



UiT Norgga árktalaš universitehta

Verb Classifiers in Slavic Languages

Laura A. Janda

Overview: The verb classifier hypothesis

Crash Course in Russian aspectual prefixes

Part One: Russian “empty” prefixes

- Prefixes in Russian Natural Perfectives are verb classifiers

Part Two: Slavic prefixes as sortal classifiers

- Prefixes in Natural and Specialized Perfectives are sortal verb classifiers

Part Three: Mensural classifiers

- Prefixes in Complex Act/Aktionsart Perfectives are mensural verb classifiers

Part Four: Typological parallels

- Structured polysemy, figure-ground and definiteness effects

Part One

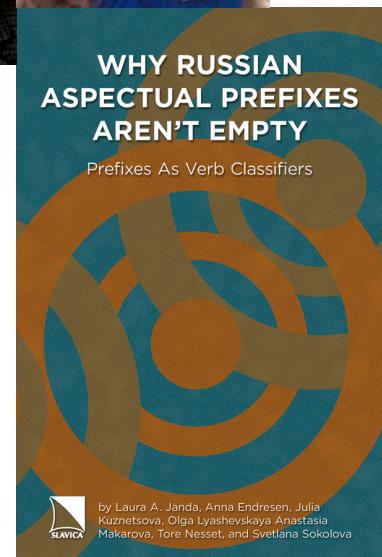
Collaborators and publications



Laura A. Janda, Anna Endresen, Julia Kuznetsova, Olga Lyashevskaya, Anastasia Makarova, Tore Nesset, Svetlana Sokolova. 2013. *Why Russian aspectual prefixes aren't empty: prefixes as verb classifiers*. Bloomington, IN: Slavica Publishers.

Laura A. Janda, Anna Endresen, Julia Kuznetsova, Olga Lyashevskaya, Anastasia Makarova, Tore Nesset, Svetlana Sokolova. 2012. "Russian 'purely aspectual' prefixes: Not so 'empty' after all?" *Scando-Slavica* 58:2, 231-291.

Laura A. Janda. 2012. Русские приставки как система глагольных классификаторов. *Вопросы языкознания* 6, 3-47.



Parts 2, 3, and 4

Collaborator and publication

Stephen M. Dickey and Janda, Laura A.
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).



Crash course in Russian aspect

Aspect in Russian

- All forms of all verbs express aspect
 - (residue of biaspectual verbs are syncretic)
- Perfective (marked)
- Imperfective (unmarked)

Major Patterns of Russian aspectual morphology

- Simplex verbs
 - nearly all Imperfective (*delat'* 'do')
- Prefixed verbs (prefix + simplex)
 - nearly all Perfective (*s-delat'* 'do', *pere-delat'* 'redo')
- Prefixed and suffixed verbs (prefix + simplex + suffix)
 - secondary Imperfectives (*pere-del-yva-t'* 'redo')

Prefixed verbs (prefix + simplex)

Prefixes on
Natural
Perfectives
termed “empty”

- Natural Perfectives: have the “same” meaning as the simplex Imperfective

- *delat'* ‘do’ -> *s-delat'* ‘do’

- Specialized Perfectives: change the meaning of the simplex Imperfective

- *delat'* ‘do’ -> *pere-delat'* ‘redo’

- Complex Act Perfectives: indicate a certain amount of an activity

- *čitat'* ‘read’ -> *po-čitat'* ‘read for a while’

- Single Act Perfectives:

- *glupit'* ‘act stupid’ -> *s-glupit'* ‘do one stupid thing’

