WHAT CAN YOU DO WITH 200 STUDIES OF LANGUAGE CHANGE?

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REASSESSING LANGUAGE CHANGE PROJECT

- Lack of access to data & previous corpus-based research → research on real-time change largely not cumulative
- **Language Change Database**: Comparative, real-time baseline data for modelling change in progress
  - Open-access **linked data** web application, easy to **edit & query**
  - Currently in beta stage, c. 200 entries
  - Could be used to carry out **meta-analyses** of a large number of linguistic changes

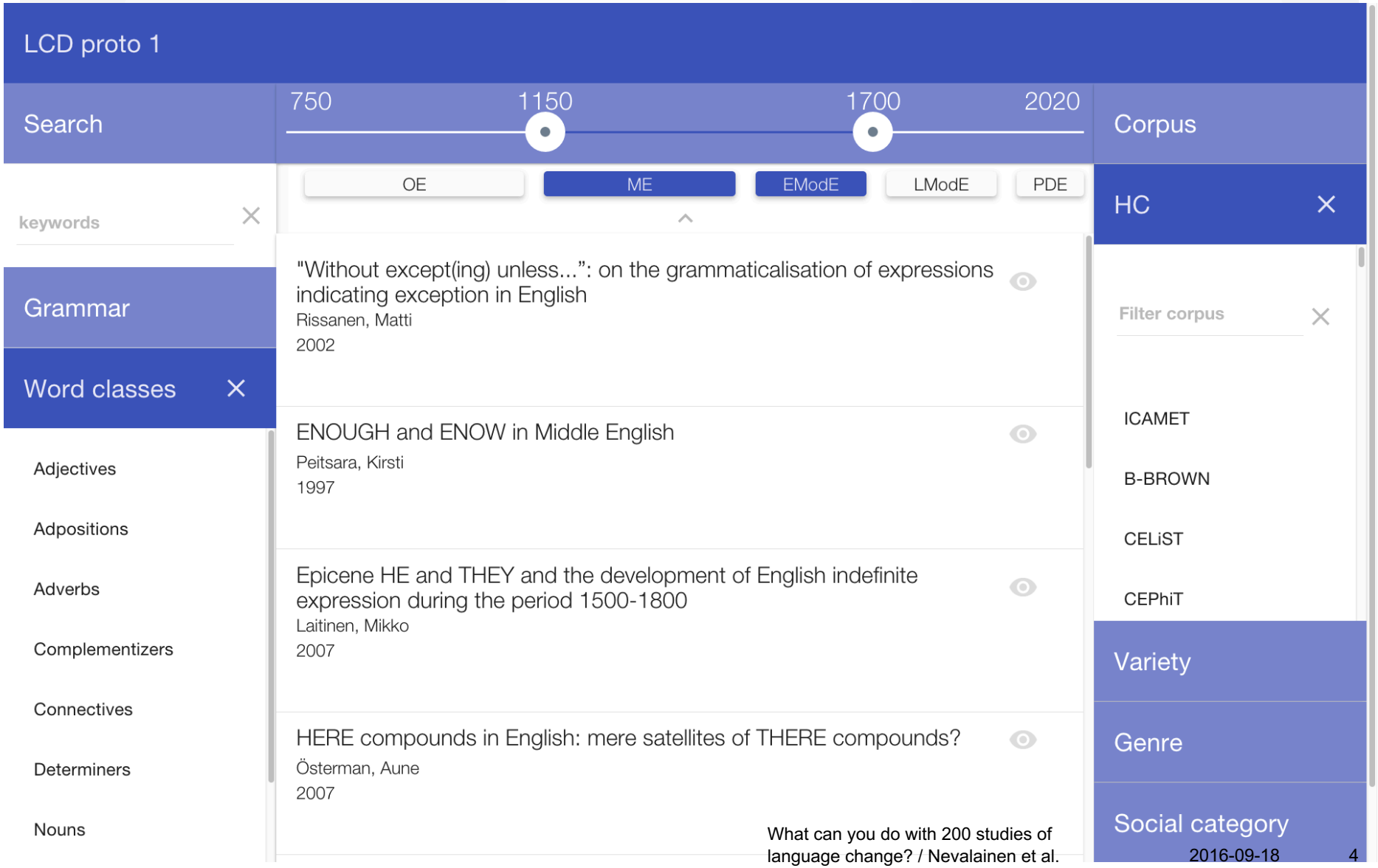
WHAT THE DATABASE WILL CONTAIN

- Metadata, e.g.
  - Bibliographical details
  - Linguistic items & topics studied
  - Corpora & time periods studied

- **Data**
  - Tables
  - Summary of results

More information:
helsinki.fi/lcd

SEARCH INTERFACE



Publication

"Without except(ing) unless...": on the grammaticalisation of expressions indicating exception in English

Topic

EXCEPT

Time periods:

Modern English
Present-Day English
Middle English
Old English

Custom time periods:

(-)

Keywords

EXCEPT; preposition; subordinator;

Corpora and databases

BROWN Corpus
Freiburg–LOB Corpus of British English
Freiburg-Brown corpus of American English
Helsinki Corpus
Lancaster-Oslo/Bergen Corpus
Middle English Compendium

Other sources

Genre

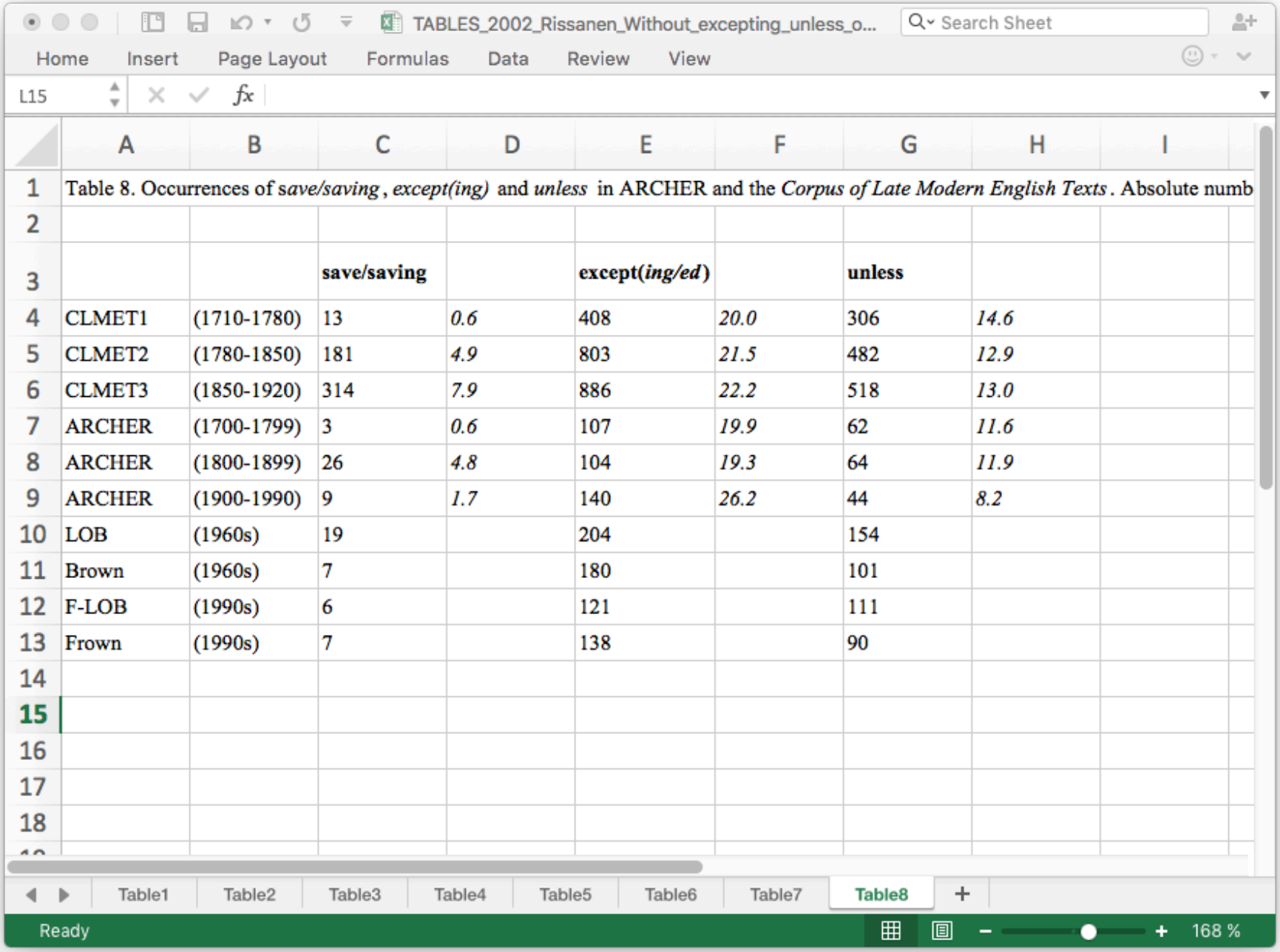
Variety

Summary of results

- The subordinator and preposition EXCEPT first appears in 15th-century texts.
- The connective was obviously borrowed from Latin; the verb EXCEPT appears roughly at the same time as the grammaticalized form.
- In the course of centuries, EXCEPT becomes more popular than SAVE but is superseded by UNLESS in subordinator use.
- It is used mostly in statutes and official correspondence.
- It's first appearance as a connective can be traced back to LME

