

# Paradigm Shifts in 19<sup>th</sup>-Century British Grammar Writing — a Network of Texts and Authors

**Beatrix Busse**

**Kirsten Gather**

**Ingo Kleiber**

**Heidelberg University**



1. Introduction: 19<sup>th</sup>-Century Grammar Writing
2. The *HeidelGram* Project
3. The Network
4. Main Results
5. Summary and Conclusion
6. Outlook



# 1. Introduction

# 1. Introduction



grammar books: indicators of changing and stable language norms

vast number of English grammar books in the 19<sup>th</sup> century

surprisingly few studies focussing on 19<sup>th</sup>-century grammar writing

"this area of investigation still constitutes a gap" (Anderwald 2016: 3)

# 1. Introduction



19<sup>th</sup> century: major changes in British grammar writing

- ♦ from the prescriptive tradition to the first modern descriptive grammars
- ♦ emergence of comparative and historical linguistics
- ♦ 'phonetic turn': phonetics/phonology becomes a separate field



## 2. The *HeidelGram* Project

## 2. The *HeidelGram* Project



UNIVERSITÄT  
HEIDELBERG  
ZUKUNFT  
SEIT 1386

### *Idea*

Combination of corpus-based historical linguistics and the analysis of scholarly networks

### *Pilot Project*

Compilation and investigation of a corpus of 19<sup>th</sup>-century grammar books with the aims

- ♦ to show connections between grammar books as manifested in grammarians' references to other grammars or grammarians
- ♦ to visualise and examine the major (meta)linguistic developments in 19<sup>th</sup>-century grammar writing by building and analysing a **network of texts and authors**
- ♦ to check the results against established assumptions

## 2. The *HeidelGram* Project



### *The Corpus*

pilot study: corpus of 19<sup>th</sup>-century grammars (40 texts, approx. 3 mio. words)

criteria for text selection

#### (a) popularity and distribution of grammar books

- ♦ bibliographic listings of grammar books (e.g. in Michael 1987, Görlach 1998)
- ♦ numbers of editions
- ♦ book catalogues, advertisements, etc.
- ♦ contemporaries' comments, e.g. in literary genres, private letters
- ♦ curricula of schools, colleges, etc.

#### (b) variety in function, audience, and text type



## 2. The *HeidelGram* Project



UNIVERSITÄT  
HEIDELBERG  
ZUKUNFT  
SEIT 1386

### *The Corpus*

#### digitisation of pilot-study corpus

- ♦ acquisition of grammars as pdf files
- ♦ digitisation via OCR
- ♦ automated correction of typical misreadings

#### annotation

- ♦ TEI-based structural annotation
- ♦ project-specific annotation, e.g. of grammarians' references



# 3. The Network

# 3. The Network



network approach (relationships as *nodes*, *edges/ties* and *attributes*)

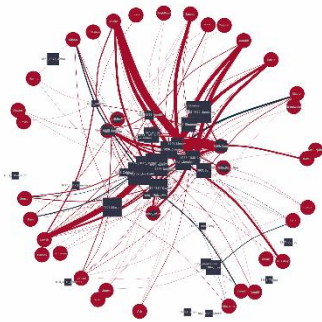
White (2011):

- ♦ social vs. scholarly networks
- ♦ scholarly networks: cultural ties between authors irrespective of their possible acquaintance
- ♦ author intercitation: "the record of who has cited whom within a fixed set of authors" (2011: 275)

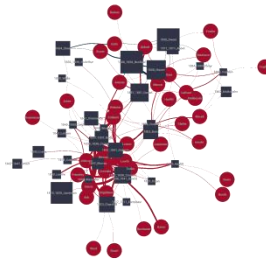
# 3. The Network



network visualisation (various example algorithms):



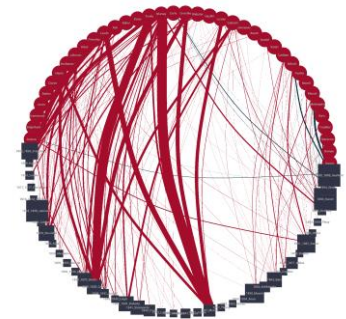
**ForceAtlas 2**  
force-directed layout;  
for network  
spatialisation



**Fruchterman  
Reingold**  
force-directed layout



**Nicely**  
aesthetic purposes



**Small World / Circle**  
geometric layout

# 3. The Network



## Procedure

- ♦ compilation of list of search terms (last names of most popular and influential grammarians between 1580 and 1900)
- ♦ problem: automated OCR due to limited resources leads to corrupted data
- ♦ our solution: automated search in digitised corpus texts with threshold-based pattern matching (gestalt pattern approach)
- ♦ use of software developed for this purpose (made available via GitHub under an OS-license)

# 3. The Network



## Procedure

- ♦ matching threshold of 0.8 to cover all misreadings  
e.g. the search for "Cobbett" produces results like *Cobbett* (1.0) and *Cohbett*, *Cobbeit*, *Gobbett*, *obbett* (0.82 to 0.92)
- ♦ list of findings/concordances: manual correction by elimination of false positives
  - ♦ *sweat* → *Sweet*  
*Johnson* → *Jonson* (and vice versa)  
etc.
  - ♦ deletion of matches that refer to a different person with the same name, e.g.

*Richard Johnson*      vs.      *Samuel Johnson*  
(Latin Grammar)                      (English Dictionary)

# 3. The Network



## Procedure

- ♦ transformation of revised list into an adjacency matrix which shows origin (grammar books), target (search terms) and numbers of references
- ♦ visualisation of adjacency matrix as network (weighed graphs)

# 3. The Network



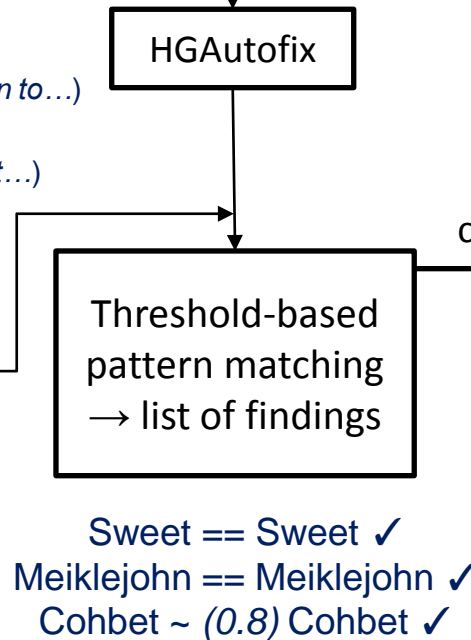
## Overview of the procedure

### Corpus

- Grammar 1.txt  
*(...See Sweet 's Grammatical Introduction to...)*
- Grammar 2.txt  
*(...2qu by Professor Meiklejohn ....Sweet...)*
- Grammar 3.txt  
*(...Cohbet , who knew nothing of the ...)*

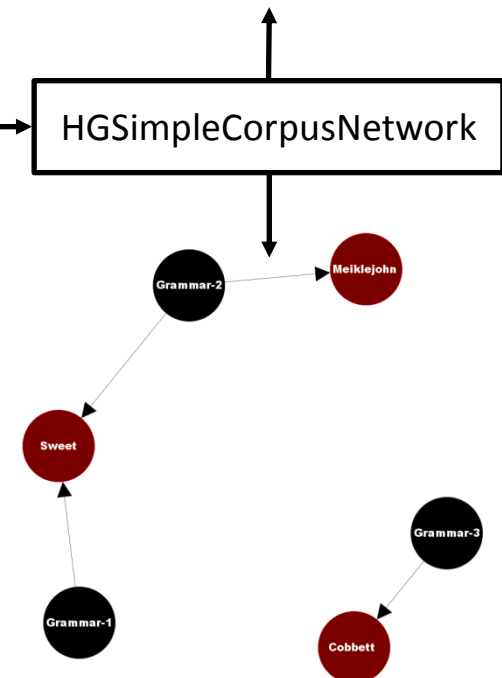
### Search Terms

- Cobbett
- Sweet
- Meiklejohn



adjacency matrix

	Grammar 1	Grammar 2	Grammar 3
Cobbett	0	0	1
Sweet	1	1	0
Meiklejohn	0	1	0







## 4. Main Results

## 4. Main Results



40 grammar books, list of 90 search terms (grammarians)

original list of concordances: ca. 11,881 matches (matching threshold: 0.8)  
revised list: 1,519 matches (12.8% of original matches)

six out of 40 grammars do not contain any references to other grammarians

of 90 search terms, only 38 are referenced

## 4. Main Results



most frequently referenced authors (absolute number and percent of all references):

Lindley Murray (1795)	284	18.7%
John Horne Tooke (1786)	226	14.9%
Robert Lowth (1762)	191	12.6%
Alexander Crombie (1802)	128	8.4%
Samuel Johnson (1755)	123	8.1%
James Harris (1751)	111	7.3%
	1063	70.0%

Kigan (1823): "Doctor **Lowth**, about sixty years ago, gave the English grammar a scientific form: and subsequently, numerous other writers offered essays on the subject, each proposing some improvement. Of these Mr. Lindley **Murray** seems to have taken the lead; his grammar is therefore in very general use."

