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

- 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

Griffiths et al., 2023

FRAGMENT THEORY

A: Mary stole the cookie.

B: No, [Peter]$_F$

Contrastive focus F

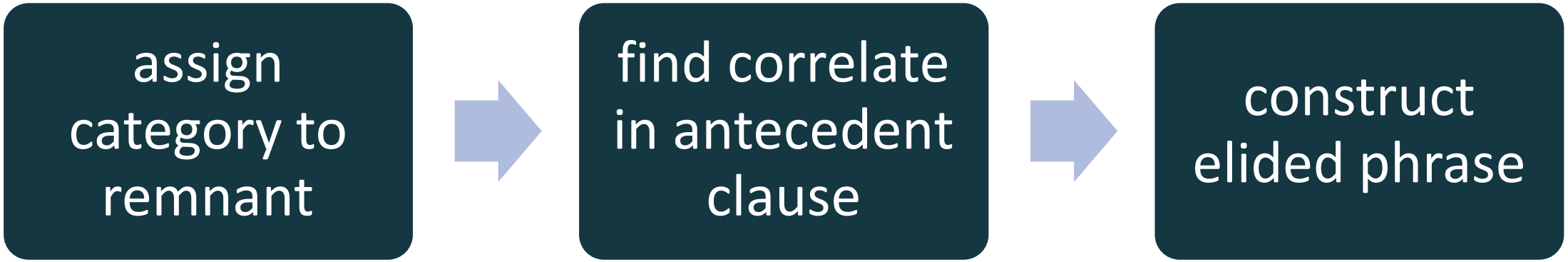
- given alternative element for which the predicate actually holds
- must bear pitch accent

Griffiths & Lipták, 2014; Krifka, 2008; Winkler, 2019

FRAGMENT THEORY

A: Mary stole the cookie.

B: No, Peter.

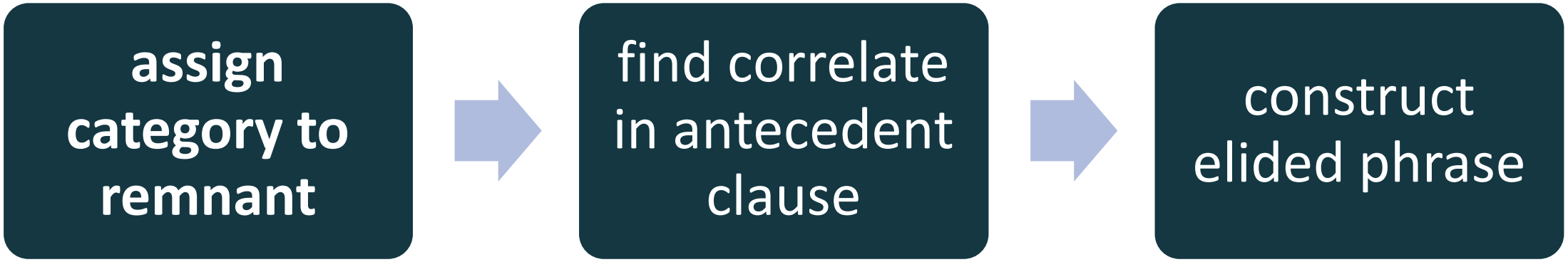


Harris & Carlson, 2018

FRAGMENT THEORY

A: Mary stole the cookie.

B: No, Peter$_{\textbf{DP=Remnant}}$

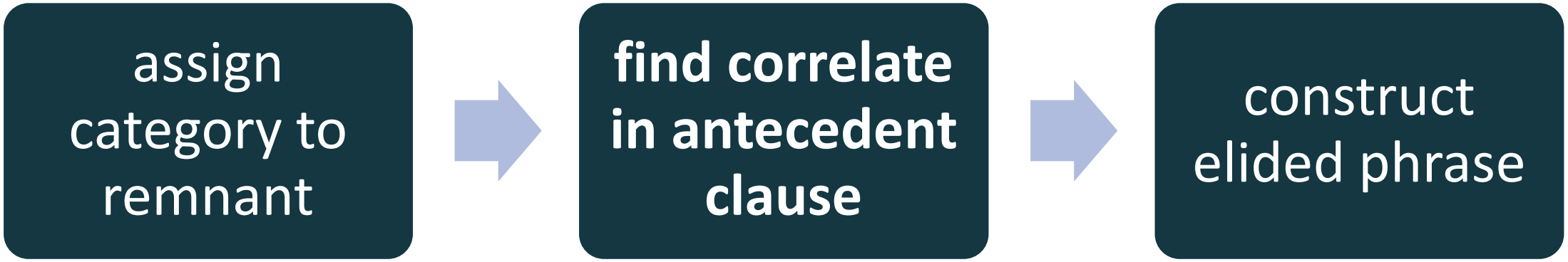


Harris & Carlson, 2018

FRAGMENT THEORY

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

B: No, Peter$_{\text{DP=Remnant}}$

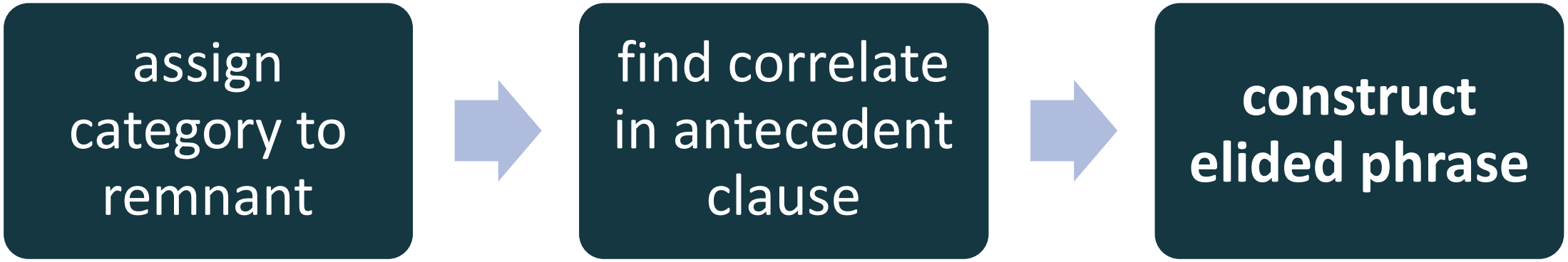


Harris & Carlson, 2018

FRAGMENT THEORY

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

B: No, Peter$_{DP=Remnant}$ ~~stole the cookie.~~



Harris & Carlson, 2018

RESEARCH QUESTION

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

HYPOTHESES

Modality

Emphasis

Fragment type

HYPOTHESES

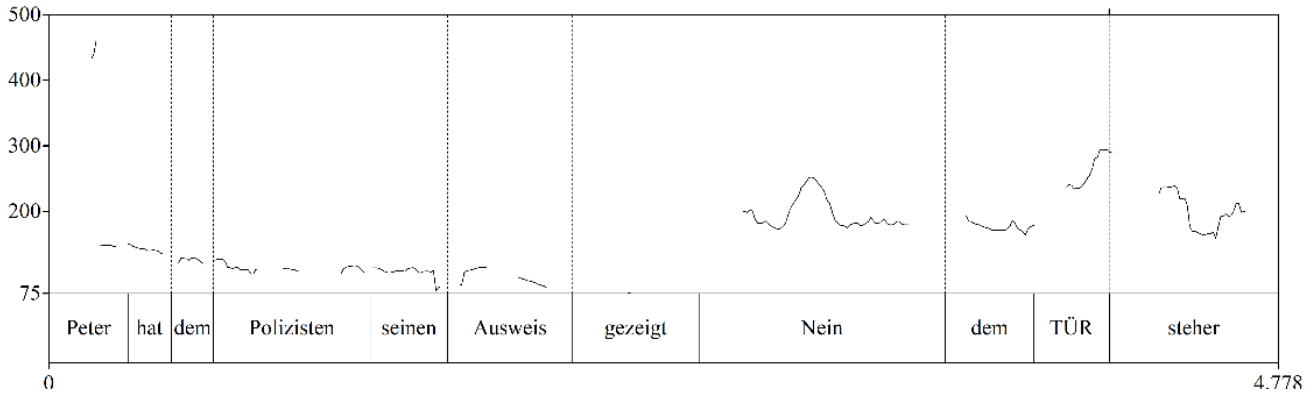
Modality

written

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

B: No, the bouncer.

auditory



HYPOTHESES

Modality

written

fragments are less common in written language

auditory

fragments are more common in spoken language

HYPOTHESES

Modality
auditory > written

HYPOTHESES

Emphasis

with emphasis

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

B: No, the BOUNCER.

without emphasis

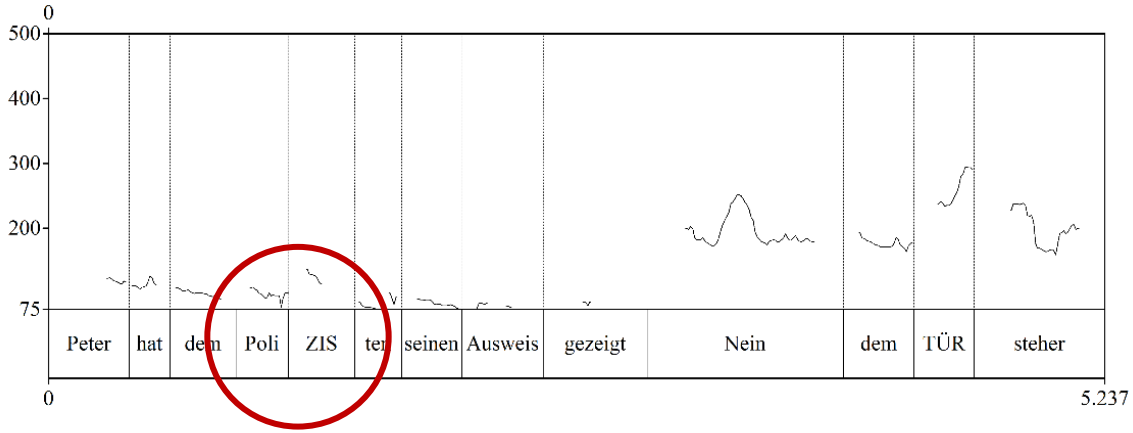
A: Peter showed his identity card to the police officer.

