

Circum-Baltic object marking against a broader areal perspective

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Outline

- Object marking strategies
- Intuition
- CB area
- Claims
- Data and methods
- Results
- Conclusions

Object marking strategies

Object marking strategies

(1) English

The cat broke the vase

(2) English

*The cat climbed **into** the box*

(3) Russian

<i>Kot</i>	<i>uvlečjon</i>	<i>korobk-oj</i>
cat(M).NOM.SG	be_passionate_about	box(F)- INS .SG

(4) Russian

<i>Kot</i>	<i>zalez</i>	v	<i>korobk-u</i>
cat(M).NOM.SG	climb	in	box(F)- ACC .SG

Object marking strategies

Transitive marking strategies

- transitive verbs are defined cross-linguistically (Haspelmath 2015)
- transitive object = the argument marked like the 'broken thing' of the 'break' verb

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Non-transitive marking strategies

- language-specific

Intuition

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For example:

(5) Latvian

Pēter-is *skatās* **uz** *jūr-u*

PN-NOM look **on** sea(F)-**ACC**.SG

‘Peteris looks at the sea’

(6) Russian

Pet-ja *smotrit* **na** *mor-e*

PN-NOM look **on** sea(N)-**ACC**.SG

‘Petja looks at the sea.’

CB area



(Koptjevskaja-Tamm, Wälchli. 2001)

CB area



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Claims

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 - genealogical AND areal
 - genealogical
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- **Do we observe any clustering in the Circum-Baltic area?**
 - binary contacts (Do we need this notion of the CB at all?)

Recent studies on closely related topics: Bickel et al. 2014, Say 2014, 2018, Malchukov and Comrie (eds.) 2015, Journal of Language Contact 12 (1), Seržant et al. (in print)

Data

Main source: <https://www.bivaltyp.info>

Say, Sergey (ed.). 2020. **BivalTyp: Typological database of bivalent verbs and their encoding frames.**

St. Petersburg: Institute for Linguistic Studies, RAS.

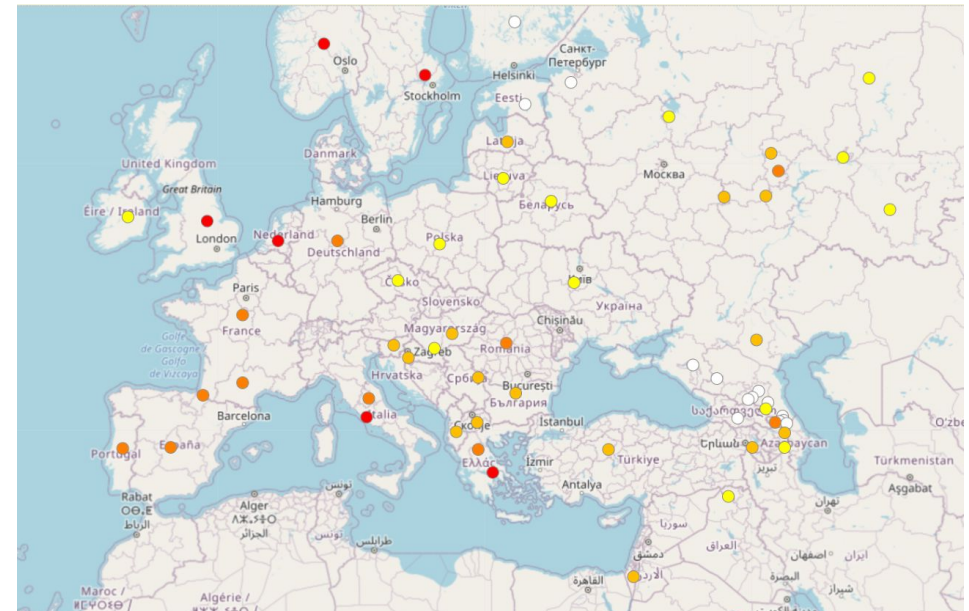


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ЛТИЯ



(Say, Nikolaev. 2021. Maps. In: <https://www.bivaltyp.info/>)

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‘be afraid’: (P. has to go out of the house, but there is a dog barking in the yard). P. is afraid of the dog.

(7) Russian:

Pet-ja bo-it-sja sobak-i → **NOM_GEN**

‘Petja is afraid of the dog’

Comparative concepts (Haspelmath 2010)

(8) Russian:

Pet-ja ljub-it Maš-u

'Petja loves Masha'

OBJECT FORM

(9) Russian:

Pet-je nra^v-it-sja Maš-a

'Petja likes Masha'

SUBJECT FORM

Comparative concepts (Haspelmath 2010)

The tags are assigned according to the least abstract meaning of the marker:

- SPATIAL
- COMITATIVE/CARITIVE
- POSSESSIVE

Latvian *uz* + ACC/GEN → **ON/ONTO**

Slavic *na* + ACC/LOC

Comparative concepts (Haspelmath 2010)

The tags assigned for the markers lacking of any non-abstract meaning:

RECIPIENT, INSTRUMENT, TOPIC, PURPOSE, COMPARISON¹, INTRANSITIVE¹

Method

- 99 verbs x 32 lgs
- comparative concepts (N = 22)
- agglomerative cluster analysis

