ADAM MICKIEWICZ UNIVERSITY IN POZNAŃ
Faculty of English

Cognitive consequences of multilingualism and age in the processing of markedness and ungrammaticality in L1

Sylwiusz Żychliński, Anna Skałba,
Magdalena Wrembel

Presentation outline

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2. Gradient acceptability
3. Constructions under investigation
4. Language attitudes
5. Research questions
6. Methods
7. Results
8. Discussion

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Project description

- inspired by findings from a longitudinal study of cross-linguistic influence in third language phonetics, phonology and syntax in L1 Polish, L2 English, and L3 Norwegian
- gradient acceptability in L1 of two syntactic constructions under investigation
- potential correlation between multilingualism and increased acceptance for marked / ungrammatical constructions in L1

Aims

- investigation of the role of multilingual status and age in the processing of markedness and ungrammaticality in L1
- why multilingualism and age?
  - **multilingualism** – based on results of the longitudinal study and previous literature on its influence of ungrammatical constructions in L1
  - **age** – based on informal observations about the over-exposure of younger generations to social media and their loose treatment of grammar rules

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What are gradient judgments?

- **gradient (acceptability) judgments** – characterize constructions which are partially acceptable within a given population of speakers
- sources of gradience:
  - language-internal perspective
  - language-external perspective (aka language attitudes) – language attitudes of speakers, usually resulting from the interaction among a number of (often) unrelated factors
- gradient acceptability judgments – result of the interaction between language-internal and language-external factors

Language-internal perspective

- language-internal sources of gradience (Francis, 2022):
  - syntactic
  - semantic / pragmatic
  - processing-based

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Constructions under investigation

1. distribution of **subject-oriented (SO) reflexive possessive / possessive pronouns**
2. (pre- vs. post-verbal) position of **adverbs of frequency**

Construction 1: SO reflexive possessive / possessive pronouns

Prescriptively speaking, only the reflexive possessive may be subject-oriented in Polish (a); the SO possessive pronoun is considered ungrammatical, but it is still grammatical when it takes a non-subject antecedent (e.g. an object), as in (b):

(a)	Jan	znalazł	swoje	/	jego	klucze.
	Jan	found	self's		his	keys

(b)	Jan	dał	Markowi	swoje	/	jego	klucze.
	Jan	gave	Mark	self's		his	keys

Construction 1: SO reflexive possessive / possessive pronouns

- possessive pronoun at least partially acceptable among native speakers of Polish (some speakers accept both pronominal forms):

(a)	Jan	znalazł	swoje	/	?jego	klucze.
	Jan	found	self's		his	keys

- SO possessives – semantic / pragmatic violation (using them often creates an ambiguous context)

Construction 2: Position of adverbs of frequency

- default pre-verbal position of adverbs of frequency in Polish

  (a) Jan rzadko czyta e-booki.
  Jan rarely reads e-books.

- post-verbal position of adverbs also acceptable, although less frequent (thus marked):

  (b) Jan czyta %rzadko e-booki.
  Jan reads rarely e-books.

- marked status of (b) – non-canonical syntactic configuration

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Language attitudes

Polish has a deeply rooted tradition of normative studies. Prescriptivist attitudes to Polish are enforced via (among others):

- regulatory body shaping language policies (the Polish Language Council)
- well-known authorities on proper language use
- kultura języka (‘proper language use’) – branch of Polish language studies concerned with cultivating the linguistic awareness of speakers

Language attitudes

Modern-time challenges to deep-seated prescriptive sentiments:

- social media (and many other informal websites) – dominant role both as a source of entertainment and information among younger generations of speakers (=> thus age can constitute a potential divide between the more conservative and more liberal language attitudes)
- substantial increase in the level of bi- and multilingualism (bi-/multilingualism as a potential agent of change in language)

The role of bi- / multilingualism

- grammatical attrition ”appears to consist in fluctuation between L1-based and L2-based grammatical options” in the context of bilingualism (Hicks & Domínguez 2020: 16)
- ”increased optionality” in the context of bilingualism (Sorace, 2019)
- ”the knowledge of multiple languages and the experience of having to survive in a foreign language and culture make individuals more tolerant of ambiguity” (Dewaele & Li, 2013: 238)

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Research questions

1. Do **multilingual status** and / or **age** affect the processing of **ungrammaticality and markedness** among L1 speakers of Polish?
2. Are **multilingual status** and / or **age** correlated with less prescriptively-oriented attitudes towards language?

