

German infants do not discriminate Portuguese rising vs. falling contours

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INTONATION CONTRASTS & ILLOCUTION TYPE

- Contrasts such as **rising vs. falling intonation contours** may signal a difference in illocution type in various languages

polar question  ? statement  .

- Languages differ in how polar questions contrast with statements
 - e.g. Portuguese & Basque: intonation only
 - e.g. English & German: intonation + morpho-syntactic information

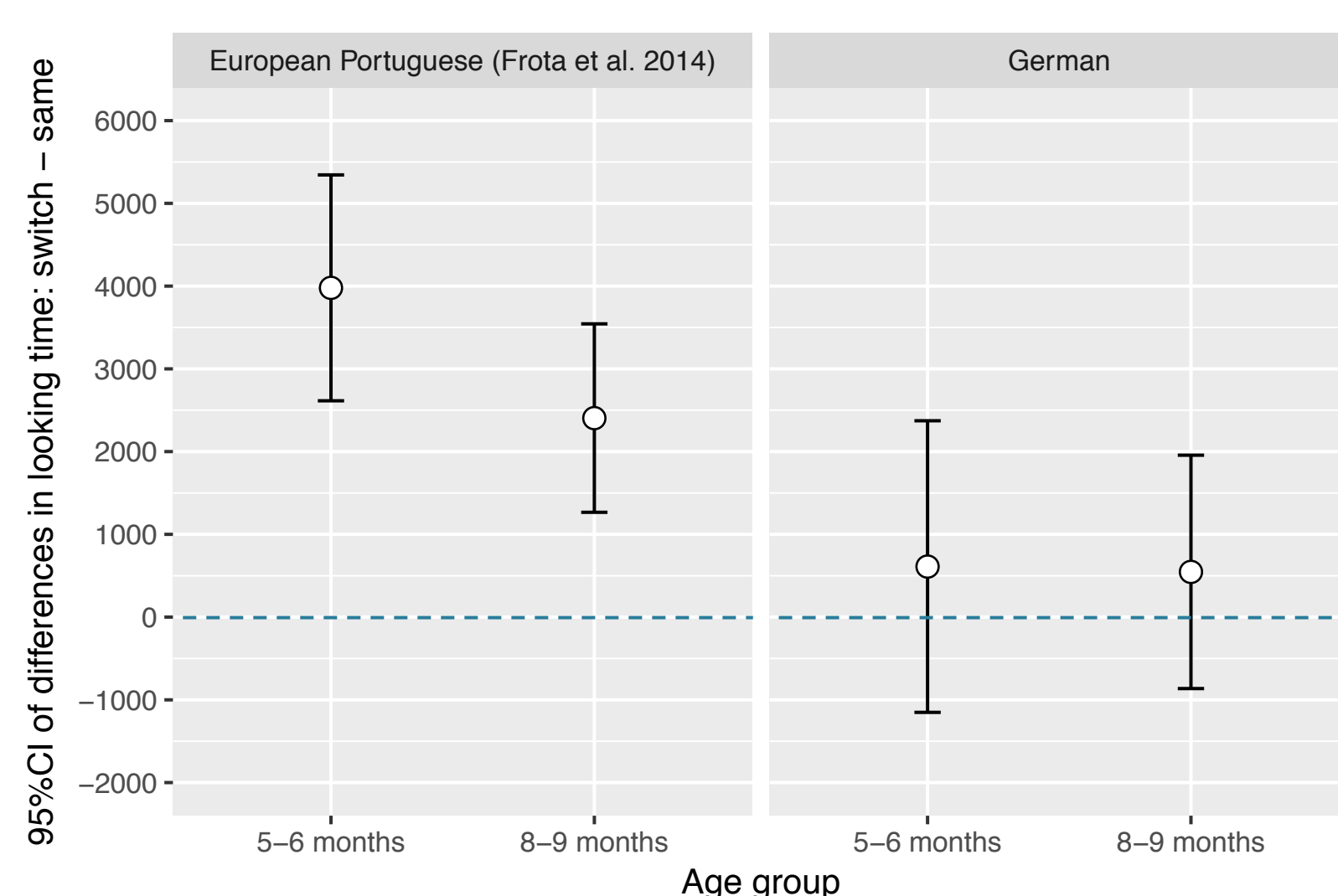
auxiliary: Does she like adventures? She likes adventures.
fronting: Aux sie mag Abenteuer? Sie mag Abenteuer.

DISCRIMINATION OF INTONATION CONTRASTS

Discrimination of rising vs. falling intonation contours:

Portuguese (5-6, 8-9 months) [1]	✓
Basque (4 months) [2]	✓
English (4 months) [2]	✗ unless when tested in a more sensitive procedure

RESULTS



- Unlike the Portuguese infants [1], German infants show no significant looking time difference between *same* and *switch* trial in test, neither at 5-6 nor at 8-9 months

GENERAL DISCUSSION

- German infants at the age of 5-6 and 8-9 months do not discriminate rising vs. falling intonation contours in single-prosodic word intonational phrases produced by a female native speaker of Portuguese
- The extent of morpho-syntactic cues to question marking in the native language may partly determine infants' ability to discriminate rising from falling contours

FUTURE DIRECTIONS

- Do German infants, like the English 4-month-olds [2], show successful discrimination when tested in a more sensitive procedure, i.e. with a habituation criterion set to 50% and no segmental variability involved?
- How does the domain of F₀-movement (mono- vs. disyllabic) affect processing [3], [4]?

