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# Following the paths of Slavic aspectual prefixes

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# Related publications

- Janda, Laura A. “Polysemy of affixes: A Slavic Perspective”, forthcoming in *Wiley Blackwell Companion to Morphology*, edited by Antonio Fábregas. 26pp.
- Dickey, Stephen M., Laura A. Janda. 2015. “Slavic Aspectual Prefixes and Numeral Classifiers: Two Kinds of Lexico-Grammatical Unitizers”. *Lingua* 168, 57-84. [DOI: 10.1016/j.lingua.2015.09.005](https://doi.org/10.1016/j.lingua.2015.09.005)
- Janda, Laura A., Anna Endresen, Julia Kuznetsova, Olga Lyashevskaya, Anastasia Makarova, Tore Nettet, Svetlana Sokolova. 2013. *Why Russian aspectual prefixes aren't empty: prefixes as verb classifiers*. Bloomington, IN: Slavica Publishers.

# Overview

- Cognitive Linguistics
  - Construction Grammar: Prefix + Verb Constructions
  - Polysemy: Radial Categories
- Verbal Prefixes: Paths as Prototypes and Polysemy
  - Meanings with verbs of motion
  - Extensions via metaphor and metonymy
  - Semantic relationships to verbs
- Verb Classifiers
  - Analogy to “Numeral” (noun) Classifiers
  - Sortal and Mensural Classifiers



# Cognitive Linguistics

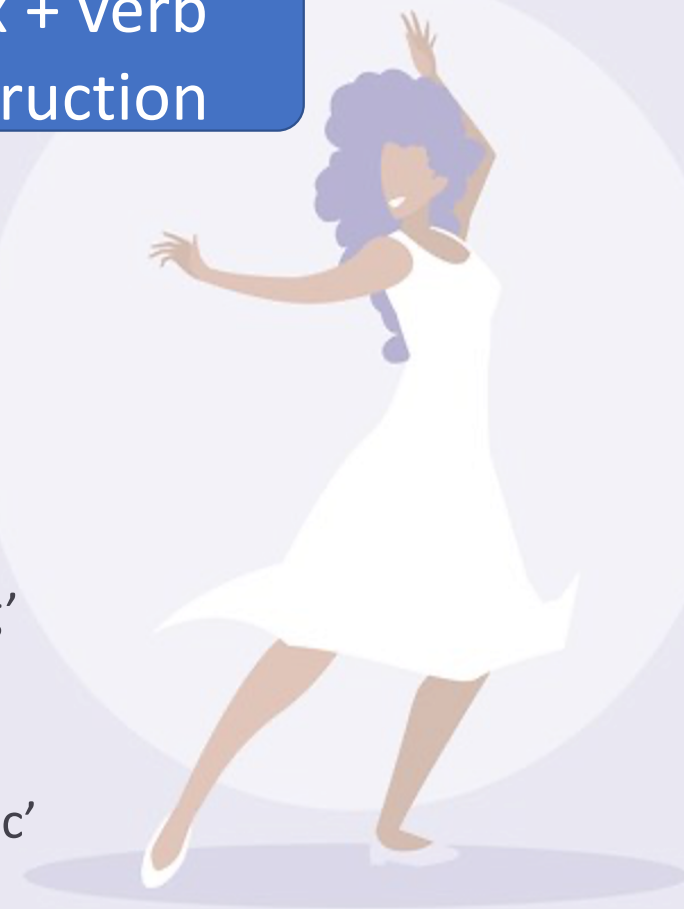
# Construction Grammar: Prefix + Verb Constructions

- All linguistic expressions are constructions
- Constructions are the basic unit of language
- A language is a system of constructions, termed a “constructicon” (cf. Lyngfeldt et al. 2018)
- Constructions are defined as conventionalized pairings of form and meaning (also called “symbolic assemblies” by Langacker)
- Morphemes such as prefixes are the minimal type of construction; cf. Goldberg’s (2006: 18) and Langacker (2008: 16) definition of the morpheme as “an expression whose symbolic complexity is zero, i.e. it is not at all analyzable into smaller symbolic components”.