Grammar

Preposition
Connectives

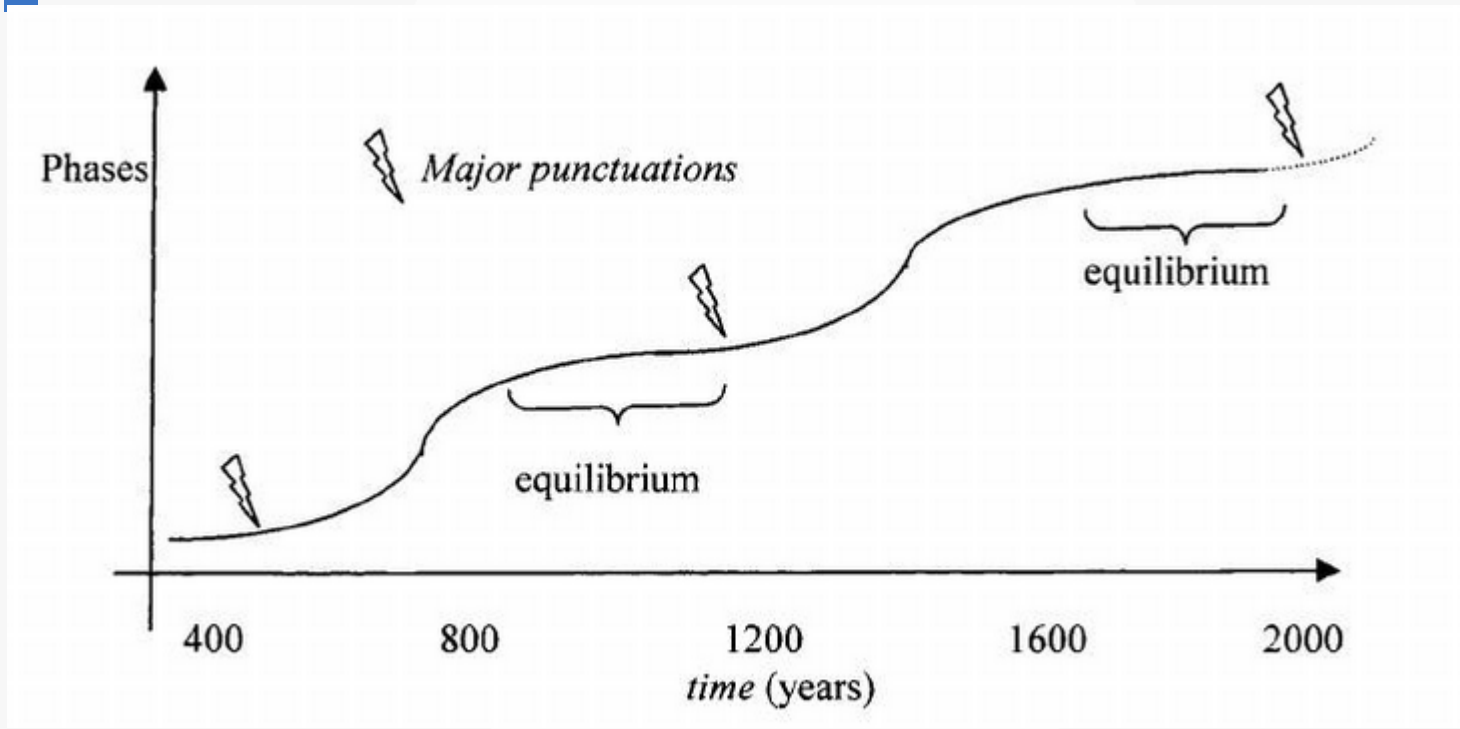


	A	B	C	D	E	F	G	H	I
1	Table 8. Occurrences of *save/saving*, *except(ing)* and *unless* in ARCHER and the *Corpus of Late Modern English Texts*. Absolute numb								
2									
3			**save/saving**		**except(*ing/ed*)**		**unless**		
4	CLMET1	(1710-1780)	13	*0.6*	408	*20.0*	306	*14.6*	
5	CLMET2	(1780-1850)	181	*4.9*	803	*21.5*	482	*12.9*	
6	CLMET3	(1850-1920)	314	*7.9*	886	*22.2*	518	*13.0*	
7	ARCHER	(1700-1799)	3	*0.6*	107	*19.9*	62	*11.6*	
8	ARCHER	(1800-1899)	26	*4.8*	104	*19.3*	64	*11.9*	
9	ARCHER	(1900-1990)	9	*1.7*	140	*26.2*	44	*8.2*	
10	LOB	(1960s)	19		204		154		
11	Brown	(1960s)	7		180		101		
12	F-LOB	(1990s)	6		121		111		
13	Frown	(1990s)	7		138		90		
14									
15									
16									
17									
18									

