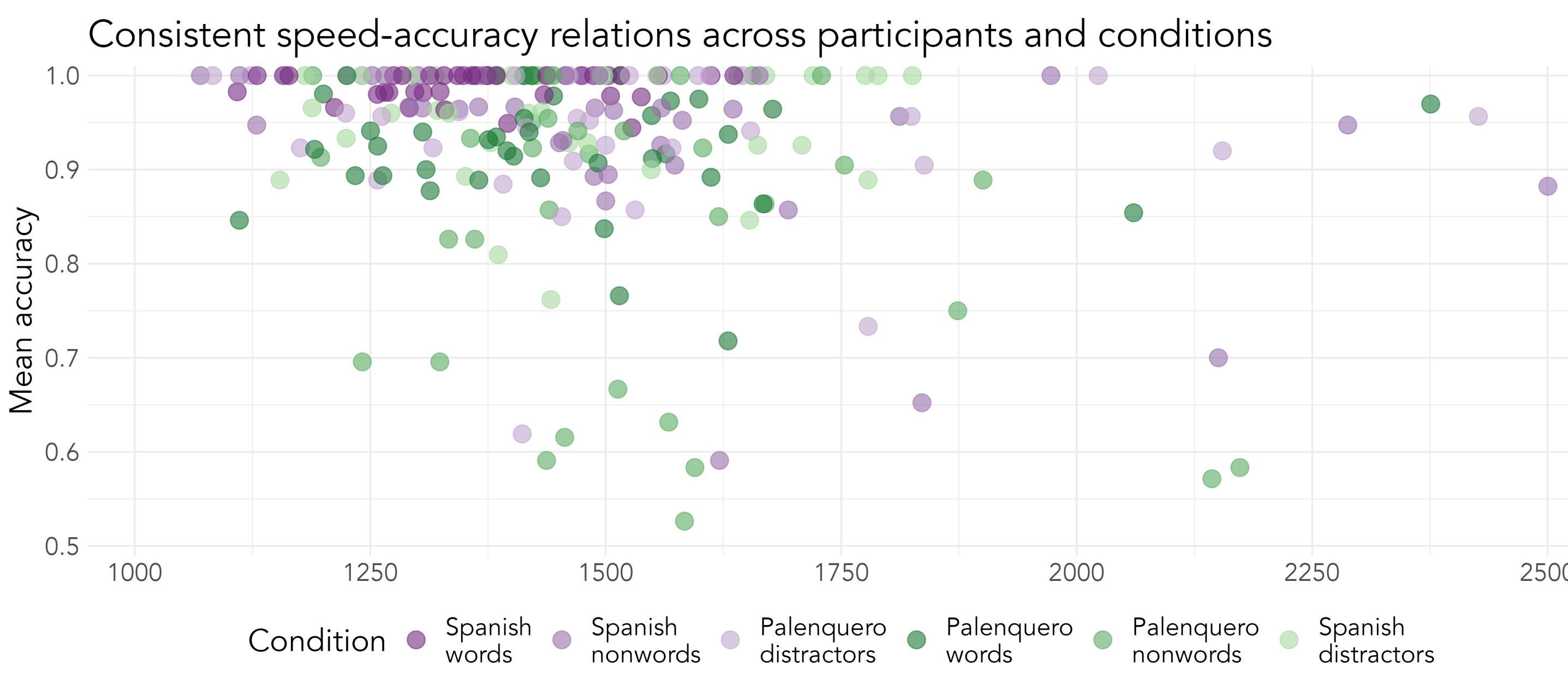
Language type	Word type	Correct response	Trials per task	Spanish task examples	Palenquero task examples
Target	Real word	Yes	60	arroz (rice)	aló (rice)
Target	Nonword	No	30	hofa (hoja/leaf)	kogó (fogó/stove)
Distractor	Real word	No	30	piangulí (pig)	cerdo (pig)