Results

Clustering dendrogram based on 99 predicate meanings

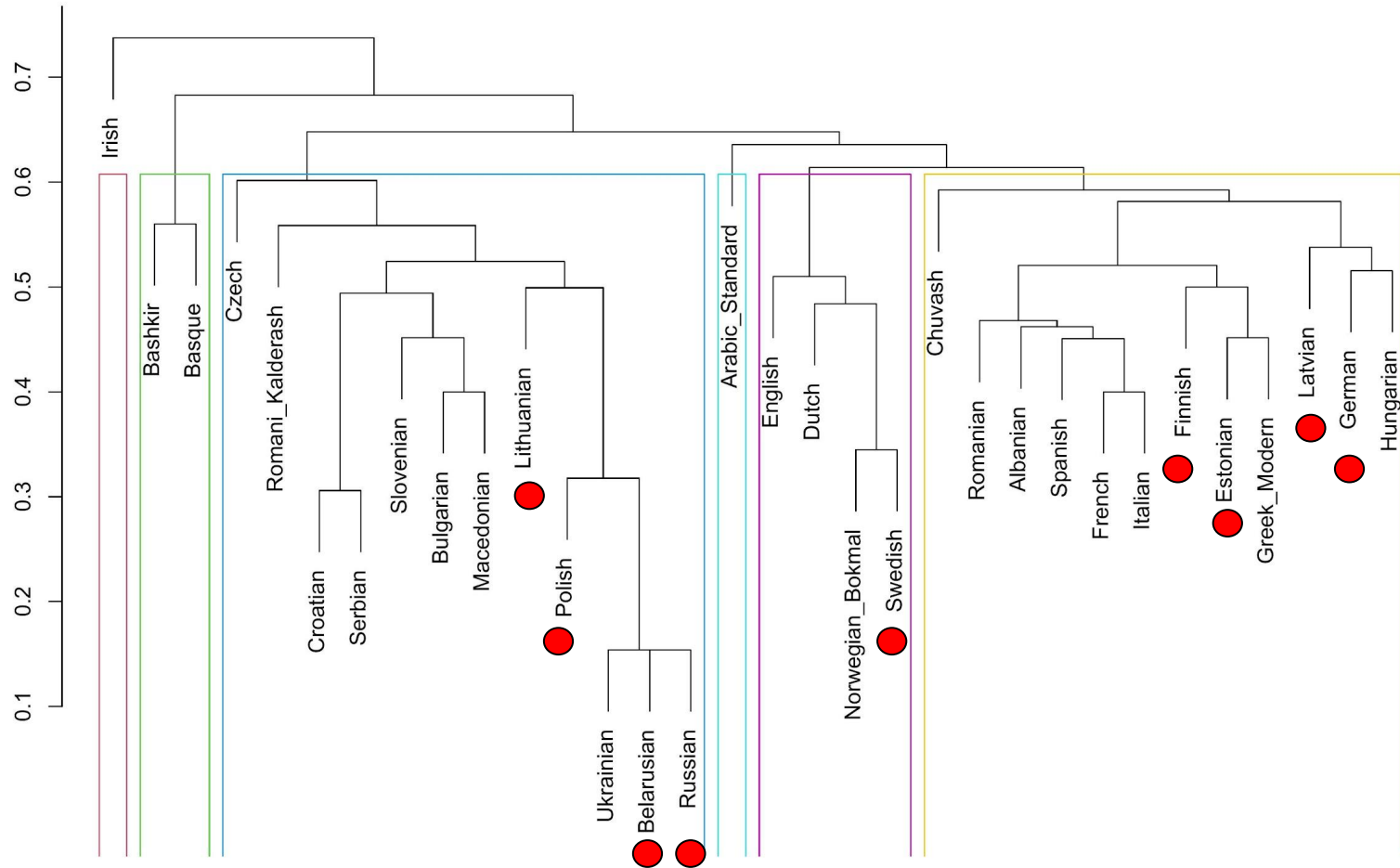


Figure 1. Clustering dendrogram 1 (agglomerative clustering, average linkage method; coph. corr. coef. ≈ 0.82)

