Disjunct size, positive polarity, and the scope of disjunction in Russian

IATL 33 | Tel Aviv University

Pavel Rudnev

pasha.rudnev@gmail.com
https://pavelrudnev.github.io

National Research University
Higher School of Economics (Moscow)

16–17 October 2017
Focus of this talk
Syntax and semantics of disjunction

(1) James speaks Russian or German.
   a. [James speaks Russian] or [James speaks German]
   b. James speaks [Russian or German]

Testing ground
Plain disjunction—ili—in Russian
Meanings of some expressions can vary depending on the presence of other expressions nearby:

(2)  
   a. He is learning French or Italian.  \( p \lor q \)
   b. He is not learning French or Italian.  \( \neg(p \lor q) = \neg p \land \neg q \)

De Morgan’s law  \( \neg(p \lor q) = \neg p \land \neg q \)

A negation of disjunctions is equivalent to a conjunction of negations.
Some logically well-behaved languages

(3) James doesn’t speak Russian or German.
   a. James speaks neither.
   b. James doesn’t speak Russian or he doesn’t speak German.

(4) Jan spreekt geen Russisch of Duits.
    John speaks NEG Russian or German
    see above

(5) Es nestrādāju skolā vai universitātē.
    I not.work school.LOC or university.LOC
    ‘I don’t work at a school or university.’
Other languages not so much

Seminal work by Anna Szabolcsi (Szabolcsi, 2002)

(6) Mari nem járt hokira vagy algebrára
Mari not went hockey-to or algebra-to
≠ ‘Mary didn’t take hockey and didn’t take algebra.’
‘Mary didn’t take hockey or she didn’t take algebra.’ [Hungarian]

(7) On ne znaet russkogo ili nemeckogo
He NEG knows Russian or German
‘He doesn’t speak Russian or German.’ [Russian]

Szabolcsi argues that disjunction is a **positive polarity item** in Hungarian and Russian.
Background and motivation

Empirical motivation

• questionable acceptability of the wide-scope reading

Theoretical motivations

• Spector’s 2014 taxonomy of positive polarity items (PPIs)
• purely semantic unificationist accounts of PPI-hood
• analyses of conjunction and disjunction as propositional operators (Schein, 2017)
The scope properties of the Russian disjunction marker *ili* correlate with the phrasal vs. clausal nature of the disjunction:

- phrasal disjunction yields narrow scope
- clausal disjunction yields wide scope
ili as a local PPI: locality of anti-licensing

[→ > V] in predication

(8)  Ja ne ščitaju pivo vrednym ili protivnym
     I do not consider beer harmful or gross
     ‘I do not consider beer harmful or gross.’

(9)  on ne byl / budet vorom ili mošennikom
     he not was / will be thief or crook
     ‘He {wasn’t/won’t be} a thief or a crook.’

[→ > V] across clause boundaries

(10) Ja ne dumaju [ čto on znaet russkij ili nemeckij ]
     I do not think that he speaks Russian or German
     ‘I don’t think he speaks either language.’
Consider the contrast between the *in-situ* and fronted disjunction:

(11) On ne znaet russkogo ili nemeckogo  
    he not knows Russian or German  
    ‘He doesn’t speak Russian or German.’  
    \[ \forall \rightarrow \neg \]

(12) [ Russkogo ili nemeckogo ] on ne znaet  
    Russian or German he not knows

(13) On [ russkogo ili nemeckogo ] ne znaet  
    he Russian or German not knows  
    ‘Russian or German, he doesn’t speak.’  
    \[ \neg \rightarrow \forall \]

The availability of the narrow-scope reading is unexpected.
• normally, Russian marks scope overtly (Ionin 2001)
• normally, Russian marks scope overtly (Ionin 2001)
• fronting the disjunction should change scope relations, yet the disjunction scopes under the negation,
• normally, Russian marks scope overtly (Ionin 2001)
• fronting the disjunction should change scope relations, yet the disjunction scopes under the negation,
• which it couldn’t do in situ
Overt scope paradox

- normally, Russian marks scope overtly (Ionin 2001)
- fronting the disjunction should change scope relations, yet the disjunction scopes under the negation,
- which it couldn’t do *in situ*
- not predicted by any approach to PPI-hood known to me
No competition between fronted *ili* ‘or’ and *ni_ni* ‘nor’:

(14) [Russkogo ili nemeckogo] on ne znaet
     Russian or German he not knows
     ‘Russian or German, he doesn’t speak.’ [¬ > ∨]

(15) [Ni russkogo ni nemeckogo] on ne znaet
     nor Russian or German he not knows
     ‘He doesn’t speak Russian or German.’ [¬ > ∨]
Observation 2: Zero copula clauses

(16)  * On ne vor ili mošennik
       he not thief or crook
       (‘He isn’t a thief or a crook.’)  \[*¬ > V; *V > ¬*]
Observation 3: Sentence-medial disjunction

When the disjunction phrase appears sentence-medially, neither the wide- nor the narrow-scope reading is available:

(17)  * On ne dal ručku ili karandaš Maše
       he not gave pen or pencil Masha.DAT
       (*‘He didn’t give Masha the pen or the pencil.) [*¬ > V; *V > ¬]
Acceptability of wide-scope reading

So far we’ve been assuming that ( 18 ) was a good sentence of Russian.

\[
\text{(18) On ne znaet russkogo ili nemeckogo} \\
\text{he not speaks Russian or German} \\
\text{‘He doesn’t speak Russian or German.’} \\
\]

