

ACCEPTABILITY JUDGEMENTS ON CONTRASTIVE DIALOGUES INVOLVING ELLIPSIS

Master's thesis

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CONTRASTIVE DIALOGUES INVOLVING ELLIPSIS



Fragment theory



Research question & hypotheses



Study design



Participants



Results



Conclusions



Discussion

FRAGMENT THEORY

A: Mary stole the cookie.

B: No, Peter.

FRAGMENT THEORY

A: Mary stole the cookie.

B: No, Peter ~~stole the cookie~~.

FRAGMENT THEORY

A: Mary stole the cookie.

B: No, Peter ~~stole the cookie~~.

Fragment

remnant of ellipsis

FRAGMENT THEORY

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

FRAGMENT THEORY

A: Mary stole the cookie.

B: No, Peter.

assign
category to
remnant



find correlate
in antecedent
clause



construct
elided phrase

FRAGMENT THEORY

A: Mary stole the cookie.

B: No, Peter **DP=Remnant**

assign
category to
remnant



find correlate
in antecedent
clause



construct
elided phrase

FRAGMENT THEORY

A: **Mary**_{DP=Correlate} stole the cookie.

B: No, Peter_{DP=Remnant}

assign
category to
remnant



find correlate
in antecedent
clause



construct
elided phrase

FRAGMENT THEORY

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

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

assign
category to
remnant




find correlate
in antecedent
clause



**construct
elided phrase**

RESEARCH QUESTION



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

FACTORS



Emphasis



Modality



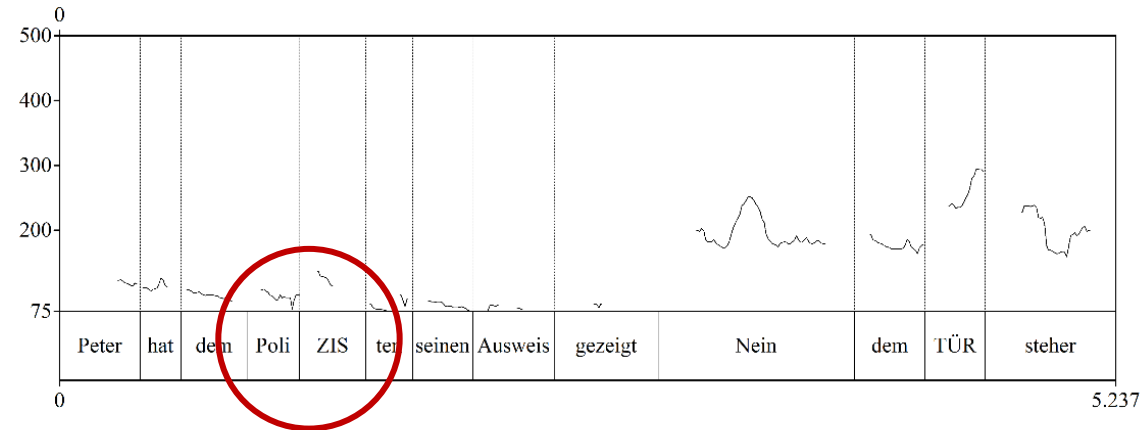
Fragment type

FACTORS

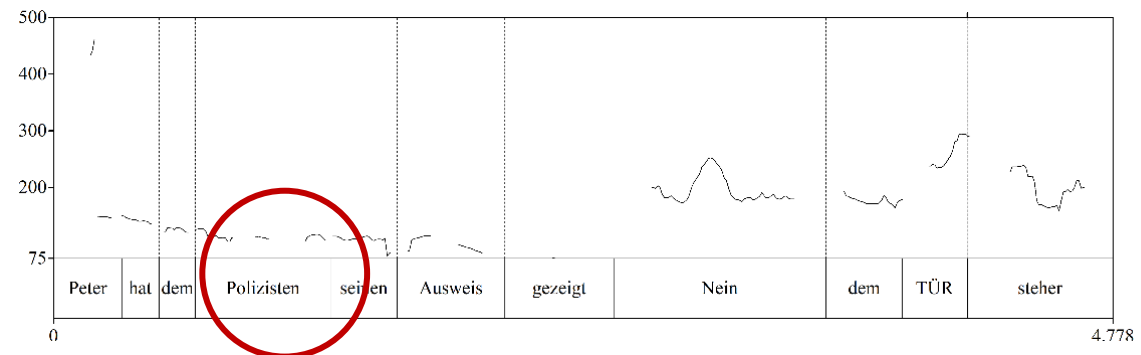


Emphasis

with
emphasis



without
emphasis

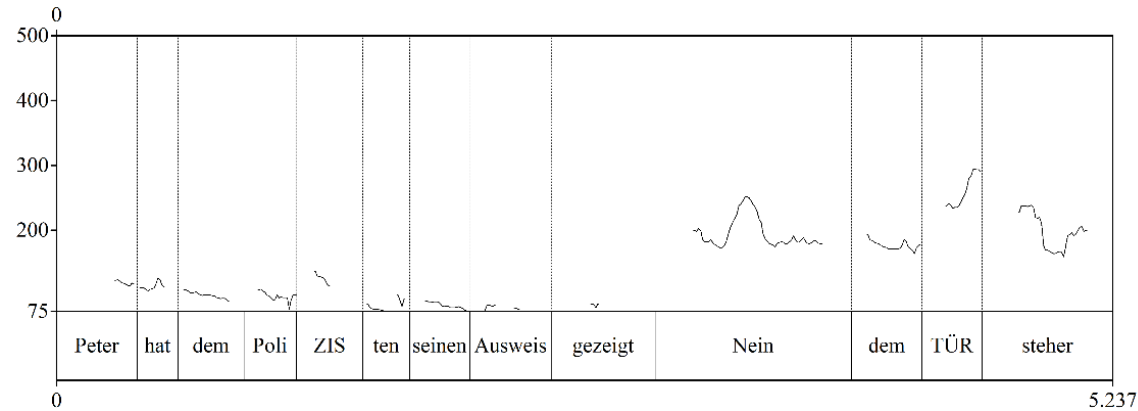


FACTORS



Modality

auditory



written

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

B: No, the BOUNCER.

FACTORS



Fragment
type

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.

HYPOTHESES



Emphasis

emphasis on contrasting words > lacking emphasis



Modality



Fragment type

HYPOTHESES



Emphasis

emphasis on contrasting words > lacking emphasis



Modality

auditory > written



Fragment type

HYPOTHESES



Emphasis

emphasis on contrasting words > lacking emphasis



Modality

auditory > written



Fragment type

lexical fragments > functional fragments

STUDY DESIGN

Modality

- written
- auditory

Emphasis

- with
- without

Fragment type

- lexical
- functional

STUDY DESIGN

Modality

- written
- auditory

between-subject

Emphasis

- with
- without

within-subject

Fragment type

- lexical
- functional

STUDY DESIGN

Acceptability Judgement Task

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

STUDY DESIGN

Acceptability Judgement Task

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- 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 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 völlig natürlich

Bitte geben Sie eine Bewertung ab.

STUDY DESIGN

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.