#### Analysis approach

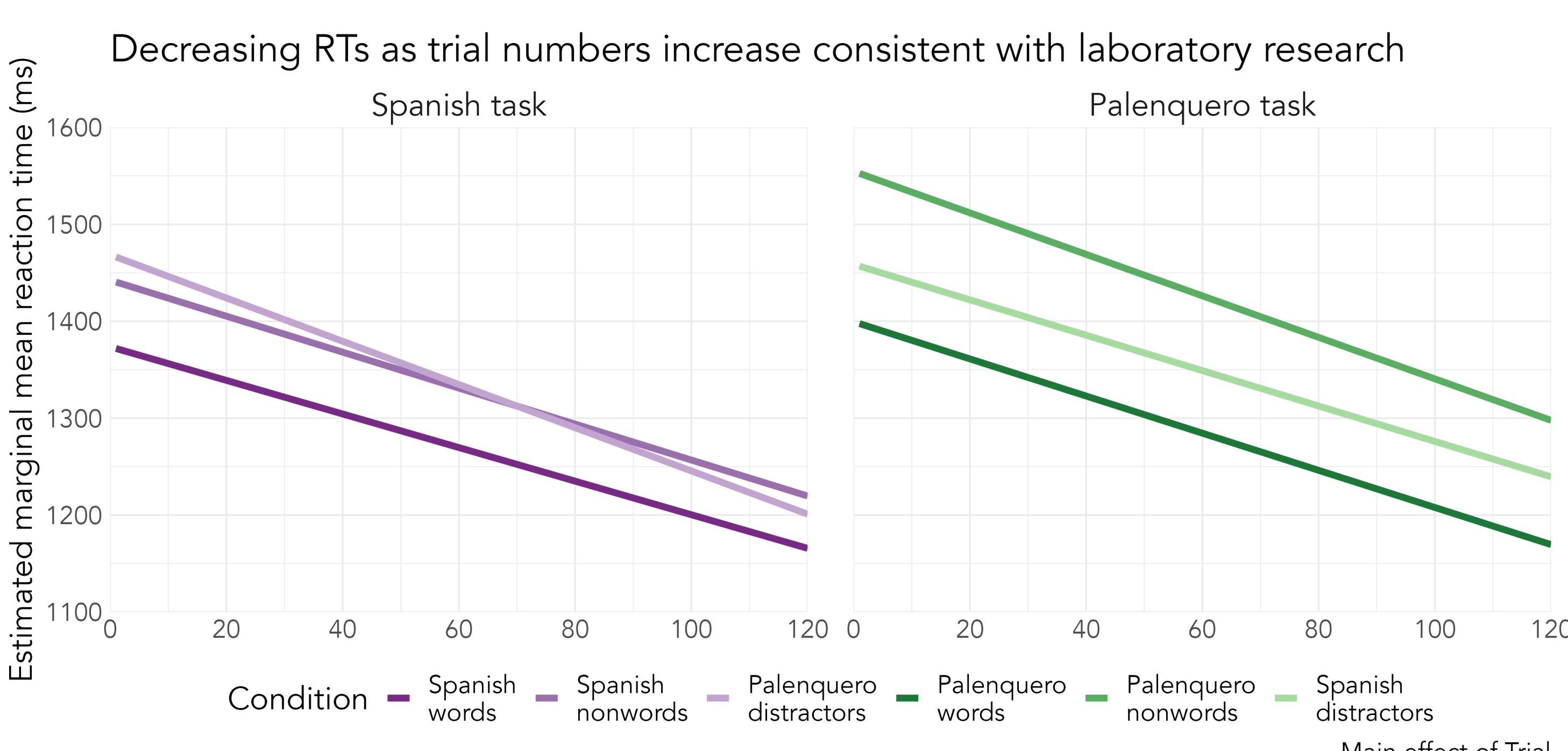
Condition	Contrast1	Contrast2	Task	Variables		Models	
				Independent	Dependent	Effects	Effects
Real = 2/3, Nonword = -1/3, Distractor = -1/2	Real = 0, Nonword = 1/2, Distractor = -1/2	Spanish = 1/2, Palenquero = -1/2	Spanish = 1/2, Palenquero = -1/2	Mean-centered (Trial - Mean(Trial))	Accuracy = Binary (0,1) RT = Inverse (RT*1-1000)	Contrast1*Task + Contrast2*Task (1 Item) + (1 Participant)	(1 Item) + (1 Participant)
						Contrast1*Task + Contrast2*Task + Order + Trial (1 Item) + (Contrast1:Task + Contrast2 + Task Participant)	(1 Item) + (Contrast1:Task + Contrast2 + Task Participant)