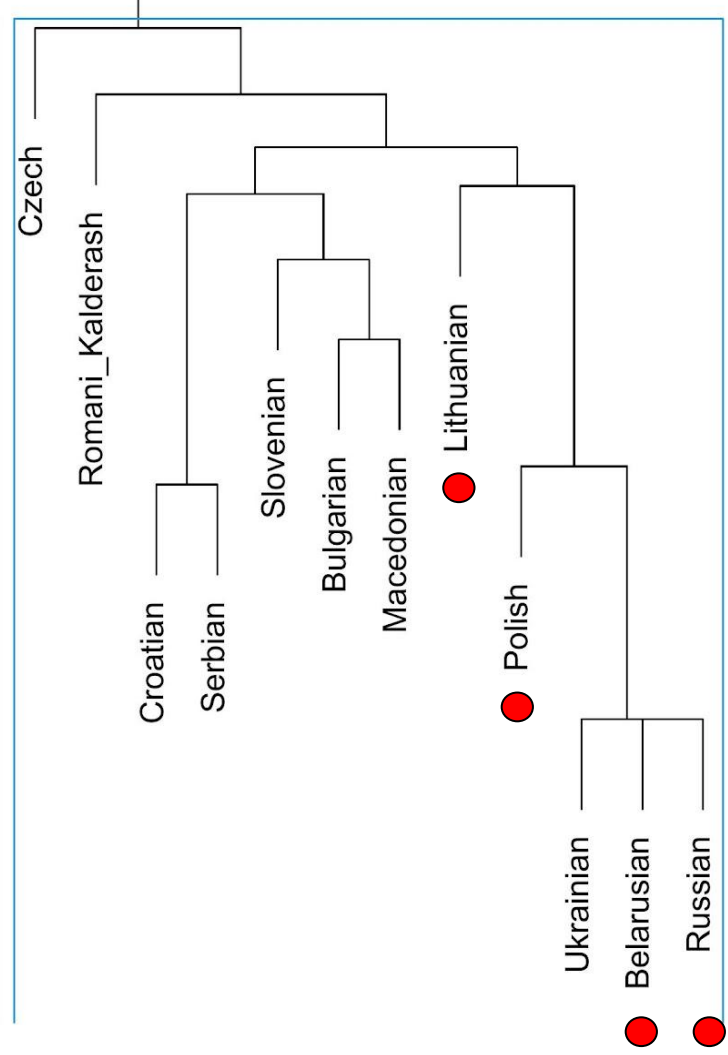


Figure 2. Clustering dendrogram 1, Fragment 1

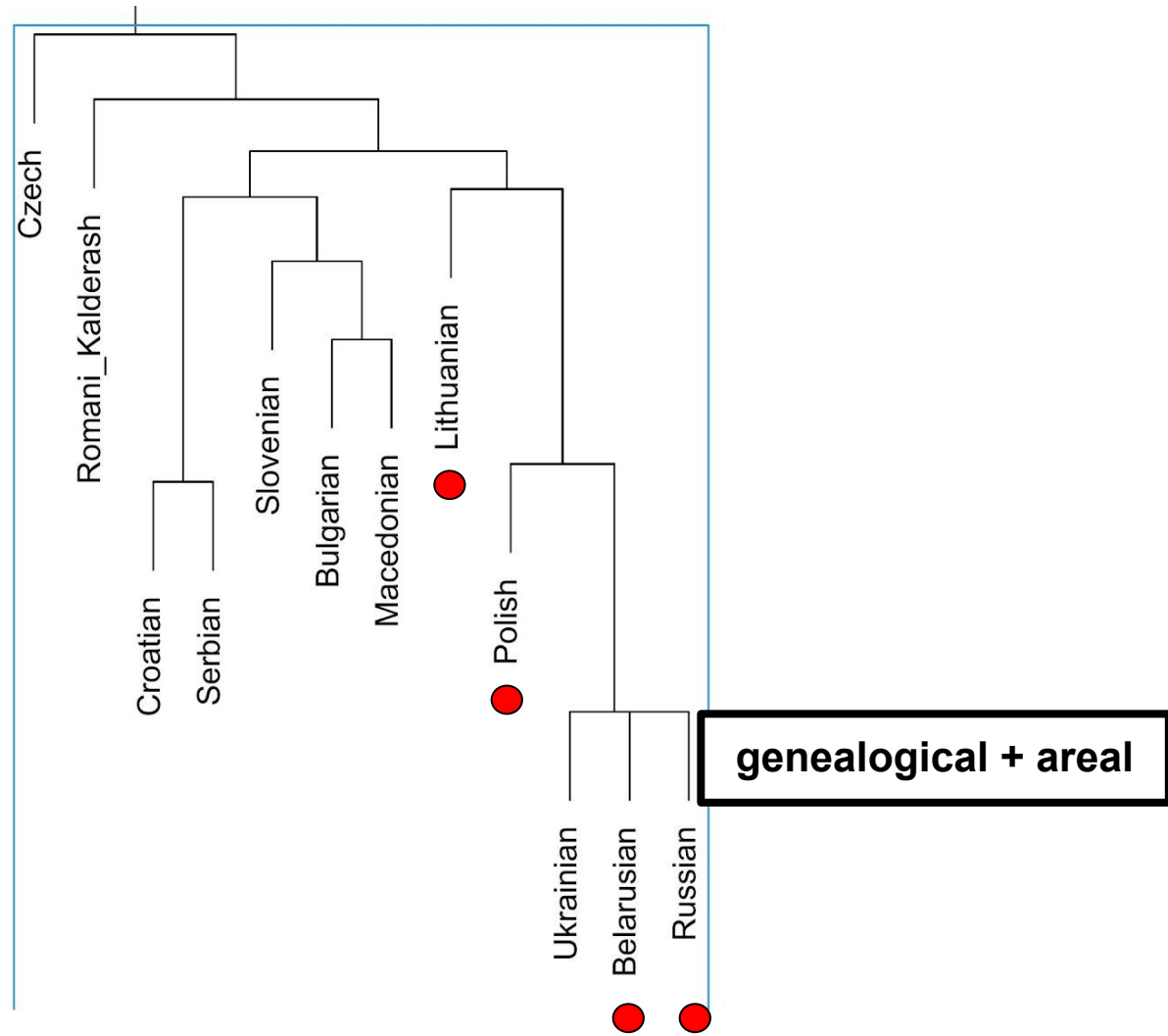


Figure 2. Clustering dendrogram 1, Fragment 1

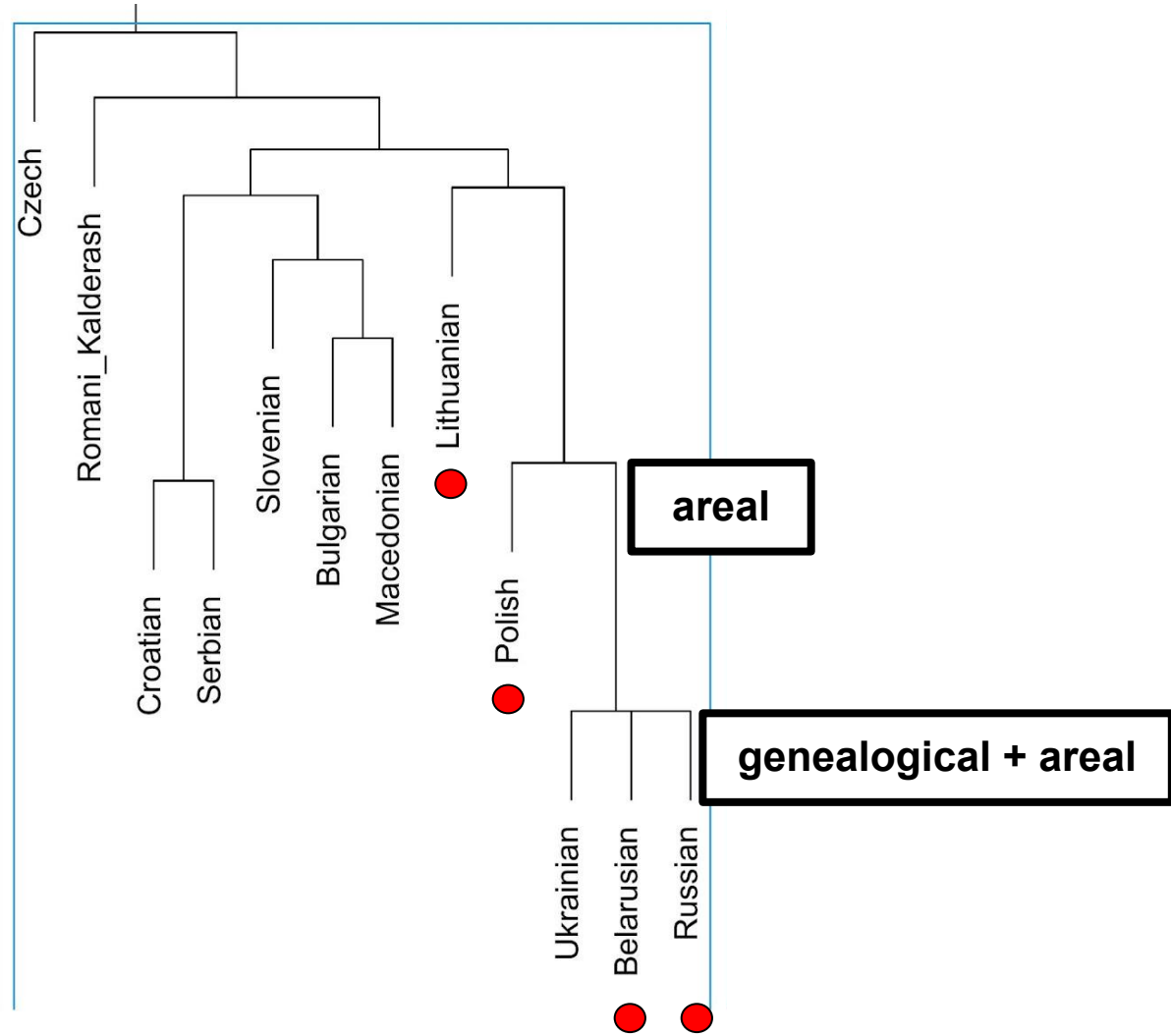