# Examples of Russian constructions

- morphemes  
-ть = INF, за- = ingressive
- lexemes  
*танцевать* 'dance', ***затанцевать*** 'begin to dance'
- multi-word idioms where all slots are fixed  
*танцевать от Адама* 'start from the very beginning'
- multi-word expressions with open slots  
VP pod NP-Acc  
*Она танцевала под музыку* 'She danced to the music'
- larger discourse units

Prefix + verb construction



See the Russian Constructicon: <https://constructicon.github.io/russian/>



### Search in names and illustrations

### Results

28 - NP-Nom по-Verb-по-~Verb и VP - **Поспит-поспит и проснётся.**  
269 - по-Verb-Pst и будет - Погуляли и будет.  
270 - по-Adj/Adv-Cmp - К сыну надо относиться помягче.  
652 - по-Verb-Imp ещё (мне/у меня)! - Поговори мне ещё!  
1249 - по-Verb-Pst и хватит - Погуляли и хватит.  
1284 - Cl, поскольку Cl - Поскольку английский я знаю недостаточн  
1349 - по-прежнему VP - Тётя по-прежнему живёт в Петербурге.  
1368 - (пока) по-Verb - Мы его пока наблюдаем.  
1454 - NP-Nom Сор ни бум-бум на/в NP-Loc/по-Adj-ски - Вася в мат  
1598 - NP-Nom по-Verb-ивать - Иван мне позванивает.  
1600 - NP-Nom по-Verb-ивать - Иван мне позванивает.

28

NAME NP-Nom по-Verb-по-~Verb и VP - *Поспит-поспит и проснётся.*

DEFINITION (Russian) Конструкция обозначает, что [участник]<sub>Agent</sub> совершает несколько порций повторяющегося цикличного [действия]<sub>Activity</sub>, которое прерывается [другим действием или событием]<sub>Event</sub>. Повторение порций действия выражается повторением глагола, который обычно имеет приставку по-.

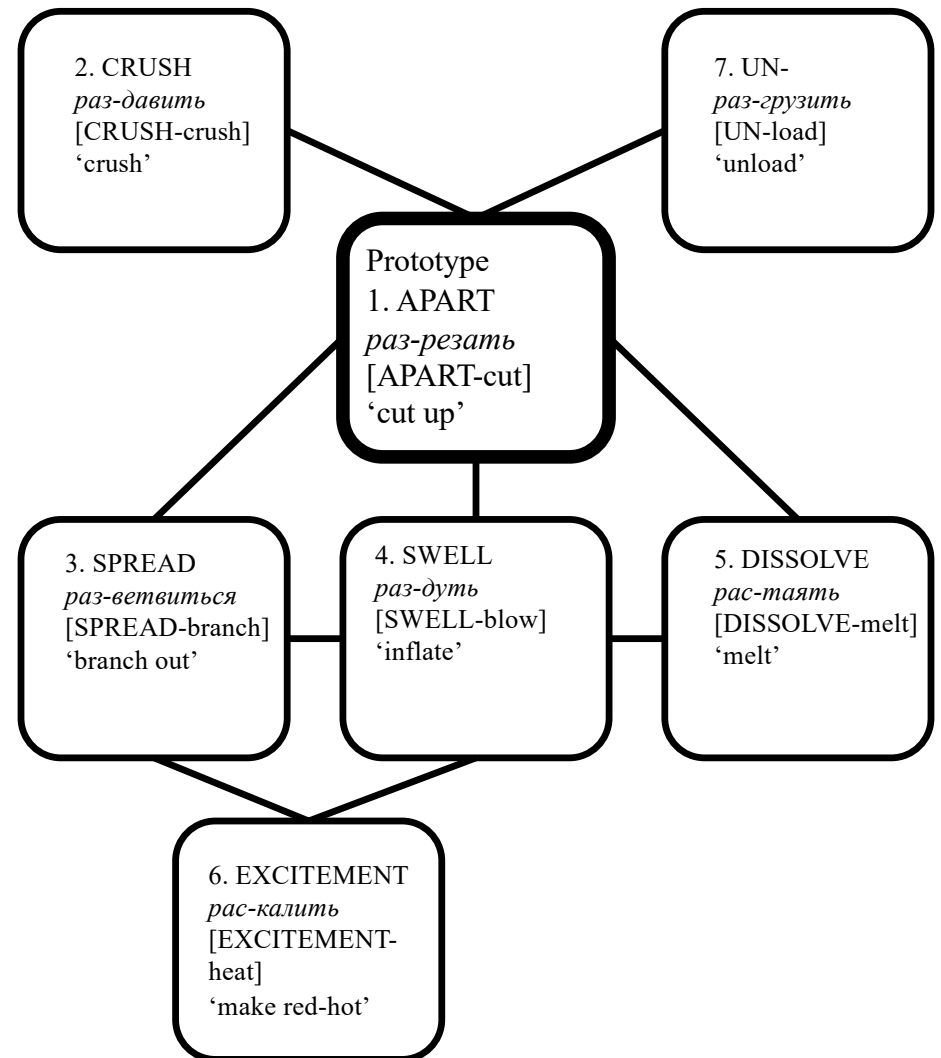
DEFINITION (English) This construction means that the [participant]<sub>Agent</sub> performs several rounds of a repetitive, cyclical [action]<sub>Activity</sub> which is interrupted by another [action or event]<sub>Event</sub>. The repetition of the action is expressed by repeating the verb, which usually contains the prefix “по-”.



