

# **The Metaphorical Shape of Actions: Verb Classifiers in Russian**

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# Overview

- Aspect in Russian
- Are there “empty” prefixes in Russian?
- Why the prefixes aren’t “empty”
  - Radial category profiling
  - Semantic profiling
- Why the prefixes are a verb categorization system
  - Comparison with verb classifiers
  - Comparison with numeral classifiers

Each prefix has a unique “shape”

# Aspect in Russian

- All forms of all verbs express aspect
  - (residue of biaspectual verbs are syncretic)
- Two types of verbs in Russian, often referred to as “paired”:
  - Perfective
  - Imperfective

# Aspect in Russian: prefixation of verbs

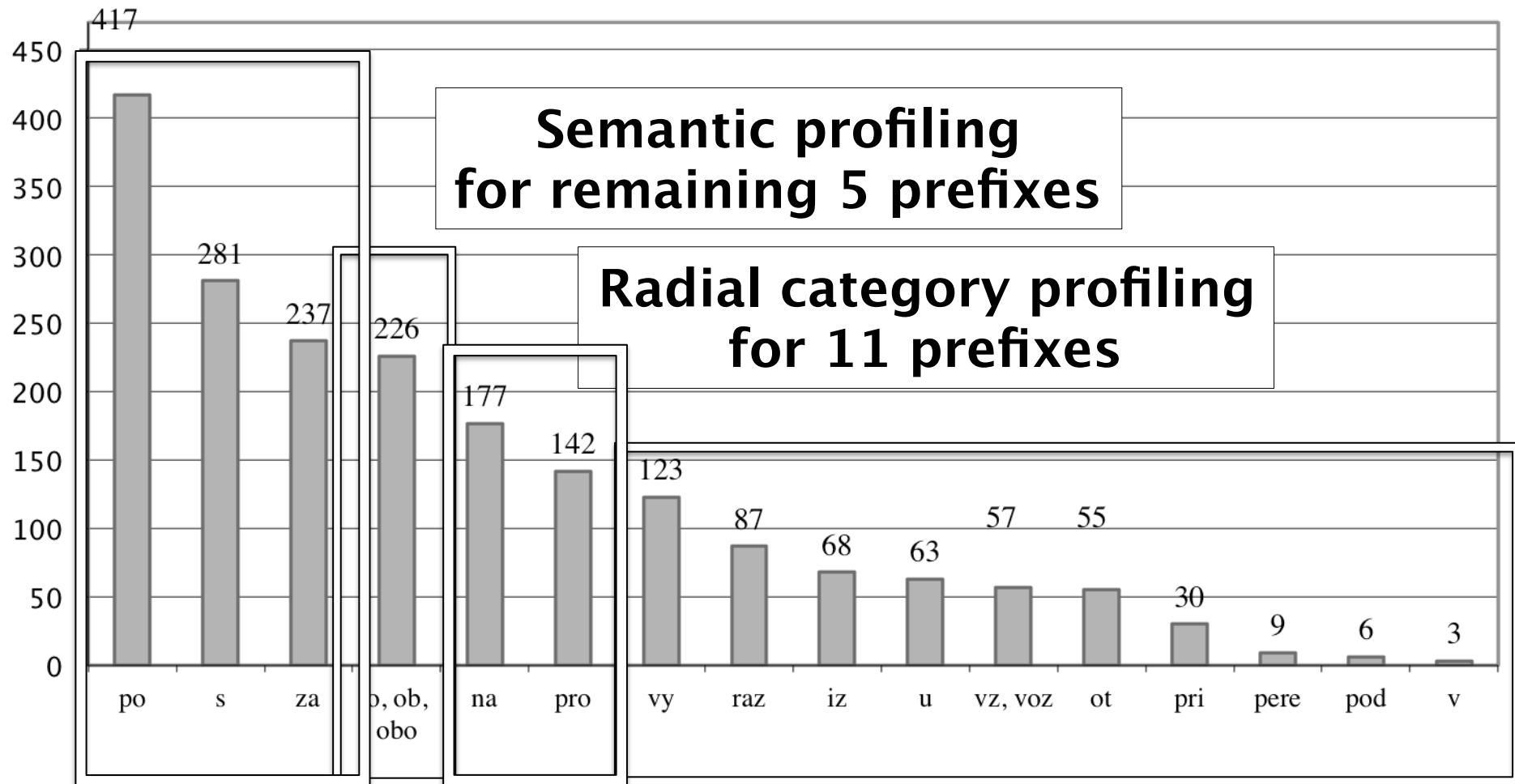
- Simplex verbs
  - nearly all imperfective (*tajat* ‘melt’, *nesti* ‘carry’)
- Prefixed verbs (prefix + simplex)
  - nearly all perfective (*rastajat* ‘melt’, *raznesti* ‘deliver, disperse’)
  - 16 prefixes that can BOTH:

- perfectivize a simplex verb without changing the lexical meaning, as in *rastajat* ‘melt’

- perfectivize a simplex verb and change the lexical meaning, as in *raznesti* ‘deliver, disperse’ (Russian is satellite framed, path is marked in the prefix)

# Are there “empty” prefixes in Russian?

- It is traditionally assumed that when a prefix perfectivizes a simplex verb without changing the lexical meaning, the prefix is “empty”
- Our goal:
  - Show that the prefixes aren’t “empty” – each specifies a “shape” for an event
  - Prefixes are a verb categorization system, parallel to numeral classifiers for nouns
  - “Emptiness” is an illusion caused by conceptual overlap



## Distribution of so-called “empty” prefixes

# General arguments against “empty” prefixes

1. If the only purpose of prefixes is to perfectivize verbs, Russian would need only ONE prefix to mark “+ perfective”

BUT: Russian has sixteen such prefixes

2. All 16 “empty” prefixes are semantic when combined with other verbs

SO: How do the prefixes know when to turn their meanings on and off?

3. WHY do native speakers agree on which “empty” prefix to use with borrowed verbs?

# Radial category profiling

- 11 prefixes analyzed
  - Nearly 2000 verbs (both “non–empty” and “empty” uses)
  - (Baydimirova et al. forthc., Baydimirova 2010)
- Method:
  - polysemy of each prefix established via analysis of all “non–empty” uses in verbs with frequency >100 in Russian National Corpus
  - this yields a radial category for the meanings of the prefix
  - comparison of prefix meanings with meanings of simplex verbs that use the same prefix as an “empty” prefix

# Radial category profiling, cont'd.

## The prefix RAZ- as an example

### “Non-empty” meanings of RAZ

APART: RAZ+*pilit* ‘saw’ =  
‘saw apart’

CRUSH: RAZ+*toptat*  
‘stamp one’s feet’ =  
‘trample, crush by  
stamping’

SPREAD: RAZ+*katat* ‘roll’  
= ‘roll out dough’

SWELL: RAZ+*dut* ‘blow’ =  
‘inflate, swell by blowing’

