



International Summer School  
“Areal Linguistics and Languages of Russia”  
Higher School of Economics,  
Voronovo, 10-14 September 2018

**Slavic-style aspect:  
An areal-typological approach**

***Peter Arkadiev***

Institute of Slavic Studies of the Russian Academy of  
Sciences / Russian State University for the Humanities /  
Vilnius University

[alpgurev@gmail.com](mailto:alpgurev@gmail.com), <https://goo.gl/E7gKZM>

# Disclaimer

- Nothing really new, i.e. what I have not already said or written elsewhere.
- See Arkadiev 2014, 2015, 2018, Arkadiev & Shluinsky 2015, 2016.

# Roadmap

- Introducing “Slavic-style” aspect
- A multivariate typology
- Some quantitative methods
- A broader typological outlook
- Genetic inheritance vs. language contact

# Roadmap

- **Introducing “Slavic-style” aspect**
- A multivariate typology
- Some quantitative methods
- A broader typological outlook
- Genetic inheritance vs. language contact

# Introducing “Slavic-style” aspect

**Aspect** is a grammatical system expressing the “different ways of viewing the internal temporal constituency of a situation” (Comrie 1976: 3).

# Introducing “Slavic-style” aspect

Languages differ as to which (if at all) aspectual meanings are grammaticalised, which of them form oppositions and which are grouped together, and how they are expressed.

Comrie 1976, Maslov 1984, Dahl 1985, Smith 1991/1997, Bybee et al. 1994, Boland 2006 etc.

# Introducing “Slavic-style” aspect

“Two-component” theory of aspect:

**Viewpoint** aspect: particular ways in which the speaker construes the situation and relates it to other situations in the discourse.

vs.

**Actionality**: partly lexically encoded and partly syntactically determined linguistic categorisation of situations.

Maslov 1984, Smith 1991/1997, Breu 1994, Bertinetto & Delfitto 2000, Tatevosov 2002, 2015, 2016



# Introducing “Slavic-style” aspect

Actionality: categorisation of situations as static vs. dynamic, durative vs. punctual, telic vs. atelic etc.

Viewpoint aspect: roughly, construal of situations as **perfective** (bounded, included into the reference time) vs. **imperfective** (unbounded, overlapping with the reference time).

Smith 1991/1997, Klein 1994



# Introducing “Slavic-style” aspect

Intersection of actionality and viewpoint aspect  
in English and Russian:

	Perfective	Imperfective
Telic	<i>John <b>read</b> the book</i> <i>Ivan <b>pročital</b> knigu</i>	<i>John <b>was reading</b> the book</i> <i>Ivan <b>čital</b> knigu</i>
Atelic	<i>John <b>slept</b></i> <i>Ivan <b>pospal</b></i>	<i>John <b>was sleeping</b></i> <i>Ivan <b>spal</b></i>

# Introducing “Slavic-style” aspect

Intersection of actionality and viewpoint aspect  
in English and Russian:

	Perfective	Imperfective
Telic	<i>John <b>read</b> the book</i> <i>Ivan <b>pročital</b> knigu</i>	<i>John <b>was reading</b> the book</i> <i>Ivan <b>čital</b> knigu</i>
Atelic	<i>John <b>slept</b></i> <i>Ivan <b>pospal</b></i>	<i>John <b>was sleeping</b></i> <i>Ivan <b>spal</b></i>

# Introducing “Slavic-style” aspect

Term coined by Dahl (1985: 84-89) to cover the aspectual systems of languages sharing the following characteristics:

- “perfective” and “imperfective” are not part of the inflectional system but rather (productive) derivational categories;
- simplex verbs are imperfective and denote atelic events (processes and states);
- perfective verbs denoting events, notably, culminations of telic processes, are derived from simplex verbs by means of lexically selective perfectivising elements such as prefixes (**preverbs**).

# Introducing “Slavic-style” aspect

Indo-European:

Slavic: Russian *rezal* ‘was cutting’ ~ **raz***rezal* ‘cut (into two)’

Baltic: Lithuanian *skaitė* ‘was reading’ ~ **per***skaitė* ‘read through’

Germanic: Yiddish *washn* ‘be washing’ ~ **oy***washn* ‘wash up’

Uralic:

Hungarian: *olvasta* ‘was reading it’ ~ **el***olvasta* ‘read it through’

# Introducing “Slavic-style” aspect

In the Caucasus:

Kartvelian: Georgian *çers* ‘is writing’ ~ *daçera* ‘wrote up’

Iranian (IE): Ossetic *fysta* ‘was writing’ ~ *nyffysta* ‘wrote up’

# Introducing “Slavic-style” aspect

The so-called **bounder-based** perfectives (Bybee & Dahl 1989, Bybee et al. 1994) as opposed to **anterior-based** perfectives attested e.g. in Romance.

# Introducing “Slavic-style” aspect

<b>bounder-based perfectives</b>	<b>anterior-based perfectives</b>
go back to combinations of verbs with adverbial elements	go back to resultative-perfect constructions
tend to be derivational	tend to be inflectional
show lexical idiosyncrasies and often add meanings other than perfective	tend to be semantically compositional
emphasise completion of the event and not just temporal boundedness	express temporal boundedness of an event



# Introducing “Slavic-style” aspect

Boundary-based perfectives themselves constitute a subtype of aspectual systems which can be called **derivational** (Dahl 1985) or **verb-classifying** (Plungian 2011).

Arkadiev & Shluinsky 2015, 2016

# Introducing “Slavic-style” aspect

Derivational aspectual systems:

- aspectual interpretation is an inherent property of the verbal lexeme;
- in order to apply a different viewpoint to the same situation, a new verb has to be derived by morphological means.

# Introducing “Slavic-style” aspect

- perfectivisation      Lithuanian  
VIPF → VPFV      *skaityti* ‘read’ →  
*perskaityti* ‘read through’
- imperfectivisation      Lithuanian  
VPFV → VIPF      *įrodyti* ‘prove’ →  
*įrodinėti* ‘argue’

# Introducing “Slavic-style” aspect

- Being a separate lexeme, an aspectual derivate displays a full verbal paradigm, and not just some particular form or forms, cf. Lithuanian:

	‘write (ipf)’	‘write (pfv)’
Present	<i>rašo</i>	<b><i>parašo</i></b>
Preterite	<i>rašė</i>	<b><i>parašė</i></b>
Habitual Past	<i>rašydavo</i>	<b><i>parašydavo</i></b>
Future	<i>rašys</i>	<b><i>parašys</i></b>

# Introducing “Slavic-style” aspect

- Being a separate lexeme, an aspectual derivate displays a full verbal paradigm, and not just some particular form or forms, cf. Lithuanian:

	‘write (ipf)’	‘write (pfv)’
Present	<i>rašo</i>	<i>parašo</i>
Preterite	<i>rašė</i>	<i>parašė</i>
Habitual Past	<i>rašydavo</i>	<i>parašydavo</i>
Future	<i>rašys</i>	<i>parašys</i>

# Introducing “Slavic-style” aspect

- Being a separate lexeme, an aspectual derivate displays a full verbal paradigm, and not just some particular form or forms, cf. Lithuanian:

	‘write (ipf)’	‘write (pfv)’
Present	<i>rašo</i>	<i>parašo</i>
Preterite	<i>rašė</i>	<i>parašė</i>
Habitual Past	<i>rašydavo</i>	<i>parašydavo</i>
Future	<i>rašys</i>	<i>parašys</i>

# Introducing “Slavic-style” aspect

- The absence of a particular derivational marker does not necessarily signal a particular aspectual meaning.

Lithuanian simplex verbs:

*vesti*    ‘lead’    imperfective

*mesti*    ‘throw’    perfective



# Introducing “Slavic-style” aspect

In the Slavic languages aspectual categories have been considered to be grammaticalised to the greatest extent:

- secondary imperfectivisation alongside perfectivisation (> obligatoriness and paradigmaticisation of the aspectual opposition);
- “empty prefixes” (> “semantic bleaching”);
- nearly complementary distribution of aspects across contexts partly defined in terms of morphosyntax rather than semantics (e.g. the use of the imperfective with phasal verbs).

# Introducing “Slavic-style” aspect

Secondary imperfectivisation in Russian:

*pisat'*<sub>IPF</sub> ‘write’ → *podpisat'*<sub>PFV</sub> ‘sign’ (lit. under-write) → *podpisyvat'*<sub>IPF</sub> ‘sign’

*pit'*<sub>IPF</sub> ‘drink’ → *vypit'*<sub>PFV</sub> ‘drink (completely)’ (lit. out-write) → *vypivat'*<sub>IPF</sub> ‘(repeatedly) drink (completely)’

# Introducing “Slavic-style” aspect

Secondary imperfectivization in Russian:

*pisat'*<sub>IPF</sub> ‘write’ → *podpisat'*<sub>PFV</sub> ‘sign’ (lit. under-write) → *podpisyvat'*<sub>IPF</sub> ‘sign’

*pit'*<sub>IPF</sub> ‘drink’ → *vypit'*<sub>PFV</sub> ‘drink (completely)’ (lit. out-write) → *vypivat'*<sub>IPF</sub> ‘(repeatedly) drink (completely)’

# Introducing “Slavic-style” aspect

Secondary imperfectivization in Russian:

*pisat'*<sub>IPF</sub> ‘write’ → *podpisat'*<sub>PFV</sub> ‘sign’ (lit. under-write) → *podpisyvat'*<sub>IPF</sub> ‘sign’

*pit'*<sub>IPF</sub> ‘drink’ → *vypit'*<sub>PFV</sub> ‘drink (completely)’ (lit. out-write) → *vypivat'*<sub>IPF</sub> ‘(repeatedly) drink (completely)’

# Introducing “Slavic-style” aspect

“Empty” prefixes (apparently) only inducing a perfective interpretation of the verb:

	Imperfective	Perfective
‘write’	<i>pisat’</i>	<i>na</i> pisat’ “on-write”
‘dig’	<i>kopat’</i>	<i>vy</i> kopat’ “out-dig”
‘hide’	<i>prjatat’</i>	<i>s</i> prjatat’ “off-hide”
‘load’	<i>gruzit’</i>	<i>za</i> gruzit’ “behind-load”
‘whiten’	<i>belet’</i>	<i>po</i> belet’

- *po-* does not have spatial semantics in contemporary Russian

# Introducing “Slavic-style” aspect

Obligatoriness: iterativity/habituality → Ipfv even with clearly completed telic events (in Russian but not in Czech)

*Ivan **pročítal**<sub>PFV.PST</sub> stat'ju za dva časa.*

‘Ivan read the paper in two hours.’

# Introducing “Slavic-style” aspect

Obligatoriness: iterativity/habituality → Ipfv even with clearly completed telic events (in Russian but not in Czech)

*Ivan **pročítal**<sub>PFV.PST</sub> stat'ju za dva časa.*

‘Ivan read the paper in two hours.’

*Ivan ljubuju statju **pročityval**<sub>IPF.PST</sub> za dva časa.*

‘Ivan used to read any paper in two hours.’



# Introducing “Slavic-style” aspect

However, cross-linguistic studies have revealed considerable inner-Slavic variation:

- differences in the productivity of imperfectivisation;
- differences in the choice and productivity of “empty prefixes”(if this notion is valid at all, cf. Janda et al. 2013);
- differences in the distribution of aspects in many contexts (> differences in the semantics of aspects among individual languages).

Stunová 1993, Petrušina 2000, Dickey 2000, 2005, 2008, 2015, Fortuin & Kamphuis 2015, Wiemer & Seržant 2017

# Introducing “Slavic-style” aspect

Parallels to Slavic aspectual systems in the neighbouring languages have been pointed out in general works on aspect at least since Comrie 1976, see Dahl 1985, Breu 1992, Majsak 2005, Kiefer 2010 and especially Tomelleri 2008, 2009, 2010.

# Introducing “Slavic-style” aspect

Not all of the features traditionally associated with Slavic aspect are found in other languages with a similar kind of aspectual system.

Tomelleri 2009, 2010, Arkadiev 2014, 2015

# Introducing “Slavic-style” aspect

Research questions:

- Which properties are common to all “Slavic-style” aspectual systems and which are parameters of variation?
- Do these properties cluster in any meaningful way?
- How did the observed areal distribution of such systems come about?

# Roadmap

- Introducing “Slavic-style” aspect
- A multivariate typology
- Some quantitative methods
- A broader typological outlook
- Genetic inheritance vs. language contact

# Roadmap

- Introducing “Slavic-style” aspect
- **A multivariate typology**
- Some quantitative methods
- A broader typological outlook
- Genetic inheritance vs. language contact

# A multivariate typology

Cf. Bickel 2010 etc.:

- complex linguistic phenomena (such as aspectual systems) can be productively compared across languages if “decomposed” into a number of individual features (variables) based on empirically detected fine-grained differences between languages.
- typological comparison and generalisation is achieved by means of quantitative and qualitative analysis of **patterns of clusterisation** of such individual variables.

# A multivariate typology

Arkadiev (2014, 2015) and Arkadiev & Shluinsky (2015, 2016) offer multivariate typological analyses of, respectively, prefixal perfectivization and, more broadly, “derivational” aspectual systems.

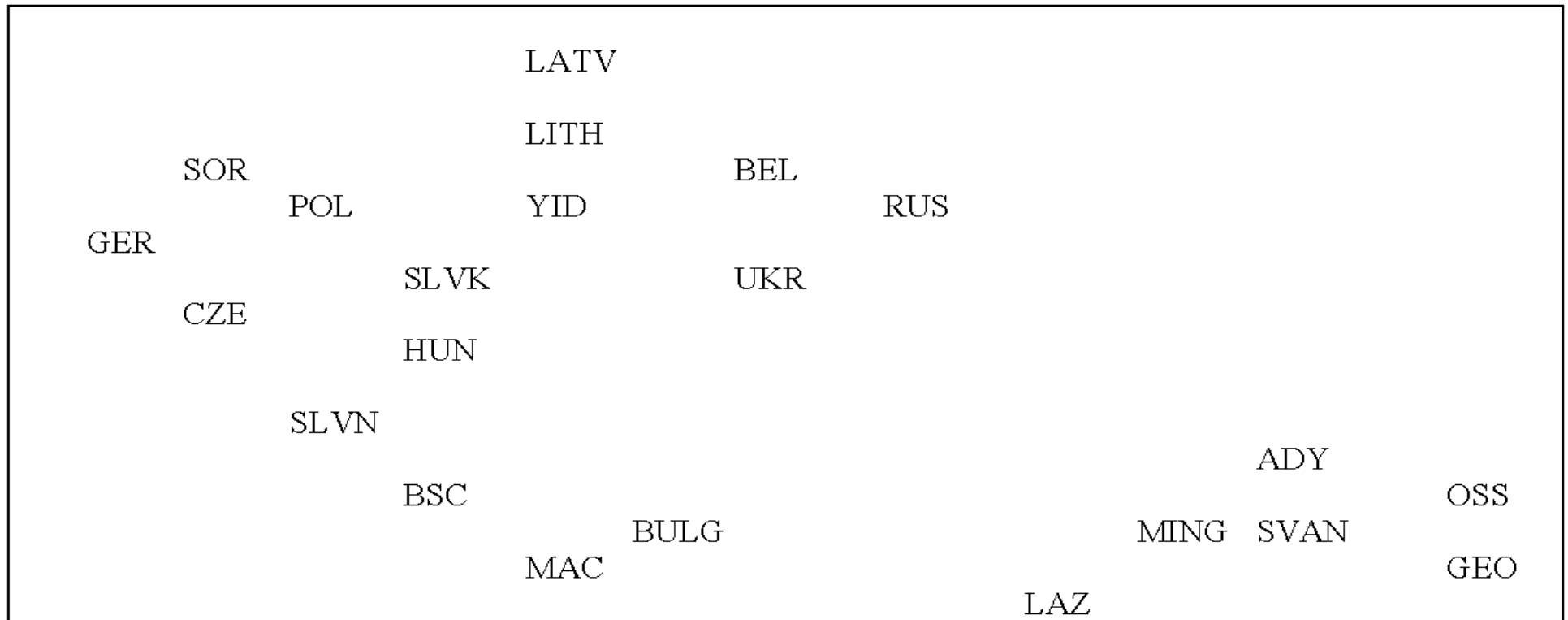
NB Much more qualitative than quantitative.



