

North Sámi Ambipositions: Radial Category Profiling & Typological Comparisons

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Radial Category Profiling

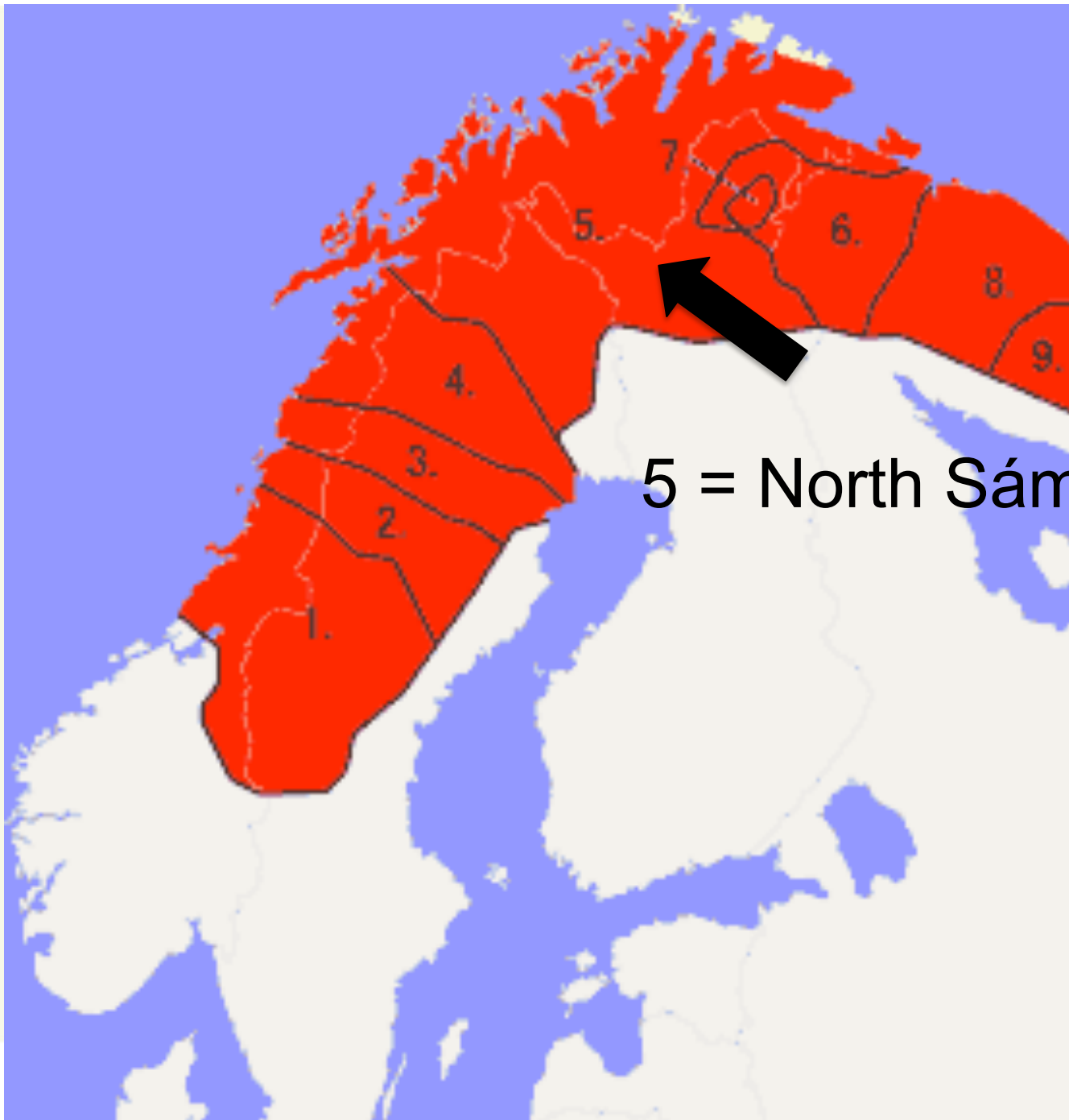
- **Radial Category Profiling** – Comparison of radial categories of polysemous elements (Nesset et al. 2011)
 - If two linguistic units are close synonyms, they share the same radial category
 - Usage will differ across the nodes of the radial category, and this can be measured
- **Other types of profiling** (methods for investigating form-meaning relationships):
 - Grammatical Profiling, Constructional Profiling, Collostructional Profiling, Historical Profiling
 - Each can be thought of as a subset of behavioral profiling (Divjak & Gries 2006, Gries & Divjak 2009)



North Sámi...



