Identifying dialectal features of the Udmurt language with the help of an internet corpus

Выявление диалектных особенностей удмуртского языка при помощи интернет-корпуса

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Udmurt language

- Uralic family, Permic branch
- Udmurtia and neighboring regions
- 340,000 speakers
- Standard literary language; 4 main dialectal areas

Corpus

- Collection of texts
- Linguistic annotation:
  - metadata
  - lemmatization, morphological annotation
  - any other kind of annotation (e.g. borrowings)
- Search engine
  - corpus ≠ library
  - corpus ≠ Yandex/Google

Udmurt vk-corpus

- Posts and comments of Udmurt-language Vkontakte groups and users
- 2.5 million tokens in Udmurt (400 groups, 2000 users)
- Sentence-level language recognition (rus/udm), morphological annotation
- Author-related metadata: sex, birth year, birth place, current location

Udmurt vk-corpus

Мон бы пукысал али и кылзйськысал Лариса Васильевнаез, сое можно кылзыны вечность. Интерес не пропадёт. Тау та смена понна котькудйзлы! Алиночка Владимировна, тон прекрасной адями☺️

привет 😄 не надо грустить, Алёна. А вот лучше малпаськы сессиед сярысь😀

Алексей, 😄 точно

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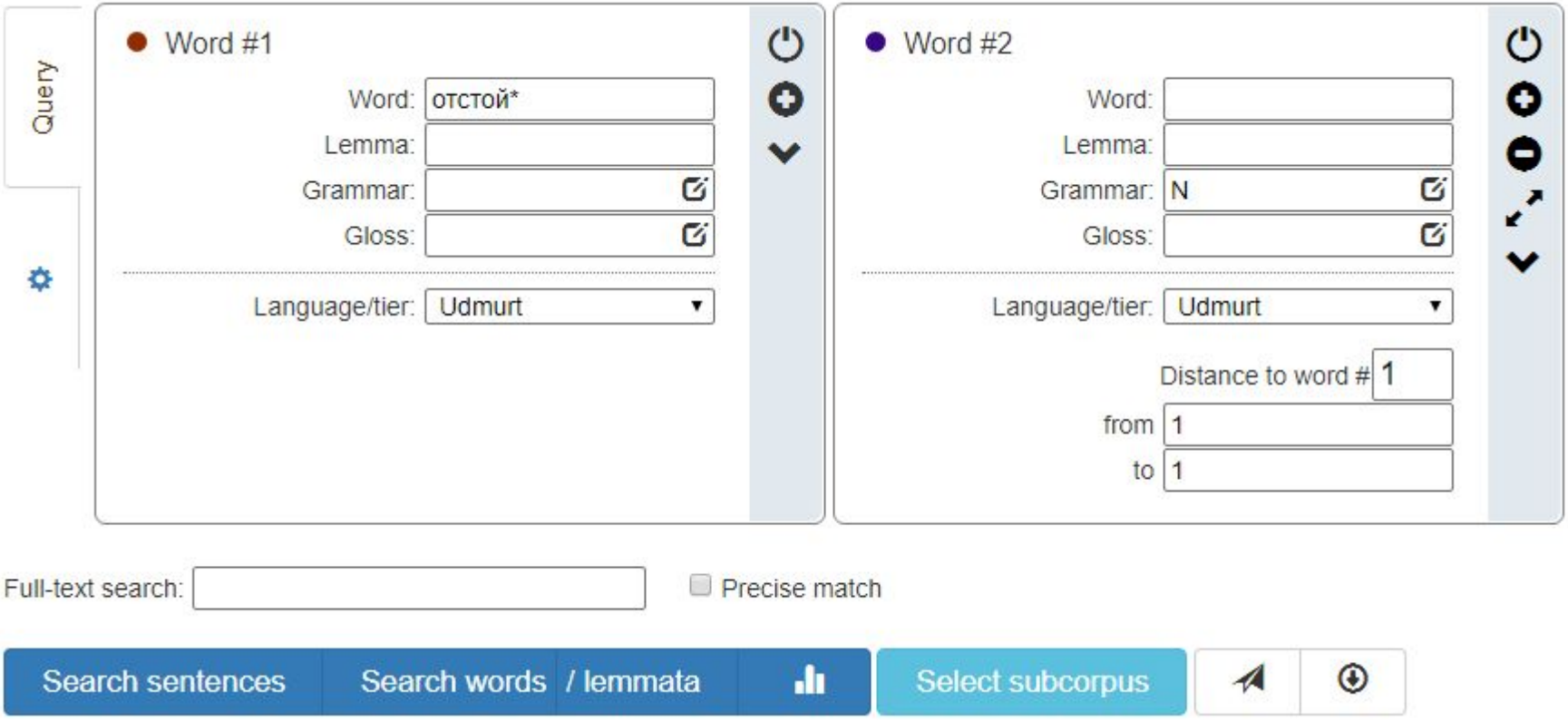
sentences in Russian