Resultative
prefixes
associated with
SORTAL
classifiers

Procedural
prefixes
associated with
MENSURAL
classifiers

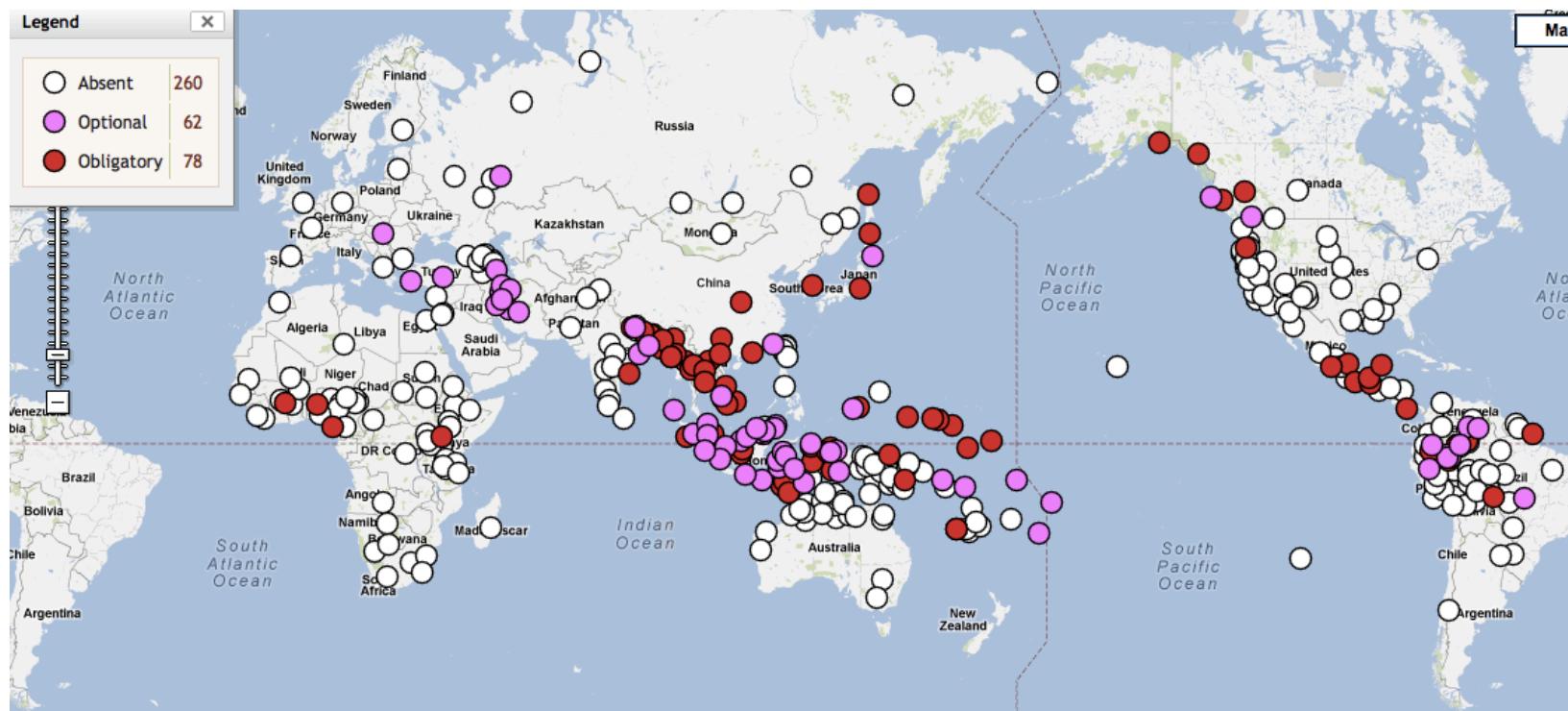
17 Perfectivizing prefixes

Prefix	Prototypical path meaning	Related meanings
<i>do-</i>	REACH	EXCESS, ADD
<i>iz-</i>	OUT OF A CONTAINER	EMPTY A CONTAINER, EXHAUSTIVE RESULT, EXHAUST A SURFACE, NEGATIVE EXHAUSTION, MAKE OUT OF, DECLINE/DEVIATE, ACQUIRE
<i>na-</i>	SURFACE	ACCUMULATE
<i>o(b)-</i>	AROUND	PASS, OVERDO, MISTAKE, AFFECT MANY, AFFECT A SURFACE, ENVELOP, IMPOSE/ACQUIRE A NEW FEATURE
<i>ot-</i>	DEPART	BOUNCE, UNSTICK, REMOVE, MAKE NON-FUNCTIONAL, STOP AT THE ENDPOINT
<i>pere-</i>	TRANSFER	SUPERIORITY, OVERDO, REDO, DURATION/OVERCOME, BRIDGE, TURN OVER, MIX, DIVIDE, SERIATIM, THOROUGH
<i>po-</i>	SET OUT	RESULT, SOME, DISTRIBUTE
<i>pod-</i>	APPLY TO BOTTOM	HORIZONTAL APPROACH, ADJUST, INCREMENT, SECRETLY, MINIMAL
<i>pri-</i>	ARRIVE	ATTACH, ADD, ATTENUATE
<i>pro-</i>	THROUGH	THOROUGH, DURATION, DISTANCE, PASS
<i>raz-</i>	APART	CRUSH, SPREAD, SWELL, SOFTEN/DISSOLVE, EXCITEMENT, UN-
<i>s-</i>	DOWN	TOGETHER, ONCE
<i>u-</i>	MOVE AWAY	MOVE DOWNWARDS, CONTROL, REDUCE, HARM, PERCEIVE, PLACE/FIT, KEEP/SAVE, COVER COMPLETELY, DEPART FROM NORM
<i>v-</i>	INTO	
<i>v(o)z-</i>	MOVE UPWARD	AGITATE, RESIST, REBUILD
<i>vy-</i>	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
<i>za-</i>	DEFLECT	EXCESS, BEGIN, EXCHANGE, ATTACHMENT, COVER, FILL, CHANGE TO A FIXED STATE

