Polysemy of verbal prefixes in Russian: conceptual structure versus syntax

Inna Tolskaya

CASTL, Tromsø University

P-Workshop 2012

University of Stuttgart, July 13-14, 2012

1. Introduction

1.1. Polysemy of Russian verbal prefixes

(1) Polysemy of prefix pere- ‘over’ with the verb igratj ‘to play’:

a. Pianist pere-igral ruku
   pianist pere-played hand
   ‘The pianist over-exercised a hand by playing too much’ (about musicians)

b. Akter pere-igral svoju rolj
   actor pere-played his part
   ‘The actor over-acted his part’

c. Geroj pytalsja pere-igratj svoju žiznij
   character tried pere-play his life
   ‘The character tried to re-act his life (repetition)’

d. Komanda pere-igrала protivnik-a
   team pere-played opponent-ACC
   ‘The team out-played the opponent’ (to win, in sports)

e. Rebenok segodnja pere-igral i kaprizničat
   child today pere-played and grizzlies
   ‘The child played for too long today and is cranky’

f. Orkestr pere-igrал все marši
   orchestra pere-played all marches
   ‘The orchestra played every march’ (distributive)

• Different uses of a single prefix share a core meaning, specified in the lexicon.

• This conceptual meaning combines with the other, structural, meaning component which is a function of the syntactic position of the prefix.
1.2. Conceptual meaning combined with structure:

<table>
<thead>
<tr>
<th>I. Idiomatic</th>
<th>II. R(e; ground)</th>
<th>III. R(e, theme)</th>
<th>IV. R(e, norm)</th>
<th>V. R(e, res(e))</th>
<th>VI. R(e, time)</th>
</tr>
</thead>
<tbody>
<tr>
<td>pere-varitj</td>
<td>pere-bezatj</td>
<td>pere-goroditj</td>
<td>pere-varitj</td>
<td>pere-pisatj</td>
<td>pere-plavatj</td>
</tr>
<tr>
<td>pro-bratj</td>
<td>pro-bezatj</td>
<td>pro-varitj</td>
<td>pro-varitj</td>
<td>do-pisatj</td>
<td>pro-plavatj</td>
</tr>
<tr>
<td>do-bitj</td>
<td>do-bezatj</td>
<td>through-take</td>
<td>do-varitj</td>
<td>re-write</td>
<td>pro-plavatj</td>
</tr>
<tr>
<td>ot-veretetjsja</td>
<td>ot-bezatj</td>
<td>up-to - beat</td>
<td>complete</td>
<td>write more</td>
<td>do-plavatj</td>
</tr>
<tr>
<td>za-pastj</td>
<td>run across</td>
<td>avoid</td>
<td>ot-varitj</td>
<td></td>
<td>ot-plavatj</td>
</tr>
<tr>
<td></td>
<td>digest</td>
<td></td>
<td>cook completely</td>
<td></td>
<td>za-plavatj</td>
</tr>
<tr>
<td></td>
<td>affect deeply</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>'exceeding'</td>
<td>'through'</td>
<td>'up to'</td>
<td>'off' (+ –)</td>
<td>'into' (– + )</td>
<td></td>
</tr>
<tr>
<td>'into' fall</td>
<td>'beat'</td>
<td>'complete'</td>
<td>'avoid'</td>
<td>'fall in love'</td>
<td>'run into'</td>
</tr>
</tbody>
</table>

1.3. Lexical-superlexical distinction

The distinction between lexical and superlexical prefixes has been widely recognized: (Isačenko (1960), Romanova (2004), Svenonius (2004), Babko-Malaya (1999), Schoorlemmer (1995))

(2) Lexical vs. Superlexical Prefixes (Romanova 2007)