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völlig unnatürlich ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☒ 5 ☐ 6 ☐ 7 völlig natürlich

WEITER

PARTICIPANTS



n = 100



crowdsourced from Prolific



German native speakers



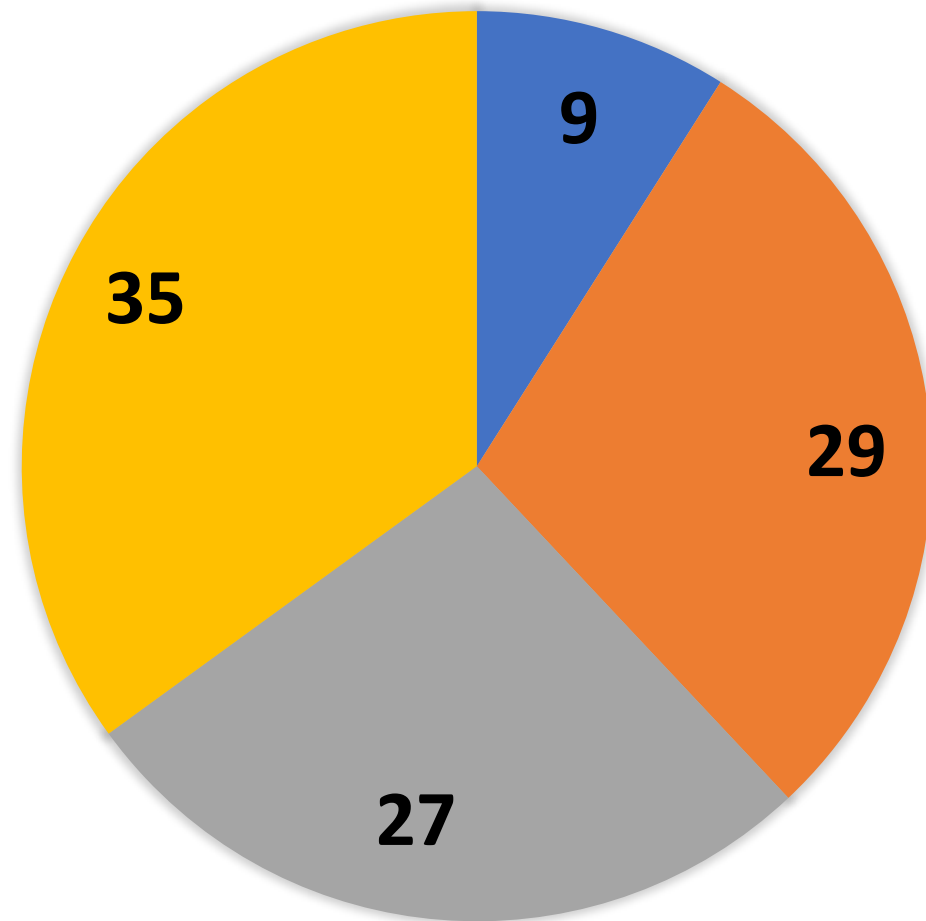
age between 19-73 years (m = 35.5)



69 males, 29 females, 2 diverse

PARTICIPANTS' HIGHEST DEGREE

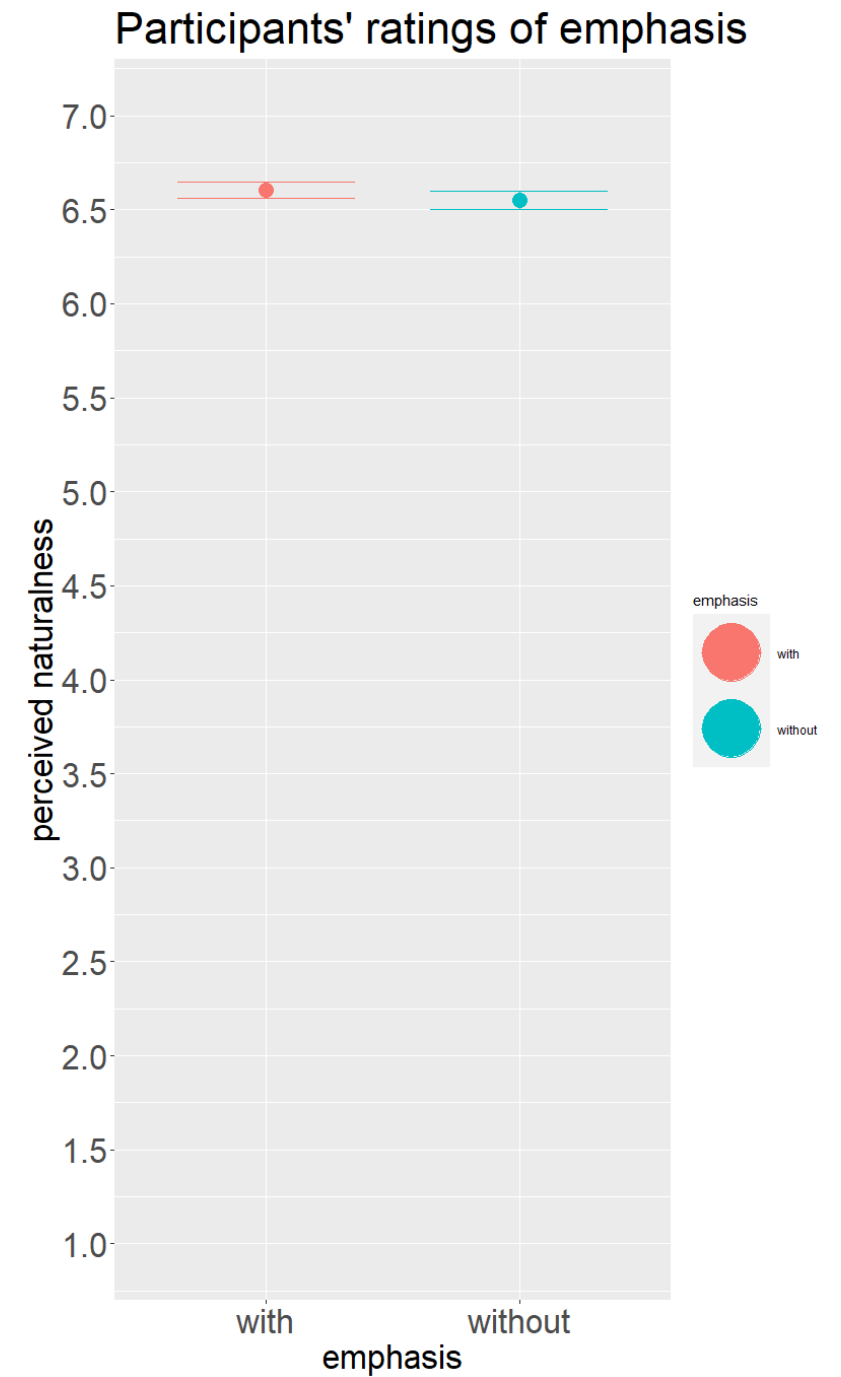
- without high school diploma
- completed high school
- with bachelor's degree
- with higher degree