# Languages examined

- Major Slavic languages (including Vernacular Upper Sorbian)
- Baltic: Lithuanian and Latvian
- Yiddish (+ German as a point of reference)
- Hungarian
- (Iron) Ossetic
- Kartvelian: Georgian, Svan, Mingrelian, Laz  
+ Adyghe (North-West Caucasian)

# Languages examined



# Sources

- Grammars and linguistic studies of aspect
- Dictionaries
- Corpora (to a significant extent only for Russian and Lithuanian)
- Fieldwork (only for Lithuanian and Adyghe)

# Sources

- Grammars and linguistic studies of aspect
- Dictionaries
- Corpora (to a significant extent only for Russian and Lithuanian)
- Fieldwork (only for Lithuanian and Adyghe)

**A parallel corpus study like von Waldenfels (2012) is certainly a desideratum.**

# Preverbs: a definition

A subtype of verbal satellites (Talmy 1985),  
which

- systematically (though not necessarily always, cf. Hungarian or German) occur as verbal prefixes;
- express broadly understood spatial and/or actional modification of the eventuality denoted by the verb.

# Typological parameters

1. Morphological properties of preverbs.
2. Functional properties of preverbs.
3. Functional properties of verbal systems.

# Morphological properties of preverbs

- Morphological status of preverbs (bound morphemes vs. separable wordforms).
- Iteration of preverbs.
- Verbal prefixes different from preverbs.
- Position of preverbs within the verb.
- Morphological subclassification of preverbs (e.g. separable vs. inseparable preverbs in Germanic).

# Morphological properties of preverbs

- Separability of preverbs:

## German

*Die Männer werden das Heu **aufladen**.*

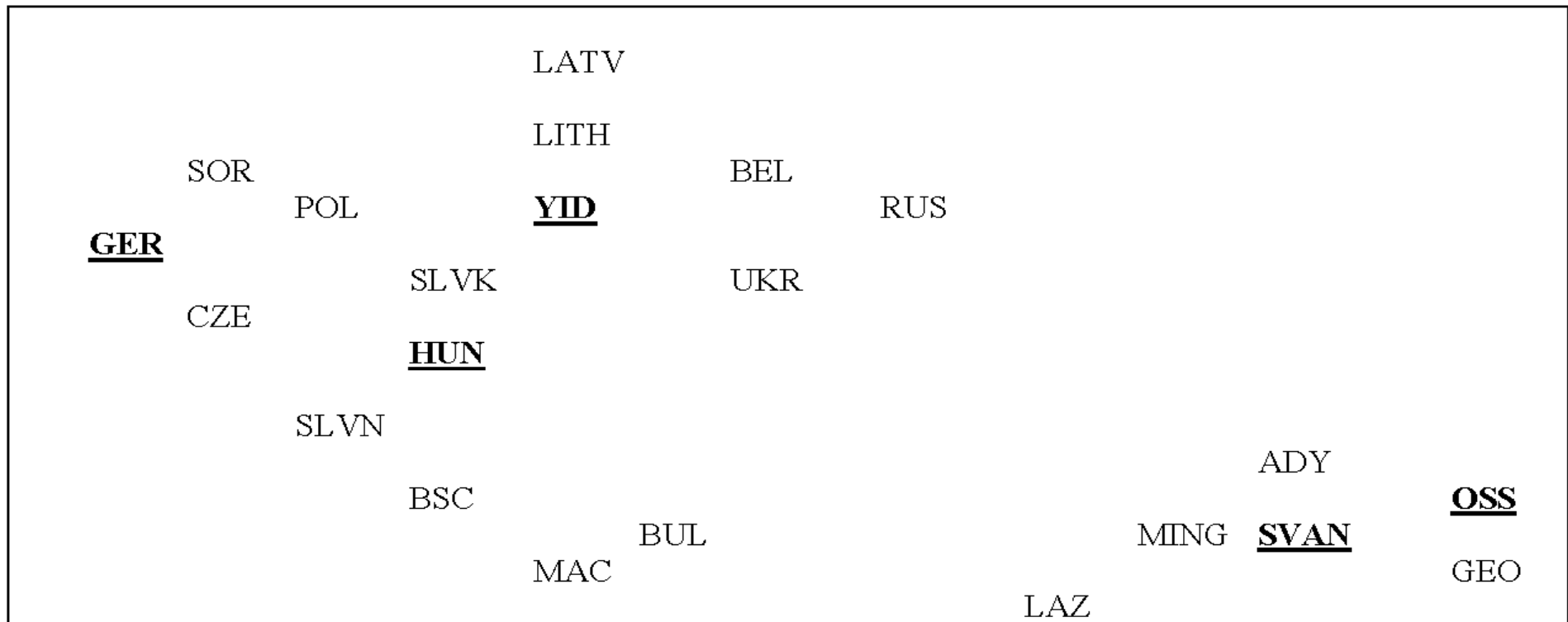
‘The men will load the hay up.’

*Die Männer laden das Heu **auf**.*

‘The men are loading the hay [up].’



# Separability of preverbs



# Morphological properties of preverbs

- Iteration of preverbs:

***pa-iz**-meklēt*

**Latvian**

PVB-PVB-search

‘to investigate for a while’

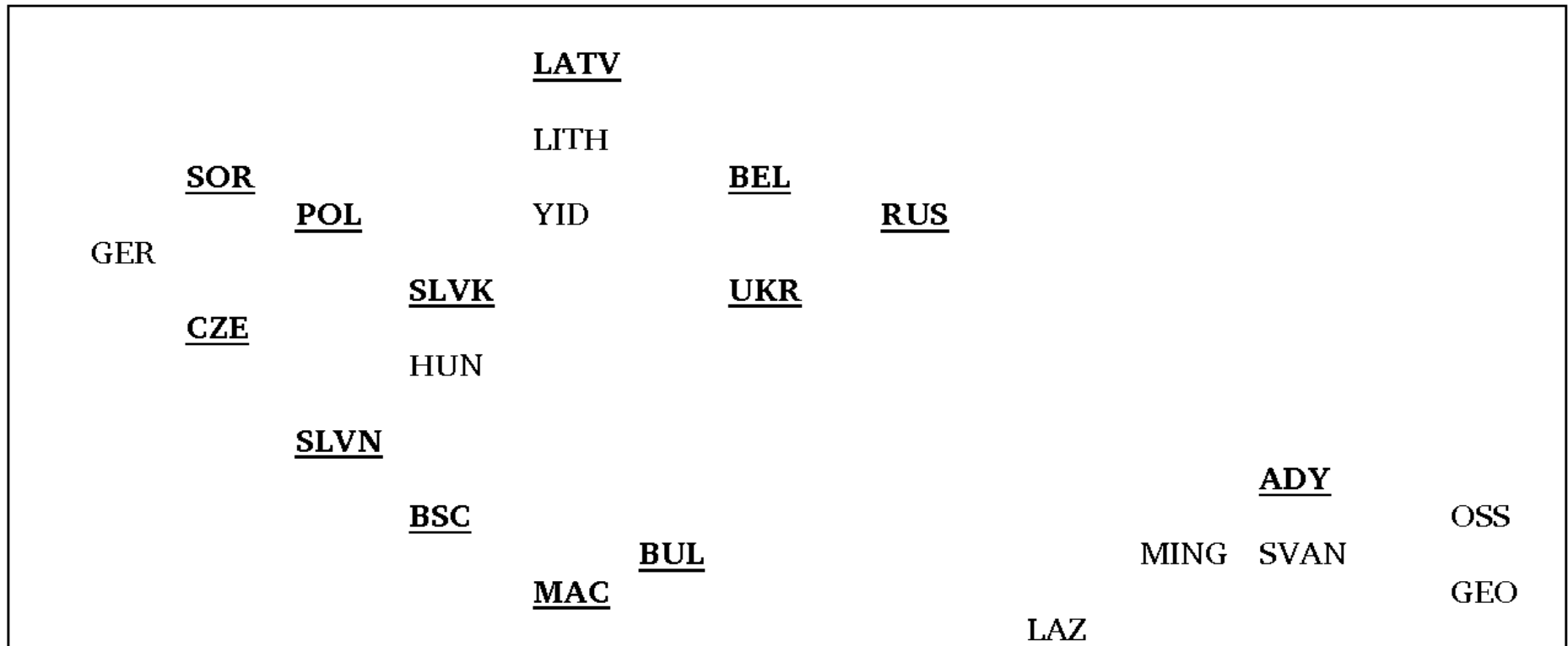
***po-na-vy**-dum-yva-l-a*

**Russian**

PVB-PVB-PVB-think-IPFV-PST-SG.F

‘she invented many different things ’

# Iteration of preverbs



# Morphological properties of preverbs

- Verbal prefixes other than preverbs:

**tebe-*per*-rašo**

**Lithuanian**

CNT-PVB-write:PRS.3

‘is still rewriting’

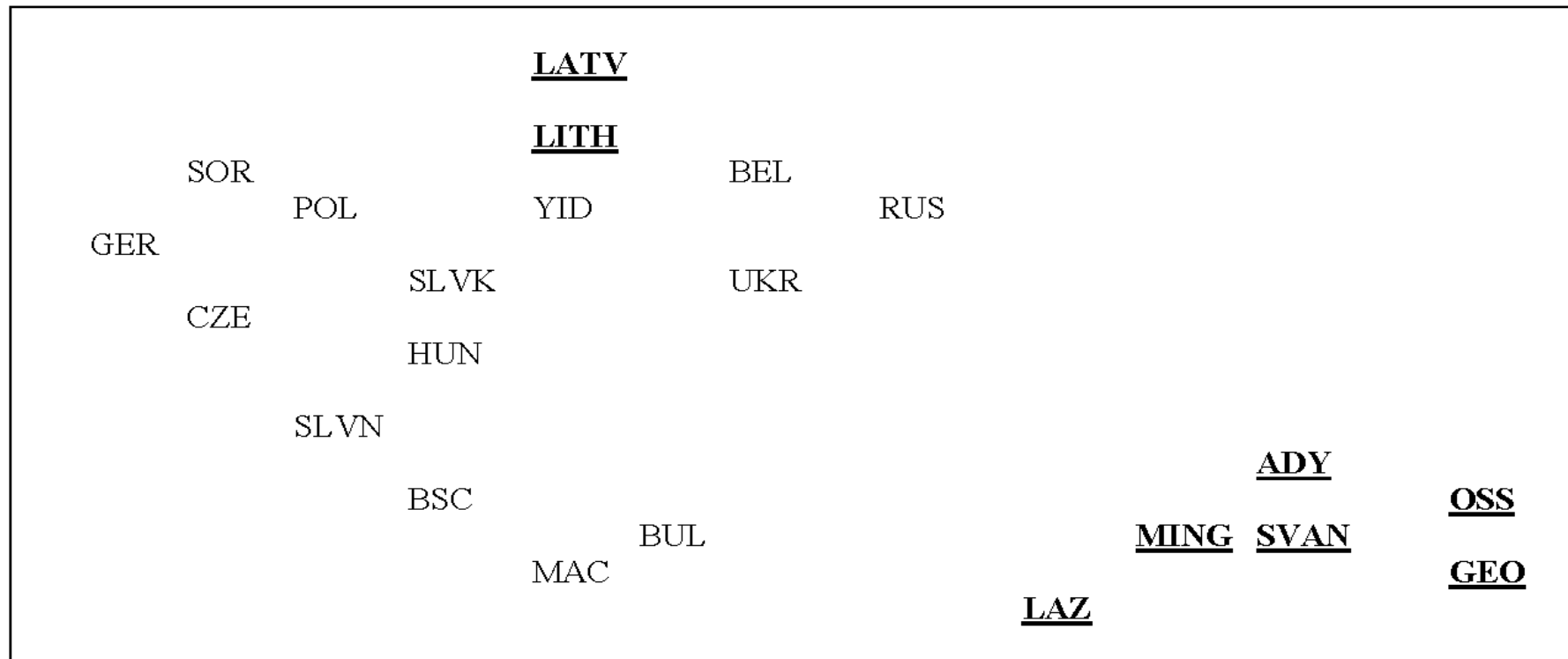
***č*a-v-i-*kitx*-e**

**Georgian**

PVB-1.SBJ-CV-read-AOR

‘I read it’

# Verbal prefixes other than preverbs



# Functional properties of preverbs

- Systematic expression of deictic notions.
- “Purely” aspectual uses of preverbs.
- Delimitative uses of preverbs with atelic verbs.
- Durative (actual present/past) use of prefixed verbs (NB verbs of motion vs. other semantic classes)

# Functional properties of preverbs

- Delimitative preverbs

*Ja **po**-spal neskol'ko časov.*

'I slept for a few hours.'

**Russian**

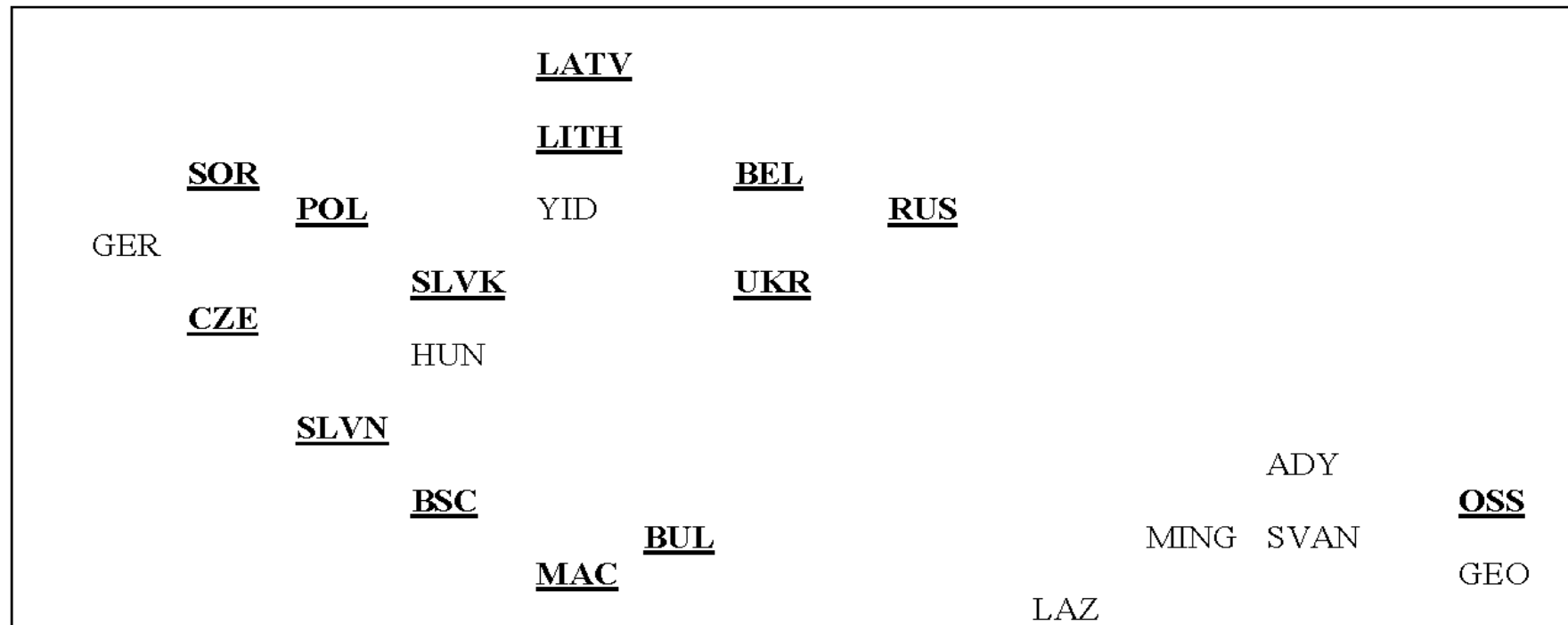
***a**-kwəš-ta*

PVB-work-PST.3SG

'S/he worked (for some time).'