Figure 2. Clustering dendrogram 1, Fragment 1

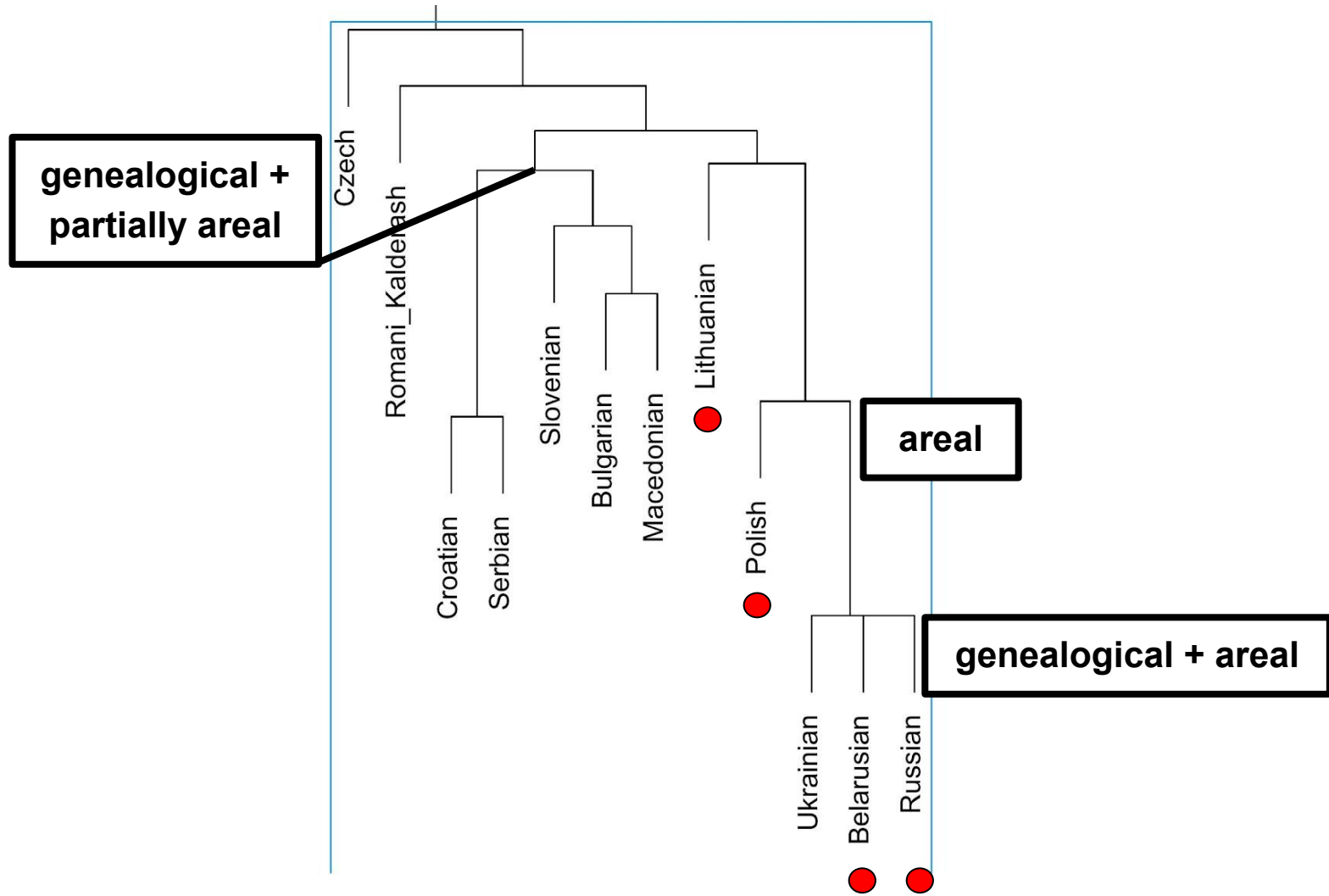
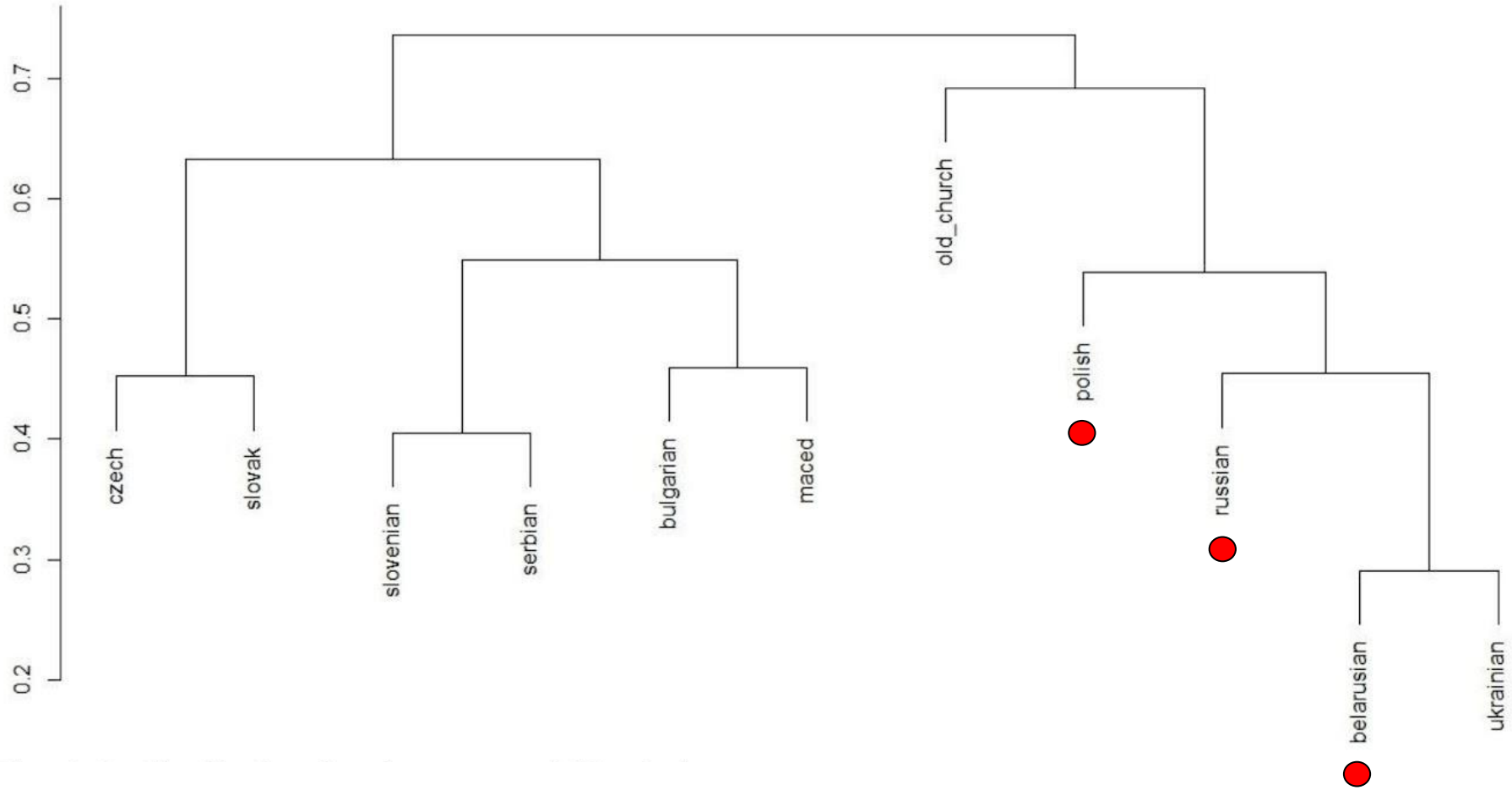


Figure 2. Clustering dendrogram 1, Fragment 1

Similarity dendrogram of Slavic languages



(Seržant et al., in print)

