

# Role of alternatives in PPI anti-licensing: the case of Russian plain disjunction *ili*

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## 1 Introduction

- Some natural language expressions are sensitive to logical properties of their environment
  - (1) Licensing of negative polarity items (see Crnič 2019 for an overview)
    - a. \*John has read any books by Limonov.
    - b. John hasn't read any books by Limonov.
    - c. If John has read any books by Limonov, "It's me, Eddie" is his favorite.
    - d. Every person who has read any books by Limonov likes his writing.
- The main generalization about NPI licensing: the Fauconnier-Ladusaw hypothesis according to which NPIs are licensed in downward (Strawson) entailing environments (Fauconnier 1975; Ladusaw 1979; von Stechow 1999).
- How is this generalization *derived*?
  - Krifka (1995): NPIs are licensed in the environments where they entail the subdomain alternatives that they trigger
  - Otherwise, the negation of stronger alternatives results in contradiction.
  - See Crnič (2011), Chierchia (2013) for various implementations
  - Core insight: NPI licensing is related to the alternatives and operations on them (for example, strengthening, also known as EXH)
- Other class of such items: positive polarity items (Szabolcsi 2002)
  - (2) Licensing of positive polarity items
    - a. John has read some books by Limonov.
    - b. John hasn't read some books by Limonov. ( $\exists > \neg$ ;  $*\neg > \exists$ )
- How should we derive their distribution?

- Exhaustification-based approaches to PPIs have been attempted (Nicolae 2012 for PPI indefinites; Spector 2014, Nicolae 2017 for PPI disjunctions). See Appendix I for the relationship between those approaches and this talk.
  - However, exhaustification-based approaches are often quite abstract and rely on theoretical parsimony considerations as the main motivation for their analyses.
  - This talk presents an empirical argument in favor of treating (at least some) positive polarity items as sensitive to the set of alternatives, using Russian PPI plain disjunction *ili* (Szabolcsi 2002) as a case study.
- (3) **This talk’s empirical claim:**  
When a conjunctive alternative is rendered UNAVAILABLE, Russian plain disjunction can take scope under negation.
- UNAVAILABLE: trivial or irrelevant.
- (4) **This talk’s theoretical claim:**  
Russian PPI disjunction is ruled out when it is equivalent to an alternative with homogenous conjunction.
- Work in progress: how to cash in the sensitivity to alternatives.
  - The main takeaway, then, is that a theory of licensing for PPI disjunction requires reference to the alternative set, namely, the presence of a conjunctive alternative.

## 2 Background on PPI disjunction in Russian

- Here is a basic sentence with disjunction in Russian: it necessarily takes wide scope.
- (5) *Grisha ne govorit po-russki ili po-anglijski*  
G. not speaks Russian or English  
‘Grisha doesn’t speak Russian or English.’  $(\vee > \neg, * \neg > \vee)$
- Following Rudnev (2017), I associate wide scope with underlyingly clausal disjunction and narrow scope with phrasal disjunction.
  - Evidence in favor of that: clause-medial disjunction (Rudnev 2017). No clear clausal parse is available: therefore, only phrasal disjunction is available. Since it falls in the scope of negation, the sentence is ungrammatical.
- (6) *\*Grisha ne dal ručku ili karandaš Vanje*  
G. not gave pen or pencil V.

- The necessary characterization: Russian simplex disjunction *ili* is a positive polarity item that cannot scope under negation. Since its scope taking capabilities correspond to its clausal/phrasal status, it is possible to narrow down the generalization: Russian plain disjunction *ili*, when phrasal, is ungrammatical in the scope of negation.
- THIS TALK: the generalization is not always true.