Part One: Russian “empty” prefixes

Prefixes in Russian Natural Perfectives
are verb classifiers

Numeral Classifier Systems Worldwide



Source: The World Atlas of Language Structures Online, wals.info

The function of sortal numeral classifiers

- Despite the name, numeral classifiers are **noun classifiers**
- Numeral classifiers are “unitizers” that construe the referents of mass nouns as countable units, i.e., count nouns.
- **Sortal** numeral classifiers “sort” the nouns of the language into groups according to the units that the substances typically form, usually according to their shape, e.g.,
 - long objects
 - flat objects
 - etc.

Yucatec Maya examples of sortal numeral classifiers (Lucy 2000: 329)

'un-tz'ít kib'

[one **long-thin** wax]

'one candle'

'un-tz'ít che'

[one **long-thin** wood]

'one stick'

'un-tz'ít nal

[one **long-thin** corn]

'one ear of corn'

'un-tz'ít há'as

[one **long-thin** banana]

'one fruit of the banana'

'un-wáal há'as

[one **flat** banana]

'one banana leaf'

'un-kúul há'as

[one **planted** banana]

'one banana tree'

Numeral classifiers are obligatory in contexts where discrete units are referred to, as in constructions with numerals

William B. McGregor

VERB CLASSIFICATION IN AUSTRALIAN LANGUAGES

EMPIRICAL APPROACHES TO LANGUAGE
TYPOLOGY [EALT]



Verb Classifier Systems

- Linguists have only recently begun to describe verb classifier systems
- Verb classifiers have been identified in Chinese and in several Australian languages (McGregor 2002, Gerner 2009)
- McGregor (2002) on verb classification: "[d]oubtless it is not confined to the relatively few languages in which it has been hitherto described, though the extent of its distribution across the world's languages remains to be charted."

Why Prefixes in Russian Natural Perfectives are Sortal Verb Classifiers

- **Russian prefixes** are “unitizers” that designate discrete events
- **Russian prefixes** are associated with quantification by perfective aspect
- **Russian prefixes** “sort” the verbs of the language according to the parameters of actions; **classification by outcome**:
 - expanding with *raz-* as in *puxnut'* > *ras-puxnut'* ‘swell’
 - movement away with *y-* as in *krast'* > *u-krast'* ‘steal’
 - attachment with *pri-* as in *lipnut'* > *pri-lipnut'* ‘get stuck to’
- **Russian prefixes** fulfill all distributional criteria for classifiers
 - overlapping groups are characteristic of classifier systems
 - the classifiers also “show different behaviours” (McGregor 2002: 17)



Distribution of prefixes in Russian Natural Perfectives

Comparison of Numeral Classifiers with Aspectual Prefixes

	Nouns	Verbs
Unitizer Type:	Numeral Classifier	Aspectual Prefix
Quantification:	Associated with numerals	Associated with Perfective Aspect
Spatial Profile:	Bounded/shaped region in space	Trajector-Landmark relation
Etymological Source:	Stem from nouns	Stem from prepositions/particles

Part Two: Slavic prefixes as sortal classifiers

Prefixes in Natural and Specialized Perfectives
are sortal verb classifiers

Yucatec Maya examples of sortal numeral classifiers (Lucy 2000: 329)

'un-tz'ít kib'

[one **long-thin** wax]

'one candle'

'un-tz'ít che'

[one **long-thin** wood]

'one stick'