CASE STUDY: RISSANEN & CONNECTIVES

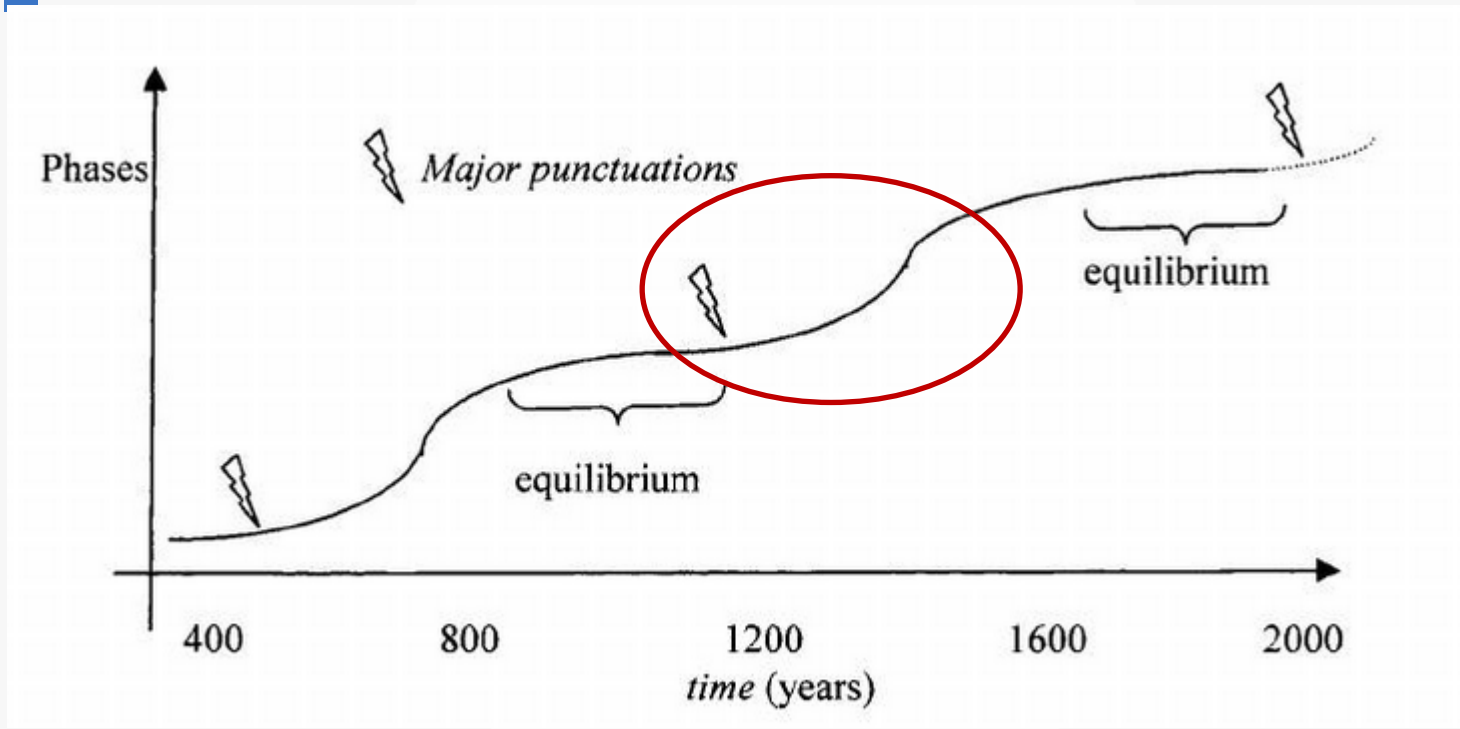
Punctuated equilibria?

HISTORY OF ENGLISH AS PUNCTUATED EQUILIBRIA



(Bergs 2005: 54)

