Intonation and polarity sensitive indefinites in Russian polar questions

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HUMBOLDT-UNIVERSITÄT ZU BERLIN



ZAS semantic circle talk 17 January 2025, Berlin

Overview

- 1. Introduction
- 2. Background
- 3. Semantic contrast
- 4. Syntactic contrast
- 5. Conclusion and outlook

In today's presentation

- We are going to talk about negated polar questions with negative concord items in Russian.
- We have found two distinct intonation contours in these questions.
- We claim that they build two contrasts semantic and syntactic.
- Semantically, they correspond to two negation types, outer and inner.
- The differences in their syntactic structure lead to two different ways of negative concord items licensing.

Russian polar questions (yes/no; PQs)

Restan (1972); King (1994); Geist & Repp (2023); Korotkova & Esipova (2024), a.m.o

particle strategy: verb fronting + li

(1) a. Kupil Ii Maks v magazine xleb? bought Li Max in shop bread 'Did Max buy bread in the shop?'

LIPPQs

intonation strategy: declarative word order + Q-PEAK

(2) a. Maks $\text{kupil}_{\{\mathbf{Q}\}} \text{ v magazine xleb}_{\{\mathbf{Q}\}}$? Max bought in shop bread 'Did Max buy bread in the shop?'

INTONPPQs

Russian polar questions (yes/no; PQs)

Restan (1972); King (1994); Geist & Repp (2023); Korotkova & Esipova (2024), a.m.o

particle strategy: verb fronting + *li*

- (1) a. Kupil li Maks v magazine xleb?
 bought Li Max in shop bread
 'Did Max buy bread in the shop?'
 - b. Ne kupil li Maks v magazine xleb?

 not bought Li Max in shop bread

 'Didn't Max buy bread in the shop?'

intonation strategy: declarative word order + Q-PEAK

- (2) a. Maks $\operatorname{kupil}_{\{\mathbf{Q}\}} v$ magazine $\operatorname{xleb}_{\{\mathbf{Q}\}}$? INTONPPQs Max bought in shop bread 'Did Max buy bread in the shop?'
 - b. Maks ne $\text{kupil}_{\{\mathbf{Q}\}} \text{ v magazine xleb}_{\{\mathbf{Q}\}}$? Max not bought in shop bread 'Did Max not buy bread in the shop?'

INTONNPQs

LIPPOS

Haspelmath (2001); Rossyaykin (2022); Letuchiy (2024), a. o.

Russian is a strict negative concord language.

- one semantic negation expressed by several items
- negative concord items (NCIs) are based on wh-words
- NCIs are only possible if licensed by the predicate negation
- (3) Nikto nikoga ničego *(ne) govoril. who.nci when.nci what.nci not said 'No one ever said anything.'

Haspelmath (2001); Rossyaykin (2022); Letuchiy (2024), a. o.

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Brown & Franks (1995); Abels (2005); Zanon (2023), a. o.

NCIs are banned from negative LIPQs.

Brown & Franks (1995); Romero & Han (2004); Abels (2005); Zanon (2023), a. o.

- negation is too high to licence NCIs in LIPQs
- NCIs should block verb movement
- negation is not interpreted there, i.e., expletive or **OUTER**
- outer is opposed to INNER, which is semantically interpreted
- (4) *Ne prišël li nikto na večerinku? not came LI who.NCI on party 'Didn't anybody come to the party?'

LIPQs

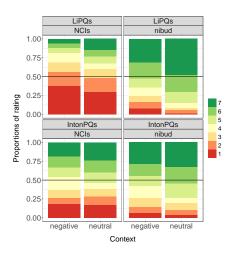
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- (4) *Ne prišël li nikto na večerinku? LIPQs not came LI who.NCI on party 'Didn't anybody come to the party?'
 - NCIs are attested in INTONPQs
- (5) Nikto ne prišël na večerinku?
 who.NCI not came on party
 'Did anyone come to the party?'

INTONPQs

- replication of Staňková (2023)
- naturalness judgment task
- · online LRex, no audio
- 2 × 2 × 2

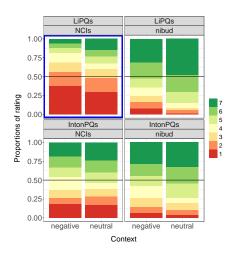
STRATEGY	INDEFINITE	CONTEXT
LıPQs	NCIs	negative
intonPQs	nibud'	neutral



Onoeva & Šimík (2023), descriptive stat

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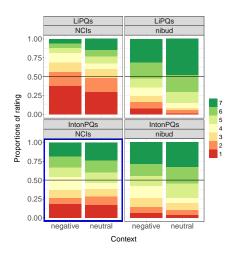
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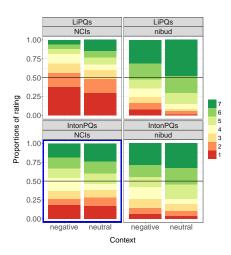
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STRATEGY	INDEFINITE	CONTEXT
LiPQs	NCIs	negative
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Onoeva & Šimík (2023), descriptive stat

→ Why did the participants behave this way?