B: No, the bouncer.

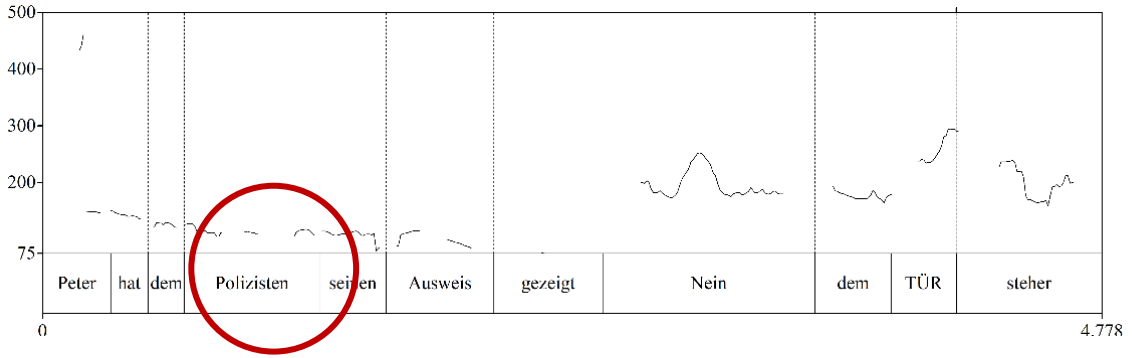
HYPOTHESES

Emphasis

with emphasis



without emphasis



HYPOTHESES

Emphasis

with emphasis	easier to identify correlate-remnant pairing
without emphasis	more difficult to identity correlate-remnant pairing

HYPOTHESES

Modality
auditory > written

Emphasis

emphasis on contrasting words > lacking emphasis

HYPOTHESES

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

Fragment type

lexical

- bear stress
- more focussed on in reading

functional

- do not bear stress
- less focussed on in reading

HYPOTHESES

Modality

auditory > written

Emphasis

emphasis on contrasting words > lacking emphasis

Fragment type

lexical fragments > functional fragments

STUDY DESIGN

Modality	Emphasis	Fragment type
• written • auditory	• with • without	• lexical • functional

STUDY DESIGN

Modality	Emphasis	Fragment type
• written • auditory	• with • without	• lexical • functional

between-subject

within-subject

STUDY DESIGN

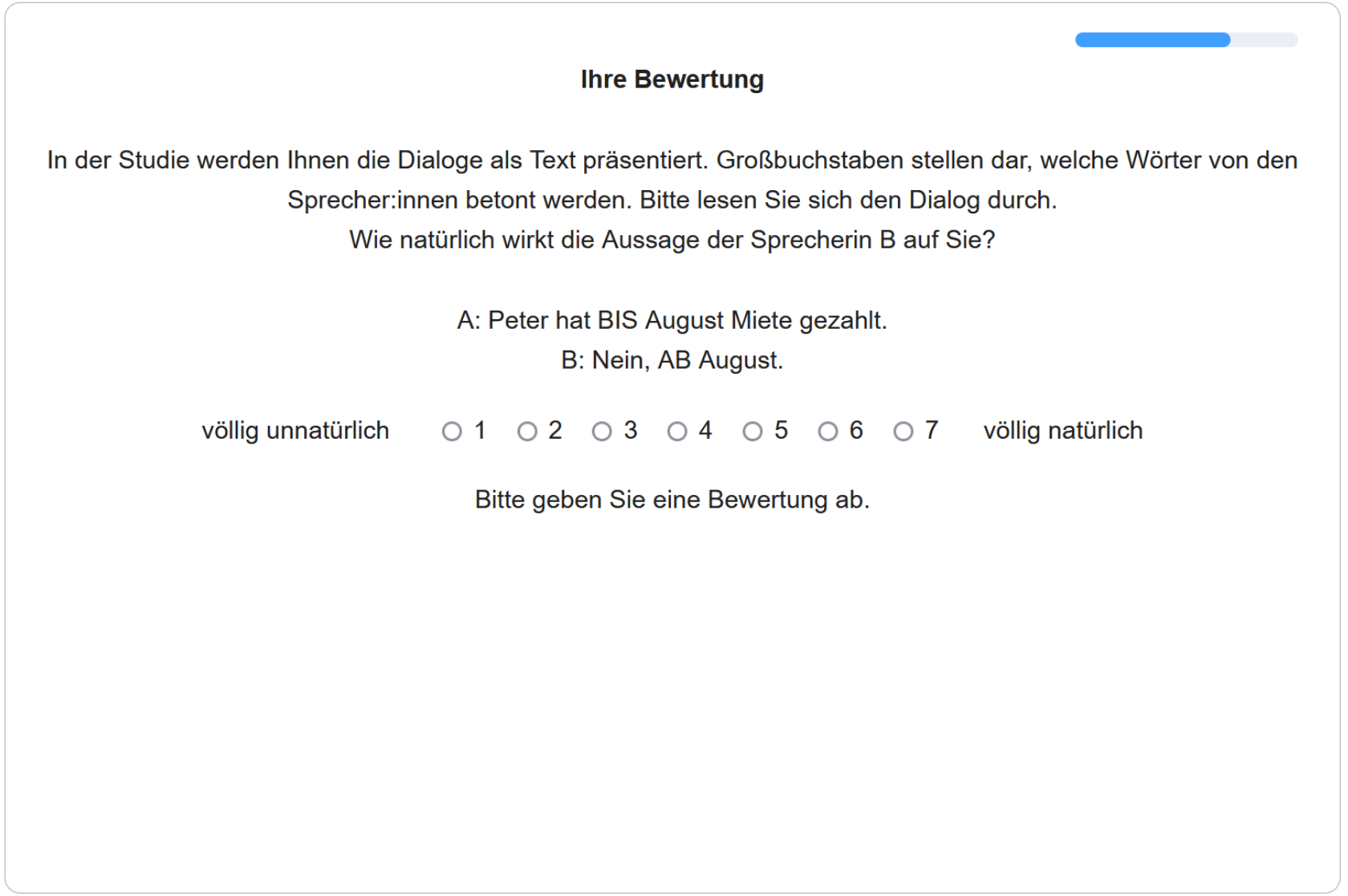
Acceptability Judgement Task

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

STUDY DESIGN

Acceptability Judgement Task

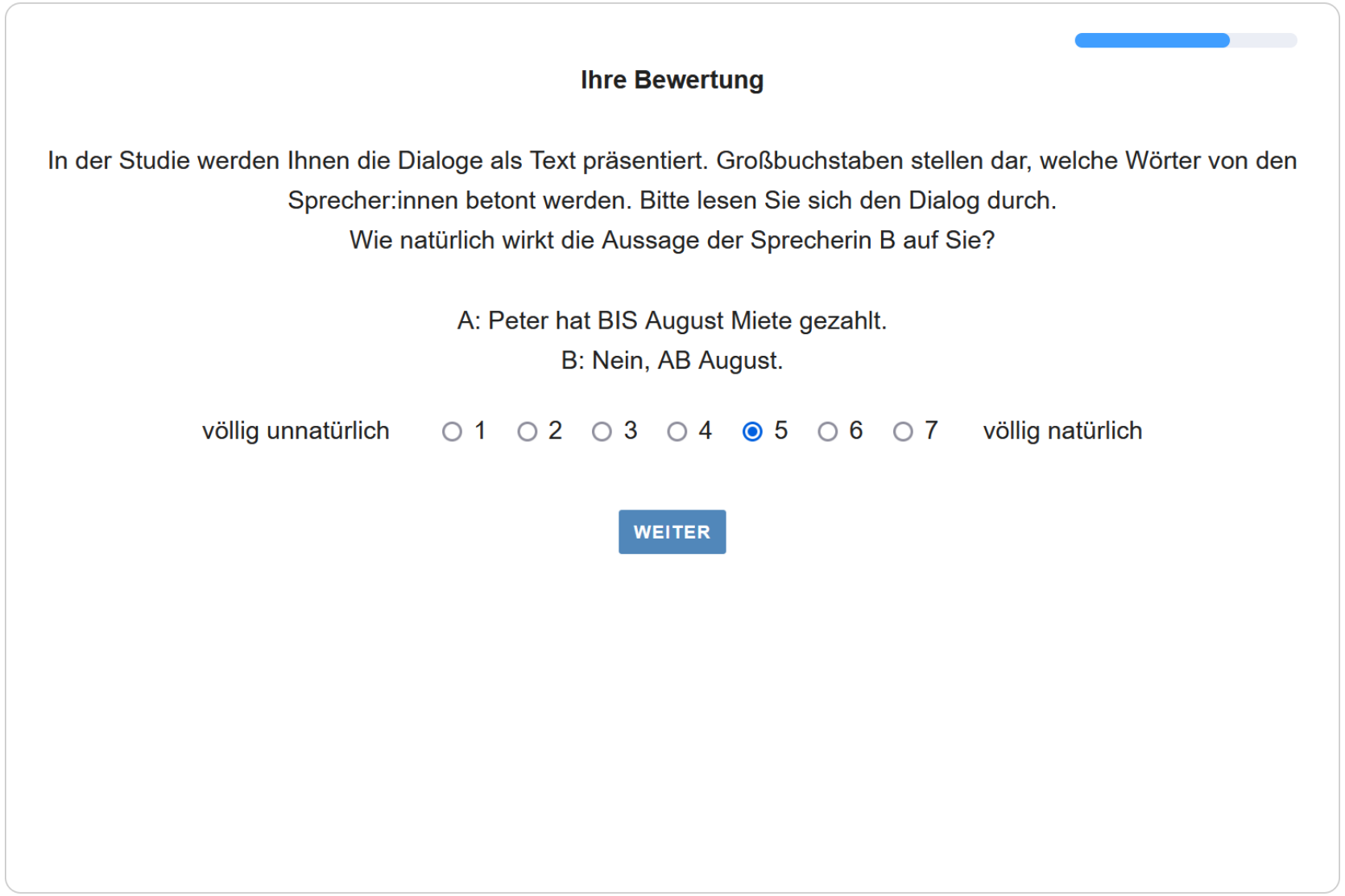
- rate naturalness of speaker B's answer
- 7-point Likert scale
- forced choice
- no time limit



