

# Computational Typology with Language Embeddings

**Johannes Bjerva**

[bjerva@di.ku.dk](mailto:bjerva@di.ku.dk)

<http://bjerva.github.io>

UNIVERSITY OF COPENHAGEN



# Language Embeddings / Distributed Language Representations

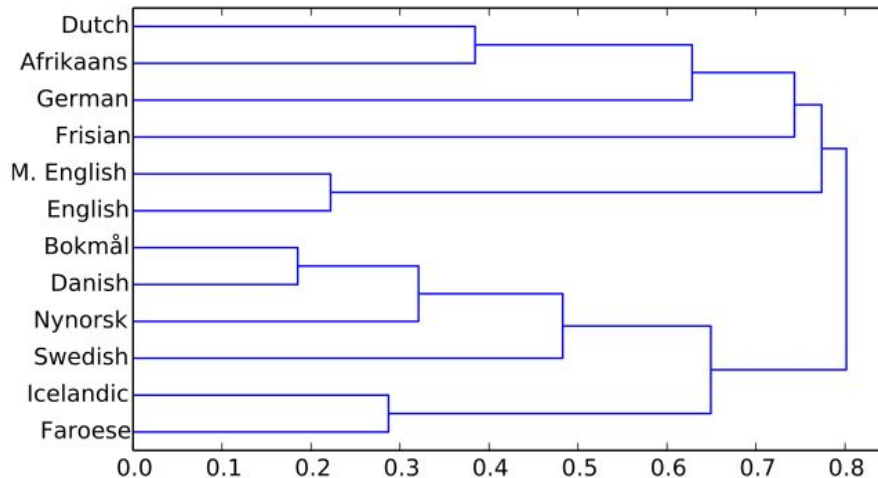
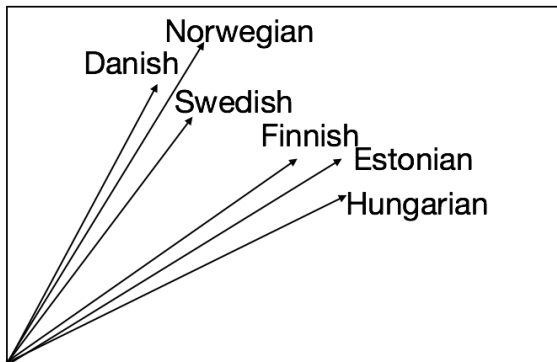
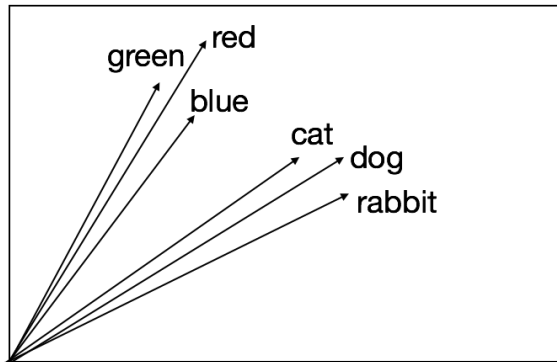
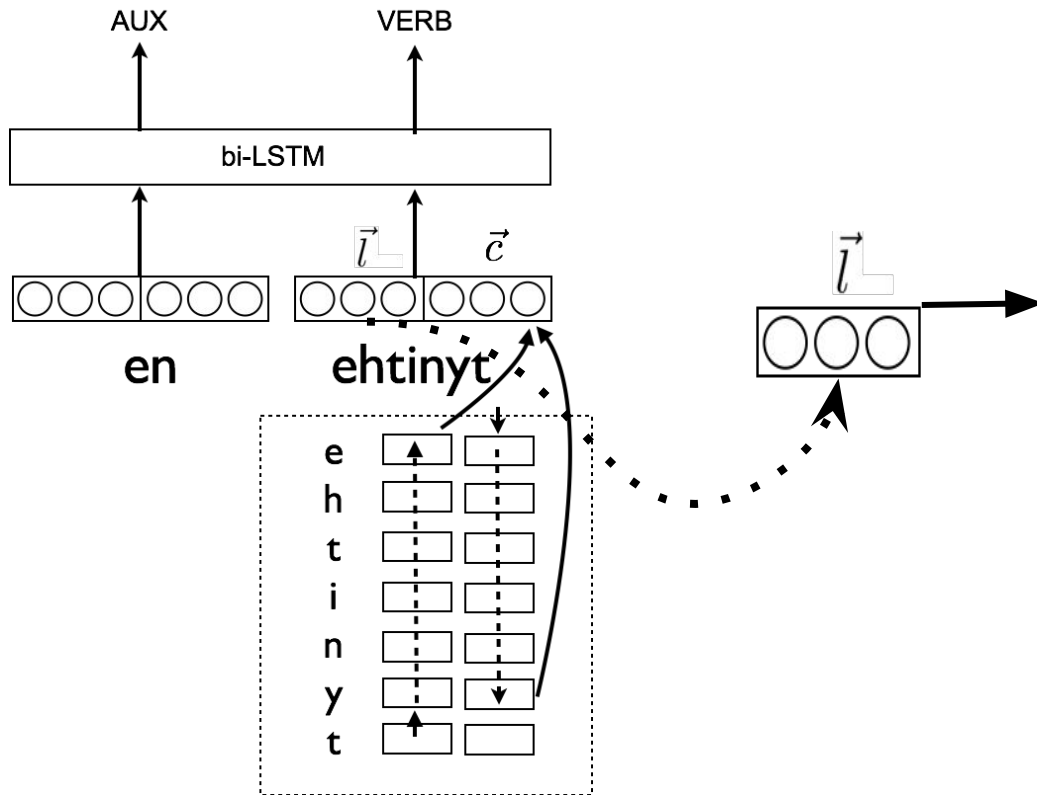


Figure 5: Hierarchical clustering of language vectors of Germanic languages.