<table>
<thead>
<tr>
<th>secondary imperfectivization</th>
<th>Lexical</th>
<th>Superlexical</th>
</tr>
</thead>
<tbody>
<tr>
<td>yes</td>
<td>ot-prygmatj</td>
<td>ot-plavatj</td>
</tr>
<tr>
<td>OT-jump</td>
<td>OT-swim</td>
<td>OT-swim-IMP-INF</td>
</tr>
<tr>
<td>ot-pryg-ive-tj</td>
<td>*ot-plav-vo-tj</td>
<td>*ot-plav-vo-tj</td>
</tr>
<tr>
<td>OT-jump-IMP-INF</td>
<td>OT-swim-IMP-INF</td>
<td># ot-plav-atj</td>
</tr>
<tr>
<td>stacking</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>pro-vy-dergivatj</td>
<td>pro-vy-dergivatj</td>
</tr>
<tr>
<td></td>
<td>PRO-VY-pull</td>
<td>PRO-VY-pull</td>
</tr>
<tr>
<td>change the argument structure of the verb</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>*spalj ekzamen</td>
<td>*spalj ekzamen</td>
</tr>
<tr>
<td></td>
<td>'sleep exam'</td>
<td>'sleep through exam'</td>
</tr>
</tbody>
</table>

1.4. First Phase Syntax

Principle of Event Composition (Ramchand 2008):

(3) If a head X which introduces an eventuality variable $e_x$, embeds a projection YP where Y introduces the eventuality variable $e_y$, then
the structure is interpreted as $e_x \rightarrow e_y$ ($e_x$ ‘leads to’ $e_y$).

(4) $initP$ (causing projection)

\[
\text{DP3} \quad \begin{array}{c}
\text{subj. of ‘caus’} \\
\text{init}
\end{array} \quad \text{procP} \quad (\text{process projection})
\]

\[
\text{DP2} \quad \begin{array}{c}
\text{subj. of ‘proc’} \\
\text{proc}
\end{array} \quad \text{resP}
\]

\[
\text{DP1} \quad \begin{array}{c}
\text{subj. of ‘res’} \\
\text{res}
\end{array} \quad \text{XP} \quad \ldots
\]

Lexical prefixes - specifier of res head
Superlexical prefixes - specifier of aspect head (cf. Pereltsvaig (2006))

2. Meanings of \textit{pere-}

(5) Meanings:

<table>
<thead>
<tr>
<th>Example</th>
<th>Translation</th>
<th>sec. stacking</th>
<th>PP</th>
<th>instr</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Idiomatic</td>
<td>perevaritj</td>
<td>digest</td>
<td>yes</td>
<td>do-, po-, na-</td>
</tr>
<tr>
<td>II. dire. motion</td>
<td>perevesti</td>
<td>carry across</td>
<td>yes</td>
<td>do-, po-, na-</td>
</tr>
<tr>
<td>III. spatial</td>
<td>peregoroditj</td>
<td>block the way</td>
<td>yes</td>
<td>do-, na-, po-</td>
</tr>
<tr>
<td>IV. overdo (tr.)</td>
<td>peresolit</td>
<td>oversalt</td>
<td>yes</td>
<td>po-</td>
</tr>
<tr>
<td>V. repetitive</td>
<td>peredelatj</td>
<td>redo</td>
<td>yes</td>
<td>both sides</td>
</tr>
<tr>
<td>VI. overdo (intr.)</td>
<td>pereplavatj</td>
<td>swim too much</td>
<td>no</td>
<td>no</td>
</tr>
</tbody>
</table>

- The lexical prefixes are located in the specifier of res and establish the relationship between the event and a measure provided by the complement of the res projection.

I. idiomatic - lexical structure, but idiomatic conceptual meaning
II. pere(event)/(path) - the result of the event exceeds the path
III. pere(event)/(space) - the result of the event exceeds the dimensions of the direct object
IV. pere(e)((f(n))) - the result of the event exceeds the norm
• Intermediate prefixes are located in the specifier of proc head.

V. pere(e)(result) - new process event exceeds the result of old event

• The superlexical prefixes are located in the specifier of aspect and establish the relationship between the event and a contextual (usually temporal) scale.

VI. pere(e)(f) - event exceeds a time scale

(6) resultee(e)(x) & pere(e) & result(e)(y) = e exceeds y.

