Incorporating Syntactic Information in a Second Language: Evidence from Lingering Garden Paths

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Introduction

- Parsing in L1 is incremental and anticipatory
  - using semantic [1], pragmatic [2], and syntactic information [3]
- Processing in L2 seems different [4], but what drives differences in L1 vs L2 parsing?
  - Language specific differences?
  - General differences in the nature of processing?

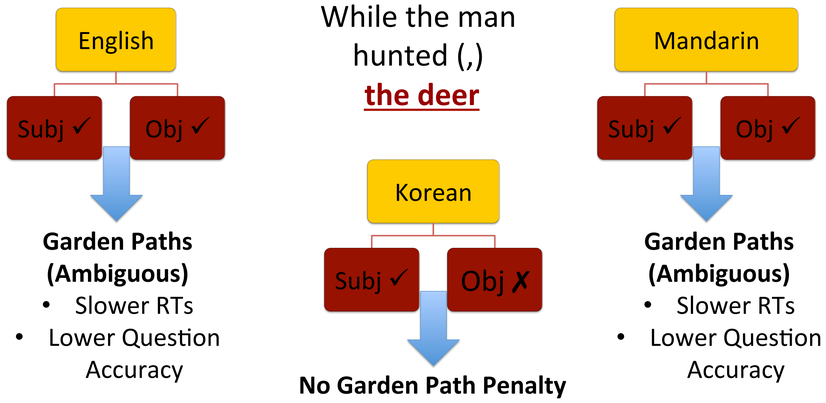
Research Question

Do L1 syntactic characteristics, like word order, affect online processing expectations in an L2?

Self-Paced Reading Study

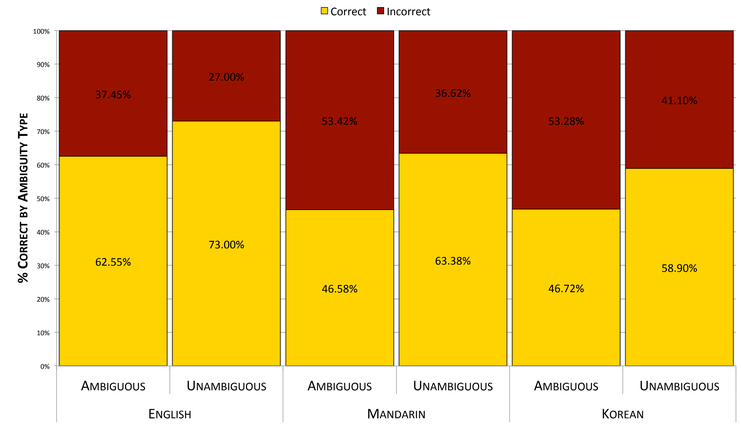
- 24 Targets; 48 Fillers
- Lingering Garden Path Sentences [5]?
  While the man hunted (,) the deer ran into the woods near the house.
- 2 Comprehension Question Types
  - **Main Clause:** Did the deer run through the woods?
  - **While-Clause:** Did the man hunt the deer?
- 2 Verb Types
  - **Optional Transitive:** Null, Inferred Object (e.g. hunt)
  - **Reflexive Absolute Transitive:** Null, referential Object (e.g. bathed)
- Participants
  - **Native English** (n=20) **Avg Cloze:** 22.25/25
  - **L1 Mandarin/L2 English** (n=24) **Avg Cloze:** 18.8/25
  - **L1 Korean/L2 English** (n=20) **Avg Cloze:** 18.5/25

Hypothesis & Predictions

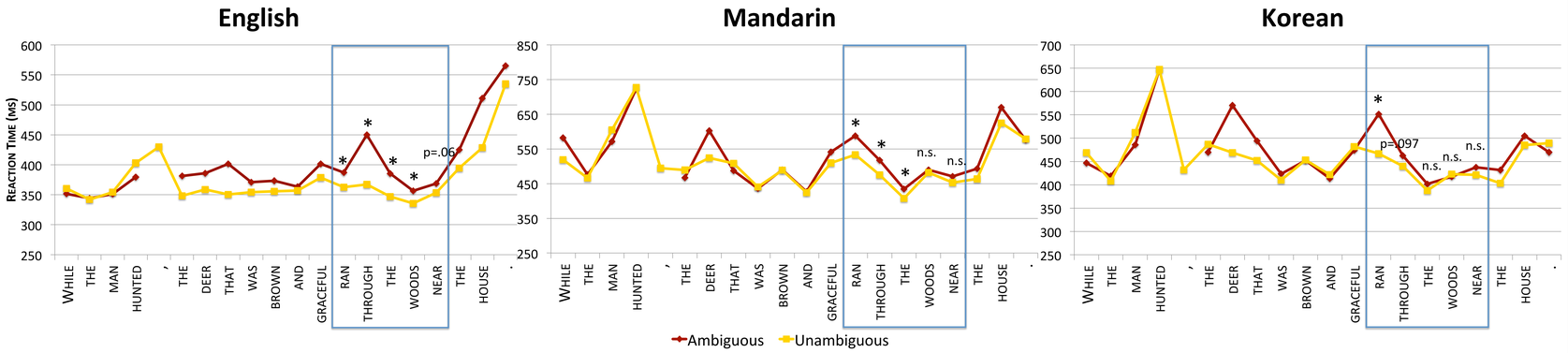


- Comparable RTs for Ambig & Unambig sentences
- Comparable Accuracy rates for Ambig & Unambig sentences

Question Accuracy Results



Reaction Time Results



- In ambiguous conditions, slow down at disambiguating verb for all languages
- Effect of Ambiguity lasts longer for native English speakers: both Mandarin and Korean speakers' RTs in Ambiguous sentences converge towards Unambiguous sentences faster
- Both Mandarin and Korean speakers "recovered" from misinterpreted garden paths faster than English speakers did

Conclusions

- Korean speakers were not using Korean SOV order to guide expectations. They built expectations based on English SVO order and had to reanalyze at the disambiguating verb.
- L2 processor's weaker commitment to the parse may facilitate faster restructuring [6]. L1 speakers build stronger expectations about (larger amounts of) upcoming structure

References: **[1]** Altmann, G.T.M., and Kamide, Y. (1999). Incremental interpretation at verbs: Restricting the domain of subsequent reference. *Cognition*, 30(3), 191-238. **[2]** Kaiser, E. & Trueswell, J.C. (2004). The role of discourse context in the processing of a flexible word-order language. *Cognition* 94 **[3]** Kamide, Y., Altmann, G.T.M., & Haywood, S.L. (2003). The time-course of prediction in incremental sentence processing: Evidence from anticipatory eye movements. *JML*, 49(1), 133-156. **[4]** Papadopoulou, D. (2005). Reading-time studies of second language ambiguity resolution. *SLR* 21 **[5]** Christianson, K. et al. (2001). Thematic roles assigned along the garden path linger. *CogPsy* 42 **[6]** Juffs, A. (1998). "Main Verb Versus Reduced Relative clause Ambiguity Resolution in L2 Sentence Processing". *Language Learning*, 28 (1), 107-147.