**Ossetic**

# Delimitative preverbs





# Functional properties of preverbs

- Imperfective use of prefixed verbs (usually only with present tense)

**Georgian** (motion verbs only)

**še**-*dis* ‘s/he is going in’ (imperfective present)

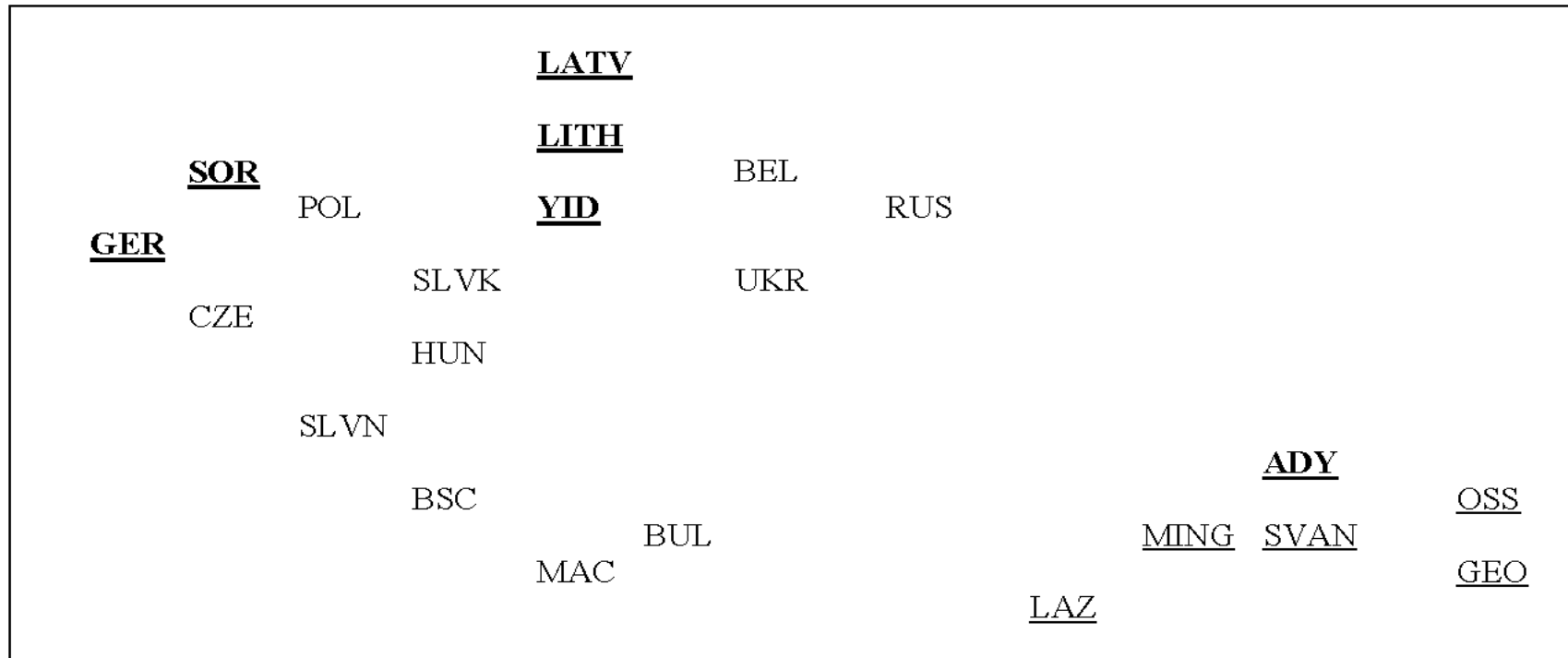
**še**-*ak’etebs* ‘s/he will repair it’ (perfective future)

**Vernacular Upper Sorbian** (various verbs, Breu 2000a: 55; 2012)

*Wón* **na-pisa**<sub>PFV.PRS</sub> *rune někotre słowa.*

‘He is writing some words now’

# Imperfective use of prefixed verbs



underlined: motion verbs only

**boldface+underlined**: motion and non-motion verbs

# Functional properties of verbal systems

- Uses of perfective present:
  - for habitual or *praesens historicum*;
  - for futurate expressions.
- Means of secondary imperfectivisation.
- Non-prefixal means of perfectivisation.
- Restrictions on the use of prefixal verbs with phasal predicates.

# Functional properties of verbal systems

- Interaction of prefixal and non-prefixal verbs with other TAM-categories:
  - formation of future tense;
  - combination of prefix-based aspectual distinctions with inflectional tense-aspect categories (e.g. Aorist and Imperfect in Balkan Slavic and Kartvelian).

# Functional properties of verbal systems

- Perfective present:

- habitual in **Lithuanian**

*rektori-us*

***pa-raš-o***

*įvad-a*

rector-NOM

PRV-write-PRS.3

introduction-ACC

‘The rector (usually) **writes** (/ \*will write) an introduction.’

# Functional properties of verbal systems

- Perfective present:

- habitual in **Lithuanian**

*rektori-us*

***pa-raš-o***

*įvad-a*

rector-NOM

PRV-write-PRS.3

introduction-ACC

‘The rector (usually) **writes** (/ \*will write) an introduction.’

- futurate in **Russian**

*rektor*

***na-piš-et***

*vvedenie*

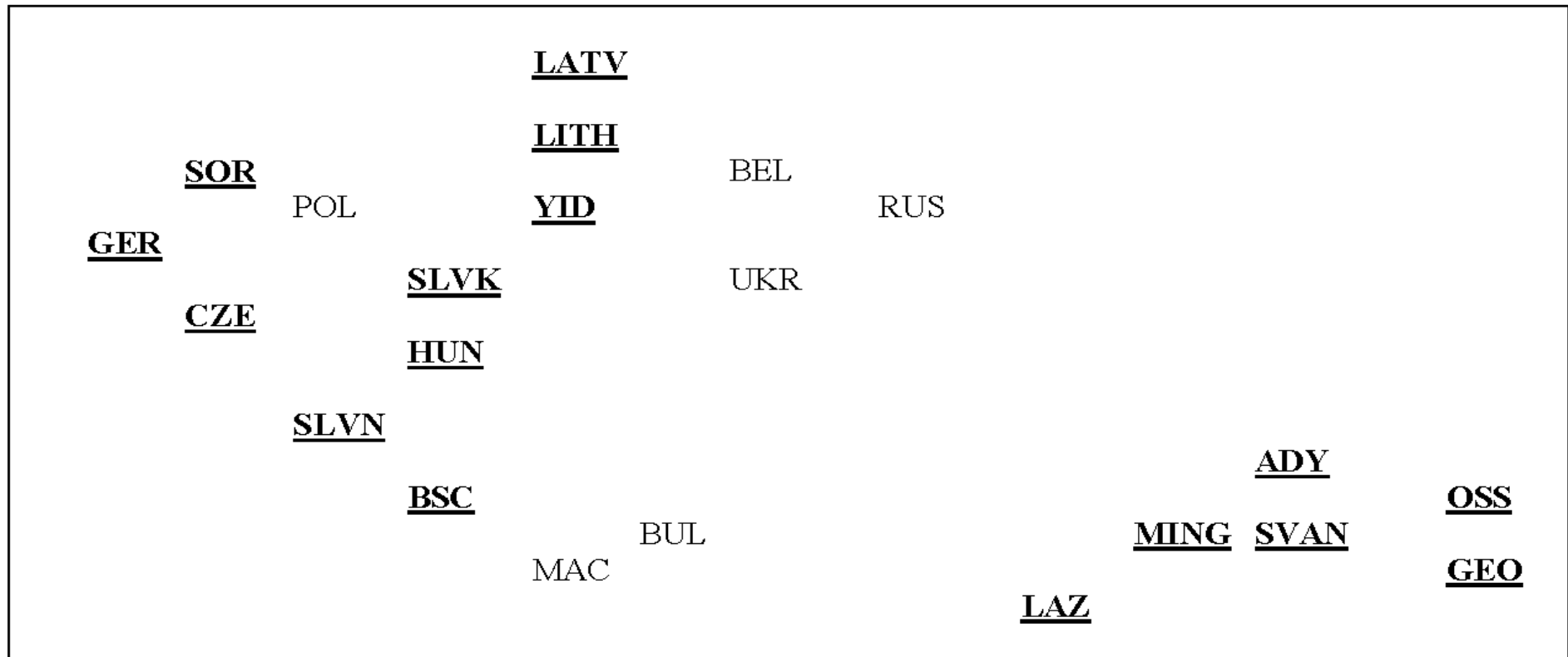
rector-NOM

PRV-write-PRS.3

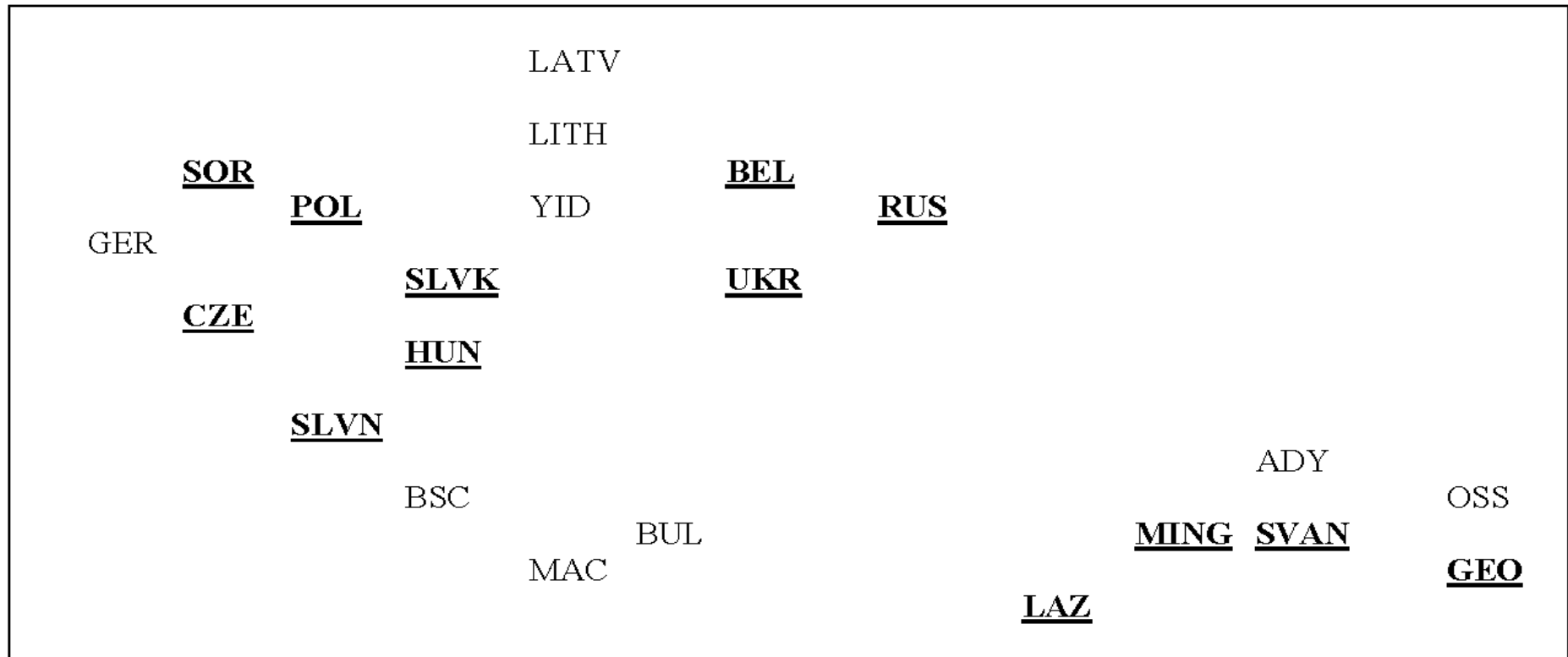
introduction-ACC

‘The rector will write (/ \*writes) an introduction.’

# Habitual use of prefixed presents



# Futurate use of prefixed presents





# Functional properties of verbal systems

- The use of prefixed/perfective verbs with phasal predicates:

**Hungarian** (Majtinskaja 1960: 139)

... *aki*      *kezd-te*                      *már*    ***le-szed-ni***

which                      start-PST.3SG.OC                      already PVB-take-INF

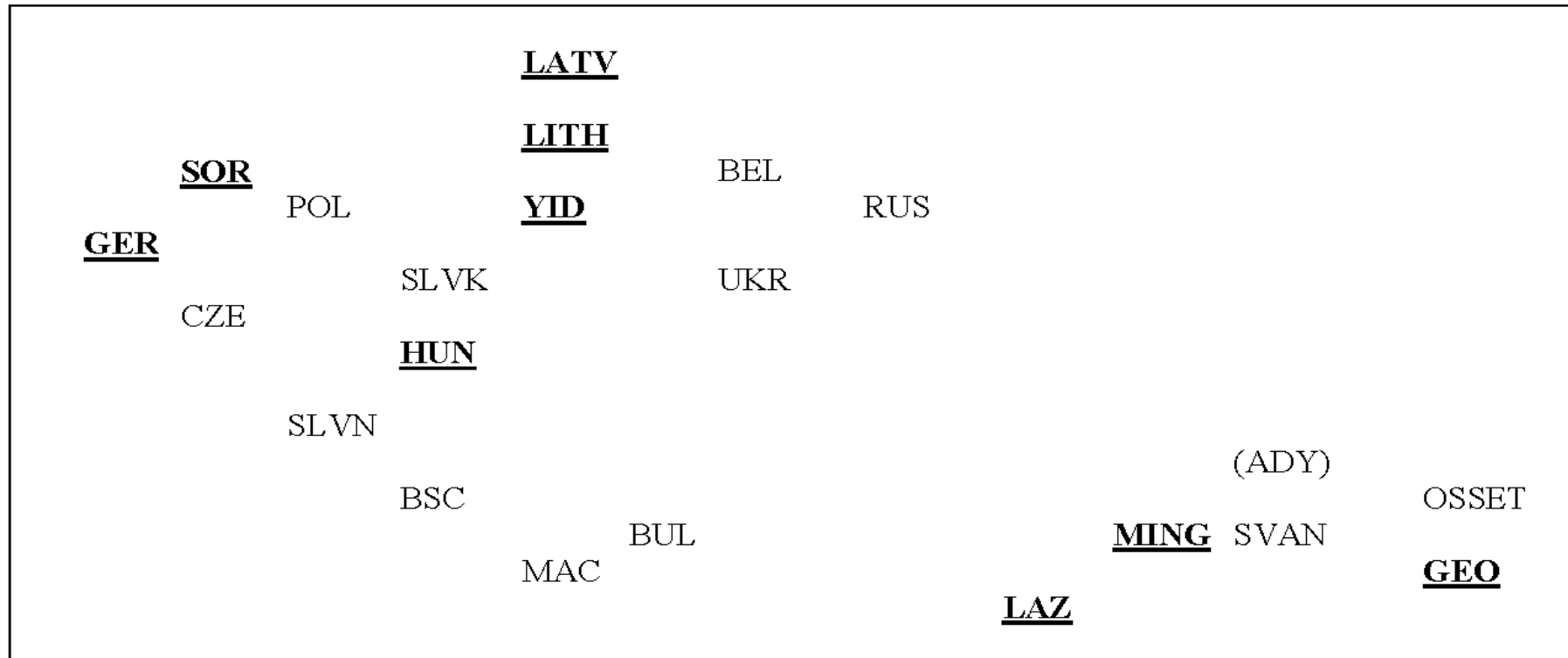
‘...who already started to unload.’

vs. **Russian**

*kotorye uže* *načali*      ***raz-gruž-a-t’***/\****raz-gruzi-t’***

which already started                      PVB-load-IPFV-INF/\*PVB-load-INF

# Perfective verbs with phasal predicates



# Functional properties of verbal systems

- secondary imperfectivisation

- morphological in **Russian**

- let-e-l* ‘was flying’ (IPF) → **vy**-*let-e-l* ‘flew out’ (PFV)

- **vy**-*let-a-l* ‘was flying out’ (IPF)

# Functional properties of verbal systems

- secondary imperfectivization

- morphological in **Russian**

- let-e-l* ‘was flying’ (IPF) → **vy**-*let-e-l* ‘flew out’ (PFV)