HISTORY OF ENGLISH AS PUNCTUATED EQUILIBRIA

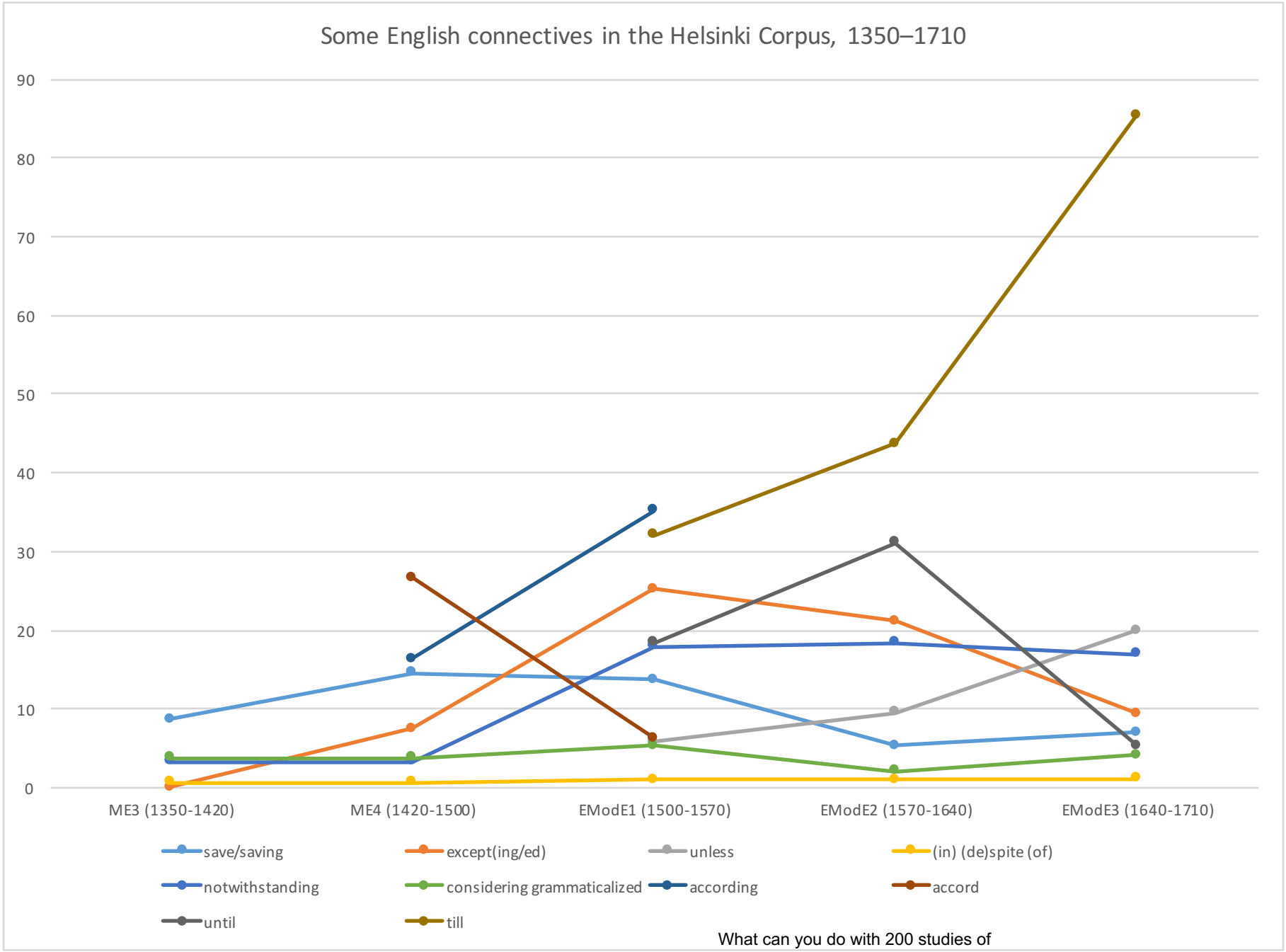


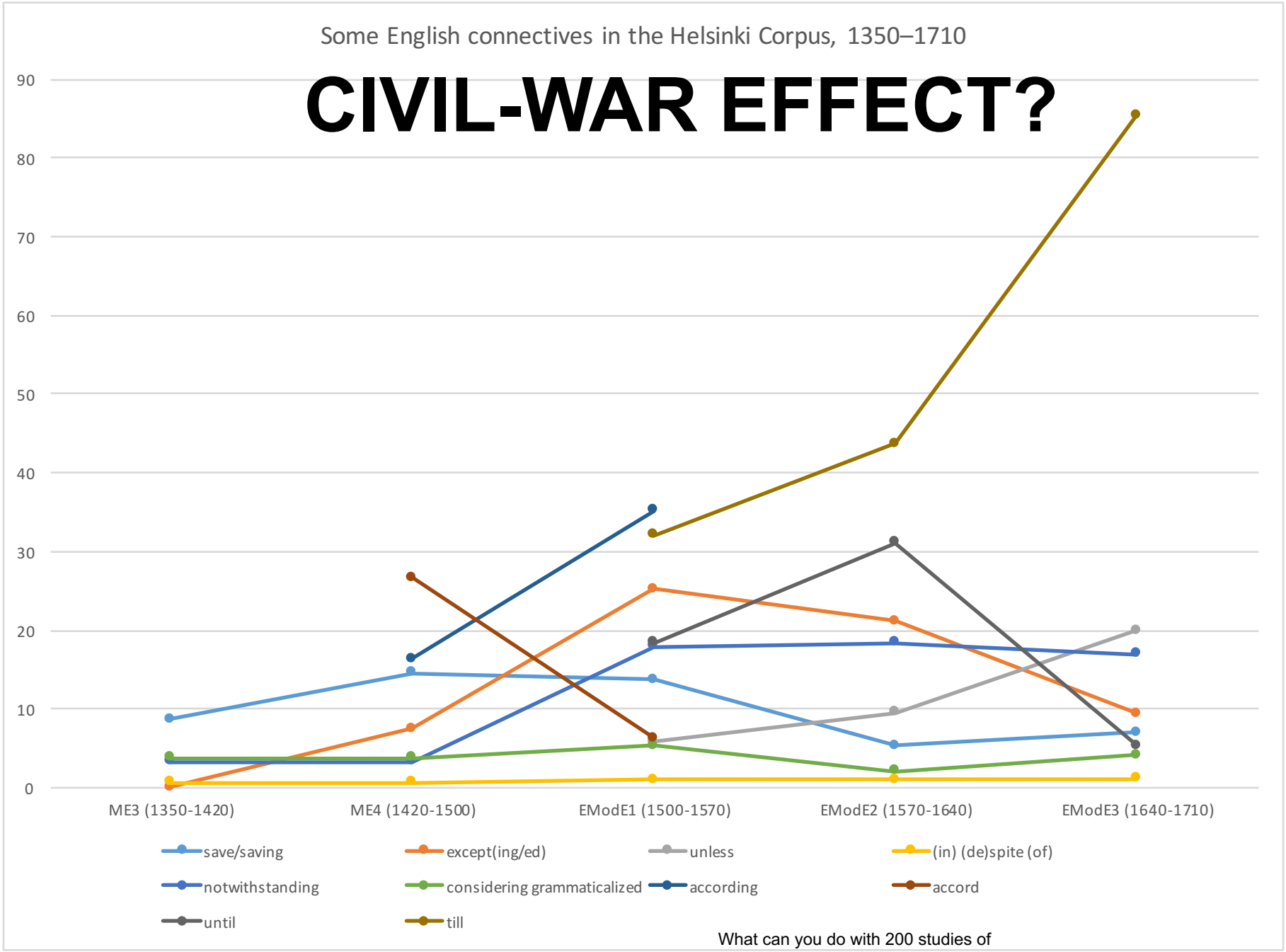
(Bergs 2005: 54)