### Meanings of simplex verbs with “empty” RAZ

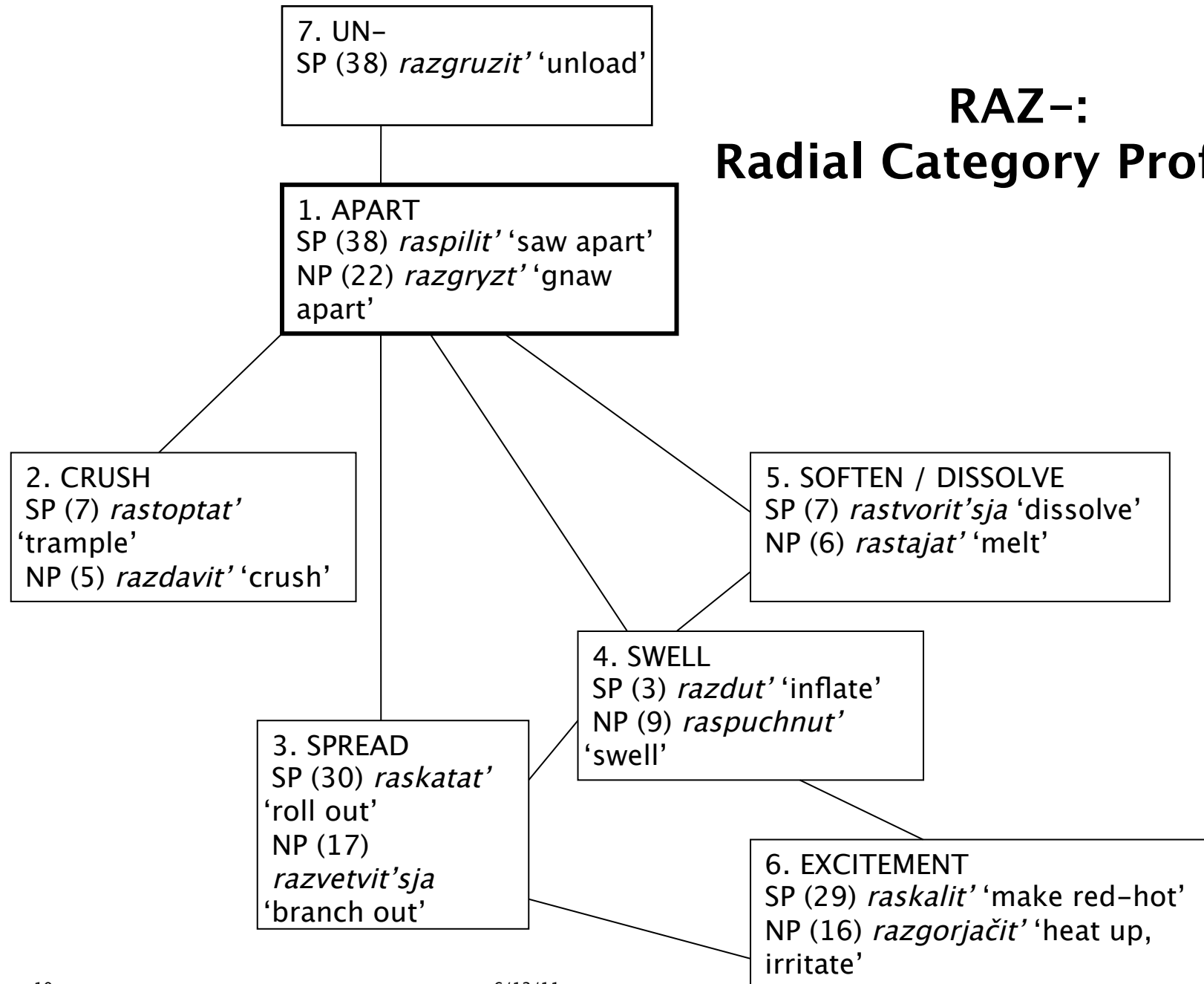
APART: RAZ+*bit* ‘break’  
= ‘break’

CRUSH: RAZ+*davit*  
‘crush’ = ‘crush’

SPREAD: RAZ+*vetvit’sja*  
‘branch out’ = ‘branch  
out’

SWELL: RAZ+*puxnut*  
‘swell’ = ‘swell’

# RAZ-: Radial Category Profiling



## Radial category profiling, cont'd.

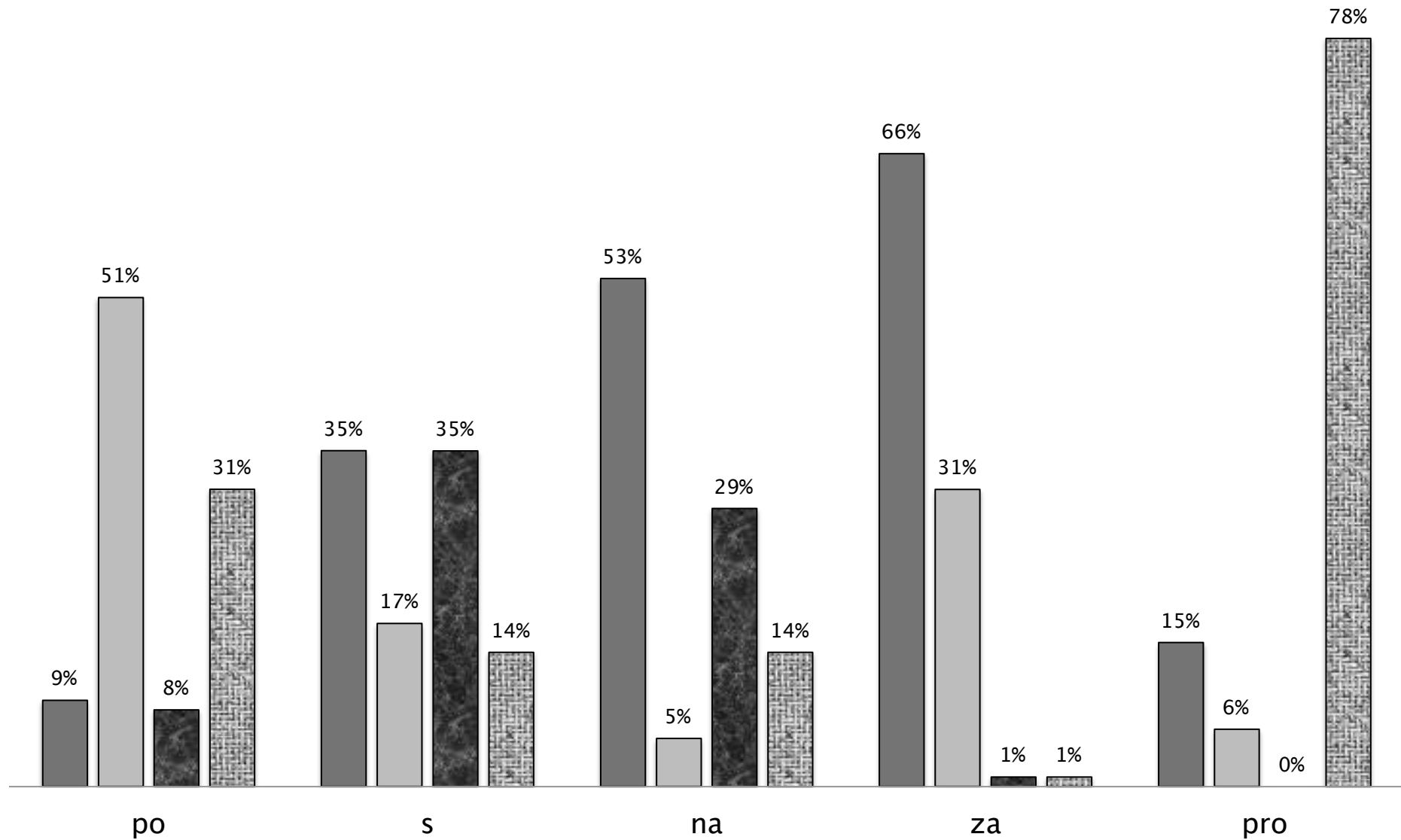
- FINDING: The radial categories of prefixes and verbs coincide
  - 3 prefixes – coincide in all meanings
  - 5 prefixes – coincide in all but one meaning
  - 3 prefixes – coincide in some meanings
- In the so-called “empty” uses of prefixes, there is conceptual overlap between the meanings of the prefixes and the meanings of the verbs
- Prefixes and verbs are matched for “shape”

