ACCEPTABILITY JUDGEMENTS ON CONTRASTIVE DIALOGUES INVOLVING ELLIPSIS

Master's thesis

Supervisors:

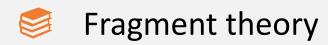
Prof. Dr. Michael Franke

Jun.-Prof. Dr. James Griffiths

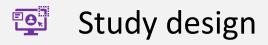
Miriam Schiele

25 September 2023

CONTRASTIVE DIALOGUES INVOLVING ELLIPSIS



? Research question & hypotheses



††† Participants

Results

Conclusions

A: Mary stole the cookie.

B: No, Peter.

A: Mary stole the cookie.

B: No, Peter stole the cookie.

A: Mary stole the cookie.

B: No, Peter stole the cookie.

Fragment

remnant of ellipsis

A: Mary stole the cookie.

B: No, [Peter]_F

Contrastive focus F

- given alternative element for which the predicate actually holds
- must bear pitch accent

A: Mary stole the cookie.

B: No, Peter.

assign category to remnant



find correlate in antecedent clause



A: Mary stole the cookie.

B: No, Peter_{DP=Remnant}

assign category to remnant



find correlate in antecedent clause



A: Mary DP=Correlate stole the cookie.

B: No, Peter_{DP=Remnant}

assign category to remnant



find correlate in antecedent clause



A: Mary_{DP=Correlate} stole the cookie.

B: No, Peter_{DP=Remnant} stole the cookie.

assign category to remnant



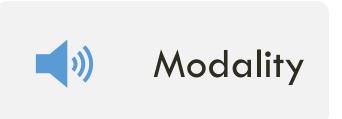
find correlate in antecedent clause



RESEARCH QUESTION

What is the <u>most effective medium</u> for obtaining acceptability <u>judgements</u> about dialogues involving <u>contrastive focus</u>?



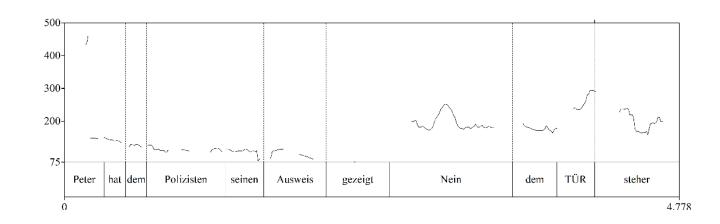


written

A: Peter showed his identity card to the police officer.

B: No, the bouncer.

auditory





written

fragments are <u>less common</u> in written language

auditory

fragments are <u>more common</u> in spoken language



Modality auditory > written



with emphasis A: Peter showed his identity card to the POLICE OFFICER.

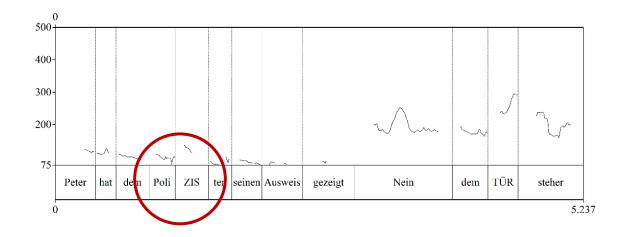
B: No, the BOUNCER.

without emphasis A: Peter showed his identity card to the police officer.

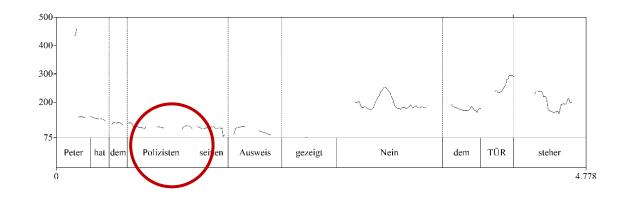
B: No, the bouncer.



with emphasis



without emphasis





with emphasis

<u>easier</u> to identify correlate-remnant pairing

without emphasis

more difficult to identity correlate-remnant pairing



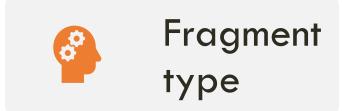
Modality

auditory > written



Emphasis

emphasis on contrasting words > lacking emphasis



lexical

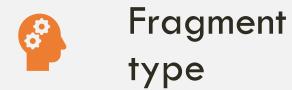
A: Peter showed his identity card to the POLICE OFFICER.

B: No, the BOUNCER.

functional

A: Peter worked at the cinema FROM 6pm.