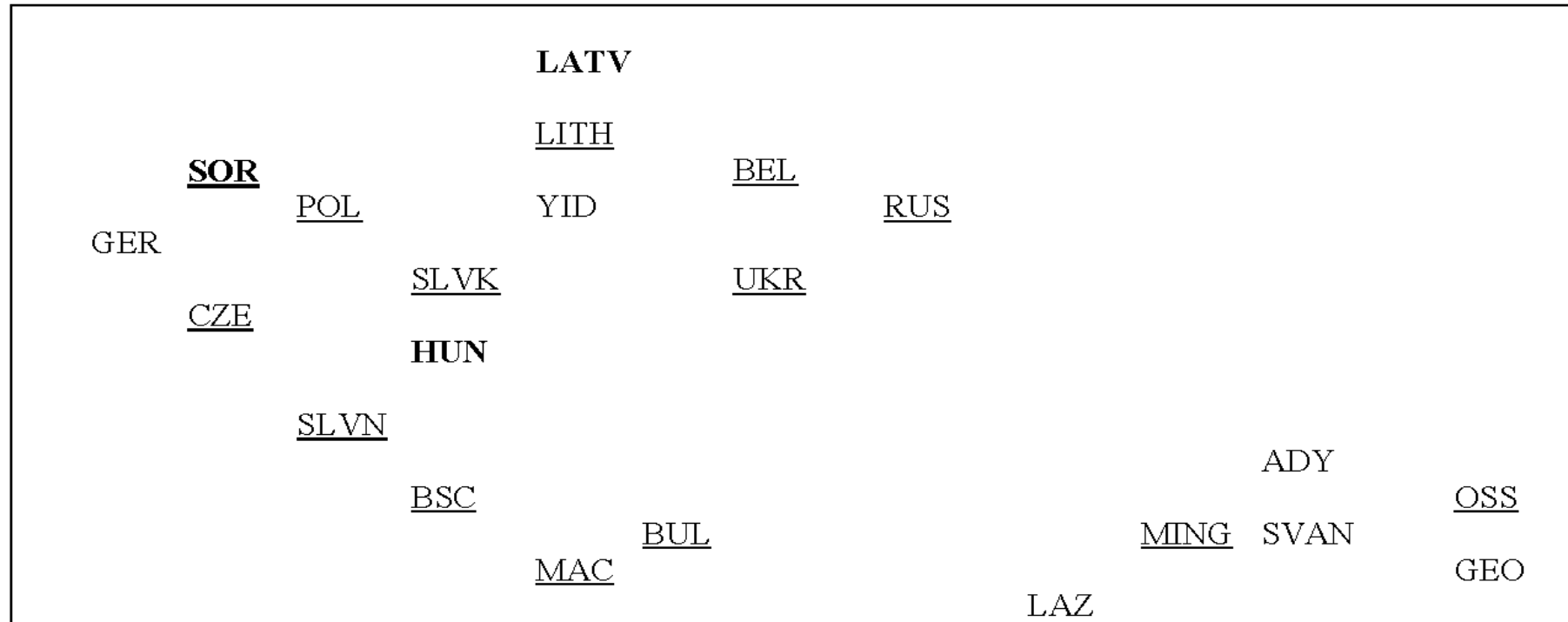
- **vy**-*let-a-l* ‘was flying out’ (IPF)

- syntactic in **Hungarian**

- men-t* ‘was going’ (IPF) → **le**-*men-t* ‘went down’ (PFV) →

- men-t* **le** ‘was going down’ (IPF)

# Secondary imperfectivization



underlined: morphological secondary imperfectivisation

**boldface**: syntactic secondary imperfectivisation

NB Upper Sorbian has both

# Functional properties of verbal systems

- Future tense independent of aspect:

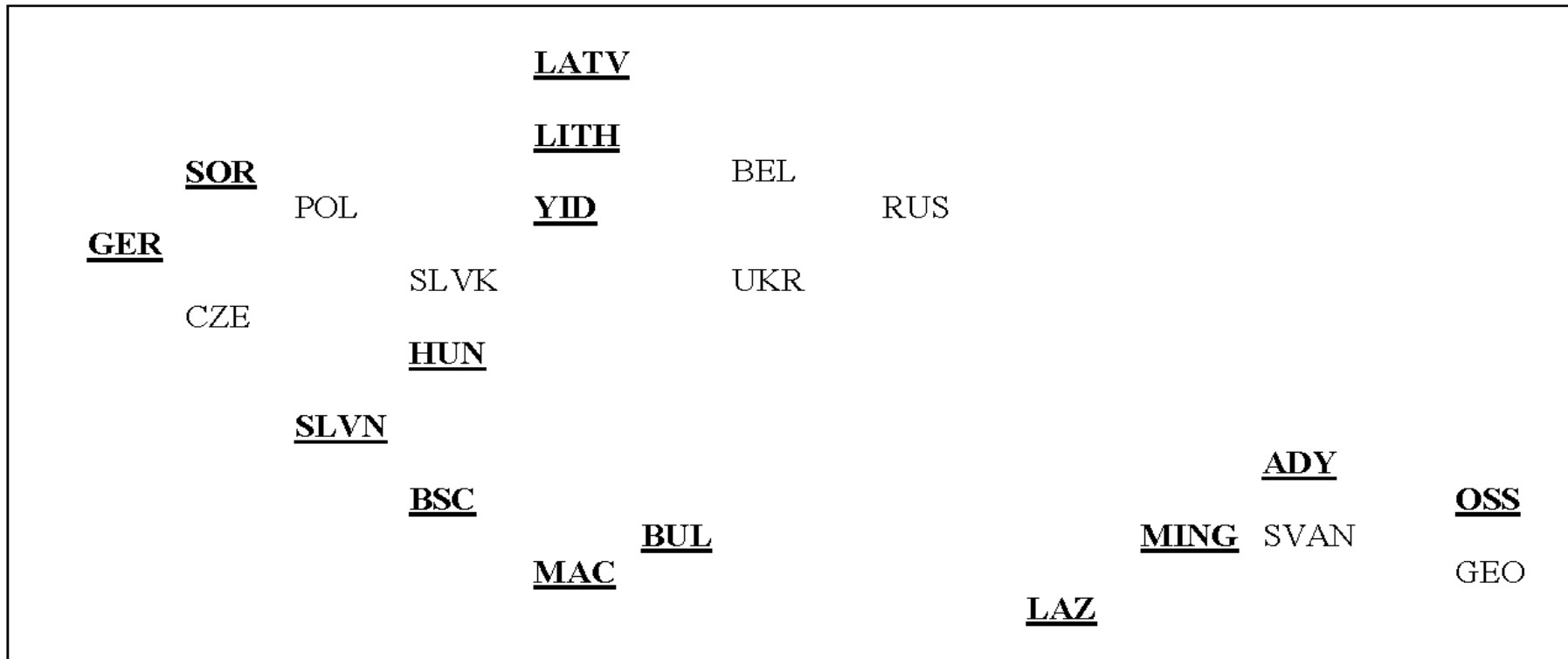
Lithuanian

*rašysiu* 'I will be writing'      imperfective

*parašysiu* 'I will write      perfective

(the whole thing)'

# Future tense independent of aspect



# Functional properties of verbal systems

- Distinction between inflectional perfective (Aorist) and imperfective (Imperfect) tenses:

Bulgarian 'write'

	Aorist	Imperfect
Imperfective	<i>pisa</i>	<i>pišeše</i>
Perfective	<i>napisa</i>	<i>napíšeše</i>



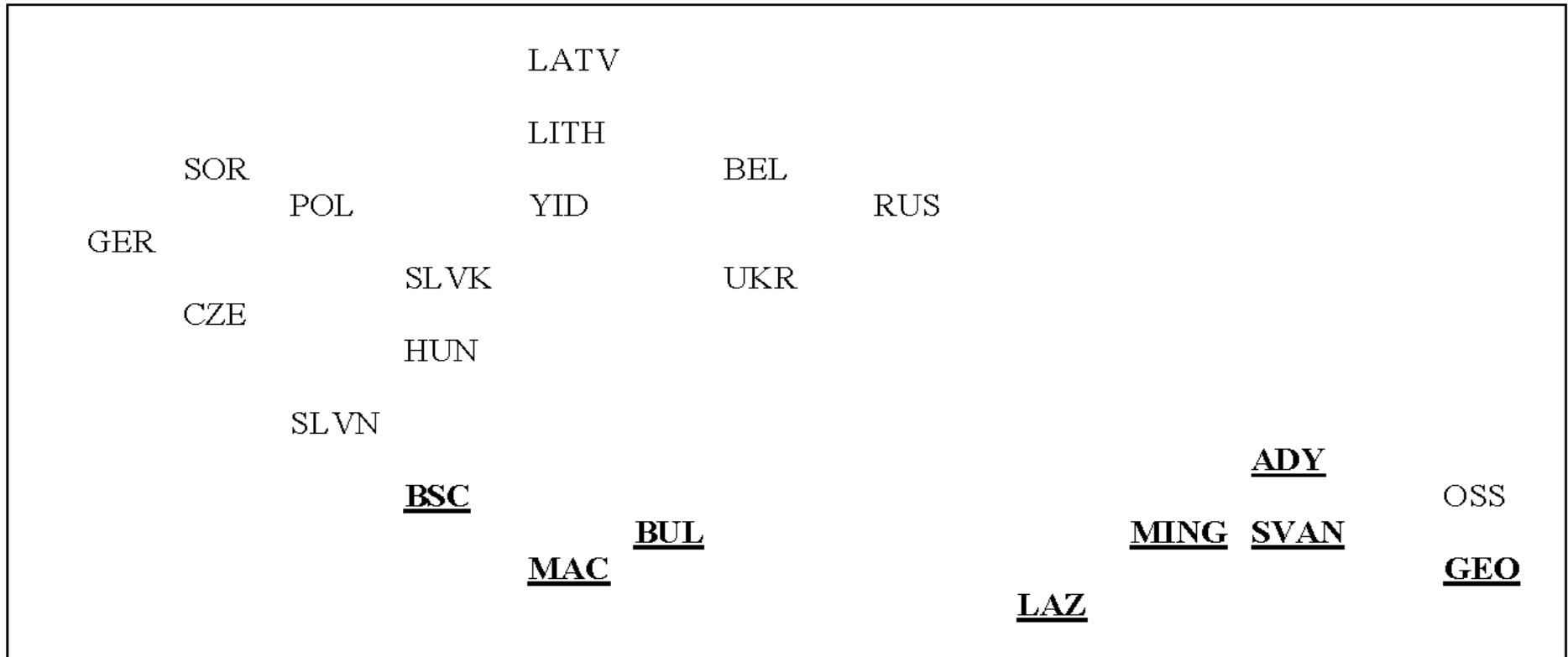
# Functional properties of verbal systems

- Distinction between inflectional perfective (Aorist) and imperfective (Imperfect) tenses:

Bulgarian 'write'

	Aorist	Imperfect
Imperfective	<i>pis</i> <b>a</b>	<i>piš</i> <b>eše</b>
Perfective	<b>na</b> <i>pis</i> <b>a</b>	<b>na</b> <i>piš</i> <b>eše</b>

# Aorist vs. Imperfect



# A multivariate typology

- The languages show considerable variation with respect to all the examined parameters. Notably, in many cases this variation is not correlated with genealogical and/or geographic divisions.

# Roadmap

- Introducing “Slavic-style” aspect
- A multivariate typology
- Some quantitative methods
- A broader typological outlook
- Genetic inheritance vs. language contact

# Roadmap

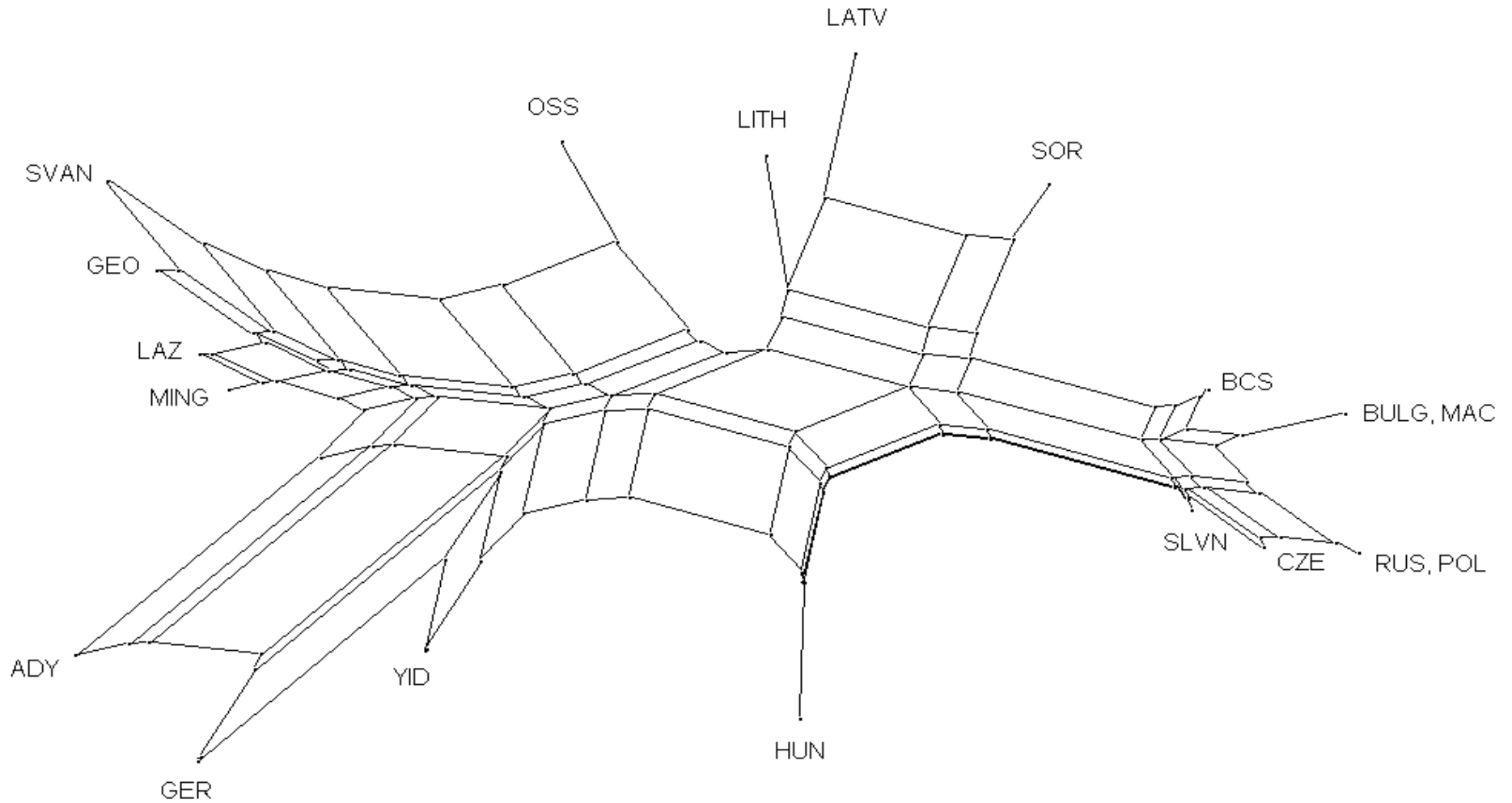
- Introducing “Slavic-style” aspect
- A multivariate typology
- **Some quantitative methods**
- A broader typological outlook
- Genetic inheritance vs. language contact