'un-tz'ít nal

[one **long-thin** corn]

'one ear of corn'

'un-tz'ít há'as

[one **long-thin** banana]

'one fruit of the banana'

The same classifier can have
different functions with different nouns

A prefix can have different functions with different verbs

Natural Perfectives

puxnut' 'swell' > ***ras-puxnut'*** 'swell'

krast' 'steal' > ***u-krast'*** 'steal'

lipnut' 'stick' > ***pri-lipnut'*** 'stick'

nočevat' 'spend the night' > ***pere-***
nočevat' 'spend the night'

HIGH DEGREE OF OVERLAP:

Natural Perfectives only change
the aspect

Specialized Perfectives

dut' 'blow' >> ***raz-dut'*** 'inflate'

bežat' 'run' >> ***u-bežat'*** 'run away'

vjazat' 'tie' >> ***pri-vjazat'*** 'tie onto'

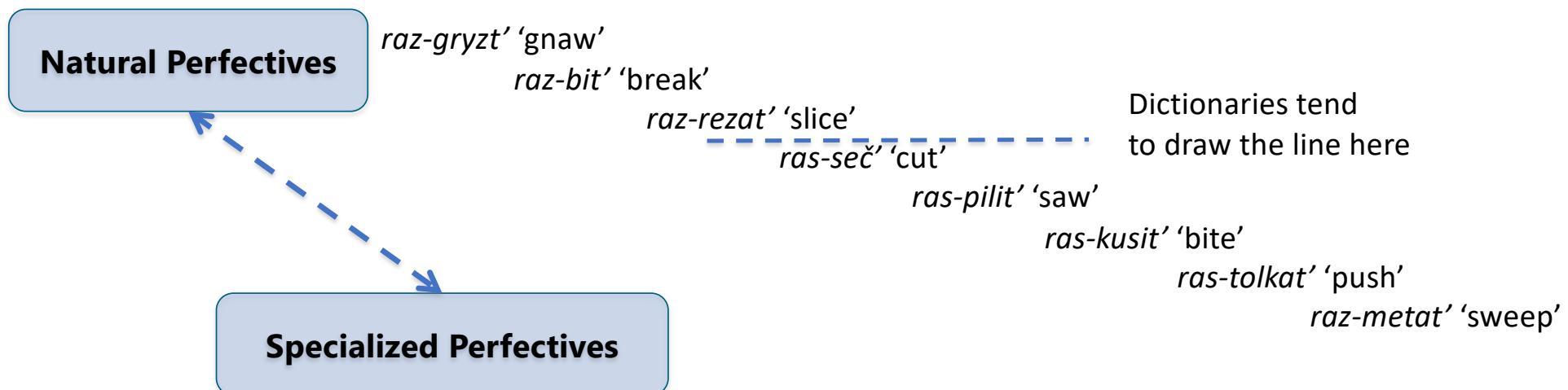
ždat' 'wait' >> ***pere-*** *ždat'* 'wait
through something'

LOW DEGREE OF OVERLAP:

Specialized Perfectives change
the aspect and the meaning

Natural Perfectives ... Specialized Perfectives

- There is no crisp division between Natural Perfectives and Specialized Perfectives
- Natural Perfectives are the perfectives for which the meaning of the base verb and the meaning of the prefix overlap most -- the combinations that are the "best match"
- Natural Perfectives are also the most frequent -- on average 10x more frequent than Specialized Perfectives



Classifier Variation

Some nouns can have several different classifiers: Burmese *myi?* 'river' (Becker 1975):

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

b. *myi?* *tə* *yə?*
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]'





Compare: Prefix Variation Example: *грузить*

Russian *gruzit'* 'load' has three Natural Perfectives

na-gruzit' 'on-load' focuses on accumulation of loaded objects, e.g., *na-gruzit' sumku arbatskim porodistym tovarom* 'load a bag with fine goods from the Arbat'

po-gruzit' 'po-load' most neutral, can also be used for things that don't ordinarily get loaded, e.g., *po-gruzit' ranennyx v furgon'* 'load the wounded into a van'.

za-gruzit' 'behind-load' focuses on states resulting from loading, e.g. *za-gruzit' paroxod proviziej* 'load a steamship with provisions'; default in professional contexts.

