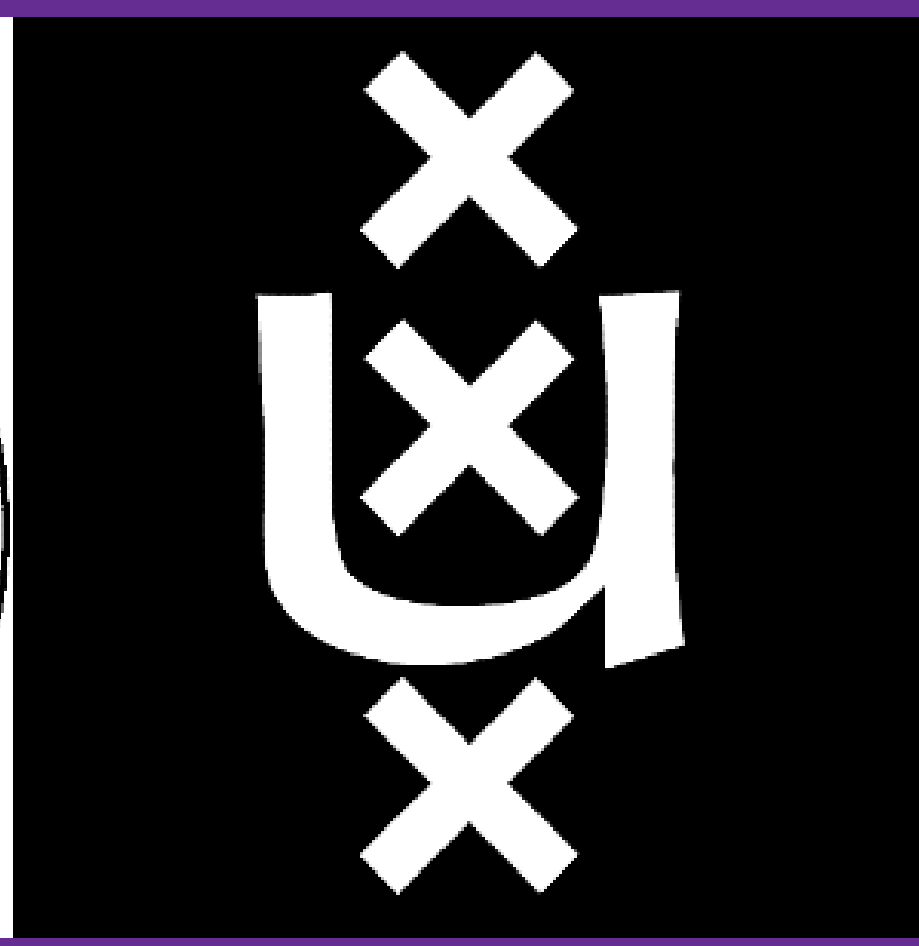# Indexicals under role shift in Sign Language of the Netherlands (NGT): experimental insights

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Role shift in sign languages

Role shift (RS) is a construction commonly used in sign languages to **report utterances or thoughts** from an agent's perspective (the attitude holder).

- It is signaled by non-manual markers (RS-NMMs): **eye gaze shift**, **body leans**, and **head turns** (Figure 1).
- Indexicals can 'shift' under role shift: in the scope of an attitude verb, context-dependent expressions such as IX_1, IX_2 and HERE obtain their reference from the reported context, being 'shifted away' from the context of utterance (Friedman 1975, Meier 1990).