- A Finno-Ugric language
- About 30,000 speakers
- In contiguous regions of northern Norway, Sweden, and Finland
- Unique in Europe as a minority language in contact with majority languages from two different language families: **Indo-European [mainly prepositional]** and **Finno-Ugric [mainly postpositional]** (Ylikoski 2009:201-202)



5 = North Sámi

Ambipositions:

Adpositions that function as both prepositions and postpositions

- Typologically rare phenomenon (Hagège 2011)
 - Such adpositions are found in Finnish, Estonian, and the Sámi languages
 - There are more of them in Sámi languages (see Table 1 on handout)
 - In Finnish and Estonian there are strong tendencies (e.g., time with preposition, space with postposition)
 - Distribution in Sámi languages has not previously been studied in detail



4 Ambipositions in North Sámi



1. a. *miehtá dálvvi* b. *dálvvi miehtá*
[**over** winter-G] [winter-G **over**]
 `**during** the winter'
2. a. *čađa áiggi* b. *áiggi čađa*
[**through** time-G] [time-G **through**]
 `**through** time'
3. a. *rastá joga* b. *joga rastá*
[**across** river-G] [river-G **across**]
 `**across** the river'
4. a. *manjel soađi* b. *soađi manjel*
[**after** war-G] [war-G **after**]
 `**after** the war'

Three hypotheses

1. We expect to find regional variation in use of ambipositions since N. Sámi is in contact with Finnish (predominantly postpositional) in East, and in contact with Norwegian/Swedish (prepositional) in Central and West regions
2. We expect position to be associated with differences in expression of meaning
3. We expect that a language with more ambipositions will use position in a more complex way

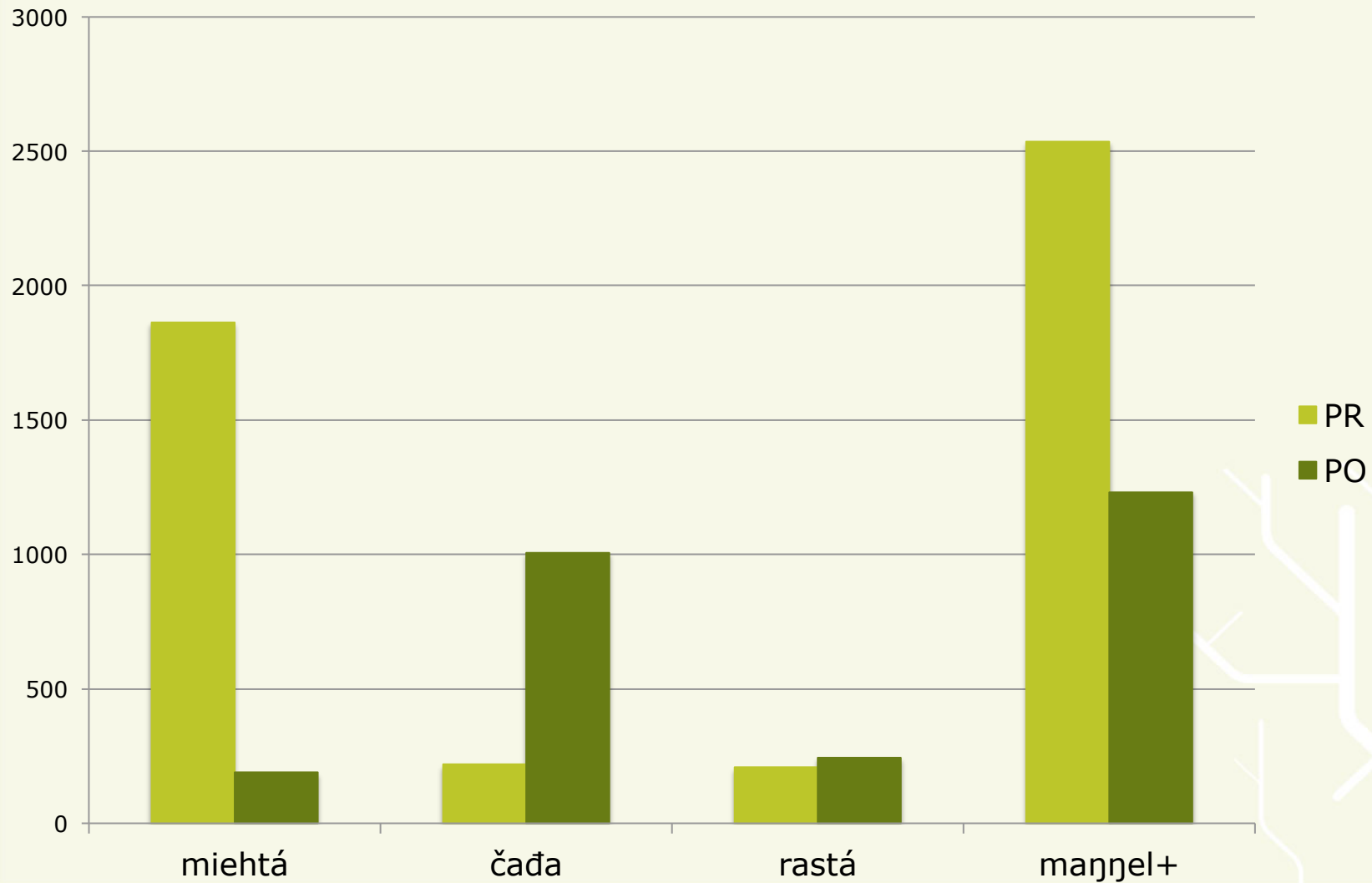


Examples from newspapers

- 1997-2011: **10M** words
- Automatic extraction found **7496** sentences with the 4 ambipositions
- Goal: Tag by hand ≥ 100 examples for each position for each adposition
- In all, **901** examples were tagged by hand for types of meaning expressed



Distribution of adpositions in newspaper corpus (10M words)



