

# Reconstruction in German A'-movement

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## Background

### Previous theoretical claims on binding and reconstruction in A'-movement:

- ▶ Argument-adjunct asymmetry: only R-expressions contained in arguments trigger Principle C effects, R-expressions inside adjuncts do not (which are thus merged late); cf. Lebeaux (1988).
- ▶ Predicate-argument asymmetry: Predicates obligatorily reconstruct (they contain the trace of the local subject/must reconstruct because they are non-referential), while arguments do not (always); cf. Heycock (1995).
- ▶ Principle A can be satisfied in intermediate/final landing sites in English, but not in German; cf. Frey (1993), Kiss (2001).

### Previous empirical work:

- ▶ English: Adger et al. (2017), Bruening and Al Khalaf (2018) found that Condition C effects were systematic only with adj. predicates, while partially absent with (nominal) arguments. Only weak argument-/adjunct asymmetry.
- ▶ German: No experimental studies yet.

### Our contribution: First experimental investigation of reconstruction for Binding Principles A and C in German A'-movement.

## Method and participants

Maria tells us how proud of Anna she is.  
 Can this sentence be interpreted such that...  
 ...Mary is proud? (Q1)  Yes  No  
 ...Anna is proud? (Q2)  Yes  No

- ▶ Forced-choice task, inspired by Bruening and Al Khalaf (2018): provide two potential referents (in local/higher clause).
- ▶ Innovation: we explicitly asked for each of the readings whether it is possible or not → optionality can be captured.

- ▶ web-based questionnaires using SoSci Survey
- ▶ four experiments, 32/36/48/36 participants
- ▶ Latin Square Design
- ▶ 1:1 items-fillers ratio

## Design and stimuli

### Sample item set: (see handout for original German items)

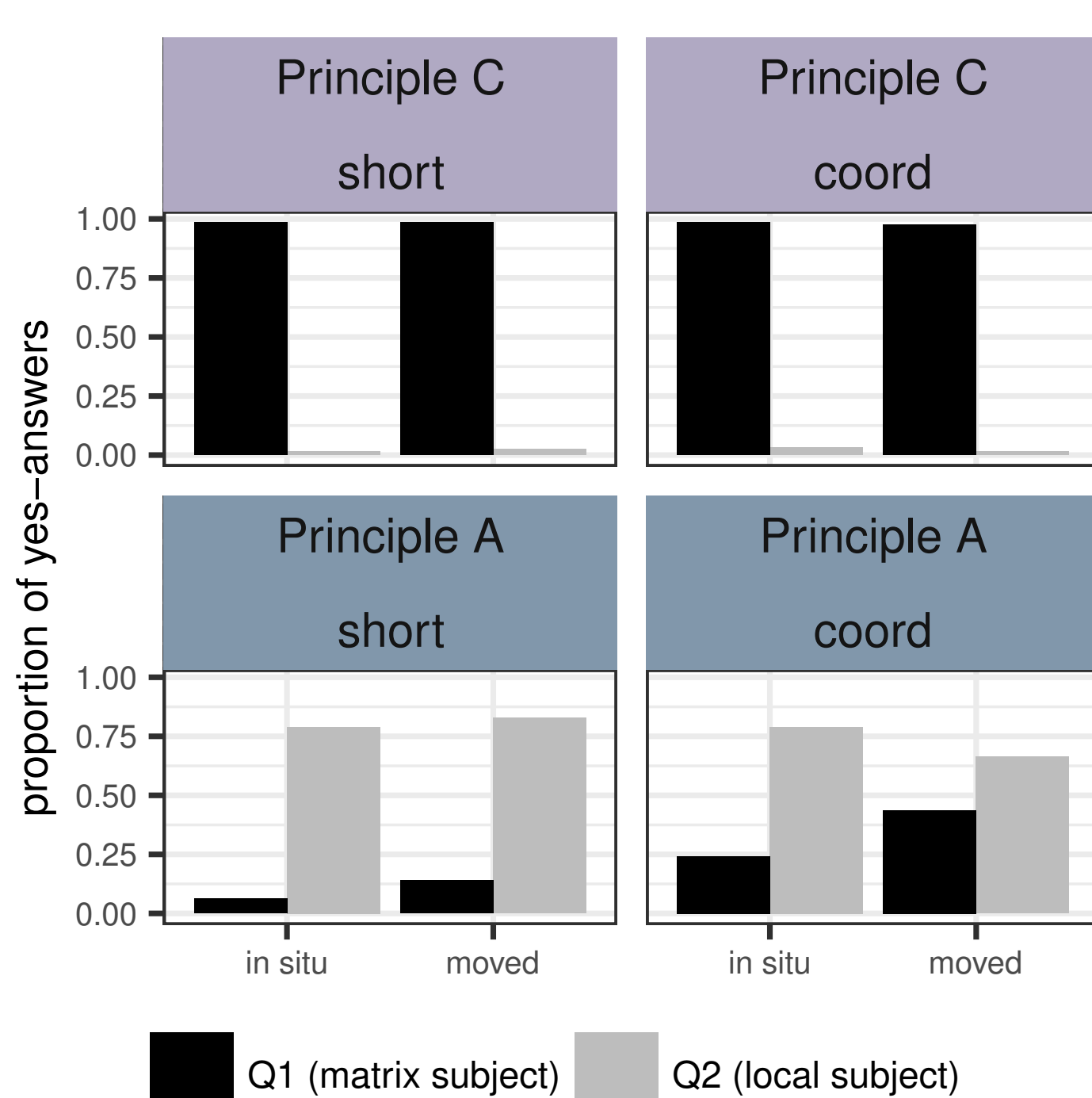
- (1) Principle C
- a. **Mary** tells (us) that she is very proud of **Anna** (and the teams). *in situ*
- b. **Mary** tells (us) [ how proud of **Anna** (and the teams) ] she is \_\_\_\_\_. *moved*
- Principle C predicts: coreference between *she* and *Anna* impossible.
- (2) Principle A
- a. **Mary** tells (us) that **Anna** is very proud of herself (and the teams). *in situ*
- b. **Mary** tells (us) [ how proud of herself (and the teams) ] **Anna** is \_\_\_\_\_. *moved*
- Principle A predicts: coreference between *herself* and *Anna* possible.