## 4. Main Results



most frequently referenced authors (absolute number and percent of all references):

Lindley Murray (1795)	284	18.7%
John Horne Tooke (1786)	226	14.9%
Robert Lowth (1762)	191	12.6%
Alexander Crombie (1802)	128	8.4%
Samuel Johnson (1755)	123	8.1%
James Harris (1751)	111	7.3%
	1063	70.0%

Booth (1837): " 'That *than* is an adverb, and that adverbs have no government,' have been reiterated in every successive Grammar since that of **Lowth**."

## 4. Main Results



highest number of references to other grammarians (per 1,000w):

Gerald Murray (1847)	4.53
William Cramp (1838)	3.06
Alexander Crombie (1802)	2.04
all others	<1.00

Gerald Murray: *The Reformed Grammar* (1847)

"He savages all other grammarians, but offers his own reformed terminology with assurance." (Michael 1991: 18)

"Murray is so polemical that his negative views outweigh his attempts at being constructive." (Görlach 1998: 252)

## 4. Main Results



highest number of references to other grammarians (per 1,000w):

Gerald Murray (1847)	4.53
William Cramp (1838)	3.06
Alexander Crombie (1802)	2.04
all others	<1.00

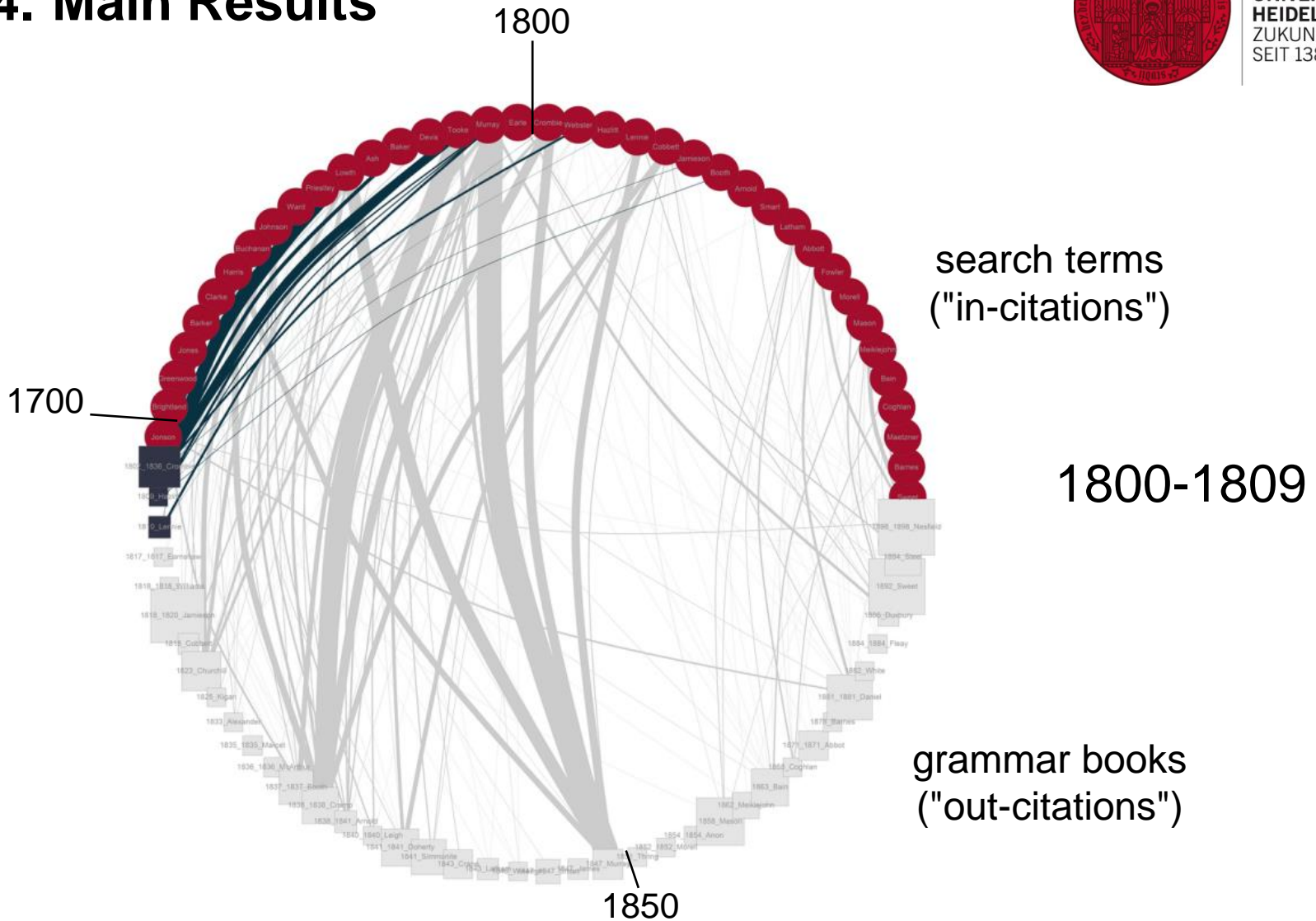
William Cramp (*The Philosophy of Language* (1838)) and Alexander Crombie (*The Etymology and Syntax of the English Language, Explained and Illustrated* (1802)): proper 'discursive grammars', citing and discussing authorities on grammar writing, while introducing their own approaches and definitions.



