German clefts address unexpected questions

Swantje Tönnis* & Judith Tonhauser**
University of Stuttgart
University of Stuttgart, Germany
SALT 32, COLMEX/UNAM, June 8 – 10, 2022
El Colegio de México

Puzzle of German *es*-clefts in discourse

(1) Als Benni in den Schuppen kam, war sein Fahrrad zugestellt.
'When Benni came into the shed his bicycle was blocked.'

(2) Als Benni in den Schuppen kam, war sein Fahrrad zugestellt. Er konnte es so schnell nicht frei bekommen. Also fuhr er mit dem Tretroller los.
'When Benni came into the shed his bicycle was blocked. He couldn't get it out quickly enough. Hence, he set off on the scooter.'

a. Canonical sentence: Lilly hat vor Bennis Fahrrad geparkt. ✓ in (1), ? in (2)
'Lilly parked in front of Benni's bicycle.'

b. Cleft sentence: Es war Lilly, die vor Bennis Fahrrad geparkt hat. ? in (1), ✓ in (2)
'It was Lilly who parked in front of Benni's bicycle.'

- **None of the previous accounts of clefts can sufficiently account for this contrast, except for Tönnis' (2021) expectedness-based account.**

We provide empirical evidence for **Tönnis' (2021) hypothesis**
In German, cleft sentences address relatively unexpected questions while canonical sentences address relatively expected questions.

Previous analyses

- **Exhaustivity cannot explain contrast:** In (1)/(2), (a) and (b) could equally well continue with *"and so did Martin"*. (contra Percus 1997)
- **No inquiry-terminating construction** (contra Velleman et al. 2012):
  - Cleft does not contribute to ongoing inquiry in (2).
  - No explanation for why cleft cannot terminate inquiry in (1).
- Few analyses incorporated **discourse context**, which is necessary to explain contrast in (1)/(2). (e.g., Prince 1978, Destruel & Velleman 2014)
- Tönnis (2021) spells out effect of discourse context on acceptability of German clefts by involving **discourse expectations**.

Discourse expectations

- **Assumptions**
  - Every sentence of a discourse addresses (implicit) question. (Simons et al. 2017)
  - Interlocutors form probability distribution over questions that next discourse move is likely to address (Kehler & Rohde 2017, Tönnis 2021).
  - Every new discourse move affects probability distribution, e.g., by answering old questions or raising new questions.
- Sentence 1 in (1) and (2) gives rise to question Q1 *Who parked in front of Benni's bicycle?* (c.f. Onea 2016)
- Q1 more expected to be addressed in context of (1) than of (2) because of greater distance to Q1-raising sentence 1 in (2). (Tönnis 2021)

Experiment 1: Question norming

- **Purpose:** Distinguish relatively expected from relatively unexpected questions, depending on distance to Q1-raising sentence:
  - No distance (after sentence 1) → Q1 rather expected
  - 2 intervening sentences (after sentence 3) → Q1 rather unexpected
- **Participants:** 80 self-reported German native speakers (via Prolific)
- **Conditions:** Rating given after sentence 1 or after sentence 3.
- **Stimuli:** 16 target questions Q1, each presented with 4 other questions
- **Example stimulus in condition 2**

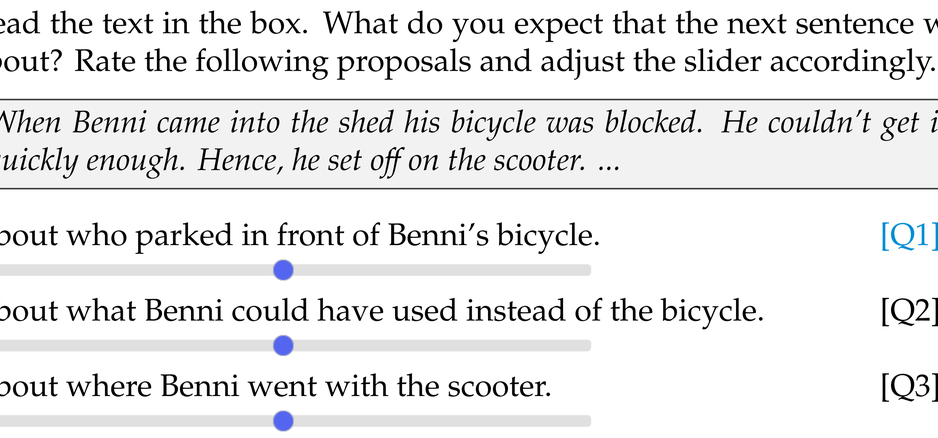
  Read the text in the box. What do you expect that the next sentence will be about? Rate the following proposals and adjust the slider accordingly.

