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

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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**

a. There's a prince that the ogre doesn't care if the troll slayed {*__/*him}. **(ORC island)**

b. There's a prince that the ogre doesn't care if {*__/*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 **whose L1 lacks *wh*-movement in *wh*-questions**?

Participants

Groups

1. Adult English native speaker controls (**ENSs**)
2. Adult L1-Korean L2ers of English (**KLEs**)
3. Adult L1-Mandarin L2ers of English (**MLEs**)

Note. Korean and Mandarin lack *wh*-movement in *wh*-questions; Mandarin has more resumption in RCs than Korean does

ORC Study

Group	*n*	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	*n*	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). Cascadilla 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)

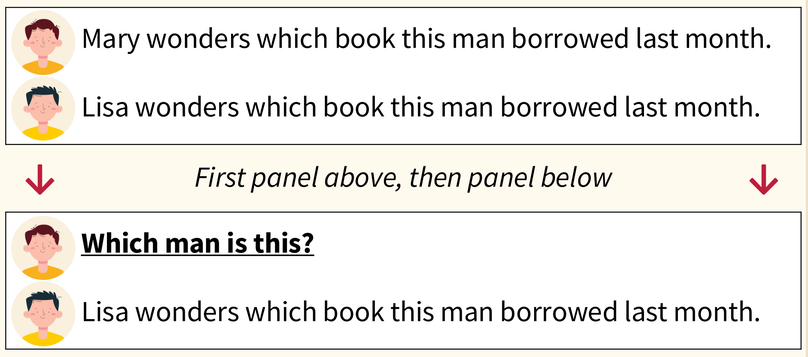
Design of the ORC & SRC EPTs

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

Wh-island conditions in ORC & SRC EPTs

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

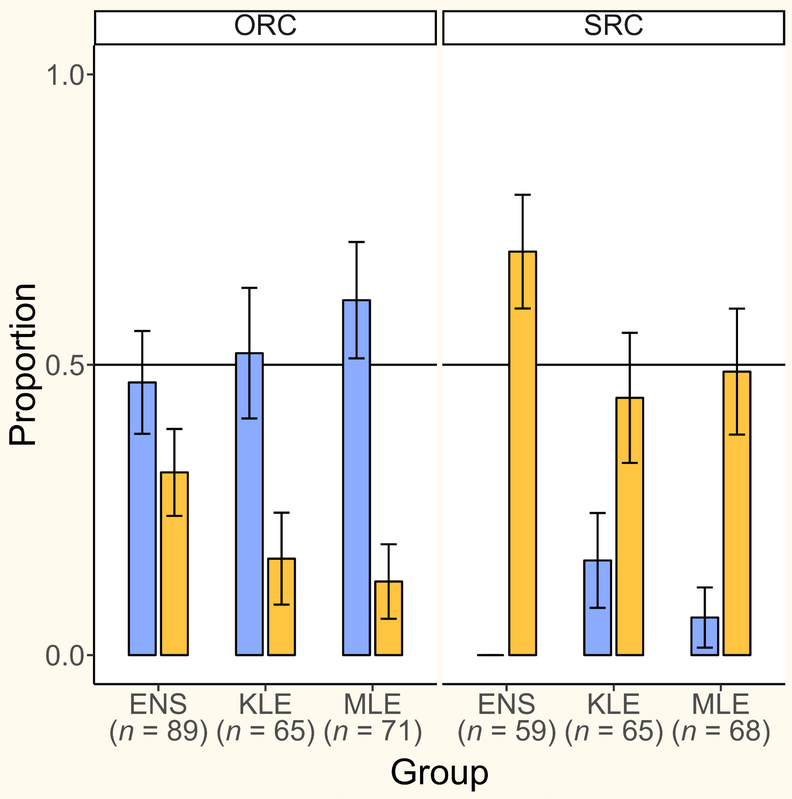
Example trial from SRC *wh*-island condition



Start of target response: "the man that…"

Results

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



Note. Error bars are 95% *CI*s; Nontarget 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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PDF of Poster:

fredzenker.com/bucld50.pdf

Acceptability Judgment Tasks (AJTs)

Design of the ORC & SRC AJTs

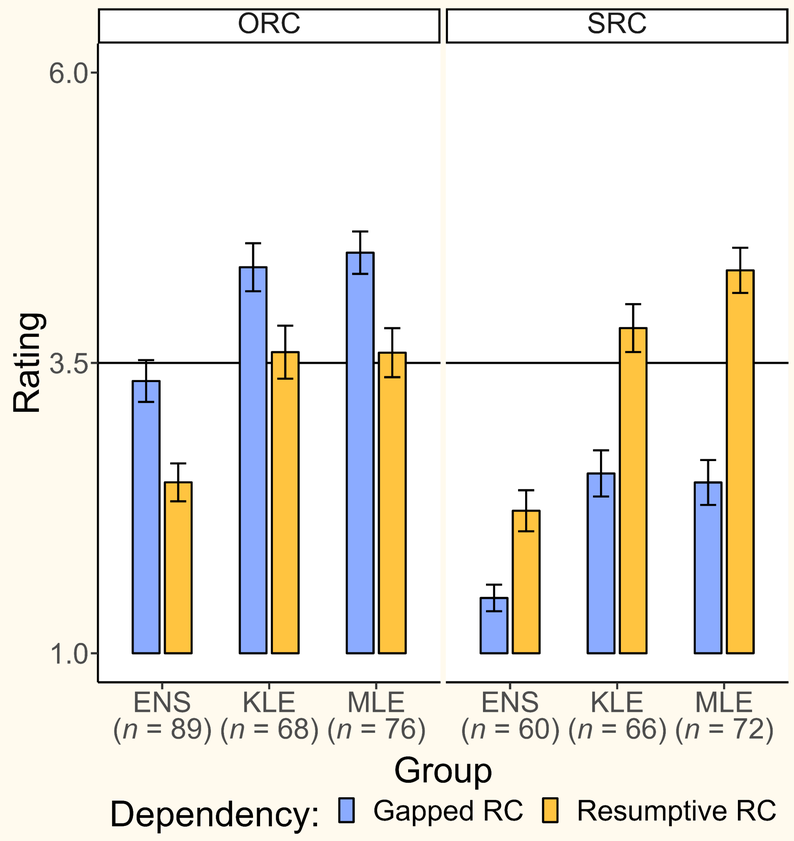
- 2 × 3 design crossing DEPENDENCY (gapped RC vs. resumptive RC) & ENVIRONMENT (short-distance vs. long-distance vs. *wh*-island)
- 30 critical items (6 conditions × 5 tokens); 40 fillers
- Here, **only *wh*-island conditions of interest**
- 6-point Likert scale plus I-don't-know option

Wh-island conditions in the ORC & SRC AJTs

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

Results

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



Note. Error bars are 95% *CI*s

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**$_1$ [that Mary wonders [**which book** t_1 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**$_1$ [that Mary wonders [**which book**$_2$ ___$_1$ borrowed ___$_2$]]

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