

Interaction of word order and prosody in the processing of information structure (IS): a study of Russian polar questions

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IS-related effects of word order alternations and their interaction with prosody in statements are widely discussed cross-linguistically and in Russian, in theoretical models and in processing (see [1] for a recent overview), but almost no studies focus on questions. In this study, we asked whether comprehenders allow (i) a wide reading when stress is on an argument, (ii) a narrow subject reading with verb stress, and (iii) a narrow object reading with verb stress — and, for each case, which contextual or structural conditions license such interpretations.

Method. Participants (N=31) judged 32 target polar questions + 16 fillers. After hearing a question, they saw two written answers (presupposing a sentence-wide vs. narrow reading), as in (i)-(ii), and chose whether one answer was better, or whether both were equally good or equally bad. We manipulated three factors: word order (SVO vs. OVS), stress placement (subject, verb, or object), and ‘oddness’ (one argument—subject, object, or neither—could be contextually unexpected). Table 1 provides sample materials for the narrow object vs. wide reading comparison in SVO; the same pair of readings was tested in OVS. We also tested narrow subject vs. wide readings in both word orders. Each condition included four items.

Results and discussion. Mixed-effects logistic regressions tested participants’ likelihood of selecting wide, subject, or object readings (Figures 1–3, Table 2). For wide readings, the intercept confirmed a preference for canonical word order, verb stress, and no odd constituents. Stress placement had a significant main effect, and its interaction with oddness was significant: stress on arguments was more readily compatible with wide readings when arguments were odd. Word order had little effect, unlike in statements.

For subject readings, the intercept showed preference for subject stress, canonical order, and no odd constituents. The stress factor was significant, and its interaction with verb stress and non-canonical word order reduced the likelihood of narrow readings. Non-canonical orders typically mark narrow focus with the stress on the focused constituent, so verb stress in such orders caused confusion, reflected in many ‘both bad’ responses.

For object readings, the intercept confirmed preference for object stress, canonical order, and no odd constituents. Verb stress and odd objects independently reduced the odds of narrow readings, but their interaction increased them—an interesting nonlinear effect. The interaction of non-canonical order with oddness also boosted the narrow reading likelihood.

Figures and tables

Table 1: Examples of experimental materials (with glosses) for testing object narrow reading vs wide reading in SVO

Word order & stress	Odd	Stimulus	Answer 1 (narrow reading)	Answer 2 (wide reading)
SVO	None	<i>Vasja s'jel PONCHIK?</i> Vasya _{NOM} ate donut _{ACC}	<i>Da, ponchik.</i> yes, donut _{ACC}	<i>Da, tak i bylo.</i> yes, so it was
	O	<i>Vasja s'jel ZHUKA?</i> Vasya _{NOM} ate beetle _{ACC}	<i>Da, zhuka.</i> yes, beetle _{ACC}	<i>Da, tak i bylo.</i> yes, so it was
SVO	None	<i>Varja SSHILA plat'je?</i> Varya _{NOM} sewed dress _{ACC}	<i>Da, platje.</i> yes, dress _{ACC}	<i>Da, tak i bylo.</i> yes, so it was
	O	<i>Varja SSHILA serdze?</i> Varya _{NOM} sewed heart _{ACC}	<i>Da, serdze.</i> yes, heart _{ACC}	<i>Da, tak i bylo.</i> yes, so it was

Figure 1: Distribution of answers in different conditions

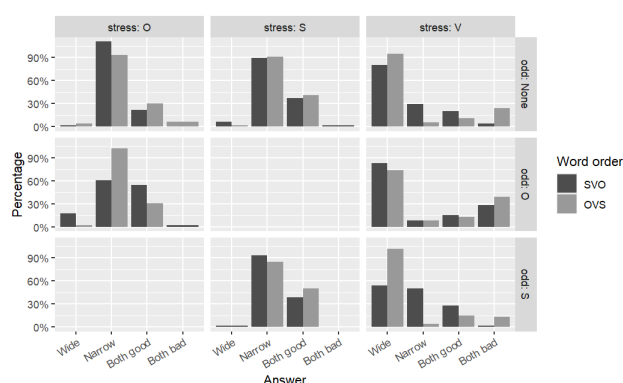


Table 2: Number of items per stress and oddness conditions (in each group, 50% items were SVO and 50% OVS)

