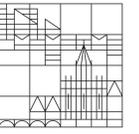


# Diachronic Visualization of Oblique Subjects in Icelandic

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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]?

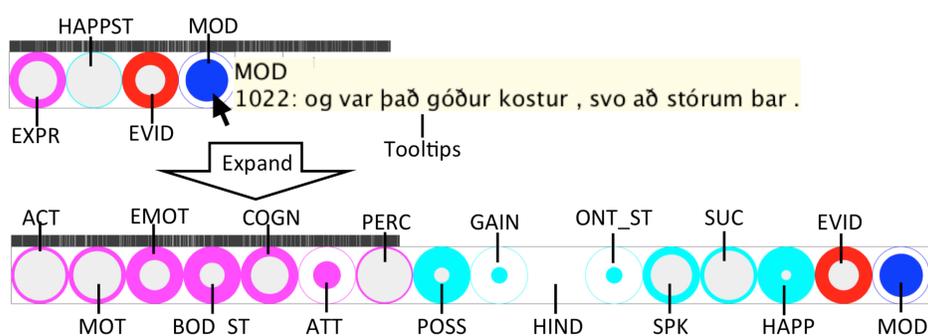
## Diachronic Corpus Study

- 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



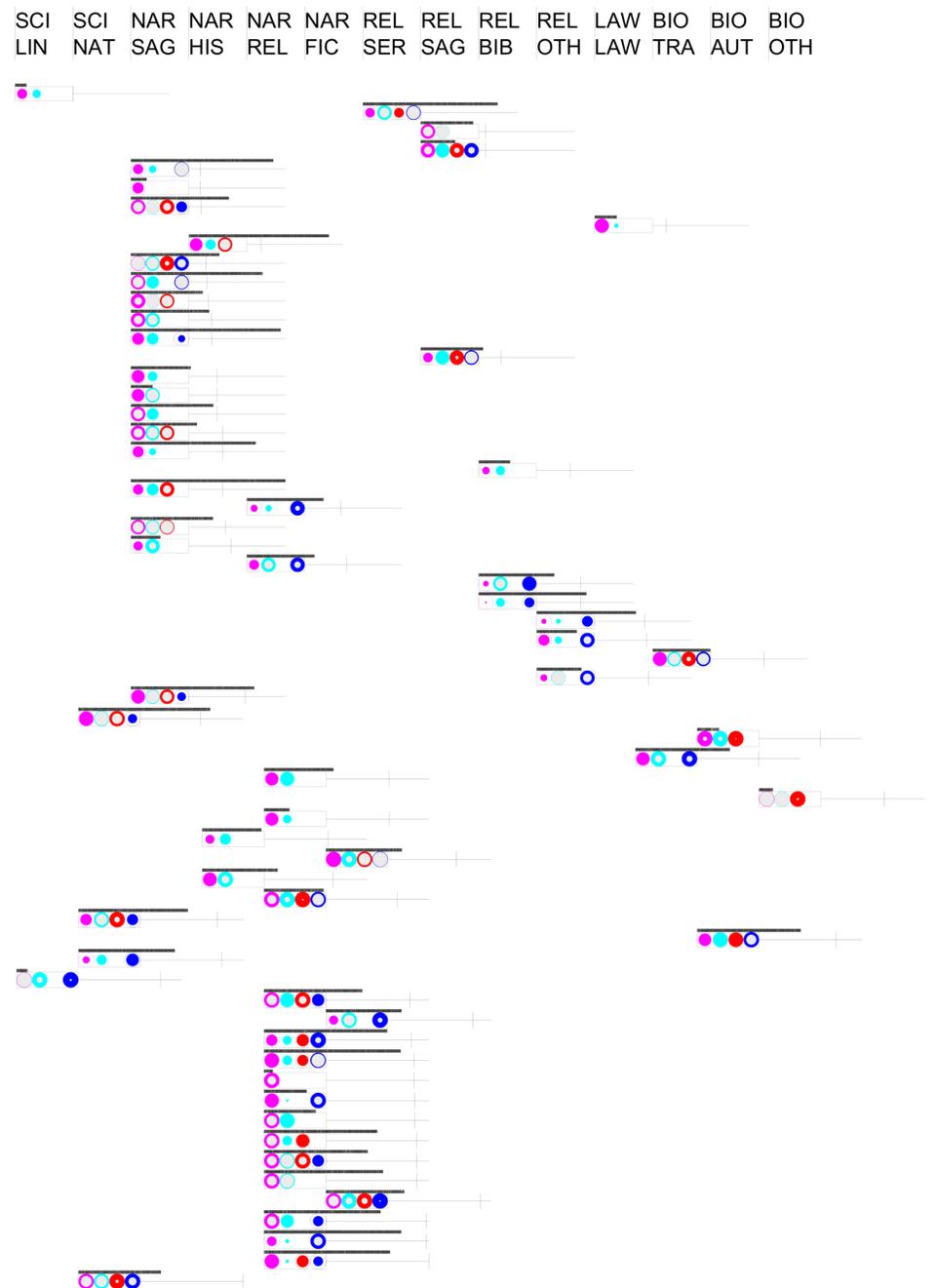
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## Diachronic Visualization of Multifactorial Data



## 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