borrowed words / code switching within a sentence

Udmurt vk-corpus

- Web interface: search



Udmurt vk-corpus

- Web interface: search results

Dialectology

- Phonetics
- Lexicon
- Morphology
- Syntax

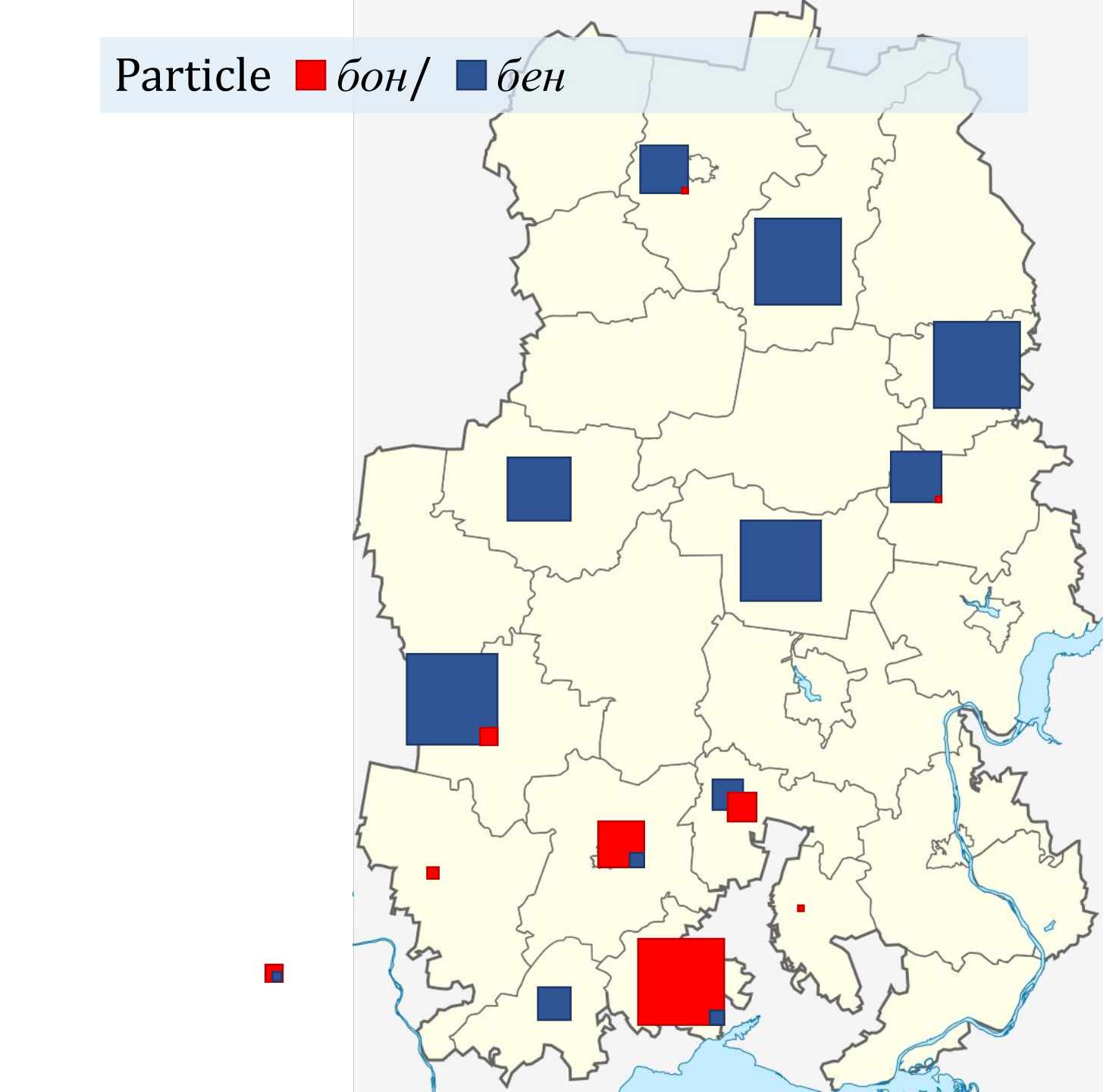