# Some quantitative methods

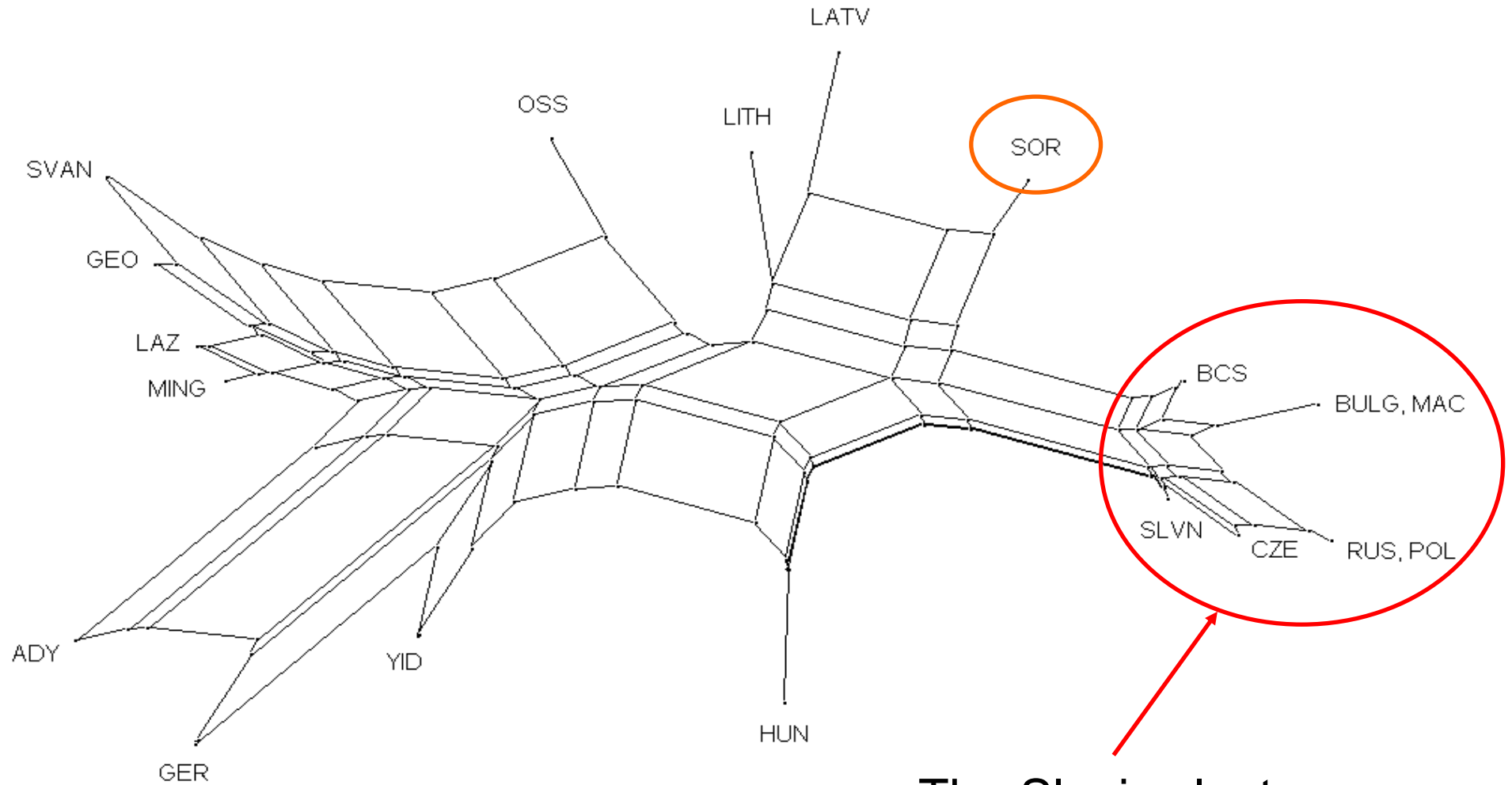
Nothing really sophisticated to offer:

- NeighborNet (Bryant & Moulton 2004, Huson & Bryant 2006, Bryant et al. 2005)

# Some quantitative methods



# Some quantitative methods

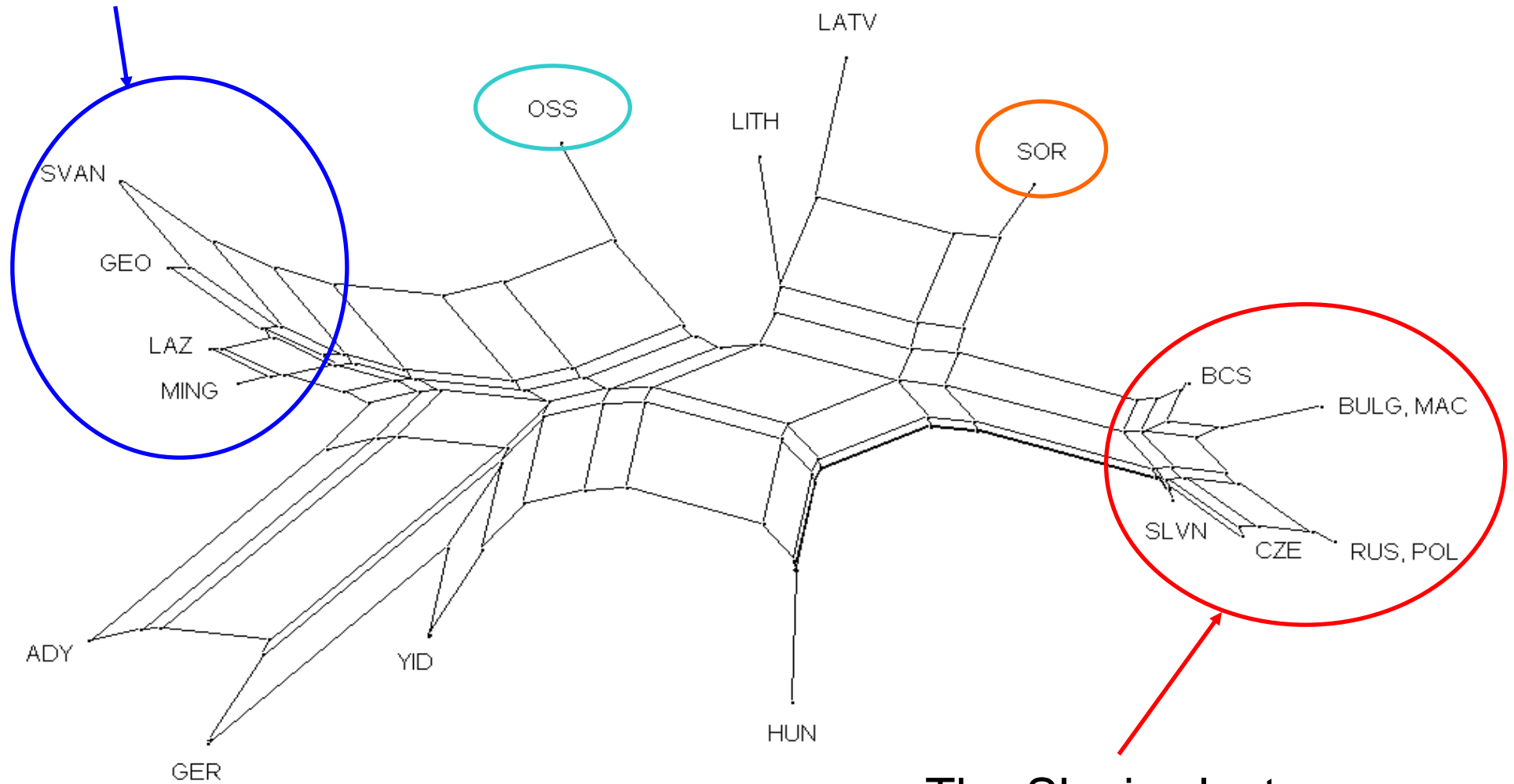


The Slavic cluster



# Some quantitative methods

The Kartvelian/Caucasian cluster



The Slavic cluster

# Some quantitative methods

Two major clusters of systems of prefixal perfectivization, both defined more by **genealogical relationship** rather than **areal proximity**:

- Slavic (with Sorbian vernaculars as an outlier)
- Kartvelian (with geographically close but genealogically unrelated Ossetic as an outlier)

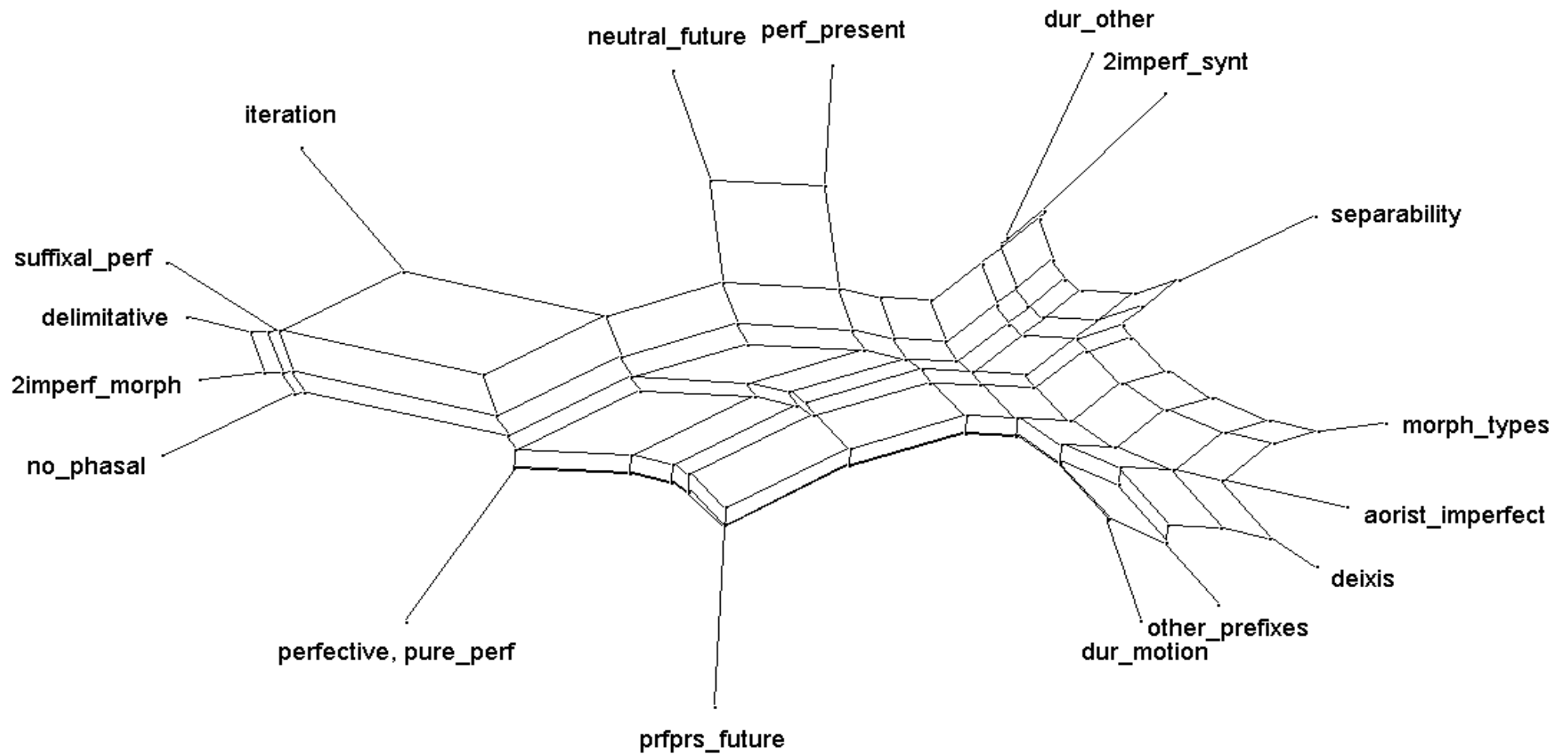
# Some quantitative methods

Other languages occupy intermediate positions in the continuum whose opposite poles are constituted by the Slavic and Kartvelian clusters, showing no significant similarity either to each other or to either of the two poles.

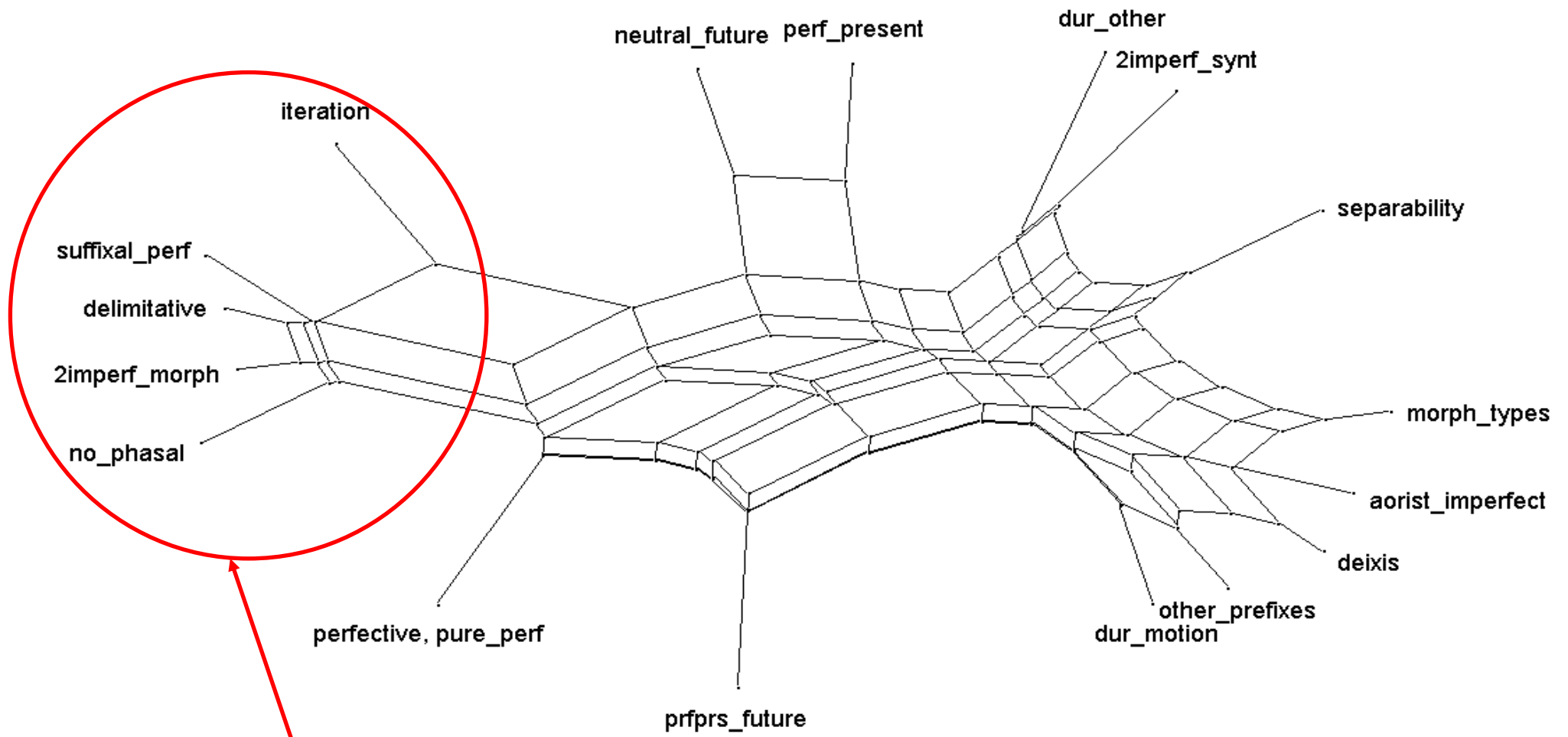
# Some quantitative methods

- By swapping the rows and columns of the table, it is possible to apply NeighborNet to features instead of languages.
- NB Strictly speaking, an illegitimate move (thanks to Sergey Say for pointing this out to me)
- ... but it has worked!
- (Cf. Cysouw 2007 for a similar approach)