# Polysemy: Radial Categories

- Polysemy can be described as a radial category with a central prototypical meaning and a network of extensions of that meaning that are relatively more or less peripheral (Lakoff 1987)
- Peripheral meanings are related directly or indirectly to the prototype, and the structure of the network is coherent rather than haphazard
- Metaphor and metonymy motivate the structure of polysemy
- Metaphor: a meaning is mapped from one domain (a source domain, often the physical environment) to another (a target domain) (Lakoff and Johnson 1980)
- Metonymy: a meaning shifts to follow associations from source to target within a single domain (Peirsman and Geeraerts 2006)

# Example of polysemy: Russian prefix *раз-*



A blue ribbon graphic with a folded end on the left side, containing white text.

# Verbal Prefixes: Paths as Prototypes and Polysemy

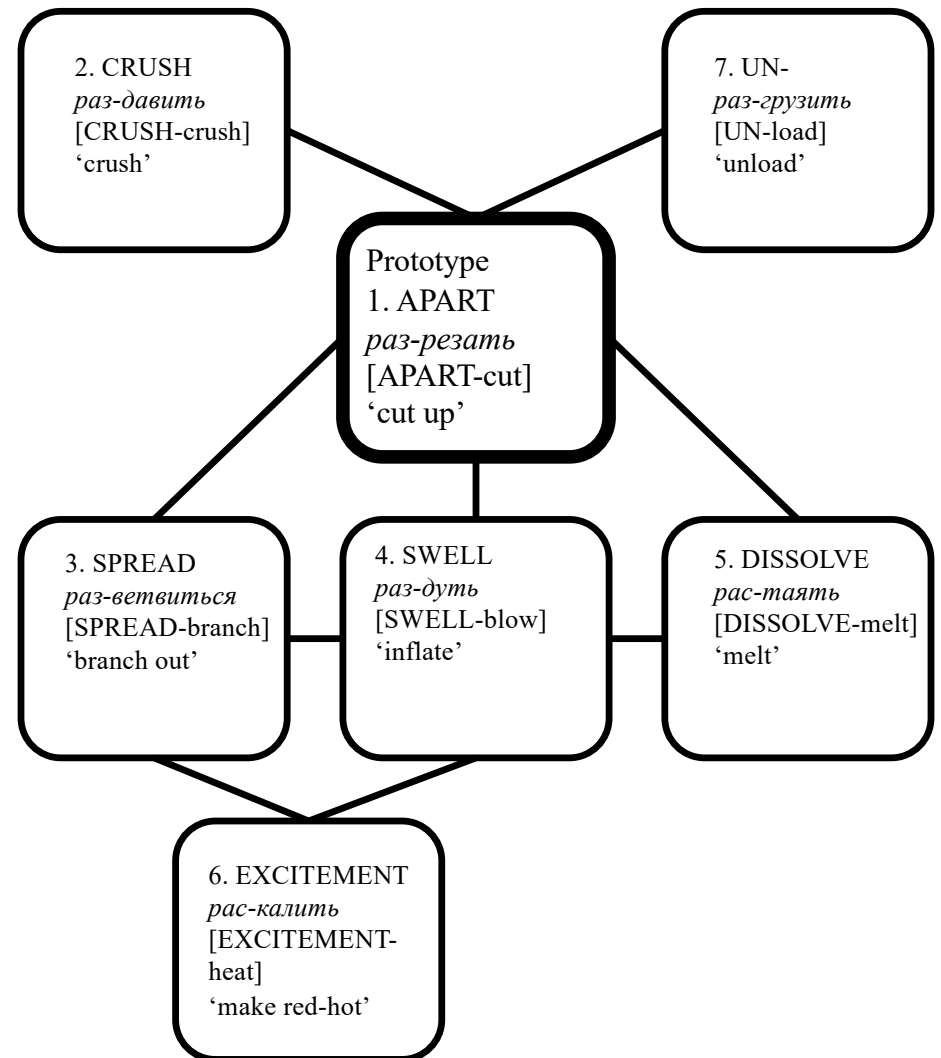
# Russian has 17 perfectivizing prefixes