Examples from literature

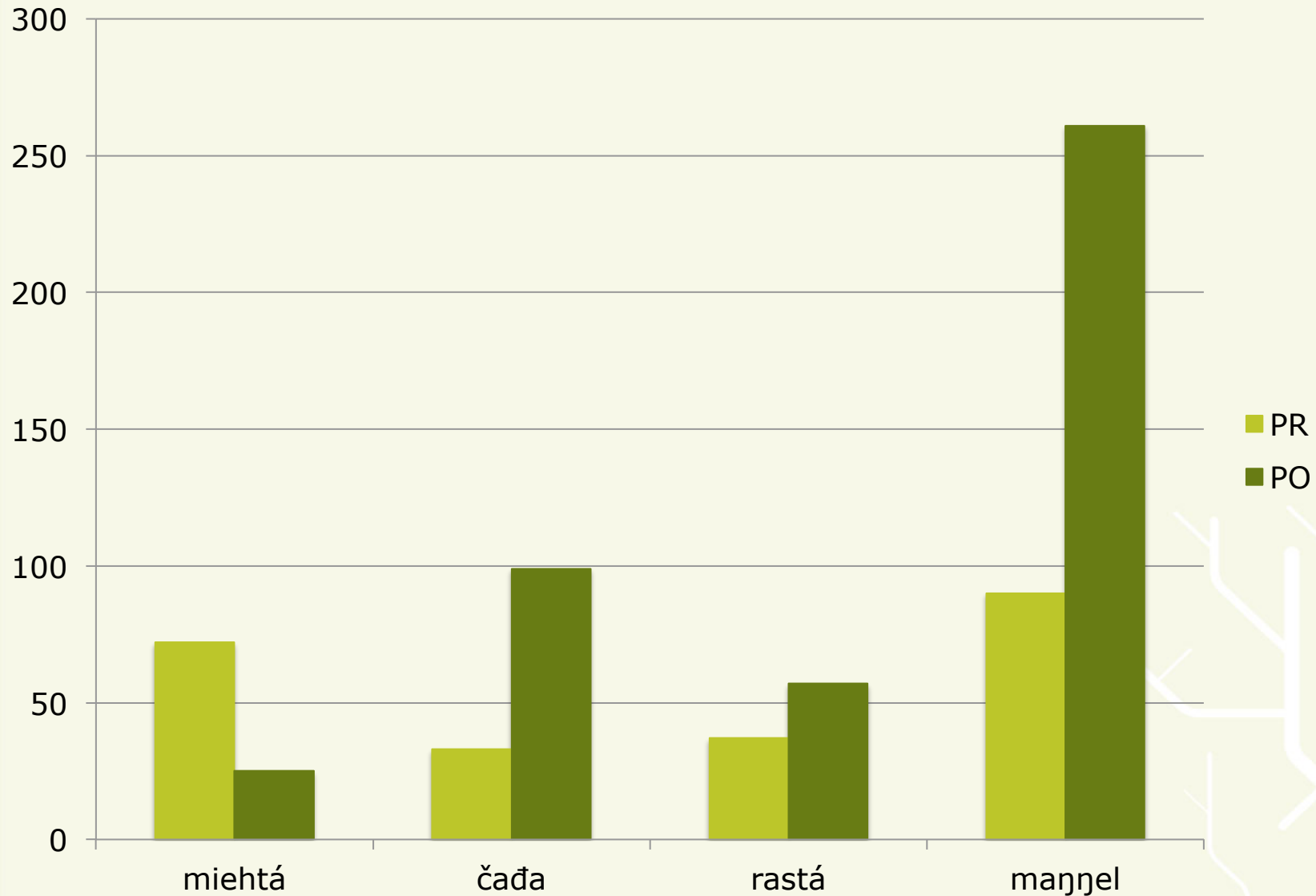
- Examples extracted partly automatically, partly by hand
- **652** examples of the 4 ambipositions found, all tagged by hand
- 20 texts, three geographical regions:
 - West = S. Troms (contact with Norwegian and Swedish)
 - Central = Kautokeino (contact with Norwegian)
 - East = Tana (contact with Finnish)
- New translation of the New Testament