### Additional factors:

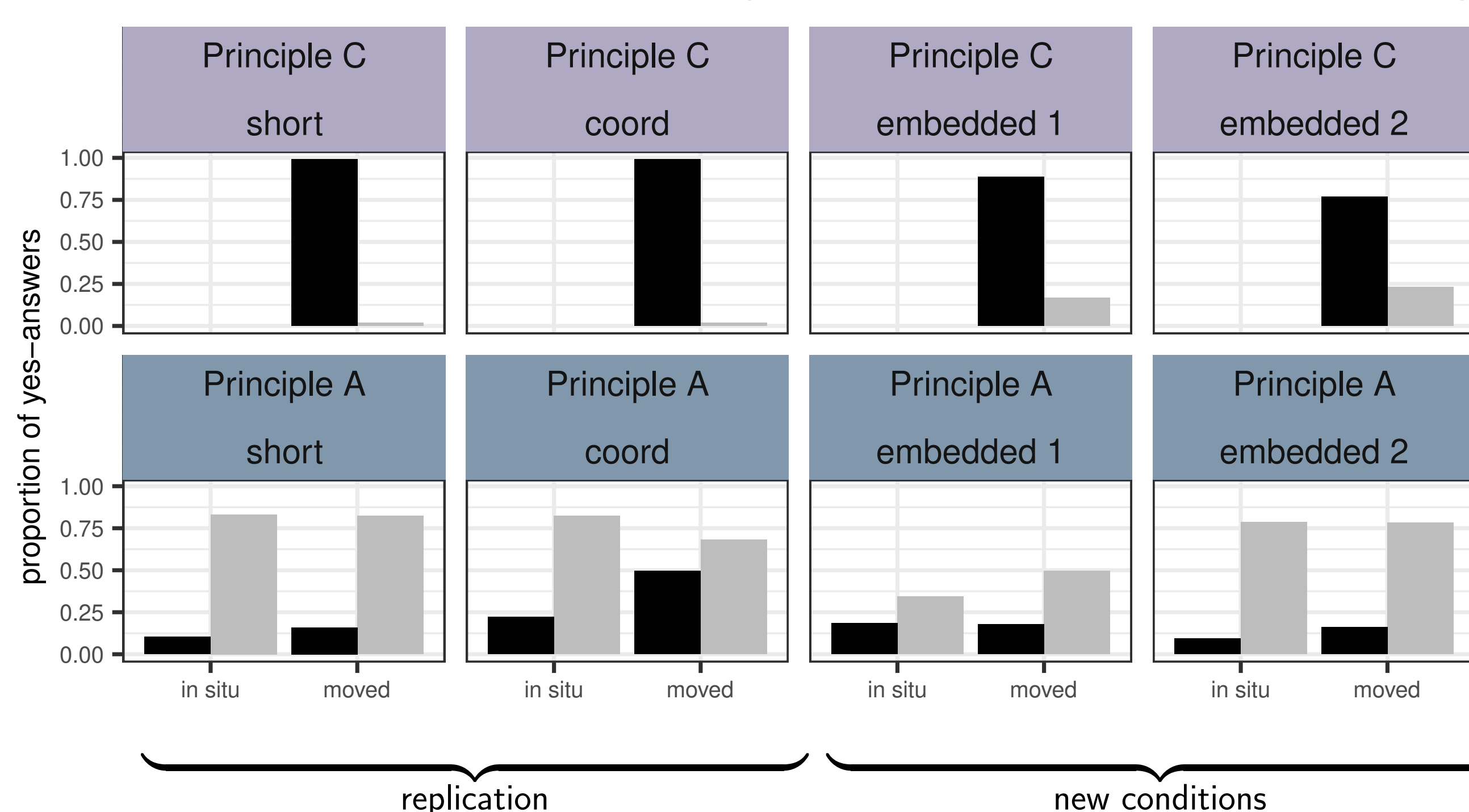
- (3) Within the noun experiments—R-expression contained in argument or adjunct?
- a. **Mary** tells (us) [ which statue of **Anna** ] she saw \_\_\_\_\_. *argument*
- b. **Mary** tells (us) [ which statue on **Anna's** desk ] she saw \_\_\_\_\_. *adjunct*
- Late Merger predicts: coreference between *she* and *Anna* only possible in (b).
- (4) Within the expts on long movement—R-expression and pronoun/anaphor clause-mates?
- a. **Mary** tells (us) [ how proud of **Anna** ] she thinks that you are \_\_\_\_\_. *embedded 1*
- b. **Mary** tells (us) [ how proud of **Anna** ] you think that she is \_\_\_\_\_. *embedded 2*
- Vehicle Change predicts: co-reference between *she* and *Anna* only possible in (a).