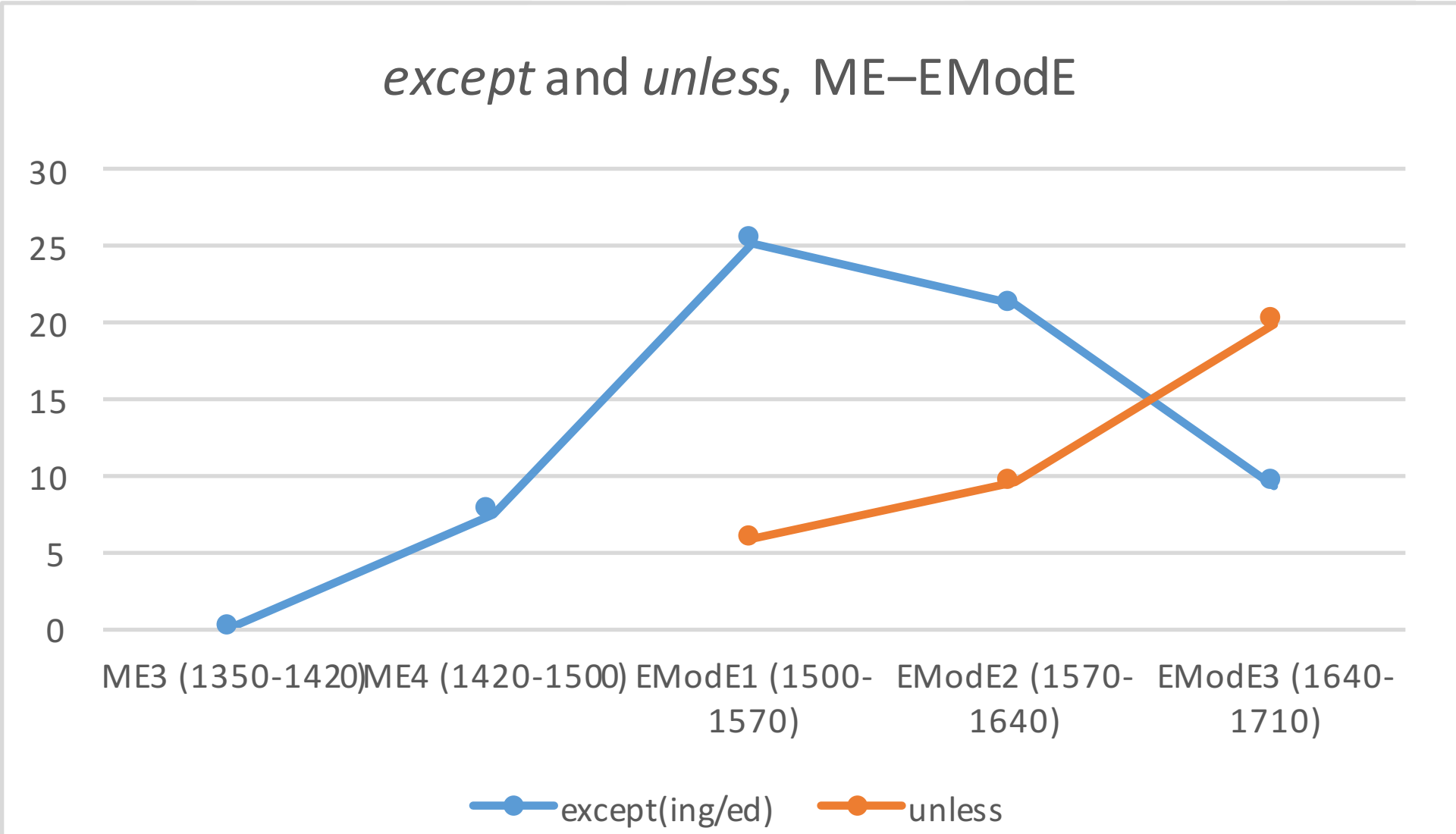
RISSANEN'S STUDIES ON CONNECTIVES

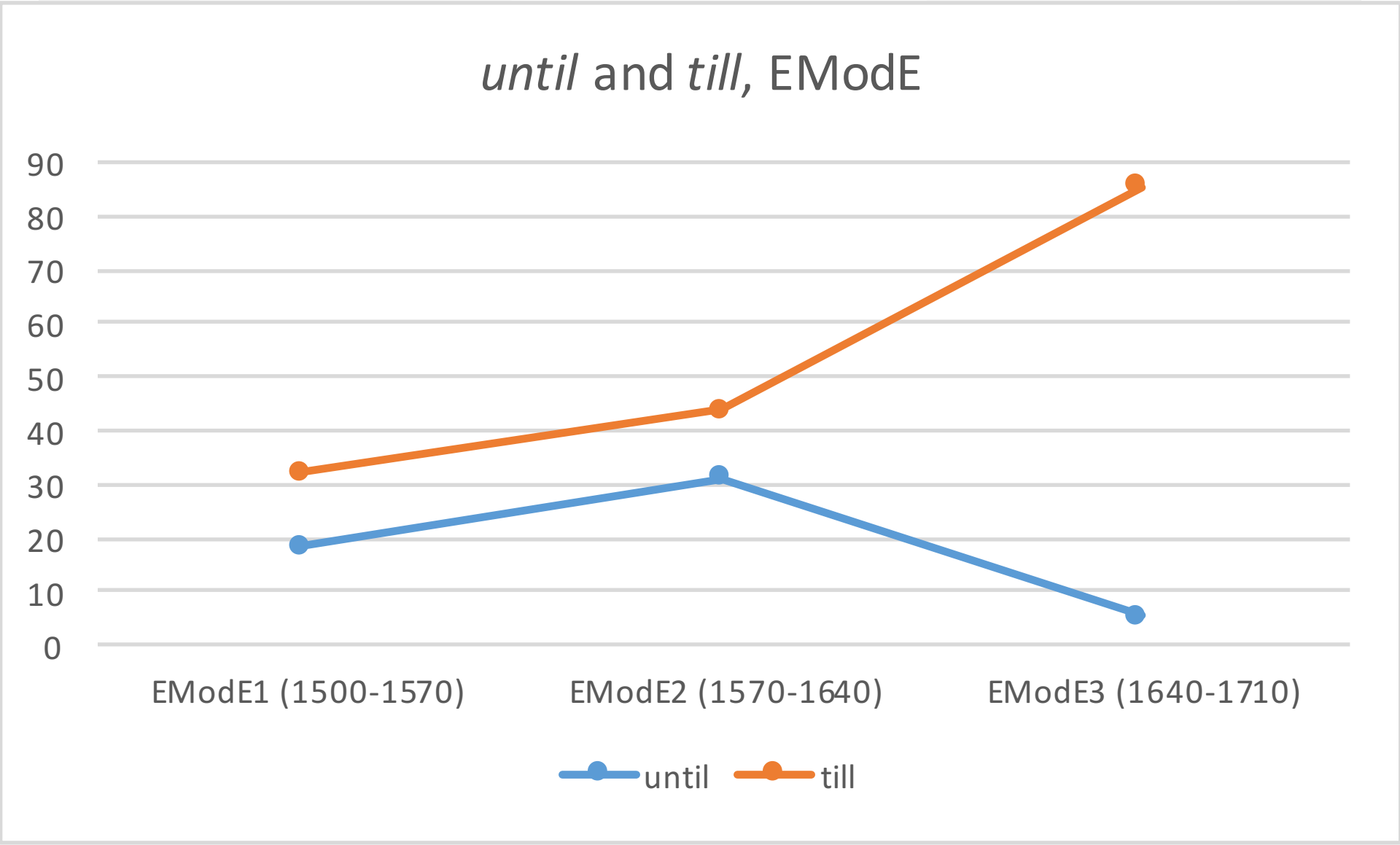
Grammaticalization / first appearance as a connective:

- Old English (or earlier)
  - *without, but, oþ, till, lest, þe/þæt*
- Middle English
  - *until, that*
- **Late Middle English** (C14–15) – punctuation?
  - *except, in case, because, save, unless, notwithstanding, outtaken, according, provided that, despite, seeing, considering*