Natural and Specialized Perfectives in Other Slavic Languages

Late Common Slavic:

pъsati 'write'

- > *na-pъsati* 'write'
 - >> *vъ-pъsati* 'write in, insert'
 - >> *za-pъsati* 'record, register'
- Natural Perfective**
Specialized Perfective
Specialized Perfective

Czech:

psát

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

BCS:

pisati

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

Polish:

pisać

- > *na-pisać*
- >> *w-pisać*
- >> *za-pisać*

Bulgarian:

piša

- > *na-piša*
- >> *v-piša*
- >> *za-piša*



Part Three: Mensural classifiers

Prefixes in Complex Act/Aktionsart Perfectives
are mensural verb classifiers

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>pījiù</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 vs. Mensural Classifiers for Nouns and Verbs

Unitizer Type:	NOUNS Numeral Classifier	VERBS Aspectual Prefix
Reference to inherent boundaries:	Sortal Classifiers	Lexical + purely perfectivizing prefixes (Natural Perfectives and Specialized Perfectives)
Imposition of external 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 piiju* (Mandarin Chinese: Gao and Malt 2009: 1129)
one cl:glass beer
'a glass of beer'

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



- (2) a. *po-* *sidet'* (Russian)
for-a-while- sit
'sit for a while'



A classifier can have different functions with different nouns

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

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

- a. *san pian shuye* (individual classifier) Parallel: prefixes in **Natural Perfectives**
three cl:slice leaf
'three leaves'
- b. *yi pian qiche* (collective/mensural classifier)
one cl:slice car
'one group of cars'
- c. *san pian mutou* (individual classifier) Parallel: prefixes in **Procedural Perfectives**
three cl:slice wood
'three pieces of wood'
- d. *she pian luobo* (partitive/mensural classifier)
ten cl:slice carrot
'ten slices of carrot'

Russian Examples for the Types of Sortal and Mensural Classifiers

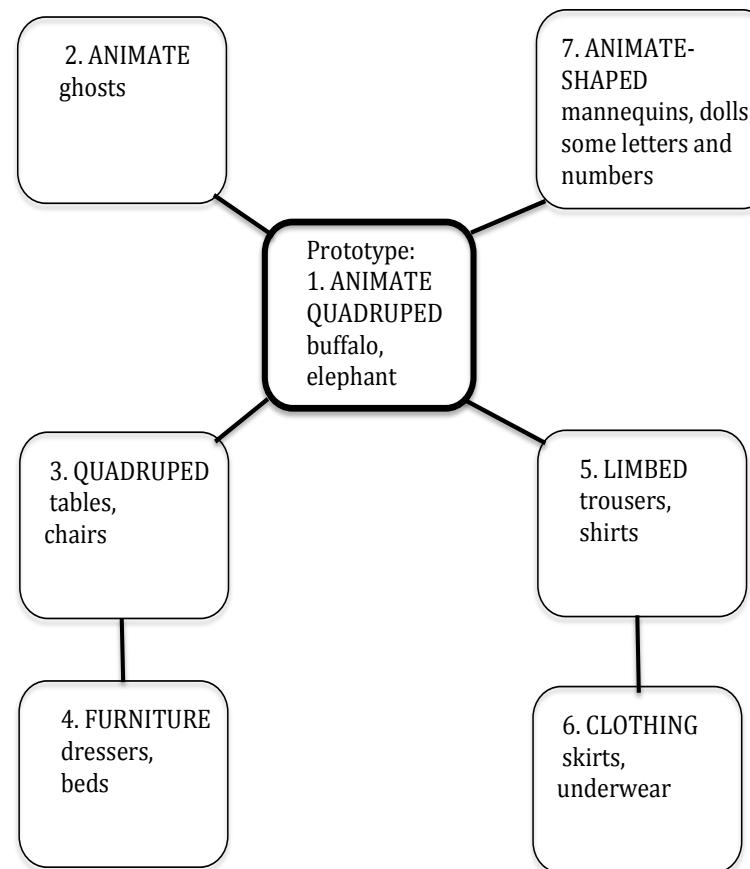
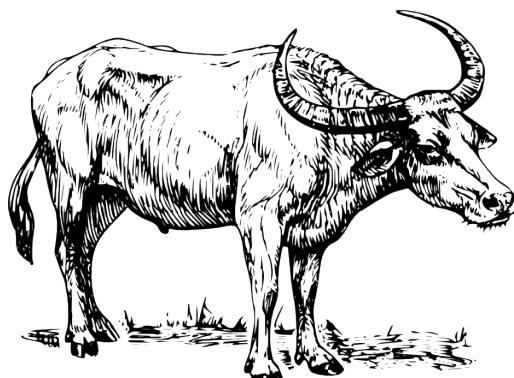
Type of Classifier	Russian Perfectivizing Prefixes	Russian Examples
(1) Individual Classifiers (Sortal)	Natural <i>po-</i> , <i>s-</i> , <i>za-</i> , etc. Specialized <i>do-</i> , <i>s-</i> , <i>za-</i> , etc.	<i>po-stroit'</i> 'build', <i>s-varit'</i> 'cook', <i>za-krepit'</i> 'fasten' <i>do-pisat'</i> finish writing', <i>so-brat'</i> 'collect', <i>za-pisat'</i> 'register'
(2) Collective Classifiers (Mensural)	Distributive <i>pere-</i> , <i>po-</i> Cumulative <i>na-</i>	<i>pere-probovat'</i> 'try a series of things', <i>po-brosat'</i> 'throw a lot of things' <i>na-grešit'</i> 'commit a lot of sins'
(3) Individuating Classifiers (Mensural)	Delimitative <i>po-</i> Perdurative <i>pro-</i> Attenuative <i>pri-</i> , <i>pod-</i> Ingressive <i>za-</i> Finitive <i>ot-</i> Intensive-Resultative <i>do-...-sja</i> , <i>za-...-sja</i> , etc.	<i>po-sidet'</i> 'sit for a while' <i>pro-plakat'</i> 'cry all through a period of time' <i>pri-tormozit'</i> 'tap the brake', <i>pod-soxnut'</i> 'dry a little' <i>za-gоворит'</i> 'start to talk' <i>ot-služit'</i> 'complete a tour of duty' <i>do-pljasat'sja'</i> 'dance one's feet off', <i>za-rabotat'sja'</i> 'get lost in one's work'
(4) Partitive Classifiers (Mensural)	Semelfactive <i>s-</i> , <i>-nu-</i>	<i>s-glupit'</i> 'do one stupid thing', <i>čix-nut'</i> 'sneeze once'