STUDY DESIGN

Acceptability Judgement Task

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

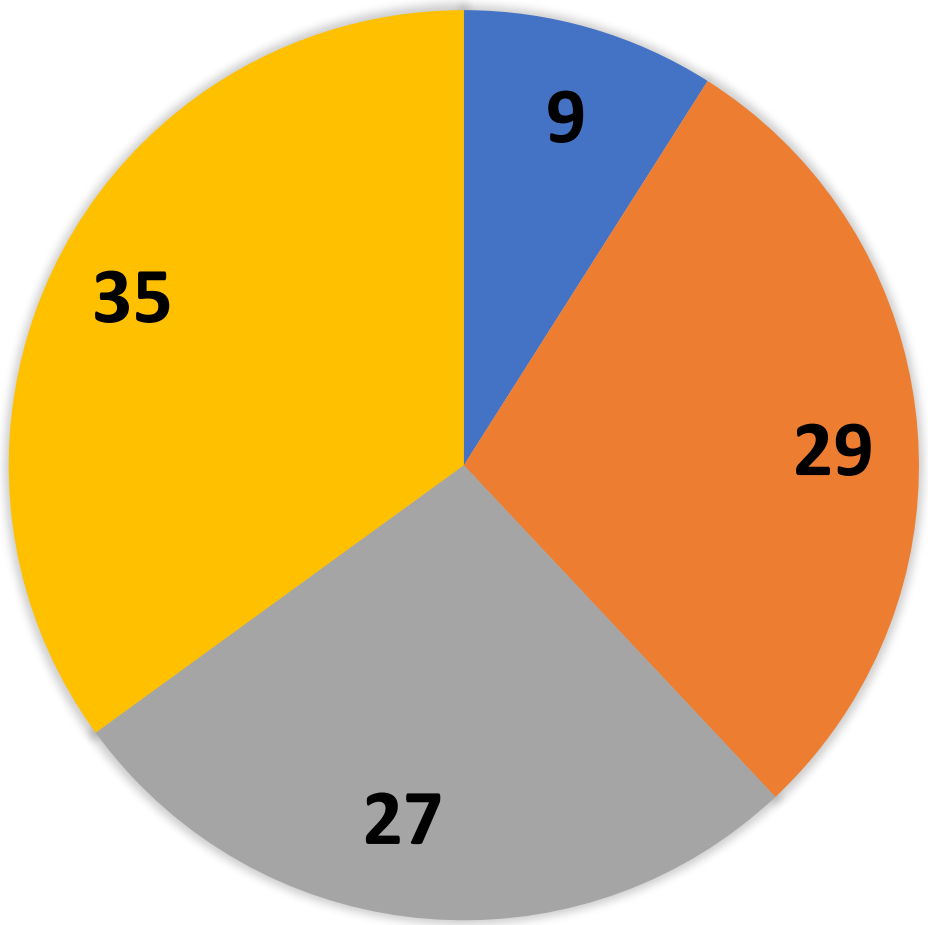


PARTICIPANTS

- 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

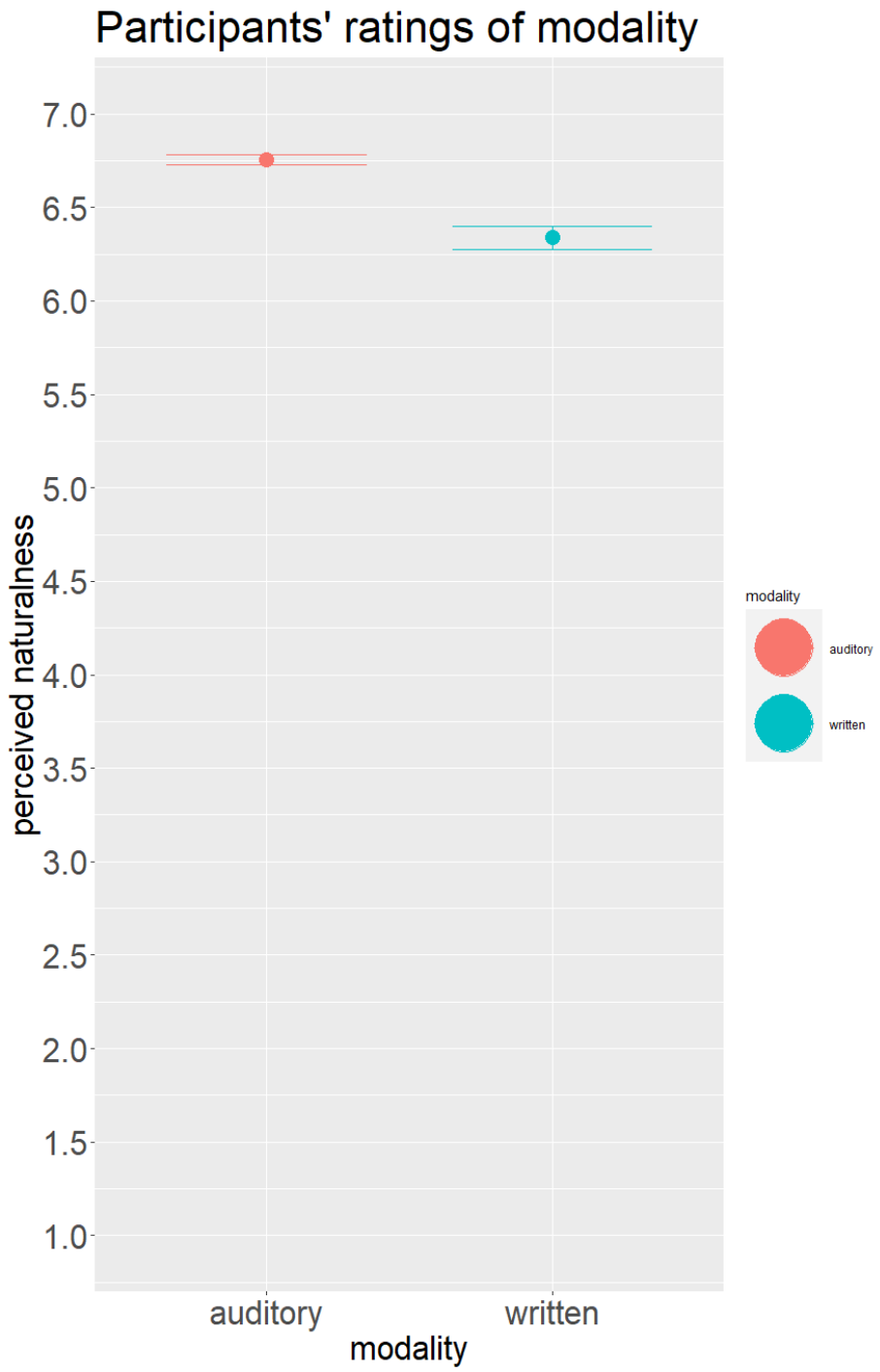


RESULTS

RESULTS

Modality

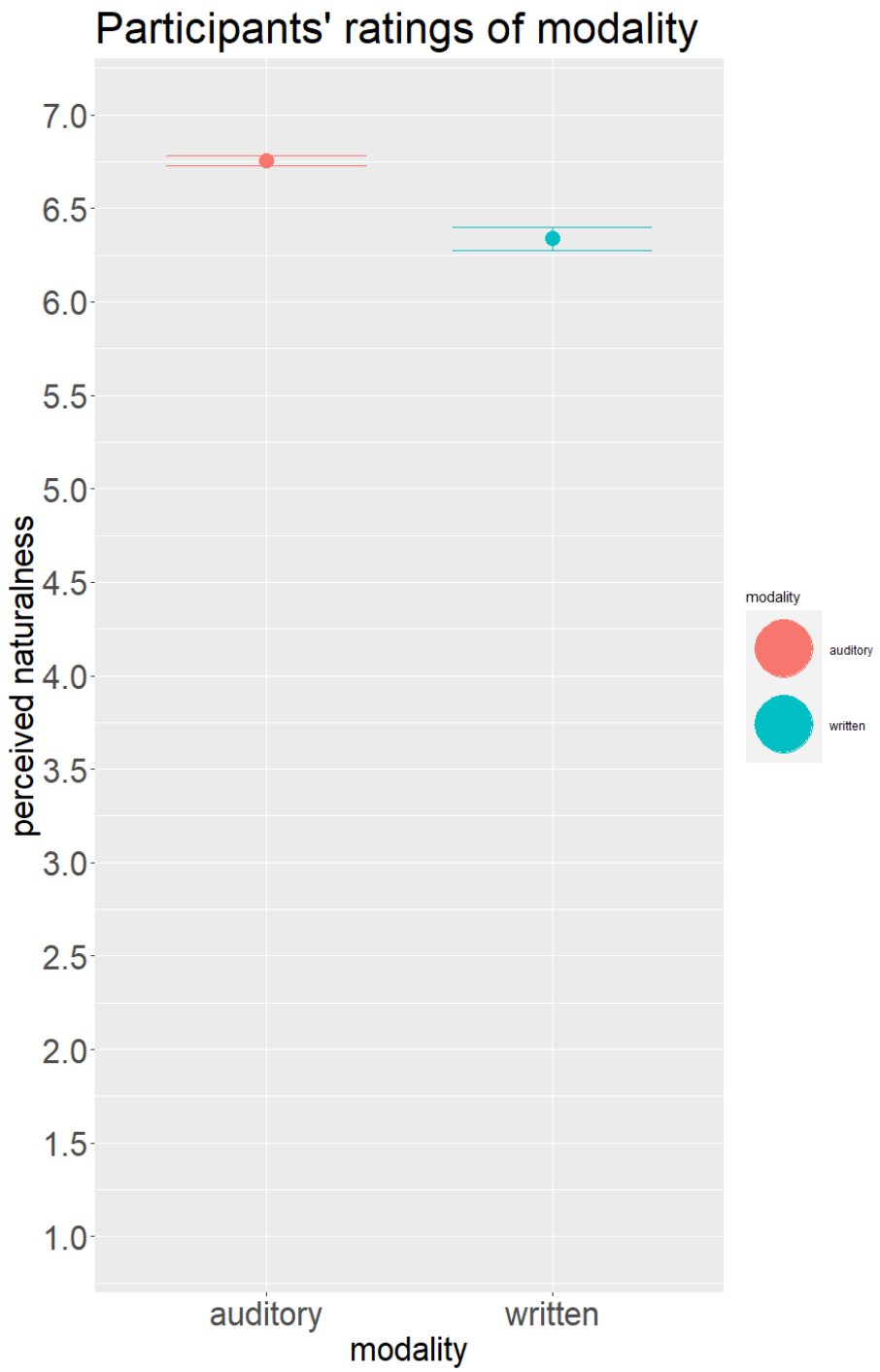
- auditory:
  m = 6.76, sd = 0.53
- written:
  m = 6.34, sd = 1.11



RESULTS

Modality

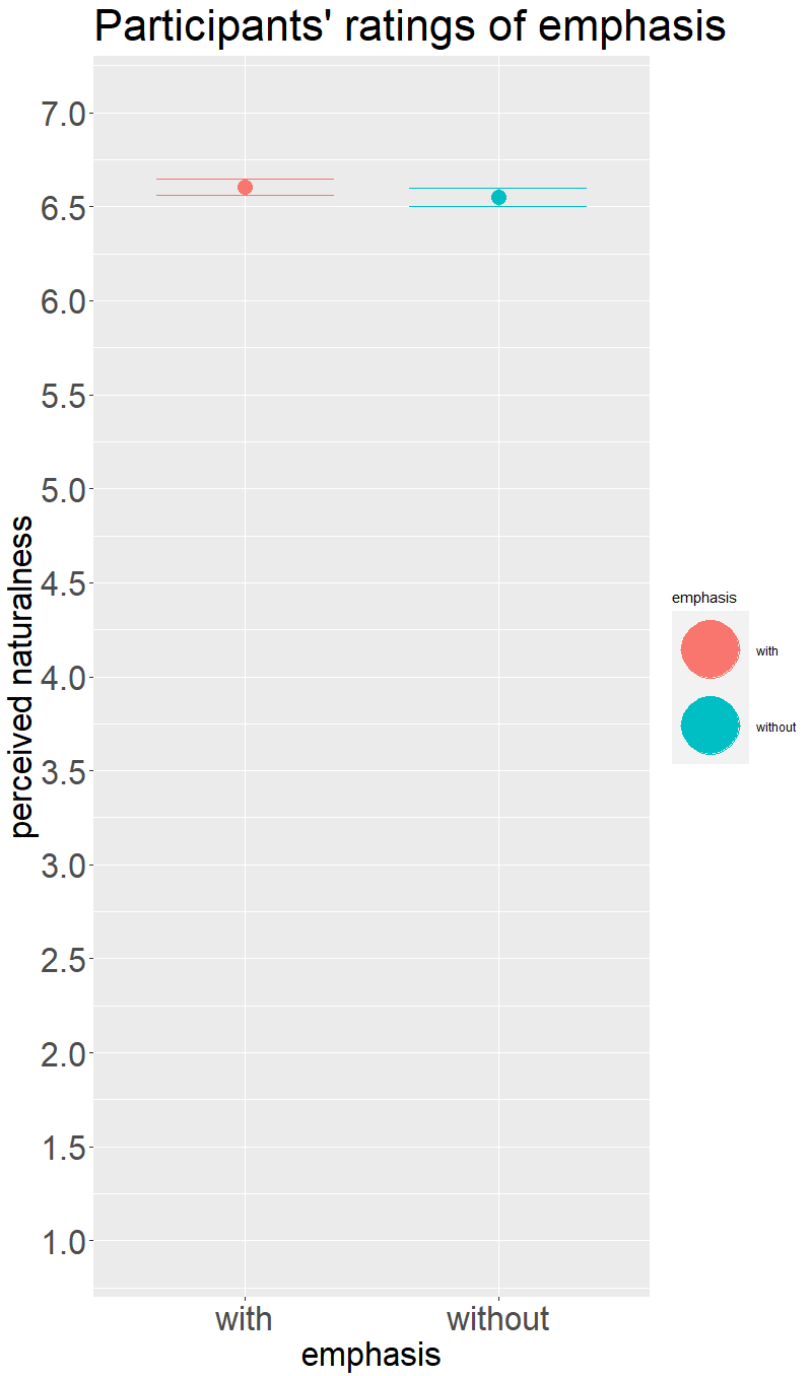
- written:
  $\beta_1 = -1.99$
- as hypothesised
- significant effect:
  $p = 0.016$



RESULTS

Emphasis

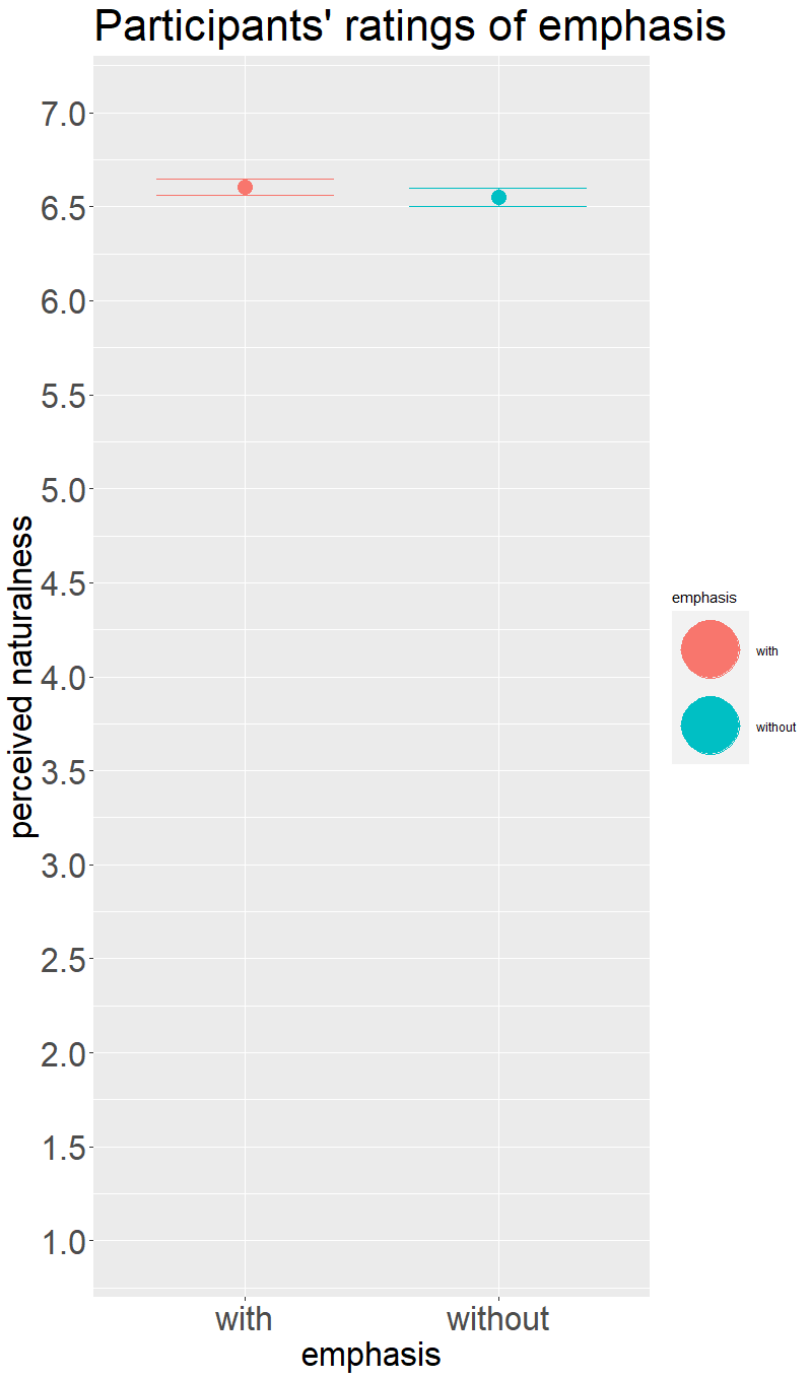
- with emphasis:
  m = 6.60, sd = 0.80
- without emphasis:
  m = 6.55, sd = 0.91