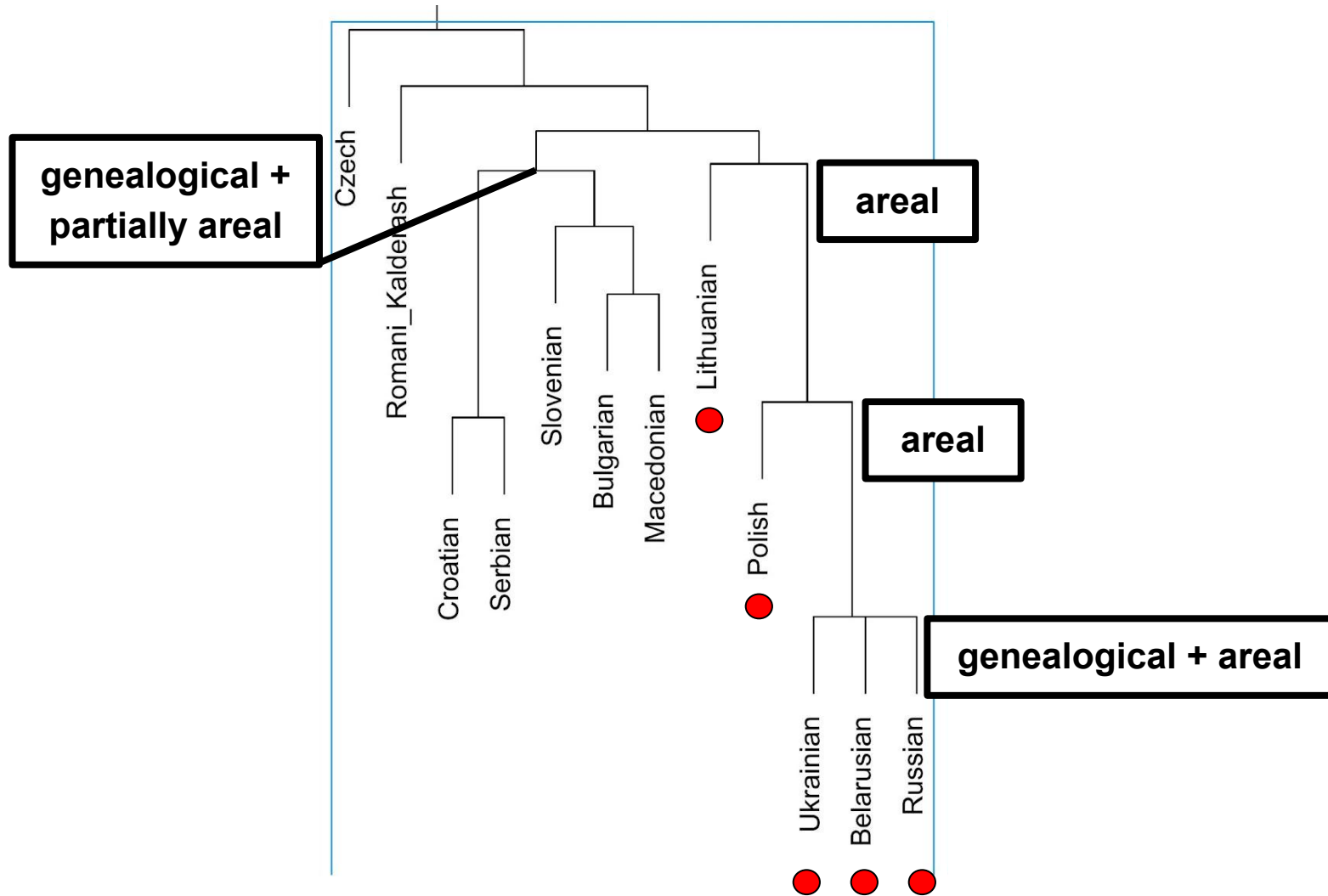


Figure 2. Clustering dendrogram 1, Fragment 1

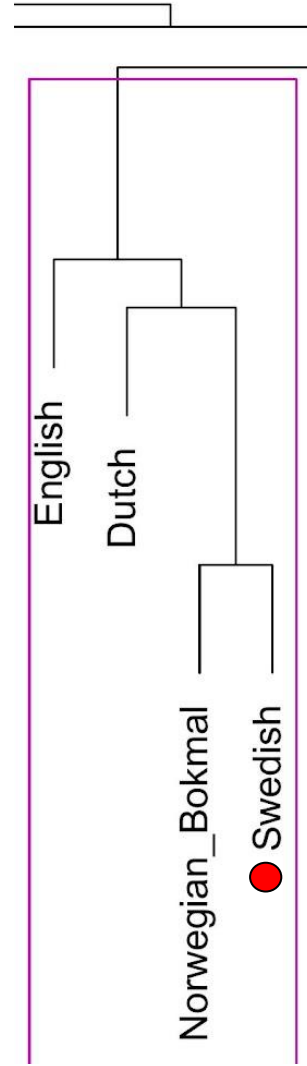


Figure 3. Clustering dendrogram 1, Fragment 2

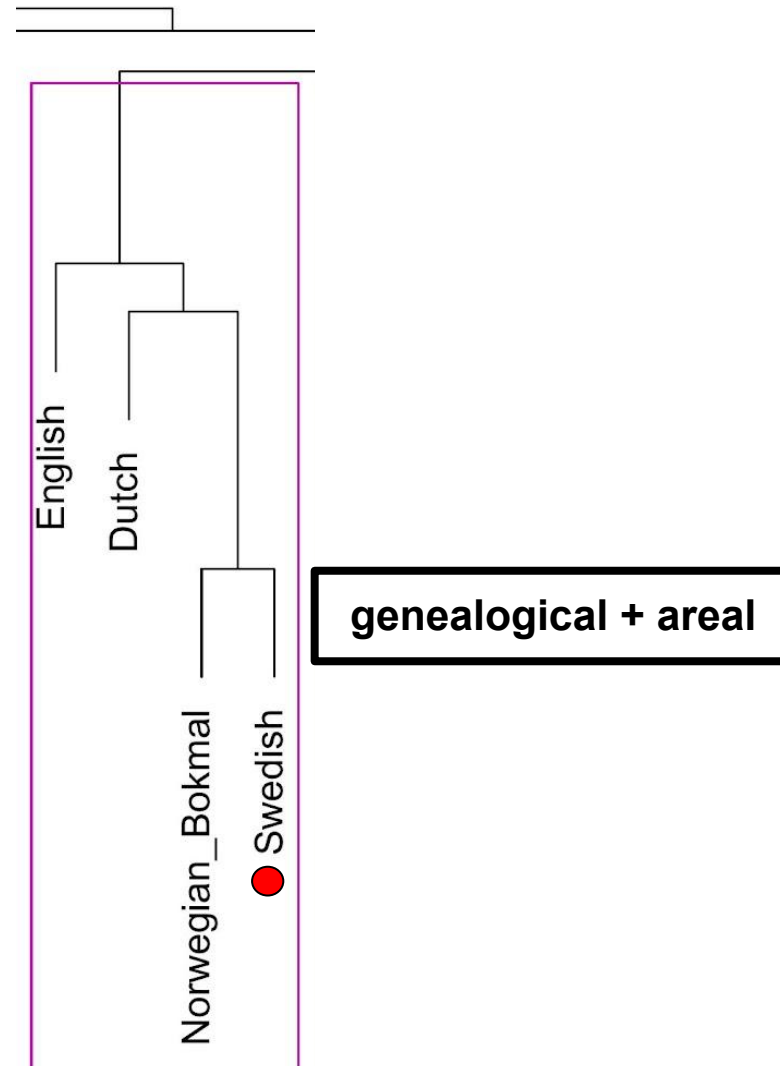


