

Does the number morphology determine the agreement strategy?

A quantitative study of nominal right node raising in Russian



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Introduction

- ❑ Parameterizing agreement variation → the analysis of multiple language factors.
- ❑ What is the role of number morphology in determining agreement strategy?
- ❑ Case study: the variation in Russian nominal right node raising constructions (NRNR).
- ❑ The type of noun number inflection imposes certain restrictions on the possible agreement strategy in Russian NRNR.
- ❑ Considering noun morphology enables to opt for the theoretical approach explaining variation in this construction.

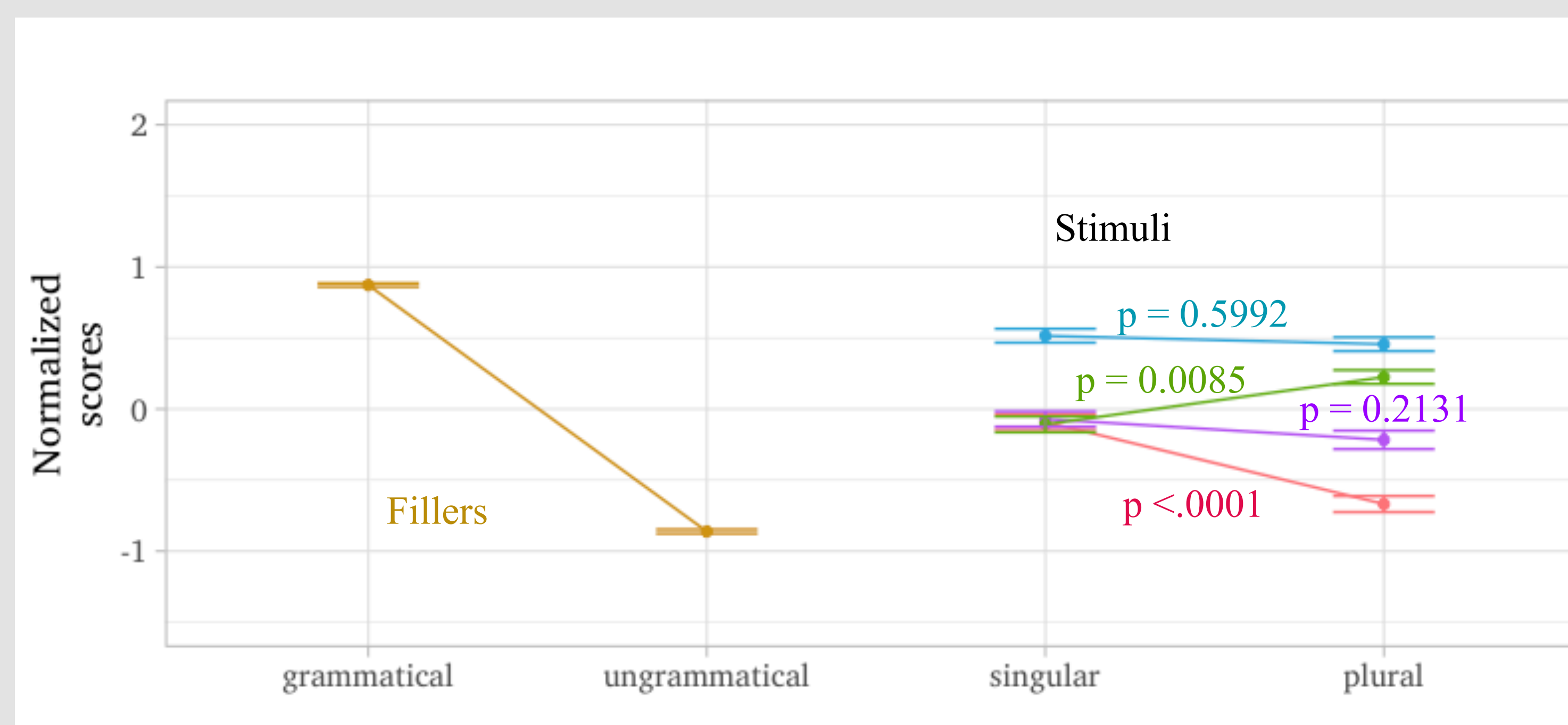
Nominal right node raising

- ❑ Russian NRNR demonstrate agreement variation:
 - ✓ distributive strategy (singular noun)
 - ✓ summative strategy (plural noun)
- (1) *vysok-ij i nizk-ij student/ student-y*
tall-SG and short-SG student.SG / student-PL
'the tall and the short student'
- ❑ The discourse and syntactic factors parameterizing the agreement variation were considered.
- ❑ The role of noun morphology in Russian has not been studied before.
- ❑ The correlation between the morphology and the agreement was described for Bulgarian.
 - ✓ regular number morphology → summative strategy
 - (2) *bălgarsk-ija i rusk-i narod-i / *narod*
bulgarian-SG.M and russian-SG.M nation-PL / nation.SG
'the Bulgarian and Russian nations'
 - ✓ irregular number morphology → distributive strategy
 - (3) *naj-nisk-oto i naj-visok-o dete / *deca*
most-short-SG.N and most-tall-SG.N child/children
'the shortest and tallest child'
- ❑ ATB-movement, privative number feature
- ❑ The difference between regular and irregular morphology
 - ✓ Early insertion of lexical roots and late insertion of inflection morphemes.
 - ✓ The root is inserted before syntactic movements, but the plural feature arises in syntactic derivation.
 - ✓ Therefore, contextual allomorphy is impossible.

