

Does the number morphology determine the agreement strategy?

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Abstract

Parameterizing agreement variation requires the analysis of multiple language factors. This paper investigates the role of number morphology in determining agreement strategy. In present study, I consider the variation in Russian noun phrases with coordinated modifiers, also known as nominal right node raising constructions (NRNR). Previous studies pointed out semantic, discourse and syntactic factors parameterizing the agreement variation. Using experimental study, I show that the type of noun number inflection imposes certain restrictions on the possible agreement strategy in Russian NRNR. I argue that considering noun morphology enables to opt for the theoretical approach explaining variation in this construction.

Keywords: number morphology, agreement, variation, coordination, right node raising

Introduction

In order to parameterize agreement variation in a certain construction, it is necessary to list the variety of factors which can be identified as predictors for choosing one or another agreeing option. The present paper deals with the influence of morphological factors on the agreement strategy. The study investigates variation in Russian noun phrases with coordinated modifiers, also known as nominal right node raising constructions (NRNR, Shen 2018).

Nominal right node raising constructions

Russian nominal right node raising constructions are noted to demonstrate number agreement variation: both distributive strategy (singular noun) and summative strategy (plural noun) are acceptable (1). Previously semantic, discourse and syntactic factors parameterizing the agreement variation were considered (Kodzasov 1987). However, the role of noun morphology in Russian has not been studied before.

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|--------------|-----|-----------|-------------------------|
| (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 correlation between the morphology and the agreement was described for Bulgarian (Harizanov & Griбанова 2015). The regular number morphology of the noun enables only summative strategy (2) while the irregular number morphology enables only distributive agreement (3).

(2) bālgarsk-i-ja		i	rusk-i	narod-i/ * narod
Bulgarian-SG.M-the	and	russian-SG.M	nation-PL/ nation.SG	
'the Bulgarian	and	Russian	nations'	

(3) naj-nisk-o-to		i	naj-visok-o	dete/ * deca
most-short-SG.N-the	and	most-tall-SG.N	child/children	
'the shortest	and	tallest	child'	

The syntactic analysis proposes an ATB-movement, number feature is assumed to be privative. The difference between regular and irregular morphology is explained by early insertion of lexical roots and late insertion of inflection morphemes (Embick & Halle 2005). The root is inserted before syntactic movements, but the plural feature arises in syntactic derivation. Therefore, contextual allomorphy is impossible.

Experimental study

In order to examine the relation between the number morphology and the agreement in Russian, I conducted a self-paced acceptability experiment (Likert scale 1-7). It tested 2 factors: the noun number (singular/ plural) and the morphological noun type: suppletion and stem alternations (4), suffix alternations (5), syncretic forms (6), namely *singulare tantum* (6a) and *plurale tantum* (6b), regular nouns (7). Statistical analysis was conducted with linear mixed models.

(4) vysok-ij	i	nizk-ij	človek / ljudi
tall-SG	and	short-SG	man / people
'the tall	and	the short	man'
(5) bur-yj	i	bel-yj	medvež-onok / medvež-ata
brown-SG	and	white-SG	bear-SG / bear-PL
'the brown	and	the white	bear'
(6) a. morsk-aya	i	sukhoputn-aya	pekhota
naval-SG	and	ground-SG	infantry
'the naval	and	the ground	infantry'
b. elektronn-ye	i	mekhaničesk-ie	vesy
electronic-PL	and	mechanical-PL	scales
'the electronic	and	the mechanical	scales'

- (7) *požil-oj i mlad-oj prepodavatel' / prepodavatel-i*
 elderly-SG and young-SG teacher.SG / teacher-PL
 'the elderly and the young teacher'

The results of the experiment are as follows. The syncretic nouns receive the highest scores and show no delay in the reading task ($p=0.5992$). The nouns with stem alternations demonstrate the preference of singular number. The plural forms receive significantly lower scores ($p<.0001$) and cause reading delays ($p=0.0039$). There is no significant difference between acceptability of singular and plural forms for nouns with suffix alternations ($p=0.2131$). Plural forms with regular morphology receive significantly higher scores ($p=0.0085$), but singular regular forms are still more acceptable than ungrammatical fillers.

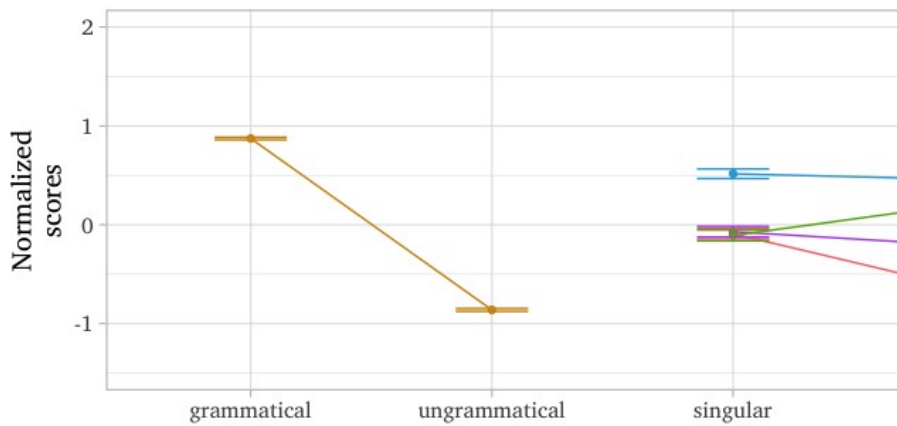


Figure 1. The interaction plot for acceptability judgments

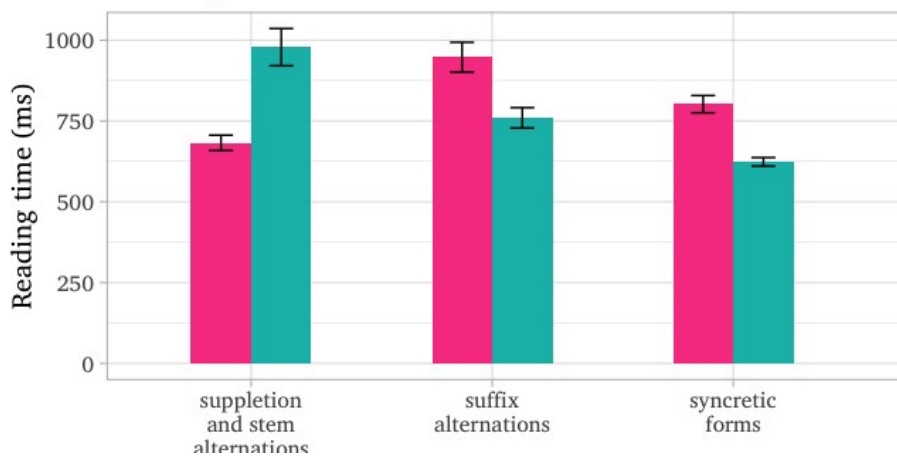


Figure 2. The barplot for reading time of a noun

Thus, the analysis with ATB-movement explains the preference of singular forms with stem alternations. However, the acceptability of both singular and plural forms with suffix alternations and with regular morphology is impossible if the number feature is privative. I argue that multidominance analysis should be applied (Shen 2018). According to this approach, the number feature is equipollent, which explains the acceptability of singular and plural forms with suffix alternations and with regular morphology. Since the multidominant structure is derived after the insertion of lexical roots, the contextual allomorphy becomes impossible on this stage. Thus, it explains the unacceptability of plural forms with suppletive morphology and stem alternations.

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