Morphological Intensifiers Beyond Adjectives: Evidence from productive patterns of Russian prefixation

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Semantics of intensification

- "Increase of quantity or quality" (Dressler & Barbaresi 1994: 416)
- Amplification of the base meaning (proposition / word)
- Can be paraphrased as ‘very-X’, ‘more-X’, ‘extremely-X’
Labov 1984: Intensity

“At the heart of social and emotional expression is the linguistic feature of intensity. It is a difficult feature to describe precisely. Intensity by its very nature is not precise: first, because it is gradient feature, and second, because it is most often dependent on other linguistic structures.”
Lexical intensifiers of propositional semantics:
- English: adverbs *very*, *absolutely*, *really* (Lorenz 2002: 148)
- Intensive use of quantifiers: *all*, *never*, *ever*, *always* (Labov 1984: 48)

Emphatic use of pronouns: German *selbst*, Russian *sam*
- English: *The President himself will give the opening speech* (König 2001: 749)

Expressive phonology (pitch, length)
- Russian: *m-m-merzkij* ‘filthy’; *ma-a-alen’kij* ‘small’ (Berkov 1996: 116)

Reduplication
- Afrikaans: *amper* ‘nearly’ > *amper amper* ‘very nearly’ (Bauer 2001: 25)

Morphological intensifiers
- Italian: augmentative suffix *-one*, elative suffix *-issimo* (Dressler & Barbaresi 1994)
This talk

What is intensifiable?

Can intensifiers be found beyond the adjectival (and broader: nominal) domain?

In particular, how does intensification work in verbs?
Case study: Russian

A single morpheme
Case study: Russian

A single morpheme

Productive intensifier of adjectives

Productive intensifier of verbs
Case study: Russian

Grammatical class of the base determines the shape of morpheme (choice of its allomorph) and the type of intensification.
Case study: Russian

A single morpheme

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It has been mostly assumed that PRE- and PERE- are two different morphemes.
Case study: Russian

PRE- 'very'
ALLOMORPH 1

PERE- 'over, across'
ALLOMORPH 2

It has been mostly assumed that PRE- and PERE- are two different morphemes.

Well described (Janda 1986; Flier 1985; Dobrušina & Paillard 2001; Shull 2003)
Case study: Russian

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Neglected due to misconception of its unclear semantics (Isačenko 1960)

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PERE- 'over, across' ALLOMORPH 2

The only contrastive analysis: Soudakoff 1975 argues for distinct morphemes (limited data, focus on contrastive uses)
Allomorphy?

Two crucial criteria:
• identical meaning
• complementary distribution

(Matthews 1974; Haspelmath 2002; Booij 2005; Bauer 2001)
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Meaning
can be strikingly different:
pere-terpet’ PERE-suffer,tolerate
‘overcome suffering’ < terpet’ ‘suffer’
pre-terpet’ PRE-suffer,tolerate
‘undergo, endure’ < terpet’ ‘suffer’

Distribution
• not governed by any
  active phonological rule
• not complementary (90 base verbs can attach both prefixes), overlap!
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Extending the traditional notion of allomorphy
Allomorphy from the perspective of cognitive linguistics

The core clear cases of allomorphy -

Deviations -

Optimization via:
  • large corpora
  • experimental data
  • quantitative methods

➢ prototypical rather than the only possible

➢ recognized as allomorphy or non-allomorphy according to statistical measurements
Allomorphy?