Prefix	Prototypical path meaning	Related meanings
<b>до-</b>	REACH	EXCESS, ADD
<b>из-</b>	OUT OF A CONTAINER	EMPTY A CONTAINER, EXHAUSTIVE RESULT, EXHAUST A SURFACE, NEGATIVE EXHAUSTION, MAKE OUT OF, DECLINE/DEVIATE, ACQUIRE
<b>на-</b>	SURFACE	ACCUMULATE
<b>о(б)-</b>	AROUND	PASS, OVERDO, MISTAKE, AFFECT MANY, AFFECT A SURFACE, ENVELOP, IMPOSE/ACQUIRE A NEW FEATURE
<b>от-</b>	DEPART	BOUNCE, UNSTICK, REMOVE, MAKE NON-FUNCTIONAL, STOP AT THE ENDPOINT
<b>пере-</b>	TRANSFER	SUPERIORITY, OVERDO, REDO, DURATION/OVERCOME, BRIDGE, TURN OVER, MIX, DIVIDE, SERIATIM, THOROUGH
<b>по-</b>	SET OUT	RESULT, SOME, DISTRIBUTE
<b>под-</b>	APPLY TO BOTTOM	HORIZONTAL APPROACH, ADJUST, INCREMENT, SECRETLY, MINIMAL
<b>при-</b>	ARRIVE	ATTACH, ADD, ATTENUATE
<b>про-</b>	THROUGH	THOROUGH, DURATION, DISTANCE, PASS
<b>раз-</b>	APART	CRUSH, SPREAD, SWELL, SOFTEN/DISSOLVE, EXCITEMENT, UN-
<b>с-</b>	DOWN	TOGETHER, ONCE
<b>у-</b>	MOVE AWAY	MOVE DOWNWARDS, CONTROL, REDUCE, HARM, PERCEIVE, PLACE/FIT, KEEP/SAVE, COVER COMPLETELY, DEPART FROM NORM
<b>в-</b>	INTO	
<b>в(о)з-</b>	MOVE UPWARD	AGITATE, RESIST, REBUILD
<b>вы-</b>	OUT OF A CONTAINER	EMPTY A CONTAINER, EXHAUSTIVE RESULT, EXHAUST A SURFACE, NEGATIVE EXHAUSTION, CREATE AN IMAGE ON A SURFACE, MAKE OUT OF, DECLINE/DEVIATE, ACQUIRE, ENDURE
<b>за-</b>	DEFLECT	EXCESS, BEGIN, EXCHANGE, ATTACHMENT, COVER, FILL, CHANGE TO A FIXED STATE

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<b>до-</b>	REACH	EXCESS, ADD
<b>из-</b>	OUT OF A CONTAINER	EMPTY A CONTAINER, EXHAUSTIVE RESULT, EXHAUST A SURFACE, NEGATIVE EXHAUSTION, MAKE OUT OF, DECLINE/DEVIATE, ACQUIRE
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<b>за-</b>	DEFLECT	EXCESS, BEGIN, EXCHANGE, ATTACHMENT, COVER, FILL, CHANGE TO A FIXED STATE

# Example of polysemy: Russian prefix *раз-*



# 1. APART

*Шлиппенбах захохотал так, что **разлетелись** бумажные салфетки.*

'Schlippenbach started to laugh so hard that the paper napkins **flew in all directions.**'

[Сергей Довлатов. Чемодан (1986)]

Metaphor



*Наше тяжелое материальное положение окончательно **расшатало** наши нервы.*

'Our difficult financial situation definitively **shattered** our nerves.'