# Some quantitative methods

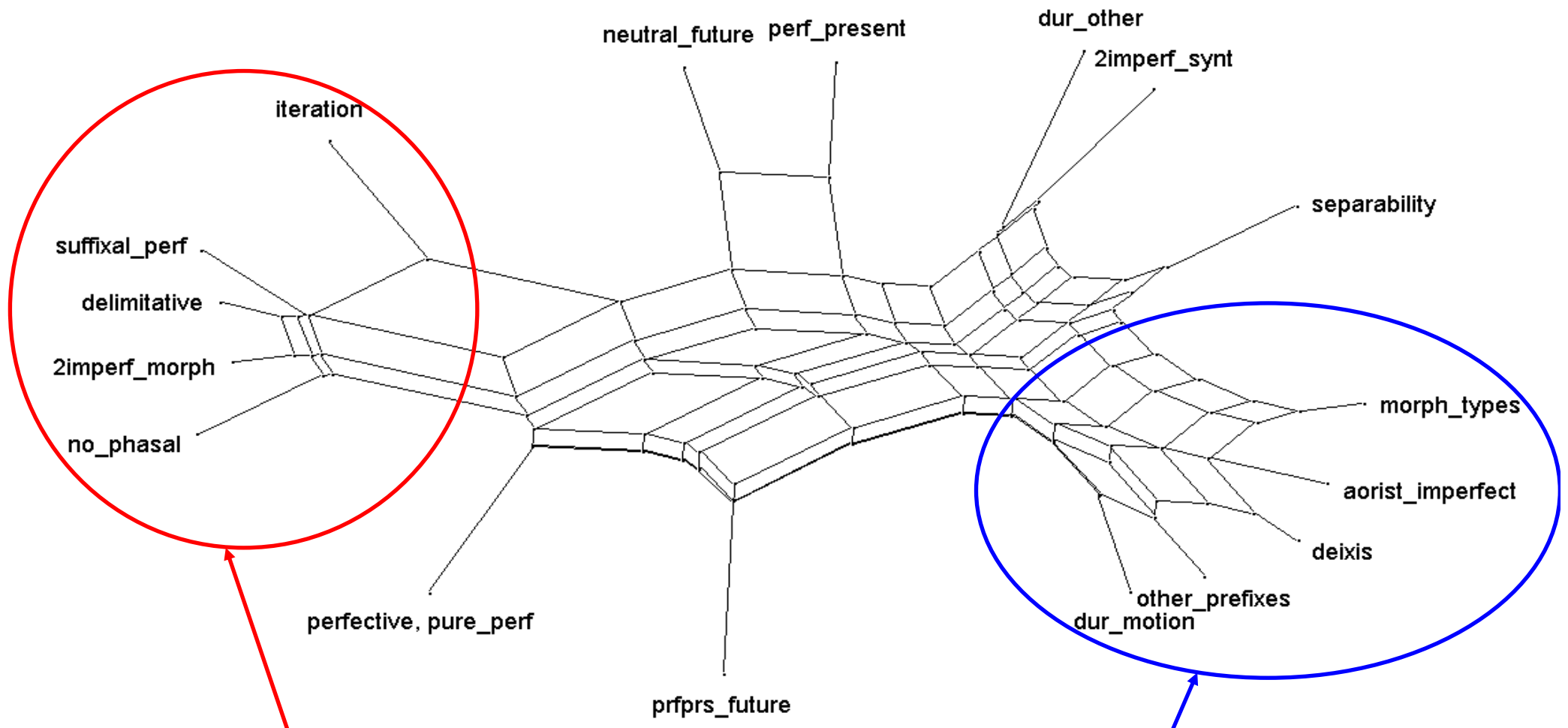


# Some quantitative methods



The Slavic "prototype"

# Some quantitative methods



The Slavic "prototype"

The Caucasian "prototype"

# Some quantitative methods

Not only clustering of **languages**, but clustering of **features** as well, showing that the two clusters of prefix-based aspectual systems are characterised by different constellations of properties.

Not **one**, but **two** “prototypes” of prefixal perfectivisation:

“Slavic” and “Caucasian”.



# Some quantitative methods

The “Slavic” prototype of prefixal perfective:

- iteration of preverbs without clear morphological or functional subdivisions;
- lack of other verbal prefixes;
- productive delimitative prefixation;
- productive morphological secondary imperfectivisation;
- a suffixal perfectivizer;
- ban on the co-occurrence of perfective verbs with phasal predicates;
- ban on the imperfective use of prefixed verbs of motion.

# Some quantitative methods

The “Kartvelian”/“Caucasian” prototype:

- no preverb iteration;
- morphological and functional subdivisions of preverbs;
- presence of other verbal prefixes;
- systematic expression of deixis by preverbs;
- no productive delimitative Aktionsarten;
- no productive secondary imperfectivisation;
- imperfective use of prefixed motion verbs;
- inflectional Aorist and Imperfect.

# Some quantitative methods

However, the quantitative multi-factorial method does not allow to determine clear areal influences (e.g. Sorbian is shown to be different from other Slavic languages, but is not shown to have similarities to German), which is an indication that contact-induced change affects individual parameters rather than whole systems.

# Roadmap

- Introducing “Slavic-style” aspect
- A multivariate typology
- Some quantitative methods
- A broader typological outlook
- Genetic inheritance vs. language contact

# Roadmap

- Introducing “Slavic-style” aspect
- A multivariate typology
- Some quantitative methods
- **A broader typological outlook**
- Genetic inheritance vs. language contact

# A broader typological outlook

Bounder-based perfectives are not necessarily prefixal.

In many languages morphemes expressing spatial and aspectual modifications of verbal semantics are suffixal.

# A broader typological outlook

**Margi** (Chadic, Nigeria, Hoffmann 1963)

*gù* ‘seek, look for (ipf)’ →

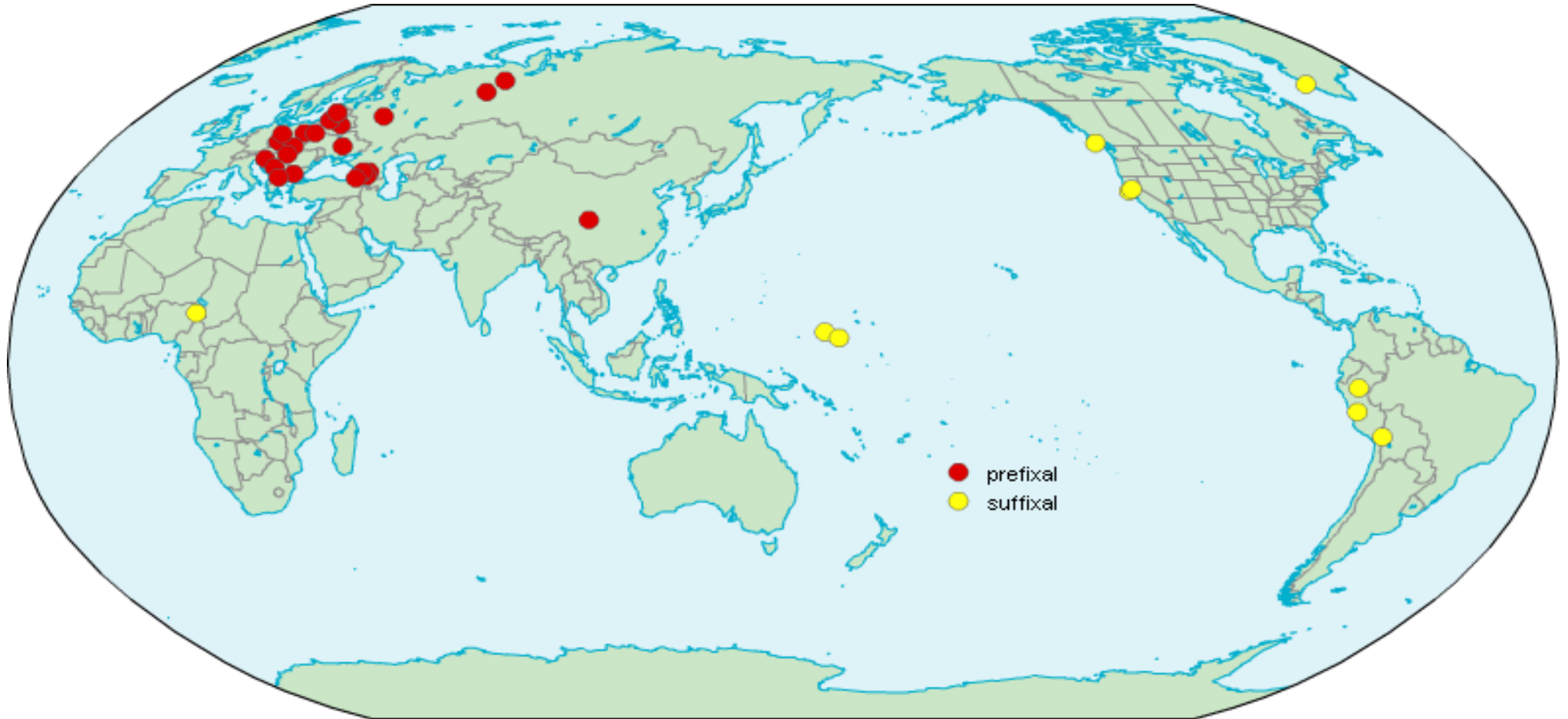
*gú-**bá*** ‘find out (pfv)’

**Aymara** (Aymaran, Bolivia, Haude 2003)

*sawu-ña* ‘weave (ipf)’ →

*saw-**su**-ña* ‘finish weaving (pfv)’

# A broader typological outlook





# A broader typological outlook

- Derivational aspectual systems are not necessarily predominantly perfectivising, like Slavic and Baltic, but can be **imperfectivising** as well.

Arkadiev & Shluinsky 2015, 2016, Shluinsky 2017

# A broader typological outlook

**Enets** (Samoyedic, Taymyr, Shluinsky 2017)

*piri-ʔ* ‘they cooked (pfv)’ →

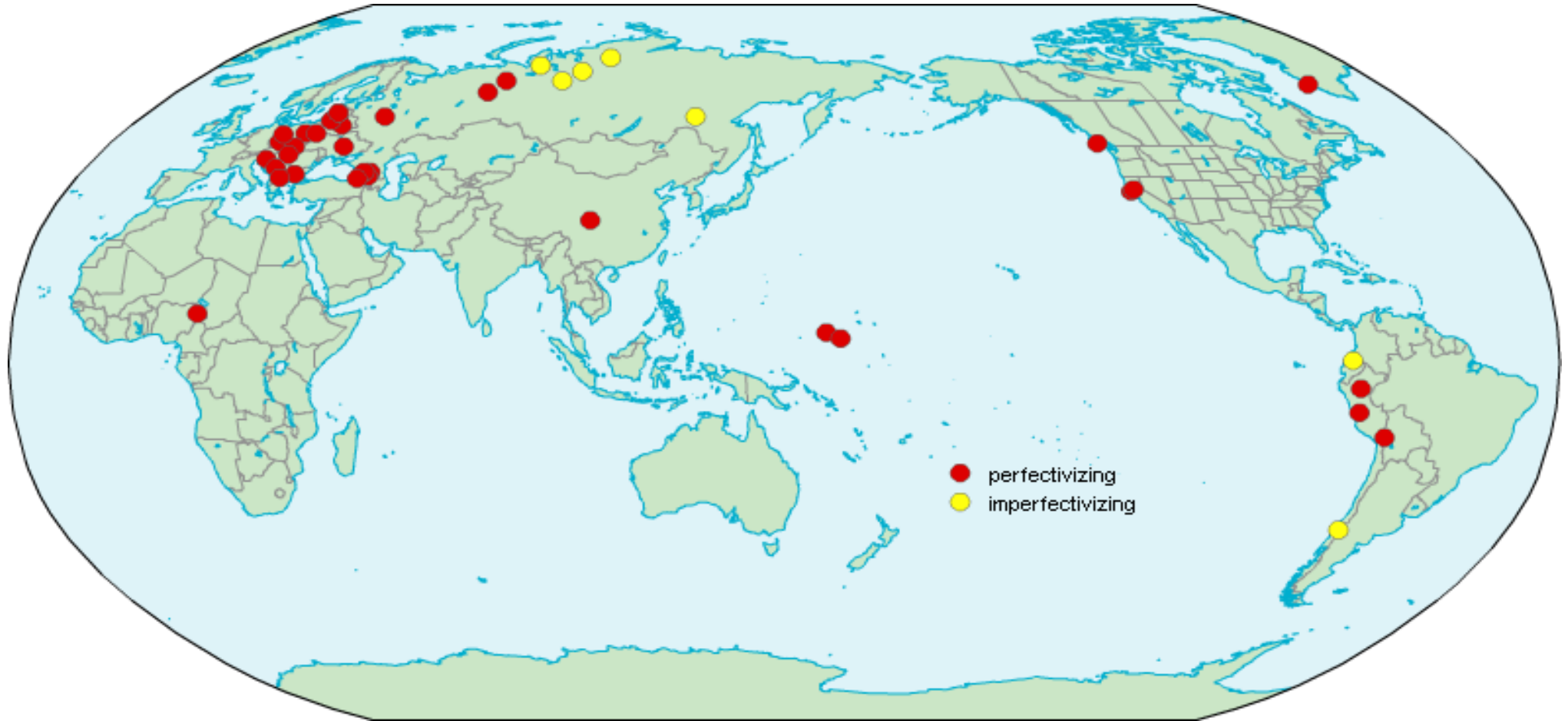
*piri-goo* ‘s/he is cooking (ipf)’

**Mapuche** (Araucanian, Chile, Smeets 2007)

*lüq-üy* ‘it became white (pfv)’ →

*lüq-küle-y* ‘it is white (ipf)’

# A broader typological outlook

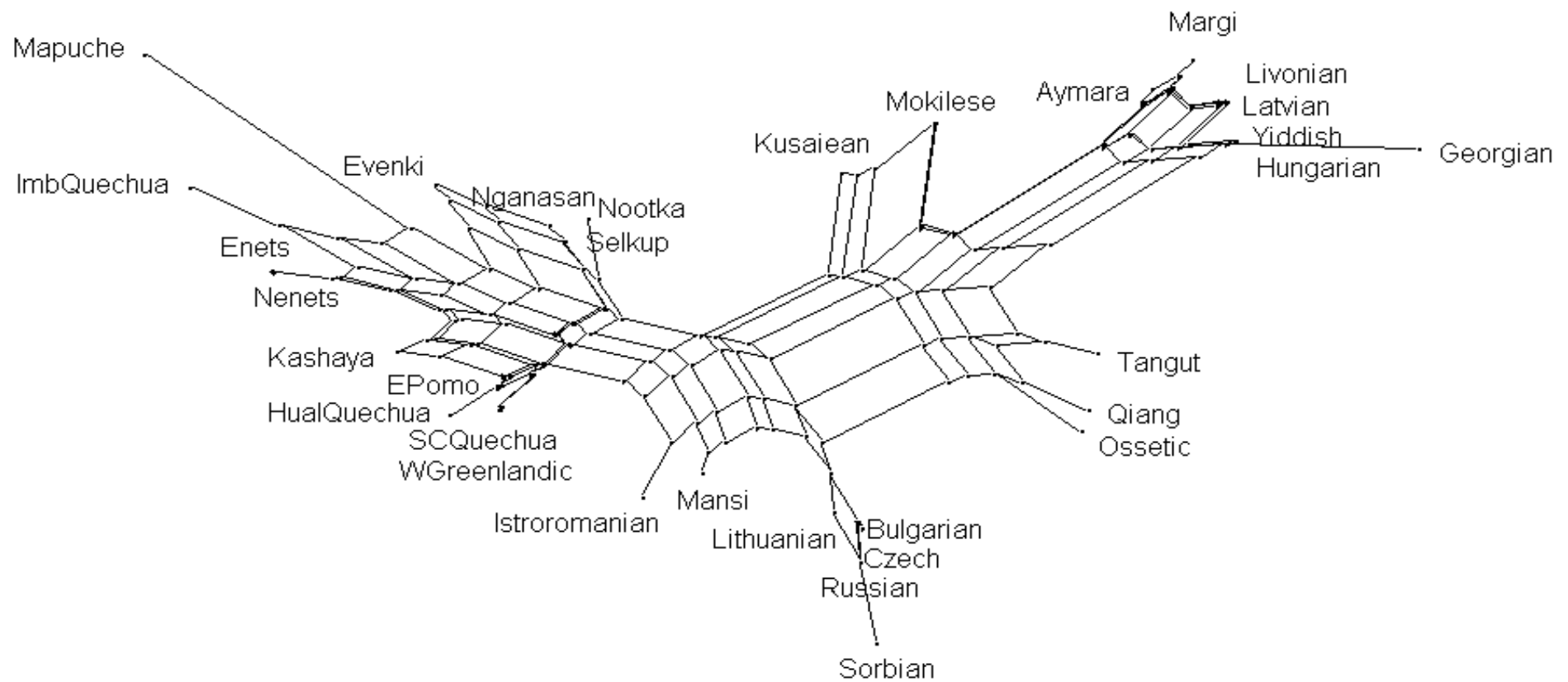


# A broader typological outlook

Clear areal patterning is evident for both prefix-based perfectivising aspectual systems and for perfectivising systems in general, though the latter seem (given the data available) to be more widespread globally.

