

What about the syntax?

Bilingual word recognition in sentence context.

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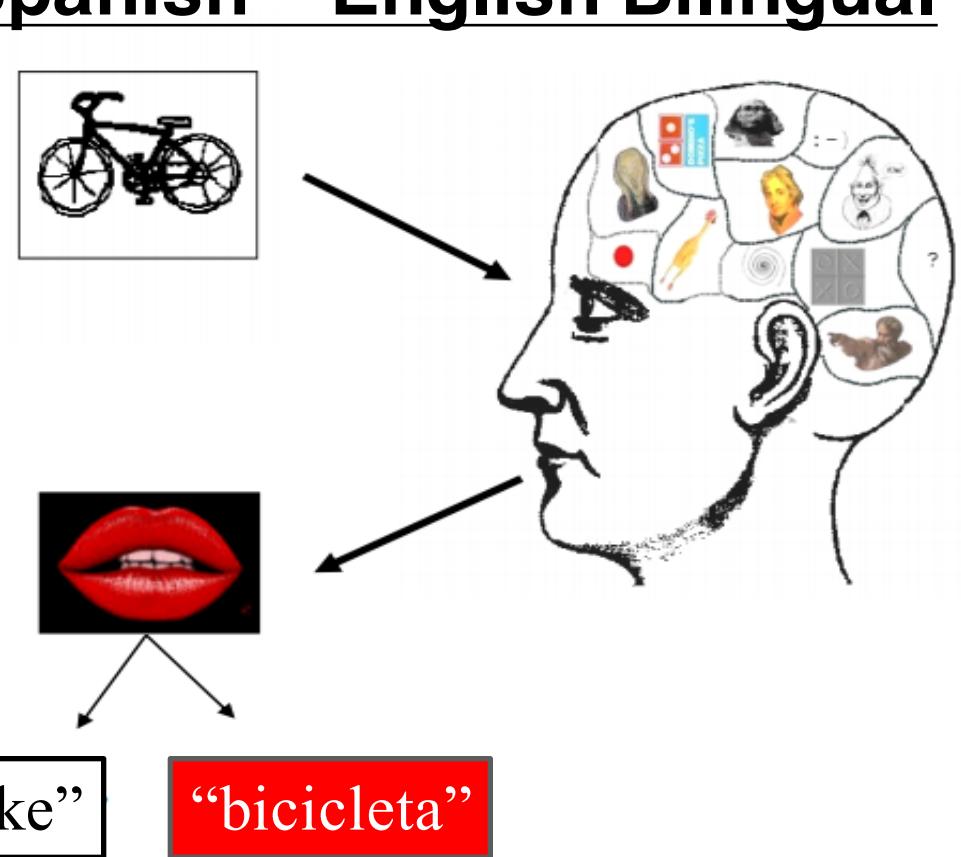
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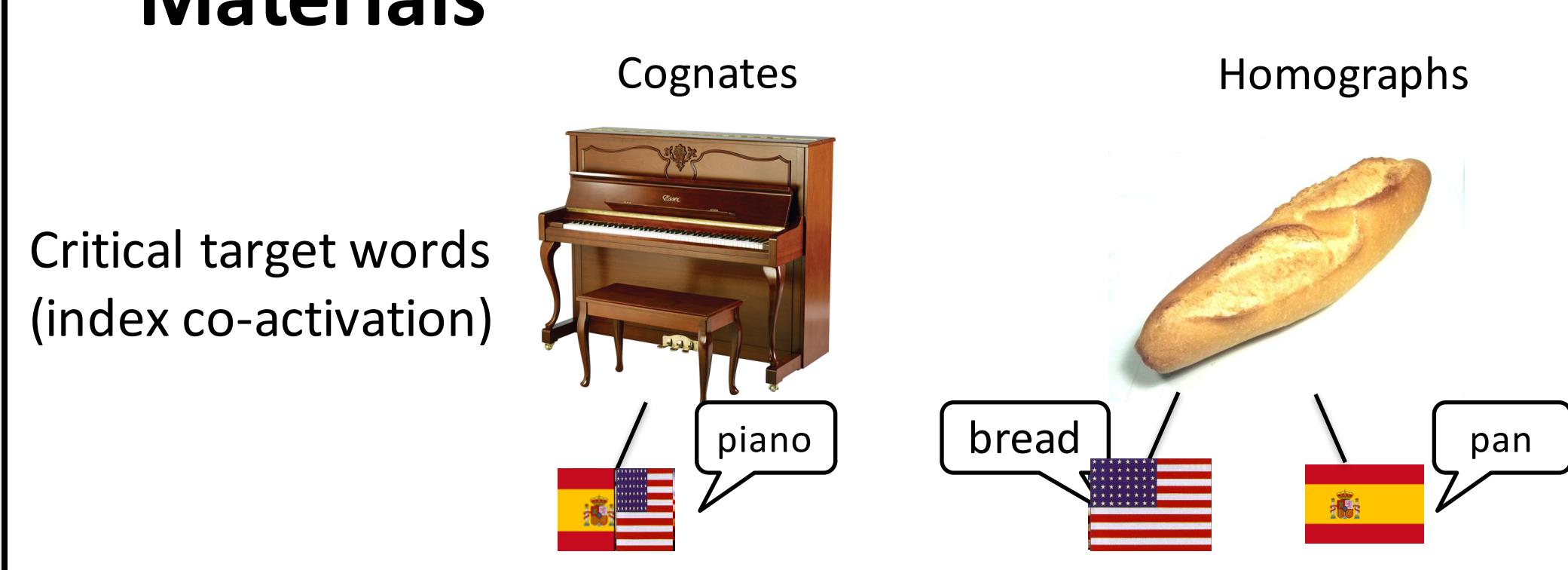
Introduction

