What about the syntax?
Bilingual word recognition in sentence context.

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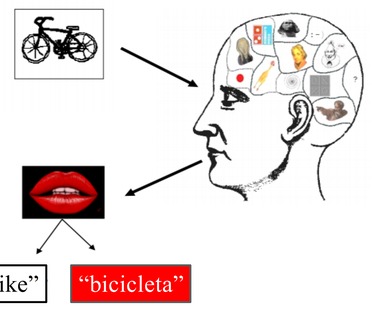
Introduction

- 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

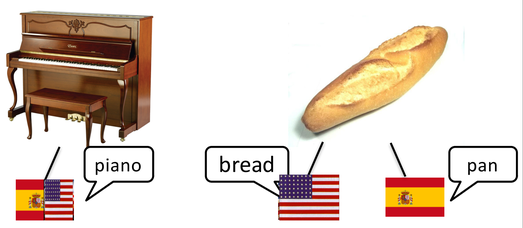
Exp. 1: Can language-specific syntax cue language selection?

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

Materials

Cognates / Homographs

Critical target words (index co-activation)



Sentence Structures

1. 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

2. 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

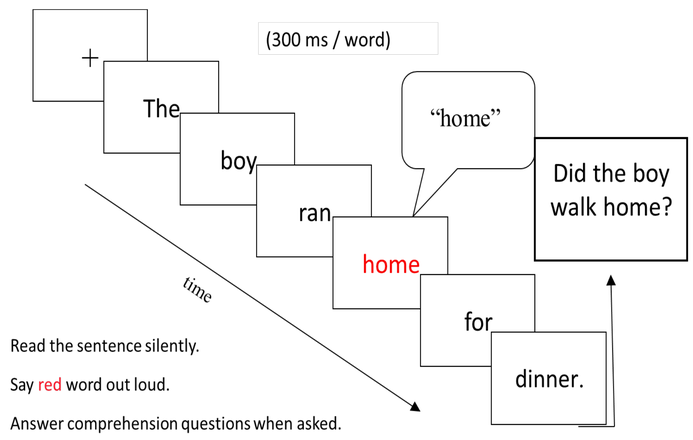
Predictions

- 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

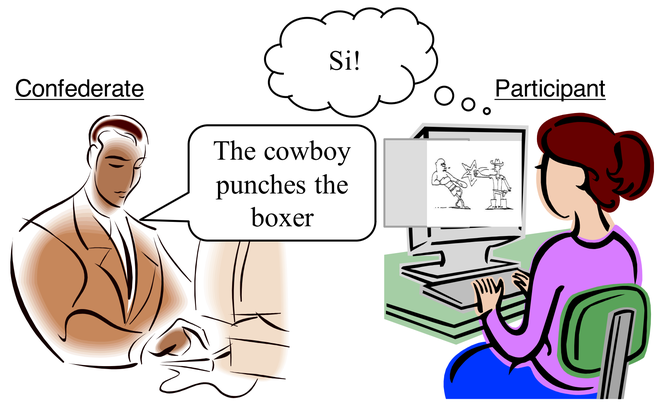
Experiment 1

Sentence Reading: Measuring co-activation



Experiment 2

Confederate Syntactic Priming: Production provides insight about syntactic representation



Results for Experiment 1

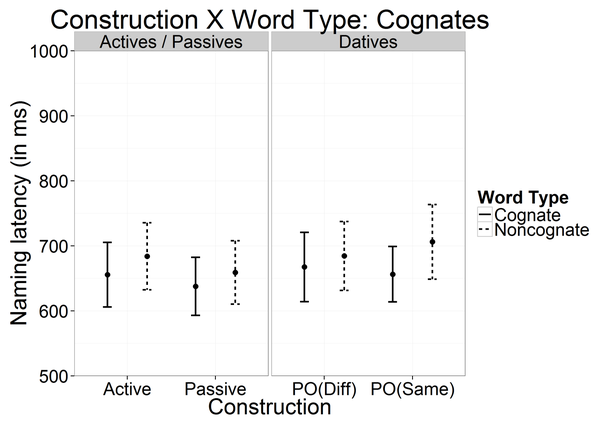
- **Reading sentences in Spanish (the native language)**
- Recruited 29 Spanish (native) – English (second language)

