

Introduction

- **Auditory language processing:** rhyming English words like *globe* or *probe* are cognitively less costly than words like *claim* or *flame* because /əʊb/ is consistently spelled whereas /eɪm/ is not (Seidenberg & Tannenhaus, 1979) → Orthographic Consistency Effect (OCE)
- **Speech production (SP):** no robust evidence of the OCE in previous research (Alario et al., 2006)
- Theoretical issues for the perception-production link (Baese-Berk & Samuel, 2016 for an overview)

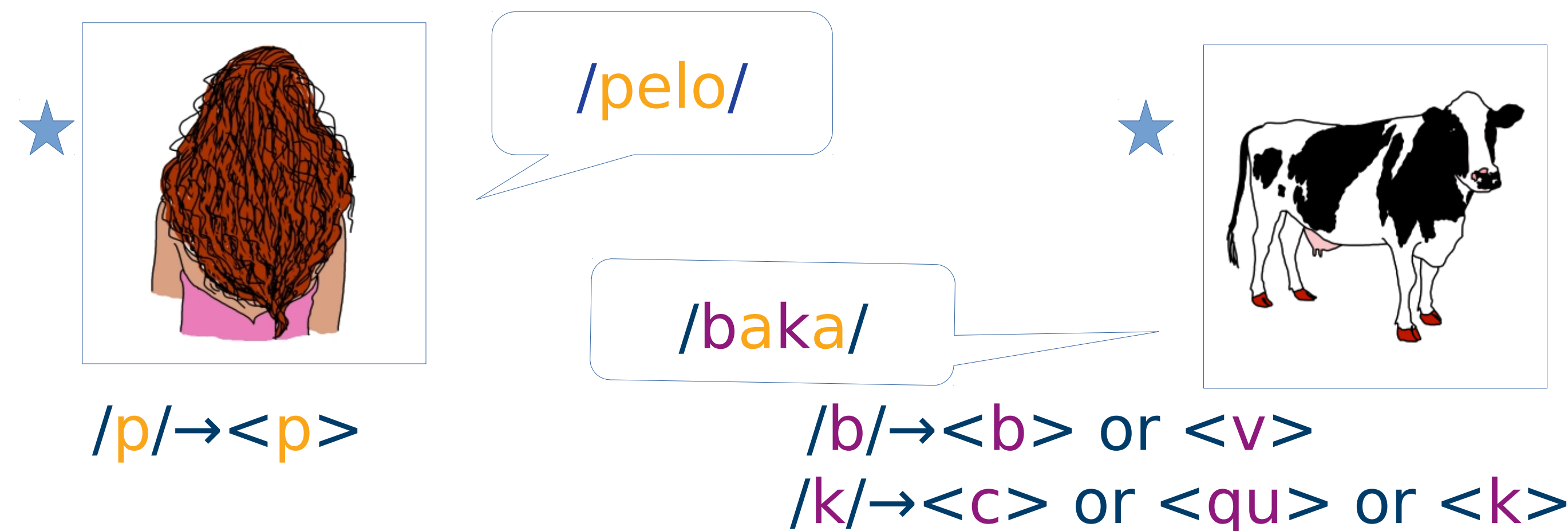
The present study

Research questions

- 1) Previous research based on manipulations at the rhyme level → **Is the OCE rooted the phonemic level?**
- 2) Previous research fail at finding robust evidence for the OCE in SP → **Does the OCE emerge in SP of a transparent language with a more fine-grained language processing (Spanish)?**
- 3) Early readers have unstable phoneme-to-grapheme mappings → **Does the OCE affect early readers in SP? To what extent?**

Method

- **Paradigm:** Picture Naming Task (PNT)
- **Participants:** 30 L1-Spanish adults ($M_{age}=22.9$);
45 L1-Spanish second graders ($M_{age}=7;6$)
- **Stimuli:** 60 pictures from the MultiPic database (Duñabeitia et al., 2015). Names of the picture either contained only **consistently-spelled phonemes** (e.g. /pelo/) or **inconsistently-spelled phonemes** (e.g. /baka/)

