Extraction out of Mandarin and English if-adjunct clauses: the role of topicalization
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Introduction

Constraints on long-distance dependencies have been crucial for linguistic theories, with three main approaches:

- **Syntactic approach**: “Island” constraints are syntactic in nature and should generalize across languages and across constructions (e.g. Huang 1982, Chomsky 1986).
- **Processing approach**: Processing factors such as low frequency and high working memory load play a role (Kluender 1991, Holmester & Sag 2010).
- **Discourse-based approach**: Based on Goldberg (2006, 2013)’s “Backgrounded Constructions are Islands”, Abellé et al (2020) propose that the discourse function of the construction plays a role: the infinitivity to extract an element out of a backgrounded constituent is worse when the extracted element is focalized (as in wh-questions or if-clauses). If most subjects and most adjunct clauses are backgrounded, it is unfelicitous to extract out of them with a focalizing construction.

Previous experiments:

Sprouse et al. (2016) found a penalty for extraction out of if-clauses with English wh-questions (without context) but not with relative clauses.

Kush et al. (2018, 2019) and Bondevik et al. (2021) observed an if-adjunct penalty in Norwegian wh-questions but not in topicalizations.

Gibson et al. (2021) and Abellé et al. (2022) replicated the adjunct penalty in English wh-questions (without context) but not in wh-questions with context, nor in topicalizations, compared to English complement that-clauses.

Myers (2012) tested Mandarin topicalizations out of if-adjuncts and because-adjuncts, finding that Mandarin seems to lack adjunct island effects, and participants accepted this kind of sentence 69.4% of the time. Zken & Schwartz (2017) also found no adjunct penalty in Mandarin topicalizations.

Two experiments

Two acceptability judgment experiments on Ixes Farm. Participants were presented with sentence pairs & asked to rate the second sentence on a 1-7 Likert scale, and answer yes/no comprehension questions. Only participants with accuracy rates above 80% were kept.

**Exp.1: Topicalization from English if-adjunct clauses**
- 16 Experimental items, 24 filler items followed by comprehension questions
- 38 US English natives recruited by Proflies
- A 2x2 design: **Topicalization** (top vs. non-topic); **If-clause Position** (initial vs. final)

**Context**: Jill’s father is fond of literature.

- **a. Topic-if initial**:
  - This book, [if she read _], he would be elated.
- **b. Topic-if final**:
  - This book, he would be elated [if she read _].
- **c. NoTopic-if initial**:
  - If she read this book, he would be elated.
- **d. NoTopic-if final**:
  - He would be elated if she read this book.

**Exp.2: Topicalization from Mandarin if-adjunct clauses**
- 20 experimental items, 25 filler items followed by comprehension questions
- 50 Mandarin natives living in Mainland China recruited through social media
- A 2x2 design: **Topicalization** (top vs. non-topic); **If-clause Position** (initial vs. final)

**Context**: zhangshan de baba xihuan wenxue. zhangshan GEN father be.fond.of literature

- **a. Topic-if initial**:
  - zheben shu, [ruogu ta renzhen yuedu], ta hui feichang gaoxing. this-CL book, if she carefully read, he will very happy
- **b. Topic-if final**:
  - zheben shu, ta hui feichang gaoxing , [ruogu ta renzhen yuedu]. this-CL book, he will very happy, if she carefully read
- **c. NoTopic-if initial**:
  - ruogu ta renzhen yuedu zheben shu, ta hui feichang gaoxing. if she carefully read this-CL book, he will very happy
- **d. NoTopic-if final**:
  - ta hui feichang gaoxing ruogu ta renzhen yuedu zheben shu. he will very happy if she carefully read this-CL book

Predictions

- Syntactic approach: higher structural distance with initial if-clauses might lower their acceptability (Haegeman, 1994). Also, if all topic structures in Mandarin are base-generated (Li, 2009), penalties are only predicted for English.
- Processing approach: shorter linear distance between filler and gap might favor topicalization out of initial if-clauses. Also higher frequency of topicalization and initial adjunct-clauses in Mandarin (Li & Thompson, 1981, Pan & Paul, 2018) should favor these compared to English.
- Discourse approach: Goldberg’s BCI predicts any extraction to be difficult out of if-adjunct clauses, while Abellé et al. (2020) predict no penalty for topicalizations since the extracted element is not focalized. If initial English if-clauses are more backgrounded than final if-clauses, Goldberg also predicts topicalization from if-initial sentences to be more difficult.

Results

**Exp.1: English experiment**

- Probability of main effect position: p(β=0)<.001
- Probability of main effect topicalization: p(β=0)<.001
- Probability of interaction: p(β=0)<.001

**Exp.2: Mandarin experiment**

- Probability of main effect position: p(β=0)<.001
- Probability of main effect topicalization: p(β=0)<.99
- Probability of interaction: p(β=0)<.77

Bayesian analyses show:

**Exp.1: English**

- a high probability for a main effect of topicalization (lower acceptability in topicalizations)
- a high probability for a main effect of if-clause position (higher ratings in English if-final sentences)
- a high probability for an interaction: smaller difference between topicalization in if-initial sentence

**Exp.2: Mandarin**

- a high probability for a main effect of topicalization (lower acceptability in topicalizations)
- a high probability for a main effect of if-clause position (higher ratings in Mandarin if-initial sentences)
- a low probability for an interaction

Discussion

Interaction effect in English: we suggest a processing effect such that linear distance plays a role, meaning that extraction is easier from if-initial sentences.

Position effects: may also be explained by processing, in particular frequency. Initial if-adverbial clauses are more frequent in Mandarin than in English, hence more acceptable.

Topicalization effect in both languages: may also be explained by frequency: Mandarin speakers use topic structures more frequently than English ones. Our results are compatible with the hypothesis that Mandarin topicalizations are not extractions, unlike English one.

Discourse approaches: No increased penalty was found for topicalization out of initial if-clauses, which is compatible with Abellé et al. but not necessarily with Goldberg’s BCI.

**Exp.0: English if/that topicalization**

Abellé et al.(2022) compared topicalizations out of English if/that clauses, finding a penalty for topicalization and no interaction (no adjunct island effect), which supports the prediction of Abellé et al. 2020’s discourse approach.

Selected References