



Eighteenth Conference on Typology and Grammar
for Young Scholars
25 November 202

**Attributive number agreement of noun phrases
with coordinated modifiers in Russian**

Kseniia Studenikina

Noun phrases with coordinated singular adjectives



Number variation of the head noun:

Both singular and plural nouns are possible

	Adj _{SG}	Conj	Adj _{SG}	N _{SG/}	N _{PL}
(1)	<i>staryj</i>	<i>i</i>	<i>novyj</i>	<i>stil'</i>	<i>stil-i</i>
	old.SG	and	new.SG	style.SG/	style-PL

'the old and new styles'

What is the reason for the number variation?

Different agreement strategy



Distributive/ morphological

Adj_{SG} Conj Adj_{SG} N_{SG}



staryj i novyj stil'
old.SG and new.SG style.SG
'the old and new style'

Summative/ semantic

Adj_{SG} Conj Adj_{SG} N_{PL}



staryj i novyj stili
old.SG and new.SG style-PL
'the old and new styles'

Attributive agreement



I. Semantic – with the entire phrase

(2) *eti [staryj i novyj stil'/stili]* – these [old.SG and new.SG style]

II. Morphological

A. Agreement on the adjective number

(3) [*etot staryj*] i [~~*etot*~~ *novyj*] *stil'/stili* – [this old.SG] and [~~*this*~~ new.SG] style/styles

B. Agreement on the noun number

(4) a. *etot* *staryj i novyj* *stil'* – this old.SG and new.SG style

b. *eti* *staryj i novyj* *stili* – these old.SG and new.SG styles

Which strategy turns out to be the most acceptable for the speakers?

Agreement Hierarchy

attributive — predicate — relative pronoun — personal pronoun
 ← morphological agreement semantic agreement →

(Corbett 1979)

Predicate agreement

- Semantic agreement

(5) *a. staryj i novyj stil' budut uravneny/ *budet uravnen*
 old.SG and new.SG style.SG will_be.PL equal.PL will_be.SG equal.SG

*b. staryj i novyj stili budut uravneny/ *budet uravnen*
 old.SG and new.SG style-PL will_be.PL equal.PL will_be.SG equal.SG

'The old and new styles will become equal.'

Corpus data

	singular premodifier	plural premodifier
singular noun	6a	—
plural noun	6b	6c

- (6) a. *reformirovanie svoej srednej i vyšej školy*
reformation its.SG secondary.SG and higher.SG school.SG
'the reformation of its secondary and higher school'
- b. *dostiženija našej ženskoj i mužskoj komand*
achievement.PL our.SG women's.SG and men's.SG team.PL
'the achievements of our women's and men's teams'
- c. *kakovy maksimal'naja i minimal'naja dal'nosti*
what_is.PL maximum.SG and minimum.SG distance.PL
'what are the maximum and minimum distance'

Experimentall study



Method:

- acceptability judgment (Likert scale, 1-7)
- self-paced reading (ms)

Design:

- premodifier number: *singular vs. plural*
- noun number: *singular vs. plural*
- noun case: *direct* (NOM) vs. *oblique* (INSTR)

Example of experimental stimuli

Vasya used our long and short hose for watering the garden.	Premodifier number	Noun number	Case
<i>Vasya ispol'zoval naš dlinnyj i korotkij šlang dlya poliva sada.</i>	SG	SG	ACC
<i>Vasya ispol'zoval naš dlinnyj i korotkij šlangi dlya poliva sada.</i>	SG	PL	ACC
<i>Vasya ispol'zoval naši dlinnyj i korotkij šlangi dlya poliva sada.</i>	PL	SG	ACC
<i>Vasya ispol'zoval naši dlinnyj i korotkij šlangi dlya poliva sada.</i>	PL	PL	ACC
<i>Vasya vospol'zovalsya našim dlinnym i korotkim šlangom dlya poliva sada.</i>	SG	SG	INSTR
<i>Vasya vospol'zovalsya našim dlinnym i korotkim šlangami dlya poliva sada.</i>	SG	PL	INSTR
<i>Vasya vospol'zovalsya našimi dlinnym i korotkim šlangom dlya poliva sada.</i>	PL	SG	INSTR
<i>Vasya vospol'zovalsya našimi dlinnym i korotkim šlangami dlya poliva sada.</i>	PL	PL	INSTR