(Östling and Tiedemann, 2017)

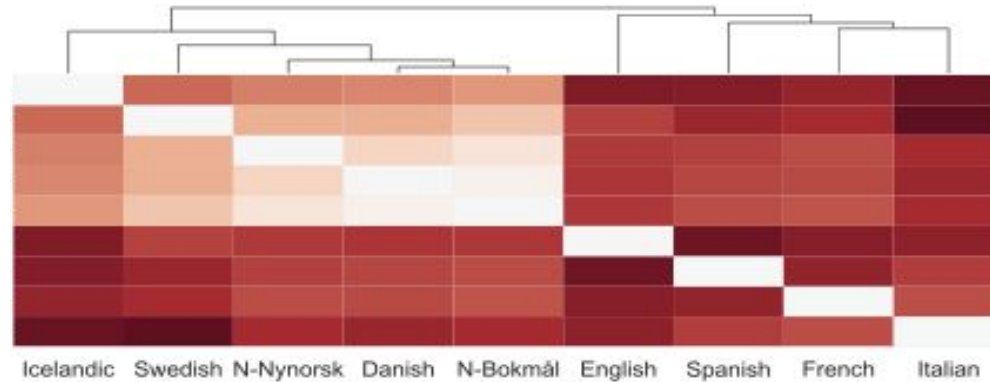
# Language Embeddings in Deep Neural Networks



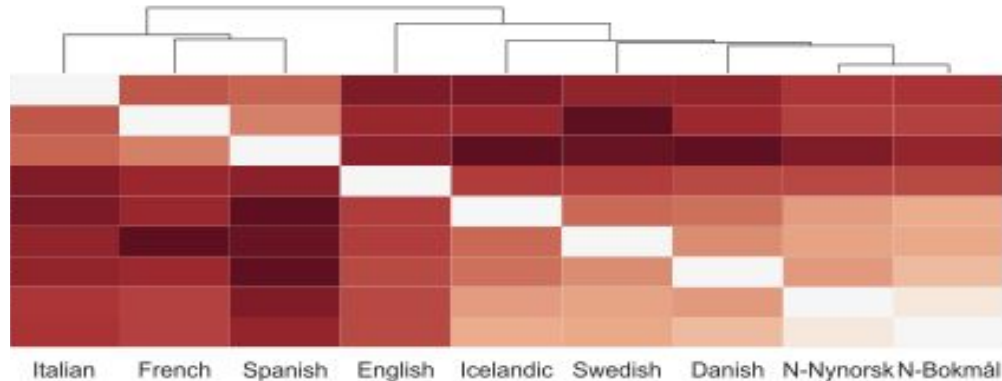
1. Do language embeddings aid multilingual modelling?
2. Do language embeddings contain typological information?

# Hierarchical Clustering of Language Embeddings

Language  
Modelling



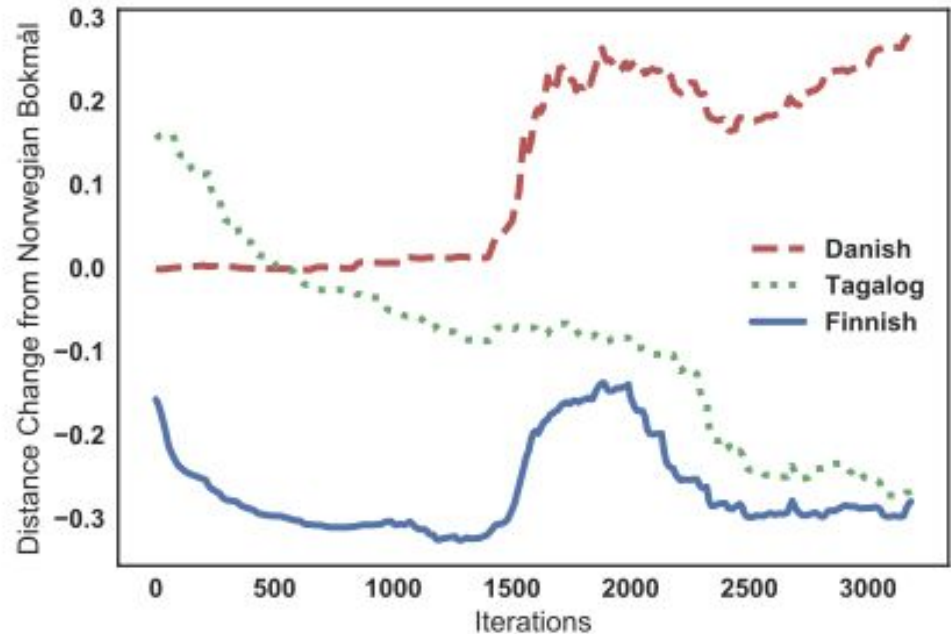
Part-of-Speech  
tagging



(Bjerva and Augenstein, under review)

# Phonological Language Embeddings

- ASJP Word Lists
- Tuning language representations to reflect phonology
- Norwegian and Danish diverge



(Bjerva and Augenstein, under review)