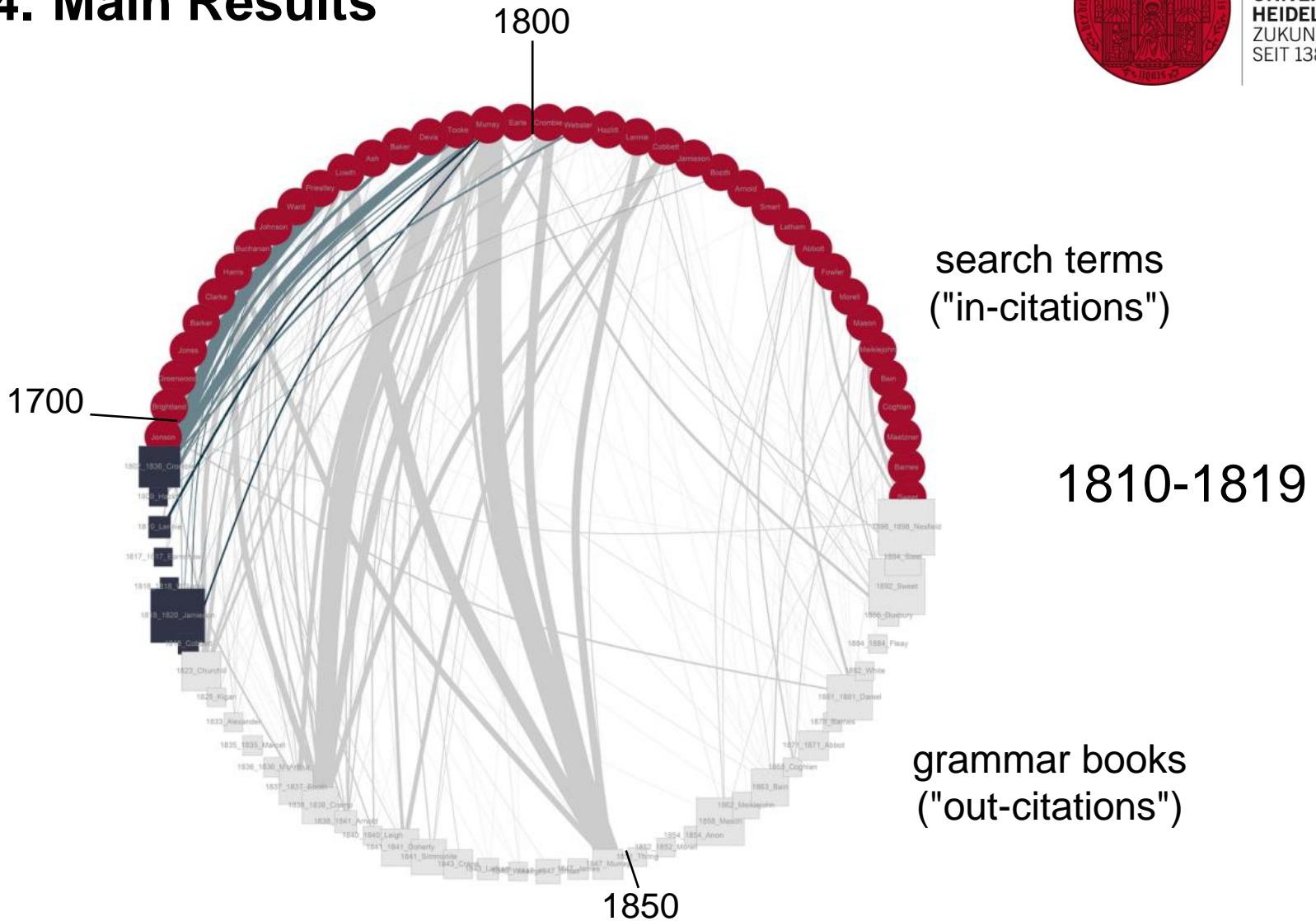




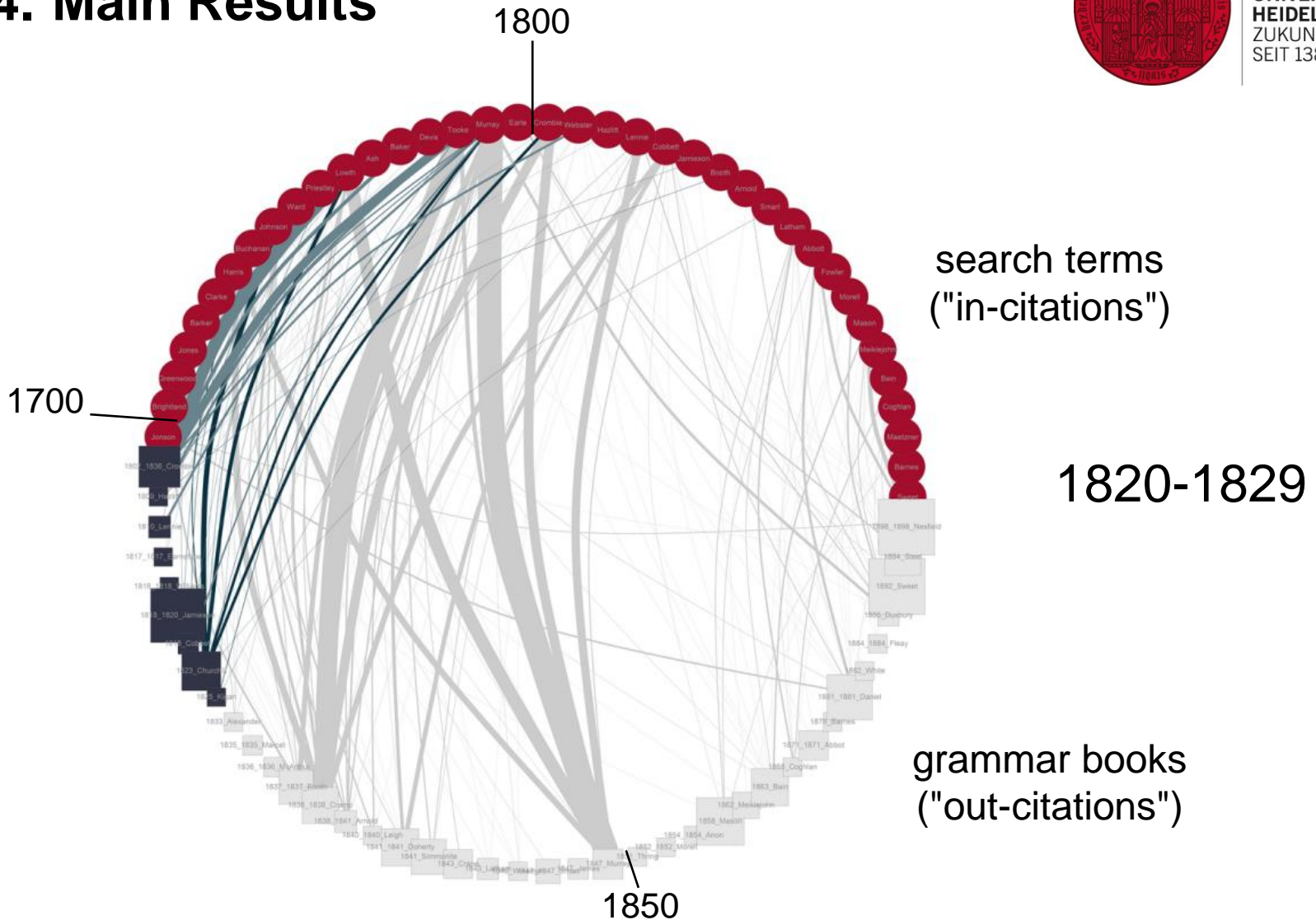
# 4. Main Results



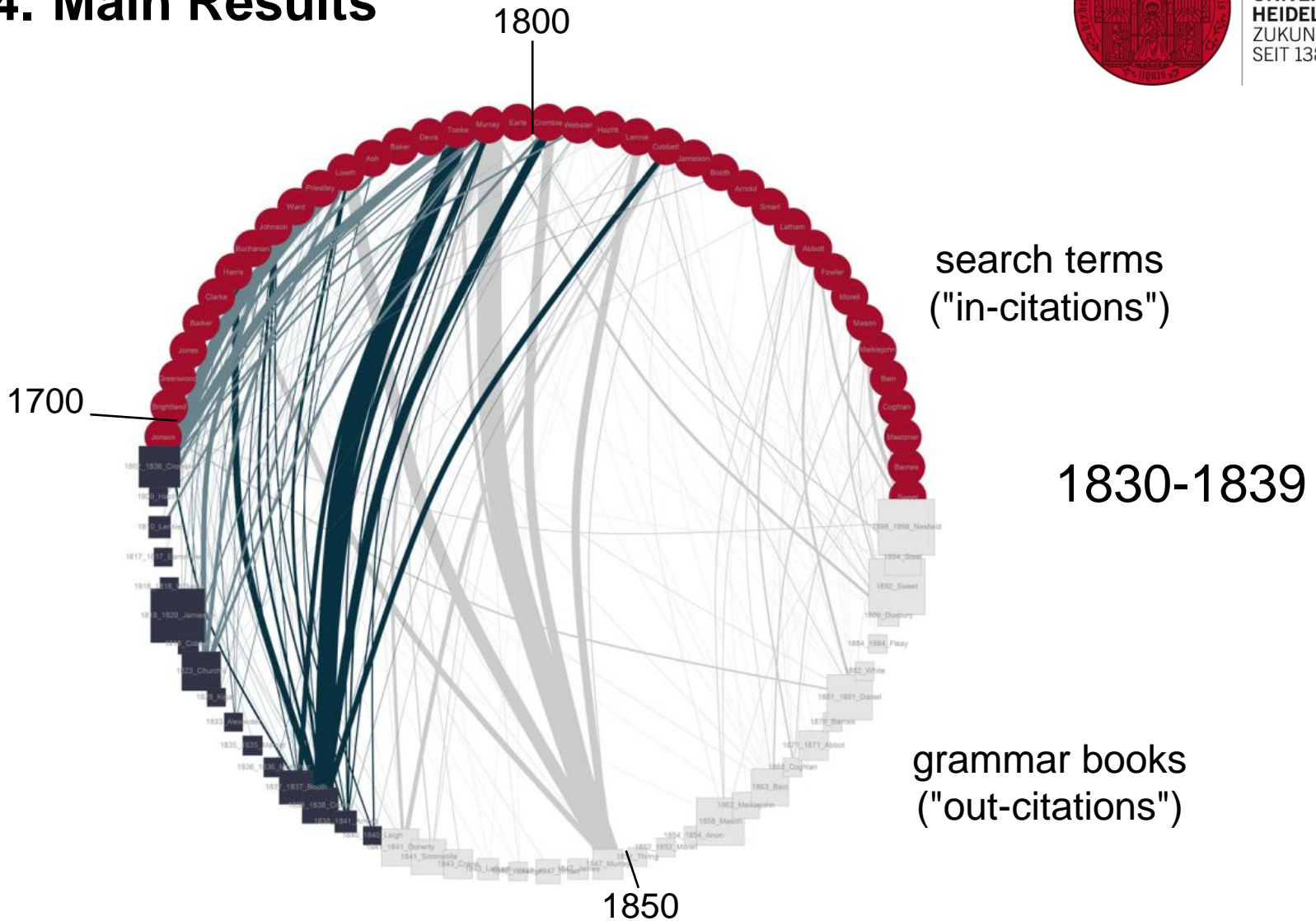
# 4. Main Results



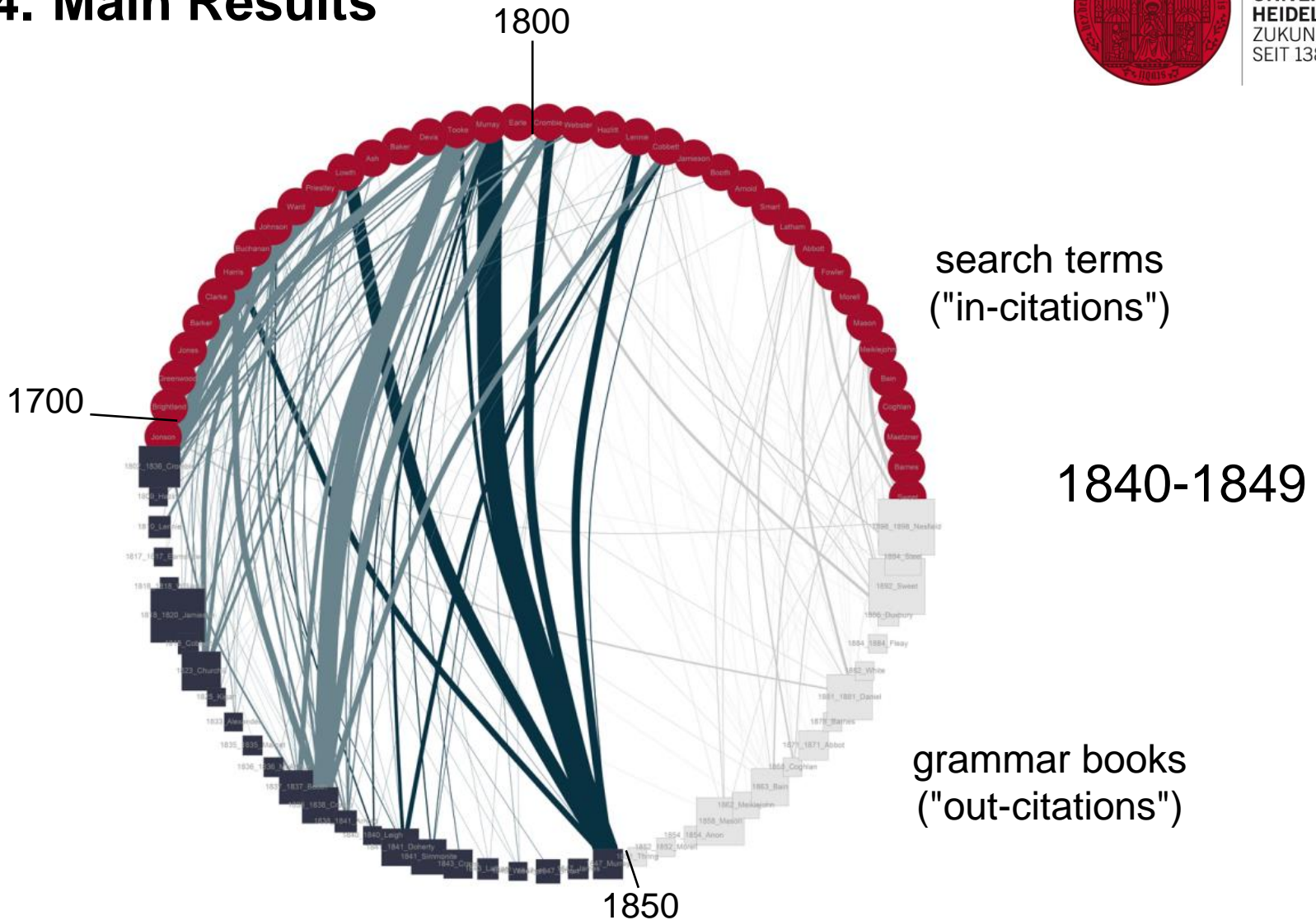
# 4. Main Results



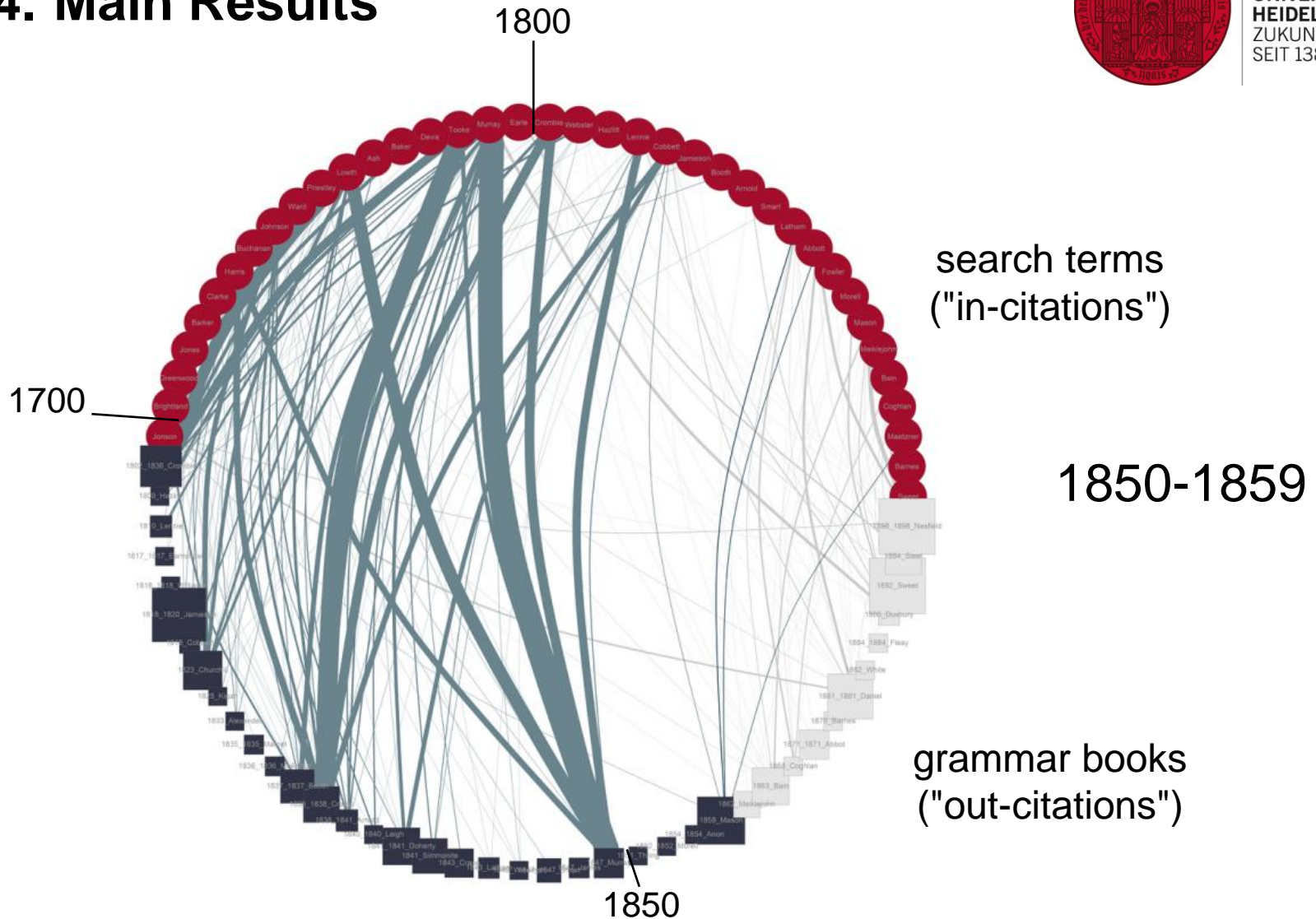