Two crucial criteria:
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Meaning
Both prefixes are highly polysemous;
Share a single radial network of meanings, the prototype, the function if intensifier

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Distribution
These prefixes are specialized for different morphological domains;
There is tendency and overlap

None of the two criteria of regular allomorphy is fully satisfied
Extending the traditional notion of allomorphy
PRE- ‘very’ and PERE- ‘over, across’

Speakers do associate PRE- and PERE- with each other (certain orthographic rules deliberately instruct to check if PRE- can be replaced with PERE-)

Formal similarity

Are the two prefixes historically related?
Native PERE- vs. borrowed PRE-

Proto-Slavic root
*пър / *пер / *пор
(Vasmer 1971)

Old Church Slavonic
PRE-
metathesis & vocalic lengthening

Modern Russian
Native PERE- (pleophony)
Native PERE- vs. borrowed PRE-

Proto-Slavic root
*پر / *پر / *پور
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PRE-
metathesis & vocalic
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Modern Russian
Native PERE- (pleophony)
Borrowed PRE-

26
Found also as roots

Proto-Slavic root

\*pьr / *per / *por

(Vasmer 1971)

- sopernik ‘rival’
- poper’ok ‘across’
- rasprja ‘quarrel, local war’
- sportit’ ‘argue’
- prekoslovit’ ‘contradict’
- perečit’ ‘contradict’
- prenije ‘dispute’
- zapretit’ ‘prohibit’
- vopreki ‘in spite of’

Old Church Slavonic PRE-
methathesis & vocalic lengthening

Modern Russian
Native PERE- (pleophony)
Borrowed PRE-
The prototype: TRANSFER

Figure 1. Variations of the image schema of the prototypical subcategory TRANSFER

a) OVER
perelezt’ čerez zabor
‘climb over a fence’

b) THROUGH
perenesti čerez porog
‘carry across a threshold’

ACROSS
perejti ulicu
‘cross the street’
The prototype: **TRANSFER**

**Figure 1. Variations of the image schema of the prototypical subcategory TRANSFER**

- **a)**
  - T
  - LM

- **b)**
  - T
  - T

- **c)**
  - T

**PRE-**
- *prepodnesti* ‘present with’
- *preprovodit* ‘accompany’

*perelezt* ‘climb over a fence’
*perejti ulicu* ‘cross the street’
*perenesti čerez porog* ‘carry across a threshold’

**THROUGH**

8/12/13
TRANSFER >> Intensification

The prototypical meaning TRANSFER motivates various ways of going beyond a metaphorical boundary (assumed norm, another person, another activity).
Two prefixes – Two domains

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<td><strong>Adv:</strong></td>
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<td><em>premnogo</em> ‘very much’ &lt; <em>mnogo</em> ‘much’</td>
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<td>• Non-verbal domain: adj. and adv.</td>
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<td>• Verbal morphological properties are less relevant</td>
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**Participle:**
- *stiranyj*-perestiranyj ‘washed many times’ < *stiranyj* ‘washed’
- *zastroennyj*-perezastroennyj ‘overbuilt’ < *zastroennyj* ‘built’

**Verbs:** 107 in [www.ruscorpora.ru](http://www.ruscorpora.ru), INTENS in 54% cases

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<td>Intensifier of activity: <strong>OVERDO, REDO, DISTRIBUTE, SUPERIORITY, THOROUGH</strong></td>
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<td>• Stronger impact on verbal morphological properties</td>
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**Verbs:** 107 in [www.ruscorpora.ru](http://www.ruscorpora.ru), INTENS in 54% cases

**Verbs:** 1,729 in [www.ruscorpora.ru](http://www.ruscorpora.ru), INTENS in 60% cases
Data

• All verbs prefixed in PRE- and PERE- attested in the Russian National Corpus (www.rusciorpora.ru):
  • 1,836 verbs include
    – 107 verbs prefixed in PRE-,
    – 1,729 verbs prefixed in PERE-

• Policy:
  – Reflexives have separate entries
  – Perfective and imperfective verbs are given separate entries
  – Submeanings as separate entries:
    e.g. perevarit’ ‘PERE-cook’
    1. ‘cook/boil again’ (REDO)
    2. ‘overcook’ (OVERDO)
    3. ‘digest’ (METAPHORICAL TRANSFER)

• Manually assigned a simplex base and tagged for semantic groups
**PERE-ː: Intensifier of verbal activity**

1. **TRANSFER**
   - PERE (197) perevesti
   - 'lead across'

