

Topicalization out of English and Mandarin if-clauses and that-clauses

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Abstract

There are three main approaches to the (un)acceptability of long-distance dependencies (LDD): syntactic theories, processing theories, and discourse theories. Syntactic theories argue constraints on LDD are universal and purely syntactic, predicting these constraints should hold across languages and constructions. This study probes into the acceptability of topicalization from English and Mandarin if-clauses and that-clauses through contextualized acceptability judgment experiment, finding no adjunct island effect in either language, which supports the discourse approach, arguing that the discourse status of the extracted element in the construction is at play (focus status of the extracted element depends on the construction). If there is a focus status conflict between the element and construction, the penalty will appear.

Keywords: syntactic islands, topicalization, experimental syntax, information structure.

Introduction

Constraints on LDD in natural languages are a prominent issue in linguistic theory since 1960s (Ross 1967), and there are three main approaches to their (un)acceptability. The syntactic approach argues they are syntactic and generalize across languages and across constructions (Huang, 1982). The processing approach claims processing factors such as frequency and high working memory load are at play given that sentences with islands may exhibit gradient acceptability and individual variation (Hofmeister & Sag 2010, Hofmeister & Sag 2010, Liu et al. 2022). The discourse approach assumes that semantic and discourse factors can explain the unacceptability of extraction from so-called islands in terms of their felicity in context. Based on the “Backgrounded Constructions are Island” principle proposed by Goldberg (2006, 2013), Abeillé et al (2020) proposed that the discourse function of the construction also plays a role: extracting an element out of a backgrounded constituent is worse when the extracted element is focalized. Extractions do not necessarily make extracted elements become focus. Specifically, the extraction elements are focalized in *wh*-questions and *it*-clefts, but not in topicalizations. This paper will focus on the so-called adjunct island constraint, comparing the acceptability of topicalization from *if*-adjuncts and *that*-complements in English and Mandarin by corresponding native speakers.

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 neither in wh-questions with context, nor in relative clauses. Myers (2012) tested Mandarin topicalizations out of if-adjuncts and because-adjuncts, finding a lack of adjunct island effect in Mandarin. In corpus studies on Danish and English, Müller & Eggers (2022) found extractions from adjunct clauses and relative clauses happen at a non-trivial rate in relativization and topicalization structure (Danish), but not in wh-questions.

Method

We conducted contextualized acceptability judgment experiments on IBEX, testing topicalization from English and Mandarin if-clauses and that-clauses. We had a 2x2 design crossing Topicalization (extraction vs. non-extraction) and Clause-type (if-clause vs. that-clause), generating four conditions in both languages, as illustrated in (1) and (2). 16 experimental items and 80 filler items compose the English experiment. Mandarin experiment comprises 20 experimental items and 37 fillers. Participants were presented with sentence pairs and asked to rate the second sentence on a 1-7 Likert scale, followed by corresponding yes/no comprehension questions. Only data from participants with an accuracy rate above 80% were analyzed, and the effective data comprise judgment from 46 US natives (recruited through prolific), and 60 Mandarin natives living in Mainland China (recruited through social media).

(1) English example set

Context: Paul cares about my music training.

- a) **Topic & if:** This concert, he worried [if I missed_].
- b) **Topic & that:** This concert, he worried [that I missed_].
- c) **Notopic & if:** He worried if I missed this concert.
- d) **Notopic & that:** He worried that I missed this concert.

(2) Mandarin example set

Context: Zhangshan de baba xiai wenxue.
Zhangshan GEN father be.fond.of literature

- a) **Topic & that:** zheben shu, ta feichang gaoxing ta renzhen yuedu le.
this-CL book, he very happy she carefully read-ASP
'This book, he was elated that she read carefully.'
- b) **Topic & if:** zheben shu, ta hui feichang gaoxing, ruguo ta renzhen yuedu.
this-CL book, he will very happy, if she carefully read
'This book, he will be elated if she reads carefully.'
- c) **NoTopic & that:** ta feichang gaoxing ta renzhen yuedu le zheben shu.
he very happy she carefully read-ASP this-CL book
'he was elated that she read this book carefully.'
- d) **NoTopic & if:** ta hui feichang gaoxing ruguo ta renzhen yuedu zhe-ben shu.
he will very happy if she carefully read this-CL book
'He will be elated if she reads this book carefully.'