## Semantic profiling

- 5 of the “biggest” prefixes analyzed (*po-*, *s-*, *za-*, *na-*, *pro-*)
- 382 verbs (ONLY “empty” uses, limited to verbs that use only one prefix and received only one tag)
- Semantic tags assigned independently in the Russian National Corpus:
  - IMPACT, CHANGEST, BEHAV, SOUND & SPEECH
- Statistically significant effect: chi-square = 248, df = 12,  $p = 2.2e-16$

■ IMPACT ■ CHANGEST ■ BEHAV ■ S&S

## Semantic Profiling of *po-*, *s-*, *na-*, *za-*, *pro-*



## Semantic profiling, cont'd.

- Each prefix has a unique semantic profile
- Further analysis makes it possible to discover the “shape” of each prefix:
  - *po-*: quantization along a scale
  - *s-*: semelfactive, ‘together’, and ‘down’
  - *za-*: covering and putting into a fixed state
  - *na-*: accumulation
  - *pro-*: ‘through’ a quantum

# Radial category profiling and semantic profiling show that the prefixes...

- Sort the verbal lexicon into categories, based on the “shape” of the action that is referred to

# Why the prefixes are a verb categorization system

- The behavior of Russian prefixes is entirely parallel with verb superclassification systems as described by McGregor (2002):
  - small number of overt markers that are obligatory in certain environments
  - exhaustively categorize the verbal lexicon (with few exceptions)
  - multiple classification exists, but is limited
  - classification is according to semantic parameters, namely Aktionsart (aspect), vectorial configuration (“the verbal analogue of shape” McGregor 2002: 29), and valency

# Why the prefixes are a verb categorization system, cont'd.

- Russian prefixes are also parallel with numeral classifier systems for noun categorization described by Aikhenvald (2000):
  - small number of overt markers that are obligatory with numerals or quantifiers
  - exhaustively categorize the nominal lexicon (with few exceptions)
  - classification is according to semantic parameters such as animacy, shape, size, structure, countability

# Conclusion

- Russian has 16 prefixes that serve as a verb superclassifying system
  - prefixes are obligatory to mark quantified aspect (perfective)
  - prefixes classify the verbal lexicon (few exceptions)
  - prefixes classify verbs according to their “shape”
- This has probably been overlooked because
  - More attention has been paid to noun categorization than to verb categorization
  - Verb categorization has been previously recognized primarily in languages that have noun categorization (Chinese, Australian languages)