## Results and Discussion

### Adj. predicates — exp 1:



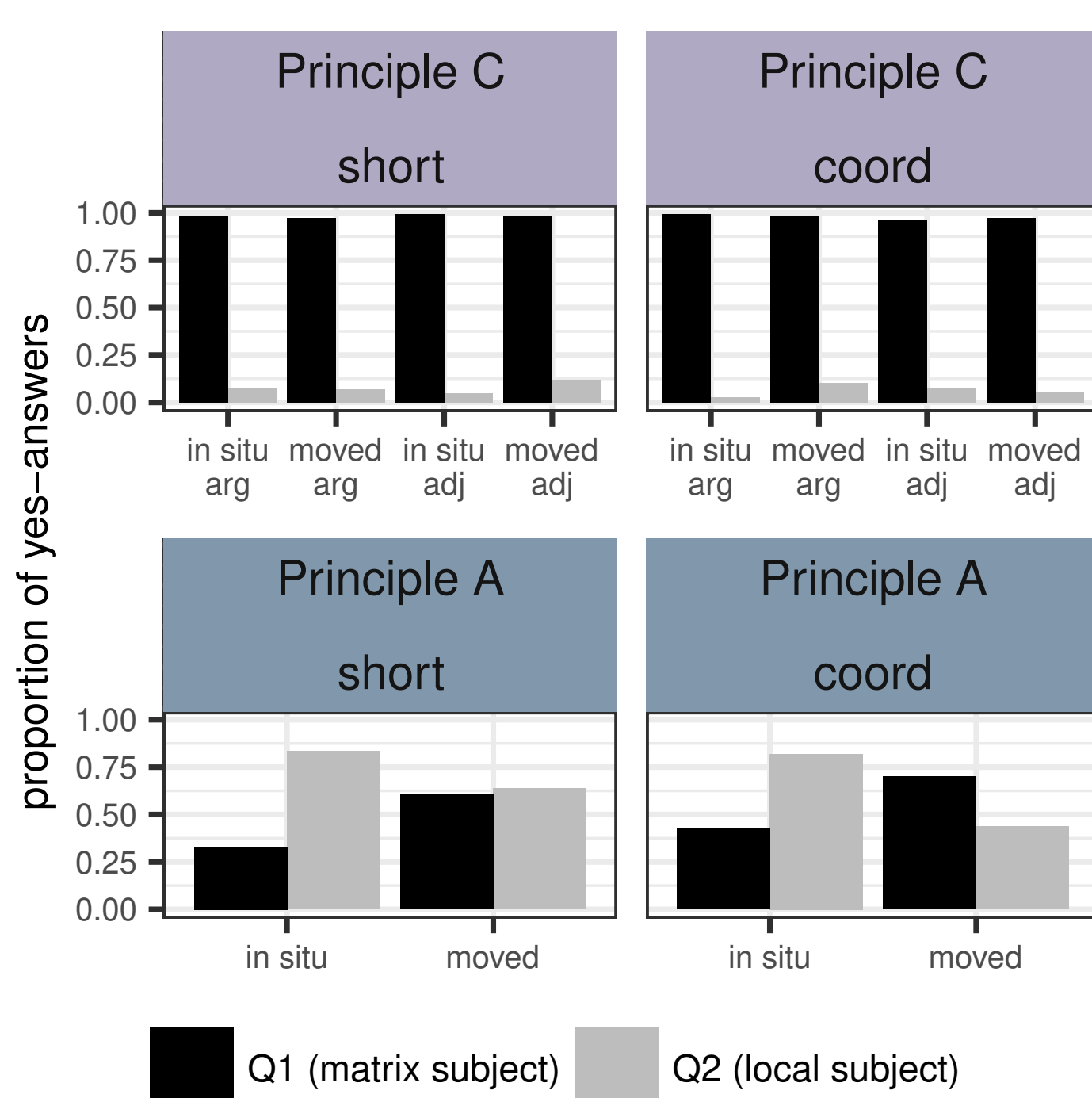
### Adj. predicates — exp 2 (new conditions on long movement):



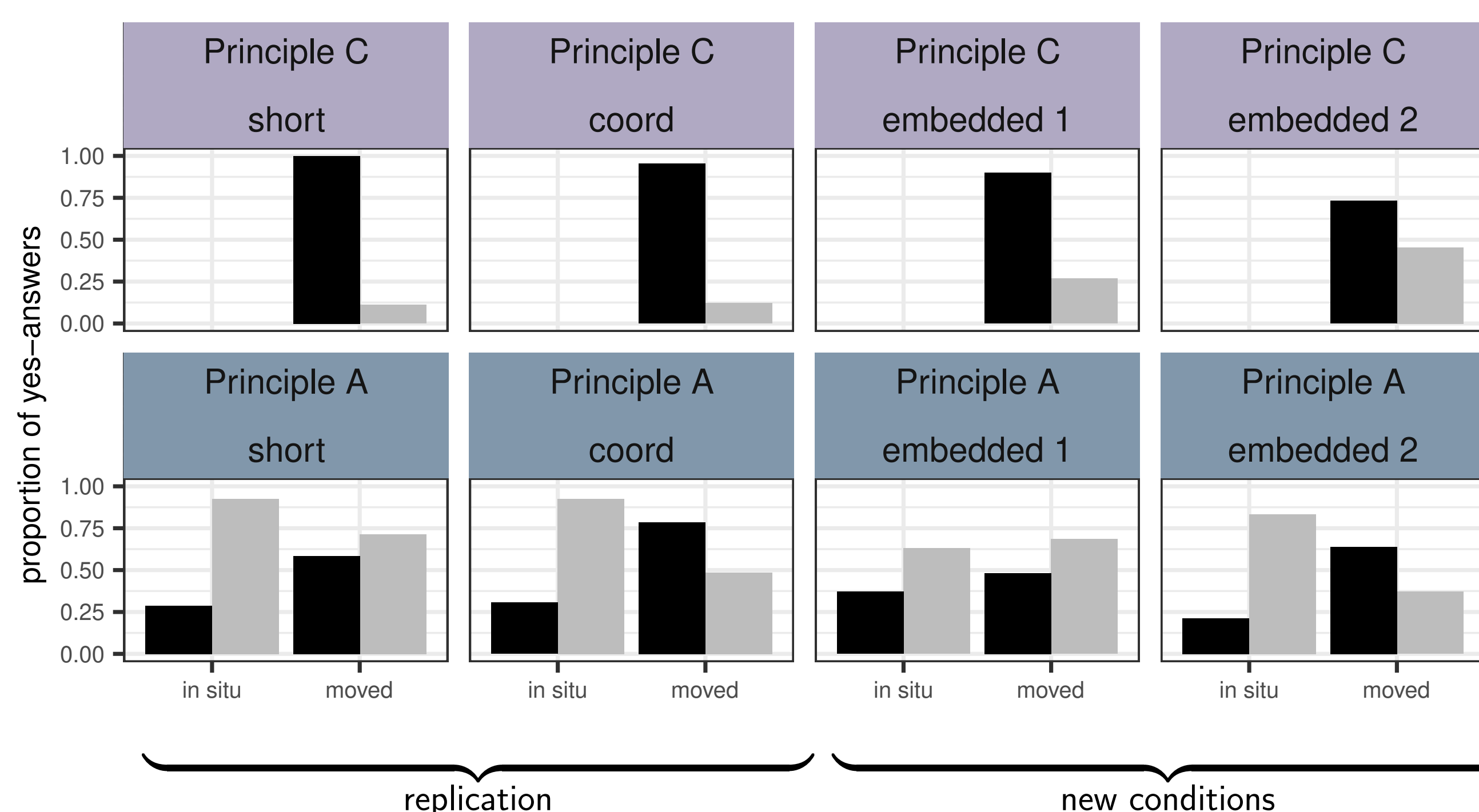
### Main findings on Principle C:

- ▶ Reconstruction for Principle C is very robust, with both adjectival predicates and nouns.
- Principle C effects are not weak/illusory.
- ▶ No support for predicted arg-adj asymmetry.<sup>1</sup>
- Argues against a late-merger approach to adjuncts.
- ▶ No significant effect of linear distance.
- ▶ Significant effect of embedding.
- Pattern goes against predictions of Vehicle Change.

### Nouns — exp 1:



### Nouns — exp 2 (new conditions on long movement):



### Main findings on Principle A:

- ▶ Reconstruction for Principle A is less systematic than for Principle C.
- ▶ Reconstruction is more likely with adjectival predicates than with nouns.
- ▶ Significant effect of linear distance.
- ▶ Intermediate binding accepted to an unexpected extent (50% with adj. predicates, 70% with nouns).
- Argues against obligatory trace of subject within AP.
- Argues against silent PRO within DP.
- ▶ Matrix binding accepted to an unexpected extent (up to 60%) (against claims in the lit.).

<sup>1</sup>(Non-)significance of effects is reported based on statistical analysis using GLMMs. See handout for detailed results.

## Conclusions and outlook

### Summary: Robust reconstruction for Principle C; no argument/adjunct asymmetry; anaphor binding in intermediate/final landing sites possible.

### Open questions:

- ▶ More robust Condition C reconstruction than in recent experimental work on English. → Due to different methods, or difference between the languages?
- ▶ Surprisingly high proportion of matrix binding in the noun experiments (even in situ ~ 30%). → Logophoric anaphor binding in German? (claimed to be absent)

**References:** Adger, D., A. Drummond, D. Hall and C. Van Urk. 2017. Is there Condition C reconstruction? Proceedings of NELS 47. — Bruening, B. and E. Al Khalaf. 2018. No argument-adjunct asymmetry in reconstruction for Binding Condition C. Journal of Linguistics. — Frey, W. 1993. Syntaktische Bedingungen für die semantische Interpretation. Akademie, Berlin. — Heycock, C. 1995. Asymmetries in Reconstruction. Linguistic Inquiry 26(4). — Kiss, T. 2001. Anaphora and Exemptness. A comparative treatment of anaphoric binding in German and English. Proceedings of HPSG 7. — Lebeaux, D. 1988. Language Acquisition and the Form of the Grammar. UMass, Amherst.