2. **SUPERIORITY**
   - PERE (85) perekrichat'
   - 'outshout'

3. **OVERDO**
   - PERE (197) peregruzit'
   - 'overload'

4. **REDO**
   - PERE (448) peredelat'
   - 'redo'

5. **METAPHORICAL TRANSFER**
   - PERE (110) perevarit'
   - 'digest'

6. **OVERCOME / DURATION**
   - PERE (88) pereždat'
   - 'wait through'

7. **BRIDGE**
   - PERE (48) peregnut'
   - 'bend over'

8. **INTERCHANGE**
   - PERE (85) peremignut'sja
   - 'exchange blinking signals'

9. **TURN OVER**
   - PERE (26) perelistnut'
   - 'turn over a page'

10. **MIX**
    - PERE (38) peremešat
    - 'intermingle'

11. **DIVIDE**
    - PERE (68) perepilit'
    - 'saw across'

12. **DISTRIBUTE (SERIATIM)**
    - PERE (217) pereprobovat'
    - 'try many things'

13. **THOROUGH**
    - PERE (32) perepachkat'
    - 'stain all over'
## Intensification applied to verbal domain

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<td><strong>OVERDO</strong></td>
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<td><em>peregruzit</em> ‘overload’ &lt; <em>gruzit</em> ‘load’</td>
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**Intensifier function in 979 verbs = 60% of all verbs with PERE-**
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- **Intensifier function in 979 verbs = 60% of all verbs with PERE-**
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**Intensifier function in 979 verbs = 60% of all verbs with PERE-**

**Intensifier function in 58 verbs = 54% of all verbs with PRE-**
Semantic overlap of PERE- and PRE-
(Radial Category Profiling methodology, cf. Nesset et al. 2001)

1. TRANSFER
   PERE (197) perevesti 'lead across'
   PRE (10) preprovodit' 'forward'

2. SUPERIORITY
   PERE (85) perekrichat' 'outshout'
   PRE (37) preobladat' 'prevail'

3. OVERDO
   PERE (197) peregruzit' 'overload'
   PRE (7) prevelichit' 'exaggerate'

4. REDO
   PERE (448) peredelat' 'redo'

5. METAPHORICAL TRANSFER
   PERE (110) perevart' 'digest'
   PRE (37) preobrazovat' 'transform'

6. OVERCOME / DURATION
   PERE (88) pereždat' 'wait through'
   PRE (7) prebyvat' 'be in a state of'

7. BRIDGE
   PERE (48) peregnut' 'bend over'
   PRE (6) preklonit' 'bow one's head'

8. INTERCHANGE
   PERE (85) peremignut'sja 'exchange blinking signals'
   PRE (3) prerekat'sja 'argue with'

9. TURN OVER
   PERE (26) perelistnut' 'turn over a page'

10. MIX
    PERE (38) peremešat' 'intermingle'

11. DIVIDE
    PERE (68) perepilit' 'saw across'
    PRE (9) prervat' 'interrupt'

12. DISTRIBUTE (SERIATIM)
    PERE (217) pereprobovat' 'try many things'

13. THOROUGH
    PERE (32) perepachkat' 'stain all over'

14. VERY
    PRE (14) preumnožit' 'increase'
    adj: predobryj 'very kind'
    adv: premnogo 'very much'
Semantic overlap of PERE- and PRE-

1. TRANSFER
   PERE (197) perevesti 'lead across'
   PRE (10) preprovodit' 'forward'

2. SUPERIORITY
   PERE (85) perekrichat' 'outshout'
   PRE (37) preobladat' 'prevail'

3. OVERDO
   PERE (197) peregruzit' 'overload'
   PRE (7) prevelichit' 'exaggerate'

4. REDO
   PERE (448) peredelat' 'redo'

5. METAPHORICAL TRANSFER
   PERE (110) perevarit' 'digest'
   PRE (37) preobrazovat' 'transform'

6. OVERCOME / DURATION
   PERE (88) pereždat' 'wait through'
   PRE (7) prebyvat' 'be in a state of'

7. BRIDGE
   PERE (48) peregnut' 'bend over'
   PRE (6) preklonit' 'bow one's head'

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Qualitative intensification:
PERE- & PRE-
Semantic overlap of PERE- and PRE-