RESULTS

Emphasis

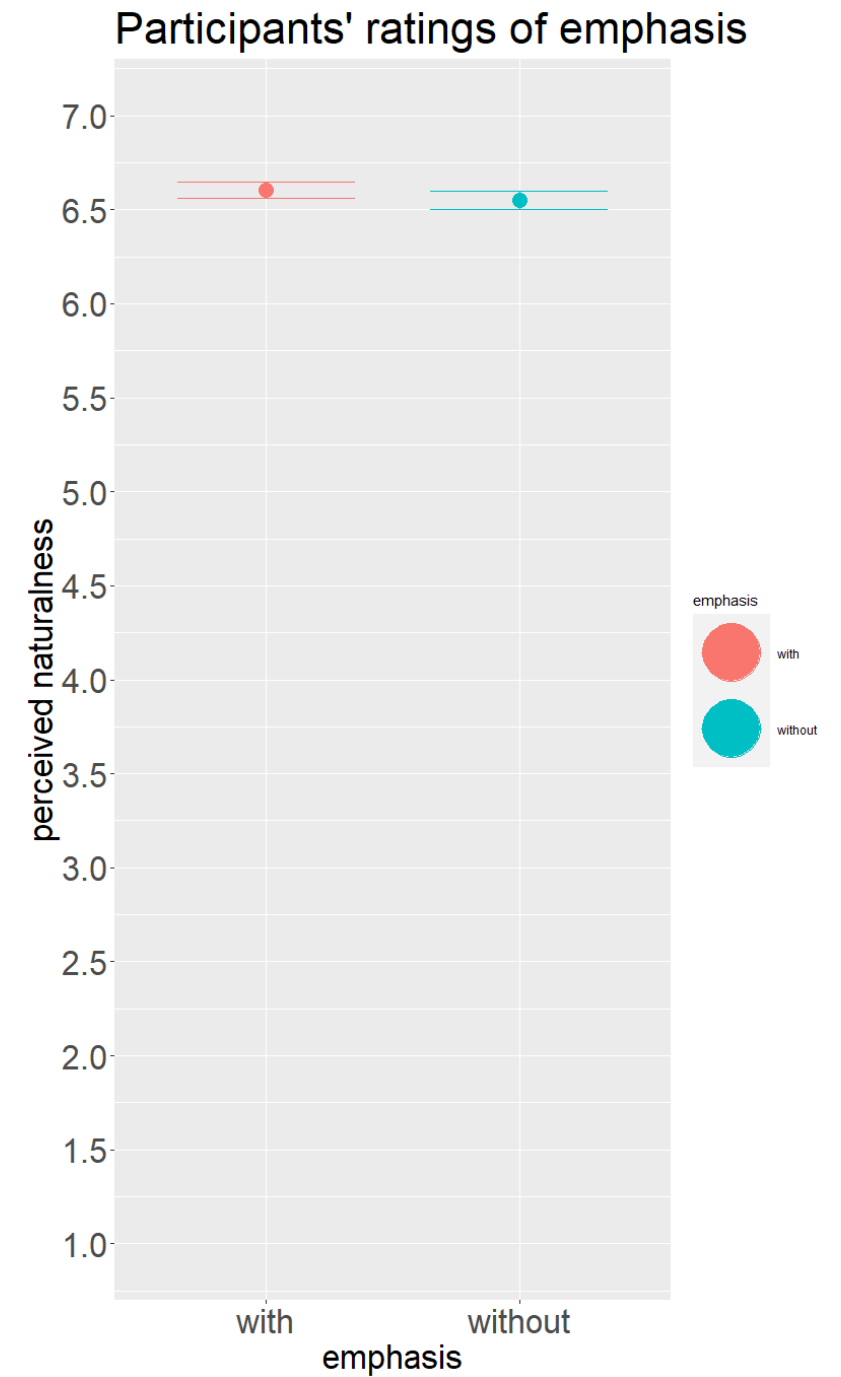
- **with emphasis:**
 $m = 6.60, sd = 0.80$
- **Without emphasis:**
 $m = 6.55, sd = 0.91$



RESULTS

Emphasis

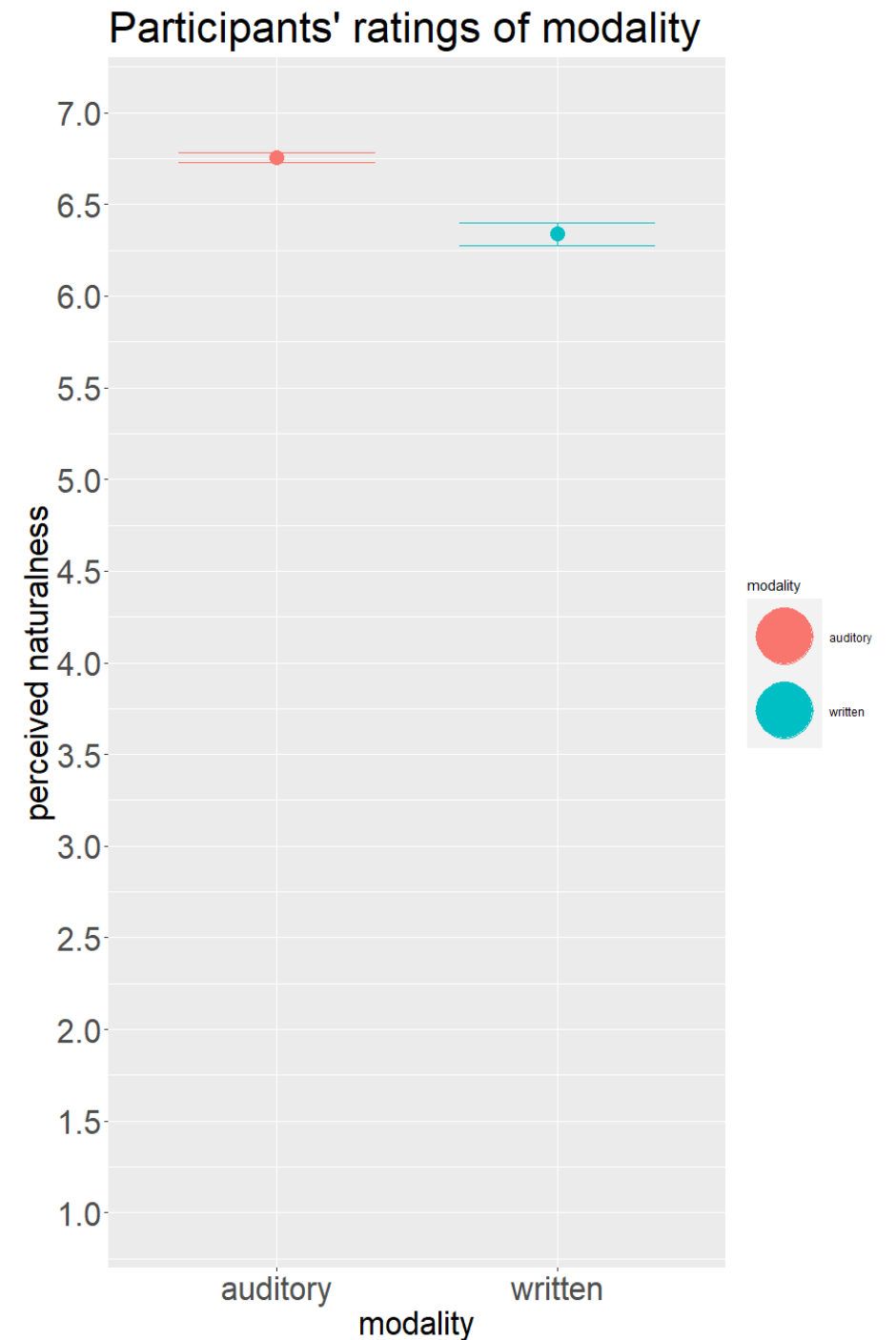
- without:
 $\beta_1 = -0.25$
- as hypothesised
- significant effect:
 $p = 0.027$