# 4. Main Results



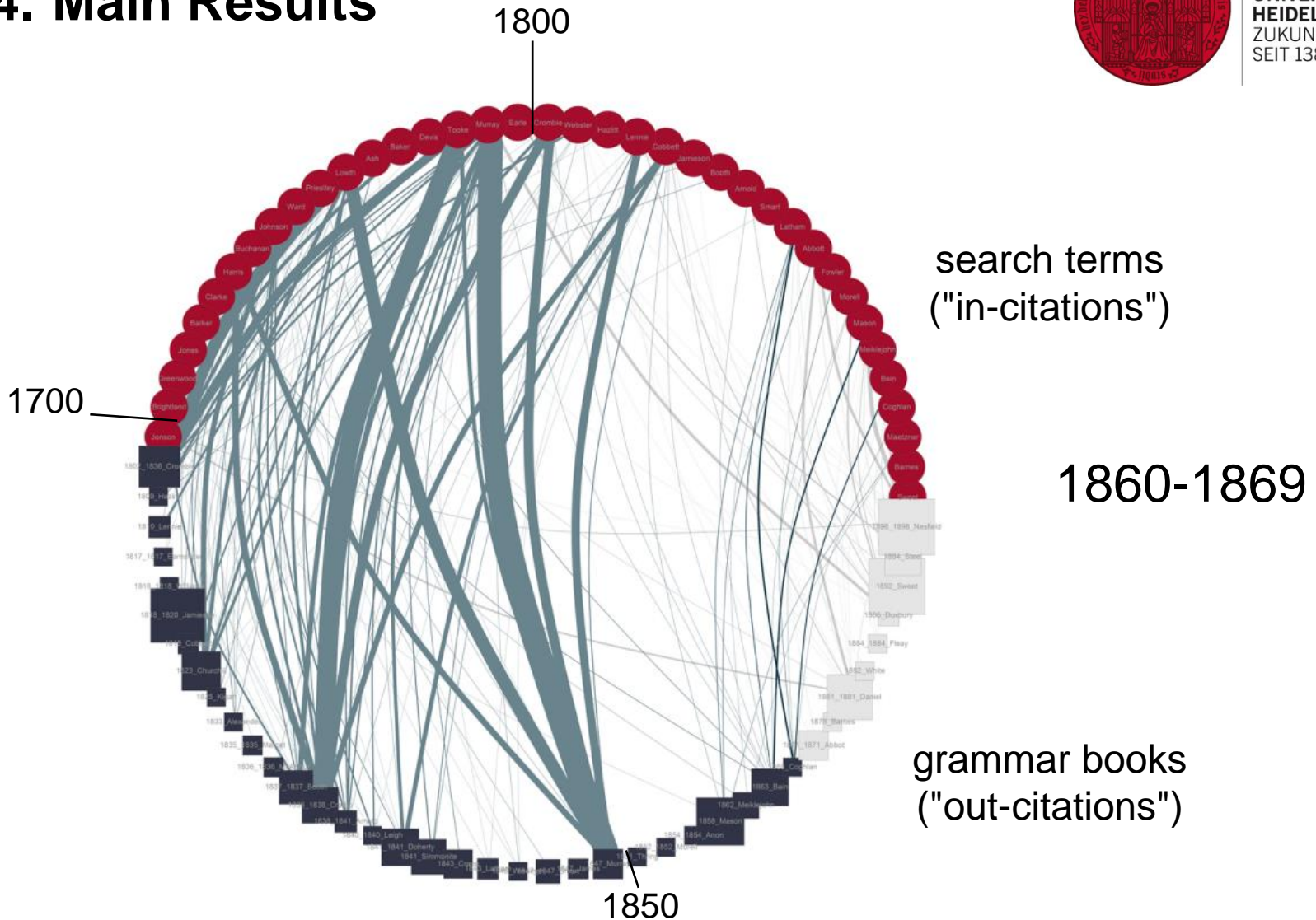
# 4. Main Results



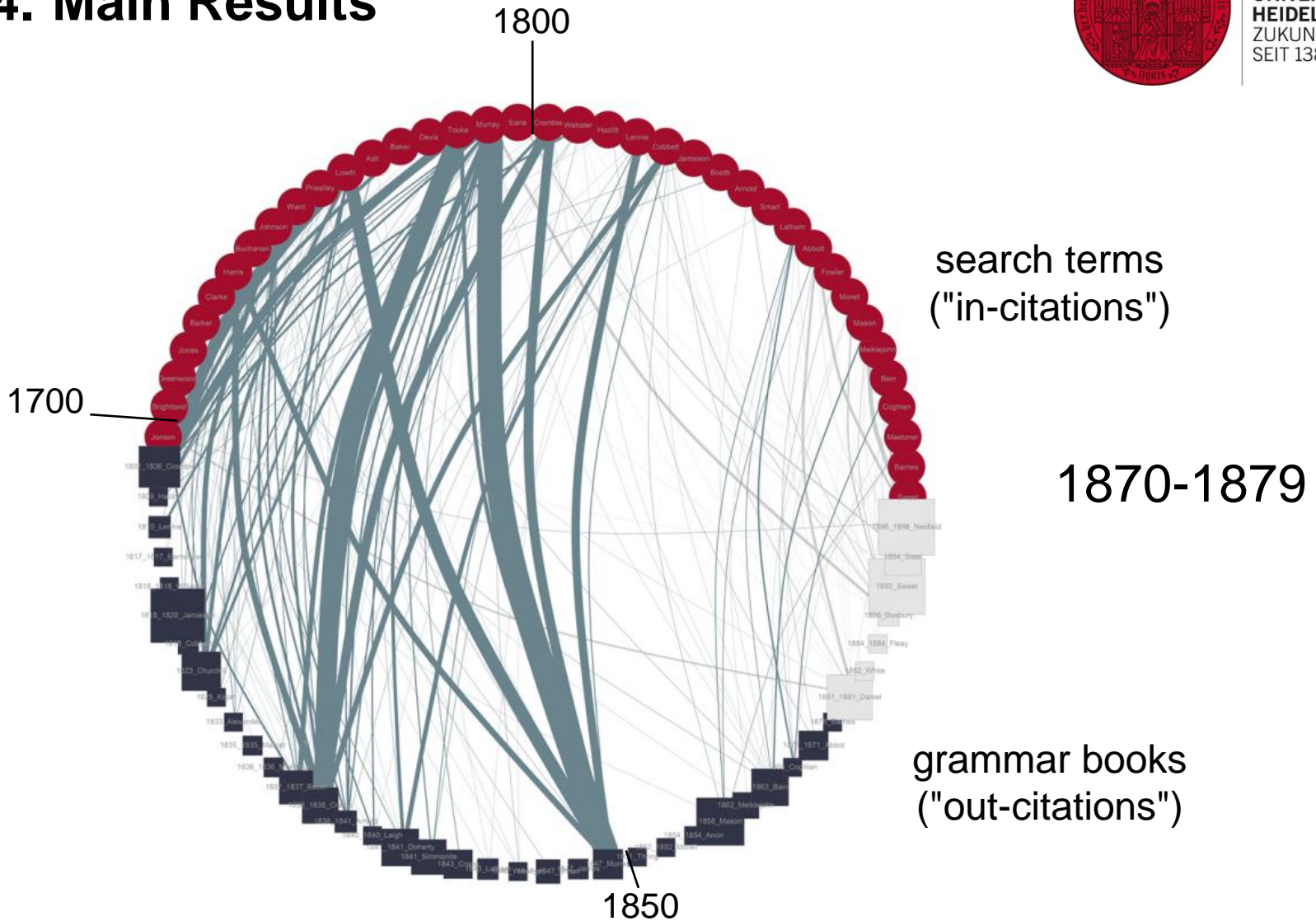
# 4. Main Results



# 4. Main Results

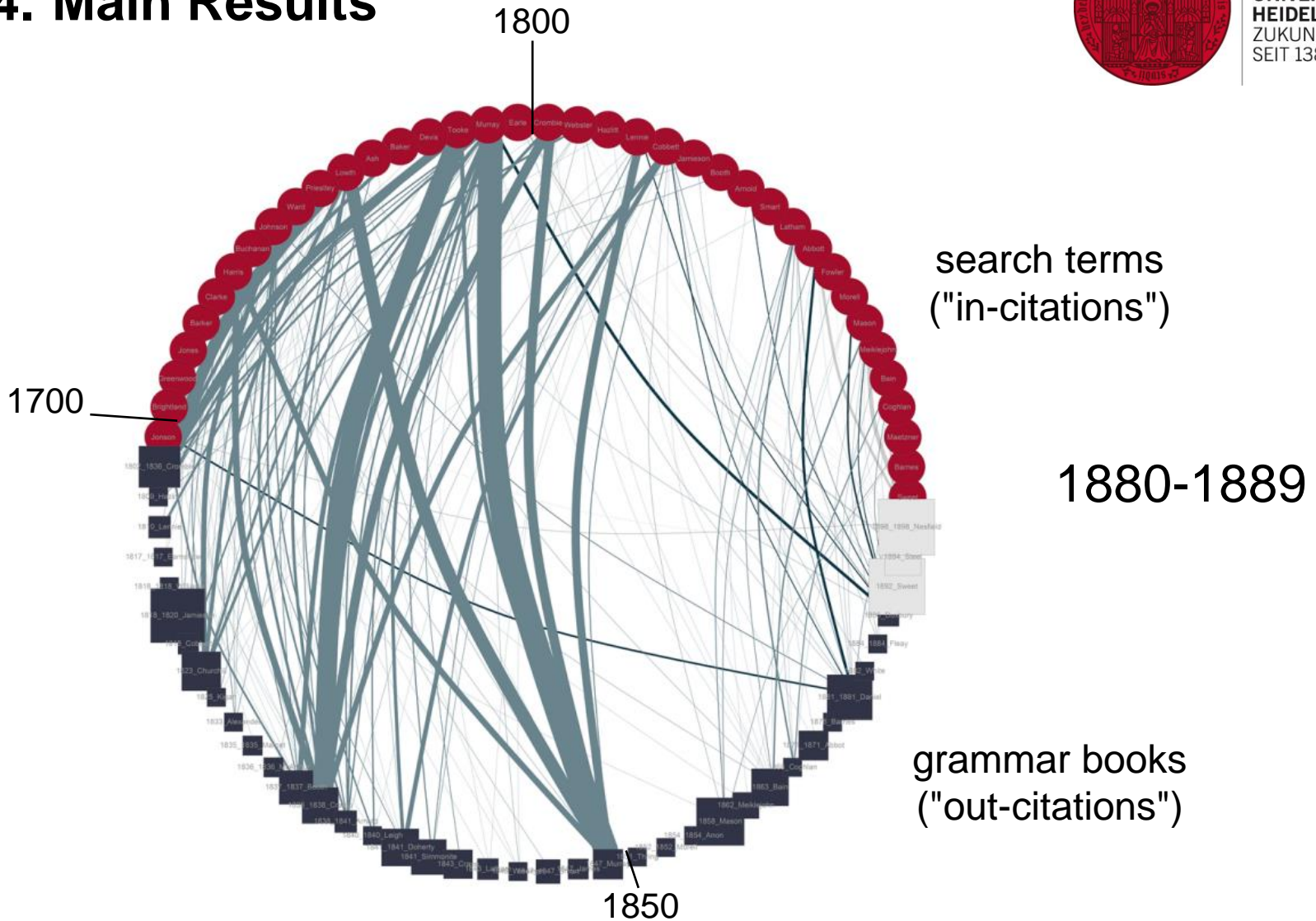


# 4. Main Results

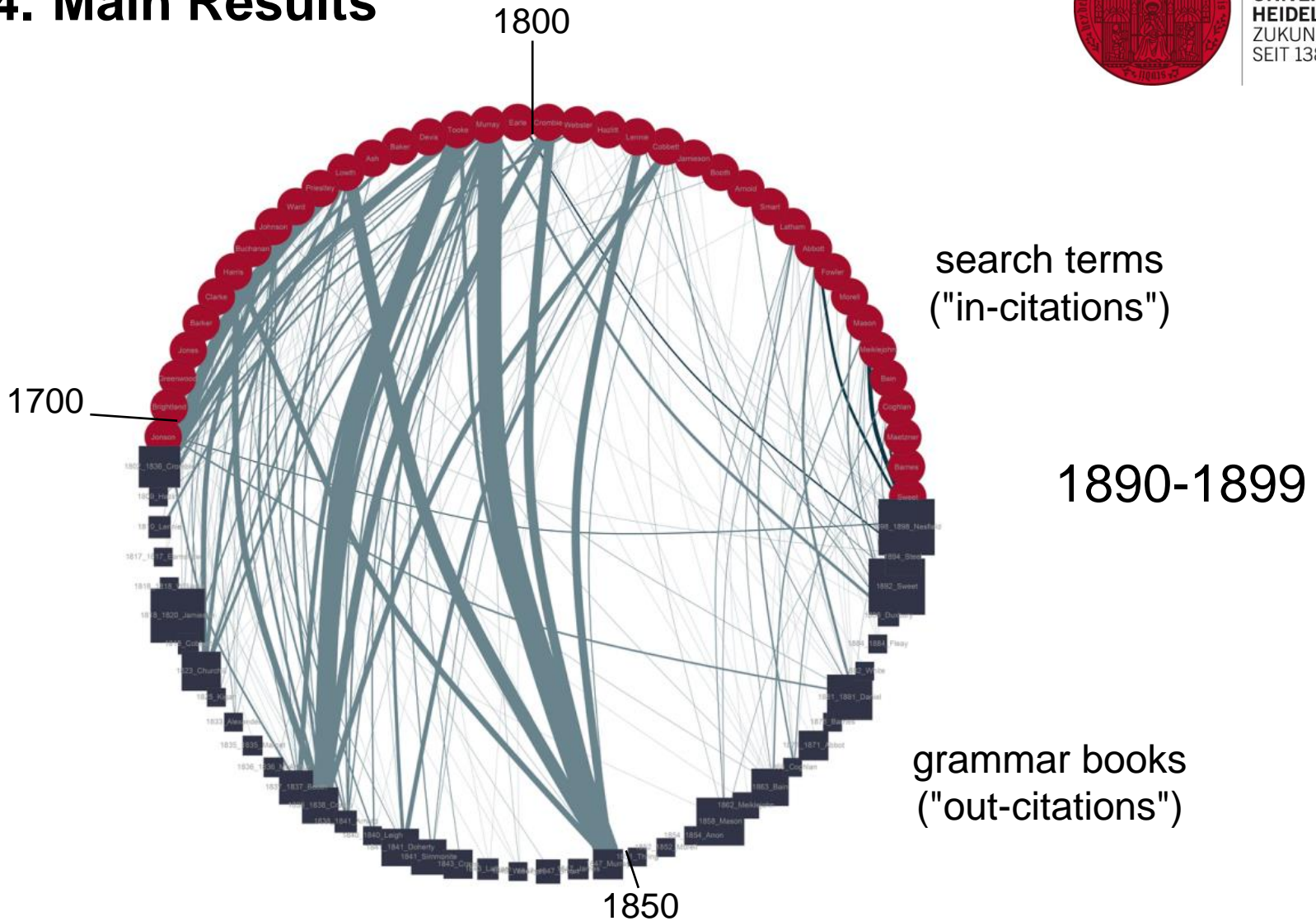




# 4. Main Results



# 4. Main Results



# 4. Main Results



break around 1850

afterwards, grammarians rather turn to their contemporaries instead of referring back to 18<sup>th</sup>-century authors; generally less references to other grammarians

→ turn away from prescriptive grammar writing

→ opening up of new approaches?

- ♦ emergence of comparative and historical linguistics
- ♦ separation of phonetics/phonology from orthography
- ♦ beginnings of descriptive grammar writing