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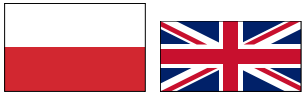
Participants

		
	N = 31 $M_{English\ score}$ = 12.03/25 M_{age} = 18.94	N = 23 $M_{English\ score}$ = 18.24/25 M_{age} = 19.87
	N = 26 $M_{English\ score}$ = – M_{age} = 66.67	N = 25 $M_{English\ score}$ = 16.76/25 M_{age} = 48.80

Study design

- acceptability judgement task (Does this sentence sound good?)
- 5-point Likert scale (1 – definitely not; 5 – definitely yes)
- written presentation of items in an online questionnaire
- 10 sentences with SO pronouns (5 grammatical + 5 ungrammatical)
- 10 sentences with adverb placement (5 grammatical + 5 marked)

Stimuli – SO pronouns

- introductory sentence
  Paweł i jego wspólniczka Helena zarobili na giełdzie sporo pieniędzy.
  'Peter and his business partner Helen made a lot of money on the stock exchange'
- target sentence
  Paweł$_1$ wydał **swoje**$_1$ pieniądze na nowy samochód.
  vs.
  *Paweł$_1$ wydał **jego**$_1$ pieniądze na nowy samochód.
  'Peter spent his money on a new car'

Stimuli – adverb placement

- introductory sentence
  Większość pracowników dojeżdża do pracy pociągiem
  'The majority of employees commute by train'
- target sentence
  Ale Stanisław **rzadko jeździ** pociągiem.
  vs.
  %Ale Stanisław **jeździ rzadko** pociągiem.
  'But Steven **seldom takes / takes seldom** the train.'