traditional dialectology

vk-corpus: phonetics

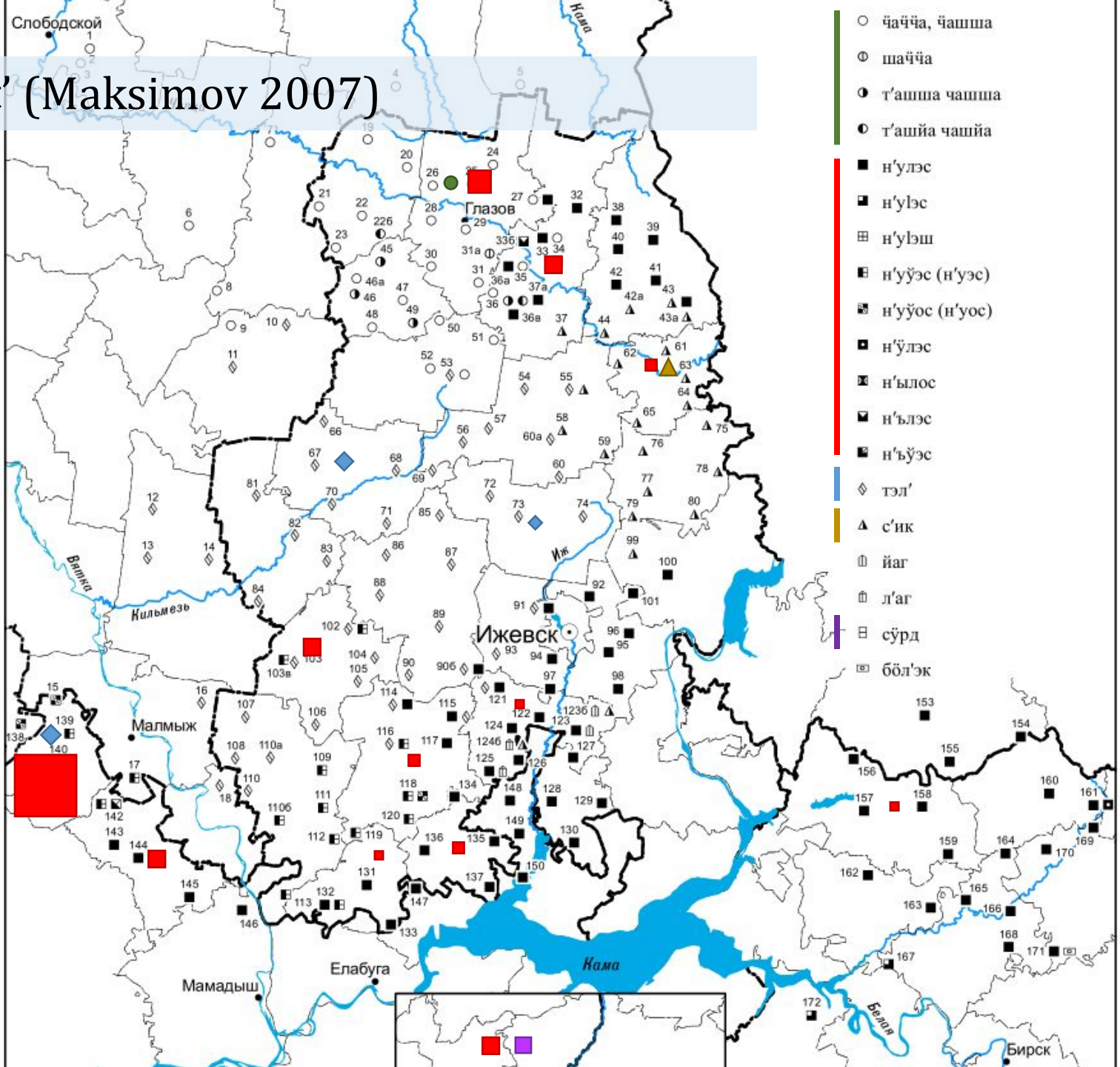
- People try not to deviate from the standard variety; orthography cannot reflect all dialectal features; the diacritics (*ӵ, ӟ, ӝ, ӥ, ӧ*) are often omitted