stress: O	stress: S	stress: V	
8	8	16*	odd: none
8	0	8	odd: O
0	8	8	odd: S

* 8 items with object and 8 with subject answers

Figure 2: Number of answers for targets with a choice of narrow subject focus

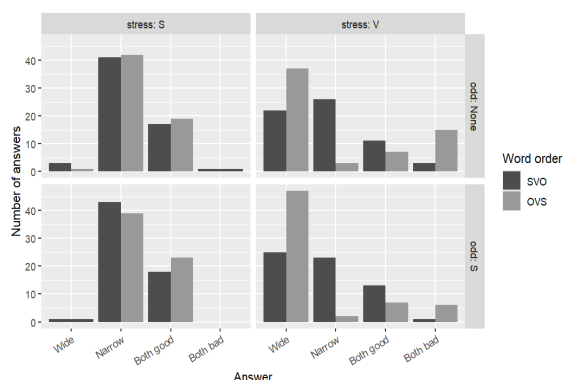
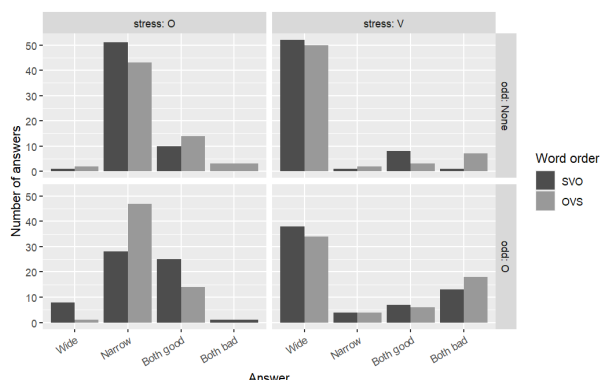


Figure 3: Number of answers for targets with a choice of narrow object focus



References

- [1] Novozhilov, A., & Slioussar, N. (2026). *I like to move it, move it: word order, sentential stress and information structure in comprehension*. To appear in the *Journal of Slavic Linguistics*. [2] Matusevich, M. I. (1976). *Sovremennyy russkiy yazyk: Sintaksis*. [Contemporary Russian language: syntax]. Prosveshcheniye.

Supplemental Information about Russian polar questions

Russian polar questions may include the question particle *li*, but often do not differ from statements on the surface — interrogativity is marked only by prosody. In wide readings, the stress is normally on the verb (ia),¹ but, especially if some XP is contextually unexpected, contrasted etc, may be shifted to this XP (iia).

(i) SVO, stress on V, no ‘odd’ arguments

(a) *Varja SSHILA plat’je?*

Varya_{NOM} sewed dress_{ACC}

‘Did Varya sew a dress?’

(b) *Net, ona kupila.*

‘No, she bought it.’

(c) *Da, tak i bylo.*

‘Yes, this is how it was.’

(ii) SVO, stress on O, ‘odd’ O

(a) *Vasja s’jel ZHUKA?*

Vasja_{NOM} ate beetle_{ACC}

‘Did Vasja eat a beetle?’

(b) *Da, tak i bylo.*

‘Yes, this is how it was.’

(c) *Da, zhuka.*

‘Yes, a beetle.’

In narrow readings, e.g. when the question targets an argument, this argument is stressed, as in (iia). Like statements, questions can have different word orders [2], but the effects of word order alternations are much less well understood. This was one of the questions addressed in our study. Intuitively, they can be used to make the stress object more prominent by fronting it, as in (iva), or to keep the stress in the neutral sentence-final position with the stressed subject in (va).

(iii) SVO, stress on O, no ‘odd’ arguments

(a) *Vasja s’jel PONCHIK?*

Vasya_{NOM} ate donut_{ACC}

‘Was it a donut that Vasya ate?’

(b) *Da, ponchik.*

‘Yes, it was a donut.’

(iv) OVS, stress on O, no ‘odd’ arguments

(a) *PONCHIK s’jel Vasja?*

donut_{ACC} ate Vasya_{NOM}

‘Was it a donut that Vasya ate?’

(b) *Da, ponchik.*

‘Yes, it was a donut.’

(v) OVS, stress on S, no ‘odd’ arguments

(a) *Ponchik s’jel VASJA?*

donut_{ACC} ate Vasya_{NOM}

‘Was it Vasya who ate a donut?’

(b) *Da, Vasja.*

‘Yes, it was Vasya.’

¹ We use target sentences from the present study as examples.