### 3 CP disjunction: when conjunction is trivial

- Consider the following example: narrow scope wrt. negation is available when disjuncts are CPs

(7) *Maria ne думаet čto Grisha durak ili čto Vanja debil*  
 M. not thinks that G. fool or that V. moron  
 ‘Maria doesn’t think that Grisha is a fool or that Vanja is a moron.’  $(\vee > \neg, \neg > \vee)$

- THE PROBLEM: why is phrasal disjunction of CPs licit under negation?
- The patterns is not reducible to local PPI licensing (Szabolcsi 2002): there is no clausal boundary between the disjunction and the negation. Insofar as [Neg [V [DP or DP]]] and [Neg [V [AdvP or AdvP]]] result in impossibility of narrow scope, [Neg [V [CP or CP]]] should too.
- As Bassi & Bondarenko 2020 note, phrasal conjunction of CPs is both observed and predicted to be contradictory.

(8) Conjoining contentful CPs

- a. Theoretical prediction in the equality semantics (Elliott 2020)

$$\llbracket \text{ATT}[p \text{ and } q] \rrbracket = \exists e. \text{ATT}(e) \wedge \text{CONT}(e) = \{w \mid \llbracket p \rrbracket(w) = 1\} \wedge \text{CONT}(e) = \{w \mid \llbracket q \rrbracket(w) = 1\}$$

- b. Data-point: single-event readings are unavailable

Context: Masha’s singing is quite likely, but Dina’s dancing is very unlikely. Thus, the combination of these two events is also very unlikely.

#*Ja сомневаюсь, [čto Maša pela] i [čto Dina tancevala].*

I doubt that M. sang and that D. danced

Int: ‘I doubt that Masha sang and Dina danced.’

- What CP disjunction suggests: when a conjunctive alternative is unavailable (for the reasons of triviality), disjunction may take narrow scope.

## 4 Topicalized disjunction: when conjunction is irrelevant

- Another case of apparent availability of narrow scope of disjunction: topicalized disjunction (Rudnev 2017)

(9) *[Po-russki ili po-anglijski]<sub>TOP</sub> Grisha ne govori*  
 Russian or English G. not speaks  
 ‘Grisha doesn’t speak Russian or English.’ ( $\neg > \vee$ )

- There is experimental evidence that topicalized disjunction does not give rise to the scalar implicature that  $p \vee q \wedge \neg[p \wedge q]$  (Zondervan 2010). The judgements seem to show that the pattern exists for Russian PPI disjunction too.

(10) a. *Ja čitaju po-anglijski ili po-nemetski. ?? Ja oba jazyka prekrasno znaju.*  
 I read English or German I both language very.well know  
 ‘I know how to read English or German. I know both languages very well.’  
 b. *[Po-anglijski ili po-nemetski]<sub>TOP</sub> ja čitaju. Ja oba jazyka prekrasno znaju.*  
 English or German I read I both language very.well know  
 ‘English or German, I know how to read. I know both languages very well.’

- Descriptively, topicalizing the disjunction blocks the conjunctive alternative. Why? Relevance.

(11) Relevance of  $p$  given QUD  $Q$  (Lewis 1988)

- A proposition  $p$  is relevant given a partition  $Q$  iff  $\exists Q' \subseteq Q[p = \bigcup Q']$
- A proposition is relevant given a QUD when there are no two worlds which are in the same cell in the QUD but which don’t agree on the truth of the proposition (both quote and formulation from Bar-Lev 2024)

- Consider the partition  $Q_4$  where one is interested which of the propositions  $p, q$  is true if any and the partition  $Q_2$  where one is interested whether  $p \vee q$  is true.

(12) Set of worlds  $W = \{w_\emptyset, w_p, w_q, w_{pq}\}$

- Partition  $Q_4 = \{\{w_\emptyset\}, \{w_p\}, \{w_q\}, \{w_{pq}\}\}$
- Partition  $Q_2 = \{\{w_\emptyset\}, \{w_p, w_q, w_{pq}\}\}$

- OBSERVATION:  $p \wedge q$  is relevant given the partition  $Q_4$  but irrelevant given the partition  $Q_2$
- Insofar as PPI licensing is sensitive to alternatives, we might expect it to be sensitive to relevance of alternatives as well. The effect of topicalization is therefore predicted.