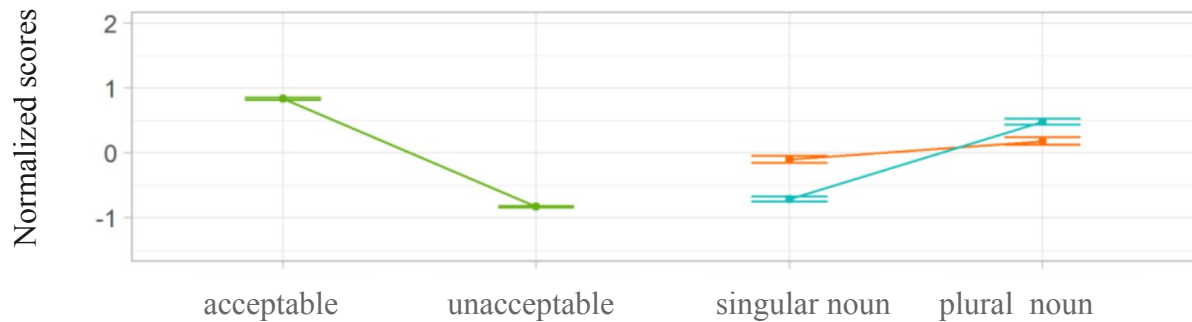
Variance analysis with repeated measures

	df	Sum Sq	Mean Sq	F value	Pr(>F)
Premodifier number	1	1,1	1,08	1,31	0.25253
Noun number	1	300,9	300,88	366,141	< 2e-16
Case	1	3,1	3,1	3,778	0.05206
Premodifier number : noun number	1	117	117,03	142,409	< 2e-16
Premodifier number : case	1	7,8	7,8	9,491	0.00209
Noun number : case	1	0,6	0,55	0,674	0.41175
Premod. num. : noun num. : case	1	0,2	0,22	0,273	0.60154

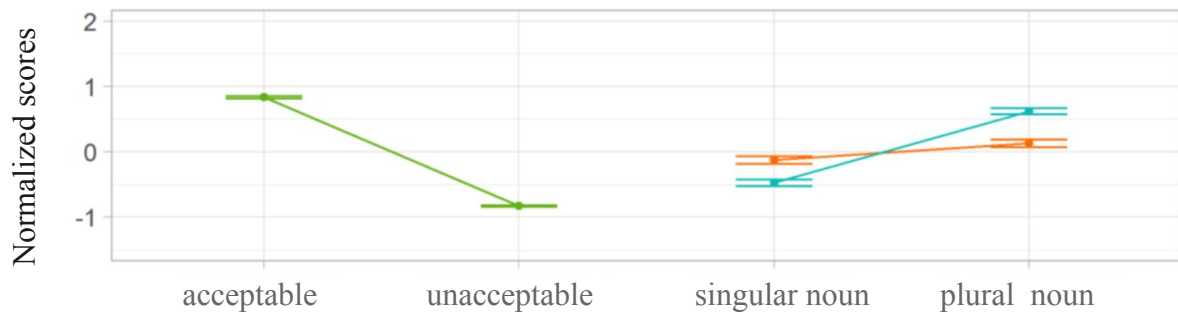
significant main effect for

- the noun number
- the interaction of the premodifier number + noun number
- the interaction of the premodifier number + case

Interaction plot for fillers and stimuli



(a)



(b)