RESULTS

Emphasis

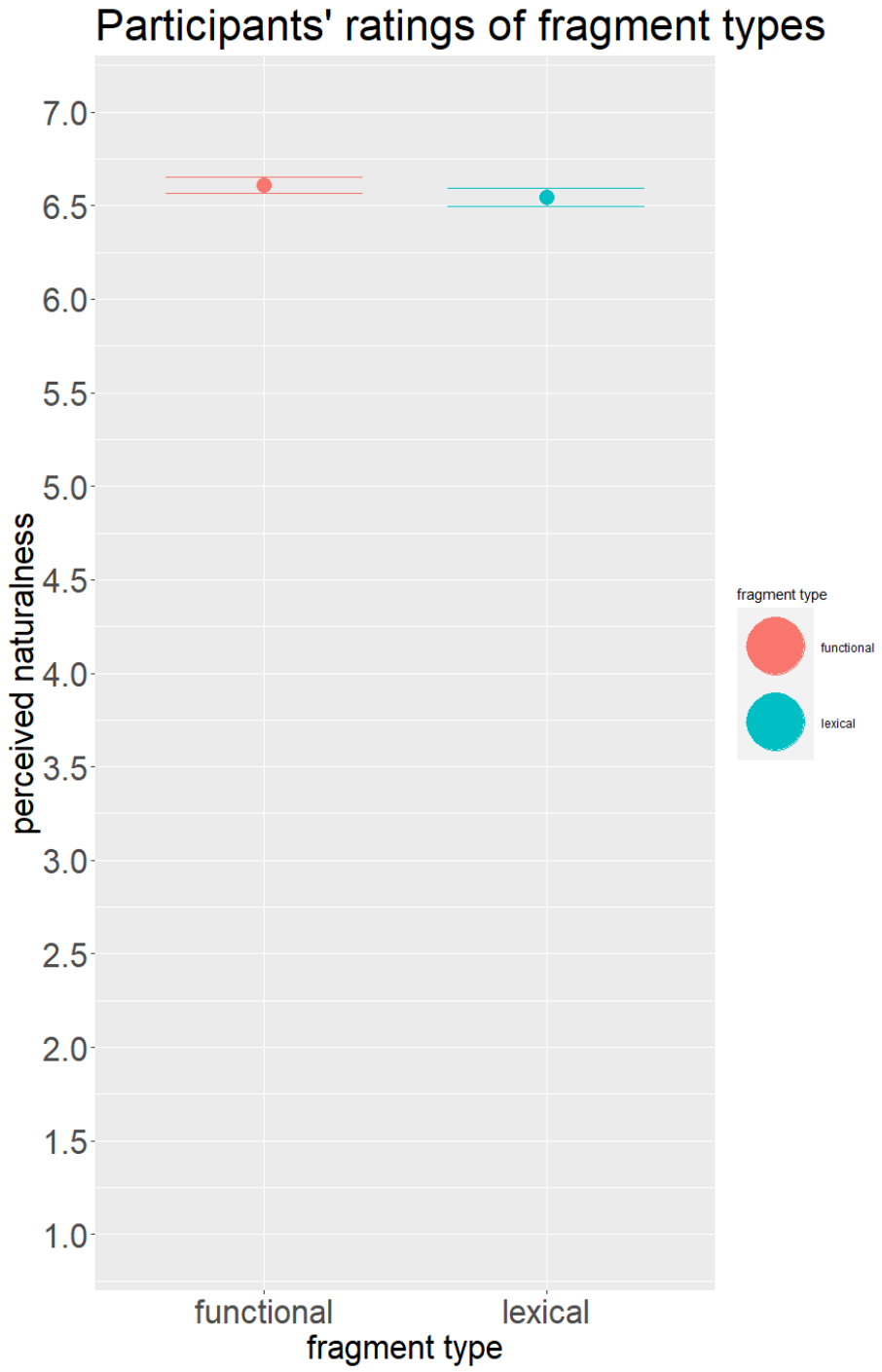
- without:
  $\beta_1 = -0.25$
- as hypothesised
- significant effect:
  $p = 0.027$



RESULTS

Fragment type

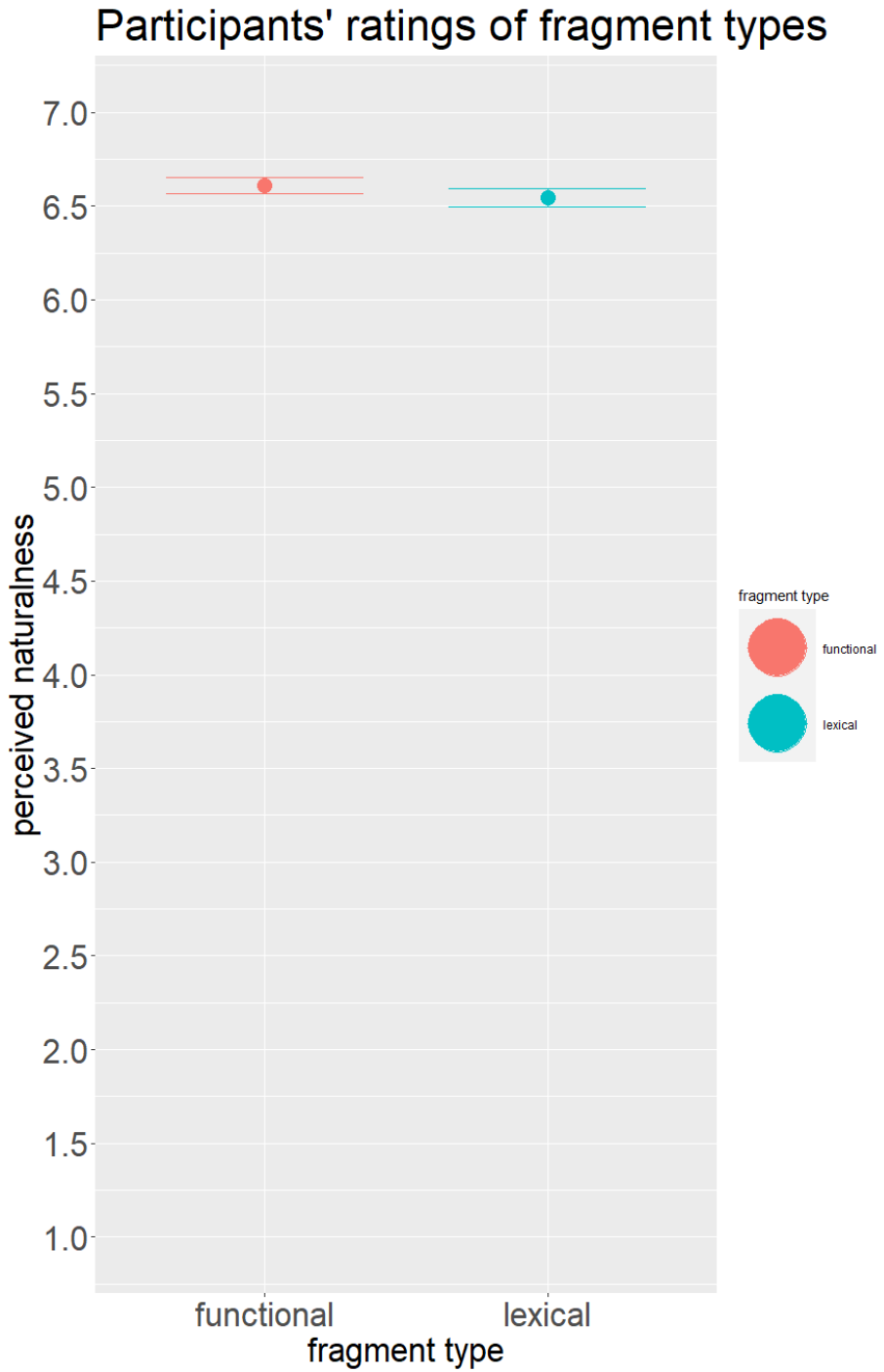
- functional:
  m = 6.61, sd = 0.82
- lexical:
  m = 6.55, sd = 0.90