RESEARCH QUESTION

Is the developmental path of how infants acquire the ability to discriminate sentence type intonation contrasts (rising vs. falling contours) affected by the way the native language marks illocution type?

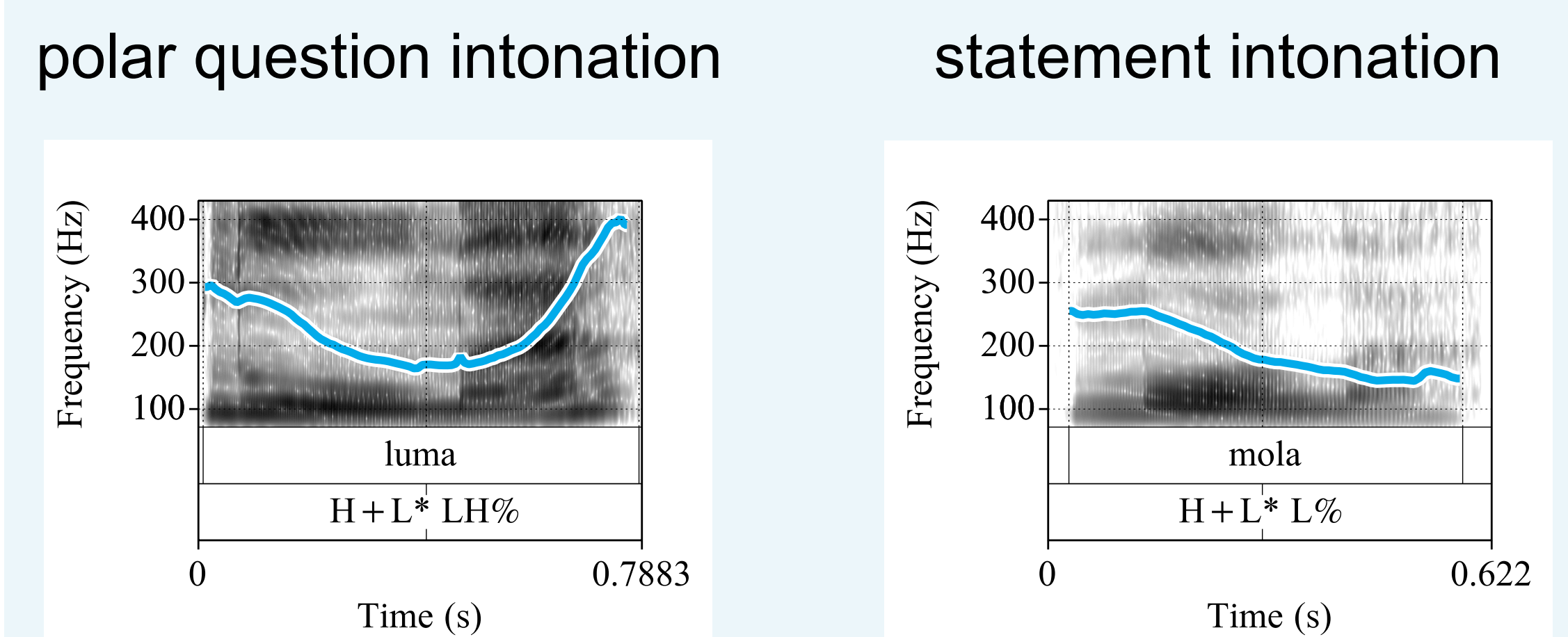
METHODS

Participants

- 5-6 month-old German infants (n=20, mean age = 0;5,28)
- 8-9 month-old German infants (n=20, mean age = 0;8,15)

Stimuli [1]

- 16 segmentally varied disyllabic pseudo-words produced in IDS by a female native speaker of Portuguese



Procedure [1]

- Visual **habituation paradigm** to test intonation discrimination
 - Habituation**
 - Infants habituated with question or statement intonation
 - Each trial (16sec) consisted of 8 disyllabic words
 - Habituation criterion set to a 60% decrease in average looking time of the last 4 compared to the first 4 trials
 - Test phase**
 - One *same* (as habituation), one *switch* (different to the intonation contour presented during habituation) trial
 - Each trial consisted of 8 different disyllabic words
 - Order of presentation (same/switch first) counterbalanced

REFERENCES

[1] Frota, S., Butler, J., and Vigário, M., "Infants' perception of intonation: Is it a statement or a question?," *Infancy*, vol. 19, pp. 194-213, 2014. [2] Sundara, M., Molnar, M., and Frota, S., "The perception of boundary tones in infancy," in *Proceedings of the 18th International Congress of Phonetic Sciences*, Glasgow, UK, 2015. [3] Soderstrom, M., Ko, E. S., and Nevzorova, U., "It's a question? Infants attend differently to yes/no questions and declaratives," *Infant Behavior and Development*, vol. 34, pp. 107-110, 2011. [4] Götz, A., Yeung, H. H., Krasotkina, A., Schwarzer, G., and Höhle, B., "Perceptual reorganization of lexical tones: Effects of age and experimental procedure," *Frontiers in Psychology*, vol. 9, 2018.

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