[А. М. Ремизов. Взвихренная Русь (1917-1924)]

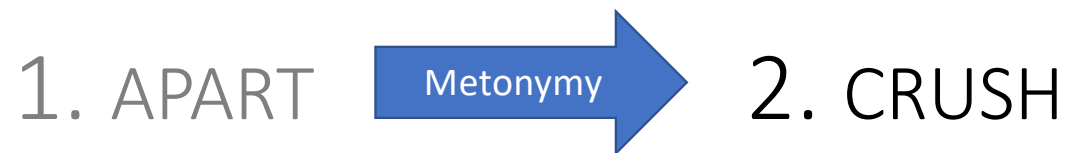
Metonymy



*Виктор взял чемодан в левую руку, правой ещё пригубил на дорожку коньячку и **раскланялся**.*

'Viktor took his suitcase in his left hand, used his right to take a swig of cognac for the road and **took a parting bow.**'

[Василий Шукшин. Печки-лавочки (1970-1972)]



*Миша докурил сигарету до самого фильтра, и яростно **растоптал** ее каблуком.*  
'Misha smoked his cigarette all the way down to the filter and furiously **crushed** it with his heel.'  
[Евгений Прошкин. Механика вечности (2001)]



1. APART

Metonymy



3. SPREAD

*Раскатала тесто, поставила пирог в духовку, и тут позвонили в дверь...*

'She **rolled out** the dough, put the pie in the oven, and right then someone rang the doorbell.'

[Симон Соловейчик. Ватага «Семь ветров» (1979)]

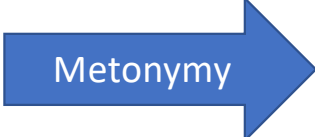
Metaphor



*я **разработал** стратегический план, который вам станет ясен впоследствии.*

'I **have worked out** a strategic plan, which will subsequently become clear to you.'

[Владимир Войнович. Иванькиада, или рассказ о вселении писателя  
Войновича в новую квартиру (1976)]

3. SPREAD  Metonymy 4. SWELL

*Средний палец у него **распух** от удара.*  
'His middle finger **swelled up** from the blow.'  
[Сати Спивакова. Не всё (2002)]



*У нас есть категория людей, которые **разбогатели** и стали миллиардерами, как у нас говорят, в одночасье.*  
'We have a category of people who **got rich** and became billionaires in one fell swoop as we say.'  
[Валерий Лебедев. Отечество в опасности // Интернет-альманах «Лебедь», 2003.11.01]



*Два дня сыпал снег, потом **растаял**, и полил дождь.*

'Snow was coming down for two days, then it **melted**, and then rain came pouring down.'

[Сергей Козлов. Правда, мы будем всегда? (1969-1981)]

3. SPREAD 4. SWELL

Metonymy



6. EXCITEMENT

*Зинаида Николаевна ... **разогрела** в духовке французский батон.*  
'Zinaida Nikolaevna ... **heated up** the French baguette in the oven.'  
[Ольга Новикова. Женский роман (1993)]

Metaphor



*Сердце застучало. Я чуть не **расплакался**.*  
'My heart started to pound. I almost **burst into tears**.'  
[Григорий Горин. Иронические мемуары (1990-1998)]

1. APART

Metonymy



7. UN-

*Развязала* веревки, которыми были спутаны его руки и ноги.

'She **untied** the ropes that bound his hands and feet.'

[Татьяна Тренина. Никогда не говори «навсегда» (2004)]

Metaphor



Гурьев обиделся и *раздумал* нас провожать

'Gur'ev took offense and **changed his mind about** accompanying us'

[Сергей Довлатов. Заповедник (1983)]

Metaphor



Профессор Дэвид Пейдж первым (в 2003 году) *расшифровал* последовательность человеческой Y-хромосомы.

'Professor David Page is the first person (in 2003) who **decoded** the sequence of the human Y chromosome.'