B: No, UNTIL 6pm.



lexical

- bear stress
- more focussed on in reading

functional

- do not bear stress
- less focussed on in reading



Modality auditory > written



Emphasis

emphasis on contrasting words > lacking emphasis



Fragment type

lexical fragments > functional fragments

Modality

- written
- auditory

Emphasis

- with
- without

Fragment type

- lexical
- functional

Modality

- written
- auditory

Emphasis

- with
- without

Fragment type

- lexical
- functional

between-subject

within-subject

Acceptability Judgement Task

- rate naturalness of speaker B's answer
- 7-point Likert scale
- forced choice
- no time limit

Acceptability Judgement Task

- rate naturalness of speaker B's answer
- 7-point Likert scale
- forced choice
- no time limit

Ihre Bewertung

In der Studie werden Ihnen die Dialoge als Text präsentiert. Großbuchstaben stellen dar, welche Wörter von den Sprecher:innen betont werden. Bitte lesen Sie sich den Dialog durch.

Wie natürlich wirkt die Aussage der Sprecherin B auf Sie?

A: Peter hat BIS August Miete gezahlt.
B: Nein, AB August.

völlig unnatürlich \bigcirc 1 \bigcirc 2 \bigcirc 3 \bigcirc 4 \bigcirc 5 \bigcirc 6 \bigcirc 7 völlig natürlich

Bitte geben Sie eine Bewertung ab.

Acceptability Judgement Task

- rate naturalness of speaker B's answer
- 7-point Likert scale
- forced choice
- no time limit

Ihre Bewertung

In der Studie werden Ihnen die Dialoge als Text präsentiert. Großbuchstaben stellen dar, welche Wörter von den Sprecher:innen betont werden. Bitte lesen Sie sich den Dialog durch.

Wie natürlich wirkt die Aussage der Sprecherin B auf Sie?

A: Peter hat BIS August Miete gezahlt.

B: Nein, AB August.

völlig unnatürlich 0 1 0 2 0 3 0 4 0 5 0 6 0 7 völlig natürlich

WEITER

PARTICIPANTS



n = 100



crowdsourced from Prolific



German native speakers



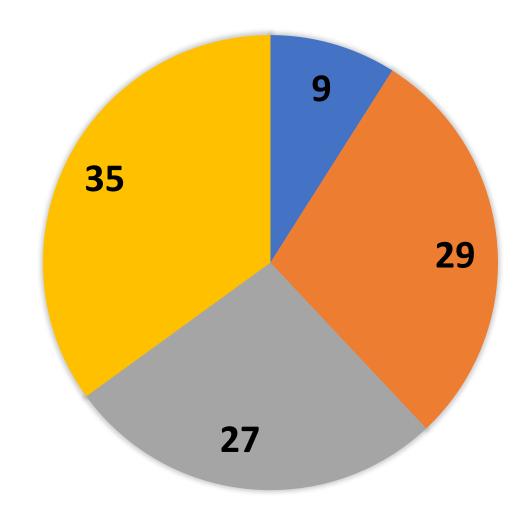
age between 19-73 years (m = 35.5)



69 males, 29 females, 2 diverse

PARTICIPANTS' HIGHEST DEGREE

- without high school diploma
- completed high school
- with bachelor's degree
- with higher degree



Modality

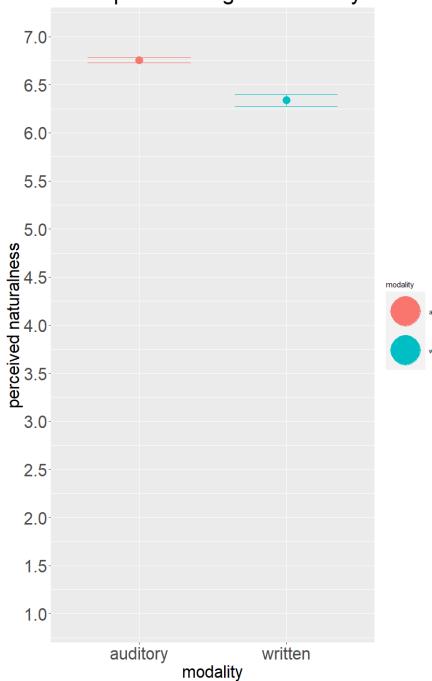
• auditory:

$$m = 6.76$$
, $sd = 0.53$

written:

$$m = 6.34$$
, $sd = 1.11$

Participants' ratings of modality

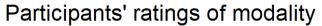


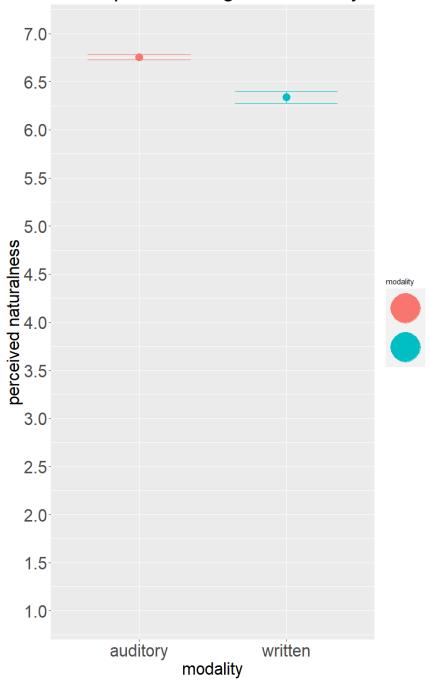
Modality

written:

$$\beta_1 = -1.99$$

- as hypothesised
- significant effect:p = 0.016





Emphasis

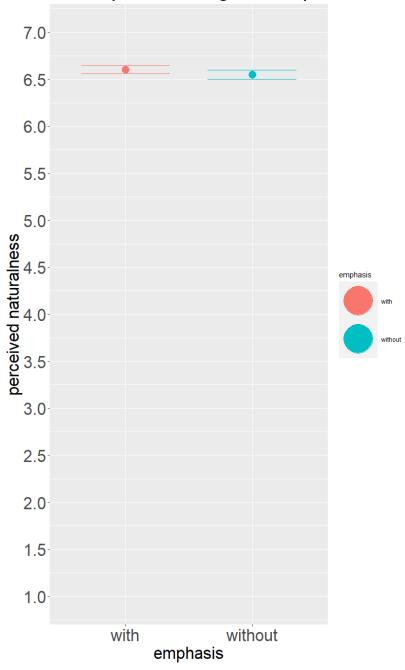
with emphasis:

$$m = 6.60$$
, $sd = 0.80$

without emphasis:

$$m = 6.55$$
, $sd = 0.91$

Participants' ratings of emphasis



Emphasis

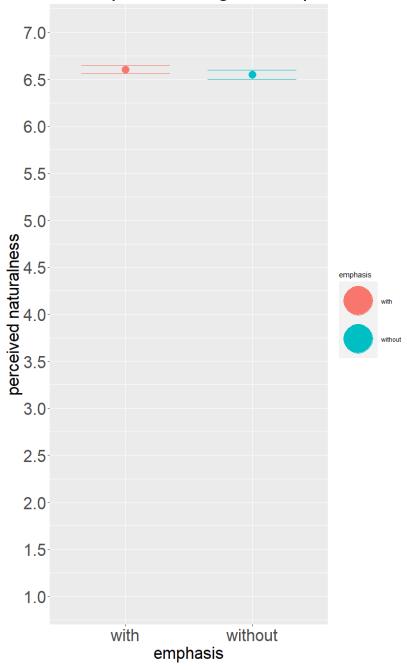
• without:

$$\beta_1 = -0.25$$

- as hypothesised
- significant effect:

$$p = 0.027$$

Participants' ratings of emphasis



Fragment type

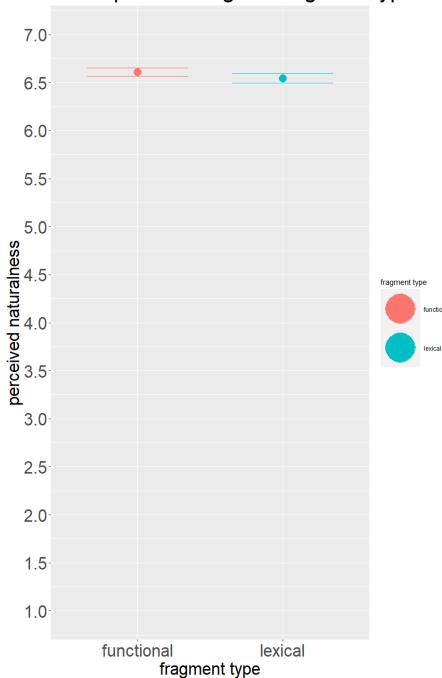
functional:

$$m = 6.61$$
, $sd = 0.82$

lexical:

$$m = 6.55$$
, $sd = 0.90$

Participants' ratings of fragment types



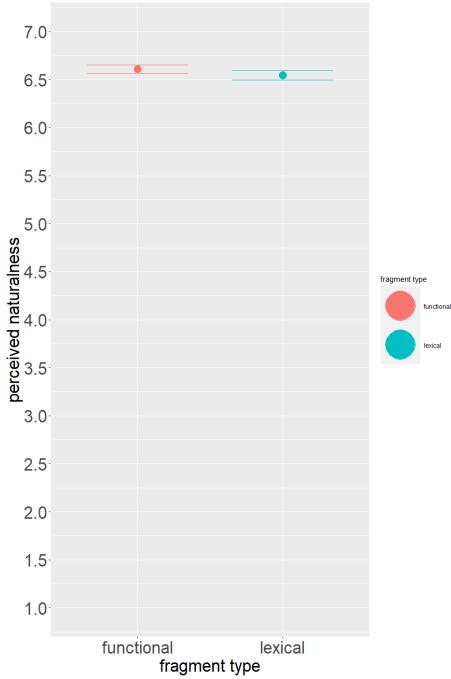
Fragment type

• lexical:

$$\beta_1 = -0.49$$

- inverse to hypothesis
- significantly effect:p < 0.01

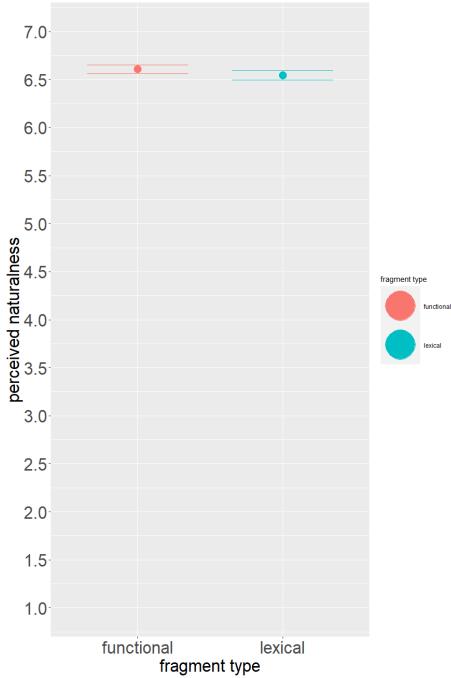
Participants' ratings of fragment types



Fragment type

Potential explanation for inverse trend?

Participants' ratings of fragment types



functional

A: Peter worked at the cinema FROM 6pm.

B: No, UNTIL 6pm.

lexical

A: Peter showed his identity card to the POLICE OFFICER.

B: No, the BOUNCER.

functional

A: Peter worked at the cinema FROM 6pm.

B: No, UNTIL 6pm.

prepositions have opposing meaning: binary contrast

lexical

A: Peter showed his identity card to the POLICE OFFICER.

B: No, the BOUNCER.

functional

A: Peter worked at the cinema FROM 6pm.

B: No, UNTIL 6pm.

prepositions have opposing meaning: binary contrast

lexical

A: Peter showed his identity card to the POLICE OFFICER.

B: No, the BOUNCER.

nouns denote alternative referents: non-binary contrast

prepositions have opposing meaning: binary contrast

nouns denote alternative referents: non-binary contrast

prepositions have opposing meaning: binary contrast

nouns denote alternative referents: non-binary contrast

The <u>clearer</u> the contrast, the <u>more natural</u> the dialogue?

accepted hypotheses
emphasis and
modality affect
judgements on contrastive fragments

accepted hypotheses
emphasis and
modality affect
judgements on contrastive fragments

inverse trend

- functional fragments rated more natural
- perhaps due to clearer contrast?

accepted hypotheses
emphasis and
modality affect
judgements on contrastive fragments

inverse trend

- functional fragments rated more natural
- perhaps due to clearer contrast?

further research

- influence of clarity of contrast
- compare phrasal answers to oneword answers

Thank you for listening!

DISCUSSION



- Akinnaso, F. N. (1982). On The Differences Between Spoken and Written Language. Language and Speech, 25(2), 97–125. https://doi.org/10.1177/002383098202500201
- ■Baayen, R. H., Davidson, D. J., & Bates, D. M. (2008). Mixed-effects modeling with crossed random effects for subjects and items. *Journal of Memory and Language*, *59*(4), 390–412. https://doi.org/10.1016/j.jml.2007.12.005
- ■Beckman, M. E., & Ayers. (1997). *Guidelines for ToBI labelling, version 3*. The Ohio State University Research Foundation. http://www.ling.ohio-state.edu/phonetics/ToBI/ToBI.0.html
- Biber, D., Johansson, S., Leech, G. N., Conrad, S., & Finegan, E. (2021). *Grammar of Spoken and Written English*. John Benjamins Publishing Company. https://doi.org/10.1075/z.232
- Black, M., Coltheart, M., & Byng, S. (1985). Forms of coding in sentence comprehension during reading. In M. Coltheart (Ed.), *Attention and performance XII: The psychology of reading* (pp. 655–672). Lawrence Erlbaum Associates.
- •Carlson, K., Frazier, L., & Clifton, C. (2009). How prosody constrains comprehension: A limited effect of prosodic packaging. *Lingua*, 119(7), 1066–1082. https://doi.org/10.1016/j.lingua.2008.11.003