  > *When Benni came into the shed his bicycle was blocked. He couldn't get it out quickly enough. Hence, he set off on the scooter. ...*

  About who parked in front of Benni's bicycle. [Q1]
  About what Benni could have used instead of the bicycle. [Q2]
  About where Benni went with the scooter. [Q3]
  About what Benni did next. [Q+]
  About how the weather is in Colombia. [Q-]

- Q+: very expected question, Q-: very unexpected question, Q2/Q3: question raised by 2nd/3rd sentence

Results – Experiment 1



- **Q1 significantly less expected after sentence 3 than after sentence 1:** LMEM with fixed effect of context length, participant and item as random effects, and a by-participant slope. (β=-29.3, SE=2, t=-15, p<.001)

Experiment 2: Relative preference rating

- **Hypothesis:** In German, clefts address relatively unexpected questions while canonical sentences address relatively expected questions.
- **Prediction of results of Exp.1 and hypothesis:** Clefts are preferred more strongly after three context sentences than after one sentence.
- **Participants:** 120 self-reported German native speakers (via Prolific)
- **Conditions:** Identical context conditions as in Exp.1
- **Stimuli:** 16 cleft/canonical sentence pairs (addressing Q1)
- **Example stimulus in condition 2**

  Read the text in the box. The next sentence of this text is illegible (marked by XXXX).

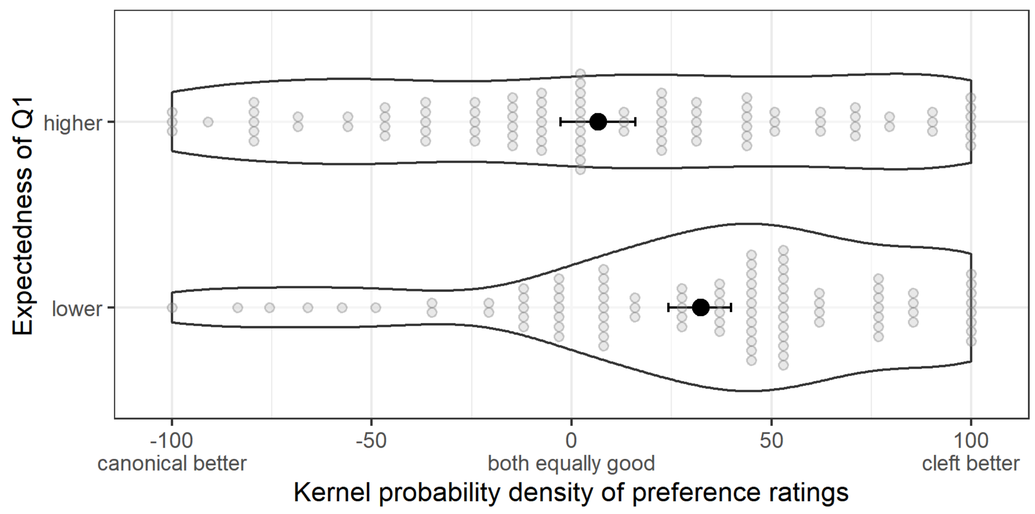
  > *When Benni came into the shed his bicycle was blocked. He couldn't get it out quickly enough. Hence, he set off on the scooter.* **XXXX**

  A. **Lilly parked in front of Benni's bicycle.**
  B. **It was Lilly who parked in front of Benni's bicycle.**

  Which of the sentences A or B would you prefer and how strongly? Adjust the slider accordingly.

  (A much better) (both equally good) (B much better)

Results – Experiment 2



- **Significantly stronger cleft preference when Q1 is less expected:** LMEM with fixed effect of question expectedness, participant and item as random effects, and a by-participant slope. (β=26, SE=5.8, t=4.5, p<.001)

Conclusion

- Our results support Tönnis' (2021) hypotheses:
  - Exp.1 showed that expectedness of question Q1 decreases with a larger distance to the Q1-raising sentence.
  - Exp.2 showed that clefts are preferred over canonical sentences when addressing a less expected question.
- Involving discourse expectations accounts for contrast in (1)/(2).

Selected references
• Destruel & Velleman (2014). Refining contrast: Empirical evidence from the English *it*-cleft. *Empirical Issues in Syntax and Semantics* 10, 197–214. • Kehler & Rohde (2017). Evaluating an expectation-driven question-under-discussion model of discourse interpretation. *Discourse Processes* 54, 219–238. • Percus (1997). Prying Open the Cleft. *Proceedings of NELS* 27, 337–352. • Tönnis (2021). *German es-Clefts in Discourse. A Question-Based Analysis Involving Expectedness.* PhD thesis. Graz University. • Velleman et al. (2012). *It*-clefts are IT (inquiry terminating) constructions. *SALT Proceedings* 22, 441–460.

*swantje.toennis@ling.uni-stuttgart.de, **judith.tonhauser@ling.uni-stuttgart.de