[Леонид Крайнов. Будущее мужской хромосомы // «Знание-сила», 2013]

# Semantic relationships of prefixes to verbs

## CONTRAST

разлететься [APART-fly]  
расшатать [APART-shake]  
раскланяться [APART-bow]  
раскатать [SPREAD-roll]  
разработать [SPREAD-work]  
развязать [UN-tie]  
раздумать [UN-think]  
разшифровать [UN-encode]

## COMPATIBILITY

растоптать [CRUSH-stamp]  
разбогатеть [SWELL-get.rich]  
разогреть [EXCITEMENT-heat]  
расплакаться [EXCITEMENT-weep]

## OVERLAP

распухнуть [SWELL-swell]  
растаять [DISSOLVE-melt]

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разрыдаться [EXCITEMENT-weep]

Path meaning with  
motion verbs

## OVERLAP

**распухнуть [SWELL-swell]**  
**растаять [DISSOLVE-melt]**

Overlap with  
Natural Perfectives

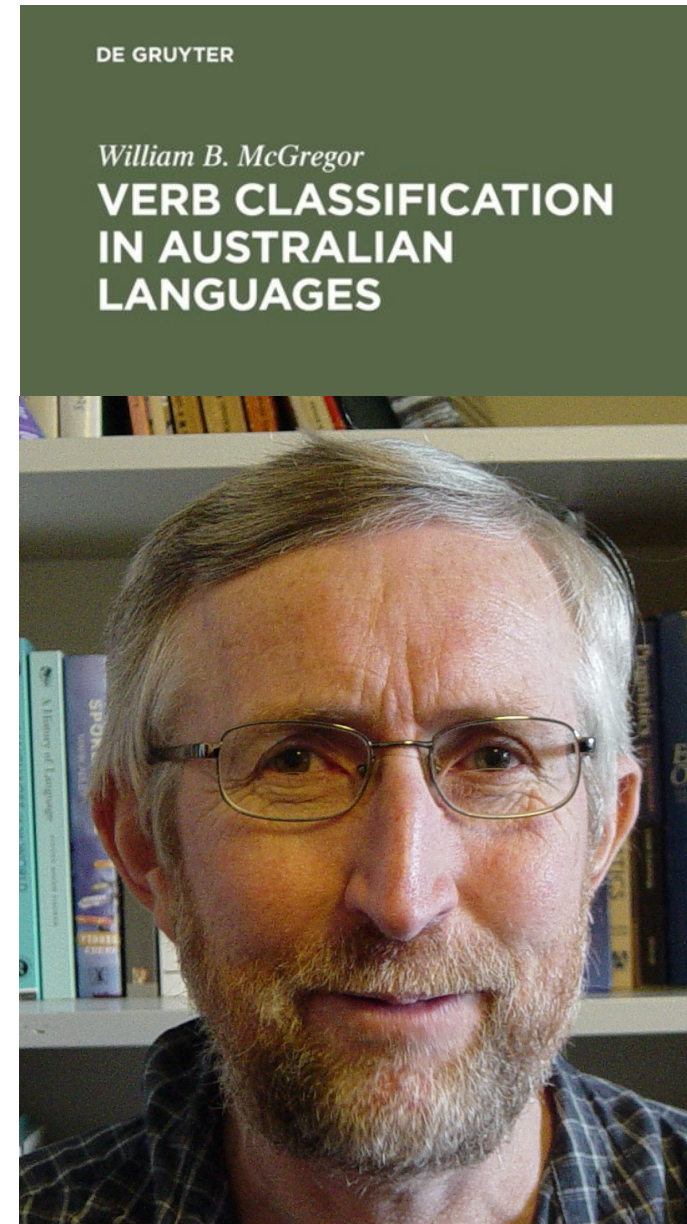
A blue ribbon graphic with a 3D effect, featuring a darker blue shadow on the left side. The ribbon is horizontal and contains the text "Verb Classifiers" in white.