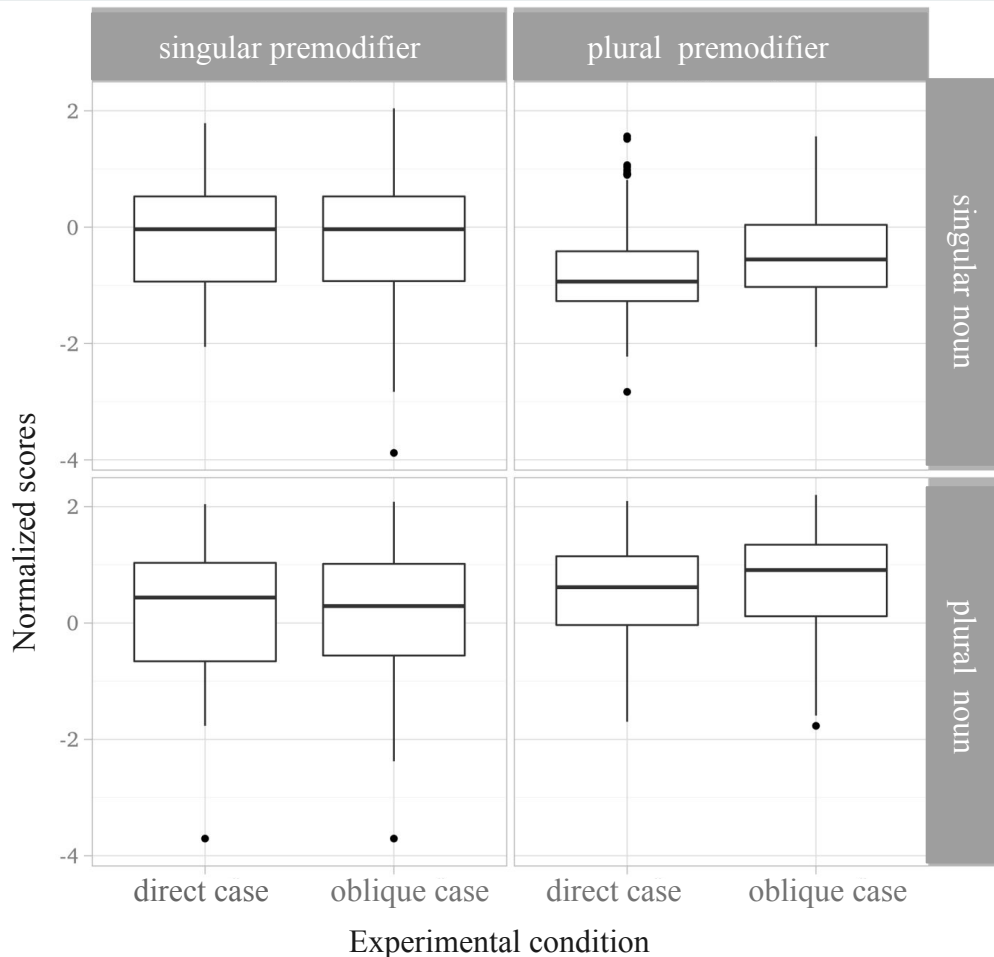
Condition: —●— filler —●— singular premodifier —●— plural premodifier

Significant differences:

- between singular and plural premodifiers for singular and plural nouns
- between singular and plural nouns with a plural modifier
- between direct and oblique case with the plural premodifier and the singular noun

Interaction plot of mean scores for fillers and stimuli (a) direct case (ACC), (b) oblique case (INSTR)