## Results

### Overall auditory lexical decision performance



### Change in performance over time

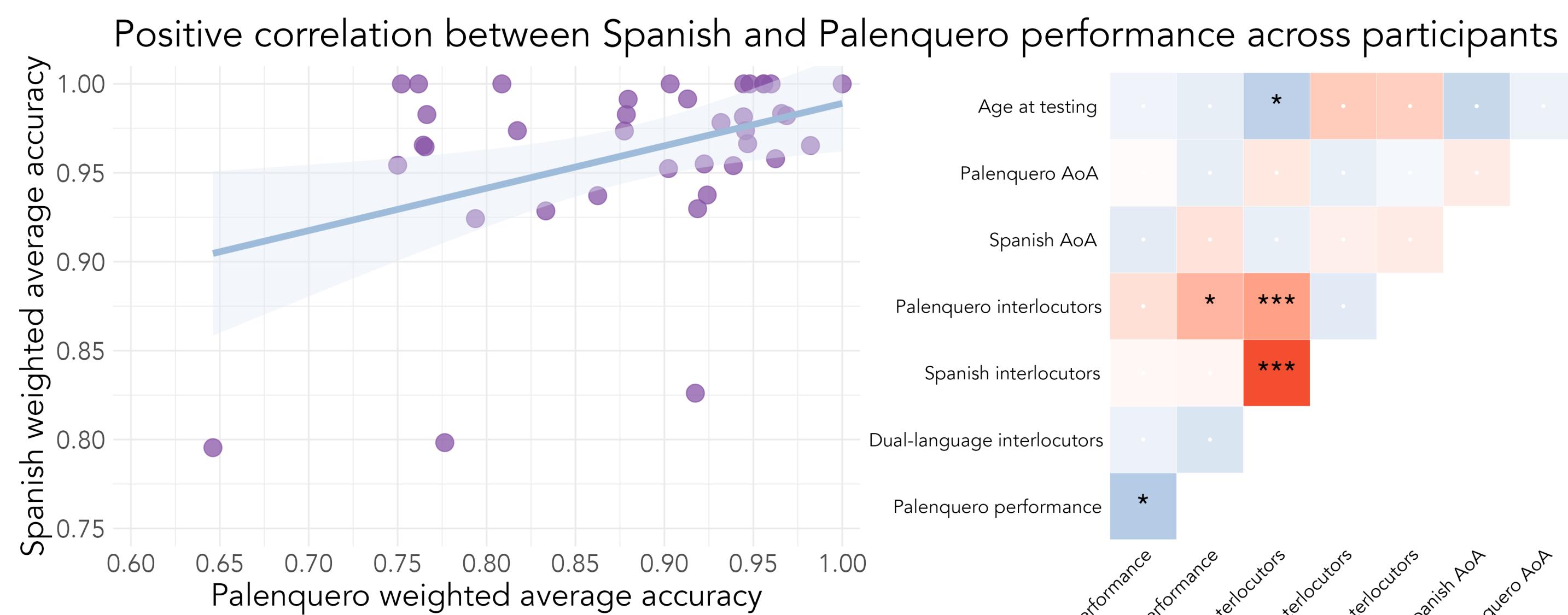


### References and acknowledgements