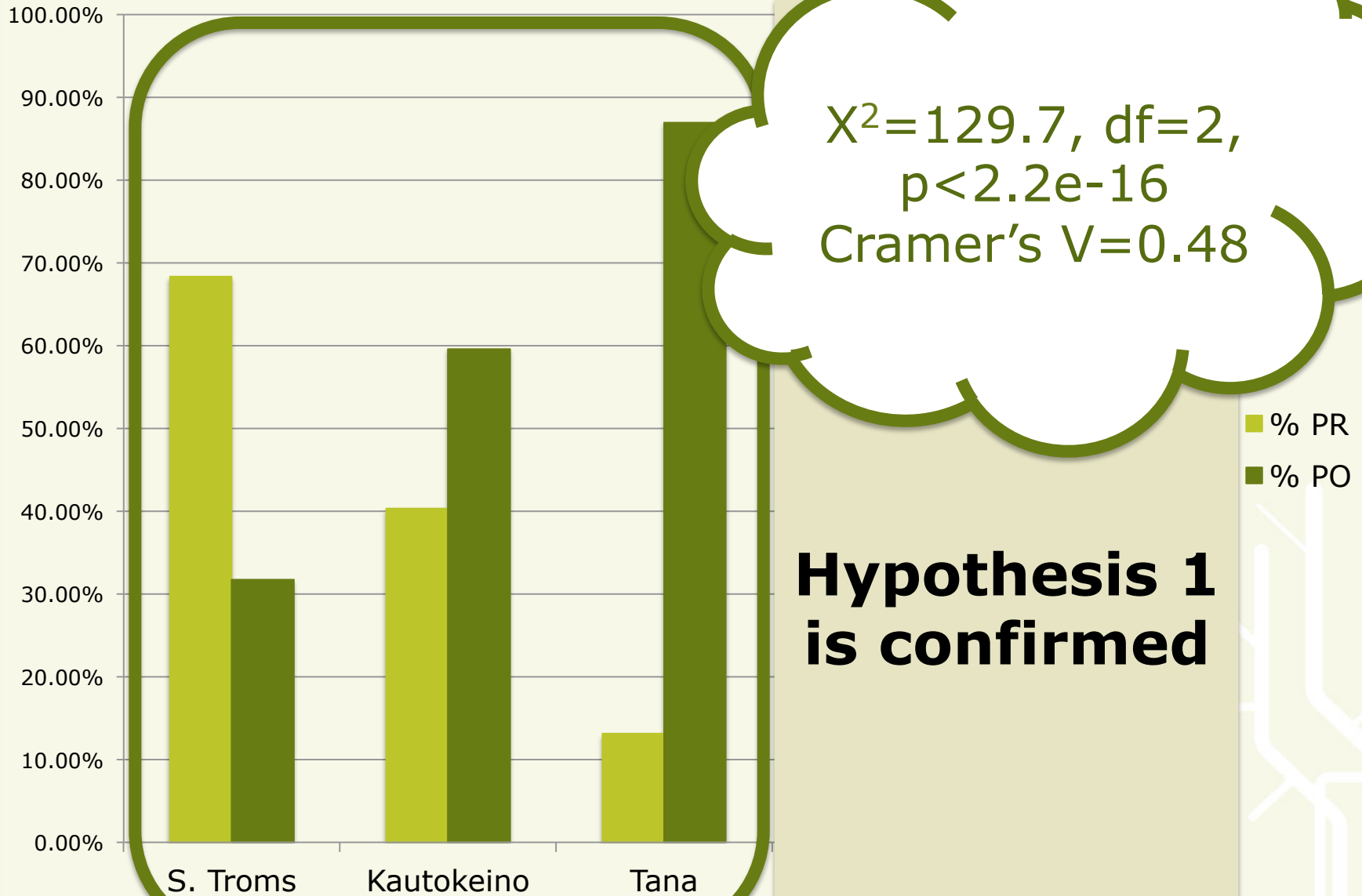


Geographical distribution of literary texts

Distribution of adpositions in literature



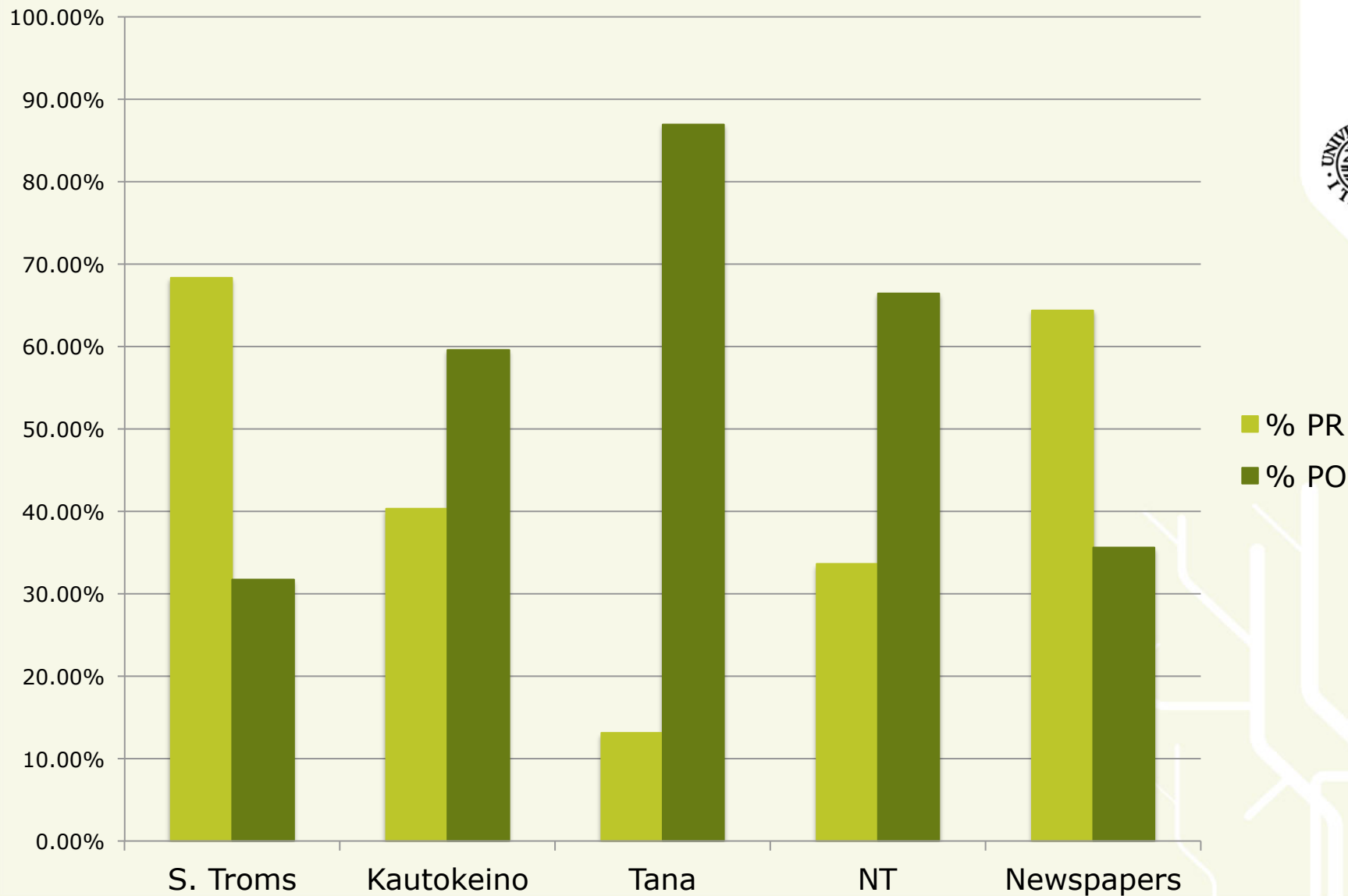
Distribution of adpositions



$\chi^2=129.7$, $df=2$,
 $p<2.2e-16$
Cramer's $V=0.48$

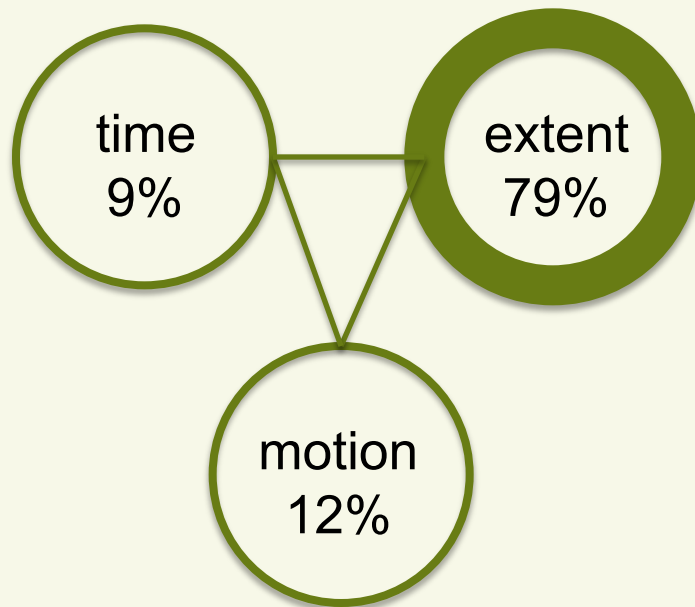
**Hypothesis 1
is confirmed**

Distribution of adpostitions

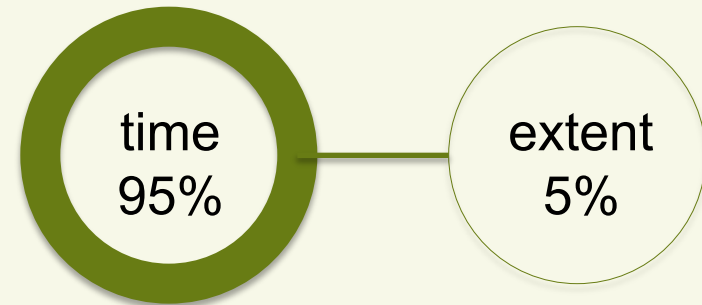


