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► To cite this version:

Ruihua Mao, Edward Gibson, Barbara Hemforth, Anne Abeillé. Extraction out of Mandarin and English if-adjunct clauses: the role of topicalization. AMLaP2022, Sep 2022, York, United Kingdom. hal-03924665

HAL Id: hal-03924665

<https://cnrs.hal.science/hal-03924665>

Submitted on 5 Jan 2023

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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 (Klunder 1991, Hofmeister & Sag 2010)
- **Discourse-based approach:** Based on Goldberg (2006, 2013)’s “Backgrounded Constructions are Islands”, Abeillé et al (2020) propose that the discourse function of the construction plays a role: the infelicity to extract an element out of a backgrounded constituent is worse when the extracted element is focalized (as in wh-questions or it-clefts). 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-adjuncts 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 Abeillé 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.

Zenker & Schwartz (2017) also found no adjunct penalty in Mandarin topicalizations.

Two experiments

Two acceptability judgment Experiments on Ibex 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 Prolific

- A 2x2 design: **Topicalization** (topic vs. non-topic); **If-clause Position** (initial vs. final)

(1)

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** (topic vs. non-topic); **If-clause Position** (initial vs. final)

(2)

Context: zhangshan de baba xihuan wenxue.

zhangshan GEN father be.fond.of literature

a. **Topic-if initial:**

zheben shu, [ruguo 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, [ruguo ta renzhen yuedu].

this-CL book, he will very happy, if she carefully read

c. **NoTopic-if initial:**

ruguo ta renzhen yuedu zhe-ben shu, ta hui feichang gaoxing.

if she carefully read this-CL book, he will very happy

d. **NoTopic-if final:**

ta hui feichang gaoxing ruguo ta renzhen yuedu zhe-ben shu.

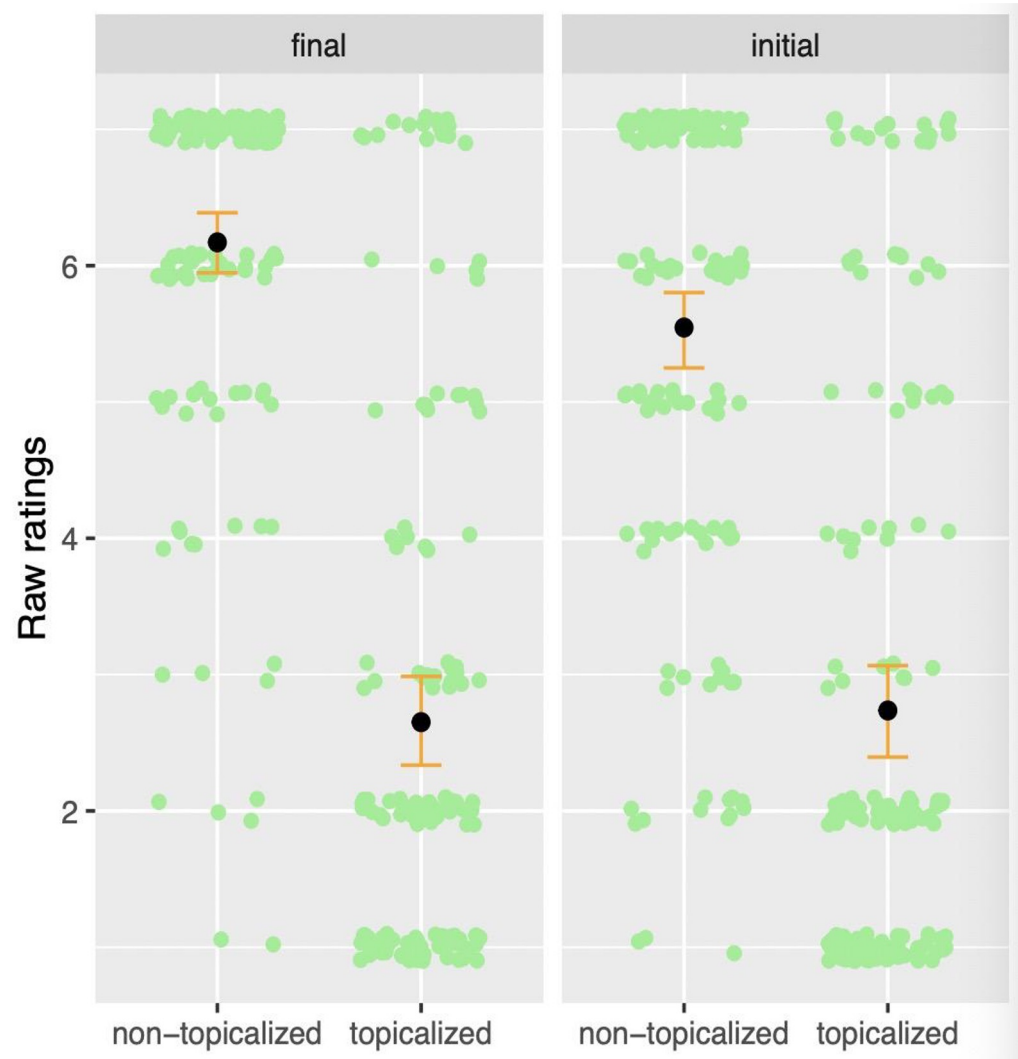
he will very happy if she carefully read this-CL book