Boxplots for experimental conditions

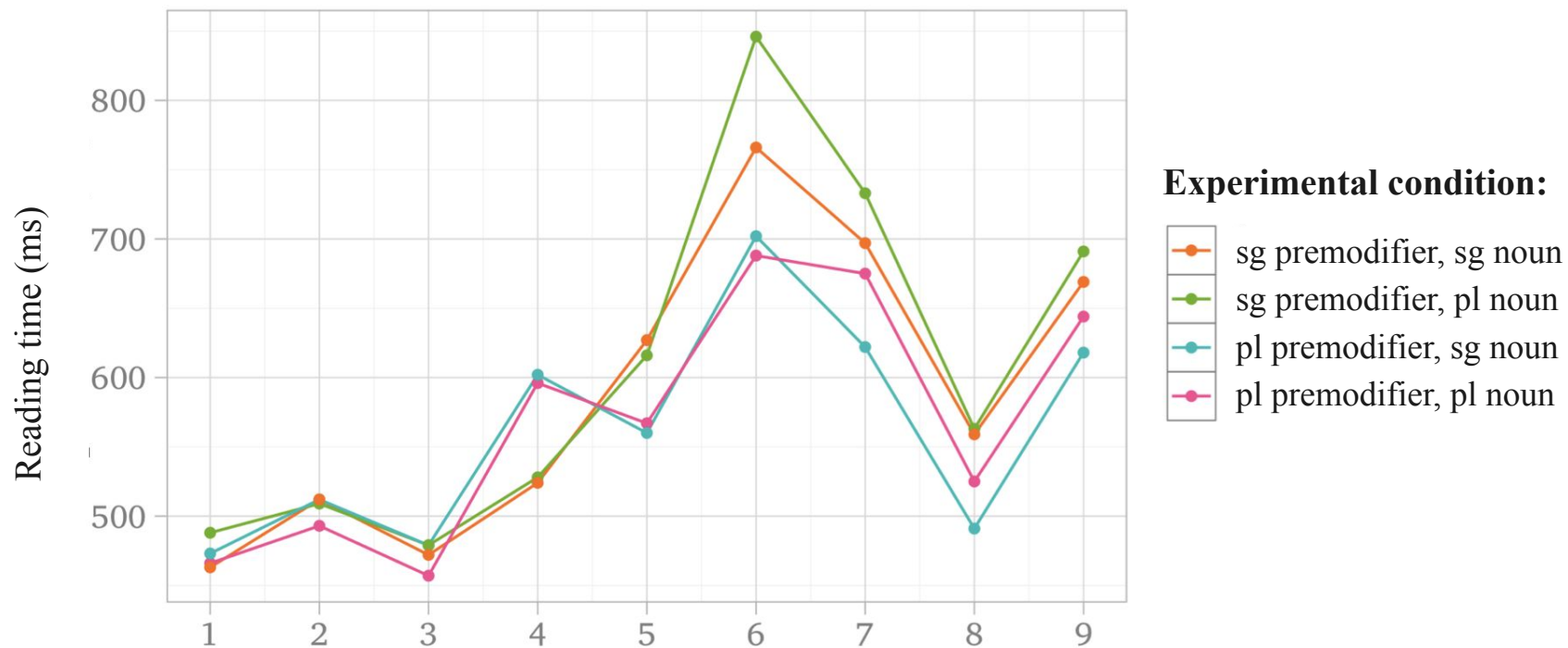


→ the most acceptable is the same number of the premodifier and the noun: both singular or both plural

→ variation is observed for the singular premodifier and the plural noun: some speakers find these sentences acceptable, while others consider them less acceptable