Radial categories: *miehtá* 'over' in newspapers

preposition



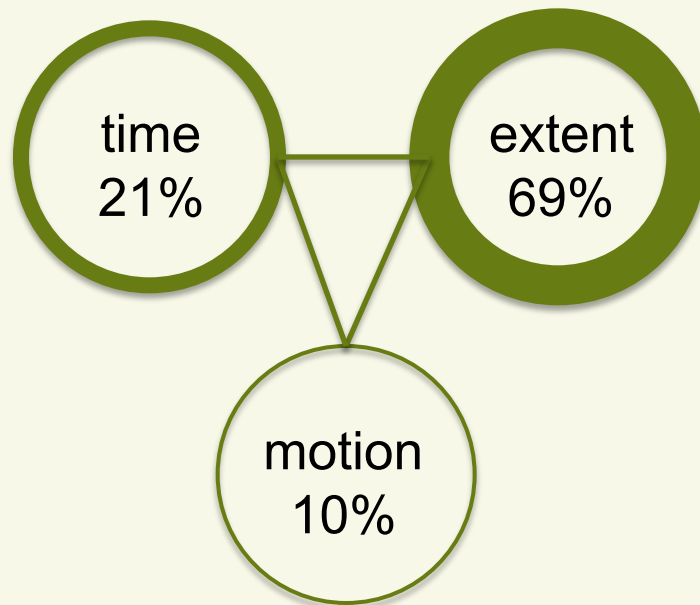
postposition



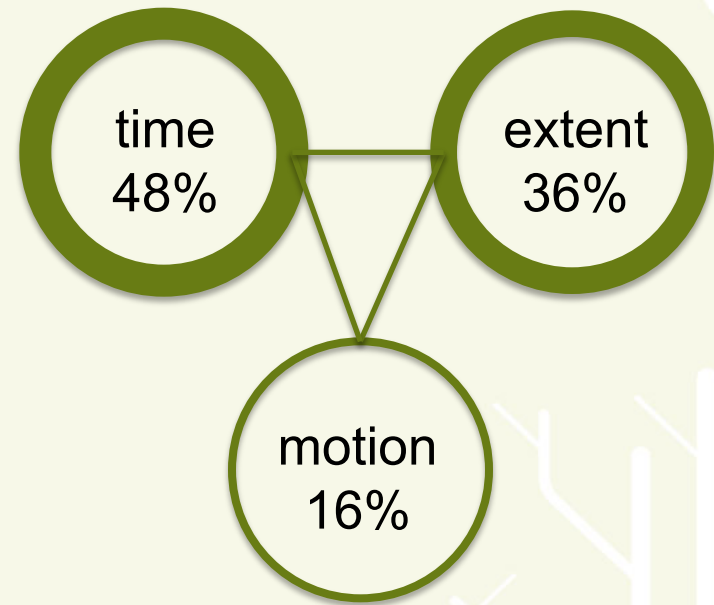
X-squared = 170, df = 2, p-value < 2.2e-16; V = 0.85

Radial categories: *miehtá* 'over' in literary texts

preposition



postposition



miehtá 'over'

Preposition

- Prefers extent, usually in two dimensions