Predictions

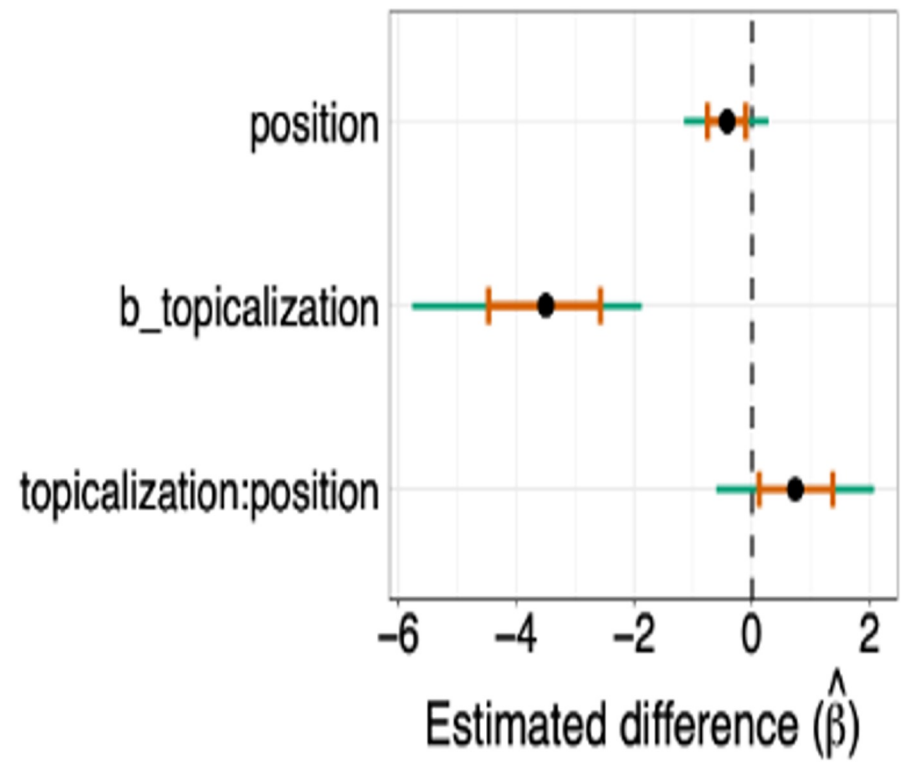
- Syntactic approach: higher structural distance with initial if-clauses might lower their acceptability (Haegeman, 1994). Also, if all topic structures in Mandarin are base-generated (Li, 2009), penalties are only predicted for English.
- Processing approach: shorter linear distance between filler and 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 Abeillé 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