Part Four: Typological parallels

Structured polysemy, figure-ground and definiteness effects

Polysemy and Radial Category Structure for Classifiers

Radial category structure for
Thai Classifier *tua*
(Deepadung 1997)

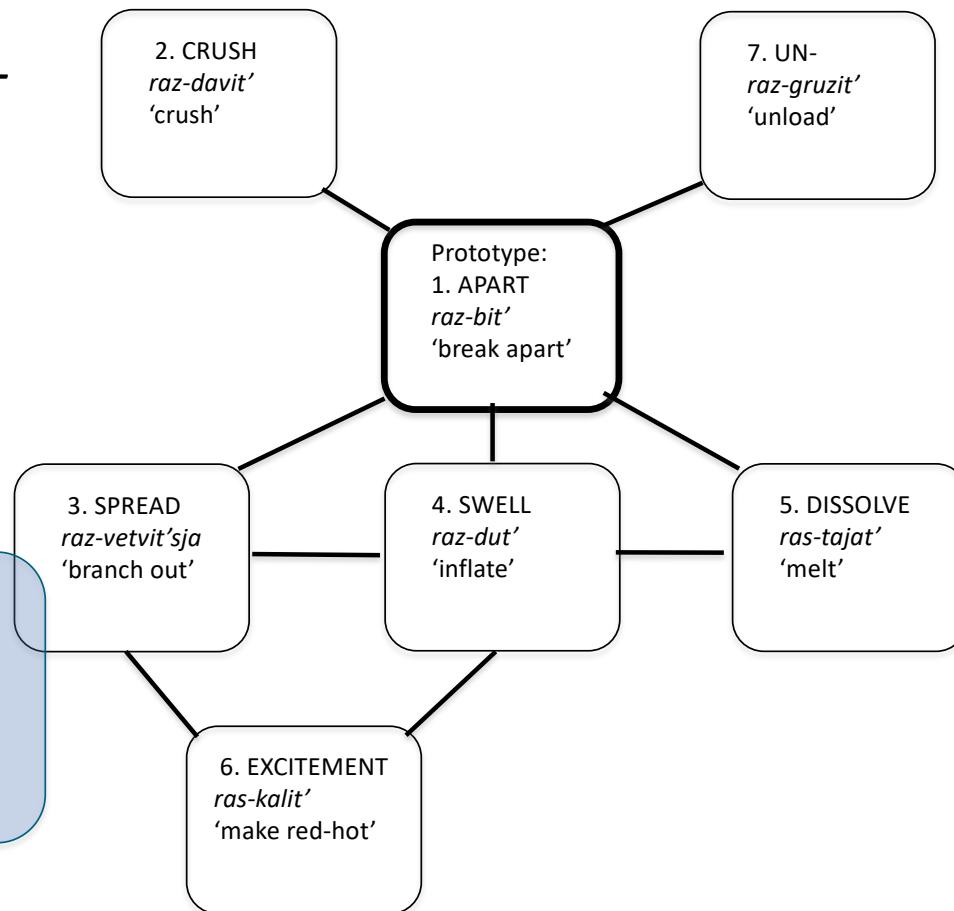


Slavic Prefixes in Natural and Specialized Perfectives

Example: Russian *raz-*



Natural and Specialized
Perfectives share
**the same radial
categories**



Foregrounding Effects of Numeral Classifiers Statistics from Mandarin Chinese (Sun 1988)

In narratives

- **80% of nouns referring to entities thematically important to narratives (subsequently mentioned) are introduced with a numeral classifier**
- 18% of nouns referring to entities **not** thematically important to narratives (not subsequently mentioned) are **not** introduced with a numeral classifier

See examples from myth about the giant Kuafu on next slides...



Foregrounding Effects of Numeral Classifiers

Example from Mandarin Chinese (Li 2000: 1121-1122)

<i>Chuan</i>	<i>shuo</i>	<i>zai</i>	<i>hen</i>	<i>gu</i>	<i>de</i>	<i>shihou,</i>	<i>you</i>	<i>yi-ge</i>	<i>jiao</i>	<i>Youdu</i>
Legend	say	be	very	old	MOD	time,	there-be	one-CL	called	Youdu
<i>de</i>	<i>defang</i>	<i>zhongnian</i>	<i>bu</i>	<i>jian</i>	<i>taiyang,</i>	<i>daochu</i>	<i>yipian</i>	<i>qihei.</i>		
MOD	place	all year	not	see	sun,	everywhere all			pitch dark	
<i>Zai</i>	<i>nar</i>	<i>you</i>	<i>yi-zuo</i>	<i>da</i>	<i>hei</i>	<i>shan,</i>	<i>shan</i>	<i>shang</i>	<i>zhu</i>	
In	there	there-be	one- CL	big	dark	mountain	mountain	top	live	