3. Idiomatic meanings (I)

(7) verb gloss idiomatic usage sec. impf stacking

<table>
<thead>
<tr>
<th>verb</th>
<th>gloss</th>
<th>idiomatic usage</th>
<th>sec. impf</th>
<th>stacking</th>
</tr>
</thead>
<tbody>
<tr>
<td>pere-živatj</td>
<td>over-live-sec.impf</td>
<td>worry</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>pere-igratj (ruku)</td>
<td>over-play</td>
<td>about musicians</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>pere-spatj</td>
<td>oversleep</td>
<td>have sex</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>pere-borschitj</td>
<td>over-borsch-inf</td>
<td>overdo</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>pere-togo</td>
<td>over-that.Gen</td>
<td>overdo</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When these same verbs are used non-idiomatically, their properties may be different:

(8) verb translation sec. impf stacking class

<table>
<thead>
<tr>
<th>verb</th>
<th>translation</th>
<th>sec. impf</th>
<th>stacking</th>
<th>class</th>
</tr>
</thead>
<tbody>
<tr>
<td>pere-igratj</td>
<td>play too long</td>
<td>no</td>
<td>no</td>
<td>VI</td>
</tr>
<tr>
<td>pere-spatj</td>
<td>sleep too long</td>
<td>no</td>
<td>no</td>
<td>VI</td>
</tr>
</tbody>
</table>

4. Directional motion (II)

List of directional motion verbs, adopted from Janda (2006):
(9) bežatj run
bresti walk with difficulty
vezti carry (by vehicle)
vesti lead
gnatj drive, chase
exatj drive
idti walk
katitj roll
leztj climb
letetj fly
nesti carry (on foot)
plytj swim, sail
polzti crawl
taschitj drag

These verbs allow secondary imperfective, can have superlexical prefixes stacked above them, and demand a Rheme PP denoting path.

(10) a. Vor pere-lez (čerzej) zabor.
The thief climbed over the fence.
b. Vor pro-lez v fortčku.
The thief climbed through in window.
c. Alpinisty do-lezli do samogo verxa.
The alpinists climbed up to the very top.
d. Malčik ot-skočil ot kostra
The boy jumped away from the fire.
e. Malčik za-lez na čerđak
The boy climbed up to the attic.

(11) a. climb(e)&initiator(e)(thief)&[e → e′]&climb(e′)&undergoer(e′)(thief)
&[e′ → e″]&resultee(e″)(thief)&pere(e″)(fence)

(12) The climbing event, of which the thief was the initiator, leads to a climbing event e′, of which thief is the undergoer, which leads to result e″, of which the thief is the resultee, and which is an exceeding mapping relationship between the event and the path over the fence.
5. Spatial / dividing meaning (III)

(list adopted from ‘Exploring Emptiness’ project, with my own additions)

(14) | pere-rezatj cut across  
| pere-čerknutj cross out  
| pere-bitj smash into two parts  
| pere-krytj cover (a flow)  
| pere-rubitj chop into two parts  
| pere-goroditj block  
| pere-rytj dig across  
| pere-lomitj break into two parts

(15) OMON pere-gorodil proxod (mašinami) riot-police over-blocked way.ACC (machines-instr) ‘The riot police blocked the way (with trucks)’

(16) goroditj(e)&initiator(e)(OMON)&[e → e’]&undergoer(e’)(way)&[e’ → e’’] &pere(e’’)&∃x&resultee(e’’)(x)&pere(e)(way)

(17) There is a blocking event, the initiator of which is the riot police, which leads to a blocking process e’, the undergoer of which is the way, which leads to the result event e”, and the event exceeds the relevant dimension of the way (= ‘something over the way’).
(18) \[ \text{initP} \]

\begin{align*}
\text{riot-police} & \quad \text{init} \\
\text{block} & \quad \text{procP} \\
\text{way} & \quad \text{proc} \\
\text{block} & \quad \text{resP} \\
\text{pere} & \quad \text{res DP} \\
\text{way} & \quad \text{DP}
\end{align*}