- Bilinguals co-activate both languages
 - Language ambiguous cognates and homographs
- Spanish – English Bilingual**

- Cross-language syntactic priming
- How do bilinguals select the intended language?
- Bilinguals develop control that enables fluent performance and also code-switching (e.g., Green, 1998)
 - Cognitive? Linguistic?
- Languages have different syntax / word order
 - Places constraints on code-switching and cross-language syntactic priming
 - Word recognition?
- Hypothesis:** syntax that is indicative of one language and not the other will eliminate co-activation
 - If true: Cognates/homographs should be processed like non-ambiguous words

Exp. 1: Can language-specific syntax cue language selection?

Exp. 2: How to ensure structures with different word order are really language-specific?

Materials



Sentence Structures

- Active and passive
Word order is the same between Spanish and English

Active:
El chico quemó el **garaje** en su totalidad
The boy burned the **garage** to the ground

Passive:
El coche fue protegido por el **garaje** durante la tormenta
The car was protected by the **garage** during the storm

- Dative
Options that are not available in both languages (may influence indices of co-activation)

PO Dative (2 options, one not available in English)
El señor le enseñó al **barbero** el **bigote** muy grande

*The man showed to the barber the very large **mustache**

El señor le enseñó el **bigote** muy grande al **barbero**
The man showed the very large **mustache** to the **barber**