# A broader typological outlook

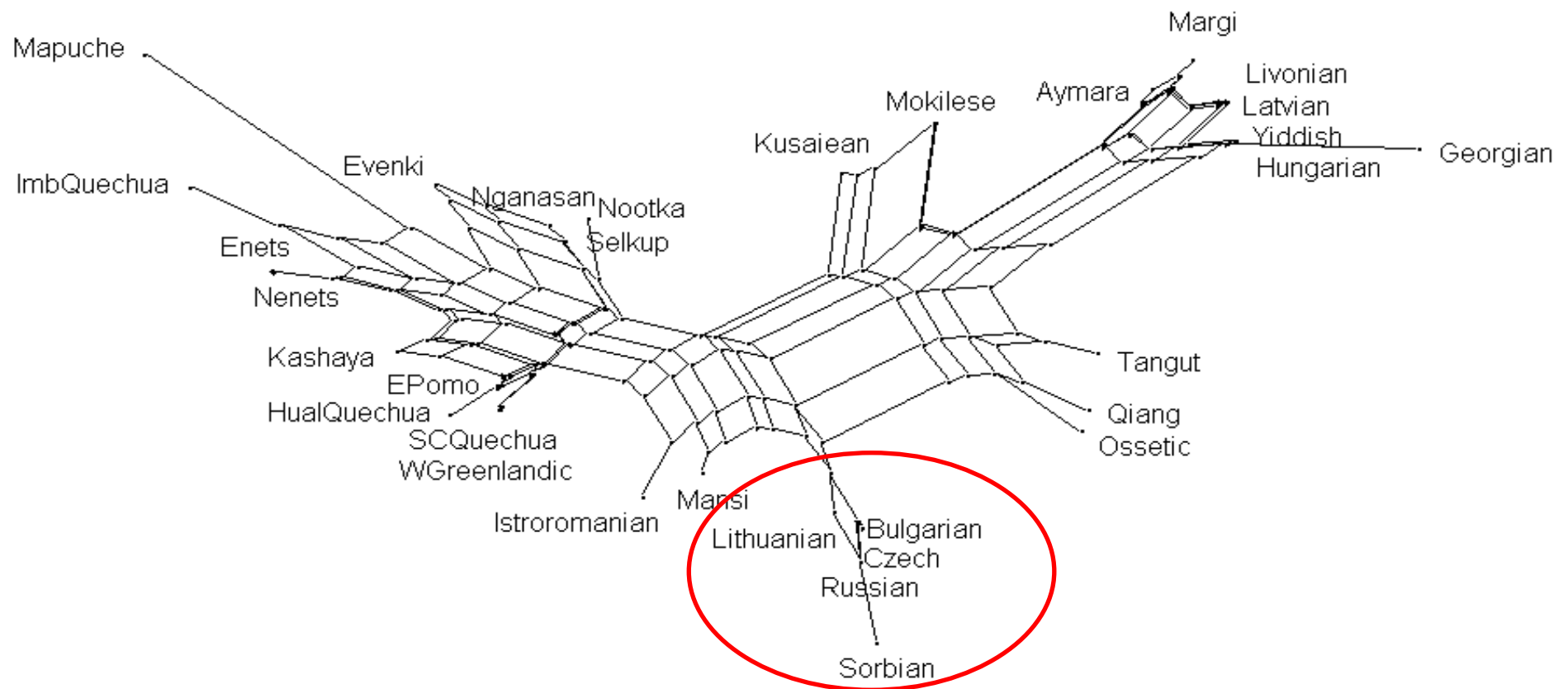
0.1



Arkadiev & Shluinsky 2016

# A broader typological outlook

0.1



# A broader typological outlook

Slavic aspect is neither a “paradigm case”, nor an “exotic phenomenon” in the typology of aspectual systems.

Its place in the general landscape of aspectual systems can be assessed by comparing it not only to the Western European-style systems of inflectional aspect (e.g. Breu 2000b), but to other boundary-based and, more generally, verb-classifying aspectual systems as well.

# Roadmap

- Introducing “Slavic-style” aspect
- A multivariate typology
- Some quantitative methods
- A broader typological outlook
- Genetic inheritance vs. language contact



# Roadmap

- Introducing “Slavic-style” aspect
- A multivariate typology
- Some quantitative methods
- A broader typological outlook
- **Genetic inheritance vs. language contact**

# Inheritance vs. contact

What is the role of genealogical inheritance and language contact in the rise and development of “Slavic-style aspect”?

Which properties of these systems reflect internal developments and which are subject to areal diffusion?

# Inheritance vs. contact

In all the languages under investigation the systems of preverbs encoding spatial meanings are inherited from prehistoric times:

- Slavic, Baltic and at least some Germanic and Ossetic preverbs go back to the Proto-Indo-European verbal satellites;
- Hungarian preverbs find counterparts in the Ob-Ugric verbal satellites (Kiefer & Honti 2003, Honti 1999);
- though fairly diverse, the preverbs in Kartvelian are attested across the whole family (Hewitt 2004, Rostovtsev-Popiel 2012a).

# Inheritance vs. contact

This implies that at least some (and potentially many) prerequisites for the development of the prefixal perfective have been present in the languages in question prior to any possible contact leading to the spread of the grammaticalisation pattern

“spatial preverb” → “Aktionsart preverb” →  
“perfectivising preverb”.

# Inheritance vs. contact

This finds support in the fact that verbal satellites or other elements specifying the spatial extent of the situation tend to develop into aspectual “bounders” (Bybee & Dahl 1989) cross-linguistically (Breu 1992, Bybee et al. 1994, Maisak 2005).

# Inheritance vs. contact

Such developments have been recurring in the documented history of the Indo-European languages: besides Balto-Slavic cf. late Latin (Haverling 2003, Panov 2012) and Gothic (Maslov 1959, Genis 2012) preverbs, as well as adverbial particles in Germanic (e.g. Brinton 1988), Italian (Iacobini & Masini 2006) and Balto-Finnic (Wälchli 2001).

# Inheritance vs. contact

However, in all the studied languages the use of preverbs for perfectivisation is a more or less recent innovation.

Therefore, contact and areal diffusion could have (and in some cases clearly have) played an important role in the development of prefix-based aspectual systems.

Cf. Wiemer & Seržant 2017

# Contact-induced grammatical change

Two major types of borrowing (transfer):

- MATter borrowing: “direct replication of morphemes and phonological shapes from a source language”;
- PATtern borrowing: “re-shaping of language-internal structures ... it is the patterns of distribution, of grammatical and semantic meaning, and of formal-syntactic arrangement .. that are modelled on an external source”.

Matras & Sakel 2007: 829-830, Sakel 2007, Gardani et al. 2015



# Inheritance vs. contact

Language contact phenomena attested in the domain of prefixal perfectivisation are rather diverse and include both matter (MAT) and pattern (PAT) borrowing.

# Inheritance vs. contact

MAT-borrowing:

- of individual prefixes into a system already possessing preverbs (e.g. Baltic or Finnic dialects in contact with Slavic);
- of whole preverb systems into languages originally without preverbs (e.g. Romani dialects and Istroromanian in contact with Slavic, Livonian in contact with Latvian).

# MAT-borrowing of prefixes

## Latvian Romani (Ariste 1973: 80)

*no*čhindža ‘cut off’ (~ Latv. *no*griezt),

*uz*džinena ‘get to know’ (~ Latv. *uz*zināt)

## Istroromanian (Klepikova 1959: 38-45, Hurren 1969)

*rez*lega ‘untie’ (~ Croatian *raz*vezati)

*po*ćira ‘have supper’ (~ Cro. *po*večerati)

# Inheritance vs. contact

PAT-borrowing:

- restructuring of semantics of prefixes and change in the expression of Aktionsarten (e.g. Yiddish in contact with Slavic or Sorbian in contact with German);
- calquing of the German “adverbial particles” (Slavic and Romani varieties);
- calquing of secondary imperfectivisation (Lithuanian in contact with Slavic).

# PAT-borrowing of prefixes

- Yiddish copying polysemy of Slavic prefixes:  
*iber*shraybn ‘copy, rewrite’ ~ Rus. *pere*pisat’  
*ibert*on zikh ‘change clothes’ ~ Rus. *pere*odet’sja  
*iber*vinken zikh ‘wink to each other’ ~ Rus.  
*pere*migivat’sja  
  
*far*boyen ‘block by construction’ ~ Rus. *za*stroit’  
*far*tantsn zikh ‘dance a lot’ ~ Rus. *za*tancevat’sja  
*far*shraybn ‘write down’ ~ Rus. *za*pisat’

Talmy 1982: 243, Wexler 1972: 99-100, Šišigin 2016

# Inheritance vs. contact

As usual, in each individual case the extent of contact influence depends on the sociolinguistic situation and on the structural similarities vs. differences between the verbal systems (e.g. under contact with Slavic secondary imperfectivisation did not arise in Yiddish and Latvian, whose verbal systems lack any comparable verbal affix).

# Inheritance vs. contact

Even in situations of prolonged and very intensive language contact MAT and/or PAT borrowing tends to be limited to formally transparent and semantically loaded features.

“Global copying” of an aspectual system as a whole is not attested and does not seem to be possible (cf. the discussion of the very special case of Istroromanian in Arkadiev 2018).

# Inheritance vs. contact

No reason to assume that the currently observed similarities between the Central and Eastern European and the Caucasian subareas of prefixal perfective could have arisen due to language contact between these two groups of languages (contra Abaev 1965, who postulated Slavic influence on Ossetic, and, indirectly, on Kartvelian).



# Inheritance vs. contact

The prehistoric contacts between the Balto-Slavic and the Iranian peoples and languages (Zaliznjak 1962, Èdel'man 2002 etc) must have significantly predated the time when the modern grammatical systems and especially their functional make-up started emerging.

# Inheritance vs. contact

The similarities between the Balto-Slavic and the Kartvelian-Ossetic systems of prefixal perfective are obviously not due to the recent contacts (since the late 18<sup>th</sup> cent. onwards):

When the Caucasian peoples were incorporated into the Russian Empire their languages already possessed prefixal perfective.

# Inheritance vs. contact

Though in the oldest Georgian texts (5<sup>th</sup>-8<sup>th</sup> cent. AD) numerous spatial preverbs did not perfectivise verbs (Schanidse 1982), the rise and spread of the aspectual functions of preverbs must have been completed by the middle-Georgian period (12<sup>th</sup> century, Rostovtsev-Popiel 2012b), when no intensive contacts with Slavic languages could be reasonably assumed.

# Inheritance vs. contact

Are there reasons to assume that the Caucasian (Kartvelian-Ossetic) area of prefixal perfective is at least partly due to language contact?

There is evidence pointing in this direction (*pace* Thordarson 1982, 2009, who dismisses this possibility without much discussion).

# Inheritance vs. contact

The basic spatial meanings of Ossetic preverbs are largely similar to the meanings of Georgian preverbs.

# Inheritance vs. contact

Two semantic axes:

locative ('upwards', 'downwards', 'inside', 'outside' etc.)

deictic ('towards the speaker' vs. 'from the speaker')

In Georgian the two axes are expressed by different sets of co-occurring preverbs, while in Ossetic they are conflated.

# Inheritance vs. contact

- Iron Ossetic preverbs

	'in'	'out'	'down'	'up'	'sideways'
'hither'	<i>ba-</i>	<i>ra-</i>	<i>æ-</i> , <i>cæ-</i>	<i>s-</i>	<i>fæ-</i>
'thither'	<i>ærba-</i>	<i>a-</i>	<i>ny-</i>		

# Inheritance vs. contact

- Iron Ossetic preverbs

	‘in’	‘out’	‘down’	‘up’	‘sideways’
‘hither’	<i>ba-</i>	<i>ra-</i>	<i>æ-</i> , <i>cæ-</i>	<i>s-</i>	<i>fæ-</i>
‘thither’	<i>æba-</i>	<i>a-</i>	<i>ny-</i>		

- Georgian preverbs

		‘down’	‘up’	‘out’	‘in’	‘across’	‘forward’
‘hither’	<i>mo-</i>	<i>ča-mo-</i>	<i>a-mo-</i>	<i>ga-mo-</i>	<i>še-mo-</i>	<i>gad-mo-</i>	<i>c’a-mo-</i>
‘thither’	<i>mi-</i>	<i>ča-</i> , <i>da-</i>	<i>a-</i>	<i>ga-</i>	<i>še-</i>	<i>gada-</i>	<i>c’a-</i>



# Inheritance vs. contact

- Iron Ossetic preverbs

	‘in’	‘out’	‘down’	‘up’	‘sideways’
‘hither’	<i>ba-</i>	<i>ra-</i>	<i>æ-</i> , <i>cæ-</i>	<i>s-</i>	<i>fæ-</i>
‘thither’	<i>æba-</i>	<i>a-</i>	<i>ny-</i>		

- Georgian preverbs

		‘down’	‘up’	‘out’	‘in’	‘across’	‘forward’
‘hither’	<i>mo-</i>	<i>ča-mo-</i>	<i>a-mo-</i>	<i>ga-mo-</i>	<i>še-mo-</i>	<i>gad-mo-</i>	<i>c’a-mo-</i>
‘thither’	<i>mi-</i>	<i>ča-, da-</i>	<i>a-</i>	<i>ga-</i>	<i>še-</i>	<i>gada-</i>	<i>c’a-</i>

# Inheritance vs. contact

- Since the functional and morphological distinction between the spatial and the deictic preverbs is a feature common to all Kartvelian languages, it is legitimate to hypothesize that the Ossetic system is a result of semantic borrowing from Kartvelian (cf. Levickaja 2004).
- Importantly, the key semantic features of the Kartvelian-Ossetic systems of prefixes are lacking in the Balto-Slavic preverbs.

# Inheritance vs. contact

The case for the areal nature of the prefixal perfective systems in Ossetic and Kartvelian is supported by independent evidence:

- (not so numerous) lexical borrowings (Thordarson 1999)
- shared grammatical features, e.g. negative indefinites and preverbal focus constructions (Erschler 2012).

# Inheritance vs. contact

- Turning to the better studied Central European region, we see similarities not only in the aspectual systems, but in the domain of preverb semantics as well, in particular in their polysemy patterns.
- Cf. Gast & van der Auwera (2012) and Heine (2012) on the significance of polysemy in contact-induced grammaticalisation, and Wälchli (2001) on verbal satellites in particular.

# Inheritance vs. contact

- Borrowing of polysemy patterns of preverbs have been documented for Yiddish (← Slavic, Wexler 1964, 1972, Talmy 1982) and Sorbian (← German, Wexler 1972, Toops 1992a, 1992b), as well as for some other Slavic varieties under German influence (Bayer 2006).

# Inheritance vs. contact

Similarities in “semantic networks” of preverbs can be observed between Baltic and the neighbouring Slavic languages (cf. e.g. Kožanov 2015), as well as between Hungarian and both Slavic and German (Kiefer 2010).

# Conclusions

The distribution of prefixal perfectives in the languages of Central and Eastern Europe and the Caucasus involves a complex interplay of genetic inheritance, contact-induced developments and universal-typological tendencies

# Conclusions

- Though areal “on the surface”, the distribution of prefixal perfectives cannot be reasonably attributed to a single center of innovation and spread (e.g. Slavic).
- Rather, at least two mutually independent centers of development must be postulated: the Balto-Slavic and the Caucasian.



# Conclusions

- Clues of possible contact-induced developments are to be sought not in the easy to grasp major grammatical features, which can well be explained by the universal tendencies, but in the more intricate properties of grammatical systems and their interaction with the lexicon, e.g. in the semantics and polysemy of preverbs.