RESULTS

Modality

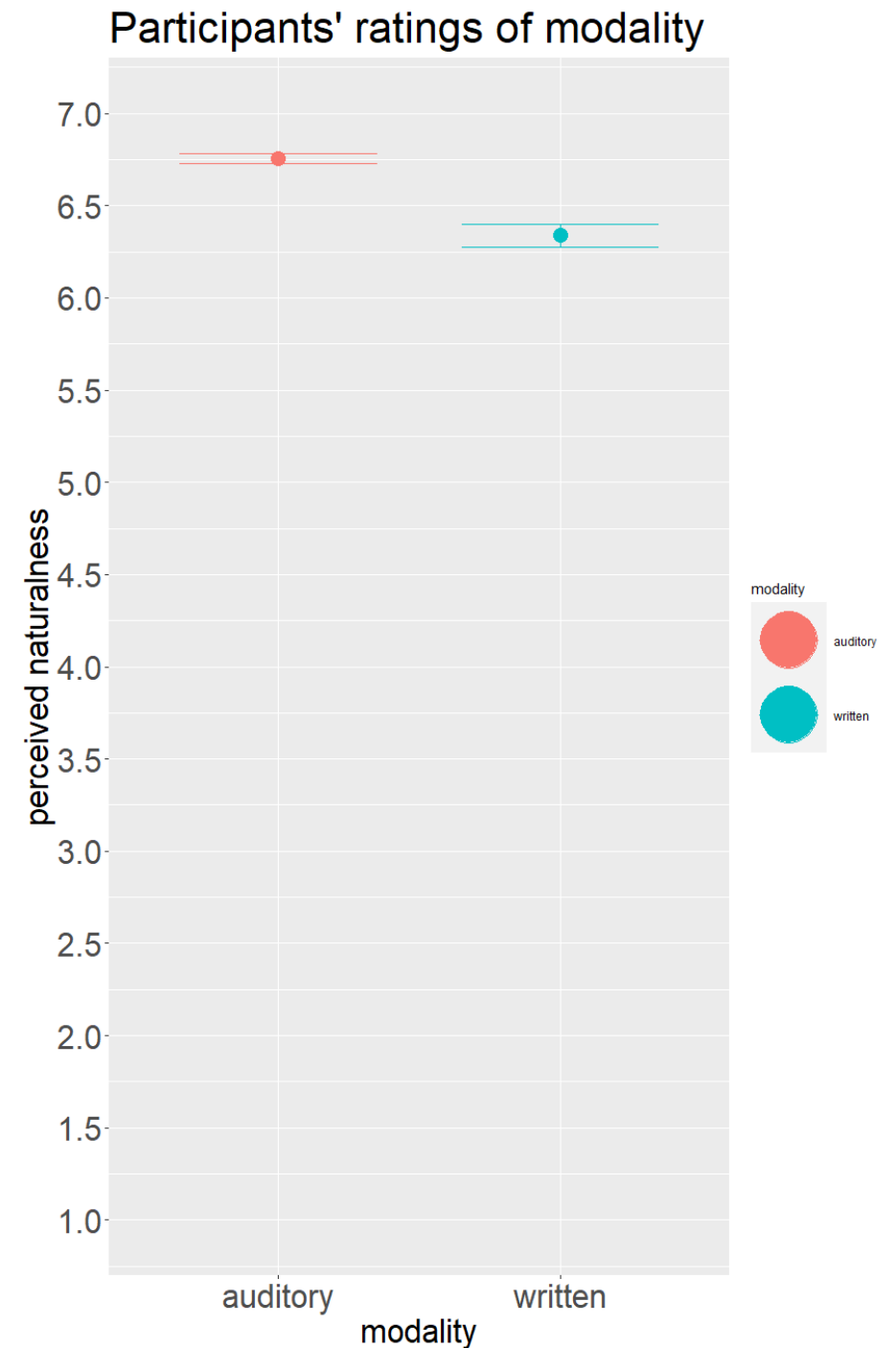
- **auditory:**
 $m = 6.76, sd = 0.53$
- **written:**
 $m = 6.34, sd = 1.11$



RESULTS

Modality

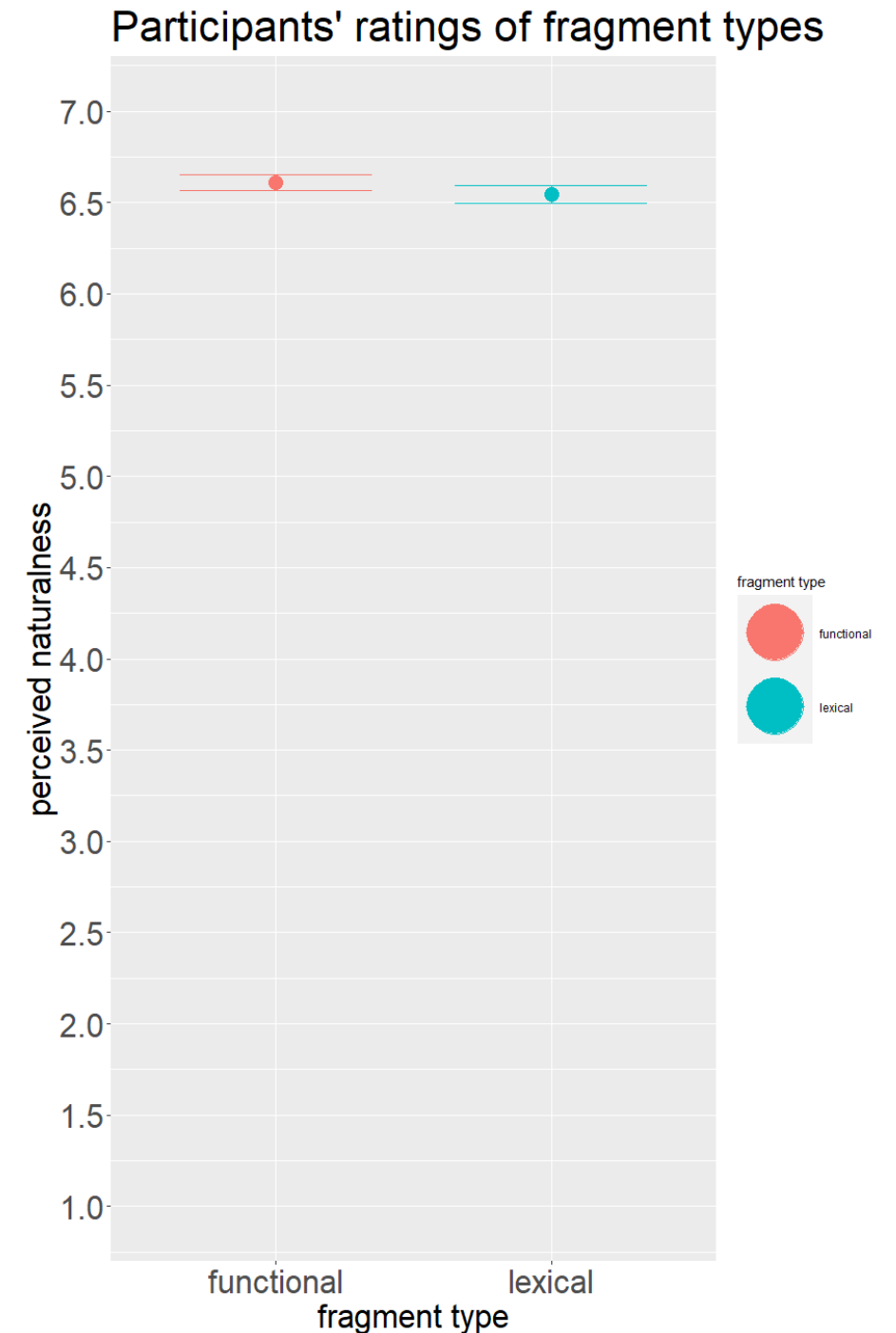
- **written:**
 $\beta_1 = -1.99$
- as hypothesised
- significant effect:
 $p = 0.016$