But my informal consultations with Russian-speaking linguists reveal that the sentence is hardly acceptable, unless there is a prosodic boundary between the two disjuncts:

\[
\text{(19) On ne znaet russkogo | ili nemeckogo} \\
\text{he not speaks Russian or German} \\
\text{‘He doesn’t speak Russian or German.’} \\
\]
Clausal disjunction + ellipsis

(20) \[\text{On ne govorit po-russki ili on ne govorit po-nemecki}\]
    he not speaks by-Russian or he not speaks by-German

\[\lor \rightarrow\] follows naturally

prosodic boundary between disjuncts highlights clausal disjunction structure
My idea (very informally)

- *ili* ‘or’ might be a local PPI

- PPI-hood should be formulated with reference to syntactic hierarchical relations rather than semantic notions such as downward entailment
  
  - perhaps akin to Beck’s intervention effects? (NB: very tentative)

- both clausal and phrasal disjunction are required (cf. Toosarvandani, 2013 for corrective *but*)

- *ne* ‘not’ isn’t sentential negation but is instead licensed by an abstract negation operator $\text{Op}_-$ (cf. Zeijlstra, 2004)
Generalised syntax of negation (Zeijlstra, 2004)

\[ \text{OP}_{\neg} \ldots ne \ldots \]

PPI-hood as intervention/entanglement (Chierchia, 2013; Crnič, 2014)

\[(21) \quad \text{OP}_{\neg} \text{he } ne \text{ speaks [Russian or German]} \quad [\text{PPI}] \]

\[(22) \quad \text{OP}_{\neg} \text{ [Russian or German] he } ne \text{ speaks} \]

\[(23) \quad \text{OP}_{\neg} \text{ he [Russian or German] } ne \text{ speaks} \]
Phrasal disjunction yields narrow scope

(24) On [ russkogo ili nemeckogo ] ne znaet
    he Russian or German he not knows
    ‘Russian or German, he doesn’t speak.’
    \[ \neg > \vee \]

(25) Op, he [Russian or German] ne speaks
    [ne-intervention]

Clausal disjunction is significantly less plausible

(26) ?? [ On russkogo ne znaet ] ili [ on nemeckogo ne znaet ]
    he Russian not knows or he German not knows

thus, no wide scope
No disjunction under negation with zero copula

(27) * On ne vor ili mošennik

he not thief or crook

(‘He isn’t a thief or he isn’t a crook.’)

(‘He is neither a thief nor a crook.’)

2 things to account for

• unavailability of narrow-scope reading

• unavailability of wide-scope reading
Unavailability of narrow scope

Phrasal disjunction + *ne*-intervention yields PPI-effect

(28) Disjunction phrase cannot be evacuated past *ne* since *ne* is a clitic

a. * On *ne [ vor ili mošennik ]
   he not thief or crook

b. * [ Vor ili mošennik ] on *ne
   thief or crook he not
Unavailability of wide scope

(29) * [ On ne vor ] ili [ on ne mošennik ]
    he not thief or he not crook

(30) [ On ne vor ] ili [ on ne mošennik ]
    he not thief or he not crook

‘He isn’t a thief or he isn’t a crook.'
Szabolcsi gives similar examples from Russian:

\[(31) \quad * \text{On ne kuri ili p’jot} \]
\[\text{he not smokes or drinks} \]
\[\text{’(He doesn’t smoke or drink.’)} \]

According to Szabolcsi (and my own intuitions) this can only be parsed with negation only scoping over the leftmost disjunct. For Szabolcsi, the mechanism barring negation scoping over both disjuncts involves prosodic cliticisation and as such falls within the purview of the syntax/phonology interface.
Paraphrasing Szabolcsi, negation marker omission is only possible if the negated predicate is also omitted.

(32)  * [ On ne vor ] ili [ on ne mošennik ]  
      he not thief or he not crook  
      (‘He isn’t a thief or a crook.’)  
      [clausal]

The parallel, however, is wrong, as it is perfectly possible for negation to scope over two NP-disjuncts:

(33)  On ne vor ili mošennik kakoj-nibud’  
      he not thief or crook some

(34)  On ne vor ili kakoj-nibud’ mošennik  
      he not thief or some crook
      ‘He isn’t a thief or a crook.’  
      [¬ > V; *V > ¬]
Accounting for observation 3

(35)  * On ne dal ručku ili karandaš Maše
      he not gave pen or pencil Masha.DAT
      (‘He didn’t give Masha the pen or the pencil.) [*¬ > V; *V > ¬]

2 things to account for

• unavailability of narrow scope
• unavailability of wide scope
No narrow scope

*ne*-intervention

No wide scope

Implausible clausal disjunction parse:

(36) ?? [ On ne dal ručku Maše ] ili [ on ne dal karandaš Maše ]

he not gave pen Masha or he not gave pencil Masha
• PPI-hood of *ili* should be formulated with reference to syntactic hierarchical relations rather than semantic notions such as downward entailment
  • perhaps in terms of an intervention effect
• *ne* ‘not’ isn’t sentential negation but is instead licensed by an abstract negation operator $\mathcal{O}P_-$ (cf. Zeijlstra, 2004)
both phrasal and clausal disjunction are required in the grammar


Disjunct size, positive polarity, and the scope of disjunction in Russian

Pavel Rudnev
pasha.rudnev@gmail.com
https://pavelrudnev.github.io

National Research University
Higher School of Economics (Moscow)

16–17 October 2017