

# Wh-island effects are stronger for subject relatives than object relatives in L1/L2 English



BUCLD 50

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## Observation

### In relative clauses (RCs) of L1-English adults:

Island effects stronger in subject RCs (**SRCs**) than in object RCs (**ORCs**)  
(Han et al., 2012; Keffala & Goodall, 2011; Morgan & Wagers, 2018)

## Morgan & Wagers (2018)

### Written Elicited Production Task

More resumptive RCs in SRC islands like (1b) than in ORC islands like (1a)

- (1) *Whether-island* conditions with **gap** vs. **pronoun**
- There's a prince that the ogre doesn't care if the troll slayed {**gap**/\***him**}. (ORC island)
  - There's a prince that the ogre doesn't care if {**gap**/\***he**} slayed the troll. (SRC island)

- Higher incidence of resumption in SRC islands suggests they are **stronger islands**
- Why? L1-English speakers resort to resumption where gapped RCs are difficult to produce or inadmissible (Ferreira & Swets, 2005)

### Acceptability Judgment Task

Gapped RCs received lower ratings in SRC islands than in ORC islands

- More evidence that SRC islands are stronger

## Research Question

Does the ORC-SRC asymmetry in the strength of *wh*-islands hold for adult L2ers of English?

## Participants

### Groups

- Adult English native speaker controls (**ENSSs**)
- Adult L1-Korean L2ers of English (**KLEs**)
- Adult L1-Mandarin L2ers of English (**MLEs**)

### ORC Study

Group	<i>n</i>	Age at testing	C-test score	AOA
ENS	90	29.98 (18–71)	42.74 (26–49)	—
KLE	69	26.29 (18–41)	29.29 (7–45)	9.35 (8–15)
MLE	76	28.14 (18–45)	28.85 (7–49)	9.71 (8–14)

### SRC Study

Group	<i>n</i>	Age at testing	C-test score	AOA
ENS	61	26.43 (18–58)	42.85 (22–50)	—
KLE	66	25.38 (19–36)	32.05 (11–46)	9.23 (8–13)
MLE	73	29.51 (18–46)	28.80 (11–48)	10.29 (8–14)

Note. Values are means and ranges prior to exclusions; the C-test (max score = 50; Zenker, 2024) assessed English proficiency

**References:** Chomsky, N. 1981. *Lectures on government and binding*. Foris. Ferreira, F. & B. Swets. 2005. The production and comprehension of resumptive pronouns in relative clause “island” contexts. In A. Cutler (Ed.), *Twenty-first century psycholinguistics: Four cornerstones* (pp. 263–78). Lawrence Erlbaum. Han, C.-h., N. Elouazizi, C. Galeano, E. Görgülü, N. Hedberg, J. Hinnell, M. Jeffrey, K.-m. Kim & S. Kirby. 2012. Processing strategies and resumptive pronouns in English. In N. Arnett & R. Bennett (Eds.), *Proceedings of the 30th West Coast Conference on Formal Linguistics* (pp. 153–61). Cascadia Press. Keffala, B. & G. Goodall. 2011. *Do resumptive pronouns ever rescue illicit gaps in English?* (Poster). CUNY 2011 Conference on Human Sentence Processing, Stanford University. Marcus, M. P. 1978. *A theory of syntactic recognition for natural language*. Doctoral dissertation, MIT. Morgan, A.M. & M.W. Wagers. 2018. English resumptive pronouns are more common where gaps are less acceptable. *Linguistic Inquiry*, 49, 861–76. O'Grady, W. 2005. *Syntactic carpentry: An emergentist approach to syntax*. Lawrence Erlbaum. Zenker, F. 2024. *The processing and acceptability of gapped vs. resumptive relative clauses in first and second language English*. Doctoral dissertation, University of Hawai'i at Mānoa.

## Elicited Production Tasks (EPTs)

### Design of the ORC & SRC EPTs

- 3 conditions eliciting short-distance, long-distance, & *wh*-island RCs
- 15 critical items (3 conditions × 5 tokens); 15 fillers
- Here, **only *wh*-island condition of interest**
- Oral responses transcribed & coded; non-RC responses excluded

### Wh-island condition in ORC & SRC EPTs

Study	Target response with <b>gap</b> vs. <b>pronoun</b>
ORC	the man that Mary wonders which officers arrested { <b>gap</b> /* <b>him</b> } last week
SRC	the man that Mary wonders which book { <b>gap</b> /* <b>he</b> } borrowed last month

### Example trial from SRC *wh*-island condition

Mary wonders which book this man borrowed last month.  
Lisa wonders which book this man borrowed last month.