RESULTS

Fragment type

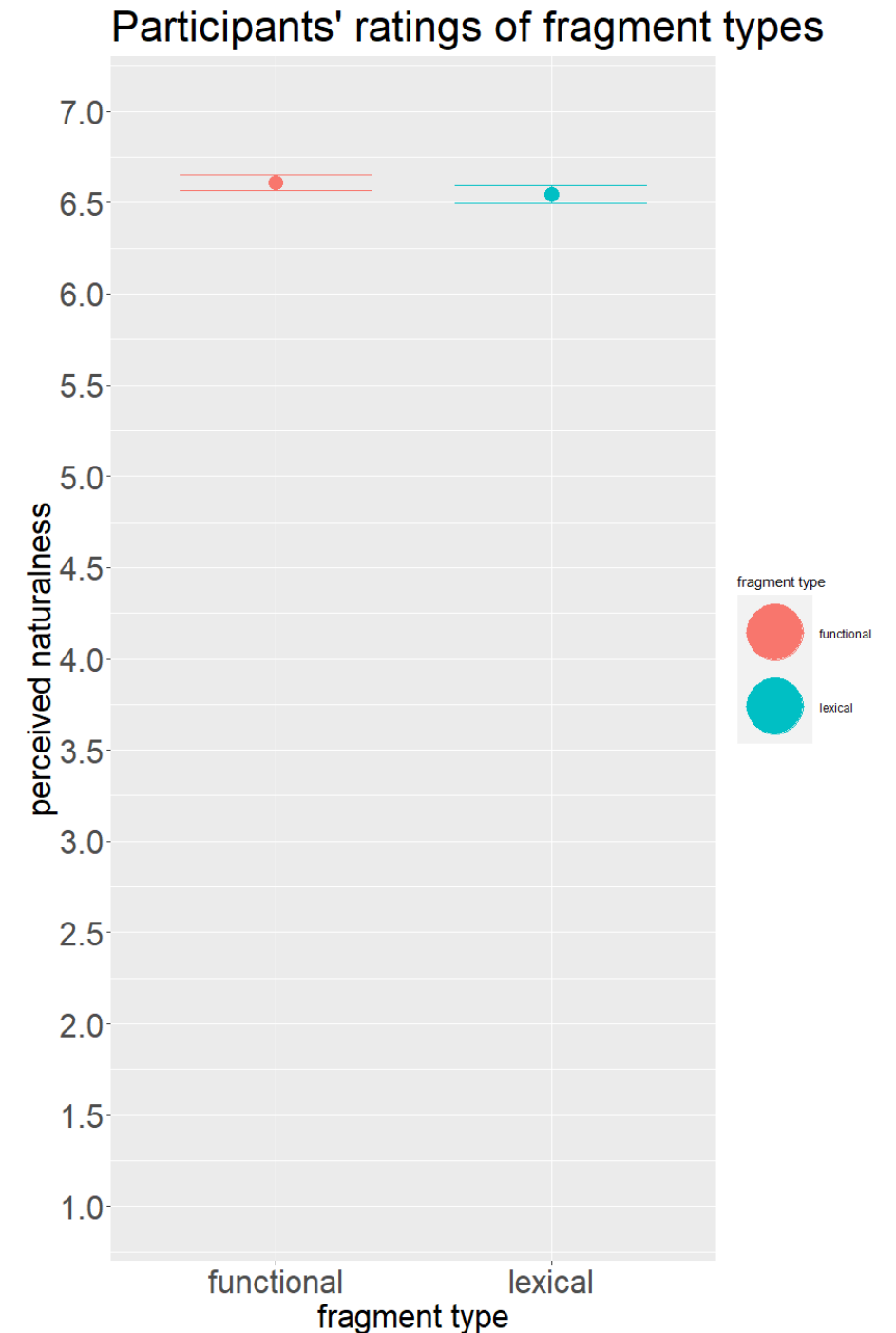
- **functional:**
 $m = 6.61, sd = 0.82$
- **lexical:**
 $m = 6.55, sd = 0.90$



RESULTS

Fragment type

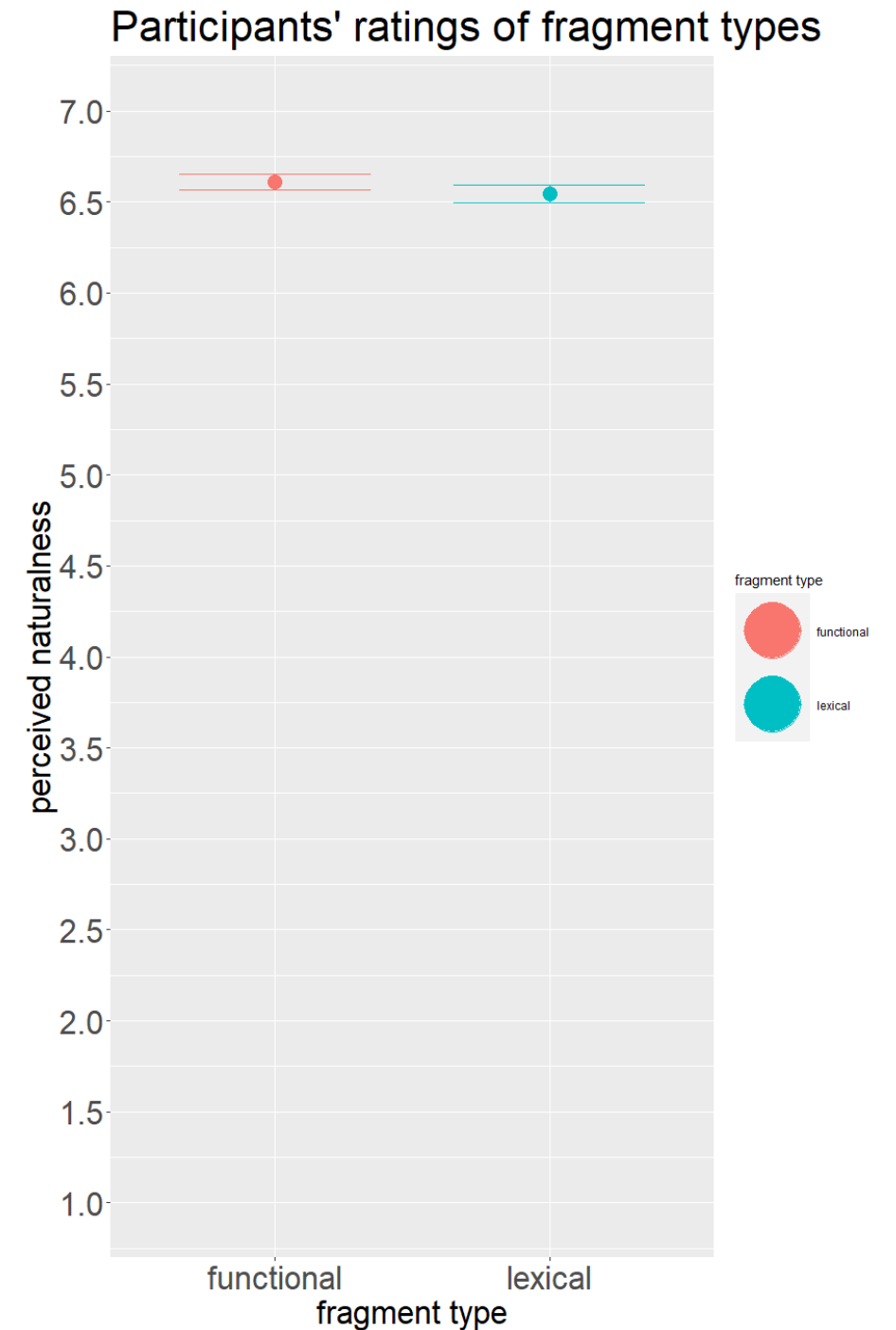
- **lexical:**
 $\beta_1 = -0.49$
- **inverse** to hypothesis
- **significantly effect:**
 $p < 0.01$



RESULTS

Fragment type

Potential explanation for
inverse trend?



INVERSE TREND

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.

INVERSE TREND

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

INVERSE TREND

prepositions have
opposing meaning:
binary contrast

nouns denote
alternative referents:
non-binary contrast



The clearer the contrast, the
more natural the dialogue?

INVERSE TREND

Explanation for inverse trend:

- **prepositions** have opposing meaning → binary contrast
- **nouns** denote alternative referents → non-binary contrast
- clear contrast = natural ?

A: Peter worked at the cinema FROM 6pm.

B: No, UNTIL 6pm.

functional

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

B: No, the BOUNCER.

lexical

STUDY DESIGN: STIMULI

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

B: No, the BOUNCER.

lexical

A: Peter worked at the cinema FROM 6pm.

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functional

CONCLUSIONS

accepted hypotheses

emphasis and
modality affect
judgements on con-
trastive fragments

CONCLUSIONS

accepted hypotheses

emphasis and
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judgements on con-
trastive fragments

inverse trend

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

CONCLUSIONS

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 one-word answers

Thank you for listening!

DISCUSSION



REFERENCES

- 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>

REFERENCES

- 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.

REFERENCES

- 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>

REFERENCES

- 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.uni-tuebingen.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.