- Used with 'world' and words naming countries, territories, regions

Postposition

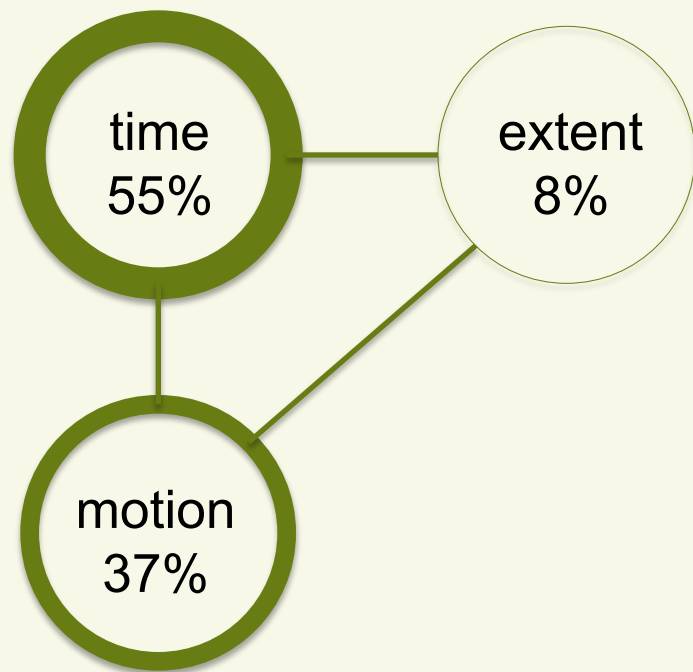
- In newspapers prefers time, especially with words for: 'summer', 'winter', 'day', 'night', but does not express motion
- In literature, most often refers to time and extent



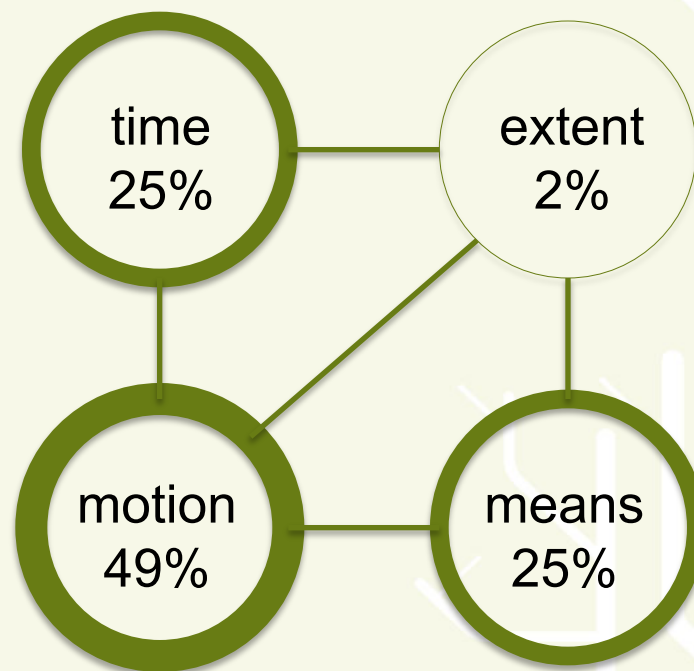
Radial categories: *čada* 'through' in newspapers