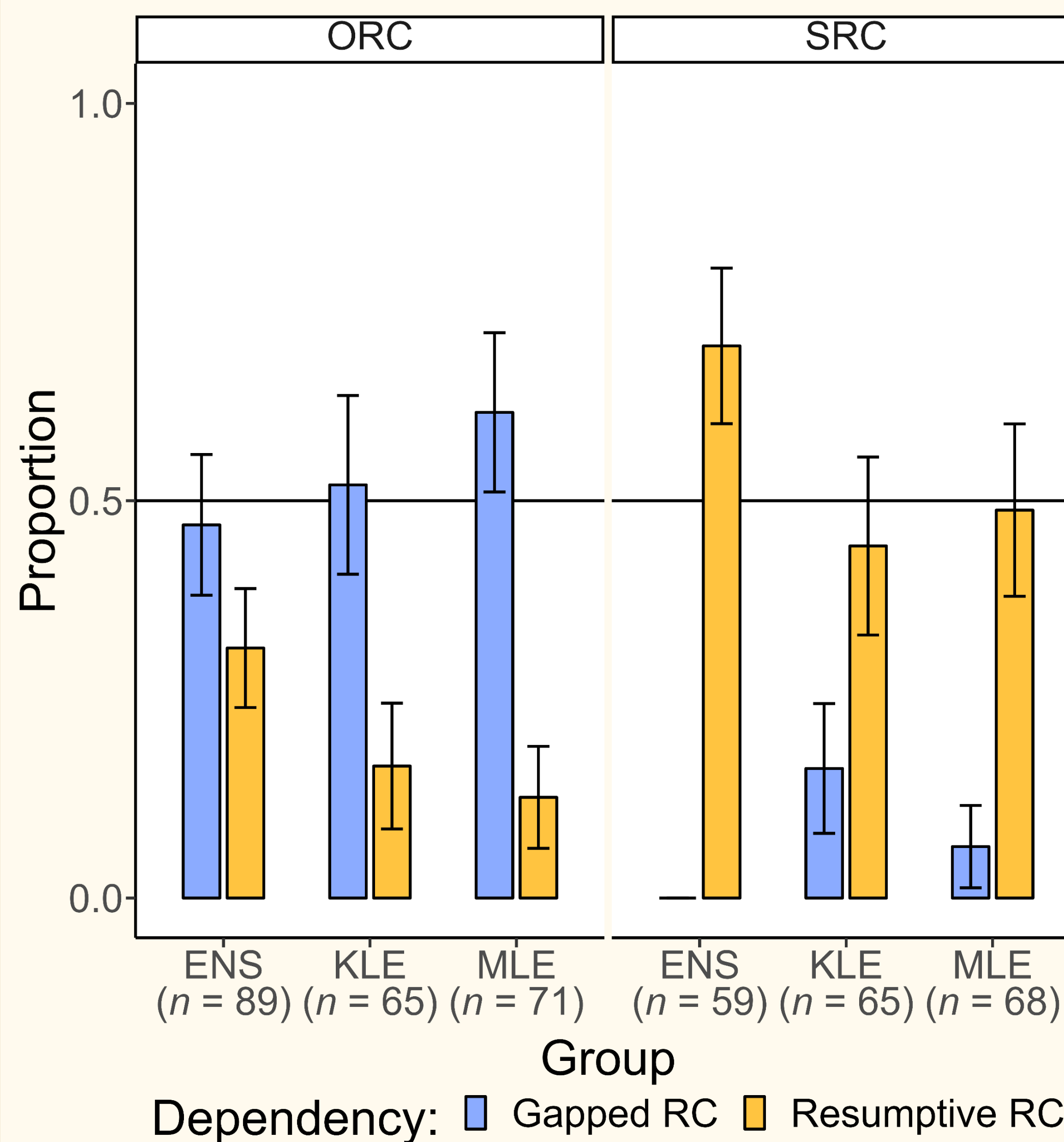
↓ First panel above, then panel below ↓

Which man is this?  
Lisa wonders which book this man borrowed last month.

Response: “the man that...”

### Results

Figure 1. Mean response rates for *wh*-island conditions in the EPTs



Note. Error bars are 95% CIs; non-RC responses not shown  
ORC model formula: Resumption ~ Environment \* Group + (1 | Participant) + (1 + Environment + Group | Item)  
SRC model formula: Resumption ~ Environment \* Group + (1 + Environment | Participant) + (1 | Item)

- Gaps rarer in SRC islands than in ORC islands
- Only in SRC islands: Resumptive RCs significantly more common than gapped RCs
- Higher L2 proficiency → more resumption

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## Acceptability Judgment Tasks (AJTs)