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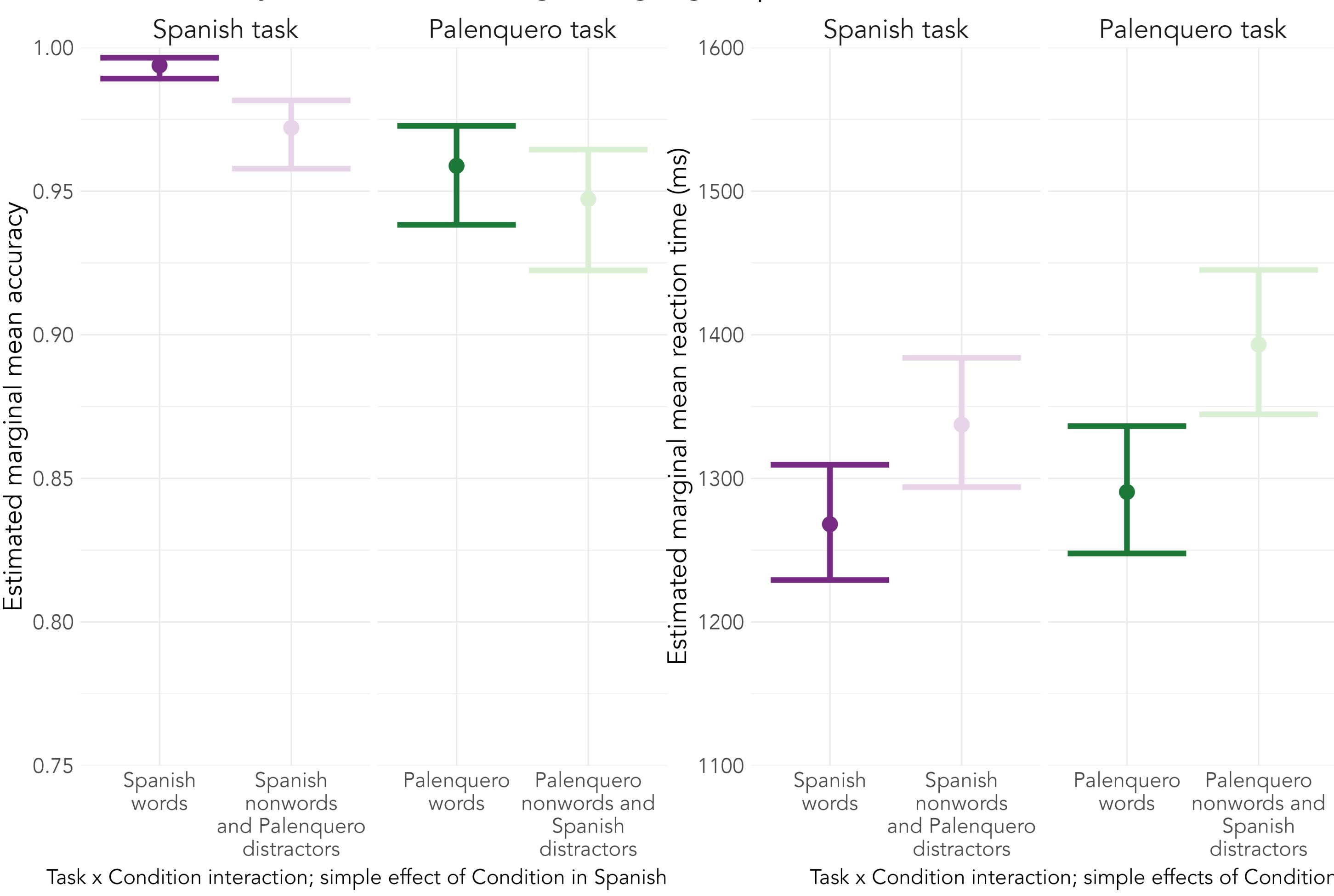
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## Comparison of average performance in each language