Intonation strategy: Q-peak

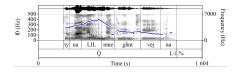
Meyer & Mleinek (2006); Rathcke (2006); Esipova & Romero (2023); Esipova (2024)

- declarative word order and L+H* pitch accent
- 2 possible positions in positive PQs
- but one locus of prominence
- (6) Ty nalil mne glintvejna? ◆ you poured me mulled-wine 'Did you pour me mulled wine?'

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- (6) Ty nalil mne glintvejna? ◀ you poured me mulled-wine 'Did you pour me mulled wine?'
 - stressed syllable of finite verb
 - · neutral and unbiased
 - polarity-seeking

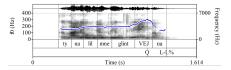


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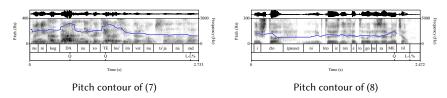
- linearly last stressed syllable
- why-type parent QUD
- explanation-seeking



Corpus examples

Grišina (2015)

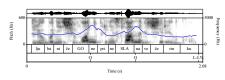
(7) Nu nikog DA_Q ne xo TE_Q los' im vernut'sja nazad $_{L-L\%}$? \P well when.nci not wanted them return back 'Well, have they ever wanted to go back?'



(8) I čto, nikto iz nix ètogo ne $zaME_Qtil_{L-L_{\%}}$? \P and what who.nci from them this not noticed 'So none of them noticed that?'

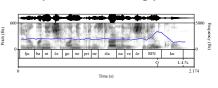
Our finding

- (9) Ljuba ničego ne prinesla na večerinku? ◄>> Ljuba NCI.what not brought on party 'Did Ljuba bring anything/nothing to the party?'
 - two loci of prominence



2 Q-peaks pattern

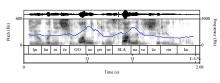
explanation-seeking pattern



1 Q-peak pattern

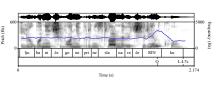
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2 Q-peaks pattern

explanation-seeking pattern



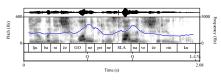
1 Q-peak pattern

Research question no. 1

Do these two distinct intonation patterns lead to different meanings?

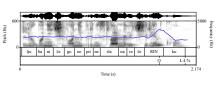
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2 Q-peaks pattern

explanation-seeking pattern



1 Q-peak pattern

Research question no. 1

Do these two distinct intonation patterns lead to different meanings?

- negation in INTONPQs with NCIs and 2 Q-peaks is outer
- negation in INTONPQs with NCIs and 1 Q-peak is inner

Compatibility with particles: slučajno

Šimík (to appear); Zanon (2023); Bill & Koev (2023)

- · slučajno 'accidentally' as a modal particle
 - Eng. by any chance, Cz. náhodou
- · available only in PQs with negation in this use
- (10) Ljuba slučajno niče GO_Q ne prine SLA_Q na večerinku? (2 Q-peaks) Ljuba slučajno nci.what not brought on party 'Did Ljuba bring anything to the party by any chance?'
- (11) *Ljuba slučajno ničego ne prinesla na večeRIN_Qku? (1 Q-peak)
 Ljuba slučajno nci.what not brought on party

 '*Did Ljuba bring nothing to the party by any chance?'

Compatibility with particles: čto li

Restan (1972); Bernasconi (2023); Onoeva (2024)

- a modal particle čto li 'what whether'
 - Eng. or something, Ger. wohl, Hun. talán
- · available in statements, imperatives and PQs
- (12) *Ljuba čto li niče GO_Q ne prine SLA_Q na večerinku? (2 Q-peaks) Ljuba čto li nci.what not brought on party '*Did Ljuba bring anything to the party or something?'
- (13) Ljuba čto li ničego ne prinesla na večeRIN_Qku? (1 Q-peak)
 Ljuba čto li nci.what not brought on party
 'Did Ljuba bring nothing to the party or something?'