(19) \( \text{pro-} \) is also compatible with the spatial meaning:

a. \( \text{pro-bitj} \) \( \text{dyrku (v stene)} \)
   \( \text{THROUGH-hit hole in wall} \)
   to make a hole (in a wall) (directional motion, II)

b. \( \text{pro-bitj} \) \( \text{stenu (molotkom)} \).
   \( \text{THROUGH-hit wall hammer-INSTR} \)
   to breach a wall (with a hammer) (spatial meaning, III)

c. \( \text{pro-rubitj} \) \( \text{tunnel (skvozj skalu)} \)
   \( \text{THROUGH-hew tunnel through rock} \)
   'to cut a tunnel through rock (directional motion, II)

d. \*\( \text{pro-rubitj} \) \( \text{stenu na ulicu} \). (spatial, III)
   \( \text{THROUGH-hew wall into street} \)

e. \( \text{eta drelj lyubuju stenu pro-sverlit} \).
   \( \text{this drill any wall through-drill FUT} \)
   This drill can drill through any wall. (spatial, III, instrument as subject)

(20) There is a hitting event, which leads to hitting process, of which the wall is the undergoer, which leads to the result event, which is a through' type of event and...

a. The result of the hitting event is through the (unpronounced) wall, and the resultee is the hole.

b. The result of the hitting event is through the wall, and the resultee is an (unpronounced) instrument.

6. Lexicalized scale (IV)

Verbs that offer a scale of gradual change and a ‘norm’ (culmination):
(21)  
solitj   salt
varitj   cook
žaritj   fry
gretj    warm
oxladitj cool
gruzitj  load
litj      pour
perepolnitj fill
sušitj    dry

(22)  
pošar pere-solil sup
cook over-salted soup
cook over-salted the soup.

(23)  
salt(e)&initiator(e)(cook)&undergoer(e')(soup)&resultee(e'')(soup)&pere(e'')(f)
There is a salting event, of which soup is the undergoer, and there is a contextual measure function (of how much salt a soup needs), which was exceeded by the result.

(24)  
initP
   +---------------------------------+
   | initiator                        |
   +---------------------------------+
     | init                           |
     |                               |
     | proCP                          |
     | |                              |
     | | salt                         |
     | |                               |
     | | soup                         |
     | |                               |
     | | proc                         |
     | |                               |
     | | salt                         |
     | |                               |
     | | soup                         |
     | |                               |
     | | resP                         |
     | |                               |
     | |                               |
     | | res                         |
     | |                               |
     | | scale f                     |

(25)  
Vasja do-pisal glavu.
Vasja completed writing the chapter.

(26)  
write(e)&initiator(e)(Vasja)&undergoer(e')(chapter)&resultee(e'')(chapter)&do(e'')(f)
The writing process leads to the result, of which the chapter is the resultee, and the result event is a 'do-' event, i.e. event of reaching the right edge of the scale f, lexicalized by the verb, i.e. completeness of the chapter.

(27)  
oxozjajka ot-stiral skatertj.
The hostess washed (the dirt off) the tablecloth.
(implication: table-cloth was dirty)

(28)  
wash(e)&initiator(e)(hostess)&undergoer(e')(table-cloth)&resultee(e'')(table-
There is a washing event, which leads to a result event, of which the table-cloth is the resultee, and the result is an ‘ot-’ transition event (plus to minus), which is a transition from the opposite state (i.e. transition from being dirty to being clean).

(29) fermer za-bil svinju
    farmer za-beat pig
    The farmer slaughtered the pig.

(30) beat(e) & initiator(e)(farmer) & undergoer(e')(pig) & resultee(e'')(pig) & za(e'')(s)

In the result state, the pig is the resultee of a ‘za-’ transition type of event, which is a minus to plus transition, and leads to a new state (the pig turns into pork).