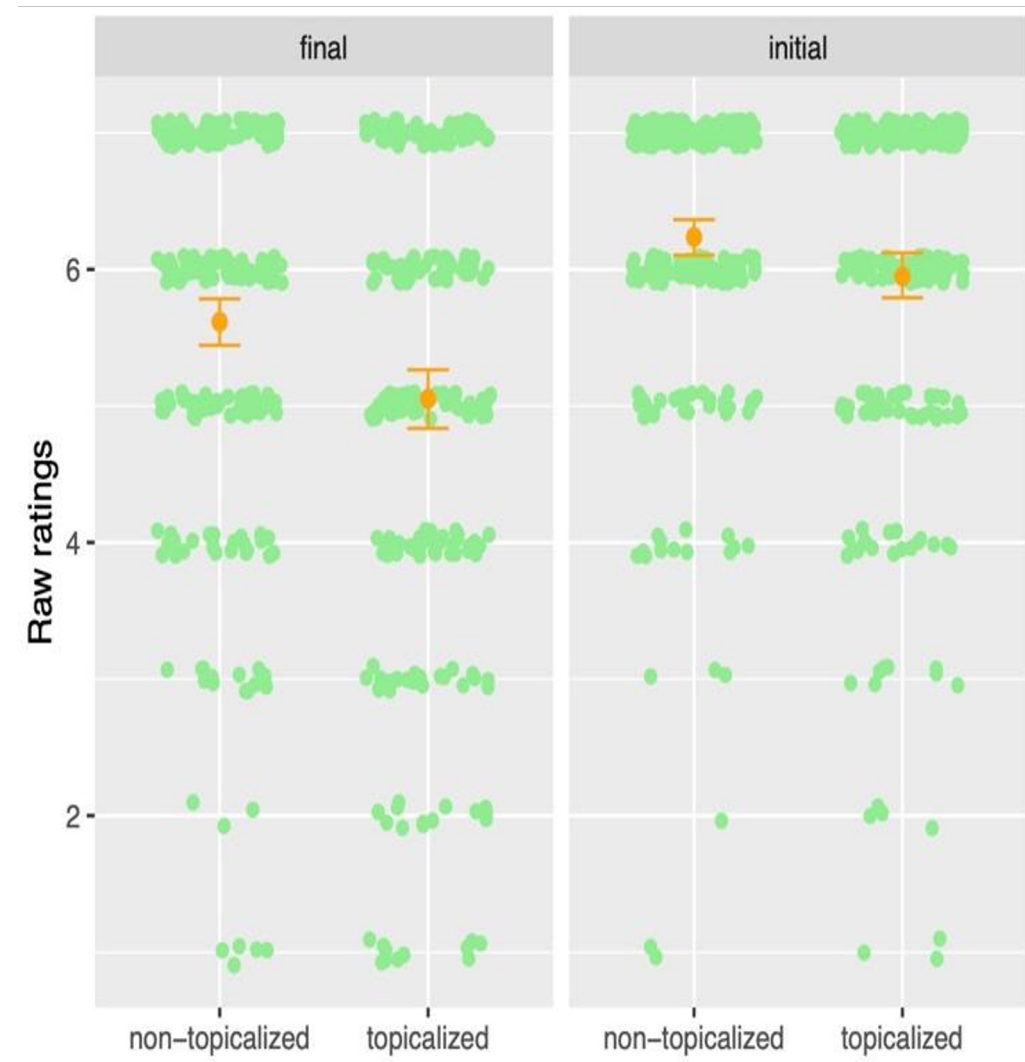
Exp.1: English experiment



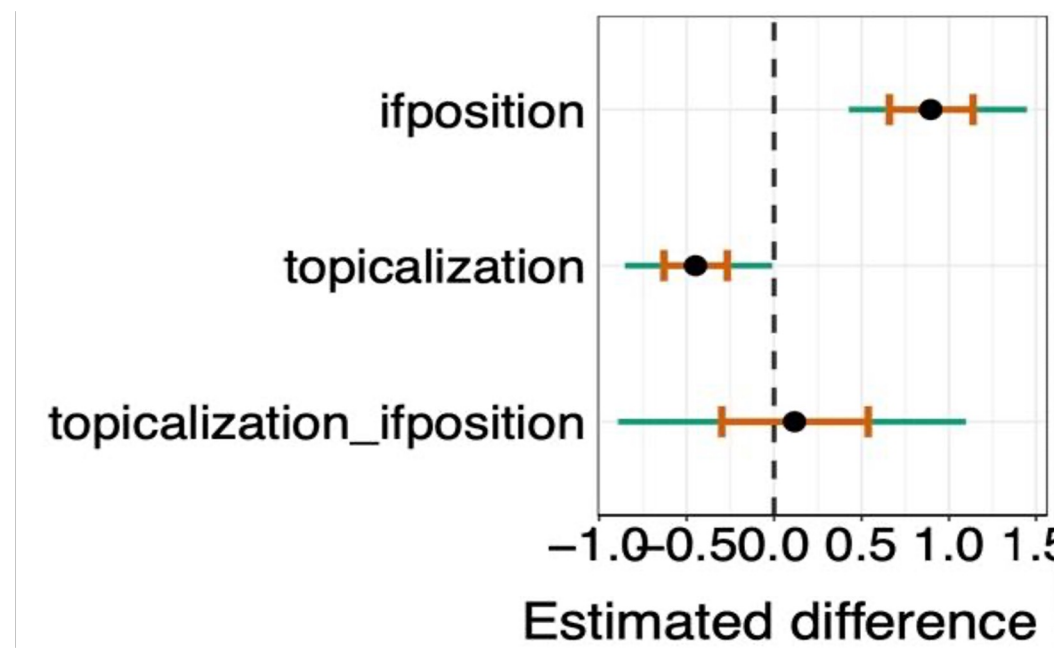
Probability of main effect position: $p(\beta < 0) = .994$
Probability of main effect topicalization: $p(\beta < 0) = 1.00$
Probability of interaction: $p(\beta > 0) = .98$