RESULTS

Fragment type

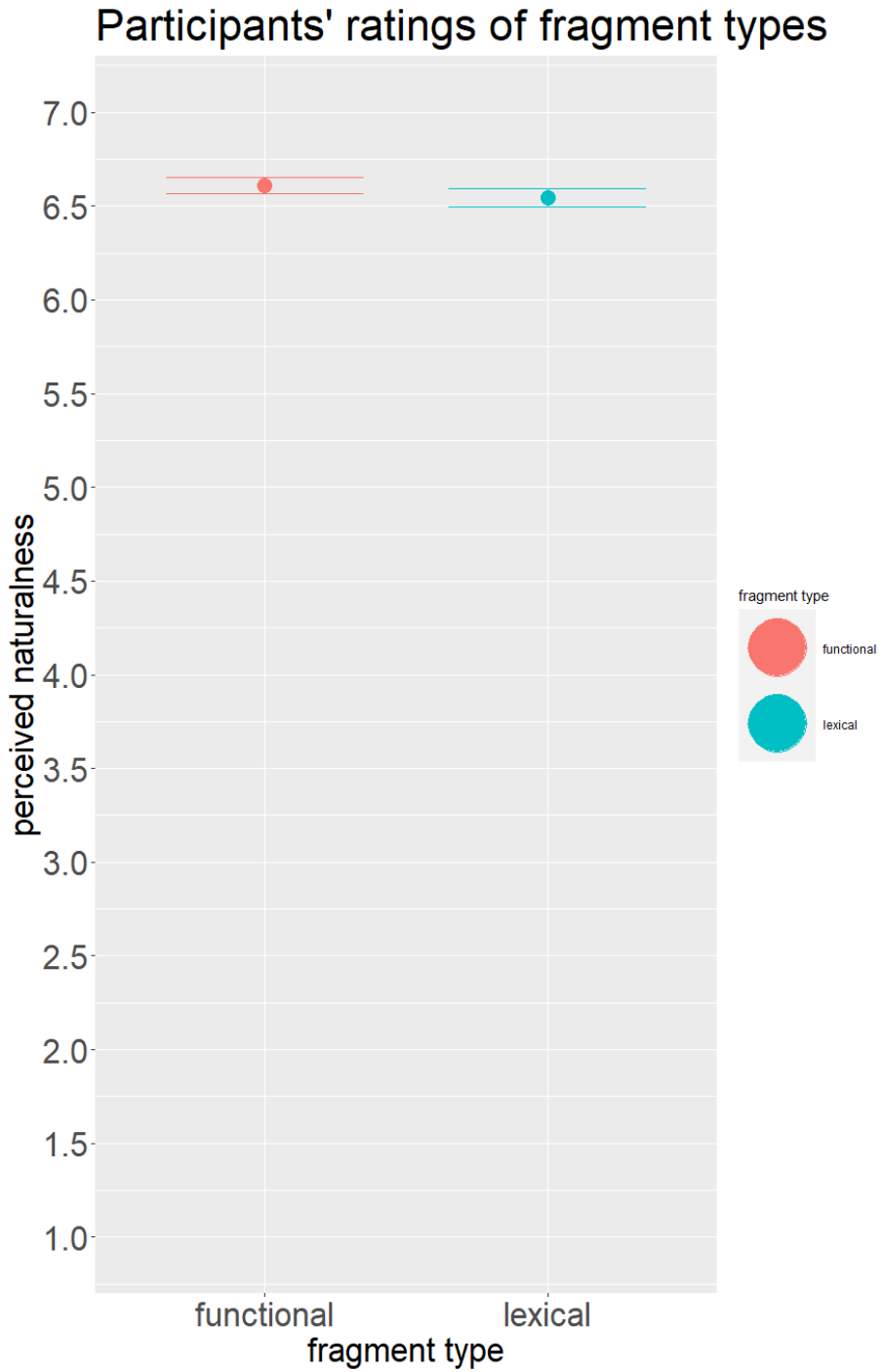
- lexical:
  $\beta_1 = -0.49$
- **inverse** to hypothesis
- significantly effect:
  $p < 0.01$



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.

lexical

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

B: No, the BOUNCER.

prepositions have opposing meaning: **binary contrast**

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**

INVERSE TREND

prepositions have opposing meaning: **binary contrast**

nouns denote alternative referents: **non-binary contrast**

The clearer the contrast, the more natural the dialogue?

CONCLUSIONS

CONCLUSIONS

accepted hypo-theses

emphasis and modality affect judgements on con-trastive fragments

CONCLUSIONS

<u>accepted hypo-theses</u>

emphasis and modality affect judgements on contrastive fragments

<u>inverse trend</u>

- 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/10.1080/0169096014300045 2
- 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
- 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

Winkler, 2019; Merchant, 2001

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

Rasekhi & Harris, 2021

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

Harris & Carlson, 2016

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

Carlson et al., 2009

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

Opitz & Borday, 2022; Meurers et al. 2010

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

Juzek, 2016

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

Franck et al., 2003

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

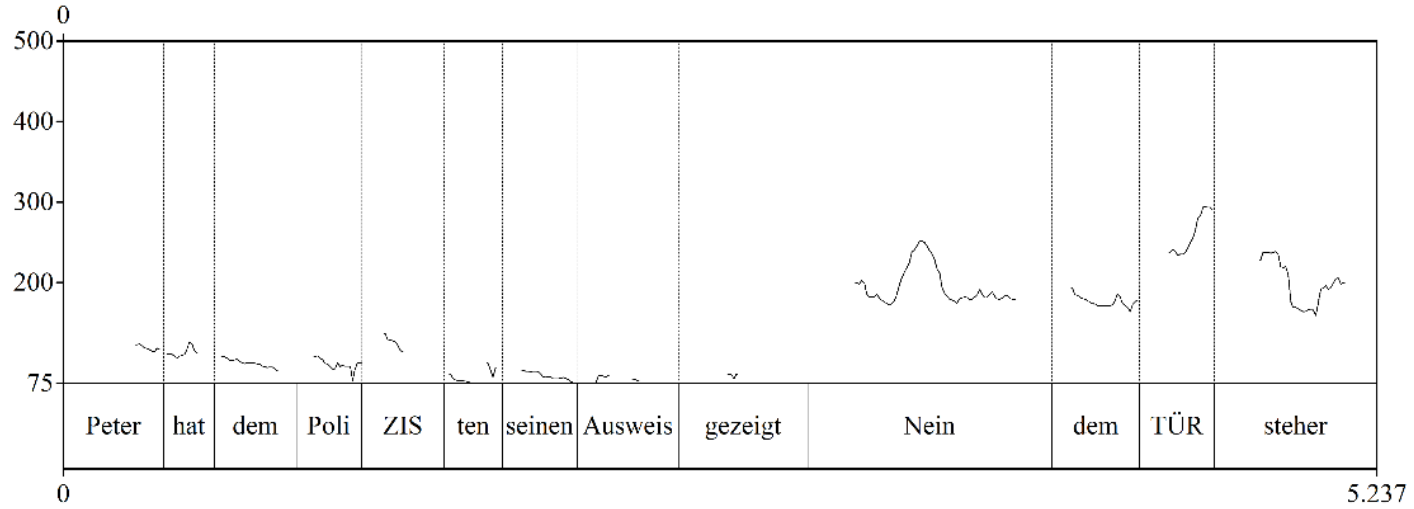
Roussel et al., 2018; Chomsky & Halle, 1991; Féry & Herbst, 2004

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.