# Verb Classifiers



# Noun classifiers and Verb classifiers

- “Numeral” classifiers are really noun classifiers
- Classifiers are “unitizers” that construe the referents of mass nouns as countable units, i.e., count nouns.
- **Sortal** classifiers “sort” the nouns of the language into groups according to the units that the substances typically form, often according to their shape: long objects, flat objects, round objects, etc.
- **Mensural** classifiers create non-inherent units of mass nouns by using measures: a bit, a cup, etc.
- Linguists have only recently begun to describe verb classifier systems



# Russian Prefixes are Verb Classifiers

- **Russian prefixes** -- “unitizers”, designate discrete events
- **Russian prefixes** -- quantification by perfective aspect
- **Resultative uses** “sort” the verbs, **classification by outcome**:
  - SWELL with *раз-* as in *пухнуть* > *раз-пухнуть* ‘swell’
  - MOVE AWAY with *у-* as in *красть* > *у-красть* ‘steal’
  - ATTACH with *при-* as in *липнуть* > *при-липнуть* ‘get stuck to’
- **Procedural uses** create non-inherent units:
  - SOME with *по-* as in *сидеть* > *по-сидеть* ‘sit for a while’
  - THROUGH with *про-* as in *плакать* > *про-плакать* (*всю ночь*) ‘cry all through the night’

SORTAL  
classifiers

MENSURAL  
classifiers

# Parallels between Noun and Verb Classifiers

## **Noun Classifiers**

- One noun can combine with various classifiers
- One classifier may have various functions
- Sortal and Mensural classifiers

## **Verb Classifiers**

- One verb can combine with various classifiers
- One classifier may have various functions
- Sortal and Mensural classifiers

# One noun may combine with various classifiers

## Burmese *myi?* 'river' (Becker 1975)

a.      *myi?*    *tə*      *myi?*  
river    one      cl:river  
'a river [default case]'

b.      *myi?*    *tə*      *ya?*  
river    one      cl:place  
'a river as site [for a picnic, etc.]'

c.      *myi?*    *tə*      *tan*  
river    one      cl:line  
'a river [on a map]'

d.      *myi?*    *tə*      *hmwa*  
river    one      cl:section  
'a river section [for fishing, etc.]'

e.      *myi?*    *tə*      *'sin*  
river    one      cl:distant arc  
'a river as path to the sea'

f.      *myi?*    *tə*      *θwe*  
river    one      cl:connection  
'a river as a connection [linking villages]'

g.      *myi?*    *tə*      *'pa*  
river    one      cl:sacred object  
'a river [in mythology]'

h.      *myi?*    *tə*      *khu'*  
river    one      cl:conceptual unit  
'a river [in a discussion of rivers in general]'



# One verb may combine with various prefixes

Russian:

*писатъ* 'write'

- > *на-писатъ* 'write'
- >> *в-писатъ* 'write in, insert'
- >> *за-писатъ* 'record, register'

**Natural** Perfective

**Specialized** Perfective

**Specialized** Perfective

Czech:

*psát*

- > *na-psat*
- >> *ve-psat*
- >> *za-psat*

Polish:

*писаć*

- > *na-писаć*
- >> *w-писаć*
- >> *za-писаć*

BCS:

*pisati*

- > *na-pisati*
- >> *u-pisati*
- >> *za-pisati*

Bulgarian:

*пиша*

- > *на-пиша*
- >> *в-пиша*
- >> *за-пиша*

Late Common Slavic:

*рьсати*

- > *на-рьсати*
- >> *въ-рьсати*
- >> *за-рьсати*



# One classifier may have various functions

- **HIGH** semantic overlap between classifier and noun => default classifier
- **LOW** semantic overlap between classifier and noun => other classifier

Mandarin Chinese classifier *pian* expresses flatness (Zhang 2013: 42):

- san pian shuye* (sortal classifier)  
three cl:slice leaf  
'three leaves'
- yi pian qiche* (mensural classifier)  
one cl:slice car  
'one group of cars'
- san pian mutou* (mensural classifier)  
three cl:slice wood  
'three pieces of wood'
- she pian luobo* (mensural classifier)  
ten cl:slice carrot  
'ten slices of carrot'



# One prefix may have various functions

## Natural Perfectives

*пухнуть* 'swell' > **рас-***пухнуть* 'swell'

*красть* 'steal' > **у-***красть* 'steal'

*липнуть* 'stick' > **при-***липнуть* 'stick'

*ночевать* 'spend the night' > **пере-**  
*ночевать* 'spend the night'

## HIGH DEGREE OF OVERLAP:

**Natural Perfectives** only change the aspect

## Specialized Perfectives

*дуть* 'blow' >> **раз-***дуть* 'inflate'

