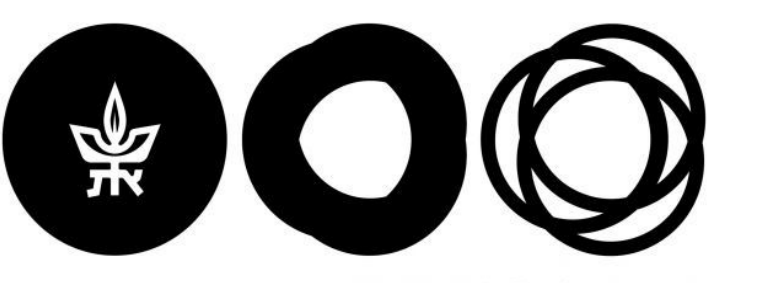


# Subject islands are not caused by information structure clashes: cross-constructional evidence

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## Subject Islands

- Syntactic subjects are **islands**: they cannot contain a gap in a filler-gap dependency [1]

(1) \*Which artist did [the book about \_\_] sell out?



- The islandhood of subjects has been argued to derive from **syntactic constraints** [1-3] and **information structural constraints** [4-8]

## FOCUS-BACKGROUND CONSTRAINT (FBC):

- A **focused element** should not be part of a **backgrounded constituent** [8]
- Filler-gap dependencies into subjects can create an **information structure clash**, as subjects are typically given or backgrounded in discourse while fillers are often focused or foregrounded, as in *wh*-extraction

## Testing the Focus-Background Constraint

- We test the FBC across three constructions, which differ in whether subject sub-extraction results in an information structure clash

**Wh-Extraction (WHQ)**: filler is focused [9]

[Which drink]<sub>i</sub> did the barista enjoy making \_\_<sub>i</sub>?

**Relativization (RC)**: filler is not focus/background [10]

I hated [the drink]<sub>i</sub> that the barista enjoyed making \_\_<sub>i</sub>

**Topicalization (TOP)**: filler is backgrounded [9]

[That drink]<sub>i</sub>, the barista enjoyed making \_\_<sub>i</sub>

## FBC Predictions for Subject Sub-extraction

**WHQ**: Clash ./. Island 🌴

**RC**: No Clash ./. No Island 🚫

**TOP**: No Clash ./. No Island 🚫

## Measuring Island Effects in 3 Constructions

- We implement a factorial design for investigating the acceptability of islands [11-15] across each construction

Gap Position (Object, Subject) ×

DP Complexity (Simple, Complex) ×

Extraction Type

(No Extraction, Full Extraction, Sub-extraction)

### No extraction

Simple Mary realized the news had completely shocked the member.

Complex O Mary realized the news had completely shocked the member of the council.

Complex S Mary realized the news about the city had completely shocked the member.

### Full Extraction

Simple O That member, Mary realized the news had completely shocked \_\_.

Complex O That member of the council, Mary realized the news had completely shocked \_\_.

Simple S That news, Mary realized \_\_ had completely shocked the member.

Complex S That news about the city, Mary realized \_\_ had completely shocked the member.