Figure 3. Clustering dendrogram 1, Fragment 2

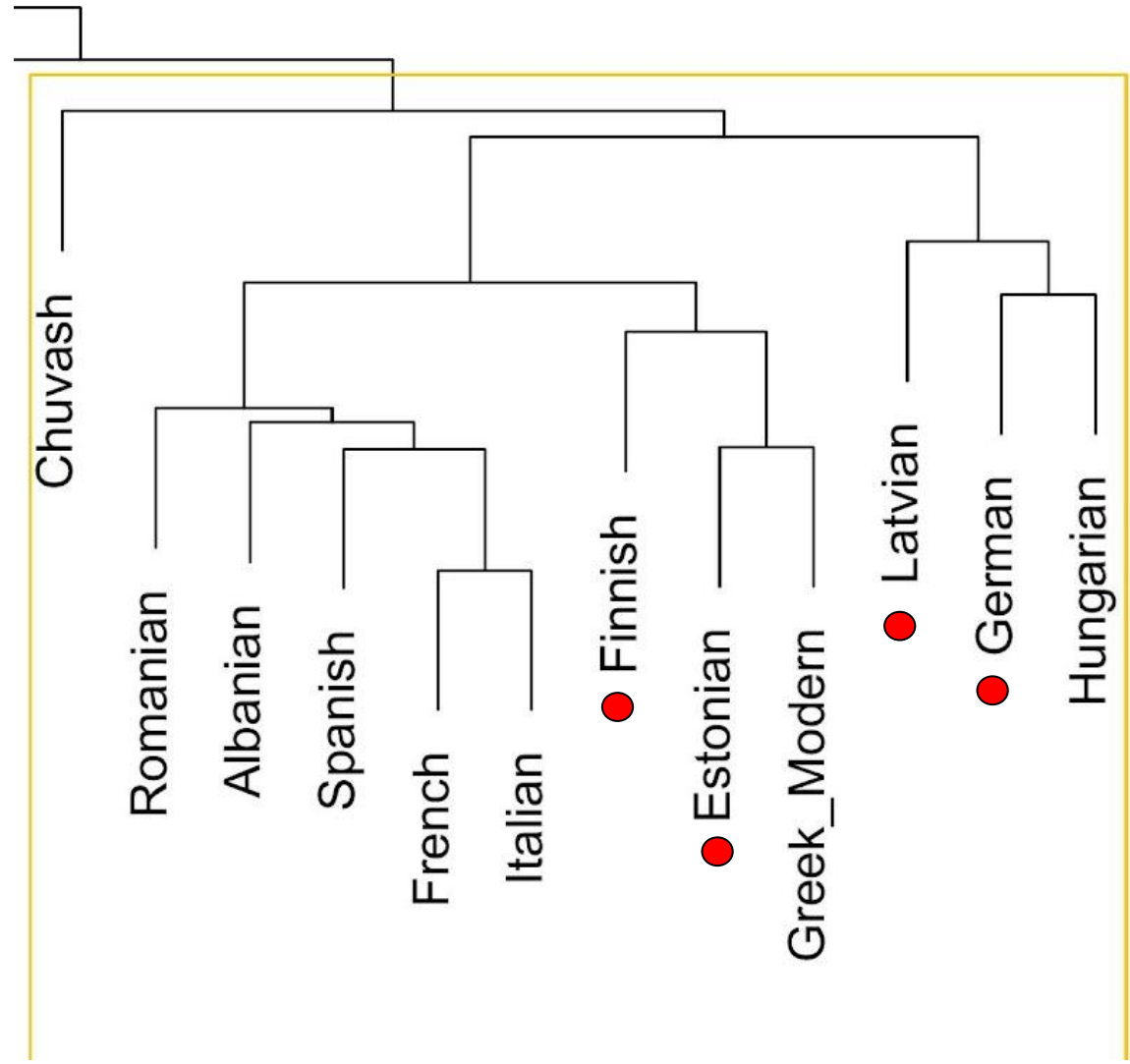


Figure 4. Clustering dendrogram 1, Fragment 3

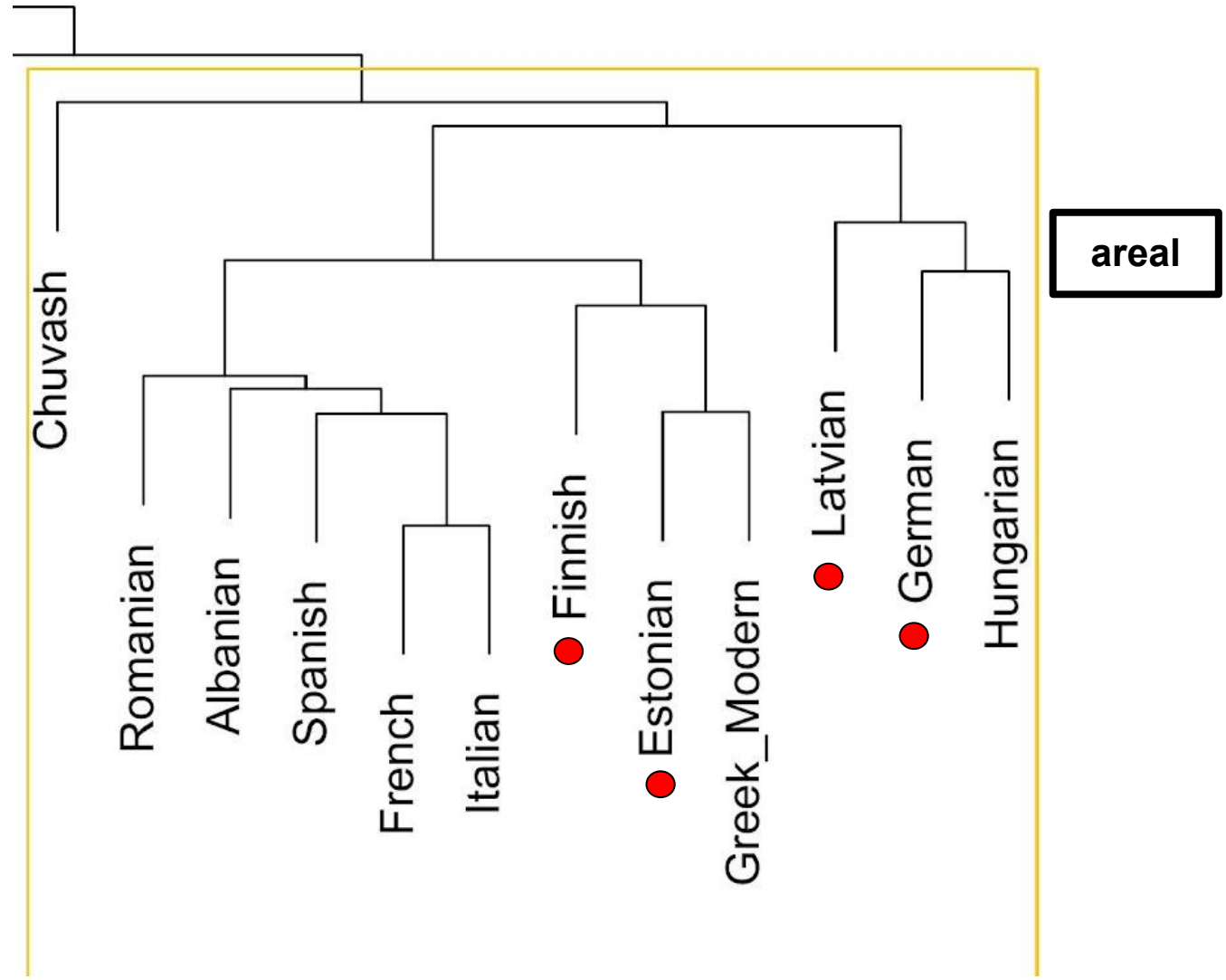


Figure 4. Clustering dendrogram 1, Fragment 3