# 4. Main Results



occurrences of keywords related to structural changes in grammar books



comparative

historical

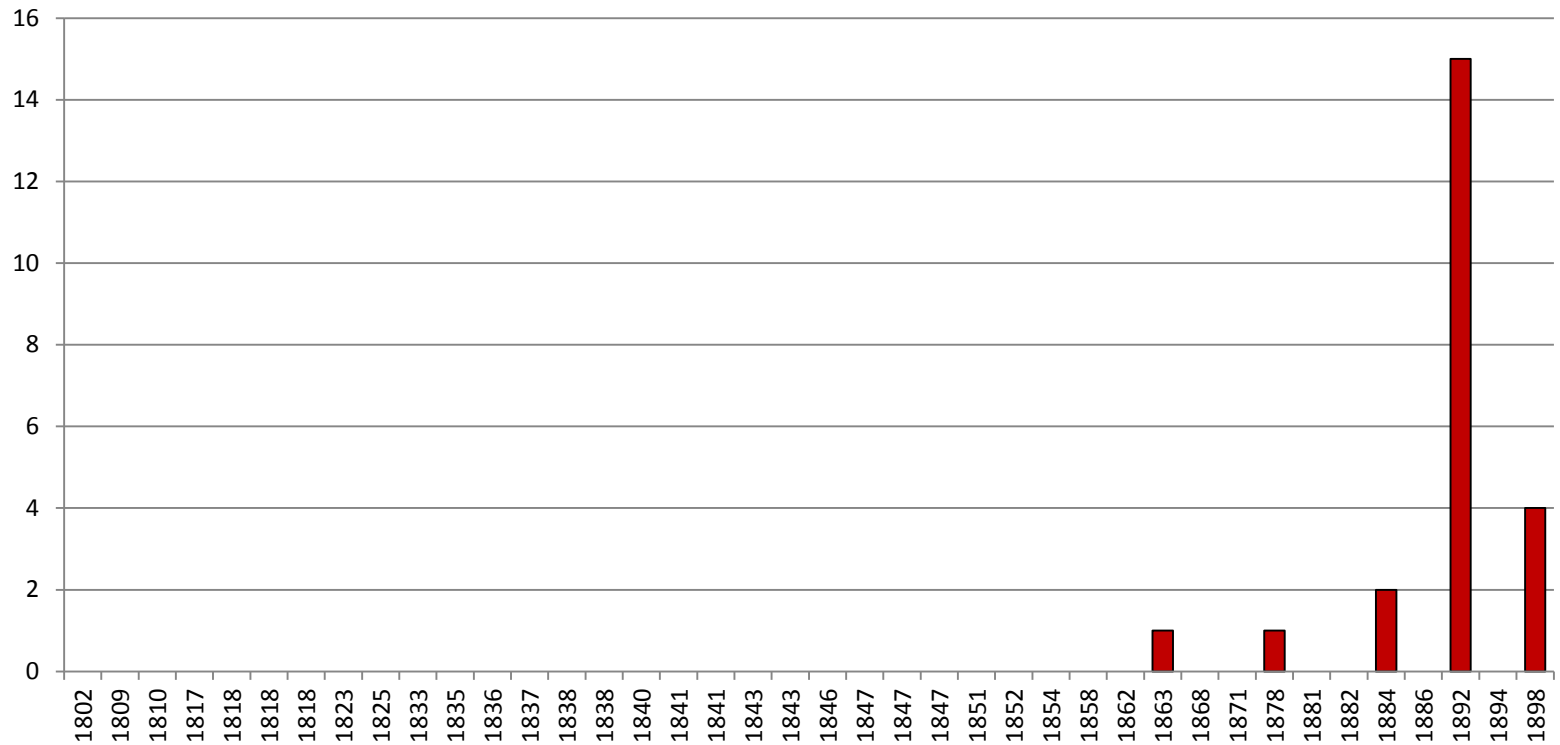
phonetic(s), phonology

descriptive vs. prescriptive/prescription

# 4. Main Results



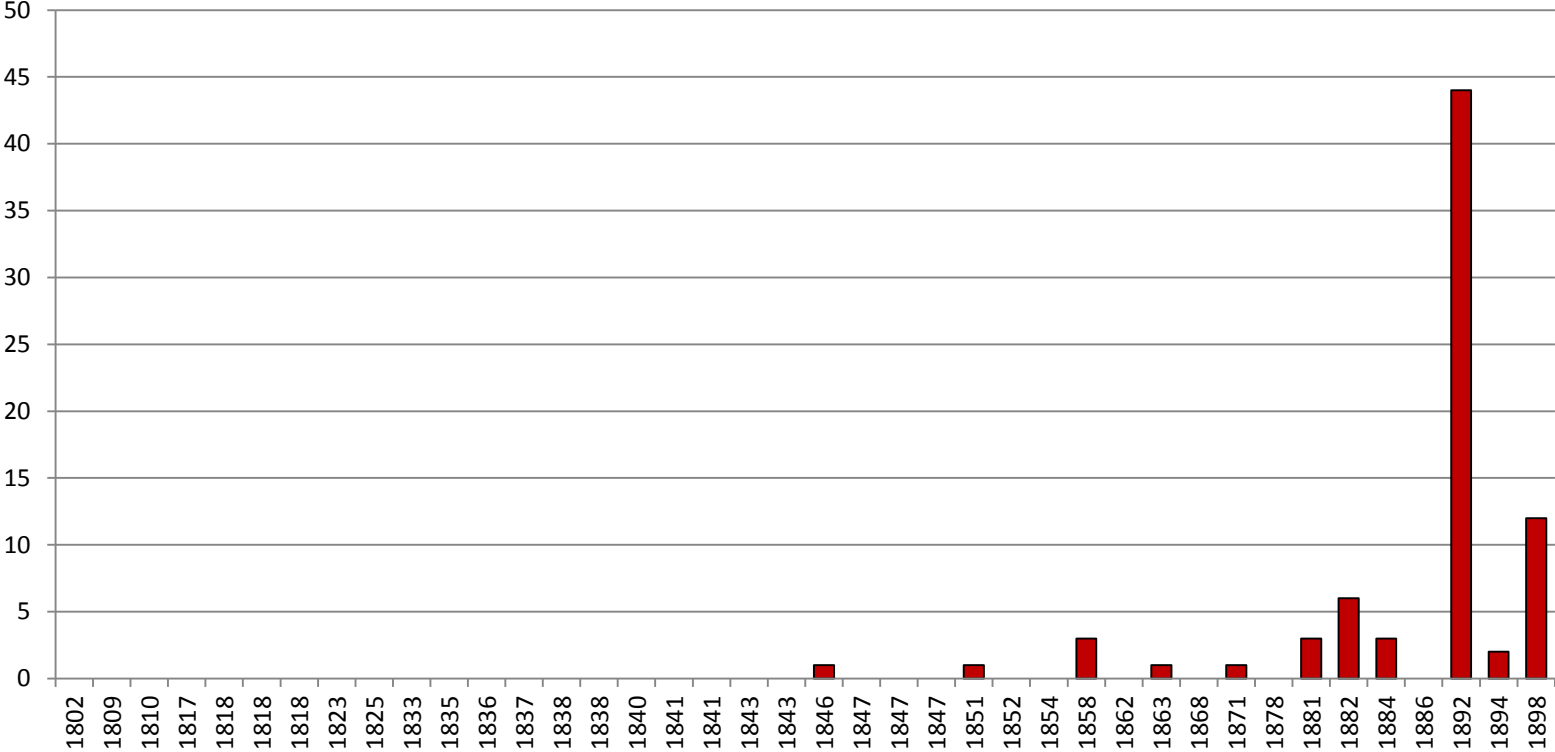
keyword *comparative*



# 4. Main Results



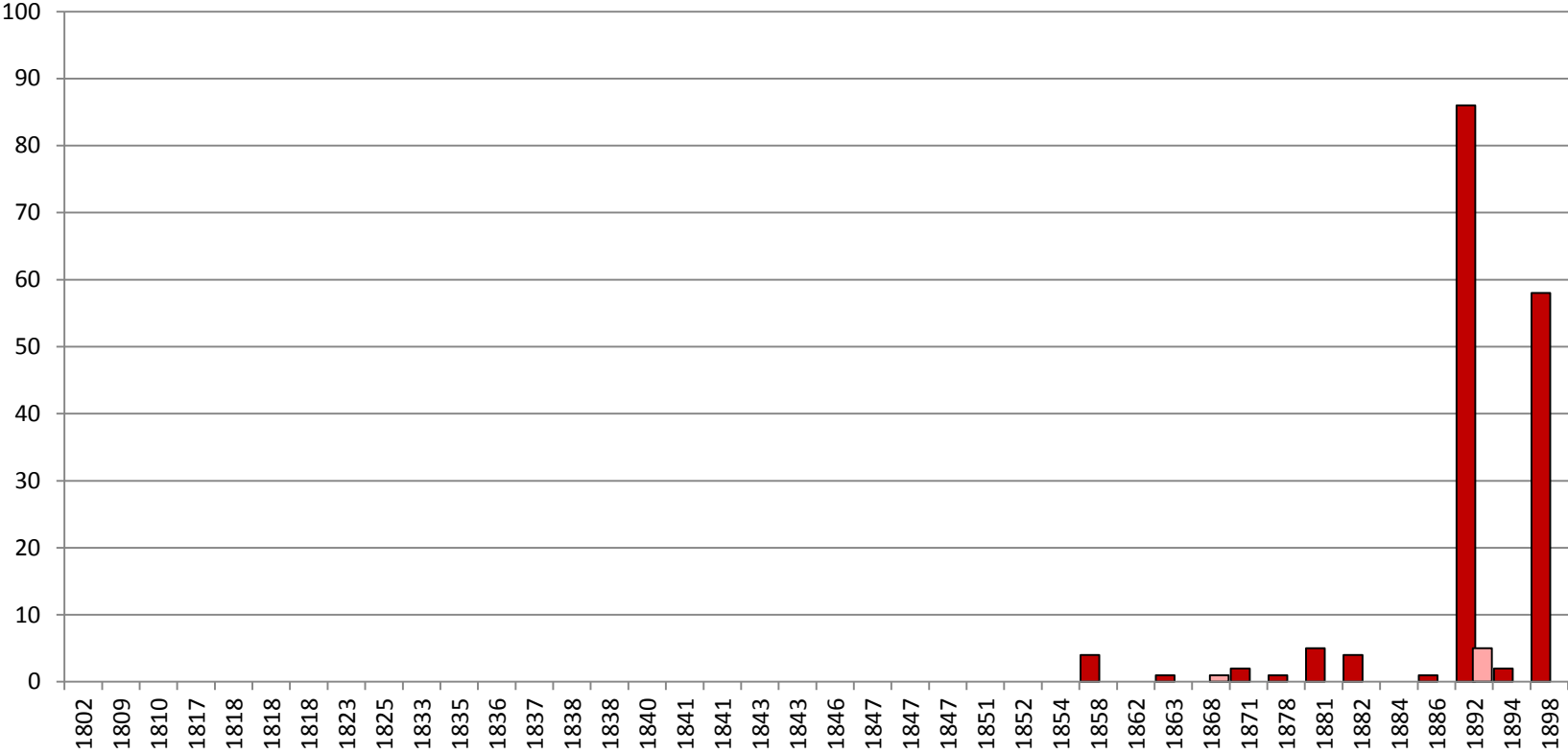
keyword *historical*



# 4. Main Results



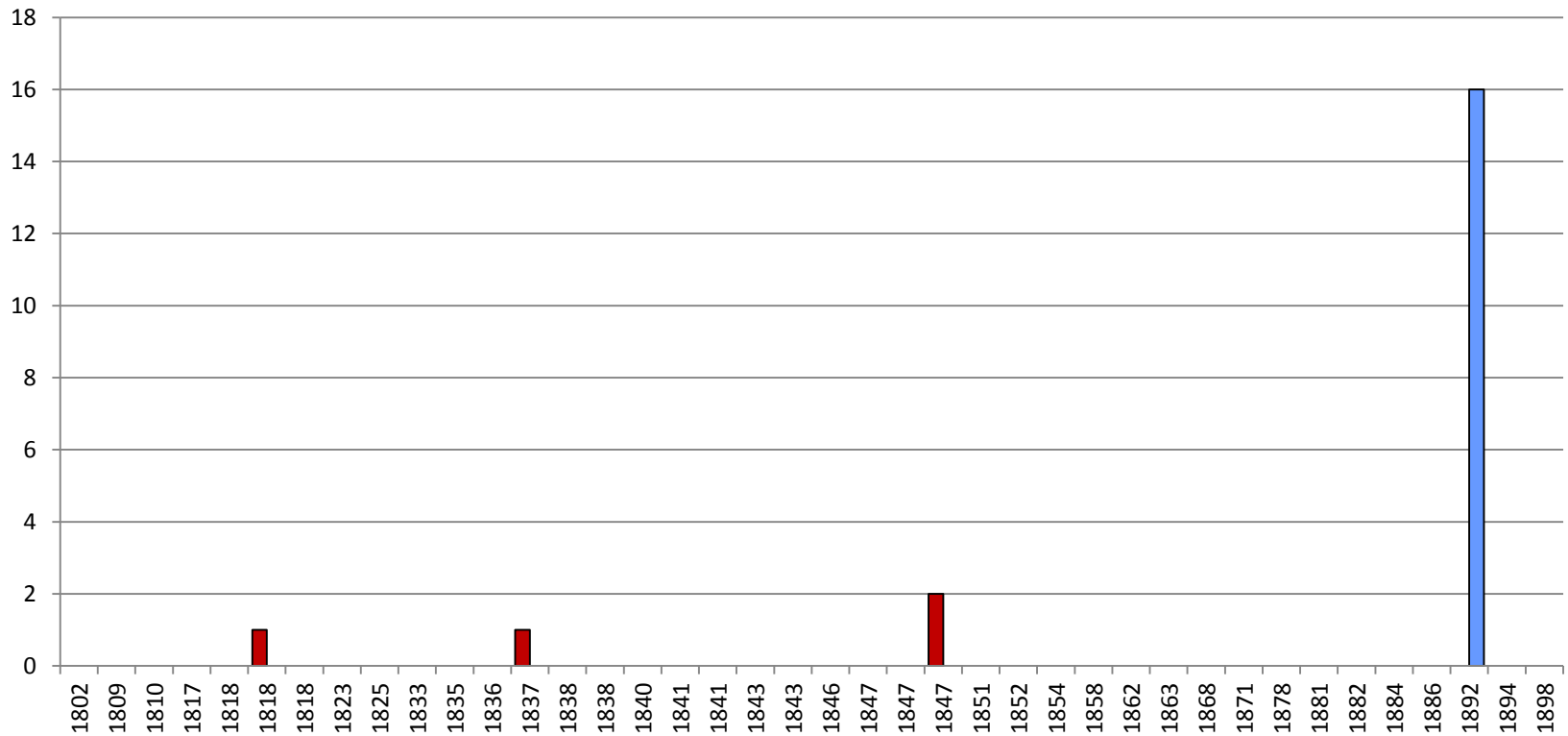
keyword *phonetic(s)*, *phonology*



# 4. Main Results



keyword *prescriptive / prescription*, *descriptive*





## 4. Main Results



keyword *prescriptive / prescription*, *descriptive*

Booth (1837): "the **prescriptions** are always most numerous"

Gerald Murray (1847): "How the foregoing anomaly originally crept into our language, and how long **prescription** has consecrated the propriety of its present application, is easy to conceive."



# 5. Summary and Conclusion

# 5. Summary and Conclusion



approx. 1,500 references in 34 out of 40 grammar books

earliest reference: Ben Jonson's grammar (1640)

→ main reason: Jonson's description of the pronunciation of EModE

very few references to grammars written between 1640 and 1750

many references to grammarians that wrote their major works in the second half of the 18<sup>th</sup> century

almost all of these references occur in grammars of the first half of the 19<sup>th</sup> century

a few authors (L. Murray, Horne Tooke, Lowth) are referred to very often

three out of 40 grammarians (G. Murray, Cramp, Crombie) refer to other grammarians excessively (but for different reasons)

# 5. Summary and Conclusion



## break around 1850:

turn away from prescriptive grammar writing

occupation with contemporary grammars

references generally less frequent

use of terms: emergence of new fields of study visible towards the end of the century (comparative linguistics, historical linguistics, phonetics)