### Design of the ORC & SRC AJTs

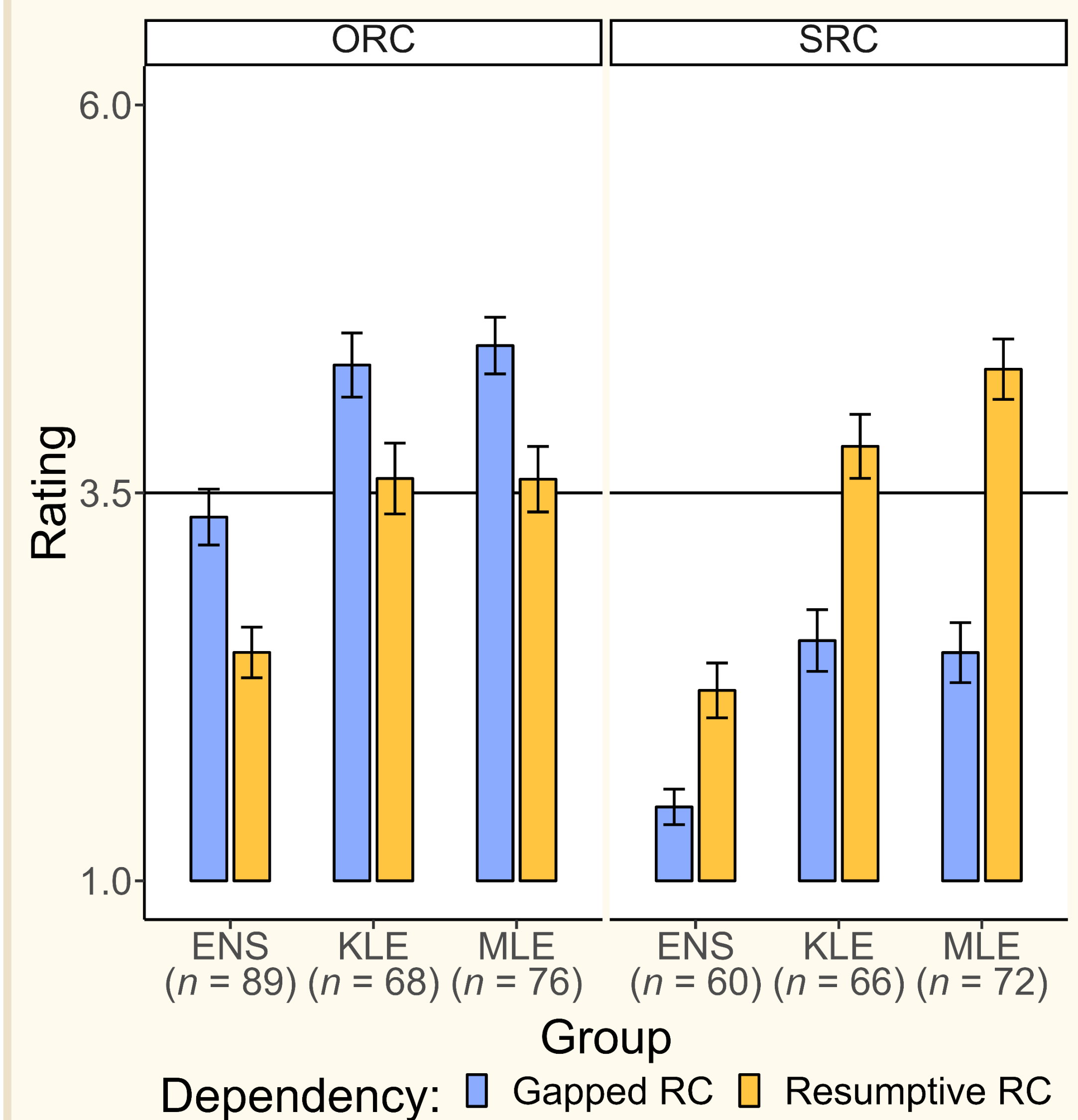
- 2 × 3 design crossing DEPENDENCY (gapped RC vs. resumptive RC) & ENVIRONMENT (short-distance vs. long-distance vs. *wh*-island)
- 30 critical items (6 conditions × 5 tokens); 40 fillers
- Here, **only *wh*-island condition of interest**
- 6-point Likert scale plus I-don’t-know option

### Wh-island condition in the ORC & SRC AJTs

Study	Example stimulus with <b>gap</b> vs. <b>pronoun</b>
ORC	Mary knows the man that I wonder which detectives arrested { <b>gap</b> /* <b>him</b> } last week.
SRC	Mary knows the man that I wonder which book { <b>gap</b> /* <b>he</b> } borrowed last month.

### Results

Figure 2. Mean ratings for *wh*-island conditions in the AJTs



Note. Error bars are 95% CIs

ORC & SRC model formula: Rating ~ Dependency \* Environment \* Group + (1 + Dependency + Environment | Participant) + (1 + Dependency + Environment + Group | Item)

- Only in SRC islands: Gap-trial ratings consistently on lower half of rating scale
- Only in SRC islands: Resumptive RCs rated significantly higher than gapped RCs

## Conclusions

- *Wh*-island effects stronger in SRCs than ORCs **even for L2ers whose L1 lacks *wh*-movement in *wh*-questions**
- KLEs and MLEs **can become sensitive to ORC-SRC asymmetry in island strength**

## Why are subject *wh*-islands stronger?

**Representational account:** They violate an extra grammar constraint (Chomsky, 1981; Keffala & Goodall, 2011)

the man<sub>1</sub> [that Mary wonders [which book <sub>1</sub> borrowed]]

**ECP violation: *Wh*-island blocks government of subject trace**

**Processing account:** They violate the push-down storage principle (Marcus, 1978; O’Grady, 2005)

the man<sub>1</sub> [that Mary wonders [which book<sub>2</sub> <sub>1</sub> borrowed <sub>2</sub>]]

**Push-down violation: First item stored is first item retrieved**