*бежать* 'run' >> **у-***бежать* 'run away'

*вязать* 'tie' >> **при-***вязать* 'tie onto'

*ждать* 'wait' >> **пере-***ждать* 'wait through something'

## LOW DEGREE OF OVERLAP:

**Specialized Perfectives** change the aspect and the meaning

# Sortal vs. Mensural Classifiers

## The Numeral Classifier Construction in Mandarin Chinese

Classifier Type	Numeral	Classifier	Noun
Sortal	<i>yi</i> 'one'	<i>tiao</i> cl: long-thin	<i>shengzi</i> rope
Mensural	<i>yi</i> 'one'	<i>bei</i> cl: glass	<i>pjiu</i> beer



(Gao & Malt 2009)

- Morpho-syntactic behavior is identical
- Both types signal units
  - **Sortal**: refer to inherent units
  - **Mensural**: create units, individuate in terms of quantity
- A single classifier can serve both sortal and mensural functions
- General classifiers often serve both functions



# Sortal & Mensural Classifiers for Nouns and Verbs

Unitizer Type:	NOUNS Numeral Classifier	VERBS Aspectual Prefix
Reference to <b>inherent</b> boundaries:	Sortal Classifiers	Lexical + purely perfectivizing prefixes (Natural Perfectives and Specialized Perfectives)
Imposition of <b>external</b> boundaries:	Mensural Classifiers	Procedural prefixes, a.k.a. Superlexical, Aktionsart prefixes (Complex Act Perfectives and Single Act Perfectives)

# Procedural Prefixes as Mensural Classifiers

(1) a. *yi bei pijiu* (Mandarin Chinese: Gao and Malt 2009: 1129)  
one cl:glass beer  
'a glass of beer'

(1) b. *'um- p'it há'as* (Yucatec Maya; Lucy 1992: 74)  
a cl:little-bit/some banana  
'a little bit of/some banana'



(2) a. *по- сидеть* (Russian)  
SOME sit  
'sit for a while'



# Russian Examples of Sortal and Mensural Classifiers

Type of Classifier	Russian Perfectivizing Prefixes	Russian Examples
(1) Individual Classifiers (Sortal)	Natural <i>по-, с-, за-</i> , etc.  Specialized <i>до-, с-, за-</i> , etc.	<i>по-строить</i> 'build', <i>с-варить</i> 'cook', <i>за-крепить</i> 'fasten'  <i>до-писать</i> 'finish writing', <i>со-брать</i> 'collect', <i>записать</i> 'register'
(2) Collective Classifiers (Mensural)	Distributive <i>пере-, по-</i> Cumulative <i>на-</i>	<i>пере-пробовать</i> 'try a series of things', <i>по-бросать</i> 'throw a lot of things' <i>на-грешить</i> 'commit a lot of sins'
(3) Individuating Classifiers (Mensural)	Delimitative <i>по-</i> Perdurative <i>про-</i> Attenuative <i>при-, под-</i> Ingressive <i>за-</i> Finitive <i>от-</i> Intensive-Resultative <i>до-...-ся, за-...-ся</i> , etc.	<i>по-сидеть</i> 'sit for a while' <i>про-плакать</i> 'cry all through a period of time' <i>при-тормозить</i> 'brake att', <i>под-сохнуть</i> 'dry att' <i>за-говорить</i> 'start to talk' <i>от-служить</i> 'complete a tour of duty' <i>до-плясаться</i> 'dance one's feet off', <i>за-работаться</i> 'get lost in one's work'
(4) Partitive Classifiers (Mensural)	Semelfactive <i>с-, -ну-</i>	<i>с-глупить</i> 'do one stupid thing', <i>чих-нуть</i> 'sneeze once'

# Conclusion

- Slavic aspectual prefixes form Prefix + Verb constructions
- Prefixes are polysemous, with radial category structure
  - Path meanings are found with motion verbs and are prototypical
  - Other meanings are related to path meanings via metaphor and metonymy
- Meanings of prefixes combine with meanings of verbs
  - Contrast
  - Compatibility
  - Overlap (Natural Perfectives)
- Prefixes can be understood as verb classifiers, similar to noun classifiers
  - One verb may combine with various prefixes
  - One prefix may have various functions
  - Sortal and Mensural Classifiers