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Qualitative intensification:
PERE- & PRE-

Quantitative intensification:
PERE- only
## Summing up

<table>
<thead>
<tr>
<th>PRE- ‘very’</th>
<th>PERE- ‘over’</th>
</tr>
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<tbody>
<tr>
<td>Loan prefix</td>
<td>Native prefix</td>
</tr>
<tr>
<td>Productive in adjectival domain</td>
<td>Productive in verbal domain</td>
</tr>
<tr>
<td>Intensifier of quality</td>
<td>Intensifier of activity</td>
</tr>
<tr>
<td>Qualitative intensification</td>
<td>Quantitative and qualitative intensification</td>
</tr>
</tbody>
</table>

Non-prototypical allomorphs of a single morpheme;
Morphological conditioning;
Semantic and distributional overlap
Aspect shift

Fisher's Exact Test p-value < 2.2e-16

PERE- is almost three times better perfectivizer than PRE-
Prefix stacking

PRE- is much more often stacked over another prefix than PERE-.

Fisher's Exact Test
p-value = 5.496e-11

<table>
<thead>
<tr>
<th></th>
<th>Stacked</th>
<th>Not Stacked</th>
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<tbody>
<tr>
<td>pere</td>
<td>281</td>
<td>929</td>
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<tr>
<td>pre</td>
<td>54</td>
<td>43</td>
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</table>
Transitivity

No significant difference: 11% of cases for both prefixes
Statistical analysis:
Scores of variable importance

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
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<tbody>
<tr>
<td>Semantic.group</td>
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<tr>
<td>Prefix.stacking</td>
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<tr>
<td>Shift.in.aspect</td>
<td>0.02</td>
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<tr>
<td>Shift.in.transitivity</td>
<td>0.01</td>
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<tr>
<td>Perfective.type</td>
<td>0.00</td>
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</table>

```
sort(dat.cforest.varimp)
```
### A similar story: English

<table>
<thead>
<tr>
<th>Germanic prefix:</th>
<th>Latin prefix:</th>
<th>German prefix:</th>
</tr>
</thead>
<tbody>
<tr>
<td>OVER-</td>
<td>SUPER-</td>
<td>ÜBER-</td>
</tr>
<tr>
<td></td>
<td>HYPER-</td>
<td>(in English mostly spelled as <em>uber</em>)</td>
</tr>
</tbody>
</table>

#### Verbs:
- overdose
- overeat

#### Adj:
- supercool
- supersensitive
- supernatural
- hyperactive

#### Nouns:
- overdose
- superman, supercoach
- superpower
- hypertension
- hyperdemocracy

(Kunter 2012)
uber examples from COCA

• Spider walked in. And I was trying to be like **uber cool**. [2010, Reality Show, transcript]

• Two **uber liberal** Congress people, Elijah Cummings and Nancy Pelosi, allow Ms. Fluke access to Capitol Hill. [2012, Santorum: FOX Favors Romney]

• Consider the **uber model** of the moment, Gisele Bundchen. Her hair is full of healthy waves... [2000, Vegetarian Times]

• Our family was in a bad way. We yelled, threatened... A friend said, “You should call **Ubernanny**” [2012, The Southern Review]
Conclusions

• PERE- and PRE- are variants of a single morpheme and are specialized for different morphological domains
• PERE- (native prefix) is a productive intensifier of activity in the verbal domain
• PRE- (loan prefix) is a productive intensifier of quality in the adjectival domain
• PERE- and PRE- overlap in semantics and can be used beyond their typical domains
• A similar opposition of native vs. loan intensifying prefixes holds for English: over- vs. super-, hyper- vs. uber-