preposition



postposition

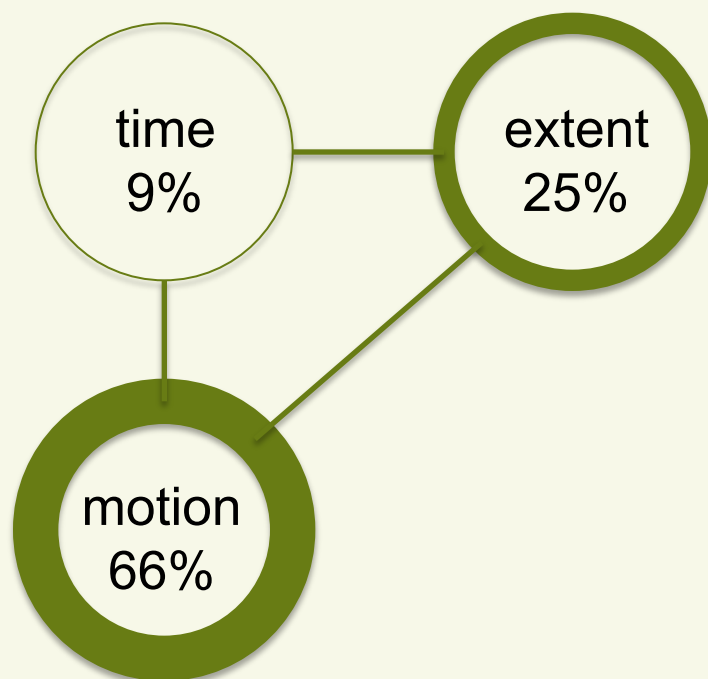


X-squared = 45, df = 2, p-value < 1.3e-10; V = 0.43

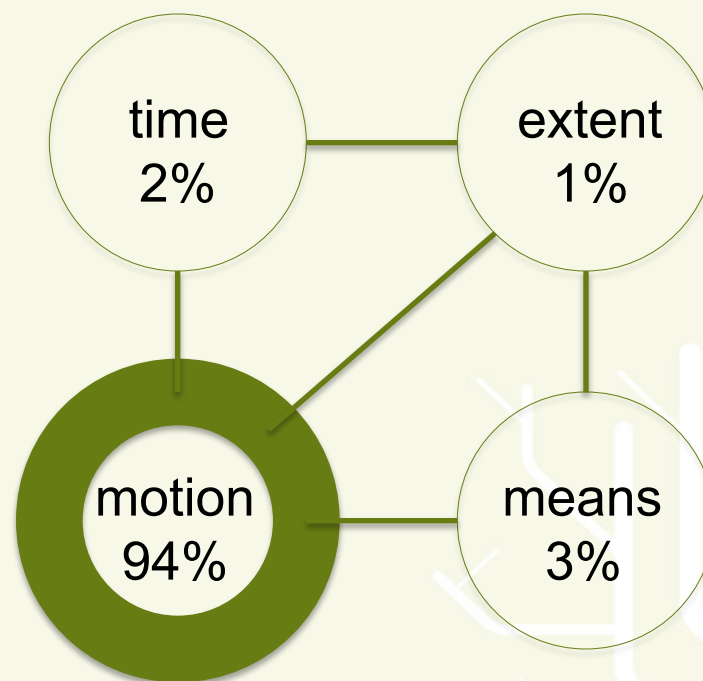
Radial categories: *čađa* 'through' in literary texts



preposition



postposition



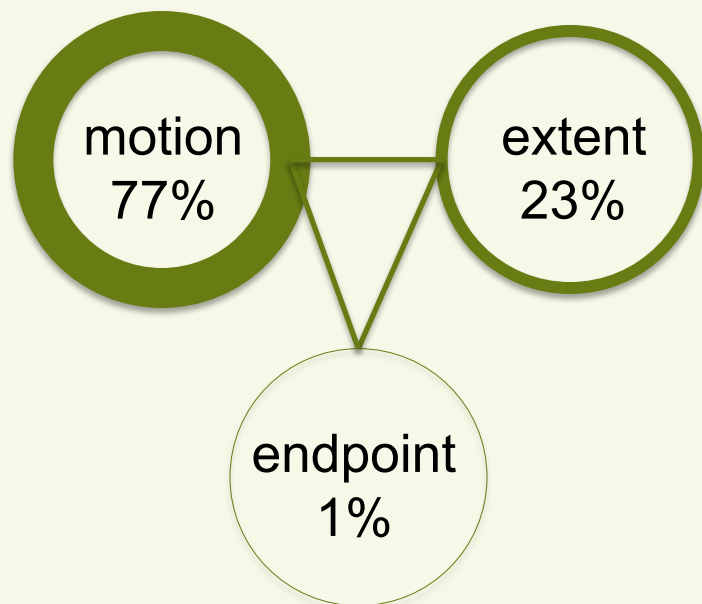
čada 'through'

- In newspapers:
 - Preposition: time>motion
 - Postposition: motion>means=time
 - Frequent words from the domain of time:
 - Preposition: *gaska* 'interval', 'time (sg/pl)'
 - Postposition: 'time (sg/pl)'
- Motion: openings, obstacles, problems, weather – this meaning predominates in literature
- Means (postposition): actions, instruments, media, administrative measures, organizations