## 5 Steps towards an analysis

- THE MAIN RESULT: Russian PPI disjunction is able to scope under negation when its conjunctive alternative is unavailable.

- Russian conjunction exhibits homogeneity effects (Szabolcsi & Haddican 2004)

(13) *Grisha ne kupil ručku i karandaš Vanje. #On kupil emu toljko ručku.*  
 G. not bought pen and pencil V. he bought him only pen  
 Int.: ‘Grisha did not buy Vanja pen and pencil. He only bought him a pen.’

- Under negation, then, Russian conjunction is interpreted as  $\neg p \wedge \neg q$ , or,  $\neg(p \vee q)$ . It is equivalent to the absent  $\neg > \vee$  scope of disjunction.

- HYPOTHESIS: Russian PPI disjunction is anti-licensed in the environments where it is equivalent to conjunction.

- I suggest that the mechanism behind anti-licensing is a MAXIMIZE PRESUPPOSITION!-style effect under the assumption that homogeneity is a presupposition (Schwarzschild 1993; see Ren 2024 for experimental evidence)

- Informally, the idea is that an expression with weaker presupposition is unacceptable if contextually equivalent to an expression with a stronger presupposition.

- When conjunction happens to be trivial (in the CP conjunction environment), the contextual equivalence breaks down.

- Current approaches (see, for example, Marty & Romoli 2021) seek to unite MP! effects with other strengthening phenomena that are sensitive to relevance.

- I do not have a formalization yet

- If HYPOTHESIS is correct, the prediction is made that presence of homogenous conjunction is a sufficient condition for having PPI disjunction.

- Szabolcsi & Haddican (2004) argue that English exhibits homogeneous conjunction. I therefore predict that English disjunction exhibits PPI behavior

(14) (Of the classes on the list), Mary hasn’t taken hockey and algebra.  
 (Szabolcsi & Haddican 2004: ex. 35b)

- However, Lungu, Fălăuș & Panzeri (2021) and Jasbi, Bermudez & Davidson (2023) present experimental evidence in favor of PPI-behavior of English simplex disjunction. I conclude, then, by saying that the prediction does not face an immediate counterexample from English.

## 6 Conclusion and outlook

- This talk has presented the following empirical claim:  
(15) If conjunction is unavailable as an alternative, Russian disjunction stops being unable to scope under negation.
- The suggestion is that PPI behavior of disjunction arises through competition with homogeneous conjunction.
- It remains to be seen, however, whether the suggestion can be given an appropriate formalization.

## Appendix I: Spector-Nicolae theory of PPIs

- Nicolae (2017), building on Spector (2014), presents an approach to PPI behavior of plain disjunction based on obligatory exhaustification.
- For Nicolae, EXH is optional unless required by some lexical item in the structure. PPI disjunctions lexically require EXH (cf. Chierchia 2013 on NPIs)  
(16) **No vacuous EXH:**  
 $[\text{EXH } S] \text{ is illicit if } \llbracket \text{EXH } S \rrbracket \equiv \llbracket S \rrbracket$
- One of the cases when application of EXH is vacuous: the prejacent is the strongest alternative  
(17) Exhaustifying disjunctive LFs
  - a.  $\text{ALT}(p \vee q) = \{p, q, p \wedge q\}$
  - b.  $\llbracket \text{EXH } p \vee q \rrbracket = (p \vee q) \wedge \neg(p \wedge q)$
  - c.  $\llbracket \text{EXH } \neg(p \vee q) \rrbracket = \neg(p \vee q)$
- Note: under negation, removing  $p \wedge q$  from the alternative set does not change anything (unlike in upward entailing environments; see Nicolae’s paper for discussion).
- Therefore, the effects observed in this talk cannot be modelled under Nicolae’s proposal.

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