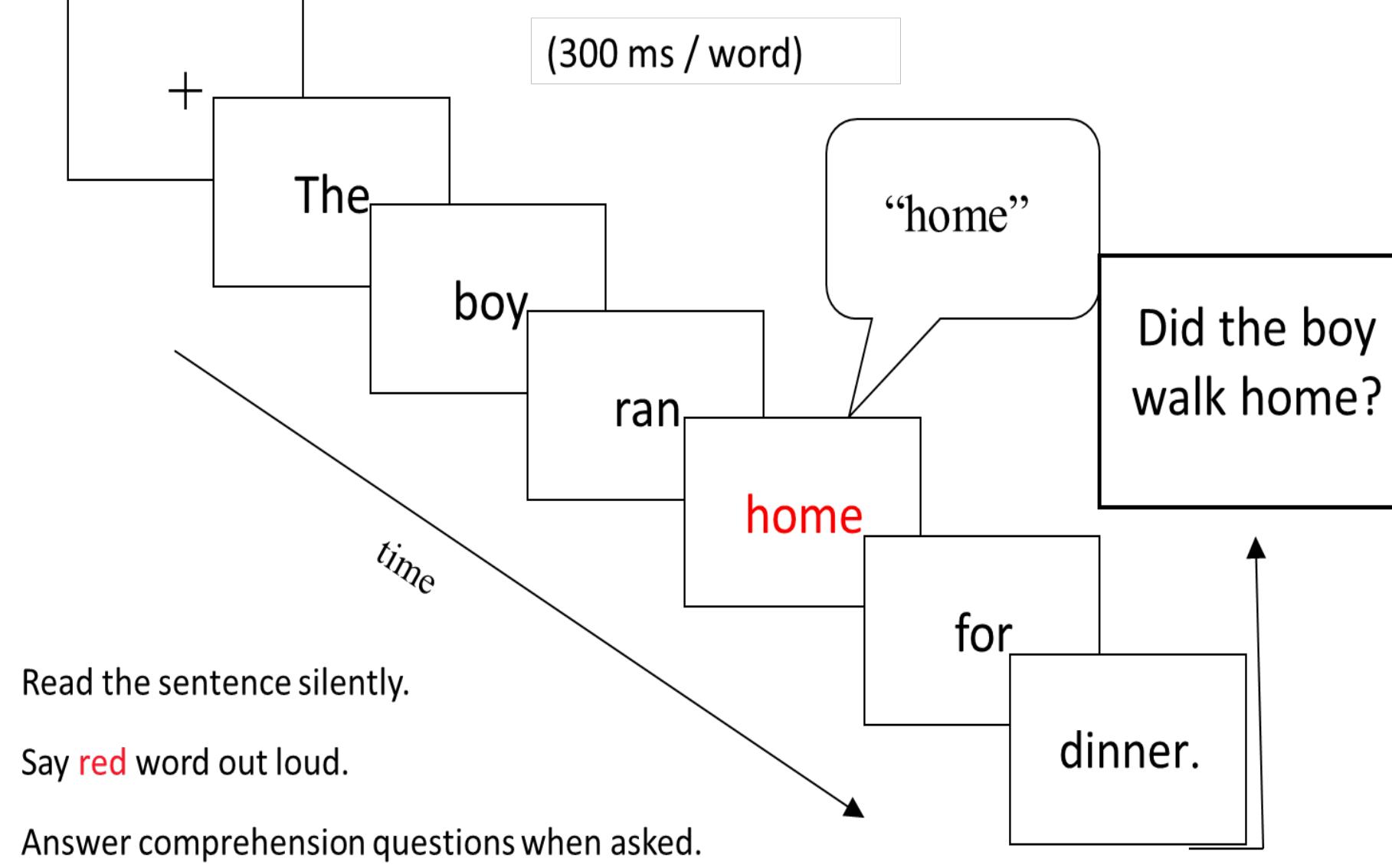
Predictions

- Cognate / homograph effects should be observable in active/passive
 - No language-specific syntax
- If word order differences constrain co-activation
 - Reduced or absent cognate/homograph effects in the dative

Methods

Experiment 1

Sentence Reading: Measuring co-activation



Results for Experiment 1

- Reading sentences in Spanish (the native language)
- Recruited 29 Spanish (native) – English (second language)