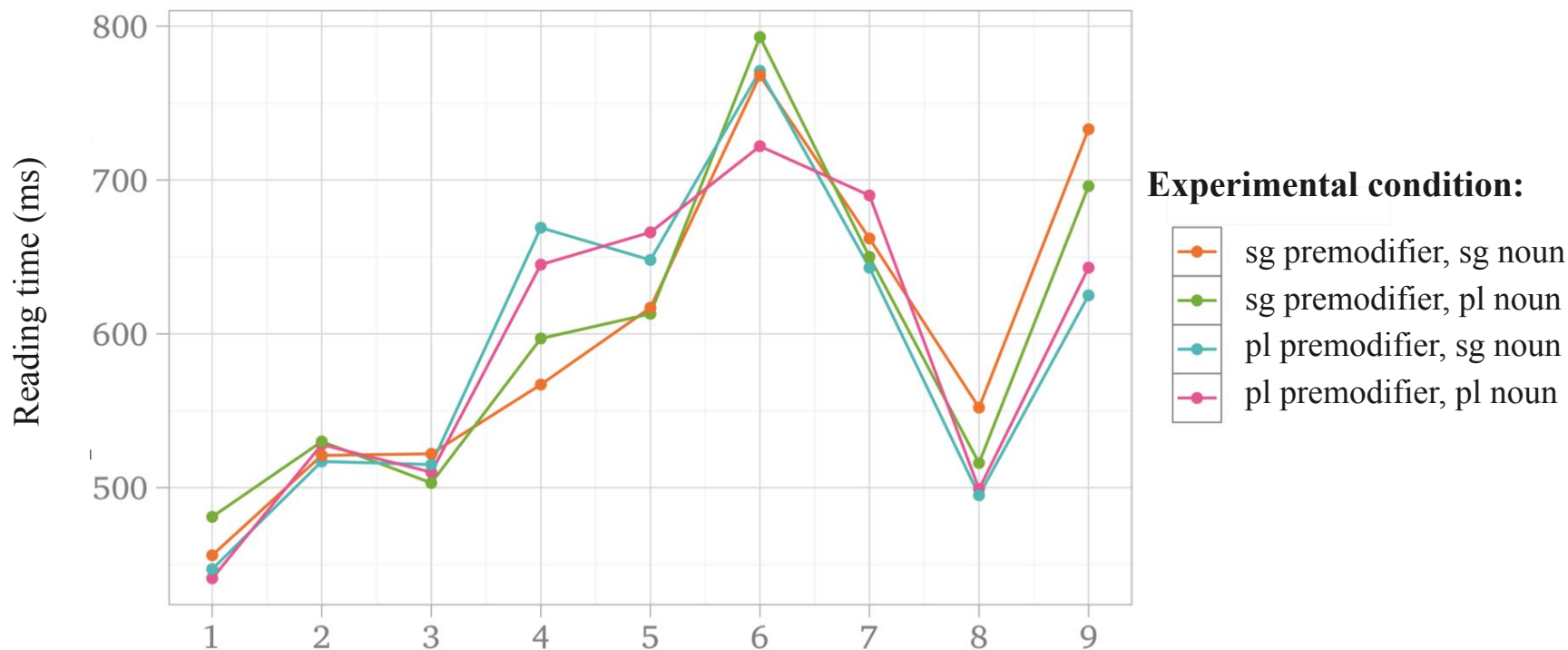
→ the plural premodifier and the singular noun are the least acceptable; in the oblique case the acceptability is higher than in the direct one

Reading time (direct case)



1	2	3	4	5	6	7	8	9
Vasya	<i>ispol'zoval</i> used	<i>naš/naši</i> our.SG/PL	<i>dlinnyj</i> long	<i>i korotkij</i> and short	<i>šlang/ šlangi</i> hose.SG/PL	<i>dlya poliva</i> for watering	<i>sobstvennogo</i> own	<i>sada.</i> garden

Reading time (oblique case)



1	2	3	4	5	6	7	8	9
Vasya	vospol'zovalsya used	<i>našim/našimi</i> our.SG/PL	dlinnym short	i korotkim and short	šlangom/ šlangami hose.SG/PL	dlya poliva for watering	sobstvennogo own	sada garden

Conclusions



- The morphological attributive agreement on the noun number is the most acceptable: either a premodifier and a noun are both singular or both plural
- Morphological agreement of premodifier with the singular adjective is also acceptable even with plural noun, but only for a part of the respondents
- The experimental data on the attributive agreement confirm our typological expectations
- The least acceptable is the semantic attributive agreement which is the plural modifier and the singular noun; for the indirect case, the acceptability is higher than for the direct
- The difference in the perception of the NPs in direct and oblique case is demonstrated in reading task: the mismatch is less acceptable for the direct case than for the oblique case

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Thank you for your attention!