Exp.2: Mandarin experiment



Probability of main effect position: $p(\beta < 0) = 1.00$
Probability of main effect topicalization: $p(\beta < 0) = .99$
Probability of interaction: $p(\beta > 0) = .77$



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 \pm 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

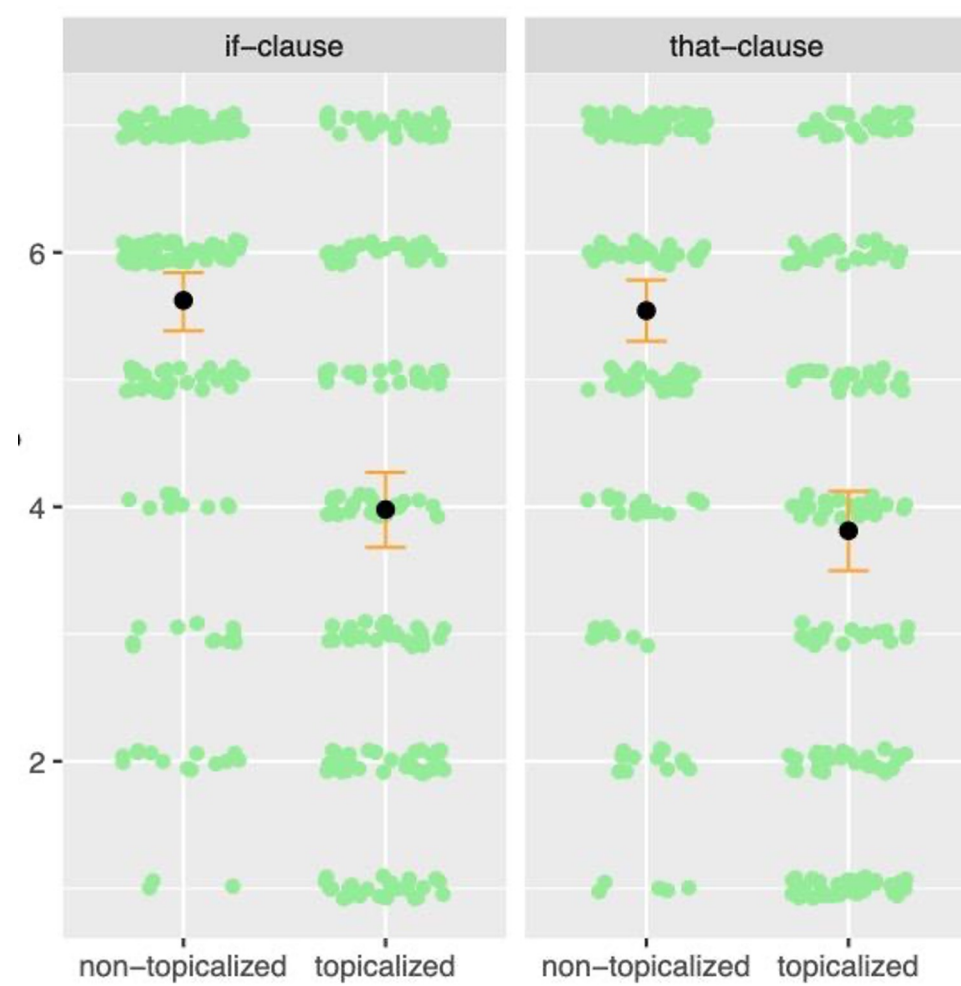
Interaction effect in English: we suggest a processing effect such that linear distance plays a role, meaning that extraction is easier from if-initial sentences.

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 also 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 Abeillé et al. but not necessarily with Goldberg’s BCI.

Exp.0: English if/that topicalization



Abeillé 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 Abeille et al. 2020’s discourse approach.

Selected References

[1]Abeillé et al. (2022) Acceptability of extraction out of English adjunct clauses: the role of topicalization; [2]Abeillé et al.(2020) Extraction from subjects: Differences in acceptability depend on the discourse function of the construction; [3]Goldberg (2013) Backgrounded constituents cannot be “extracted”; [4]Myers (2012). Testing adjunct and conjunct island constraints in Chinese; [5]Pan & Paul(2018). The syntax of complex sentences in Mandarin Chinese: a comprehensive overview with analyses;[6]Wei & Li (2018). Adverbial Clauses In Mandarin Chinese; [7]Zenker & Schwartz (2017). Topicalization from adjuncts in English vs. Chinese vs. Chinese-English interlanguage.