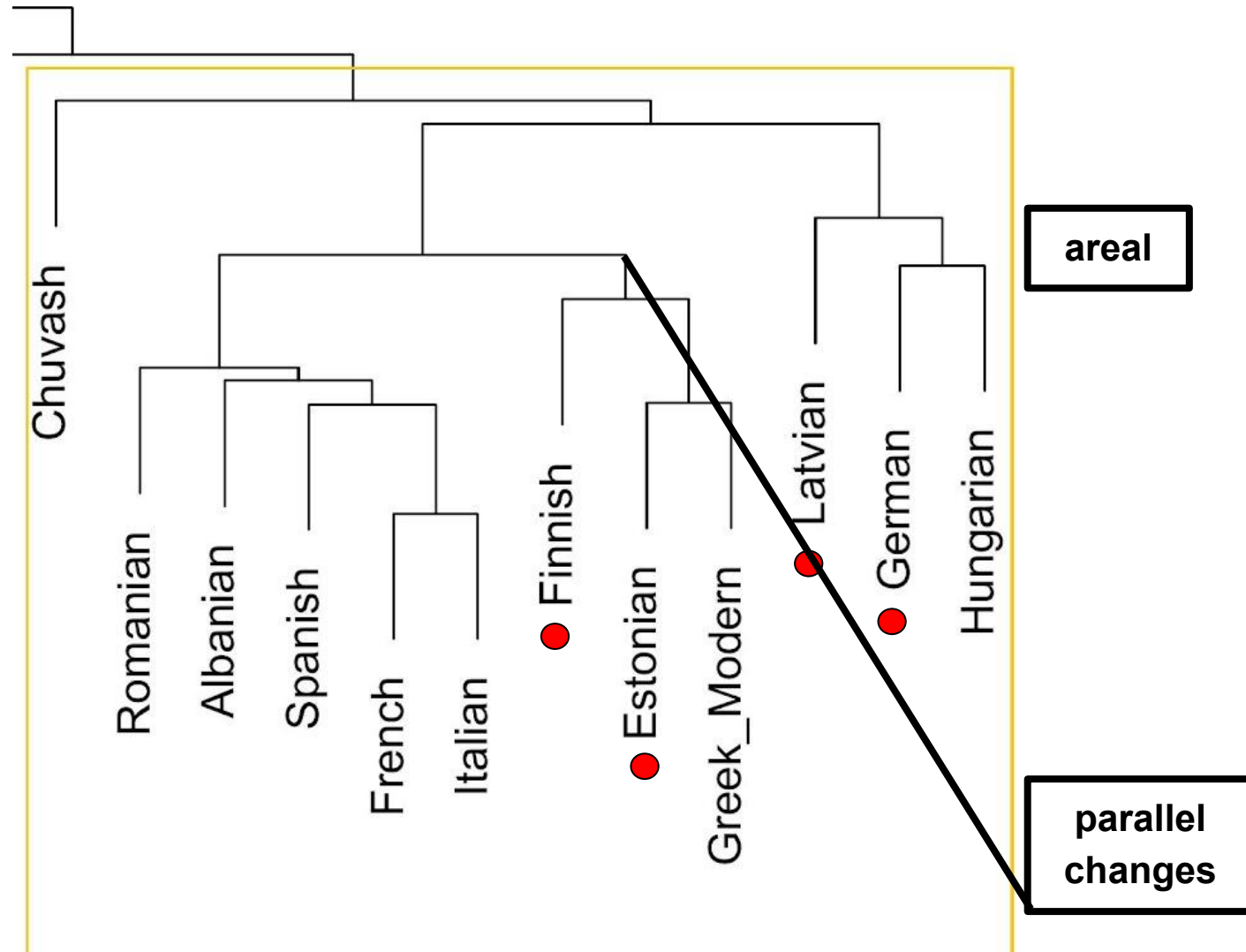


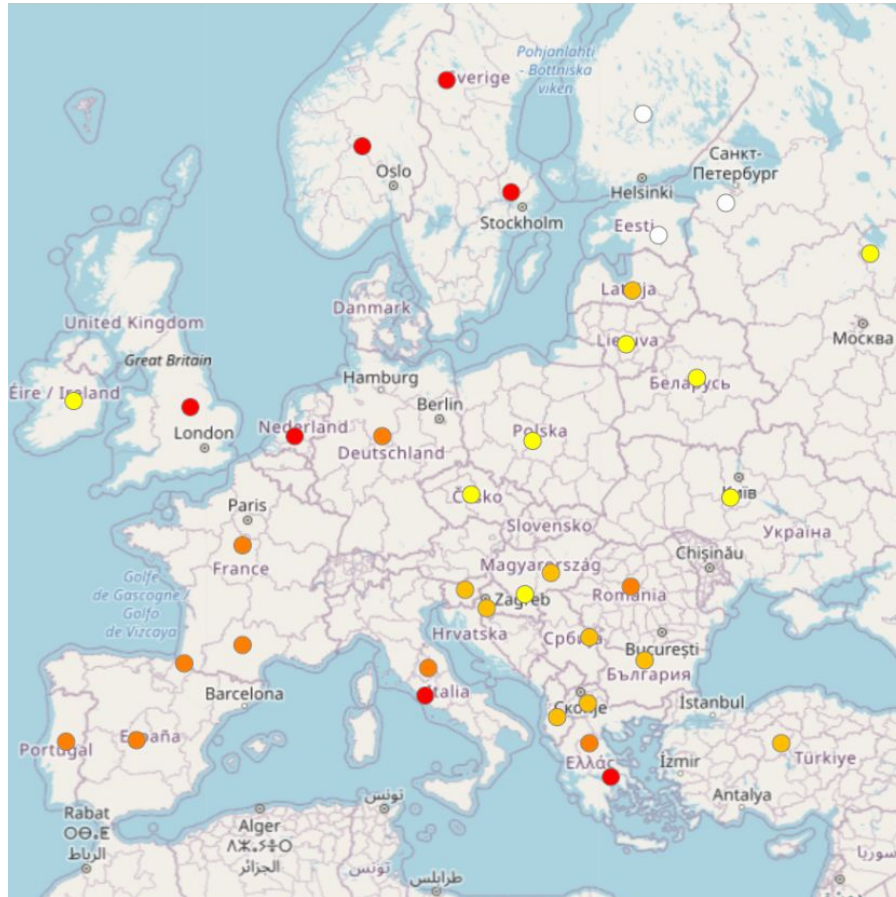
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Productivity of the transitive pattern



(Say, Nikolaev. 2021. Maps. In: <https://www.bivaltyp.info/>)

