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Diachronic dynamics of lexical networks: A roadmap

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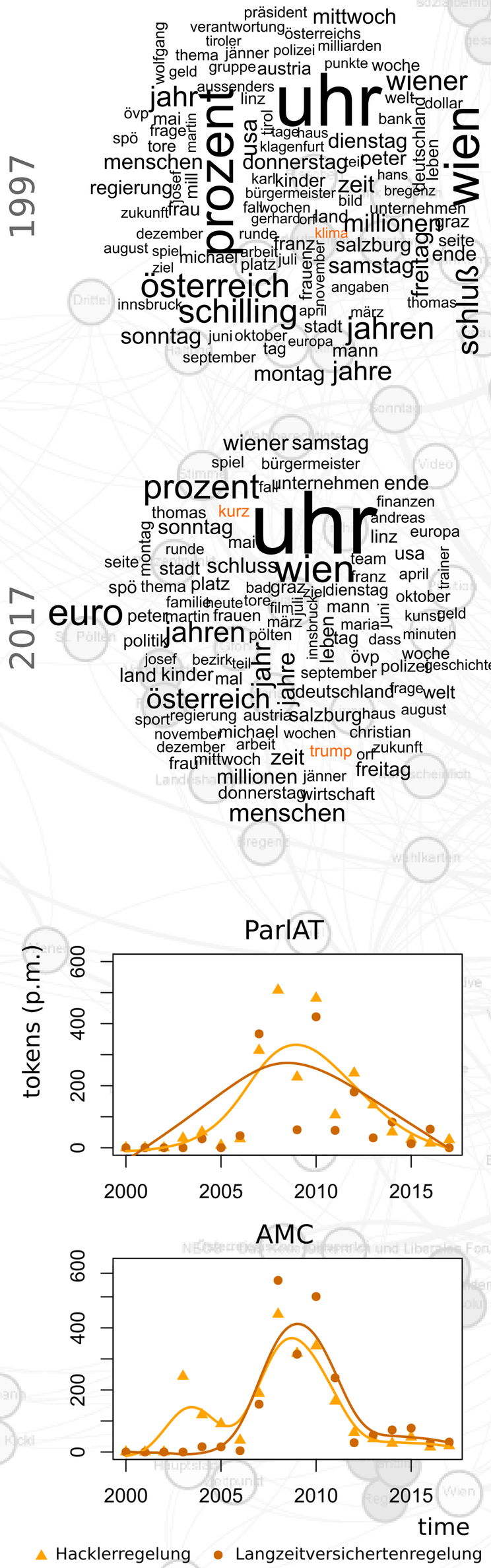


Languages change

...but to what extent is lexical change driven by individuals such as politicians?

We analyze their effect on the propagation of lexical innovations.

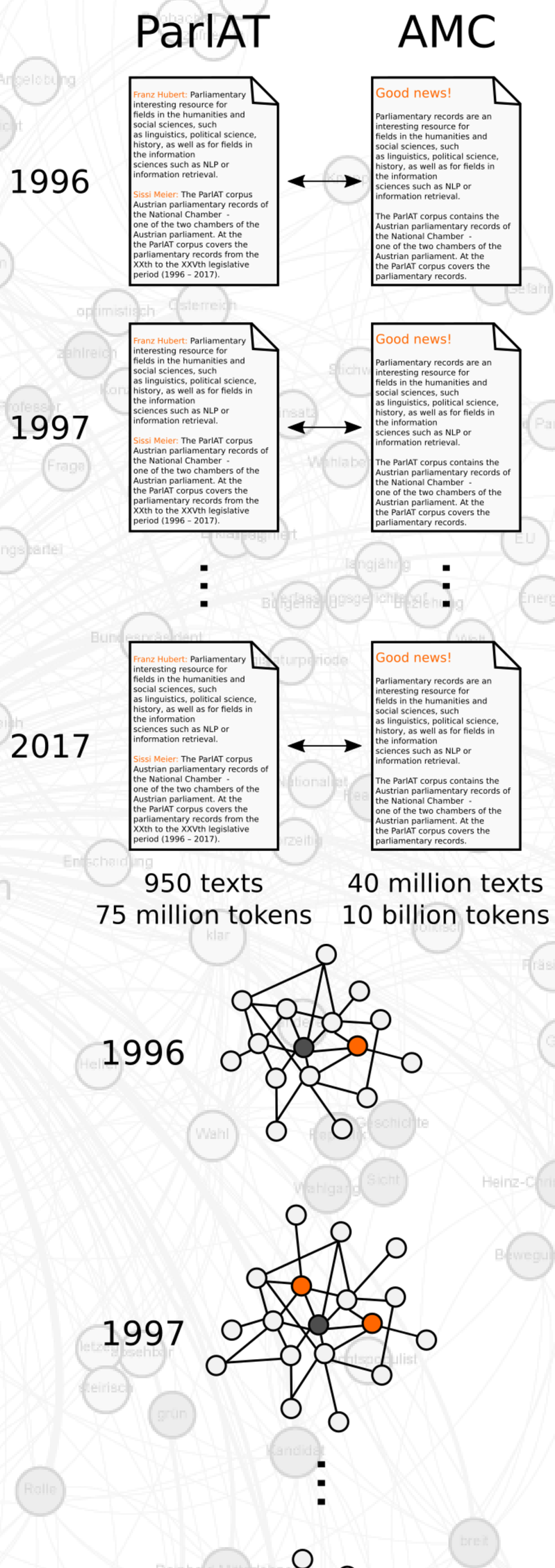
More questions:

- What determines the successful spread of lexical innovations?
- Can we disentangle social factors from cognitive factors (e.g. frequency) in language change?

Our data

We work with two diachronic text corpora of Austrian German:

- ParlAT: parlamentiary records
- AMC: Austrian media texts



Preparations

We analyze frequency trajectories to identify lexical innovations, and we use named entity recognition (NER) to identify innovators.

Methods & tools:

- NER: spaCy enhanced with Wikidata
- Trajectories: time-series modeling (GAM; NLS; growth rates)

Lexical networks

We build co-occurence networks to see if innovations detach from their innovators and start to get used in other contexts as well.

Methods & tools:

- Co-occurrence networks (sentence/paragraph/text)
- igraph, Neo4j, Gephi
- Time-series modeling of network parameters

Background image | Lexical network around NE 'Alexander van der Bellen' (by Grill, 2018)

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