Setting the stage

- an elegant pattern noticed by Anna Szabolcsi (Szabolcsi 2002) as far as the interpretation of disjunction under negation is concerned

Setting the stage: terminology

- De Morgan's laws
  - $\neg(p \lor q) = \neg p \land \neg q$
  - $\neg(p \land q) = \neg p \lor \neg q$
- *neither_nor* reading = conjunctive reading = De Morganic reading = narrow-scope reading
- disjunctive reading = wide-scope reading ≠ exclusive disjunction XOR (1a), which behaves differently w.r.t. De Morgan's laws (1b):

(1) a. $p \, \text{XOR} \, q = (p \lor q) \land \neg(p \land q)$

  b. $\neg((p \lor q) \land \neg(p \land q)) = ((\neg p \land \neg q) \lor (p \land q))$

Crosslinguistic picture (Szabolcsi 2002)

Some logically well-behaved languages:

(2) James doesn't speak Russian or German.

  a. James speaks neither.

  b. Either James doesn't speak Russian or he doesn't speak German.

(3) Jan   spreekt geen Russisch of Duits.
    John speaks NEG Russian or German

  see above   [Dutch]

(4) Es nestrādāju skolā   vai universitātē.
    I   not.work   school.LOC or university.LOC

  'I don't work at a school or university.'   [Latvian]

- some other English-type languages
  - German, Slovenian (Marko Hladnik, p.c.), Romanian, etc.

In other languages the relevant De Morgan's law doesn't hold:

(5) Mari nem járt   hokira   vagy algebrára
    Mari not   went hockey-to or   algebra-to

  ≠ 'Mary didn't take hockey and didn't take algebra.' 'Either Mary didn't take hockey or she didn't take algebra.'   [Hungarian]

(6) On ne   govorit po-russki ili po-nemecki
    He NEG speaks Russian   or German

  'He doesn't speak Russian or German.'   [Russian]

- Hungarian-type languages
  - Polish, Serbo-Croatian, Japanese (Szabolcsi 2002); French (Spector 2014)

Aims for today

focusing on **Russian**,

- spot potential counterexamples and try to see how they fit Szabolcsi's picture
- make a case for a more prominent role of syntax for positive polarity

Disjunction under negation crosslinguistically (Szabolcsi 2002)

- Hungarian-type languages
  - Russian, Serbo-Croatian, Japanese (Szabolcsi 2002), French, Italian (Spector 2014)
    * **disjunction markers (*or*-words) are positive polarity items**
- English-type languages
  - German, Dutch, Slovenian (Marko Hladnik, p.c.), Latvian

The unavailability of De Morganic readings is directly related to the inability of disjunction words in question to scope under sentential negation

Negative and positive polarity: *some* and *any*

(7) a.   James speaks some foreign languages.

  b.   # James doesn't speak some foreign languages.

  c.   James doesn't speak any foreign languages.

NB: (b)-sentence is only bad on the ¬ > ∃ reading:

(8) James doesn't speak some foreign languages.

→ there is some foreign languages that James doesn't speak

Main properties of *some*

Anti-licensing

inability to be interpreted in the scope of a clausemate negation

Rescuing

an even number of negative operators lifts the effect:

(9) James should **not** travel if he does **not** speak some foreign languages.

Locality of anti-licensing

some can scope under negation if that negation is sufficiently far away:

(10) I don't think [Mary knows someone here]

Diagnosing PPI-disjunctions: Hungarian *vagy*

- If Szabolcsi (2002) is right about the connection between disjunction and PPI-hood, we expect *vagy* in Hungarian to pattern analogously to *some* in English
- Szabolcsi (2002) shows that this prediction (broadly) holds

Hungarian *vagy*: locality of anti-licensing

(11) Miért van itt   olyan hideg?
      why is here so   cold
      'Why is it so cold here?'