Cognates

Cognate facilitation

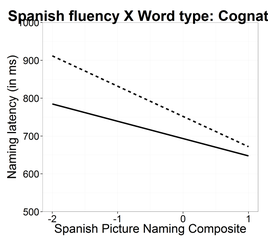
Marginal interaction with construction,

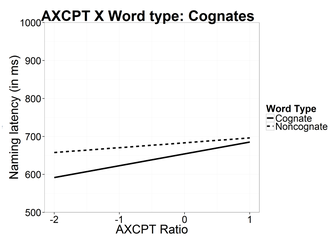
Larger effect in PO-Same



Cognate facilitation depends on:

- L1 fluency
- Executive control

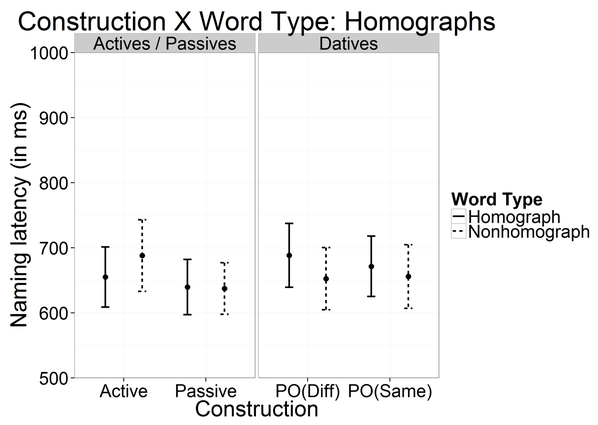




Homographs

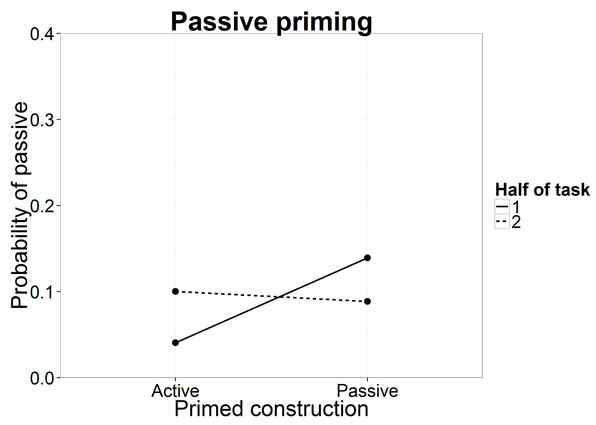
Homograph effect interacts with construction

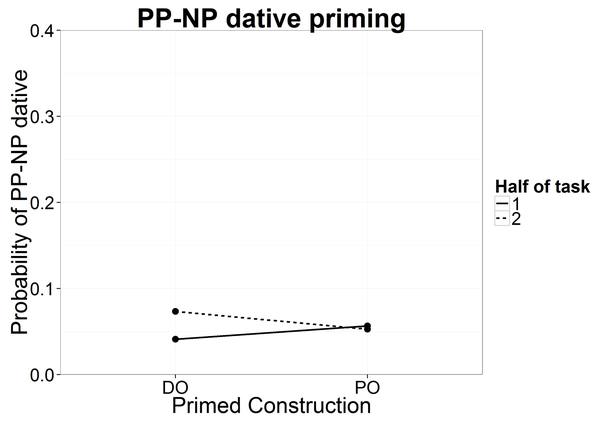
- Facilitation in active & passive
- Inhibition in datives



Results for Experiment 2

- Confederate picture description task
- Recruited 19 Spanish (native) – English (second language)

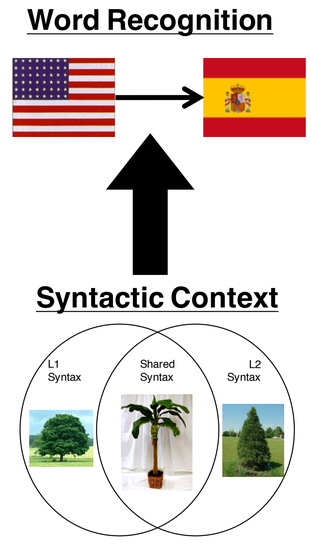




- Significant priming for in the active and passive condition
- No priming in the dative condition

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?



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