<i>zhe</i>	<i>xuduo</i>	<i>kepa</i>	<i>de</i>	<i>guaishou.</i>	<i>Neixie</i>	<i>guaishou</i>	<i>jingchang</i>	<i>xia</i>		
PF	many	scary	MOD	monster.	Those	monsters	often		descend	
<i>shan</i>	<i>weihai</i>	<i>renmen.</i>	<i>You</i>	<i>yi-ge</i>	<i>juren</i>	<i>jiao</i>	<i>Kuafu,</i>	<i>ta</i>		
mountain	endanger	people	there-be	one-CL	giant	named	<i>Kuafu,</i>	he		
<i>yong</i>	<i>guaizhang</i>	<i>he</i>	<i>guaishou</i>	<i>bodou</i>	<i>le</i>	<i>jiu</i>	<i>tian</i>	<i>jiu</i>	<i>yie</i>	<i>zhongyu</i>
use	cane	with	monster	fight	PF	9	day	9	night	finally
<i>ba</i>	<i>ta</i>		<i>da</i>	<i>si</i>	<i>le.</i>					
BA	them	beat	dead	PF	'Once upon a time, in a place called Youdu , people lived in darkness all year round. There was a big black mountain where many terrible beasts lived. The beasts often went out to harm people. There was a giant called Kuafu . He fought with the beasts with a stick for nine days and nine nights. Finally, he killed them all.'					

Foregrounding Effects of Numeral Classifiers

More Examples from Mandarin Chinese (Li 2000: 1122)

a. Kuafu si le. Tade guanzhang dunshi bian cheng le
Kuafu die PF His walking stick immediately change into PF
yi-ke xianhua shenghai de da taoshu.
one-CL flowers blooming MOD big peach tree

'Kuafu died. His walking stick immediately changed into a [CL] large peach tree with blooming flowers.'

b. Pangu si hou, tade zhiti bian cheng le shan.
Pangu die after his body change into PF mountain

'After Pangu died, his body changed into a [Ø] mountain.'