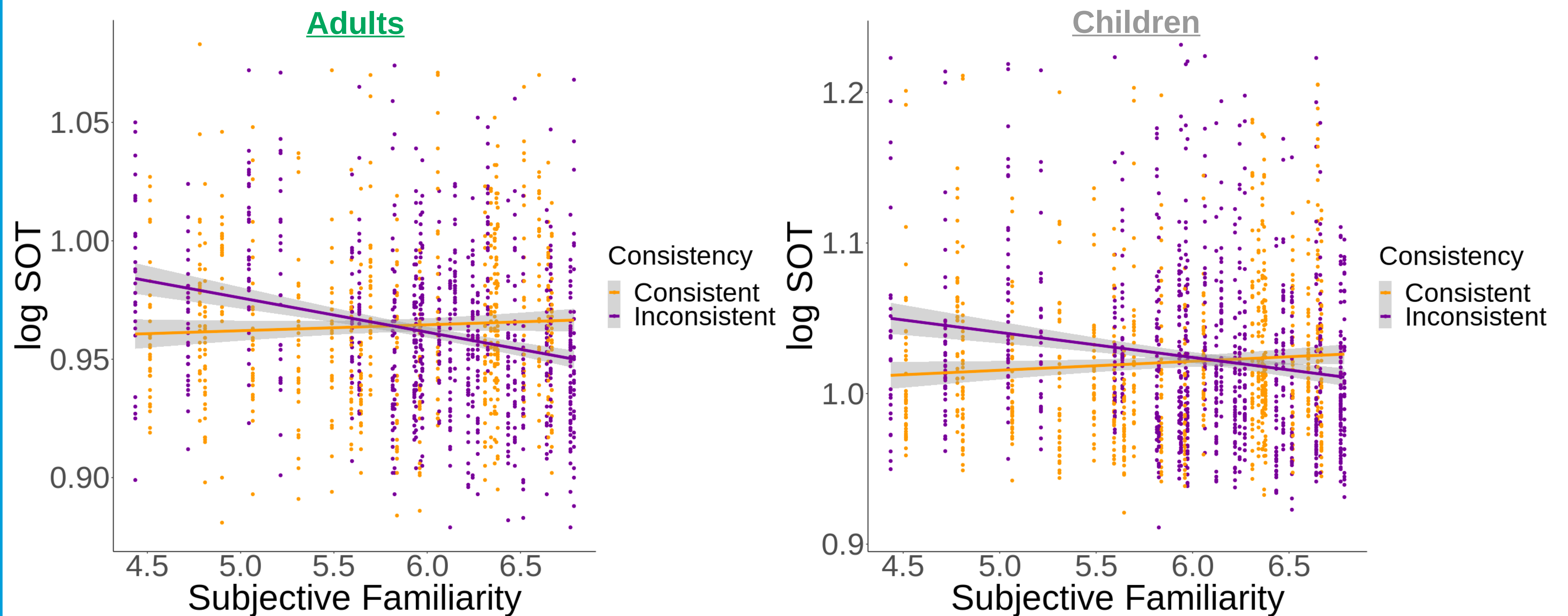


Results

Analyses

Linear mixed effects model with *Naming Latencies* (SOT) as predicted variable and *Consistency* and *Subjective Familiarity* as predictors for each sample.

- **Adults:** a significant main effect for *Consistency* ($p=0.018$) and for *Subjective Familiarity* ($p=0.004$) were found. *Consistency* and *Subjective Familiarity* interact ($p=0.015$).
- **Children:** a main effect for *Consistency* ($p=0.026$) was found. *Consistency* interacted with *Subjective Familiarity* ($p=0.031$)



Discussion

- 1) Main effect of *Consistency* in both groups suggests that the OCE is rooted at the phonemic level. The interaction between *Consistency* and *Subjective Familiarity* implies that both adults and children “make use” of orthographic representations when they have to produce less familiar words.
- 2) This study shows a consistent Orthographic Consistency Effect in speech production in a fairly transparent language. Further research is needed to understand whether the OCE exists in a opaque language in a PNT paradigm with stimuli manipulation at the phonemic level.
- 3) Early readers appear to rely on single phoneme-to-grapheme mappings like adults in language production. It remains unclear whether the cognitive process leading to these results is similar in both groups, given that children tend to recognize holistically more familiar words (Shapiro et al., 2013).

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