Predictions

According to the traditional syntactic approach, topicalization from if-clauses should be rated worse than extraction from that-clauses because of the “adjunct island” constraint. However, if topicalizations are not extractions in Chinese (there is a null pronoun) (Xu & Langendoen, 1985), the adjunct penalty may only arise in English. Regarding processing approaches, distance-based processing theories predict no differences between topicalization from if-clauses and that-clauses, and the higher frequency of topic structures in Mandarin (Pan & Paul 2018) should favor these compared with English. Since topicalization is not a focalizing construction, the discourse approach predicts no differences between the two clause types in both languages.

Results and discussion

We computed Bayesian models in R. The results of English (Figure 1a, 1b) and Mandarin (Figure 2a, 2b) show a high probability for a main effect of topicalization (higher acceptability in non-topicalized sentences) and no effect of clause type. However, there is a relatively higher probability for an interaction in the Mandarin experiment where the difference between extraction and non-extraction is bigger for if-clauses.

The lack of distinction between clause types challenges the traditional syntactic approach because there was no island effect in either language. Mandarin participants rated the topicalization conditions much higher than the corresponding English ones, which may be explained by easier processing due to frequency since Chinese is a topic-prominent language (Li & Thompson, 1981), using topic structures more frequently. Our results also refute the putative cross-linguistic difference between English (island sensitive) and Mandarin (island insensitive) (Zenker & Schwartz, 2017) at least for the constructions investigated here.

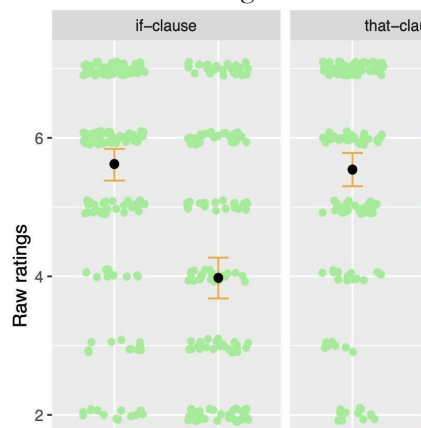


Figure 1a. English.

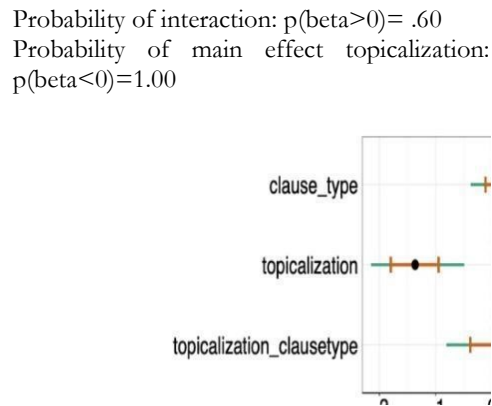


Figure 1b. Analysis.

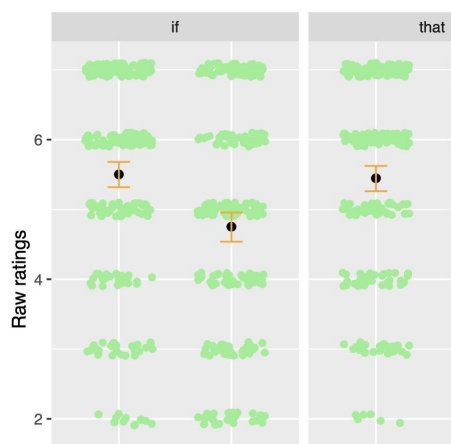


Figure 2a. Mandarin.

Probability of main effect clause type:
 $p(\beta > 0) = .67$
 Probability of main effect topicalization:
 $p(\beta < 0) = 1.00$
 Probability of interaction: $p(\beta > 0) = .88$

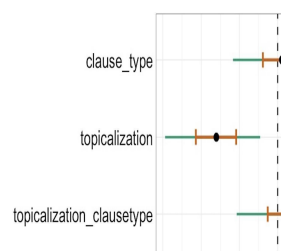


Figure 2b. analysis.

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