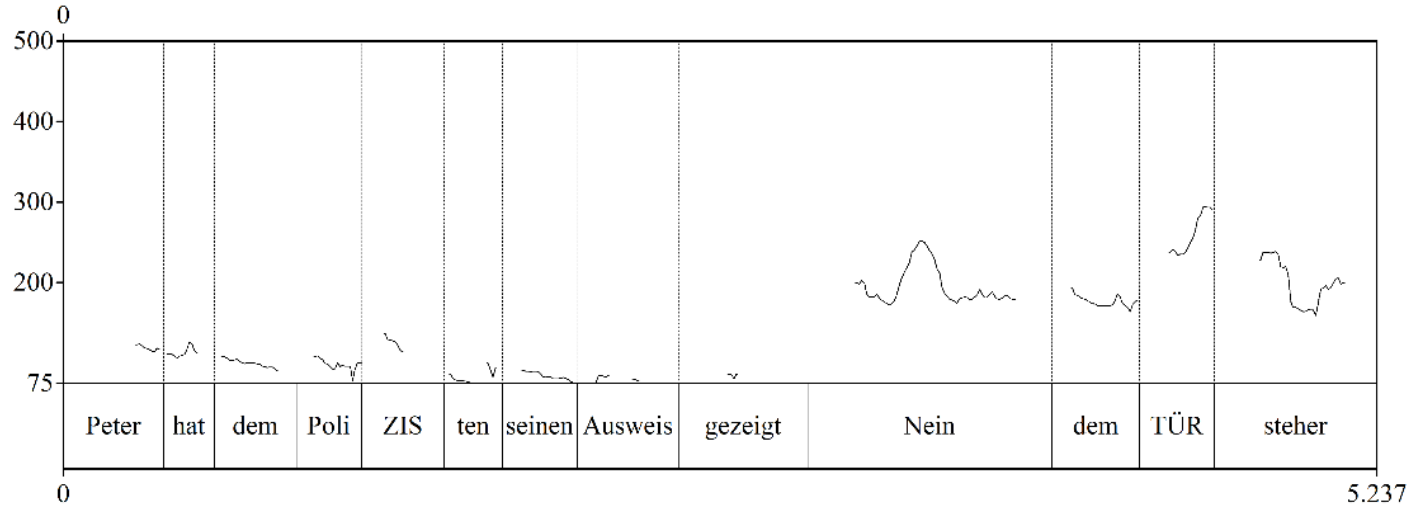
with emphasis

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

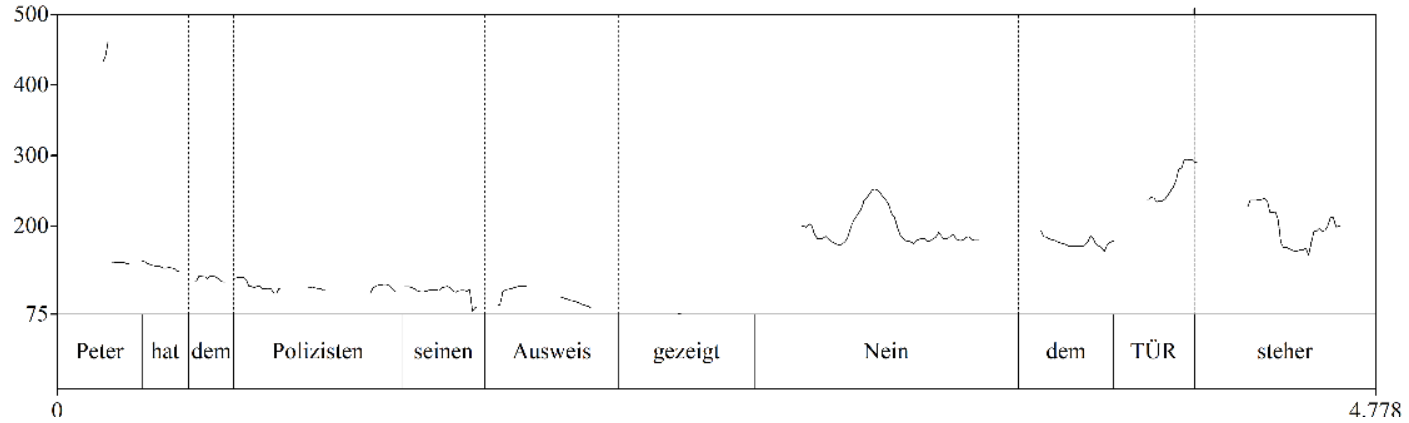
B: No, the bouncer.

without emphasis

STUDY DESIGN: STIMULI

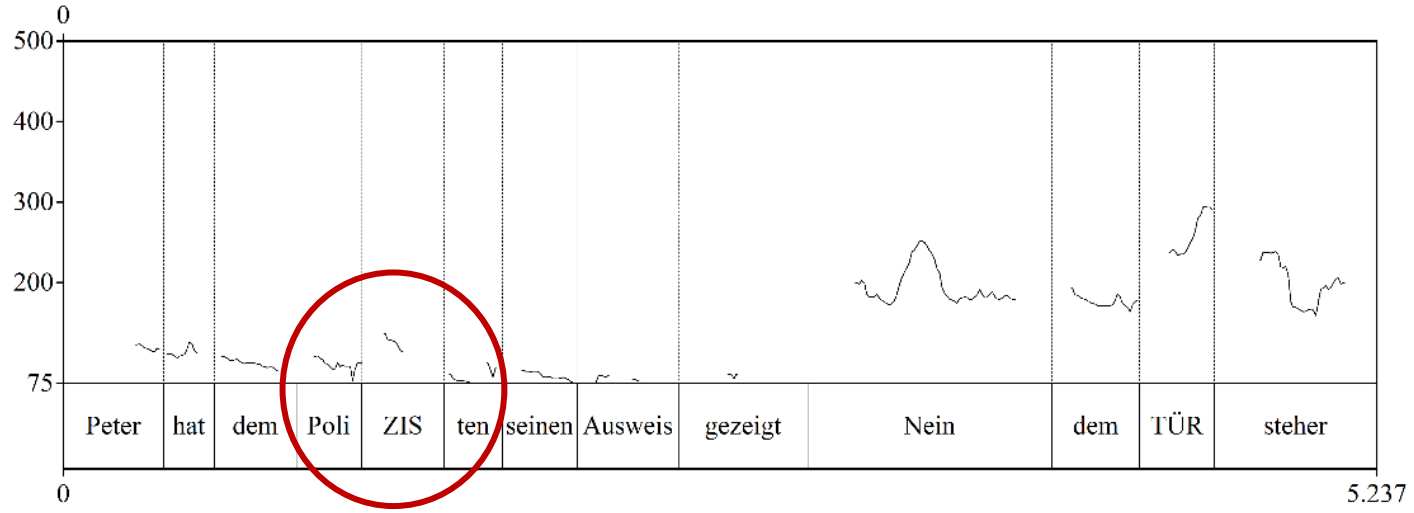


with emphasis

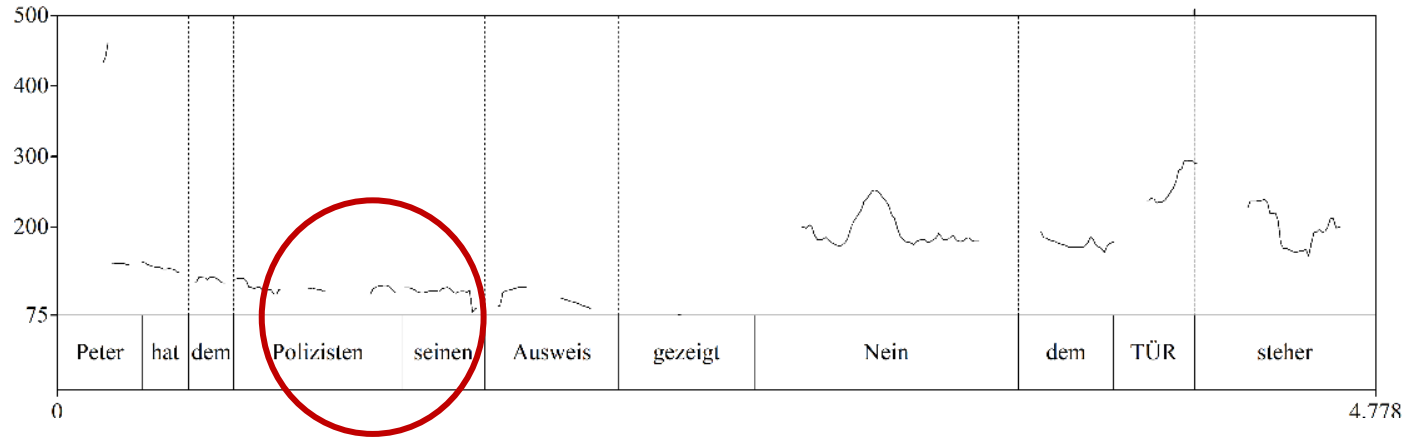


without emphasis

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 β1 = -0.25, p = 0.03
- Modality: written β1 = -1.99, p = 0.02
- Fragment type: lexical β1 = -0.4486, $p < 0.01$