REFERENCES

- 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>

REFERENCES

- 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/>

REFERENCES

- 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>

REFERENCES

- 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](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

PREVIOUS STUDIES



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

PREVIOUS STUDIES



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

PREVIOUS STUDIES



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

PREVIOUS STUDIES



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

PREVIOUS STUDIES



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

PREVIOUS STUDIES



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

PREVIOUS STUDIES



Meaning

types

lexical vs. functional words

spoken

stress is usually placed on lexical words

textual

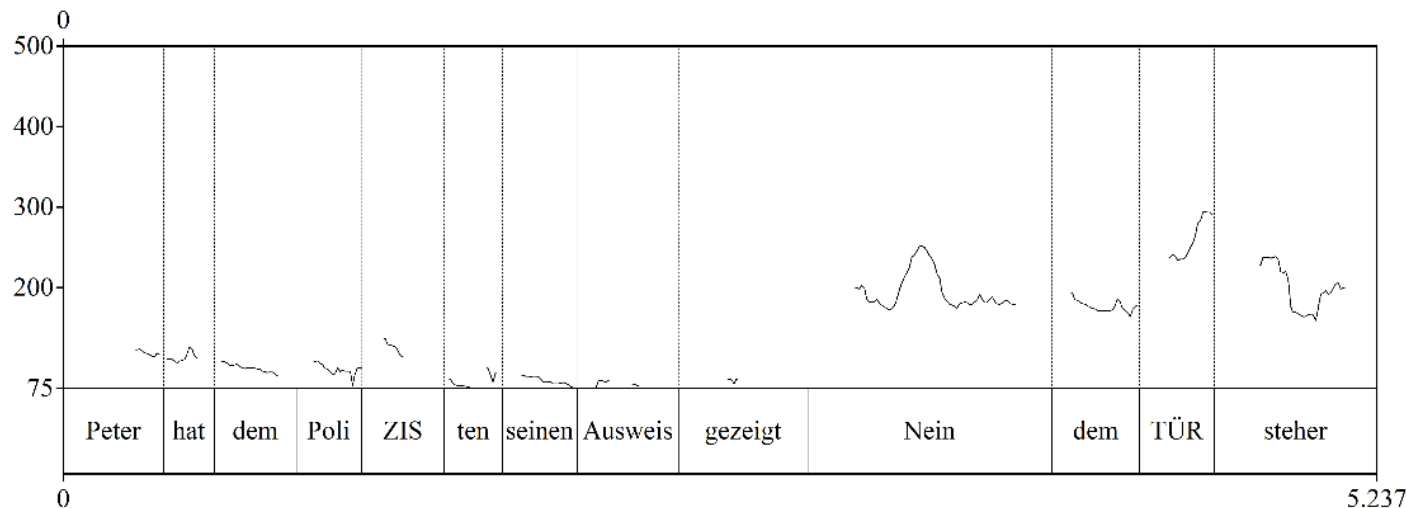
- functional words are more likely to be eluded
- functional words are fixated less often and with shorter gaze durations

STUDY DESIGN: STIMULI

A: Peter showed his ID to the POLICE OFFICER.

B: No, the BOUNCER.

written



auditory

STUDY DESIGN: STIMULI

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

B: No, the BOUNCER.

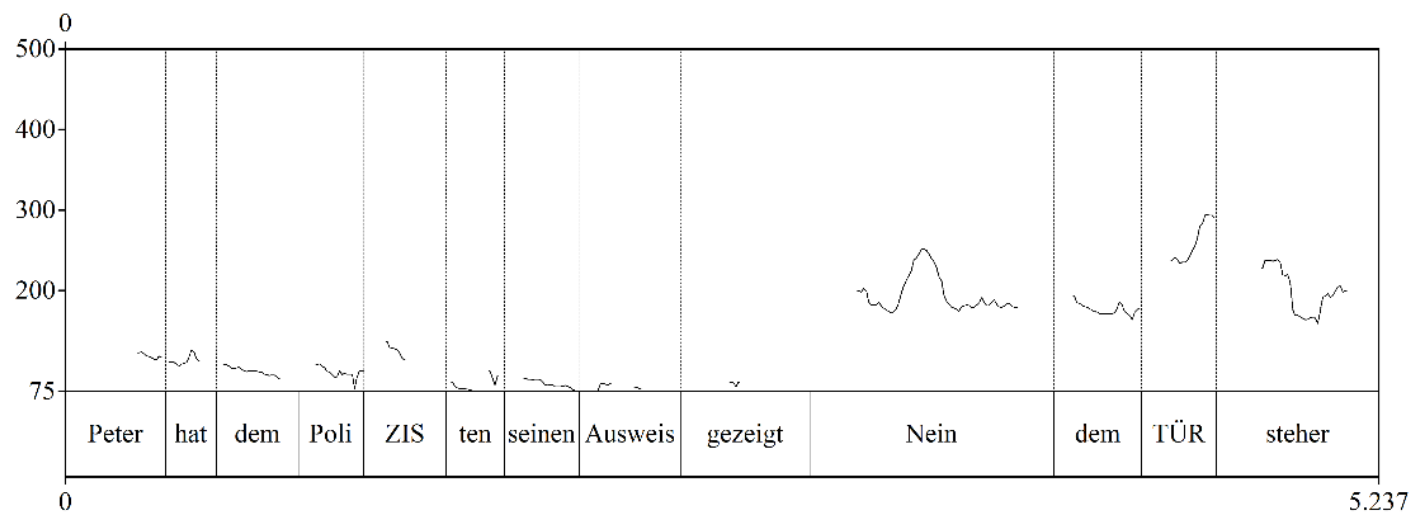
**with
emphasis**

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

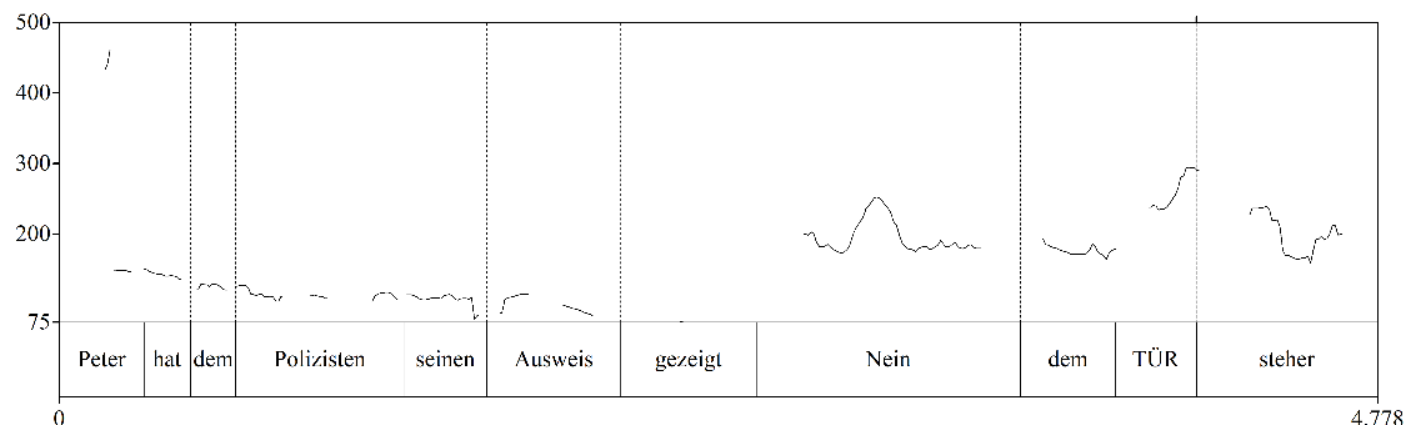
B: No, the bouncer.