- Chomsky, N. (1957). Syntactic Structures. Mouton de Gruyter.
- Chomsky, N., & Halle, M. (1991). The sound pattern of English (1st MIT Press paperback. ed). MIT Press.
- Christensen, R. H. B. (2018). Regression Models for Ordinal Data: Introducing R-package ordinal [Computer software]. https://cran.r-project.org/package=ordinal
- Curtis, A., Smith, T., Ziganshin, B., & Elefteriades, J. (2016). The Mystery of the Z-Score.
 AORTA, 4(4), 124–130. https://doi.org/10.12945/j.aorta.2016.16.014
- Delbar, N. A. (2019). Swiping in English and Dutch: The Interaction between R-Pronouns and Modal Particles.
- Featherston, S. (2008). Thermometer judgements as linguistic evidence. In C. M. Riehl & A. Rothe (Eds.), *Was ist linguistische Evidenz?* Shaker Verlag.
- Féry, C. (2011). German sentence accents and embedded prosodic phrases. *Lingua*, 121(13), 1906–1922. https://doi.org/10.1016/j.lingua.2011.07.005
- Féry, C., & Herbst, L. (2004). German Sentence Accent Revisited. *Interdisciplinary Studies in Information Structures 1. Working Pa-Pers of the SFB 632*, 43–75.

- •Franck, J., Bowers, J., Frauenfelder, U. H., & Vigliocco, G. (2003). Orthographic influences on agreement: A case for modality-specific form effects on grammatical encoding. *Language and Cognitive Processes*, *18*(1), 61–79. https://doi.org/10.1080/01690960143000452
- •Frazier, L., & Clifton, C. (1998). Comprehension of Sluiced Sentences. *Language and Cognitive Processes*, *13*(4), 499–520. https://doi.org/10.1080/016909698386474
- •Frazier, L., Taft, L., Roeper, T., Clifton, C., & Ehrlich, K. (1984). Parallel structure: A source of facilitation in sentence comprehension. *Memory & Cognition*, *12*(5), 421–430. https://doi.org/10.3758/BF03198303
- •Griffiths, J., Güneş, G., & Lipták, A. (2023). Reprise fragments in English and Hungarian: Further support for an in-situ Q-equivalence approach to clausal ellipsis. *Language*, *99*(1), 154–191. https://doi.org/10.1353/lan.2023.0000
- •Griffiths, J., & Lipták, A. (2014). Contrast and Island Sensitivity in Clausal Ellipsis. *Syntax*, 17(3), 189–234. https://doi.org/10.1111/synt.12018
- •Harris, J. A. (2015). Structure Modulates Similarity-Based Interference in Sluicing: An Eye Tracking study. *Frontiers in Psychology*, *6*. https://doi.org/10.3389/fpsyg.2015.01839

- Harris, J. A., & Carlson, K. (2016). Keep it local (and final): Remnant preferences in "let alone" ellipsis. Quarterly Journal of Experimental Psychology, 69(7), 1278–1301. https://doi.org/10.1080/17470218.2015.1062526
- Harris, J. A., & Carlson, K. (2018). Information Structure Preferences in Focus-Sensitive Ellipsis: How Defaults Persist. *Language and Speech*, 61(3), 480–512. https://doi.org/10.1177/0023830917737110
- Häussler, J., & Juzek, T. (2016). Hot Topics Surrounding Acceptability Judgement Tasks.
 Proceedings of Linguistic Evidence. https://publikationen.unituebingen.de/xmlui/handle/10900/77638
- Hedderich, J., & Sachs, L. (2016). Angewandte Statistik. Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-662-45691-0
- Jasso, J. (2022). How Does Parent Input Influence Bilingual Children's Knowledge and Use of Spanish Subjunctive? A Dyadic Study [Dissertation]. University of Texas at Austin.
- Juzek, T. S. (2016). Acceptability Judgement Tasks and Grammatical Theory. University of Oxford.

- Kayali, N. (2023). "Does this make sense?": The effect of matching guise in regional accent on grammatical acceptability judgments. *Proceedings of the Linguistic Society of America*, 8, 5525. https://doi.org/10.3765/plsa.v8i1.5525
- Krifka, M. (2008). Basic notions of information structure. Acta Linguistica Hungarica, 55(3–4), 243–276. https://doi.org/10.1556/ALing.55.2008.3-4.2
- Lambrecht, K. (1994). Information structure and sentence form: Topic, focus, and the mental representations of discourse referents. Cambridge University Press.
- Lobeck, A. C. (1995). Ellipsis: Functional heads, licensing, and identification. Oxford University Press.
- Merchant, J. (2004). Fragments and ellipsis. Linguistics and Philosophy, 27(6), 661–738.
 https://doi.org/10.1007/s10988-005-7378-3
- Merchant, J. (2019). Ellipsis: A survey of analytical approaches. In J. Van Craenenbroeck & T. Temmerman (Eds.), *The Oxford Handbook of Ellipsis* (1st ed., pp. 19–45). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780198712398.013.2