vk-corpus: lexicon

- Many people try to use the standard vocabulary
- Nevertheless, dialectal words show up quite often
- I have too few tokens for each of Udmurtia's 25 districts => only high-frequency vocabulary can be studied


Particle
бон/
бен

‘Forest’ (Maksimov 2007)



Подорожник (Maksimov 2013)

Borrowed Russian verbs

- The standard way of borrowing a Russian verb is to use the construction V_{inf} *+ [карыны]*:

Трос инты-ын снимать кар-о-м.
many place-LOC shoot.RUS do-FUT-1PL

'We're going to shoot [the movie] in many places.'

'Мы будем снимать во многих местах.'

Borrowed Russian verbs

- There is a detransitivising suffix *-ськ-/-ск-* in Udmurt, which semantically is very close to the Russian suffix *-ся*:
  - passive
  - impersonal modal passive
  - generic subject/object
  - autocausative
  - reflexive
  - reciprocal

Borrowed Russian verbs

- If a reflexive Russian verb is borrowed:
  - either the light verb *карыны* has the ***-ськ-*** suffix:

*Кызьы дозвониться кар-**иськ**-оно тӥ дор-ы.*😉😉😉😉

how reach.RUS do-DETR-DEB you.PL near-ILL

‘How can I reach you guys [by phone]?’

  - or it does not:

со-ос ю-о, кыск-о, материться кар-о.

s/he-PL drink-PRS.3PL smoke-PRS.3PL swear.RUS do-PRS.3PL

‘They drink, smoke, swear.’

Borrowed Russian verbs

- Possible hypotheses regarding the distribution of the two variants:
  - lexical (depends on the verb)
  - depends on the meaning of the *-ся* suffix
  - depends on the aspect of the Russian verb
  - depends on the form of *карыны*
  - random

Borrowed Russian verbs

- Possible hypotheses regarding the distribution of the two variants:
  - ~~lexical~~: same verbs often occur in both constructions
  - ~~depends on the meaning of *-ся*~~: no correlation
  - ~~depends on the aspect~~: no correlation; btw, the aspect is not always chosen according to Russian rules
  - ~~depends on the form of *карыты*~~: no correlation
  - ~~random~~: no, because people tend to consistently use only one of the strategies

Russian verbs: *к*

Borrowed Russian verbs

- The choice is clearly geographically conditioned
- The detransitive-less strategy prevails on the territory of the neighboring Tatarstan and Bashkortostan regions
- The light verb construction for verbal borrowings is exactly the same in Tatar and Bashkir (therefore, contact influence may be the driving force behind this distribution)

Conclusion

- An internet corpus can provide the data for identifying dialectal features
- The phonetic differences are almost impossible to extract from such a corpus
- Lexical features can be identified, provided the frequency is high enough
- Besides, interesting syntactic features can be identified (which is valuable, since the science does not know much about them)

Thank you for your attention!