**without
emphasis**

STUDY DESIGN: STIMULI

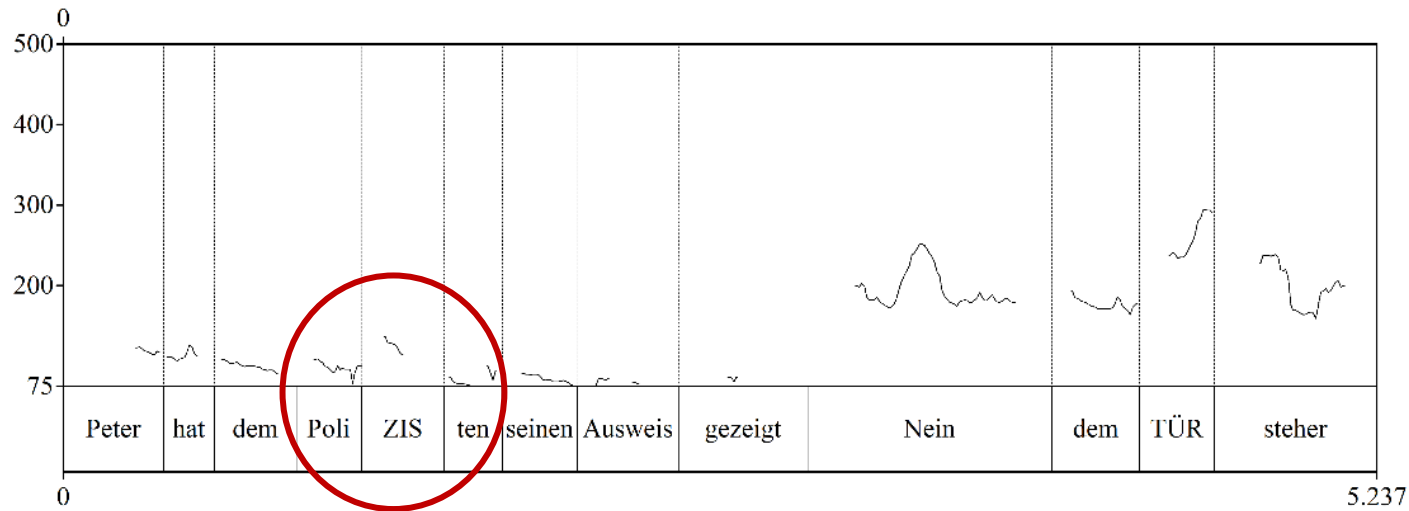


**with
emphasis**

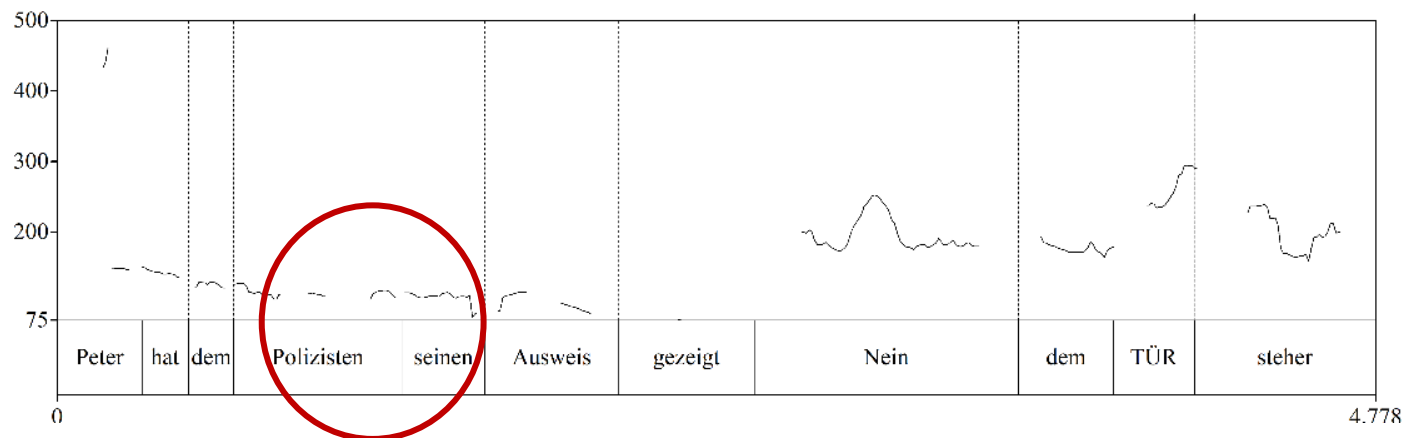


**without
emphasis**

STUDY DESIGN: STIMULI



**with
emphasis**



**without
emphasis**

STUDY DESIGN: STIMULI

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

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

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

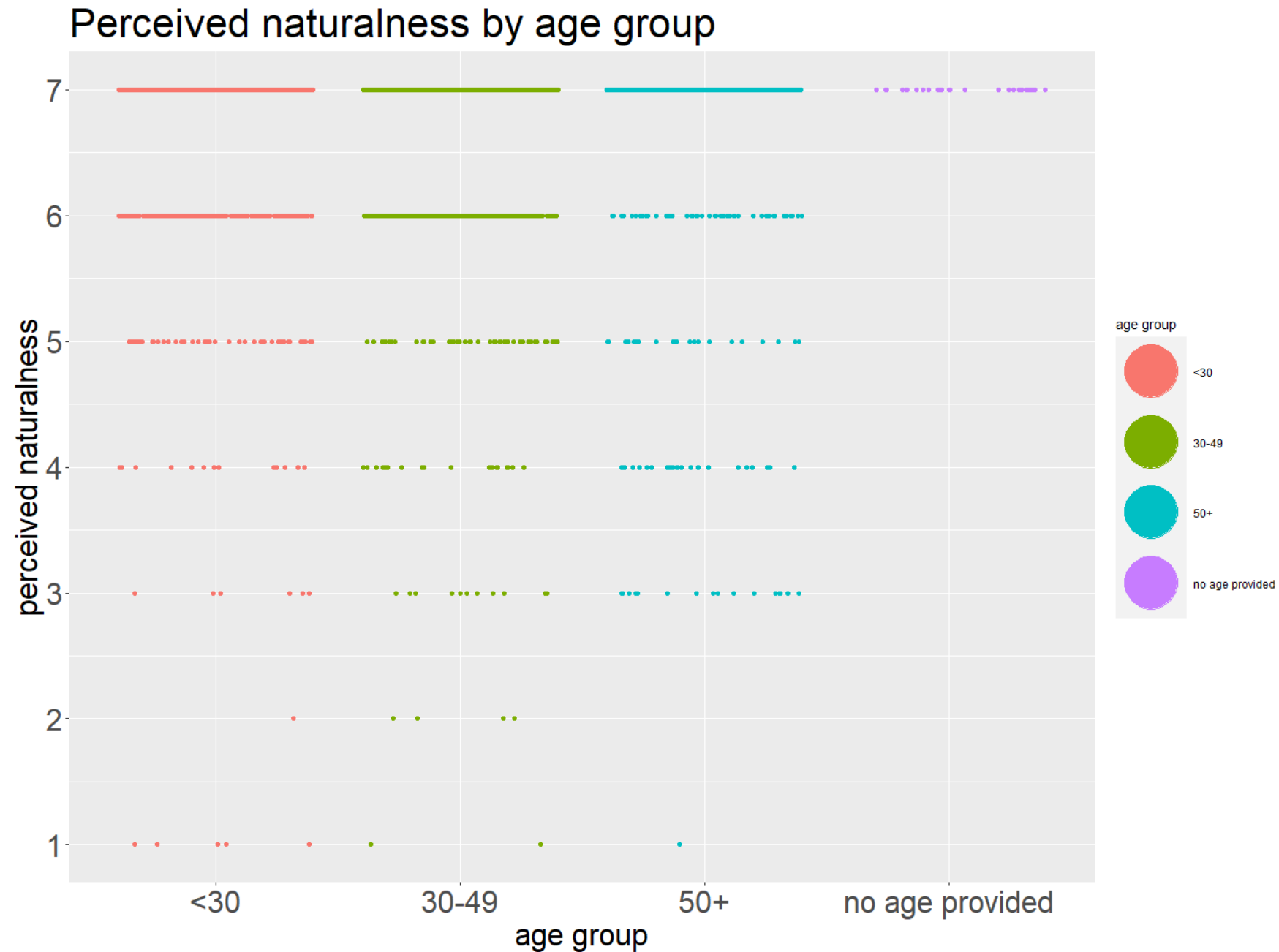