- Meurers, D., Ziai, R., Amaral, L., Boyd, A., Dimitrov, A., Metcalf, V., & Ott, N. (2010). Enhancing Authentic Web Pages for Language Learners. *Proceedings of the 5th Workshop on Innovative Use of NLP for Building Educational Applications, NAACL-HLT 2010*, 10–18. http://purl.org/dm/papers/meurers-ziai-et-al-10.html
- Opitz, A., & Bordag, D. (2022). The Impact of Orthography on Lexical Access: The Case of Capitalization and Word Category Information in L1 and L2 German. Studies in Second Language Acquisition, 44(4), 1194–1209. https://doi.org/10.1017/S0272263121000711
- Palan, S., & Schitter, C. (2018). Prolific.ac—A subject pool for online experiments. *Journal of Behavioral and Experimental Finance*, 17, 22–27. https://doi.org/10.1016/j.jbef.2017.12.004
- Phillips, C., & Parker, D. (2014). The psycholinguistics of ellipsis. Lingua, 151, 78–95. https://doi.org/10.1016/j.lingua.2013.10.003
- Prolific Academic. (2019). [Computer software]. https://prolific.ac/
- R Development Core Team. (2015). [Computer software]. http://www.r-project.org/

- Rasekhi, V., & Harris, J. A. (2021). Resolving ambiguous polarity stripping ellipsis structures in Persian. Glossa: A Journal of General Linguistics, 6(1), 1–31.
 https://doi.org/10.16995/glossa.5881
- Schütze, C. T. (2016). The empirical base of linguistics: Grammaticality judgments and linguistic methodology [Application/pdf]. Classics in Linguistics, 1.01 MB. https://doi.org/10.17169/LANGSCI.B89.100
- Sedarous, Y., & Namboodiripad, S. (2020). Using audio stimuli in acceptability judgment experiments. Language and Linguistics Compass, 14(8), 1–21.
 https://doi.org/10.1111/lnc3.12377
- Sprouse, J. (2011). A validation of Amazon Mechanical Turk for the collection of acceptability judgments in linguistic theory. *Behavior Research Methods*, *43*(1), 155–167. https://doi.org/10.3758/s13428-010-0039-7
- Sprouse, J., Schütze, C. T., & Almeida, D. (2013). A comparison of informal and formal acceptability judgments using a random sample from Linguistic Inquiry 2001–2010. *Lingua*, 134, 219–248. https://doi.org/10.1016/j.lingua.2013.07.002

- Ståhle, L., & Wold, S. (1989). Analysis of variance. *Chemometrics and Intelligent Laboratory Systems*, *6*(4), 259–272. https://doi.org/10.1016/0169-7439(89)80095-4
- Wagner, M. (2012). Focus and givenness: A unified approach. In I. Kučerová & A. Neeleman (Eds.), Contrasts and Positions in Information Structure (1st ed., pp. 102–147). Cambridge University Press. https://doi.org/10.1017/CBO9780511740084.007
- Wagner, P. S. (1999). The synthesis of German contrastive focus. Proceedings of the 14th ICPhS, 1529–1532.
- Wierzba, M., Brown, J. M. M., & Fanselow, G. (2023). The syntactic flexibility of German and English idioms: Evidence from acceptability rating experiments. *Journal of Linguistics*, 1–38. https://doi.org/10.1017/S0022226723000105
- Winkler, S. (2019). Ellipsis and Prosody. In J. Van Craenenbroeck & T. Temmerman (Eds.), The Oxford Handbook of Ellipsis (1st ed., pp. 357–386). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780198712398.013.15

FRAGMENT THEORY

A: Mary stole the cookie.

B: No, Peter stole the cookie.

Licensing condition

only given material can be omitted



Parallelism

A: Marie stellt ihrem Vater ihren Freund vor.

Mary introduces her.SG.DAT father.SG.DAT her friend PART

'Mary introduces her friend to her father.'

B: Nein, ihrem Bruder.

no her.**SG.DAT** brother.**SG.DAT**

'No, her brother.'

- category
- case
- number
- thematic role
- prosodic weight



Locality

H1

Local contrasts (B) are preferred over nonlocal contrasts (B')

stimuli

A: John took the poodle to the park.