Romero & Han (2004); Sudo (2013); Gärtner & Gyuris (2017); Goodhue & Wagner (2018)

(14) Addressee had a birthday party last week.

Ljuba ničego ne prinesla na večerinku? (2 Q-peaks/1 Q-peak)
Ljuba NCI.what not brought on party
'Did Ljuba bring anything/nothing to the party?'
p = Ljuba brought something to the party.

Romero & Han (2004); Sudo (2013); Gärtner & Gyuris (2017); Goodhue & Wagner (2018)

- (14) Addressee had a birthday party last week.
 - a. no evidence: Speaker merely wants to know whether their friend Ljuba brought something or not.
 - 2 Q-peaks ✓ 1 Q-peak 🔏

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b. evidence for $\neg p$: Addressee told Speaker that she was very upset with Ljuba. Speaker wants to know why and poses the question.

2 Q-peaks ✗ 1 Q-peak ✓

(15) Ljuba ničego ne prinesla na večerinku? (2 Q-peaks/1 Q-peak)
Ljuba NCI.what not brought on party
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 - a. no evidence: Speaker merely wants to know whether their friend Ljuba brought something or not.

2 Q-peaks ✓ 1 Q-peak X

b. evidence for $\neg p$: Addressee told Speaker that she was very upset with Ljuba. Speaker wants to know why and poses the question.

2 Q-peaks ✗ 1 Q-peak ✓

c. evidence for *p*: Addressee told Speaker that all her friends brought presents.

2 Q-peaks X 1 Q-peak X

(15) Ljuba ničego ne prinesla na večerinku? (2 Q-peaks/1 Q-peak)
Ljuba NCI.what not brought on party
'Did Ljuba bring anything/nothing to the party?'
p = Ljuba brought something to the party.

Krifka (2013); Goodhue & Wagner (2018); Geist & Repp (2023), a.o.

(16) Ljuba ničego ne prinesla na večerinku?
Ljuba NCI.what not brought on party
'Did Ljuba bring anything/nothing to the party?'

Krifka (2013); Goodhue & Wagner (2018); Geist & Repp (2023), a.o.

- (16) Ljuba ničego ne prinesla na večerinku?
 Ljuba NCI.what not brought on party
 'Did Ljuba bring anything/nothing to the party?'
 - a. Da, ona prinesla tort. 2 Q-peaks ✓ 1 Q-peak ?/✗
 'Yes, she brought a cake.'

Krifka (2013); Goodhue & Wagner (2018); Geist & Repp (2023), a.o.

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a. Da , ona prinesla tort .'Yes, she brought a cake.'

2 Q-peaks ✓ 1 Q-peak ?/X

b. Net, ona prinesla tort. 'No, she brought a cake.'

2 Q-peaks X 1 Q-peak ✓

Krifka (2013); Goodhue & Wagner (2018); Geist & Repp (2023), a.o.

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Da, one ničego ne prinesla. 2 Q-peaks X 1 Q-peak ✓

'Yes, she didn't bring anything.'

c.

Krifka (2013); Goodhue & Wagner (2018); Geist & Repp (2023), a.o.

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 b. Net , ona prinesla tort .
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 2 Q-peaks ✓ 1 Q-peak ?/✗
 2 Q-peaks ✗ 1 Q-peak ✓
 2 Q-peaks ✗ 1 Q-peak ✓
 - c. Da, one ničego ne prinesla. 2 Q-peaks ✗ 1 Q-peak ✓ 'Yes, she didn't bring anything.'
 - d. Net, one ničego ne prinesla . 2 Q-peaks ✓ 1 Q-peak ✓
 - 'No, she didn't bring anything.'

Krifka (2013); Goodhue & Wagner (2018); Geist & Repp (2023), a.o.

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Yes, she brought a cake.'
b. Net , ona prinesla tort .
'No, she brought a cake.'
c. Da , one ničego ne prinesla .
'Yes, she didn't bring anything.'
d. Net , one ničego ne prinesla .
2 Q-peaks ✗ 1 Q-peak ✗

interchangeability of yes and no only for 1 Q-peak PQs

'No, she didn't bring anything.'

2 Q-peaks answer pattern is the same as for positive PQs

Interim summary

- Two intonation patterns correspond to two distinct negation meanings.
- Negation in NPQs with 2 Q-peaks is not interpreted, so it is outer.
 - compatible with slučajno, incompatible with čto li
 - do not need salient evidence for $\neg p$ in context
 - do not allow the interchange between yes and no
- Negation in NPQs with 1 Q-peak is interpreted, so it is inner.
 - incompatible with slučajno, compatible with čto li
 - felicitous only in context with salient evidence for $\neg p$
 - allow the interchange between yes and no

Outer negation meaning

- inner negation is interpreted \rightarrow no special treatment necessary
- but what is the meaning of outer negation?