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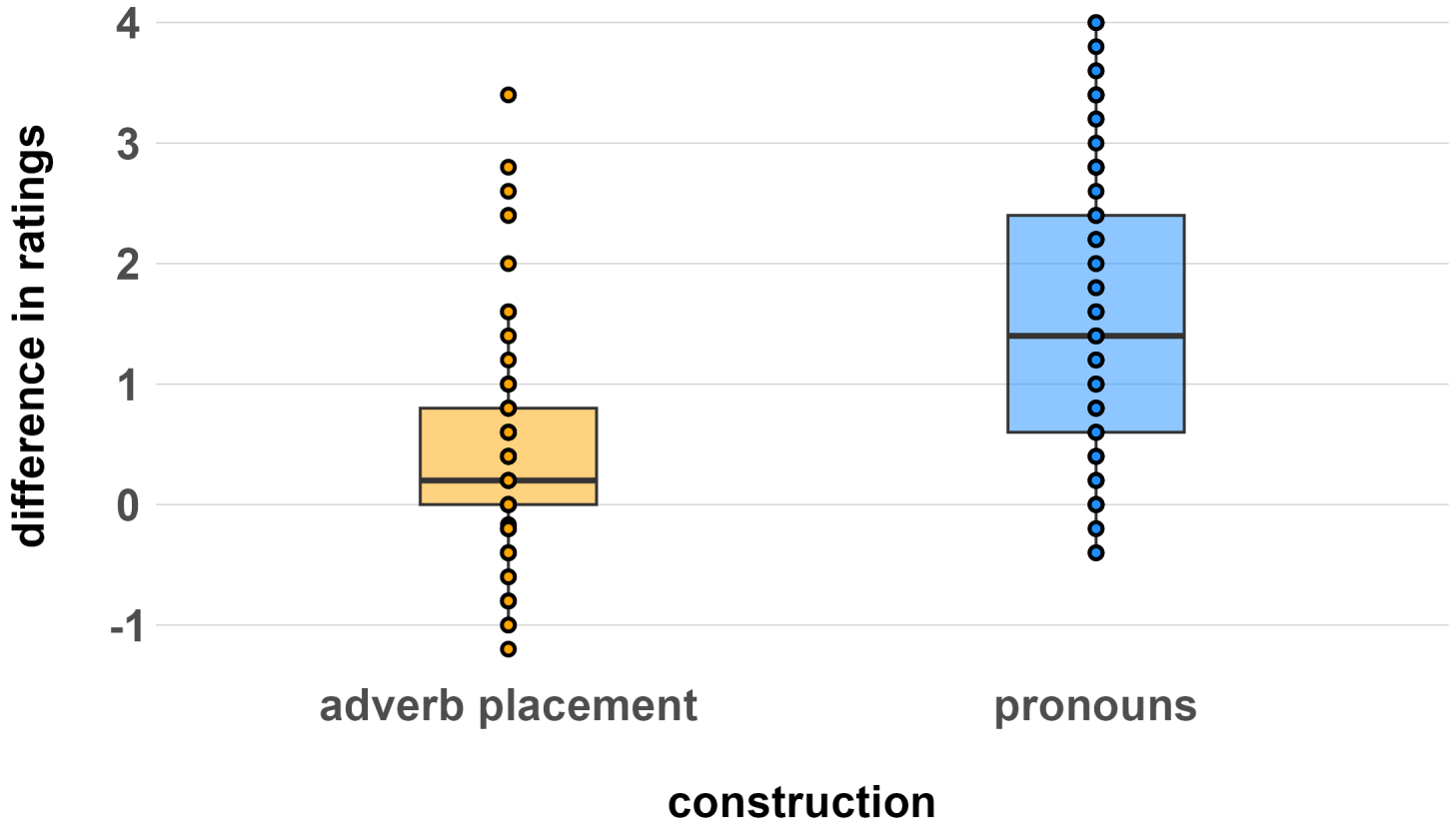
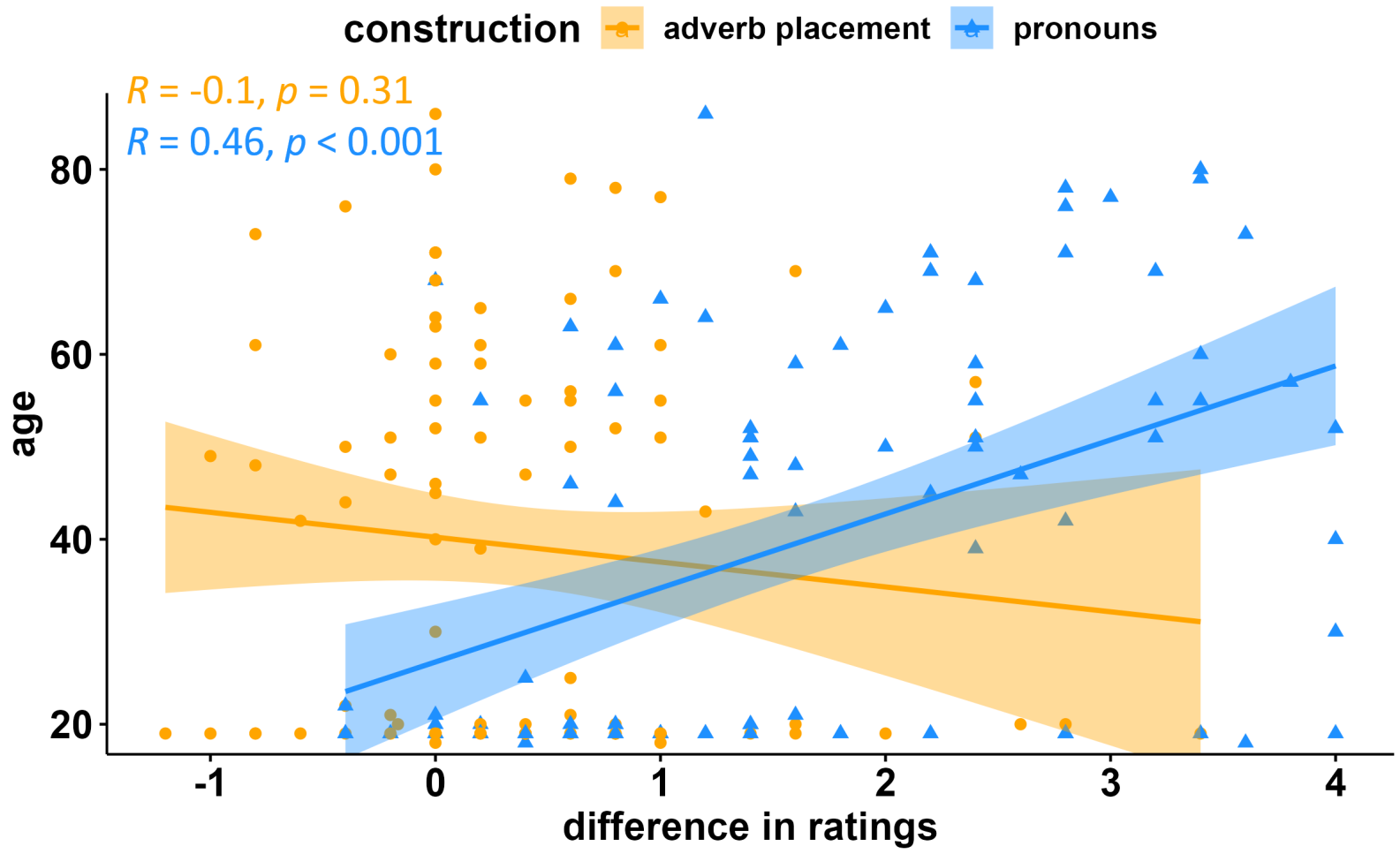
Descriptive statistics