**THANK YOU FOR YOUR  
ATTENTION!**

# References

- Abaev V. I. 1965. *Skifo-evropejskie izoglossy. Na styke vostoka i zapada*. Moscow: Nauka.
- Ariste P. 1973. Lettische Verbalpräfixe in einer Zigeunermundart. *Baltistica*, 9(1), 79–81.
- Arkadiev P. M. 2014. Towards an areal typology of prefixal perfectivization. *Scando-Slavica*, 60(2), 384–405.
- Arkadiev P. M. 2015. *Areal'naja tipologija prefiksial'nogo perfekтива (na materiale jazykov Evropy i Kavkaza)*. Moscow: Jazyki slavjanskoj kultury.
- Arkadiev P. M. 2018 Borrowed prefixes and the limits of contact-induced change in aspectual systems. In: R. Benacchio, A. Muro & S. Slavkova (eds.), *The Role of Prefixes in the Formation of Aspectuality. Issues of Grammaticalization*. Firenze: Firenze University Press, 1–21.
- Arkadiev P. M. & A. B. Shluinsky. 2015. Slovklassificirujuščie aspektual'nye sistemy: opyt tipologii. *Vestnik SPbGU, Ser. 9. Filologija. Vostokovedenie. Žurnalistika* 3, 4–24.
- Arkadiev P.M. & A. B. Shluinsky. 2016. Derivational viewpoint aspect systems: a cross-linguistic perspective. Talk at *Chronos 12*, Caen, 15–17 June 2016.

# References

- Bayer M. 2006. *Sprachkontakt deutsch - slavisch. Eine kontrastive Interferenzstudie am Beispiel des Ober- und Niedersorbischen, Kärntnerslovenischen und Burgenlandkroatischen*. Frankfurt/Main: Peter Lang.
- Bertinetto P.-M. & D. Delfitto. 2000. Aspect vs. actionality: Why they should be kept apart. In: Ö. Dahl (ed.) *Tense and Aspect in the Languages of Europe*. Berlin, New York: Mouton de Gruyter, 189–226.
- Bickel B. 2010. Capturing particulars and universals in clause linkage: a multivariate analysis. In: I. Bril (ed.), *Clause-hierarchy and clause-linking: The syntax and pragmatics interface*. Amsterdam, Philadelphia: John Benjamins, 51–101.
- Boland A. 2006. *Aspect, Tense, and Modality: Theory, Typology, Acquisition*. Vols. I–II. Utrecht: LOT Publications.
- Breu W. 1992. Zur Rolle der Präfigierung bei der Entstehung von Aspektsystemen. In: M. Guiraud-Weber, Ch. Zaremba (éd.), *Linguistique et slavistique. Melanges offerts à Paul Garde*, t.1. Paris, Aix-en-Provence: Presses universitaires de Provence, 119–135.

# References

- Breu W. 1994. Interactions between lexical, temporal, and aspectual meanings. *Studies in Language* 18(1), 23–44.
- Breu W. 2000a. Der Verbalaspekt in der obersorbischen Umgangssprache im Rahmen des ILA-Modells. In: W. Breu (Hrsg.), *Slavistische Linguistik 1999*. München: Otto Sagner, 37–76.
- Breu W. 2000b. Zur Position des Slavischen in einer Typologie des Verbalaspekts (Form, Funktion, Ebenenhierarchie und lexikalische Interaktion). In: W. Breu (Hrsg.), *Probleme der Interaktion von Lexik und Aspekt (ILA)*. Tübingen: Niemeyer, 21–54.
- Breu W. 2012. Aspect forms and functions in Sorbian varieties. *Sprachtypologie und Universalienforschung* 65(3), 246–266.
- Brinton L. J. 1988. *The Development of English Aspectual Systems. Aspectualizers and Post-verbal Particles*. Cambridge: Cambridge University Press.
- Bryant D. & V. Moulton. 2004. Neighbor-Net: An agglomerative method for the construction of phylogenetic networks. *Molecular Biology and Evolution* 21(2), 255–265.

# References

- Bryant D., F. Filimon & R. Gray. 2005. Untangling our past: Languages, Trees, Splits and Networks. In: R. Mace, C. Holden & S. Shennan (eds.), *The Evolution of Cultural Diversity: Phylogenetic Approaches*. London: UCL Press, 69–85.
- Bybee J. L. & Ö. Dahl. 1989. The creation of tense and aspect systems in the languages of the world. *Studies in Language* 13(1), 51–103.
- Bybee J. L., R. D. Perkins & W. Pagliuca. 1994. *The Evolution of Grammar. Tense, Aspect and Modality in the Languages of the World*. Chicago, London: The University of Chicago Press.
- Comrie B. 1976. *Aspect. An Introduction to the Study of Verbal Aspect and Related Problems*. Cambridge: Cambridge University Press.
- Cysouw M. 2007. New approaches to cluster analysis of typological indices. In: P. Grzybek & R. Köhler (eds.), *Exact Methods in the Study of Language and Text: Dedicated to Gabriel Altmann on the Occasion of his 75th Birthday*. Berlin, New York: Mouton de Gruyter, 61–76.
- Dahl Ö. 1985. *Tense and Aspect Systems*. Oxford: Blackwell.
- Dickey S. M. 2000. *Parameters of Slavic Aspect. A Cognitive Approach*. Stanford (CA): CSLI Publications.

# Referenece

- Dickey S. M. 2005. S-/Z- and the grammaticalization of Aspect in Slavic. *Slovene Linguistic Studies* 5, 3–55.
- Dickey S. M. 2008. Prefixes in the grammaticalization of Slavic aspect: Telic s-/z-, delimitative *po-* and language change via expansion and reduction. In: B. Brehmer et al. (Hrsg.), *Aspekte, Kategorien und Kontakte slavischer Sprachen. Festschrift für Volkmar Lehmann zum 65. Geburtstag*. Hamburg: Kovac, 96–108.
- Dickey S.M. 2015. Parameters of Slavic aspect reconsidered: the East-West Aspect Division from a diachronic perspective. In: I. M. Shrager, E. Andrews, G. Fowler & S. Franks (eds.), *Studies in Slavic Linguistics and Accentology in Honor of Ronald F. Feldstein*, Bloomington, 29–45.
- Èdel'man D. I. 2002. *Iranskie i slavjanske jazyki. Istoričeskie otnošenija*. Moscow: Vostočnaja literatura.
- Erschler D. 2012. From preverbal focus to preverbal “left-periphery”: The Ossetic clause architecture in areal and diachronic perspective. *Lingua* 122, 673–699.
- Fortuin E. & J. Kamphuis. 2015. The typology of Slavic aspect: a review of the East-West theory of Slavic aspect. *Russian Linguistics* 39, 163–208.

# References

- Gardani F., P. M. Arkadiev & N. Amiridze. 2015. Borrowed morphology: An overview. In: F. Gardani, P. M. Arkadiev & N. Amiridze (eds.), *Borrowed Morphology*. Berlin, Boston: De Gruyter Mouton, 1–23.
- Gast V. & J. van der Auwera. 2012. What is ‘contact-induced grammaticalization’? Evidence from Mayan and Mixe-Zoquean languages. In: B. Wiemer & B. Hansen (eds.), *Grammatical Replication and Borrowability in Language Contact*. Berlin: Mouton de Gruyter, 381–426.
- Genis R. 2012. Comparing verbal aspect in Slavic and Gothic. In: *Language for its own sake: essays on language and literature offered to Harry Perridon*. Amsterdam: Scandinavisch Instituut Universiteit van Amsterdam, 59–80.
- Haude K. 2003. *Zur Semantik von Direktionalität und ihren Erweiterungen: Das Suffix -su im Aymara*. Arbeitspapier Nr. 45 des Instituts für Sprachwissenschaft Universität zu Köln.
- Haverling G. 2003. On prefixes and actionality in Classical and Late Latin. *Acta Linguistica Hungarica* 50(1-2), 113–135.
- Heine B. 2012. On polysemy copying and grammaticalization in language contact. In: Cl. Chamoreau & I. Léglise (eds.), *Dynamics of Contact-Induced Language Change*, Berlin, New York: Mouton De Gruyter, 125–166.



# References

- Hewitt B. G. 2004. *Introduction to the Study of the Languages of the Caucasus*. München, Newcastle: LINCUM Europa.
- Hoffmann C. 1963. *A Grammar of the Margi Language*. London: Oxford University Press.
- Honti L. 1999. Das Alter und die Entstehungsweise der “Verbalpräfixe” in uralischen Sprachen (Unter besonderen Berücksichtigung des Ungarischen). Teil 1. *Linguistica Uralica* 35(2), 81–97.
- Hurren H. A. 1969. Verbal aspect and archi-aspect in Istro-Rumanian. *La linguistique* 5(2), 59–90.
- Huson D. H. & D. Bryant. 2006. Application of phylogenetic networks in evolutionary studies. *Molecular Biology and Evolution* 23(2), 254–267.
- Iacobini Cl. & Fr. Masini. 2006. The emergence of verb-particle constructions in Italian: locative and actional meanings. *Morphology* 16, 155–188.
- Janda L., A. Endresen, J. Kuznetsova, O. Lyashevskaya, A. Makarova, T. Nessel & S. Sokolova. 2013. *Why Russian Aspectual Prefixes Aren't Empty. Prefixes as Verb Classifiers*. Bloomington: Slavica.

# References

- Kiefer F. 2010. Areal-typological aspects of word-formation: The case of aktionsart-formation in German, Hungarian, Slavic, Baltic, Romani and Yiddish. In: Fr. Rainer, W.U. Dressler, D. Kastovsky & H. Chr. Luschützky (eds.), *Variation and Change in Morphology: Selected papers from the 13th International Morphology Meeting, Vienna, February 2008*. Amsterdam, Philadelphia: John Benjamins, 129–148.
- Kiefer F. & L. Honti 2003. Verbal ‘prefixation’ in the Uralic languages. *Acta Linguistica Hungarica* 50(1–2), 137–153.
- Klein W. 1994. *Time in Language*. London, New York: Routledge.
- Klepikova G. P. 1959. Funkcii slavjanskix glagol’nyx pristavok v istrorumynskom. In: *Voprosy slavjanskogo jazykoznanija*. Vol. 4. Moscow: Izdatel’stvo AN SSSR, 34–72.
- Kožanov K. A. 2015. *Balto-slavjanske areal’nye kontakty v oblasti glagol’noj prefiksacii*. PhD dissertation, Institute of Slavic Studies, Moscow.
- Levitskaja A. A. 2004. Aspektual’nost’ v osetinskom jazyke: genetičeskie predposylki, areal’nye svjazi, tipologičeskoe sxodstvo. *Voprosy jazykoznanija* 1, 29–41.

# References

- Majsak T. A. 2005. *Tipologija grammatikalizaciji konstrukcij s glagolami dviženija i glagolami pozicii*. Moscow: Jazyki slavjanskix kul'tur.
- Majtinskaja K. E. 1960. *Vengerskij jazyk*. Vol. 3. *Sintaksis*. Moscow: Izdatel'stvo AN SSSR.
- Maslov Ju. S. 1959. Kategorija predel'nosti/nepredel'nosti glagol'nogo dejstvija v gotskom jazyke. *Voprosy jazykoznanija* 5, 69–80.
- Maslov Ju S. 1984. *Očerki po aspektologii*. Leningrad: Leningrad State University.
- Matras Y. & J. Sakel. 2007. Investigating the mechanisms of pattern replication in language convergence. *Studies in Language* 31(4), 829–865.
- Panov V. A. 2012. Aspektual'nye funkcii latinskix preverbov: problemy opisanija. *Acta Linguistica Petropolitana* 8(2), 707–734.
- Petruxina E. V. 2000. *Aspektual'nye kategorii glagola v rusском jazyke v sopostavlenii s češkim, slovackim, pol'skim i bolgarskim jazykami*. Moscow: Moscow State University.
- Plungian V. A. 2011. *Vvedenie v grammatičeskiju semantiku: Grammatičeskie značenija i grammatičeskie sistemy jazykov mira*. Moscow: Russian State University for the Humanities.

# References

- Rostovtsev-Popiel A. A. 2012a. *Grammaticalized Affirmativity in Kartvelian*. PhD Thesis, Universität Frankfurt am Main.
- Rostovtsev-Popiel A. A. 2012b. Stanovlenie kategorii aspekta v gruzinskom jazyke. *Acta Linguistica Petropolitana* 8(2), 290–310.
- Sakel J. 2007. Types of loan: matter vs. pattern. In: Y. Matras & J. Sakel (eds.), *Grammatical Borrowing in Cross-Linguistic Perspective*. Berlin, New York: Mouton de Gruyter, 15–29.
- Schanidse A. 1982. *Altgerogisches Elementarbuch. Teil I. Grammatik der Altgeorgischen Sprache*. Tbilissi: Tbilisis universit'et'is gamomcemloba.
- Shluinsky A. B. 2017. Vidovaja sistema èneckogo jazyka na fone russkoj: k tipologii slovoklassificirujuščego vida. *Voprosy jazykoznanija* 3, 24–52.
- Šišigin K. A. 2015. *Gibridizacija jazykov. Glagol'no-prefiks'al'naja sistema idiša*. Moscow: Flinta; Nauka.
- Smeets I. 2007. *A Grammar of Mapuche*. Berlin, New York: Mouton de Gruyter.
- Smith C. 1991/1997. *The Parameter of Aspect*. Dordrecht: Kluwer (2nd ed. 1997).
- Stunová A. 1993. *A Contrastive Study of Russian and Czech Aspect: Invariance vs. Discourse*. PhD Dissertation, Universiteit Amsterdam.

# References

- Talmy L. 1982. Borrowing semantic space: Yiddish verb prefixes between Germanic and Slavic. *Proceedings of the 8th Annual Meeting of the Berkeley Linguistics Society*, 231–250.
- Talmy L. 1985. Lexicalization patterns: Semantic structure in lexical form. In: T. Shopen (ed.). *Language Typology and Syntactic Description. Vol 3: Grammatical Categories and the Lexicon*. Cambridge: Cambridge University Press, 57–149.
- Tatevosov S. G. 2002. The parameter of actionality. *Linguistic Typology* 6(3), 317–401.
- Tatevosov S. G. 2015. *Akcional'nost' v leksike i grammatike. Glagol i struktura sobytija*. Moscow: Jazyki slavjanskoj kul'tury.
- Tatevosov S. G. 2016. *Glagol'nye klassy i tipologija akcional'nosti*. Moscow: Jazyki slavjanskoj kul'tury.
- Thordarson F. 1982. Preverbs in Ossetic. *Monumentum Georg Morgenstierne II*. Leiden: Brill, 251–261.
- Thordarson F. 2009. *Ossetic Grammatical Studies*. Wien: Verlag der Österreichischen Akademie der Wissenschaften.

# References

- Tomelleri V. S. 2008. L'aspetto verbale slavo fra tipologia e diacronia. In: A. Alberti et al. (eds.), *Contributi italiani al 14. congresso internazionale degli Slavisti*. Firenze, 11–61.
- Tomelleri V. S. 2009. The category of aspect in Georgian, Ossetic and Russian. Some areal and typological observations. *Faits des langues* 1, 245–272.
- Tomelleri V. S. 2010. Slavic-style aspect in the Caucasus. *Suvremena lingvistika* 69, 65–97.
- Toops G. H. 1992a. Upper Sorbian prefixal derivatives and the question of German loan translations. *The Slavic and East European Journal* 36(1), 17–35.
- Toops G. H. 1992b. Lexicalization of Upper Sorbian preverbs: Temporal-aspectual ramifications and the delimitation of German Influence. *Germano-Slavica* 7(2), 3–22.
- von Waldenfels R. 2012. Aspect in the imperative across Slavic languages — a corpus-driven pilot study. *Oslo Studies in Language* 4(1), 141–154.

# References

- Wälchli B. 2001. Lexical evidence for the parallel development of the Latvian and Livonian verb particles. In: Ö. Dahl & M. Koptjevskaja-Tamm (eds.), *The Circum-Baltic Languages. Typology and Contact*. Vol. 2. Amsterdam, Philadelphia: John Benjamins, 413–442.
- Wexler P. 1964. Slavic influence on the grammatical functions of three Yiddish verbal prefixes. *Linguistics* 2, 83–93.
- Wexler P. 1972. A mirror image comparison of languages in contact: Verbal prefixes in slavized Yiddish and germanized Sorbian. *Linguistics* 82, 89–123.
- Wiemer B. & I. Seržant. 2017. Diachrony and typology of Slavic aspect: What does morphology tell us? In: W. Bisang & A. Malchukov (eds.), *Unity and Diversity in Grammaticalization Scenarios*. Berlin: Language Science Press, 239–307.
- Zaliznjak A. A. 1962. Problemy slavjano-iranskix jazykovyx otnošenij drevnejšego perioda. *Voprosy slavjanskogo jazykoznanija* 6, 28–45.