(12) Nem csukt-uk be az ajtó-t   vagy az ablak-ot.
      not closed-1PL in the door-ACC or   the window-ACC
      'We didn't close the door or the window.'   [∨ > ¬]

(13) Nem hisz-em, hogy becsukt-uk   volna az ajtó-t   vagy az ablak-ot.
      not think-1SG that in-closed-1PL AUX the door-ACC or   the window-ACC
      'I don't think we closed the door or the window'   [¬ > ∨]

Hungarian *vagy*: rescuing

(14) Nem hiszem,   hogy János ne evett vagy dohányzott volna.
      not think-1SG that John not ate   or   smoked   AUX
      'I don't think John didn't eat or smoke'   [¬ > ¬ > ∨]

Types of PPI-disjunctions (Spector 2014)

- local
- global (complex/discontinuous disjunctions like *soit_soit* in French)

Types of PPI-disjunctions (Spector 2014)

- **local**
- global (complex/discontinuous disjunctions like *soit_soit* in French)

Approaches to positive polarity

- current consensus seems to be that the phenomenon is inherently semantic (see Giannakidou 2011 for an overview)
    - reference-based theories (e.g. Giannakidou 2011)
    - opposition-based theories (e.g. Seuren and Jaspers 2014)
    - scalar analyses (e.g. Chierchia, Fox, and Spector 2012)
- what I want to show is that the role of syntax isn't restricted to defining the locality domain for anti-licensing

Back to Russian

Distilled into a generalisation, Russian monoclausal sentences involving and *or* word under negation

- are acceptable, and
- have no conjunctive reading

That is to say, the following Russian sentence

(15) On ne   govorit po-russki ili po-nemecki
      He NEG speaks Russian   or German

      'He doesn't speak Russian or German.'

only has one clear reading:

(16) Either he doesn't speak Russian or he doesn't speak German.

Back to Russian: expressing conjunctive readings

dedicated narrow-scope discontinuous connective *ni_ni* 'nor':

(17) On ne   govorit ni   po-russki ni   po-nemecki
      He NEG speaks nor Russian   nor German

      'He doesn't speak Russian or German.'

= he speaks neither

Why is *ili* 'or' bad under *ne* 'not'?

a competition/blocking/opposition-based analysis looks plausible:

- the existence of *ni_ni* 'nor' blocks the more general connective *ili* (cf. Horn 1989; Seuren and Jaspers 2014)

Locality of anti-licensing: secondary predication

Just like in Hungarian (Szabolcsi 2002), secondary predication in Russian is a separate domain

(18) Ja ne sčitaju   pivo vrednym ili protivnym
      I not consider beer harmful or gross

      'I do not consider beer harmful or gross.'

(19) Ja ne videl Vanju v šljape ili parike
      I not saw   Vanya in hat   or wig

      'I haven't seen Vanya in a hat or a wig.'

(20) Ja ne jem mjaso syrym ili peregotovlennym
      I not eat meat raw   or overcooked

      'I do not eat meat raw or overcooked.'

- only the conjunctive reading is available

Locality of anti-licensing: unexpected conjunctive readings

But so is primary predication with an overt copula:

(21) on ne   byl   / budet   vorom ili mošennikom
      he NEG be.PST:M:SG / be.FUT.SG thief   or crook

      'He {wasn't/won't be} a thief or a crook.'

- only the conjunctive reading
- biclausal analyses of primary predication relatively implausible
- not predicted by Szabolcsi but not a real counterexample, since what is needed is a more precise definition of the locality domain in question

Locality of anti-licensing: conjunctive reading and present tense

- no overt copula in present tense
- to express the conjunctive reading, a conjunction of negations can be used:

(22)   * on ne   vor   ili mošennik
      he NEG thief or crook

      ('He isn't a thief or a crook.')

(23)   on ne   vor   i   ne   mošennik
      he NEG thief and NEG crook

      'He isn't a thief or a crook.'

- absence of conjunctive reading predicted by the PPI story;
- **absence of disjunctive reading not predicted!**

- no overt copula in present tense
- if one disjunct is modified with an indefinite, the copulaless sentence becomes acceptable:

(24)   on ne   vor   ili kakoj-nibud' mošennik
      he not thief or some   crook

(25)   on ne   kakoj-nibud' vor   ili mošennik
      he not some   thief or crook

      'He isn't some thief of a crook.'