	adverb placement	SO pronouns
grammatical	M = 3.52 (SD = 1.45)	M = 4.37 (SD = 1.06)
ungrammatical / marked	M = 3.15 (SD = 1.39)	M = 2.79 (SD = 1.55)

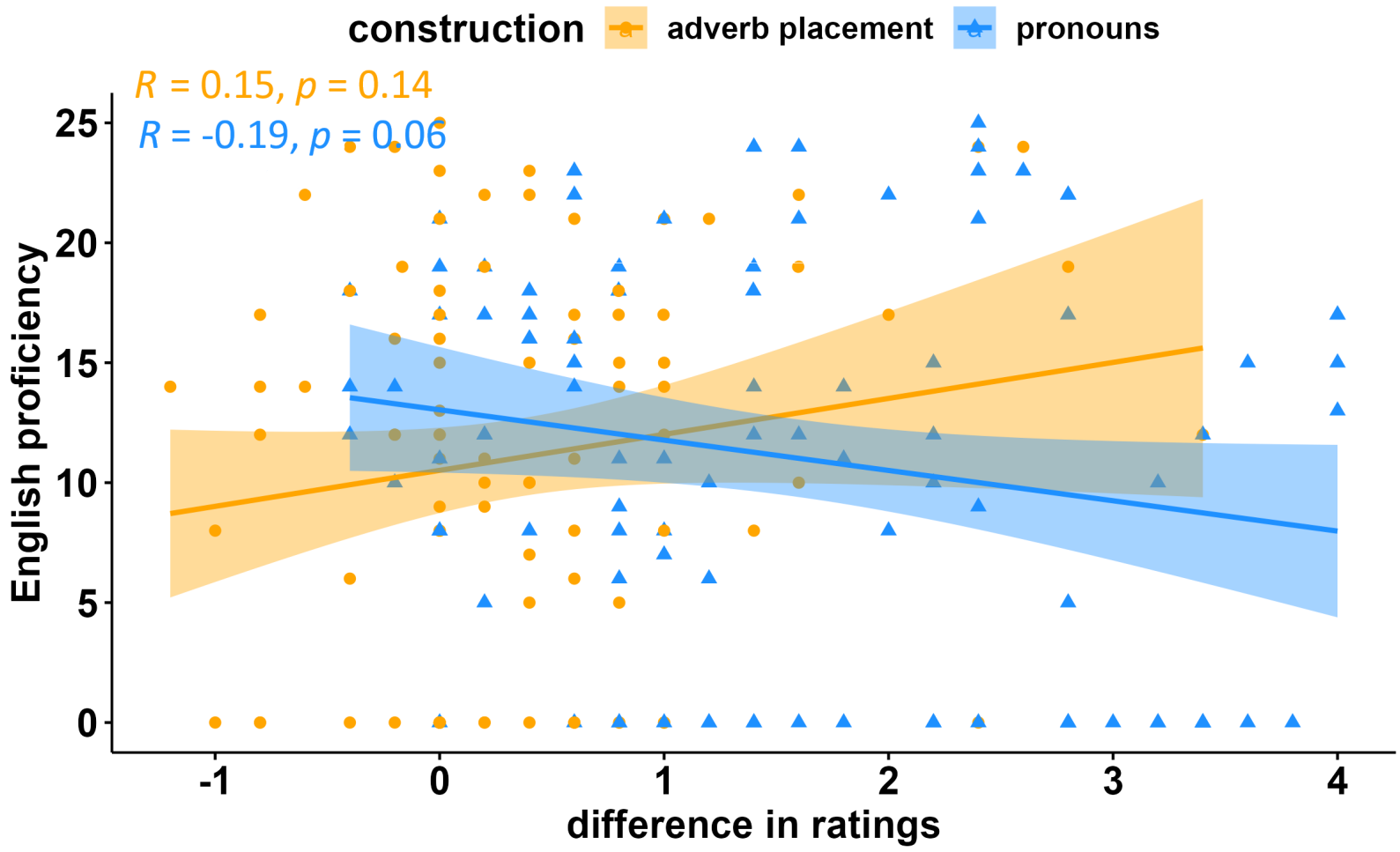
Differences in ratings between grammatical and ungrammatical/marked sentences