7. Repetitive: Intermediate prefixes (V)

Tatevosov (2008): Intermediate Prefixes, compared to Lexical and Super-lexical:

<table>
<thead>
<tr>
<th>(31)</th>
<th>SLP</th>
<th>Intermediate</th>
<th>LP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meaning</td>
<td>compositional</td>
<td>compositional</td>
<td>normally non-comp.</td>
</tr>
<tr>
<td>Multiple prefixation</td>
<td>above ITMP and LP</td>
<td>Below SLP, above LP</td>
<td>Below SLP and ITMP</td>
</tr>
<tr>
<td>Aspectual selection</td>
<td>imperfective</td>
<td>no restrictions</td>
<td>lexical restrictions</td>
</tr>
<tr>
<td>Position w.r.t. sec.impf.</td>
<td>normally above</td>
<td>always below</td>
<td>always below</td>
</tr>
<tr>
<td>Nominalization</td>
<td>not allowed</td>
<td>allowed</td>
<td>allowed</td>
</tr>
<tr>
<td>Stacking</td>
<td>not allowed</td>
<td>allowed</td>
<td>not allowed</td>
</tr>
</tbody>
</table>

Examples from Tatevosov (2008)

(32) a. Vasja nemnogo po-pere-za-pis-yva-l
        V. for.a.while SLP-IP-LP-write-IPFV-PST.M
        diski (i usel domoj)
        CD-PL.ACC and went home
        Vasja spent some time re-recording CDs, and went home.

b. Vasja [[do-[za-bi]-va]-l gvozdi-i v sten-u.
        V. CMP-LP-hit-IPFV-PST.M nail-ACC.PL in wall-ACC
        (When I came,) V. was completing hammeringIPFV nails into
        the wall.

(33) Nominalization:

a. *na-za-bi-va-nij-e gvozd-ej
        CUM-LP-hit-IPFV-NMN-NOM.SG nail-GEN.PL
        hammering a lot of nails

b. do-za-bi-va-nij-e gvozdej
        CMP-LP-hit-IPFV-NMN-NOM.SG nail-GEN.PL
completing hammering of nails

c. pere-risov-k-a kartinok
    RPT-draw-NMN-NOM.SG picture.GEN.PL
    re-drawing of pictures

(34) ja pere-pisala glavu
    I pere-wrote chapter
    I rewrote the chapter.

(35) write(e)&initiator(e)(I)&[e → e’]&write(e’)&undergoer(e’)(chapter)&[e’ → e’’]&pere(e’’)(f)&measure(f)(resP2)&resultee(e’’)(chapter)

There is a writing event e, of which I am the initiator, which leads to a writing process of which the chapter is the undergoer, and the result state exceeds a previous result state, where a chapter was written.

(36)

Initiator is above the prefix, hence outside of scope of repeating (the previous writing may or may not have the same initiator).

The resultee is inside the scope of the prefix, so the previous writing eventuality has to happen to the same chapter.

8. Superlexical prefixes, temporal interpretation (VI)

(37) ja pere-plavala v bassejne
    I over-swam in the swimming pool
    I swam too much in the swimming pool

(38) [pere(e)(f)&∃f[measure(f)(e)]&swim(e)&initiator(e)(swim)&undergoer(e)(I)]]

There is a swimming event, of which I am both initiator and undergoer, and there is a measure function, of how much swimming I can endure, and event exceeds f.
There is a walking event, and a ‘through’ relationship holds between the event and the measure function (two hours).

There is a sailing event, and there is a reaching the boundary’ relationship between the event and the measure function (trip).

There is a plus to minus transition event, namely the transition from flying to never flying again.

There is a minus to plus transition event, namely from not working to working.

9. Conclusion

The syntactic type of the verbs allows us to predict how the prefix may be interpreted:

1. Directional motion verbs - only lexical prefixes (II)
   Rheme is required for path to be measured

2. Creation verbs (sew, knit, write, draw, etc.):
   metaphorical transfer (II): when a goal PP is present
redo (IV) - when the verb is used as transitive
overdo (VI) - when the verb is used as intransitive, object may appear in oblique case

(46) Divide verbs (cut, block):
spatial (III) - where either the agent or the instrument (the figure exceeding) can be the subject, the direct object is rheme / ground (exceeded)

(47) Unergative (sing, dance):
overdo (VI)

(48) Stative (sleep)
overdo (VI)

(49) Scalar verbs (cook, salt, bend, load, pour, fill, heat, dry)
overdo(IV)
- There is a single conceptual meaning per prefix (e.g. ‘exceed’ for pere)
- The meaning differences correlate with structural differences
- The meaning is predictable from verb structure

References