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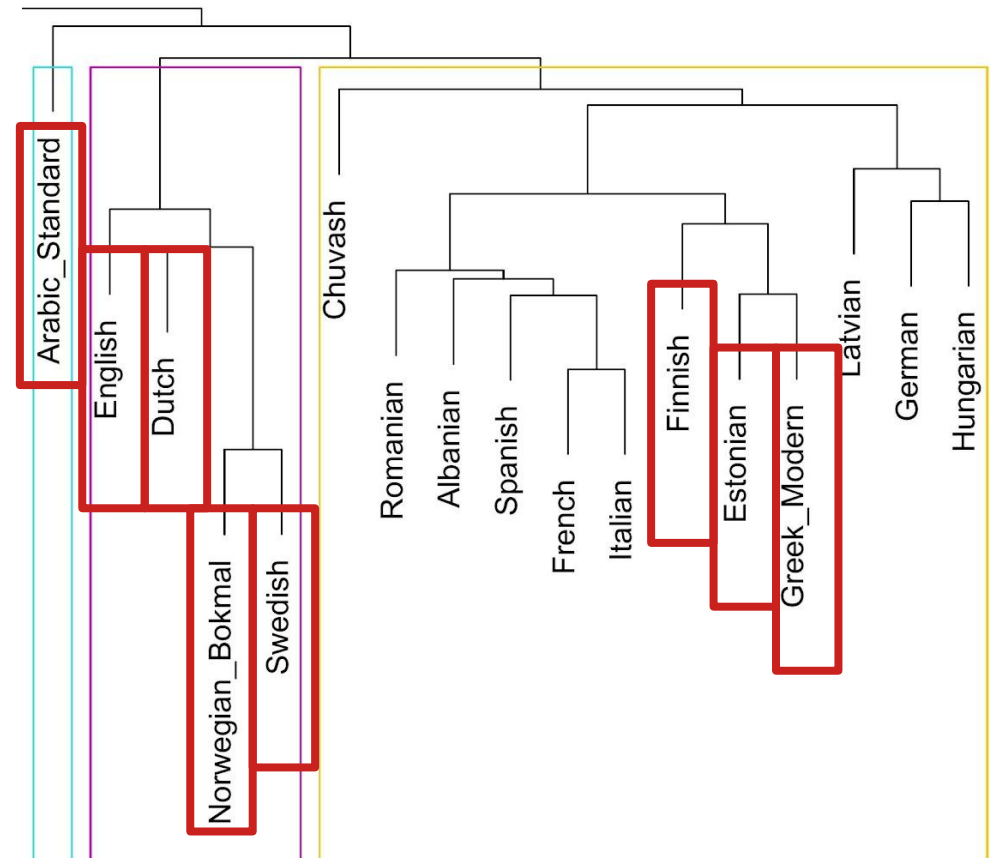
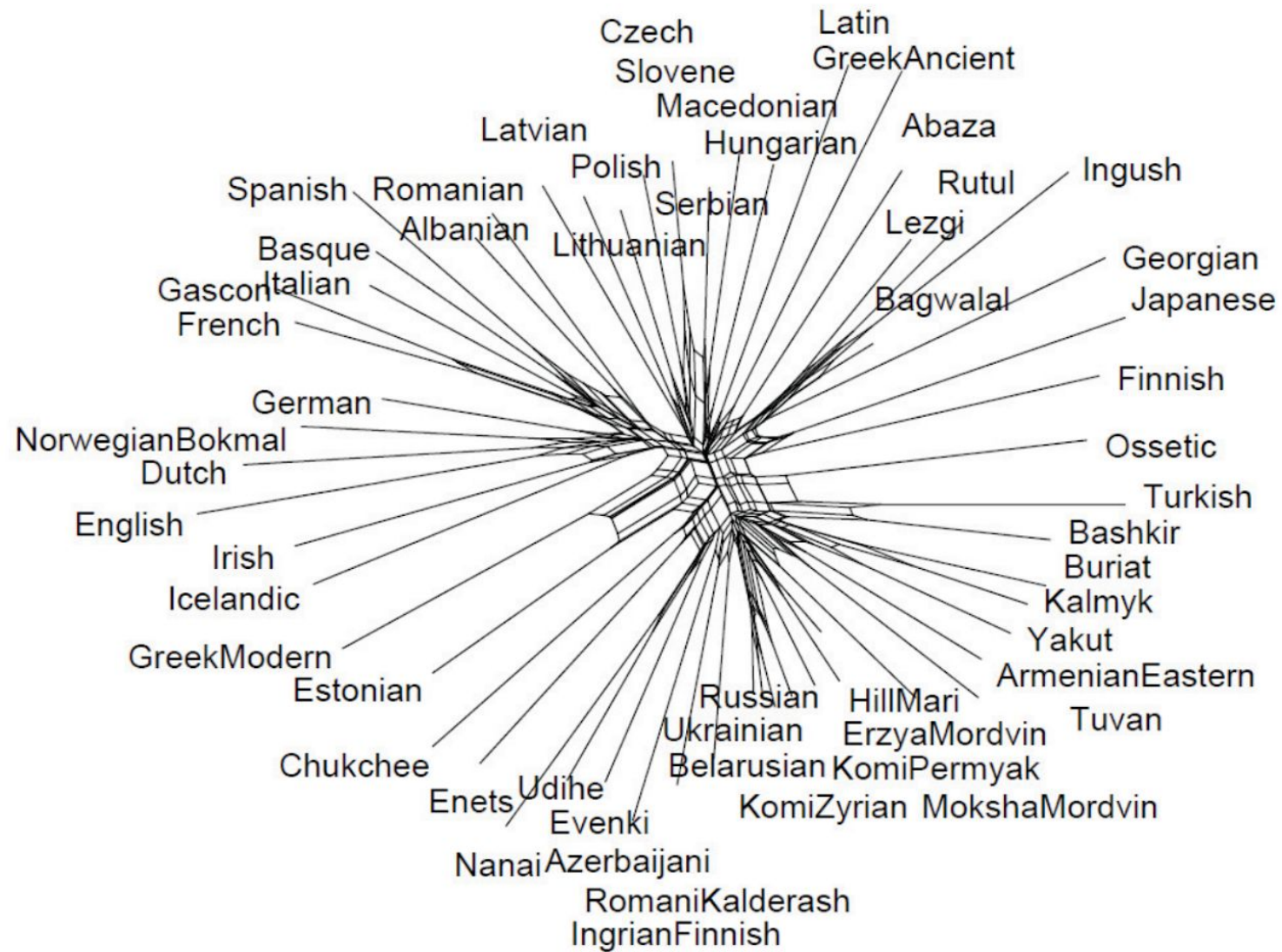


Figure 5. Language of high transitivity and their clusters



Conclusion

Object marking strategies:

1. exhibit geographical clusters
2. cluster genealogically (or genealogically + geographically)
3. may be the result of parallel independent changes (productivity of the transitive pattern)
4. The CB languages (Finnish, Estonian, Latvian, Lithuanian, Russian, Belarusian, Ukrainian, Polish, German, Swedish) take part in different clusters
5. Binary contacts

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Appendix 1. Comparative concepts (tags)

ARG1 (SUBJECT FORM)

ARG2 (OBJECT FORM)

ABOUT (TOPIC)

ACROSS

AGAINST

ALONG

AS (ESSIVE) ^{1 occurrence}

AT_TO

BEHIND

DAT (RECIPIENT)

FOR (PURPOSE)

FROM

IN_INTRO

INFRONT

INSTR (INSTRUMENT)

INTR (INTRANSITIVE VERB) ^{1 occurrence}

ON_ONTO

OVER

POS (POSSESSIVE)

UNDER

WITH (COMITATIVE)

WITHOUT (CARITIVE)

Appendix 2. Research subsample (32 lgs x 99 verbs)

	Albanian	Arabic (Standard)	Bashkir	Basque	Belarusian	...
be afraid	FROM	FROM	FROM	AT_TO	POS	...
throw	ARG2	ARG2	ARG2	ARG2	ARG2	...
believe	AT_TO	ARG2	AT_TO	AT_TO	DAT	...
take	ARG2	ARG2	ARG2	ARG2	ARG2	...
...

Appendix 3. Method

To compute the differences between the languages in the sample, I dummified the dataset (*dummy.data.frame*), measured binary distances between the languages (*dist*, method = "binary") and applied a cluster analysis (*hclust*, method = "average") using R (R Core Team 2021).

	be_afraidARG2	be_afraidAT_TO	be_afraidFOR	be_afraidFROM	be_afraidINFRONT	be_afraidPOS	throwARG2
Albanian	0	0	0	1	0	0	1
Arabic_Standard	0	0	0	1	0	0	1
Bashkir	0	0	0	1	0	0	1
Basque	0	1	0	0	0	0	1
Belarusian	0	0	0	0	0	1	1
Bulgarian	0	0	0	1	0	0	1