Correlation between differences in ratings and age



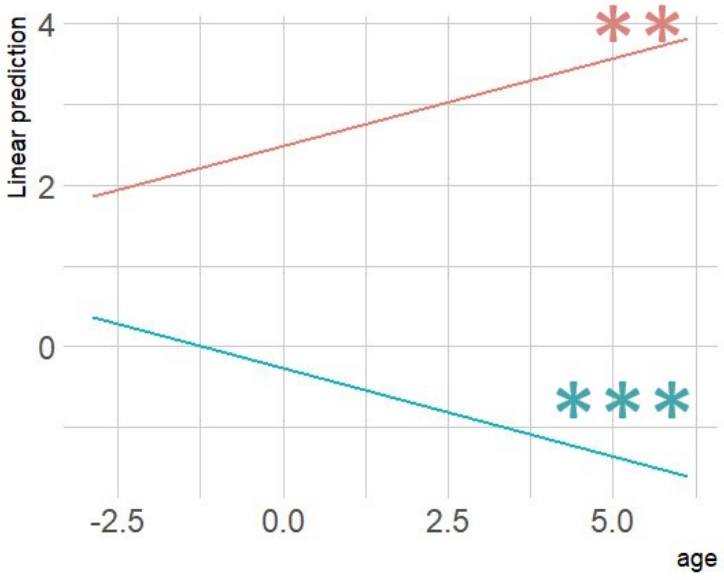
Correlation between differences in ratings and English proficiency

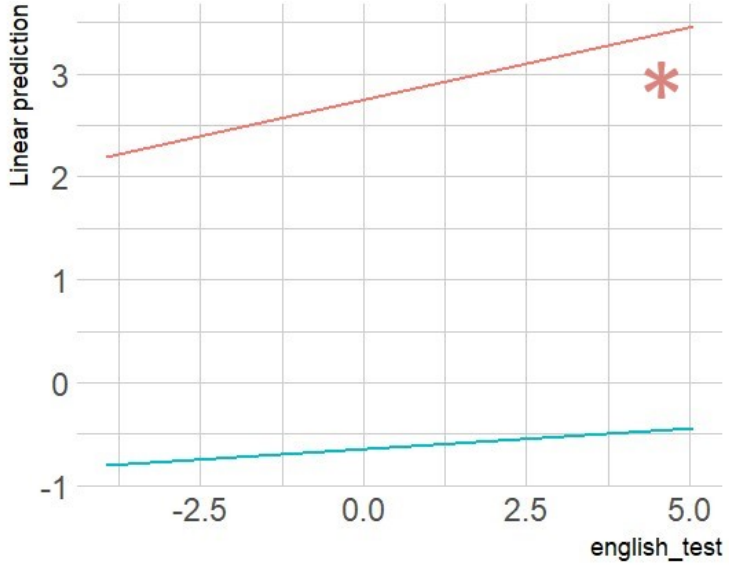


SO pronouns – modelling

- mixed effects ordinal logistic regression model
- rating $\sim$ grammaticality + grammaticality : age + grammaticality : english_proficiency + (1|participant) + (1|sentence)
- main effect of grammaticality ($p < .001$)
- interaction between grammatical condition and age ($p = .001$) and English proficiency ($p = .035$)
- interaction between ungrammatical condition and age ($p < .001$)