B: No, the zoo. (local contrast with the park)

B': No, the pug. (nonlocal contrast with the poodle)

result

processors rate local contrasts as more natural



Emphasis:

Pitch accent

H1

Does pitch accent influence the interpretation of ambiguous replacives?

stimuli

- (1) ROGER insisted that Alice was reliable, not ANDREW
- (2) Roger insisted that ALICE was reliable, not ANDREW

result

Pitch accent significantly affects the choice of the correlate



Emphasis: Orthography

capitalisation

- nouns are capitalised in German
- L1 and L2 speakers use orthography to process word-class information

colour highlighting

- input enhancement for second language learning
- orthographic marking facilitates noticing and understanding of L2 patterns



Modality

H1

"Spoken constructions" receive higher ratings in an auditory questionnaire

stimuli

Their being unaware of the situation annoyed Rob

result

modality had no significant effect



Modality

H1

Do orthographic cues influence subject-verb agreement?

stimuli

chanson 'song'/chansons 'songs' vs. refus 'refusal-S,P'

result

- less errors if number is marked orthographically
- orthographic marking is irrelevant in speaking
- suggests modality-specific effects of orthography



Meaning

types

lexical vs. functional words

spoken

stress is usually placed on lexical words

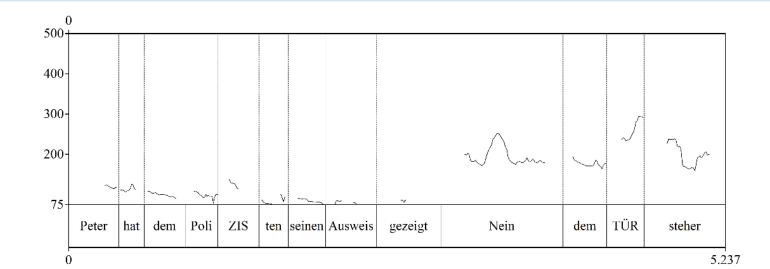
textual

- functional words are more likely to be eluded
- functional words are fixated less often and with shorter gaze durations

A: Peter showed his ID to the POLICE OFFICER.

B: No, the BOUNCER.

written



auditory

A: Peter showed his identity card to the POLICE

OFFICER.

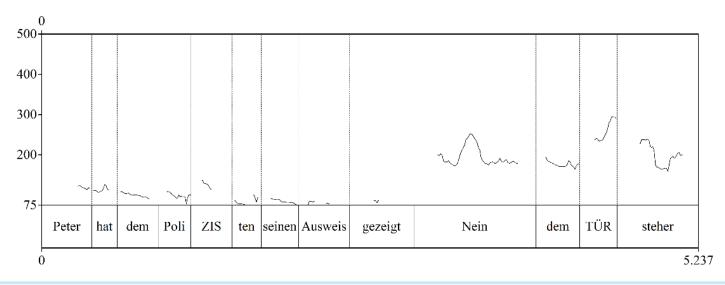
B: No, the BOUNCER.

with emphasis

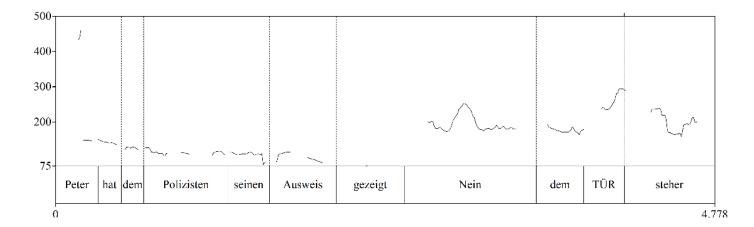
A: Peter showed his identity card to the police officer.

B: No, the bouncer.

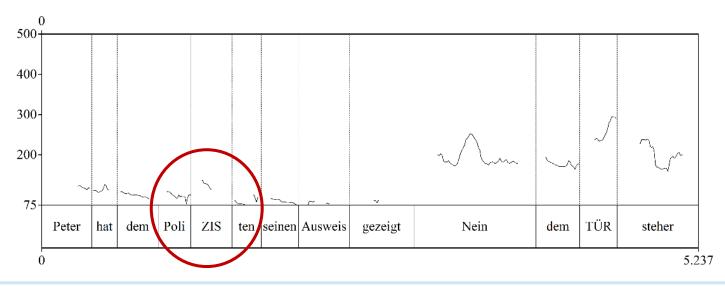
without emphasis



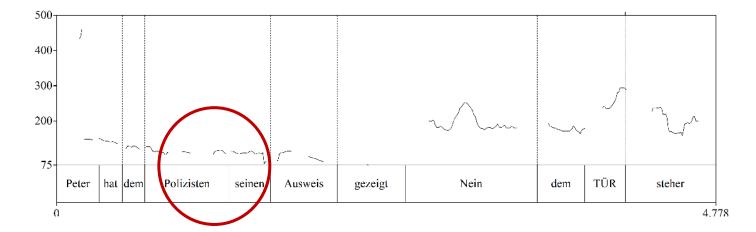
with emphasis



without emphasis



with emphasis



without emphasis

A: Peter showed his identity card to the POLICE

OFFICER.

B: No, the BOUNCER.

lexical

A: Peter worked at the cinema FROM 6pm.