Cognates

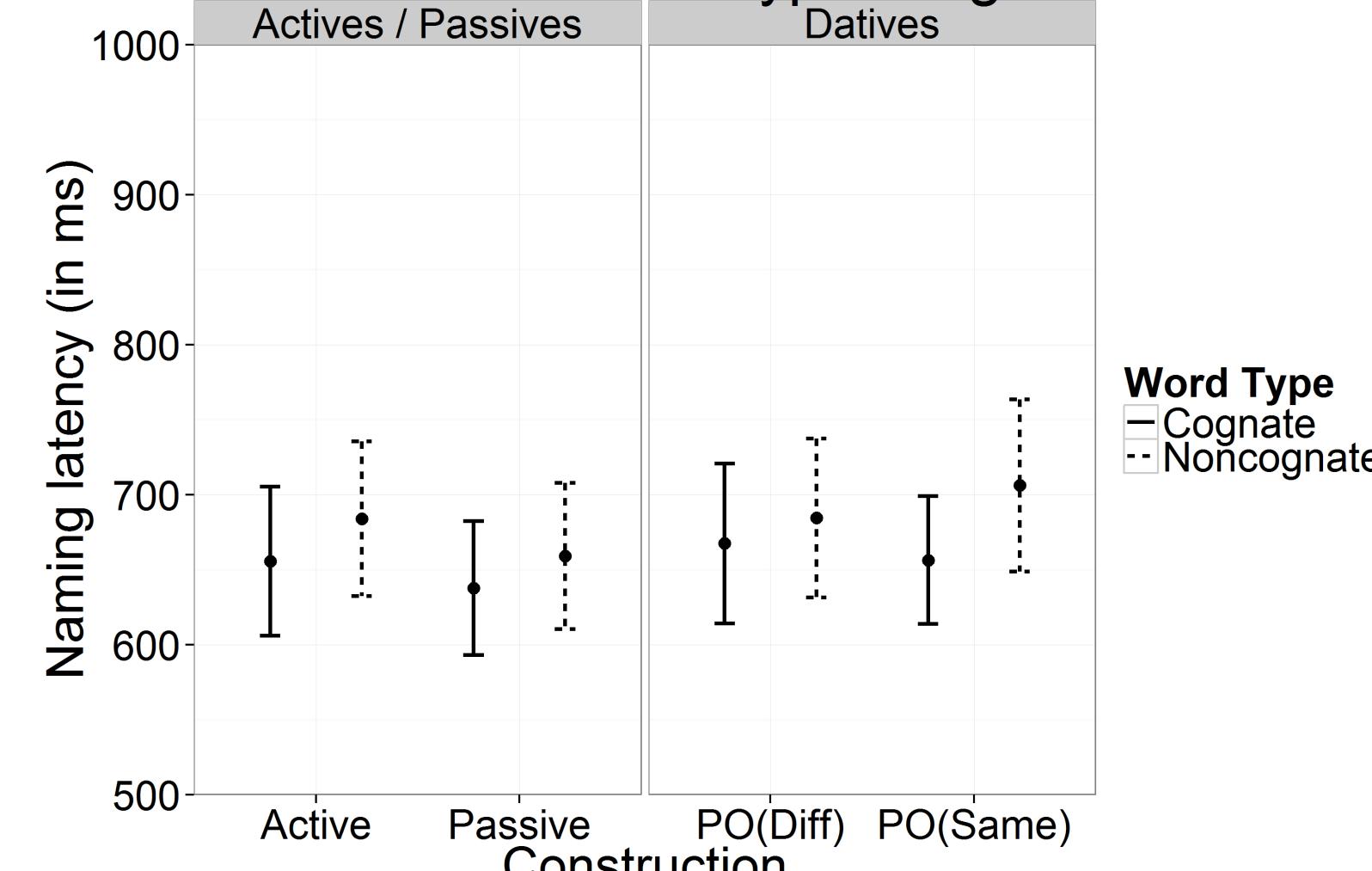


Cognate facilitation

Marginal interaction with construction,

Larger effect in PO-Same

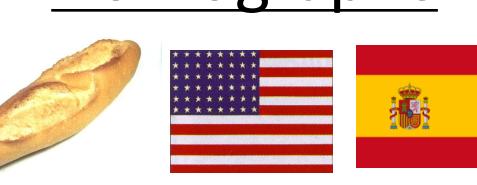
Construction X Word Type: Cognates



Cognate facilitation depends on:

- L1 fluency
- Executive control

Homographs



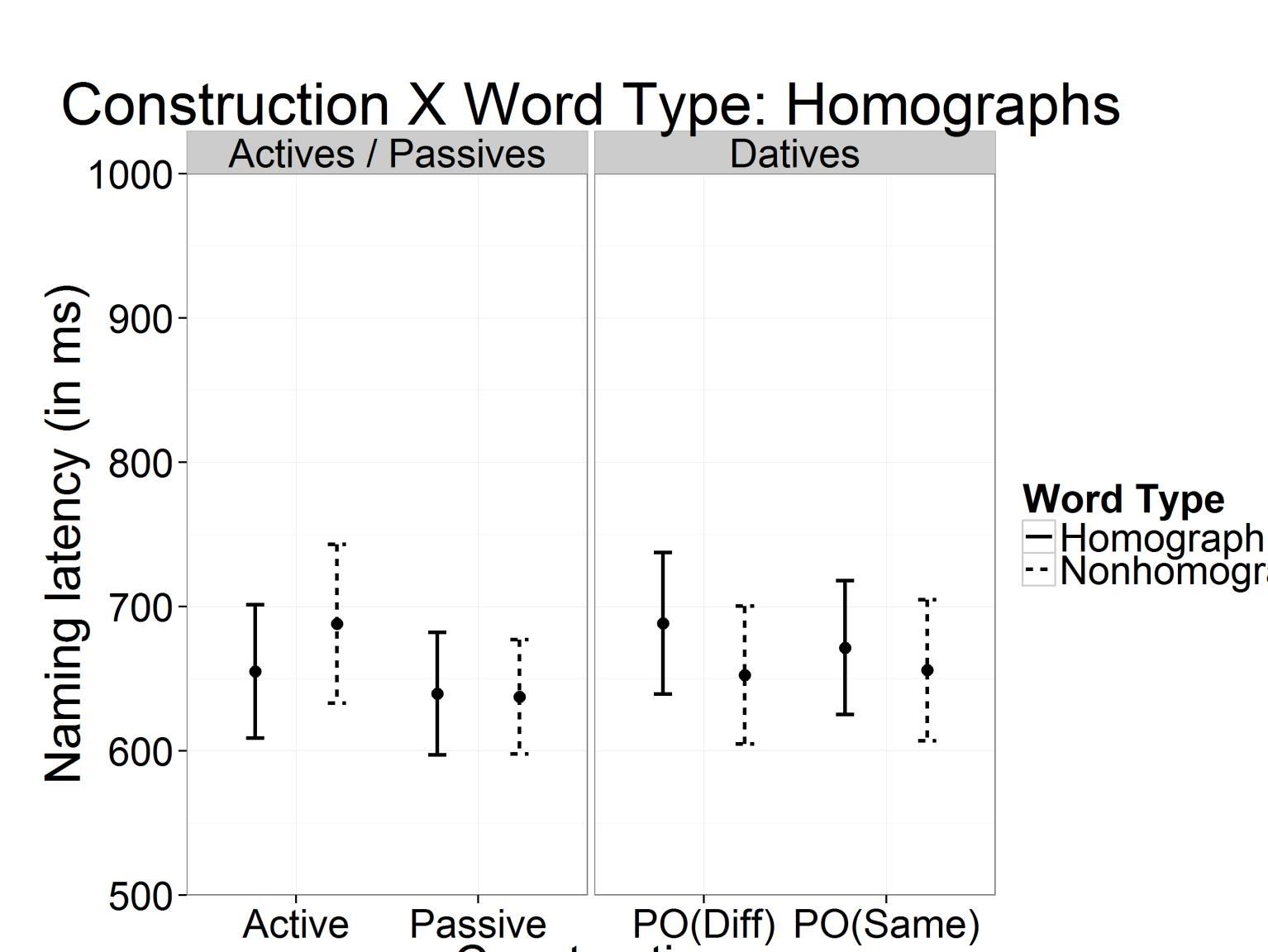
Homograph effect interacts with construction

- Facilitation in active & passive
- Inhibition in datives

Spanish fluency X Word type: Cognates

AXCPT X Word type: Cognates

Word Type: Cognate (solid line), Noncognate (dashed line)



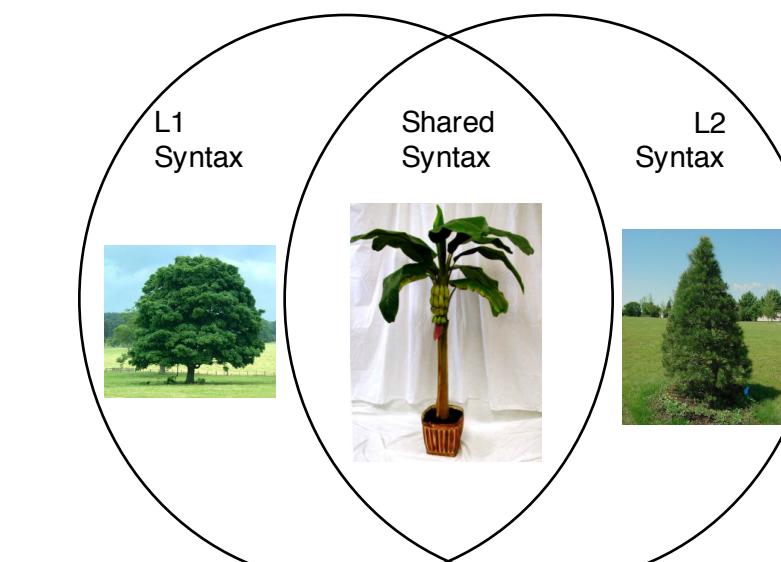
Conclusions

- Evidence for parallel activation: cognate facilitation & homographs facilitation / inhibition
 - Both language active despite presence of a sentence context
- Co-activation depends on target-language fluency (here, L1)**
 - Interaction: Cognate effect and picture naming composite
- Co-activation depends on executive control**
 - Interaction: cognate effect and AXCPT ratio
- Syntactic priming evidence that active/passive are shared datives are language-specific**
 - Significant priming for active/passive, but not for dative
- Language-specific syntax modulated the degree of co-activation**
 - For homographs: not a simple elimination of the effect
 - Inhibition more likely when both languages present and a response must be language specific (Dijkstra et al., 1998)
 - For cognates: only marginal
 - Insensitive to the context?

Word Recognition



Syntactic Context



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