SO pronouns – modelling



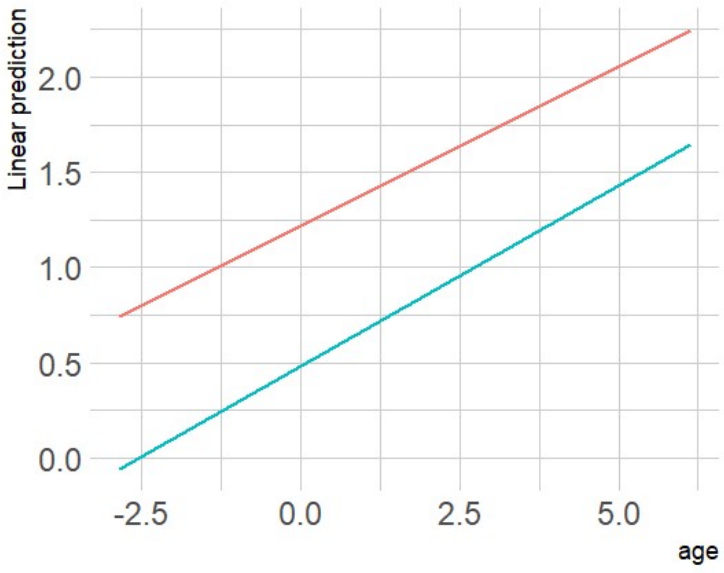


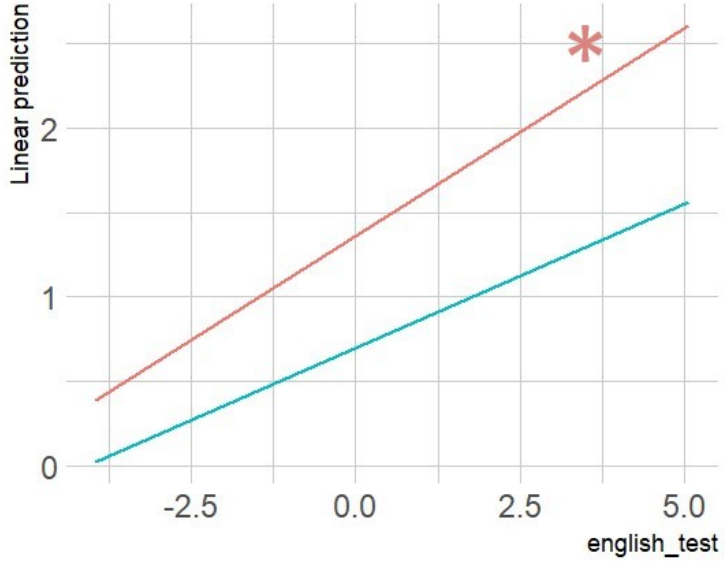
grammaticality: — grammatical, — ungrammatical

Adverb placement – modelling

- mixed effects ordinal logistic regression model
- rating $\sim$ grammaticality + grammaticality : age + grammaticality : english_proficiency + (1|participant) + (1|sentence)
- main effect of grammaticality ($p < .001$)
- interaction between grammatical condition and English proficiency ($p = .015$)

Adverb placement – modelling





grammaticality: — grammatical, — marked

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Discussion – RQ1

Do multilingual status and / or age affect the processing of ungrammaticality and markedness among L1 speakers of Polish?

- **influence of age on the ratings of ungrammatical**, but not marked constructions – **potential language change**
- **absence of clear influence of English proficiency** as proxy for multilingual status on the ratings of ungrammatical (SO pronouns) or marked (adverb placement) constructions
- **however**: young functionally monolingual adults have more frequent contact with other languages via the internet, especially social media, than older monolingual adults – **potential influence of multilingual status**

Discussion – RQ2

Are multilingual status and / or age correlated with less prescriptively-oriented attitudes towards language?

- **multilingualism- and age-related increase in optionality** (Sorace, 2019) for sentences with pronouns
- **more liberal attitudes** towards language related with **multilingual status** (e.g., Dewaele & Li, 2013) and **younger age**

Conclusions

Future research:

- investigation of gradience in other languages (e.g., Norwegian)
- more structured investigation of factors influencing ratings of ungrammatical and marked constructions in L1 (education level potentially correlated with multilingualism)
- wider selection of constructions characterised by gradience (investigation of syntactic, semantic / pragmatic, and processing-based sources of gradience)

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Thank you!

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