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- but what is the meaning of outer negation?
- they convey some speaker attitude
 - · native speaker intuition: outer negation PQs are less intruding
- expression of epistemic possibility at a non-at-issue level

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Šimík (to appear, 2024)

- (17) English high negation $[\![En \text{ high neg}]\!]^c = \lambda p \lambda w [p(w)] \cdot \forall w' [MB(w', w) \rightarrow p(w')]$
- (18) Czech high negation $[\![\text{Cz high neg}]\!]^c = \lambda p \lambda w [p(w)] \bullet \exists w' [\text{MB}(w', w) \land p(w')]$

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Research question no. 2

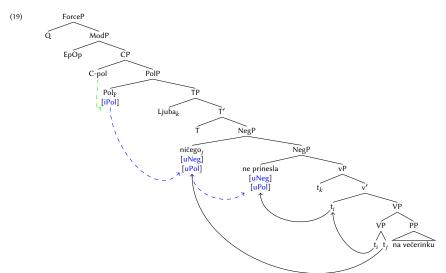
How can outer negation in NPQs with 2 Q-peaks licence NCIs?

Our proposal

- Intonation is crucial: In outer negation PQs, the NCI receives a Q-peak as well as the verb.
- In polarity seeking PQs, we assume a functional projection Pol above TP that is different from semantic negation operator.
- Beck (2006): In wh-questions, wh-words introduce alternatives
 that must be bound by a question operator that can "ignore the
 ordinary semantic value of its sister, and elevate its focus
 semantic value to the ordinary semantics".
- Meyer & Mleinek (2006): "the sentence-type feature [Q] acts similarly as a focus particle in Russian YNQs, obligatorily binding a focused constituent in its scope".
- Pol, that is F-marked, agrees with elements that bear an uninterpretable polarity feature: the verb and the NCIs. This is marked by intonation.

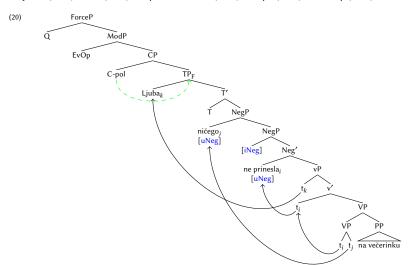
Outer negation with NCI

Zeijlstra (2004); Beck (2006); Meyer & Mleinek (2006); Richards (2010); Bailyn (2011); Letuchiy (2025)



Inner negation with NCI

Zeijlstra (2004); Beck (2006); Meyer & Mleinek (2006); Bailyn (2011); Letuchiy (2025)



Outer vs. inner negation INTONPQs

Outer negation PQ (polarity seeking)	Inner negation PQ (explanation seeking)
no [iNeg] in SpecNegP, negation is not interpreted	there is [iNeg] in SpecNegP, negation is interpreted
there is PolP, Pol is F-marked → polarity-seeking	no PolP, TP is F-marked \rightarrow explanation seeking
Agree relation between C_pol and Pol	Agree relation between C_pol and TP
NCIs are licensed as a part of Pol-NCI-V agreement chain	NCIs are licensed by [iNeg] in Spec- NegP
Pitch accents indicate the long- distance Agree relation between Pol, NCI, and V	Pitch accent is placed according to default prominence (Büring 2016), same locus of prominence as in assertions with sentence focus

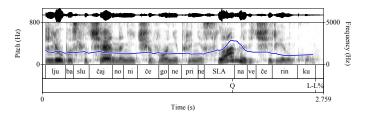
Predictions

- 1. Non-accented NCIs are not licensed in PQs with outer negation
- 2. PQs with outer negation and multiple NCIs have multiple Q-peaks
- 3. Affirmative polarity-seeking PQs also have a Q-peak on the verb
- Nibud'-indefinites are licensed differently, so they receive no Q-peak

1. Pitch accent on NCI is obligatory

INTONPQs with outer negation are degraded without pitch accent on the NCI → born out

(21) *Ljuba slučajno ničego ne prine SLA_Q na večerinku $_{L-L\%}$? \P Ljuba slučajno what.nibud' not brought on party '*Did Ljuba bring anything to the party by any chance?'