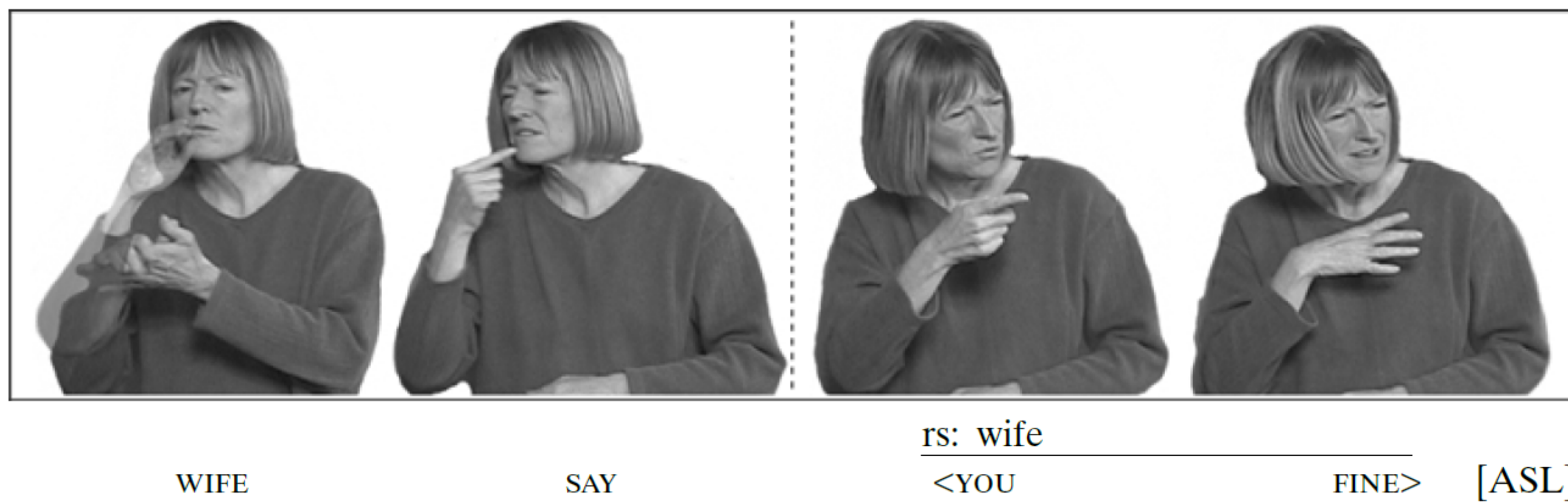WIFE   SAY   rs: wife <YOU   FINE>   [ASL]

Figure 1: RS NMMs: eye gaze shift, body lean, head turn in American Sign Language (from Lillo-Martin (2012): 369.)

Role shift as context shift?

- RS-NMMs are commonly analyzed as the overt realization of a **context-shifting operator** (Quer 2005, Schlenker 2017a, 2017b).
- It is therefore expected that **every indexical within the scope of RS-NMMs** are expected to shift.
- Conversely, this implies that **shifted readings of indexicals require RS-NMM-marking**.
- However, previous studies on Russian Sign Language (Kimmelman and Khristoforova, 2018) and Hong-Kong Sign Language (Gan, 2021) have shown that this is too strong a claim, providing data of shifted indexicals without the corresponding RS-NMMs, and data of non-shifted indexicals under RS-NMMs.

Methodology

- ✎ Interpretation tasks (What is the referent of the indexical(s)?) + felicity judgments (5-point Likert scale)
- ✎ 13 native NGT signers (26-58 y.o; 4 males)
- ✎ Conditions (Latine *cube*):
  - subject IX_1/ subject IX_2/ subject IX_1 + object IX_2
  - +/- RS-NMM
  - original quote present or absent

U kunt meer dan één vinkje zetten als u dat nodig vindt.