- and only has the conjunctive reading

- the indefinite adds a depreciative or pejorative flavour to the sentence
- not all indefinite series in Russian are suited for this, but the *-to* and *-nibud'* indefinites seem OK

(26)   on ne   vor   ili mošennik kakoj-to
      he not thief or some   crook

(27)   on ne   vor   kakoj-to ili mošennik
      he not some thief   or crook

      'He isn't some thief or crook.'

- order 'NP–indefinite' seems to be relevant:
  - the *-to*-indefinites do not precede the NP they modify unless they are followed by the adverbial *tam* 'there'

(28)   on ne   vor   ili kakoj-to *(tam)   mošennik
      he not thief or some   *(there) crook

(29)   on ne   kakoj-to *(tam)   vor   ili mošennik
      he not some   *(there) thief or crook

Order and scope: unexpected conjunctive readings

Consider the contrast between the *in-situ* and fronted disjunction:

(30)   On ne   govorit po-russki ili po-nemecki
      He NEG speaks   Russian   or German

      'He doesn't speak Russian or German.'   [∨ > ¬]

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

      'Russian or German, he doesn't speak.'   [¬ > ∨]

overt scope paradox:

- 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':

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

      'Russian or German, he doesn't speak.'   [¬ > ∨]

(33)   [Ni   po-russki ni po-nemecki] on ne   govorit
         nor Russian   or German   he NEG speaks

      'He doesn't speak Russian or German.'   [¬ > ∨]

- problematic for competition/opposition-based analyses

Summary of empirical issues

- unexpected conjunctive readings in past- and future-tense copular clauses
  - can be solved by redefining the relevant locality domain

     * but we don't want arbitrariness in that definition
- unexpected lack of disjunctive readings in present-tense copulaless clauses
- unexpected conjunctive readings with fronted disjunction

Implications for purely semantic analyses

- Are fronted disjunctions problematic for semantic theories of PPI-hood?
    - They are, but only if *ne* 'not' in Russian is viewed as the sentential negation operator
    - Less certain otherwise

My idea (very informally)

- *ili* 'or' is a 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 Op¬ (cf. Zeijlstra 2004)

Acceptability of disjunction under negation

- So far we've been assuming that (34) was a good sentence of Russian.

(34)   On ne   govorit po-russki ili po-nemecki
       He NEG speaks Russian   or German

       '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

Alternative structure for [∨ > ¬]

- two clausal disjuncts + ellipsis

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

- the [∨ > ¬] interpretation falls out naturally
- prosodic boundary between disjuncts highlights the clausal disjunction structure
- limited acceptability due to
    - reparsing, or
    - problems with recoverability for ellipsis
- there are nice processing experiments to help us decide (Hoeks et al. 2006)

Clausal and phrasal disjunction: copular facts

Phrasal disjunction under predicatemate *ne* 'not'

(36)   * On ne   [vor   ili mošennik]
         he NEG   thief or crook

         ('He isn't a thief or a crook.')

- conjunctive reading is unavailable due to *ili* being a PPI under a very local negation

Clausal disjunction plus ellipsis

(37)   * [On ne   vor   ] ili [~~on ne~~ mošennik]
         he NEG thief   or   he   NEG   crook

         ('He isn't a thief or a crook.')

- disjunctive reading is also unavailable
    - possibly because the way ellipsis is done in the second disjunct, it cannot be recovered

Clausal and phrasal disjunction: fronted disjunctions

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

       'Russian or German, he doesn't speak.'   [¬ > ∨]

(39)   LF: Op¬ [Russian or German] he *ne* speaks

(40)   [Po-russki ~~on ne govorit~~] ili [po-nemecki on ne   govorit]
      Russian he NEG speaks or German   he NEG speaks

     'Russian or German, he doesn't speak.'

Conclusions

- still convinced that Szabolcsi (2002) was right about PPI-status of *ili* 'or'
- syntax plays a greater role than previously assumed:
  - locality domain for anti-licensing is very flexible
  - most of uncovered unexpected data follow naturally from the dual syntax of disjunction (both phrasal and clausal disjunction being permitted) and divorcing the (semantic) negation operator from its (syntactic) realisation

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