

# Towards an exhaustification analysis of plain disjunction in Russian

Formal Approaches to Russian Linguistics 3

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## Focus of this talk

- syntax and semantics of **plain disjunction** in Russian
- insight from Szabolcsi (2002) of Russian disjunction being a PPI

## Theoretical context

- Grammatical approach to implicature calculation (Chierchia, Fox & Spector 2012)
  - Spector's (2014) taxonomy of PPIs
    - complex disjunctions like *soit\_soit* in French are **global PPIs**
  - Nicolae's (2017) extension of Spector's approach to plain disjunction

- determine to what extent the behaviour of the Russian plain disjunction marker *ili* is attributable to it being a PPI
- attempt an extension of Nicolae's (2017) analysis of French disjunction to the Russian facts

- Russian plain disjunction marker *ili* is a local PPI (Spector 2014)
- its behaviour is broadly compatible with the grammatical approach to implicatures (Chierchia, Fox & Spector 2012)
- PPI-obviation under topicalisation are accounted for if non-truth conditional meaning is also visible to the implicature calculation procedure

Russian *ili* cannot scope under local sentential negation:

- (1) On ne znaet russkogo ili nemeckogo  
he not knows Russian or German

'It's either Russian or German that he doesn't speak.'

Relevant test: De Morgan's laws

- (2)  $\neg(p \vee q) \equiv \neg p \wedge \neg q$

Szabolcsi (2002) draws parallels with *some* in English and argues *ili* is a PPI.

## Locality of anti-licensing

- (3) a. Mary doesn't know someone here.  $[^*\neg > \exists]$
- b. John doesn't think Mary knows someone here.  $[\neg > \exists]$

## Rescuing via embedding in additional DE environment

- (4) a. If Mary doesn't know someone there, she should stay at home.
- b. I don't believe [you didn't see something].

(5) ja ne dumaju što  
I not think that

a. on govorit po-ruski ili po-nemecki [¬ > ∨]  
he speaks by-Ru or by-Ger

b. on ne govorit po-ruski ili po-nemecki [¬ > ∨]  
he not speaks by-Ru or by-Ger

→ Russian *ili* patterns with *some* in English and is a local PPI (Spector 2014)

## WHY PURSUE AN IMPLICATURE-DRIVEN ANALYSIS?

Sentences involving disjunction give rise to various inferences:

(6) John speaks Russian or German.

a. *but not both*

scalar inference

b. *but I don't know which*

uncertainty implicature

**Acquisition** studies showing children interpret logical operators without employing implicatures (Crain 2012; Singh et al. 2016; Verbuk 2006).

→ implicature component in addition to logical operator component

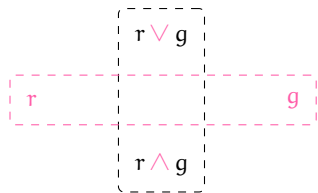


Nicolae 2017

- (7) a.  $\text{Exh}(p) = p \wedge \forall q \in \text{IE}(p, \text{Alt}(p)): \neg q.$   
where:  $\text{IE}(p, \text{Alt}(p)) = \lambda q \in \text{Alt}(p). \neg \exists r \in \text{Alt}(p): (p \wedge \neg q) \rightarrow r$   
**eliminates all innocently excludable alternatives**
- b.  $\llbracket \Box_x p \rrbracket = \lambda w. \forall w' \in \text{Dox}(x)(w): p(w')$   
 $w' \in \text{Dox}(x)(w)$  iff, given the beliefs of  $x$  in  $w$ ,  $w'$  could be the actual world  
**necessary for the uncertainty implicature**
- c. **Economy condition on exhaustification**  
Exhaustification is only licit if it leads to strengthening.

## ALTERNATIVES AND EXHAUSTIFICATION

(8)  $\llbracket \text{John speaks Russian or German.} \rrbracket = r \vee g$



assertion

$\text{Alt}_D$

$\text{Alt}_S$

(9)  $\text{Exh}[r \vee g]$

a.  $\text{Alt}(r \vee g) = \{r, g, r \wedge g\}$

b.  $\text{Exh}[r \vee g] = (r \vee g) \wedge \neg(r \wedge g)$

PPI-effect obtains as a result of vacuous exhaustification:

- (10) On ne znaet russkogo ili nemeckogo  
he not knows Russian or German

'It's either Russian or German that he doesn't speak.'

Alternatives are entailed by assertion:

- (11)  $\text{Exh}_D [\Box \neg [r \vee g]]$
- a.  $\text{Alt}_D (\Box \neg [r \vee g]) = \{\Box \neg r, \Box \neg g\}$
  - b.  $\text{Exh}_D [\Box \neg [r \vee g]] = \Box \neg (r \vee g)$

→ exhaustification is vacuous

Fronting the disjunction phrase enables the narrow-scope reading:

- (12) [Po-ruski ili po-nemecki] on ne govorit  
Russian or German he not speaks

'He doesn't speak Russian or German'

$[\neg > \vee]$

- (13) On [po-ruski ili po-nemecki] ne govorit  
he Russian or German not speaks

'He doesn't speak Russian or German'

$[\neg > \vee]$

Not predicted by Nicolae's (2017) account

No obviation under focusing:

- (14) [Po-russki ili po-nemecki] on ne govorit  
Russian or German he not speaks

'He doesn't speak Russian or German'

[\*¬ > ∨]

- (15) On [po-russki ili po-nemecki] ne govorit  
he Russian or German not speaks

'He doesn't speak Russian or German'

[\*¬ > ∨]

Just like in English *it*-clefts, in fact:

- (16) It is [Russian or German]<sub>FOC</sub> that he doesn't speak.

[\*¬ > ∨]

- (17) Ja [ručku ili karandaš] [Vane ili Maše ] ne dal  
I pen or pencil to.Vanya or to.Masha not gave  
'I didn't give a pen or a pencil to Vanya or Masha.'

Only the topical ones can scope under negation.

What's the right characterisation of anti-licensors?

(18) Vřjad li on znaet russkij ili nemeckij  
hardly he knows Russian or German

'It is unlikely that he knows Russian or German.'

Szabolcsi 2002: anti-additivity

Nicolae 2017: downward-entailingness

- Extra machinery necessary to allow for **rescuing**
  - Exh account can't be made sensitive to anti-additivity instead of DEness

Nicolae (2017) provides two ways of deriving narrow-scope readings

- inclusion of non-truth conditional content into implicature calculation
- recursive exhaustification



- inclusion of non-truth conditional content into implicature calculation
  - non-compositionally Büring-style
  - by including the presupposition introduced by topicalisation
  - compositionally Wagner-style via nested focus operations
- recursive exhaustification

vP-level coordination (Hirsch 2016; Ivlieva 2013):

- (19) Exh □ ¬ on [vP govor- po-russki ] ∨ [vP govor- po-nemecki]  
he speak by-Russian or speak by-German

not clear, however, how to derive the effects of DP-coordination

- Russian plain disjunction marker *ili* is a local PPI (Spector 2014)
- its behaviour is broadly compatible with the grammatical approach to implicatures (Chierchia, Fox & Spector 2012)
- PPI-obviation under topicalisation are accounted for if non-truth conditional meaning is also visible to the implicature calculation procedure
- More work is required to bring the postulated LFs in accordance with current assumptions about the syntax of coordination

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