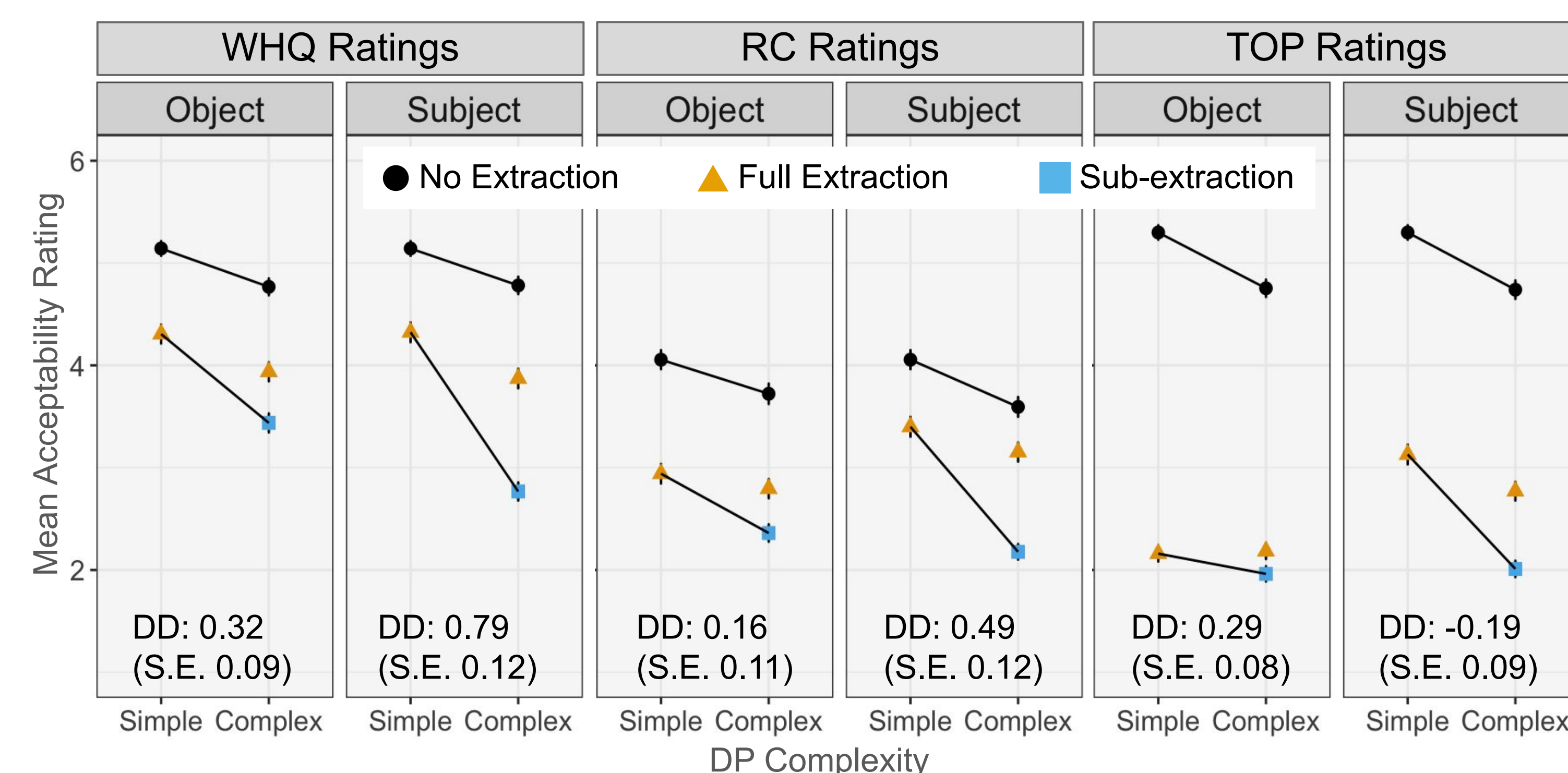
### Sub-extraction

Complex O That council, Mary realized the news had completely shocked the member of \_\_.

Complex S That city, Mary realized the news about \_\_ had completely shocked the member.