Li: Mandarin Chinese **numeral classifiers** are employed to mark noun phrases as **salient** for the purpose of "vivifying or intensifying the description without [an] implication of significance in the thematic development of the narrative." Example (a) with a numeral classifier presents a relatively vivid image; example (b) presents a rather flat image.

Foregrounding Effects of Slavic Aspectual Prefixes

- Foregrounding is understood in terms of narrative sequencing via main plotline events
- Prefixes are associated with perfective aspect, which tends to mark sequenced plotline events

*Kogda **na-čalas'** pervaja mirovaja vojna, vsja sem'ja **u-exala** v derevnju Pominovo v Tverskoj oblasti, na rodinu babuški. Dom, gde oni žili, stoit, kstati, do six por. Tam že, v Pominove, otec **po-znakomilsja** s moej mamoj. Oni **po-ženilis'**, kogda im bylo po 17 let.*

'When WWI **began**, the whole family **went** to the village of Pominovo in the Tver' region, where my grandmother comes from. The house where they lived is still standing, by the way. It was there in Pominovo where my father **met** my mother. They **got married** when they were 17 years old.'

Weak Definiteness Effects of Numeral Classifiers

- Bare classifier constructions (lacking numerals) signal specific or definite reference

Hmong example (Li & Bisang 2012: 353)

<i>Thaum ub muaj</i>	<i>ob</i>	<i>tug</i>	<i>niam</i>	<i>txiv.</i>	<i>Tus</i>	<i>txiv</i>	<i>tuag</i>	<i>lawm.</i>
Long.ago	there.are	two	cl	wife	husband	cl	husband	die
<i>Tus</i>	<i>niam</i>	<i>quaj</i>	<i>quaj</i>	<i>nrhiav</i>	<i>nrhiav</i>	<i>tsis</i>	<i>tau</i>	<i>tus</i>
cl	wife	cry	cry	look.for	look.for	neg	get	<i>txiv.</i>

'Long ago there was a wife and a husband. **The husband** died.'

The wife kept crying but no matter how she looked, she couldn't find **the/her husband**'

Vietnamese example (Simpson et al. 2011: 185-186)

<i>Thư viện</i>	<i>vừa</i>	<i>có</i>	<i>thêm</i>	<i>một</i>	<i>kế toán</i>	<i>và</i>	<i>một</i>	<i>luật sư.</i>
library	just	have	add	one	accountant	and	one	lawyer
<i>Người</i>	<i>kế toán</i>		<i>rất</i>	<i>chăm chỉ, nhưng</i>	<i>người</i>	<i>luật sư</i>	<i>rất</i>	<i>lười.</i>
cl	accountant		very	diligent	but	cl	lawyer	lazy.

'The library has a new accountant and a new lawyer. **The accountant** is hard-working, but **the lawyer** is quite lazy.'

Definiteness Effects of Slavic Prefixes are Strongest in Russian (Leinonen 1982, Dickey 2000)

a. *Kto pro-čital Vojnu i mir?* (Perfective, presumes there was an expectation)

b. *Kto čital Vojnu i mir?* (Imperfective)

'Who read *War and Peace*?'



a. *Ty pro-čital moju knigu?* (Perfective)

b. *Ty čital moju knigu?* (Imperfective, follow up: *Ty ne videl tam zapisku?*)

'Did you read my book? (You didn't see a note there?)'

Perfective sentences reflect shared information, focus on specific event.
Imperfective sentences lack this implication.

Conclusions

Verb Classifier Hypothesis

- Prefixes that form Natural and Specialized Perfectives in Slavic languages parallel sortal numeral classifiers
- Prefixes that form Procedural Perfectives in Slavic languages (mainly East Slavic and Bulgarian) parallel mensural numeral classifiers
- Shared traits of numeral classifiers and Slavic aspectual prefixes
 - Overlap produces default classifiers
 - Variation produces choices among multiple classifiers
 - Generalized productive classifiers
 - Radial category structure
 - Foregrounding, discourse prominence in narrative
 - Weak definiteness effects
- Recognition of Slavic aspectual prefixes as verb classifiers facilitates typological comparison