ANOVA

- $p < 0.01$
- significantly better model fit

RESULTS

age

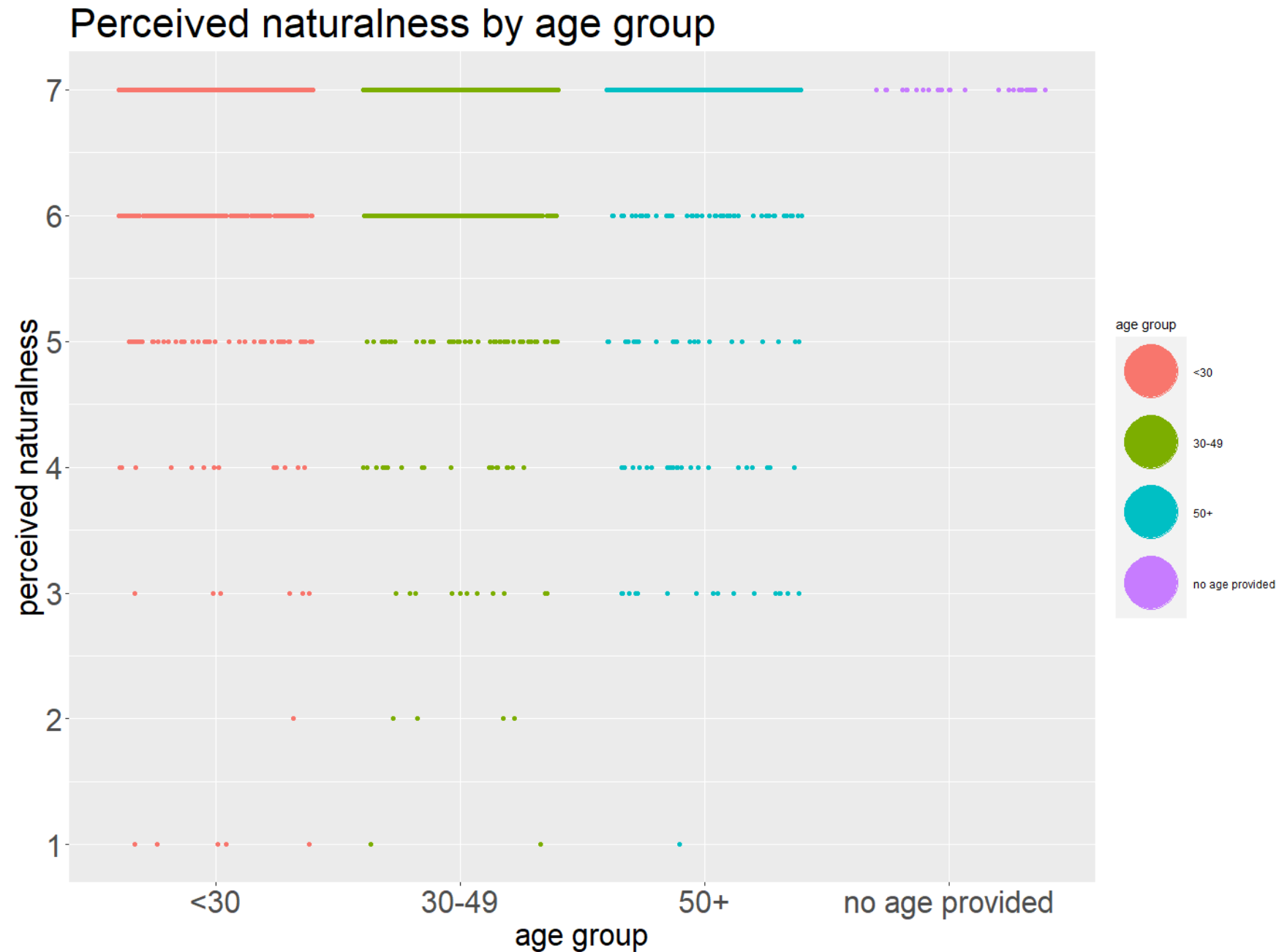
- <30 years:
m = 6.66
- 30-49 years:
m = 6.54
- 50+ years:
m = 6.43



RESULTS

age

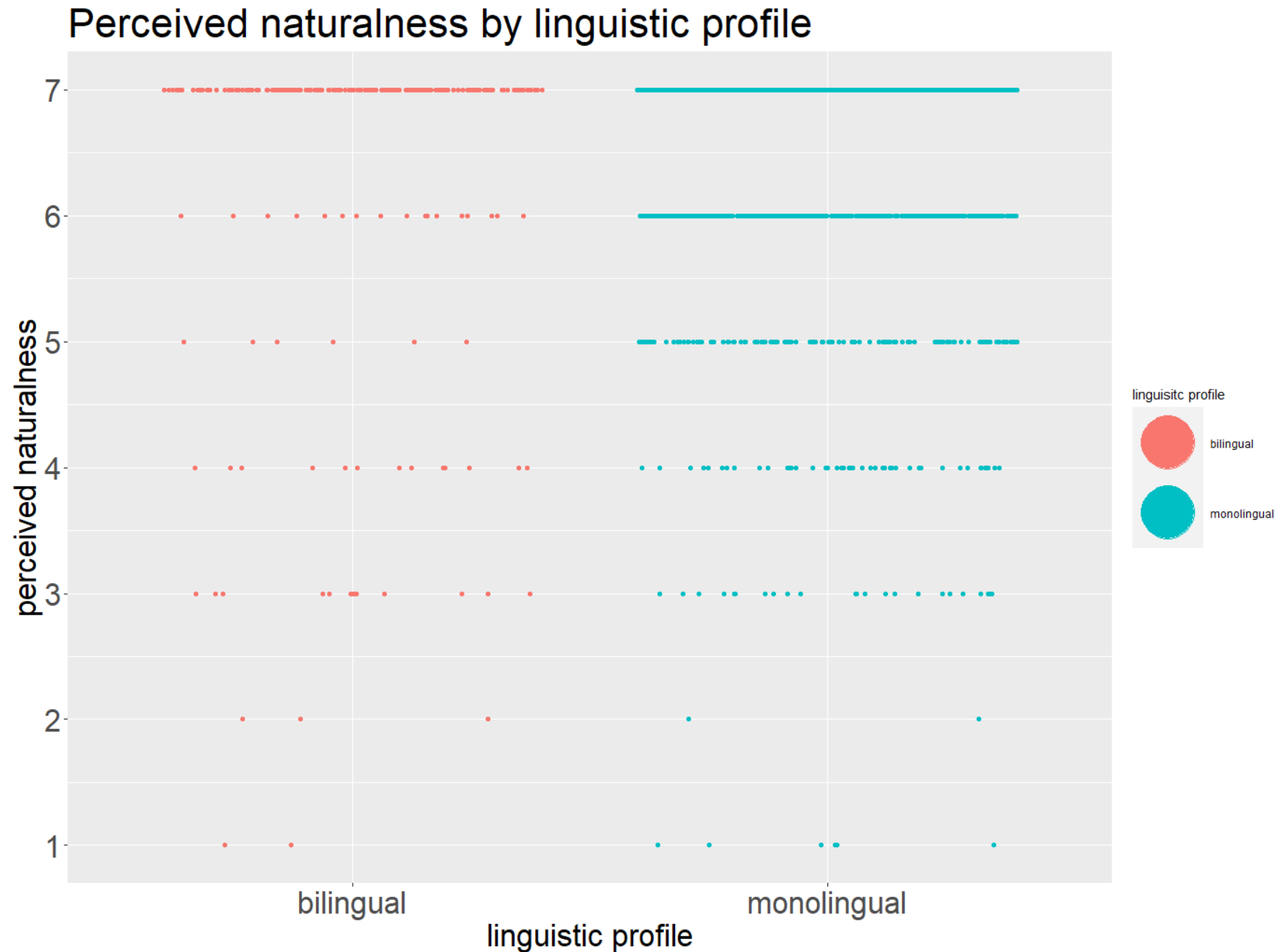
- <30 years:
42 pps
- 30-49 years:
41 pps
- 50+ years:
16 pps



RESULTS

linguistic profile

- bilingual:
 $m = 6.43$,
 $sd = 1.29$
- monolingual:
 $m = 6.59$,
 $sd = 0.80$



linguistic profile

- 9 bilinguals
- 91 mono-linguals