Geen daarvan
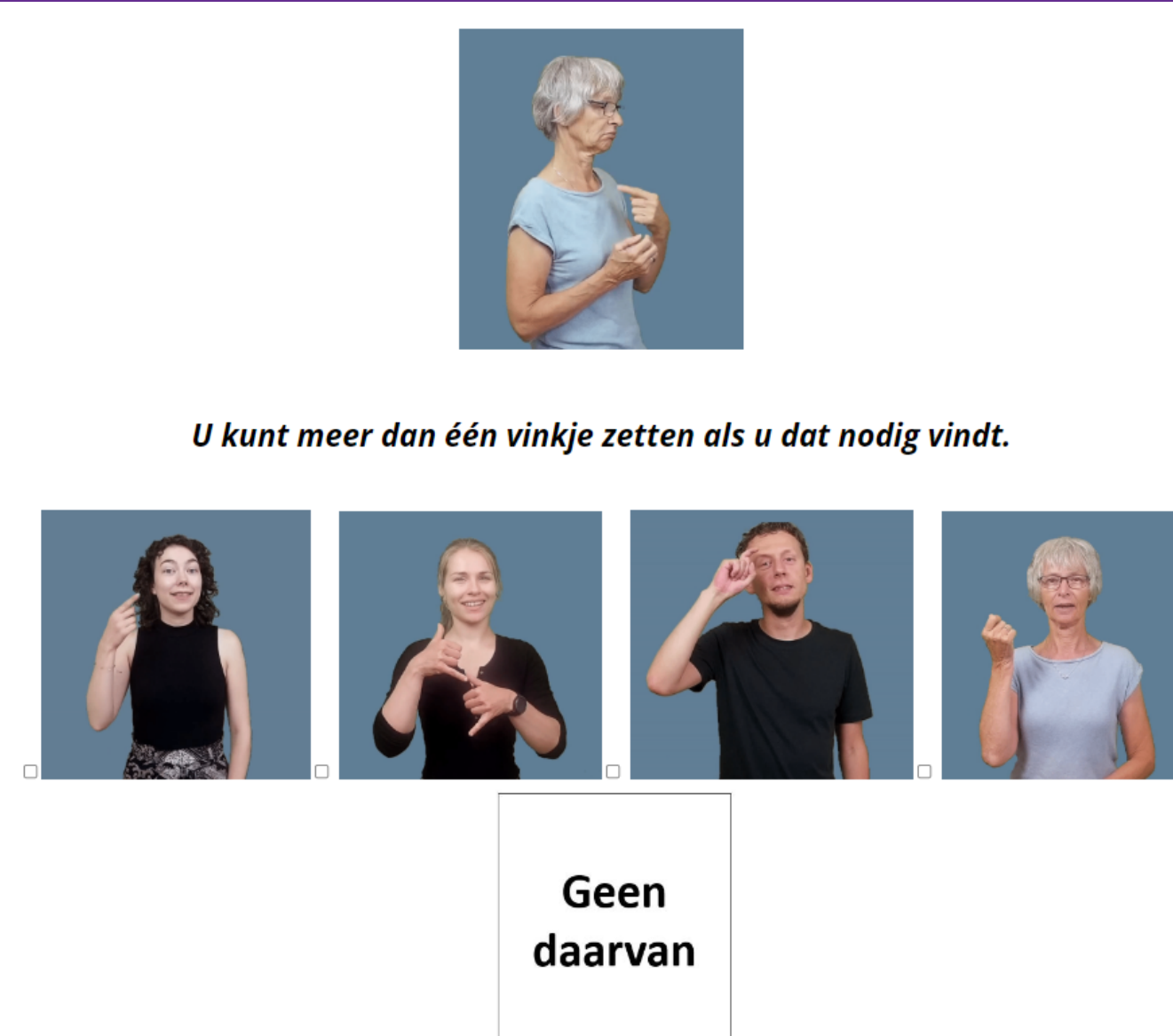
Analysis pt.1: person features in sign languages

Three patterns (clusters) are observed:
- **Cluster 1** always shifts IX_1 regardless of presence/absence of RS-NMMs, but is sensitive to RS-NMMs while interpreting IX_2.
- **Cluster 2** always shift both indexicals regardless of RS-NMMs.
- **Cluster 3** always interpret IX_1 as non-shifted or ambiguous regardless of RS-NMMs, but is sensitive to RS-NMMs while interpreting IX_2.

- Following Khristoforova (forthcoming), we assume that sign language person features are organized in a hierarchy that mirrors that of spoken languages (cp. Harley and Ritter 2002, McGinnis 2005, Sauerland and Bobaljik 2022), where the 1st person is unspecified and treated as elsewhere/default.
- This is motivated by default agreement patterns in Russian SL (Khristoforova, forth.), as well as first person encoding impersonal reference in various SLs (Barberà and Quer, 2013). Features are organized along the scale in (1), with the semantics in (2):

(1) 3 [- AUTHOR, - PARTICIPANT] < 2 [- AUTHOR] < 1

(2) a.$[\![2]\!]^{g,c,i} = \lambda x : \neg[s(c) \sqsubseteq x \vee s(i) \sqsubseteq x].x$

    b.$[\![3]\!]^{g,c,i} = \lambda x : \neg[s(c) \sqsubseteq x \vee s(i) \sqsubseteq x.x \vee a(c) \sqsubseteq x \vee a(i) \sqsubseteq x].x$

- Interpretation of the AUTHOR feature is relativized to both reported context/index i and actual context c (Anand 2006, Deal 2021), bringing its meaning close to that of a logophor (Blunier, 2023).
- 1st person is expected to be 'less indexical' than 2nd person, relying more extensively on coordinates external to the body of the signer (as reflected by the phonological features of pronouns; cp. Berenz 1996, 2002 for LIBRAS, Ciciliani and Wilbur 2006 for HZJ, Veiga Busto 2020, 2022 for LSC); we thus expect it to be less sensitive to NMMs that impact the realization of these features, such as RS-NMMs.