B: No, UNTIL 6pm.

functional

ANALYSIS

z-score

- X = individual data point
- μ = mean
- σ = standard deviation

$$Z = rac{X - \mu}{\sigma}$$

CLMM

- Emphasis: without $\beta 1 = -0.25$, p = 0.03
- Modality: written $\beta 1 = -1.99$, p = 0.02
- Fragment type: lexical $\beta 1 = -0.4486$, p < 0.01

ANALYSIS

AIC

- difference: -28
- Lower AIC for null model

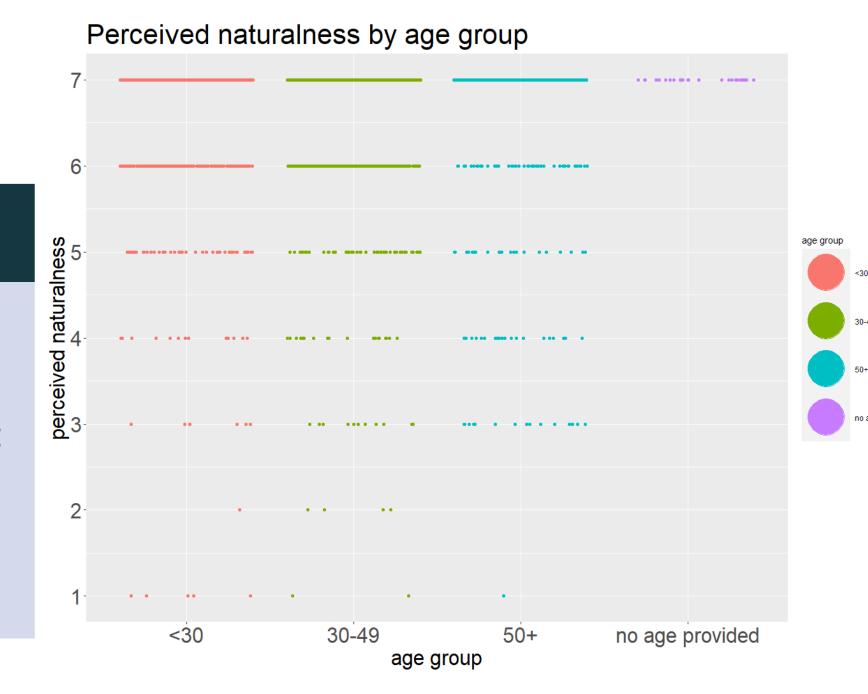
ANOVA

- p < 0.01
- significantly better model fit

age

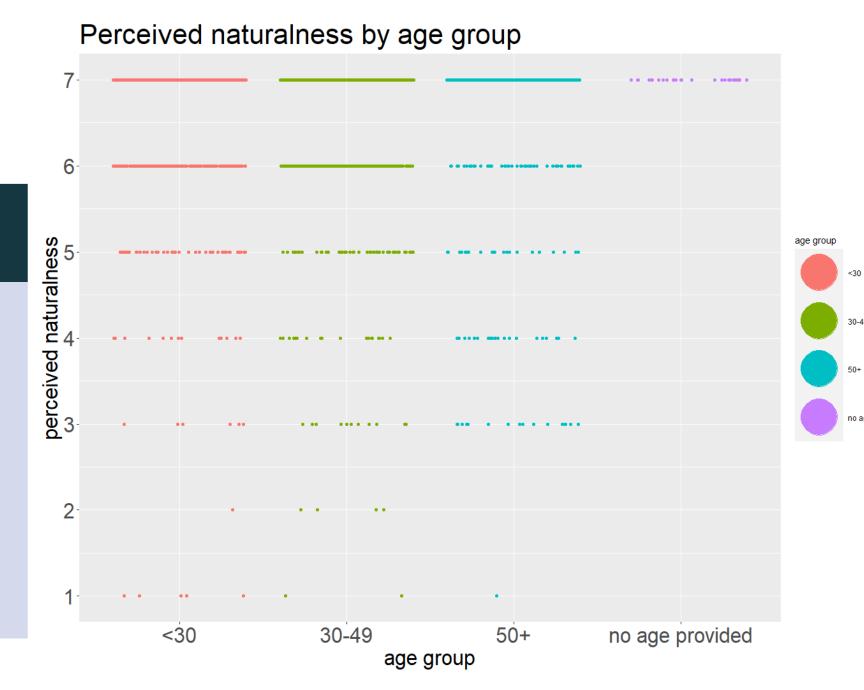
- <30 years:
 - m = 6.66
- 30-49 years:
 - m = 6.54
- 50+ years:

m = 6.43



age

- <30 years:42 pps
- 30-49 years:41 pps
- 50+ years:16 pps



linguistic profile

bilingual:

$$m = 6.43,$$

$$sd = 1.29$$

monolingual:

$$m = 6.59,$$

$$sd = 0.80$$

Perceived naturalness by linguistic profile



linguistic profile

- 9 bilinguals
- 91 monolinguals