Table 1: Sample Topicalization Itemset

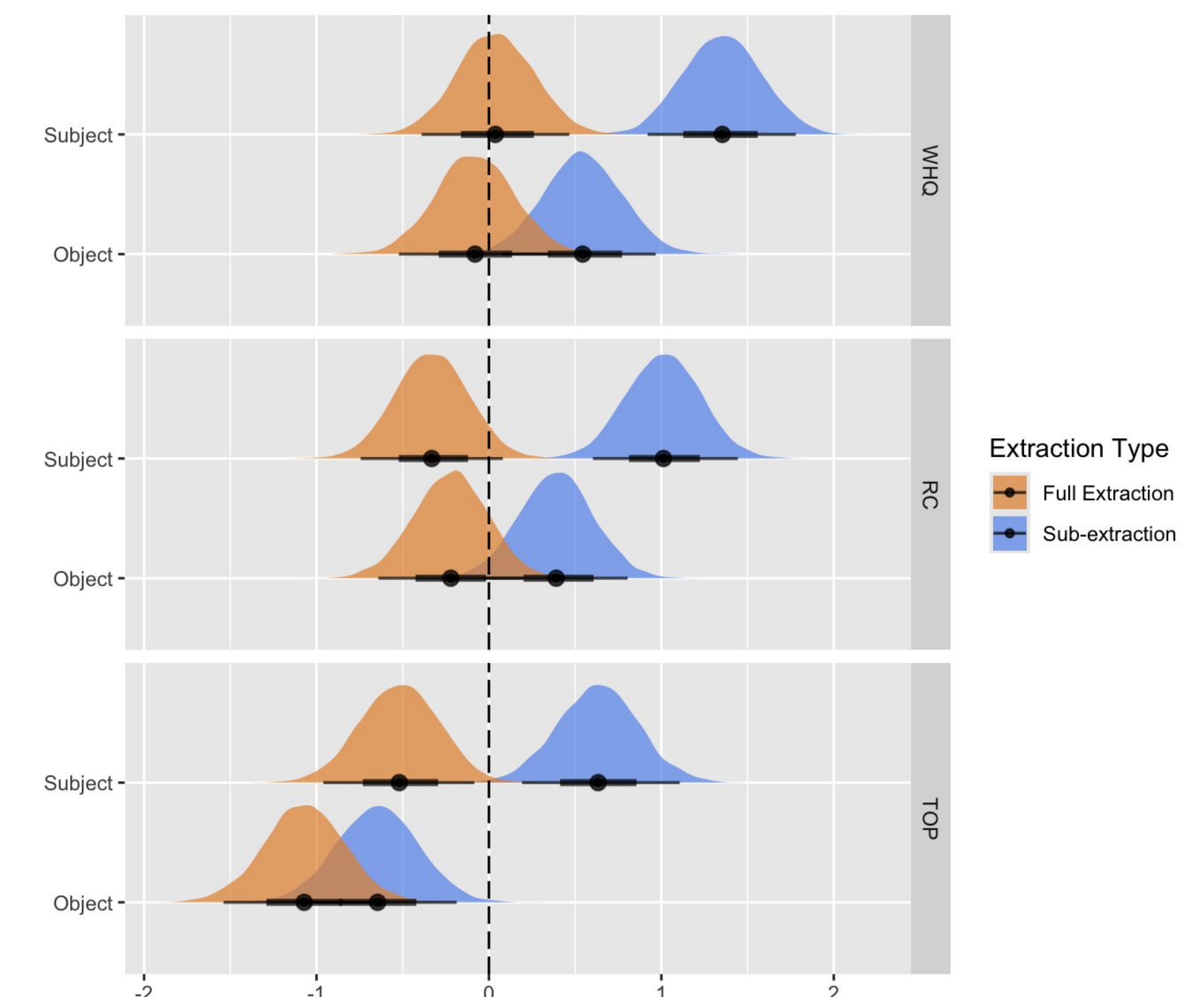
- In three experiments (WHQ, RC, TOP), 72 participants rated the acceptability of 36 items and 72 fillers on a 6pt scale



- Ratings analyzed using ordinal m/e regression in *brms* [16]
- Across constructions, we found a larger sub-extraction penalty for subjects vs objects**
  - WHQ Pos\*Comp\*Ext:  $\beta = -0.94$ , 95%CrI = [-1.54, -0.32],  $\Pr(\beta < 0) = 0.99$
  - RC Pos\*Comp\*Ext:  $\beta = -0.58$ , 95%CrI = [-1.17, 0],  $\Pr(\beta < 0) = 0.98$
  - TOP Pos\*Comp\*Ext:  $\beta = -1.24$ , 95%CrI = [-1.90, -0.59],  $\Pr(\beta < 0) = 1.00$

## Comparing Constructions

- We compared the costs of full extraction & sub-extraction in each construction
- Consistently greater difference in extraction costs for subjects vs objects across constructions**
- Within Subjects, we observe stable differences between the costs of sub- and full extraction in each construction
  - WHQ Diff<sub>SubExt - FullExt</sub> = 1.32 (95% HPDI: 1.02, 1.61)
  - RC Diff<sub>SubExt - FullExt</sub> = 1.34 (95% HPDI: 1.04, 1.64)
  - TOP Diff<sub>SubExt - FullExt</sub> = 1.15 (95% HPDI: 0.85, 1.45)



Sampled posterior distributions (with 95% HPDI) of standardized extraction costs by position, faceted by construction

## Conclusions

- We found evidence of subject island effects with WHQ, RC, and TOP, which differ in their information structure. This result is inconsistent with the FBC
- Subject islandhood cannot solely be attributed to construction-specific discourse function

**Acknowledgments:** This work was supported by NSF BCS #2019804 to UC Santa Cruz. Thank you to our research assistants, Lisa Pham, Alison Sun, and Matthew Vasser. Special thanks to Jake Vincent, audiences at AMLaP 30, Linguistics at Santa Cruz 2025, and reviewers for GLOW 47 and HSP 38.

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