→ some terms are used earlier, but considerable increase only in the 1890s (Sweet 1892/1898, Nesfield 1898)

→ but: early grammars containing comparative, historical, phonetic or descriptive aspects might not necessarily use the expected terminology

e.g. Cramp (1838: viii) rejects the "general opinion that 'the province of the grammarian is not to dictate what usages ought to be, but simply to discover what they are'."



## 6. Outlook

# 6. Outlook



What is being planned ...

- ♦ differentiation of grammarians' references by adding attributes to the XML annotation
- ♦ annotation and categorisation of all references to other authors
- ♦ examination of *ego networks*, i.e. networks with a focal actor to which other people are connected
- ♦ extension of the corpus to the 16<sup>th</sup> to 18<sup>th</sup> centuries in order to make a representative corpus of English grammar books (1580–1900) available as a prerequisite for comprehensive diachronic studies

# Project Link and Bibliography



UNIVERSITÄT  
HEIDELBERG  
ZUKUNFT  
SEIT 1386

Link to the *HeidelGram* Project: <https://heidelgram.de>



## Bibliography

- Anderwald, Lieselotte. 2016. *Language Between Description and Prescription: Verbs and Verb Categories in Nineteenth-Century Grammars of English*. Oxford: Oxford University Press.
- Görlach, Manfred. 1998. *An Annotated Bibliography of Nineteenth-Century Grammars of English*. Amsterdam/Philadelphia: John Benjamins.
- Michael, Ian. 1987. *The Teaching of English*. Cambridge: Cambridge University Press.
- Michael, Ian. 1991. "More than enough English grammars". In: Leitner, Gerhard (ed.). *English Traditional Grammars. An International Perspective*. Amsterdam/Philadelphia: John Benjamins.
- White, Howard D. 2011. "Scientific and Scholarly Networks". In: Scott, John and Peter J. Carrington (eds.). *The SAGE Handbook of Social Network Analysis*. London: SAGE Publications Ltd., 271-285.

For information and literature on the different kinds of network visualisations, please ask us.