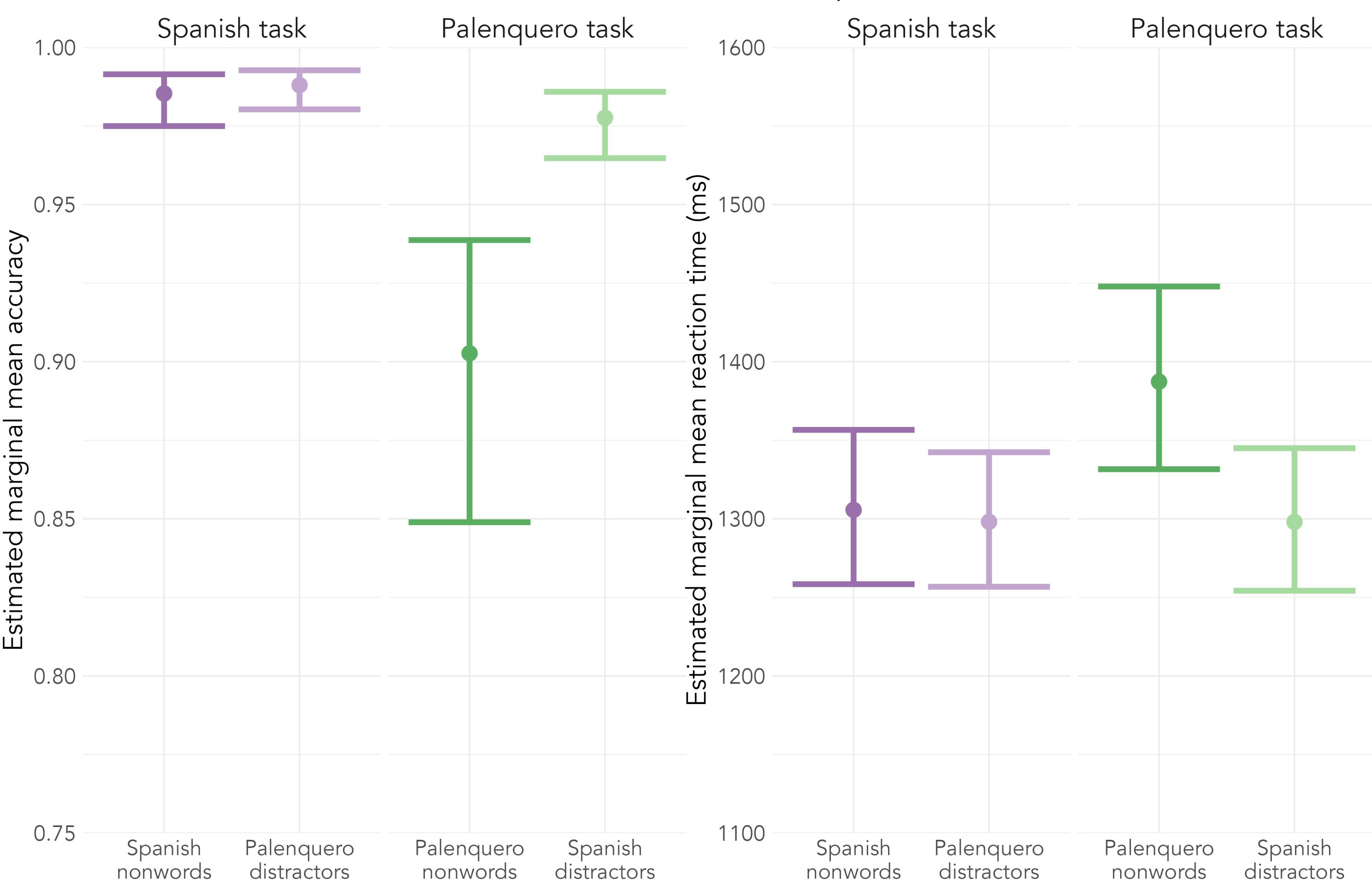
## Lexicality effect

Faster RTs for "yes" versus "no" responses consistent with laboratory research:  
Effects on accuracy restricted to stronger language (Spanish)



## Cross-language activation

Faster RTs for distractors versus nonwords suggests language co-activation:  
Effects on accuracy restricted to weaker language (Palenquero)



## Conclusions

- Evidence for co-activation of Spanish and Palenquero during bilingual word recognition: Faster RTs for distractors than nonwords
- Effect of relative proficiency: Spanish as non-target language induced stronger co-activation effects with Palenquero as target language than vice-versa (see BIA+ model, Dijkstra & Van Heuven, 2002)
- Translating labwork into fieldwork is crucial for testing psycholinguistic theory: Earlier findings of cross-language activation extend to contact languages in community settings