Analysis pt. 2: Alternatives and competition

- We suggest that **Cluster 3** considered 'anaphoric alternatives' when computing the sentences, preferring to use less ambiguous proforms such as SELF or a null pronoun (as confirmed during follow-up interviews).
- Choice of an anaphoric form that is both i) structurally equivalent and ii) able to uniquely identify the closest attitude holder is expected when thinking about pronominal competition in terms of structural complexity (Katzir, 2007) or in terms of scales (Horn, 1972). Adapting the proposal of Ahn (2019) for ASL, we assume that anaphoric expressions constitute the following scale in NGT:
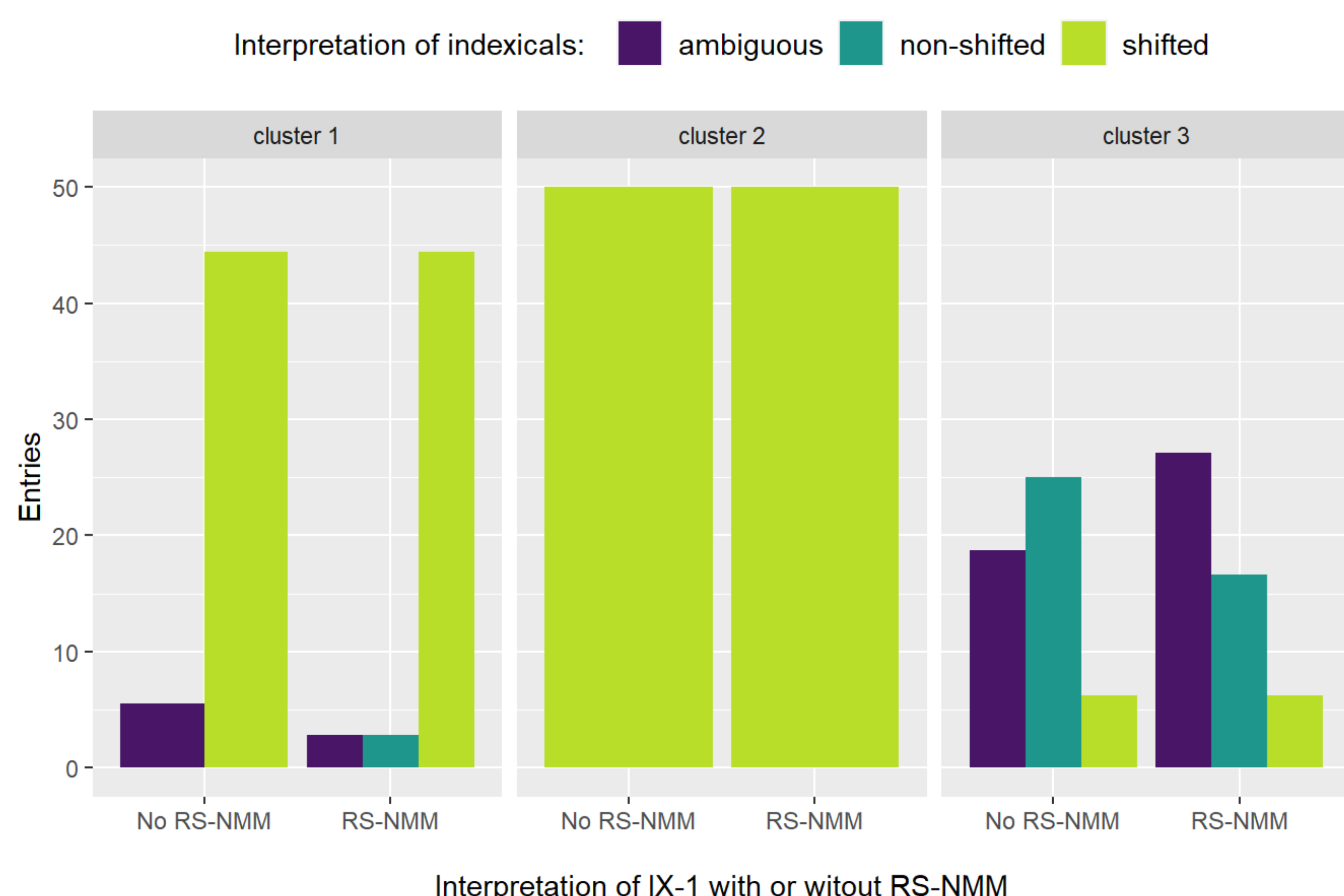
(3) $\varnothing < $ SELF $< IX$

- Participants will prefer to use the highest element in the scale that is i) compatible with its (featural) meaning and ii) unambiguously able to refer to the intended referent, following an efficiency principle (Meyer, 2013).

Scan the QR code above for references and experiment material!

Results

Condition 3 (I LOVE CYCLING)

Interpretation of indexicals: ambiguous | non-shifted | shifted

Interpretation of IX-1 with or witout RS-NMM

Condition 2 (YOU SIGN WELL)

Interpretation of indexicals: ambiguous | non-shifted | shifted

Interpretation of IX-2 with or witout RS-NMM