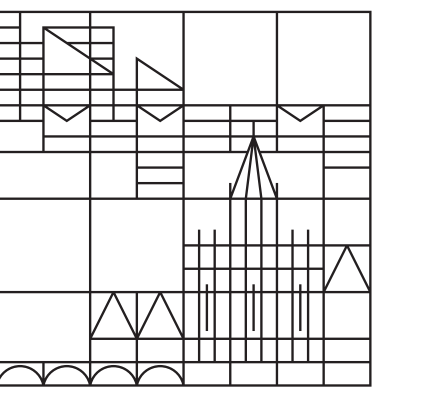


Diachronic Visualization of Oblique Subjects in Icelandic

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Motivation

- Oblique Subjects are a common phenomenon in a multitude of Indo-European languages.
- Common in Old-Norse Icelandic and Modern Icelandic:
Mér er kalt.
me.DAT is cold
'I feel cold.'
- **Research Question:** Have dative subjects been objects in an earlier language stage [4] or are they a Proto Indo-European inheritance [2]?

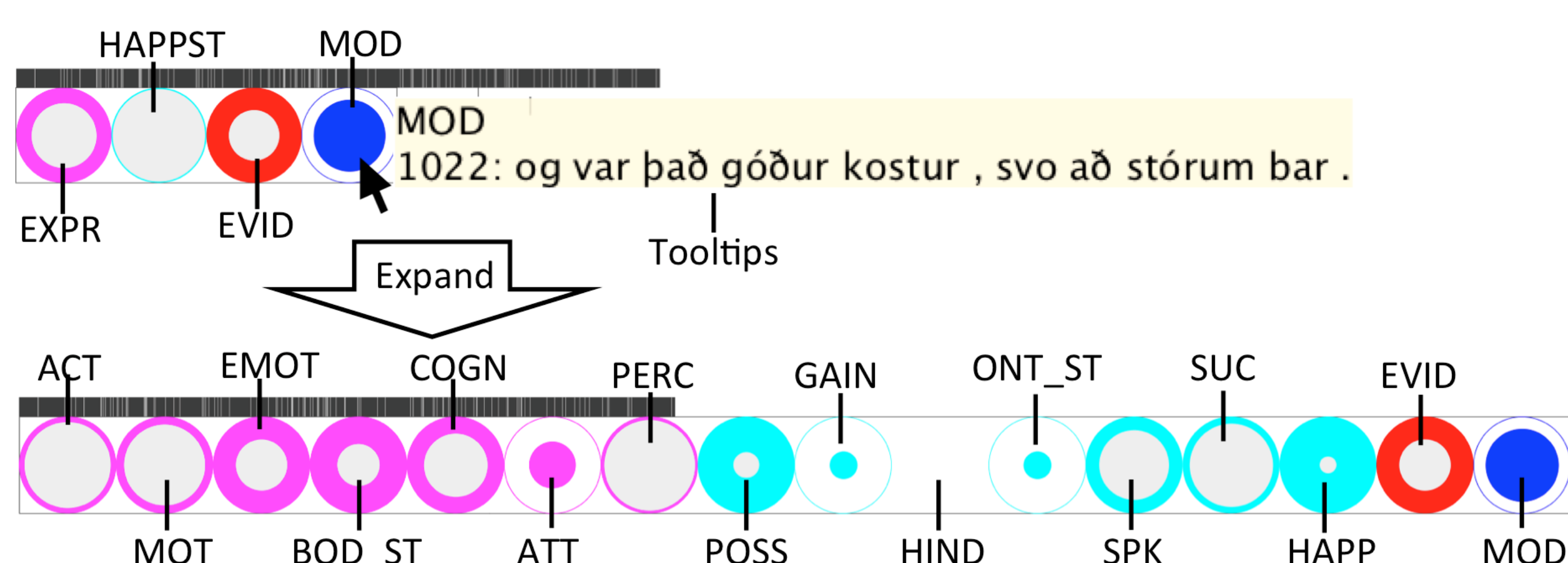
Diachronic Corpus Study

- Icelandic parsed Historical Corpus (IcePaHC)
 - Deep syntactic annotation (Penn Treebank)
 - 60 texts, 4 genres, ca. 2 million words
 - Texts from 12th to 21st century
- 4266 main verbs inducing dative subjects extracted from the corpus.
- Annotation of semantic verb classes and categories (according to [2], [3])
- Resulting data is complex and multifactorial.

Results

- Dative subjects are a stable phenomenon throughout Icelandic language history.
- Verbs are not confined to inactive verb classes → dative subjects are no Proto Indo-European inheritance (contra [2])
- Development of most verb classes changes after 1750 CE.
- Shift in verb categories from predicates denoting happenstance and experience-based events to only experience-based predicates (partially according to [1])
- Visualization of the data needed for an interactive explorative analysis without fixed parameters:
 - Overview first - details on demand approach
 - Each text visualized as composed glyph which encodes frequencies of dative subjects with respect to verb class and category:
 - * **higher** than expected: color from outside
 - * **lower** than expected: color from inside

Text Glyph



References

- [1] J. Barðdal. The rise of dative substitution in the history of Icelandic: A diachronic construction grammar account. *Lingua*, 121(1):60–79, 2011.
- [2] J. Barðdal and T. Eythórssón. The origin of the oblique subject construction: An Indo-European comparison. In V. Bubenik, J. Hewson, and S. Rose, editors, *Grammatical Change in Indo-European Languages*, pages 179–193. John Benjamins, Amsterdam, 2009.
- [3] J. Barðdal, T. Smitherman, V. Bjarnadóttir, S. Danesi, G. B. Jensen, and B. McGillivray. Reconstructing constructional semantics: The dative subject construction in Old Norse-Icelandic, Latin, Ancient Greek, Old Russian and Old Lithuanian. *Studies in Language*, 36(3):511–547, 2012.
- [4] M. Haspelmath. Non-canonical marking of core arguments in European languages. In A. Y. Aikhenvald, R. Dixon, and M. Onishi, editors, *hNon-Canonical Marking of Subjects and Objects*, pages 53–83. John Benjamins, Amsterdam, 2001.
- [5] J.C. Wallenberg, A.K. Ingason, E.F. Sigurðsson, and E. Rögnvaldsson. Icelandic Parced Historical Corpus (IcePaHC). Version 0.9. <http://www.linguist.is/icelandic-treebank>, 2011.

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Diachronic Visualization of Multifactorial Data



Benefits of the Visualization

- Genre effects become visible.
- Allows for analysis without fixed parameters (e.g. time periods).
- Verb classes/categories responsible for a certain development can be identified at a glance.

Future Work

- Integration of more factors as additional rows:
 - Transitivity
 - passive/active