Pitch contour of (21)

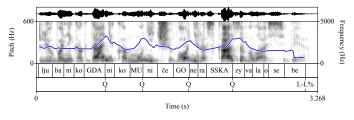
2. Multiple NCIs

Multiple NCIs in outer negation PQs lead to multiple Q-peaks

→ born out

(22) Ljuba nikogDA_Q nikoMU_Q ničeGO_Q ne rassKA_Qzyvala o Ljuba NCI.when NCI.whom NCI.what not told about sebe_{L-L%}? ◀》 herself

'Did Ljuba ever tell anyone anything about herself?'

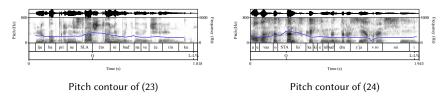


Pitch contour of (22)

3. Affirmative polarity-seeking PQs

Q-peak on the inflected verb \rightarrow born out

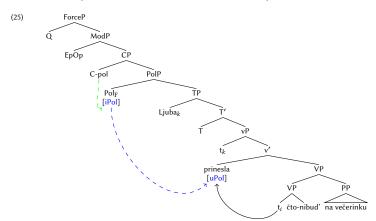
(23) Ljuba prineSLA_Q čto-nibud' na večerinku_{L-L%}? **◆**)
Ljuba brought WHAT.NIBUD' on party
'Did Ljuba bring anything to the party?'



(24) a u vas oSTA $_Q$ lis' kakie-nibud' druz'ja v Rossii $_{L-L\%}$? \blacktriangleleft A at you left WHICH.NIBUD' friends in Russia 'Do you still have any friends in Russia?' Grišina (2015)

Positive PQ

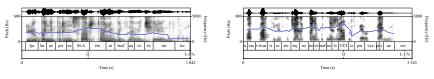
Beck (2006); Meyer & Mleinek (2006); Richards (2010); Bailyn (2011)



4. Nibud'-indefinites

No Q-peak on *nibud*'-indefinites in negative PQs → born out

(26) Ljuba ne prineSLA_Q čto-nibud' na večerinku_{L-L%}? **◆**)
Ljuba brought what.nibud' on party
'Did Ljuba bring anything to the party?'



Pitch contour of (26)

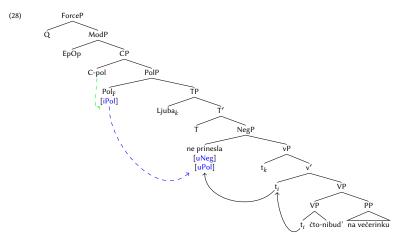
Pitch contour of (27)

A u vas v kvartire slučajno kto-nibuď ne žiVËT_Q iz pervyx
A at you in flat slučajno who.nibuď not lives from first
pionerov_{L−L%}? ◀》
pioneers
'Does anybody from the first pioneers live in your flat, by any chance?'

Grišina (2015)

Outer negation with *nibud*'-indefinite

Zeijlstra (2004); Beck (2006); Meyer & Mleinek (2006); Richards (2010); Bailyn (2011); Letuchiy (2025)



Puzzle: outer negation PQs with a single accent on NCI

- (29) Ljuba niče GO_Q ne prinesla na večerinku_{L-L%}? Ljuba NCI.what not brought on party 'Did Ljuba bring anything to the party?'
 - Only possible when NCI precedes the verb:
 - (30) *Ljuba ne prinesla na večerinku nika KOJ_Q podarok $_{L-L_{\%}}$?

 Ljuba not brought on party NCI. which present

 'Did Ljuba bring any gift to the party?'
 - Another case where a polarity seeking PQ has one locus of prominence that is not the verb and not the narrow focus:
 - (31) VSE_Q studenty rabotajut nad projektom_{L-L%}? All students work on project 'Are all students working on the project?'

Conclusion

- We investigated the underexplored phenomenon of negative INTONPQs with indefinites in Russian.
- Two distinct intonation patterns with different distributions indicate two different interpretations and structures.
- The pattern with 1 Q-peak (usually sentence-final) corresponds to inner negation. The pattern with 2 Q-peaks (on the verb and the NCI) indicates outer negation.
- In outer negation INTONPQs, NCIs can be licensed as a part of a Pol-NCI-V agreement chain, if they are stressed.
- An attempt to model the relation between polarity and focus through a C-pol operator.
- A step towards a unified approach to PQs with different information structure and intonation patterns in Russian.

Outlook

- What would be the semantic derivation of negative INTONPQs and the denotation of C-pol?
- Can the analysis be extended to LIPQs? What about embedded LIPQs?
- How and why is Russian different from languages (e.g., Czech and Polish) that do not accent the verb even in PQs with SVO word order?
- What other intonation patterns can be found in Russian PQs?
 What is the distribution of other indefinites in them?

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