Experimental study

- ❑ Method: self-paced acceptability (Likert scale 1-7)
- ❑ Design: 2 × 4
 - ✓ the noun number: singular, plural
 - ✓ the morphological noun type: suppletion and stem alternations, suffix alternations, syncretic forms, regular nouns
- ❑ Statistical analysis: linear mixed models

Acceptability judgment

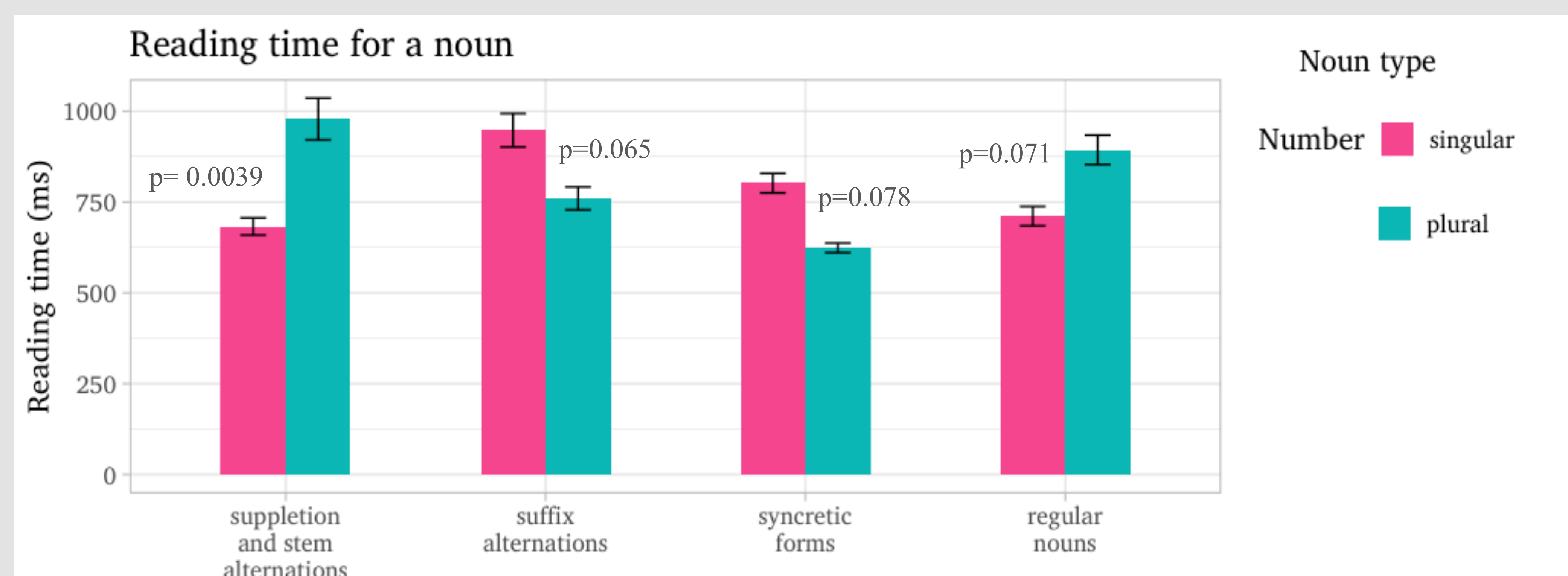


Suppletion and stem alternations: singular nouns are significantly more acceptable than plural nouns.

Suffix alternations, syncretic forms: the difference in the acceptability of singular nouns and plural nouns is not statistically significant.

Regular nouns: plural nouns are significantly more acceptable than singular nouns.

Self-paced reading



- ❑ The difference in the reading time for singular and plural nouns
 - ✓ is significant only for the suppletive forms and nouns with stem alternation
 - ✓ is not significant for other conditions

Results

- ❑ The nouns with stem alternations demonstrate the preference of singular number. The plural forms receive significantly lower scores and cause reading delays.
- ❑ There is no significant difference between acceptability of singular and plural forms for nouns with suffix alternations.
- ❑ The syncretic nouns receive the highest scores and show no delay in the reading task.
- ❑ Plural forms with regular morphology receive significantly higher scores, but singular regular forms are still more acceptable than ungrammatical fillers.

Discussion

- ❑ The analysis with ATB-movement explains the preference of singular forms with stem alternations.
- ❑ The acceptability of both singular and plural forms with suffix alternations and with regular morphology is impossible if the number feature is privative.
- ❑ Multidominance analysis should be applied:
 - ✓ The number feature is equipollent → the acceptability of singular and plural forms with suffix alternations and with regular morphology.
 - ✓ The multidominant structure is derived after the insertion of lexical roots → the contextual allomorphy becomes impossible on this stage → the unacceptability of plural forms with suppletive morphology and stem alternations.

Acknowledgements

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References

Embick, D., Halle, M. 2005. On the status of stems in morphological theory. In Geerts, T., van Ginneken, I., Jacobs, H. (eds.) Romance Languages and Linguistic Theory 2003: Selected papers from 'Going Romance' 2003, Nijmegen, 20-22 November, 37-62. Amsterdam: John Benjamins.

Harizanov, B., Gribanova, V. 2015. How across-the-board movement interacts with nominal concord in Bulgarian. In Proceedings from the Annual Meeting of the Chicago Linguistics Society 49, University of Chicago, IL. Chicago Linguistics Society.

Kodzasov, S. 1987. Chislo v sochinitel'nyx konstrukcijax [Number in coordinated structures]. In Kodzasov, S., Laufer, N., Savina, E. (eds.) Modelirovanije jazykovoj dejatel'nosti v intellektual'nyx sistemax, 204-219, Moscow, Russia.

Shen, Z. 2018. Feature arithmetic in the nominal domain. PhD thesis, University of Connecticut, Storrs, CT.