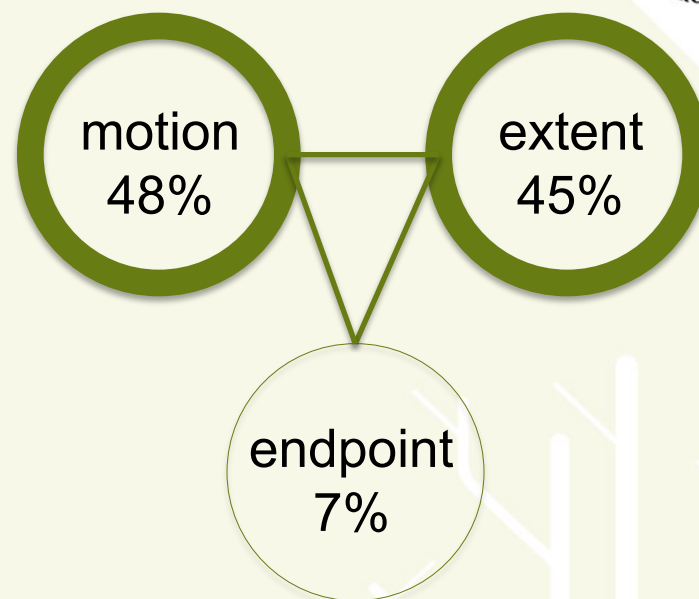


Radial categories: *rastá* 'across' in newspapers

preposition



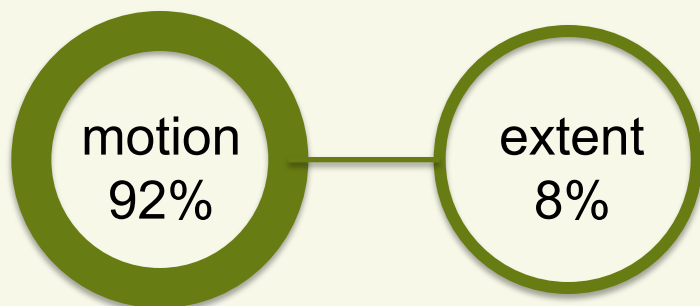
postposition



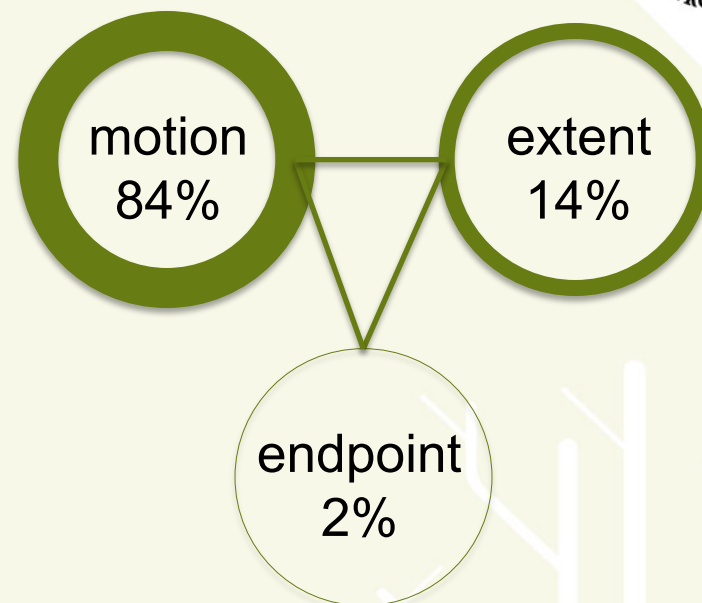
X-squared = 12, df = 2, p-value < 4.4e-4; V = 0.25

Radial categories: *rastá* 'across' in literary texts

preposition



postposition



rastá 'across'



- In newspapers:
 - Preposition: motion > extent
 - Postposition: motion \approx extent
- Mostly used with nouns denoting rivers, lakes, borders, roads, bridges
- Endpoint is fairly rare but possible in both positions
- Motion predominates in literature in both positions

mangel 'after'

Preposition

- Preposition often comes after the verb
- Preposition prefers bare nouns
- Preposition is preferred in combination with adverbs meaning 'immediately' or phrases quantifying a time interval

Postposition

- Postposition is balanced between preverbal and postverbal position
- Postposition prefers pronouns and modified nouns



Radial category profiling of Sámi adpositions

- For each adposition, the preposition and postposition share the same radial category, but the distribution of meanings can differ significantly
- Radial category profiling makes it possible to measure the differences between prepositions and postpositions
- There is no single tendency for all adpositions
 - For *miehtá* time is stronger for the postposition
 - For *čad̥a* time is stronger for the preposition



Hypothesis 2 is confirmed

Typological observation

- Languages with few ambipositions do not use position to signal meaning
 - English, Norwegian *over* : postposition marginal
 - Russian *spustja, pogodja* 'later', *radi* 'for the sake of': no differences in use connected to position
- Finnish and Estonian have systematic use of ambipositions (10-13% of adpositions) and do show differences connected to position; these involve clear tendencies (e.g. preposition preferred for temporal expression)
- N. Sámi has extensive systematic use of ambipositions (22% of adpositions) and has strong, but complex differentiation of use according to position (*miehtá* prefers postposition to express time, *čađa* -- preposition)



Hypothesis 3 is confirmed

Conclusions:

Three hypotheses confirmed

1. We found regional variation in use of ambipositions aligned with use of adpositions in contact languages
2. We found that position is associated with differences in expression of meaning
3. North Sámi has more ambipositions and uses position in a more complex way