ANALYSIS

AIC

- difference: -28
- Lower AIC for null model

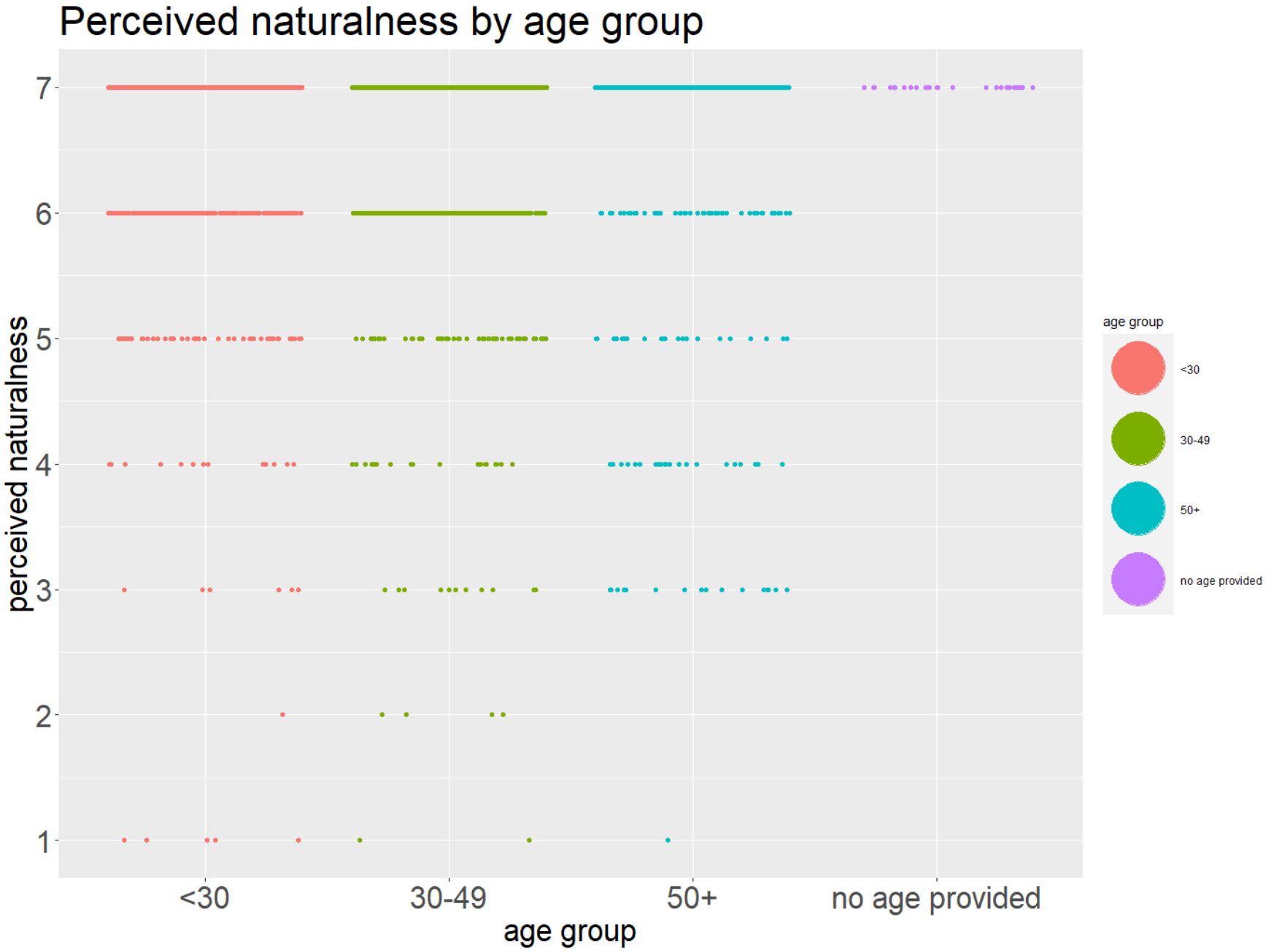
ANOVA

- $p < 0.01$
- significantly better model fit

RESULTS

age

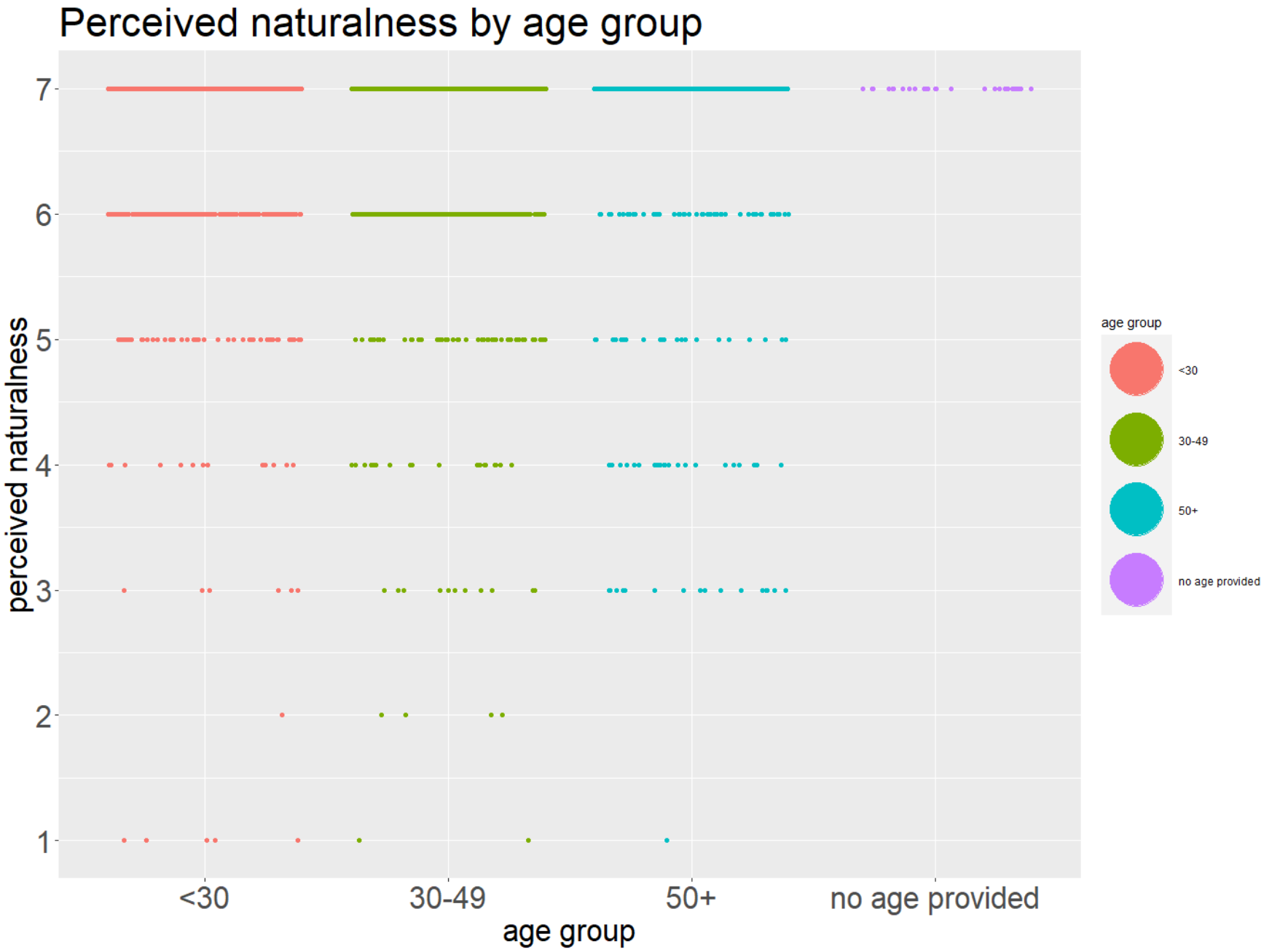
- <30 years: m = 6.66
- 30-49 years: m = 6.54
- 50+ years: m = 6.43



RESULTS

age

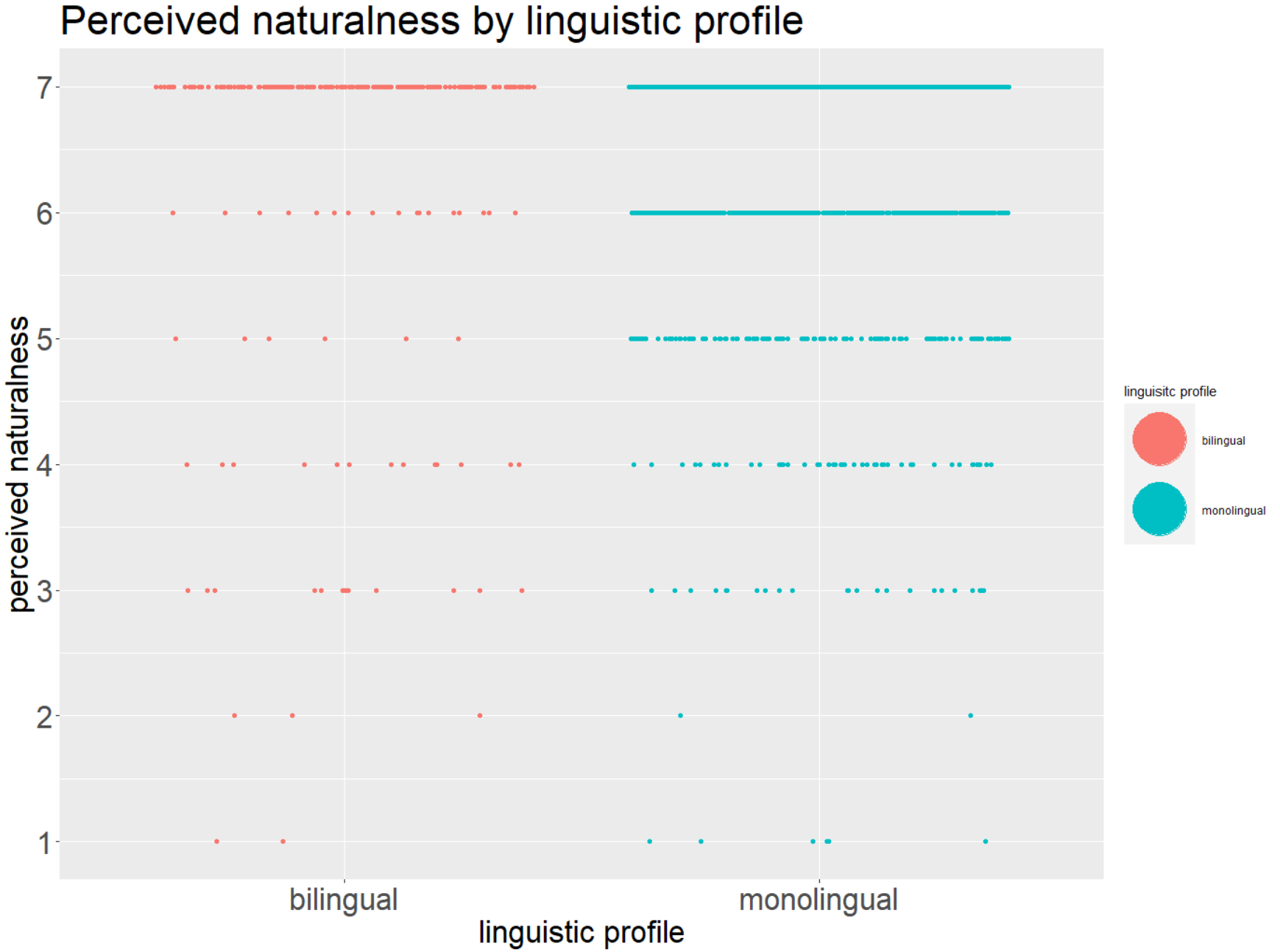
- <30 years: 42 pps
- 30-49 years: 41 pps
- 50+ years: 16 pps



RESULTS

linguistic profile

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



RESULTS

linguistic profile

- 9 bilinguals
- 91 mono-linguals