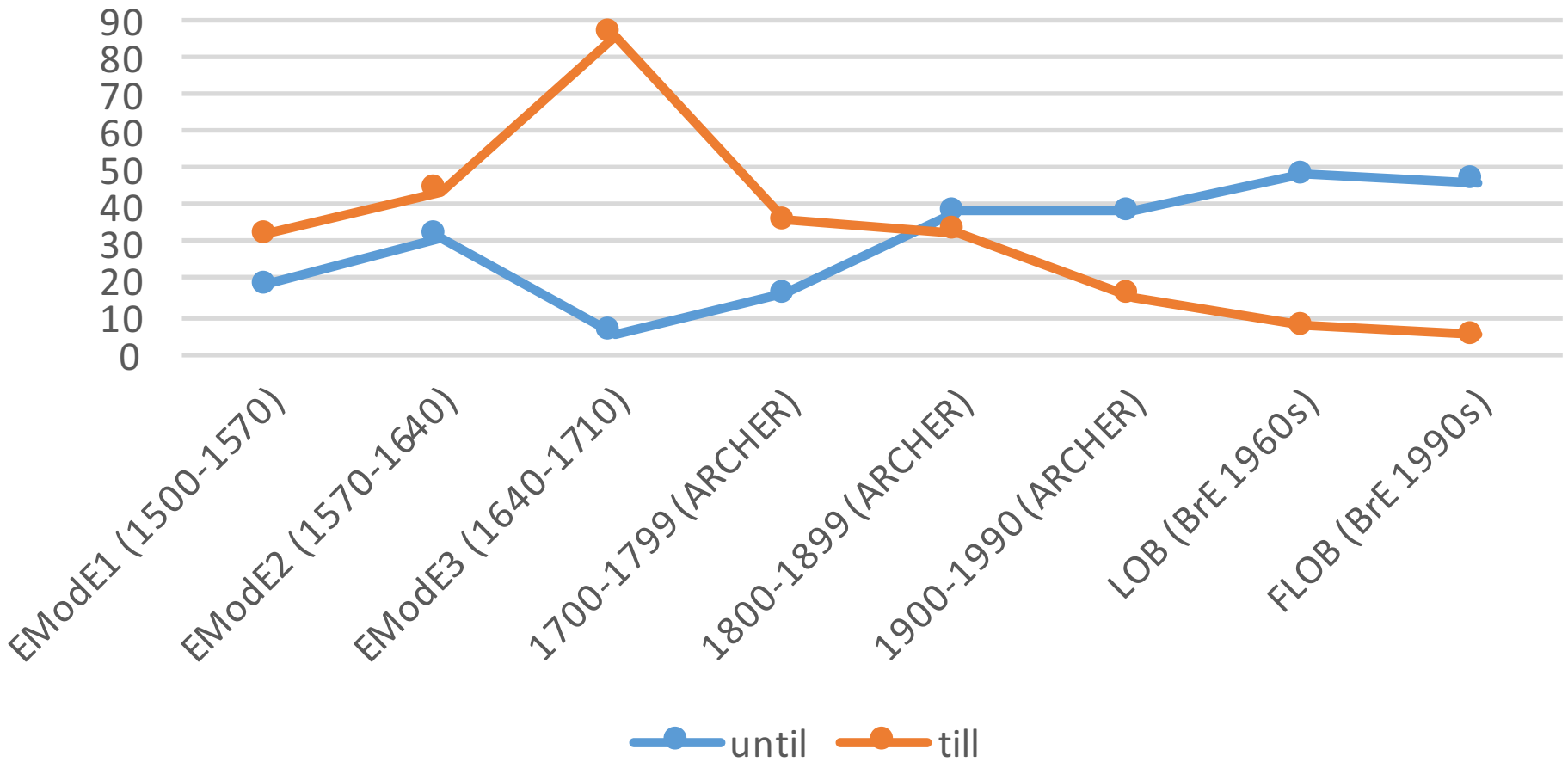

Some English connectives in the Helsinki Corpus, 1350–1710
90
80
70
60
50
40
30
20
10
0
ME3 (1350-1420)
ME4 (1420-1500)
EModE1 (1500-1570)
EModE2 (1570-1640)
EModE3 (1640-1710)
save/saving
except(ing/ed)
unless
(in) (de)spite (of)
notwithstanding
considering grammaticalized
according
accord
until
till


Some English connectives in the Helsinki Corpus, 1350–1710
CIVIL-WAR EFFECT?
90
80
70
60
50
40
30
20
10
0
ME3 (1350-1420)
ME4 (1420-1500)
EModE1 (1500-1570)
EModE2 (1570-1640)
EModE3 (1640-1710)
save/saving
except(ing/ed)
unless
(in) (de)spite (of)
notwithstanding
considering grammaticalized
according
accord
until
till

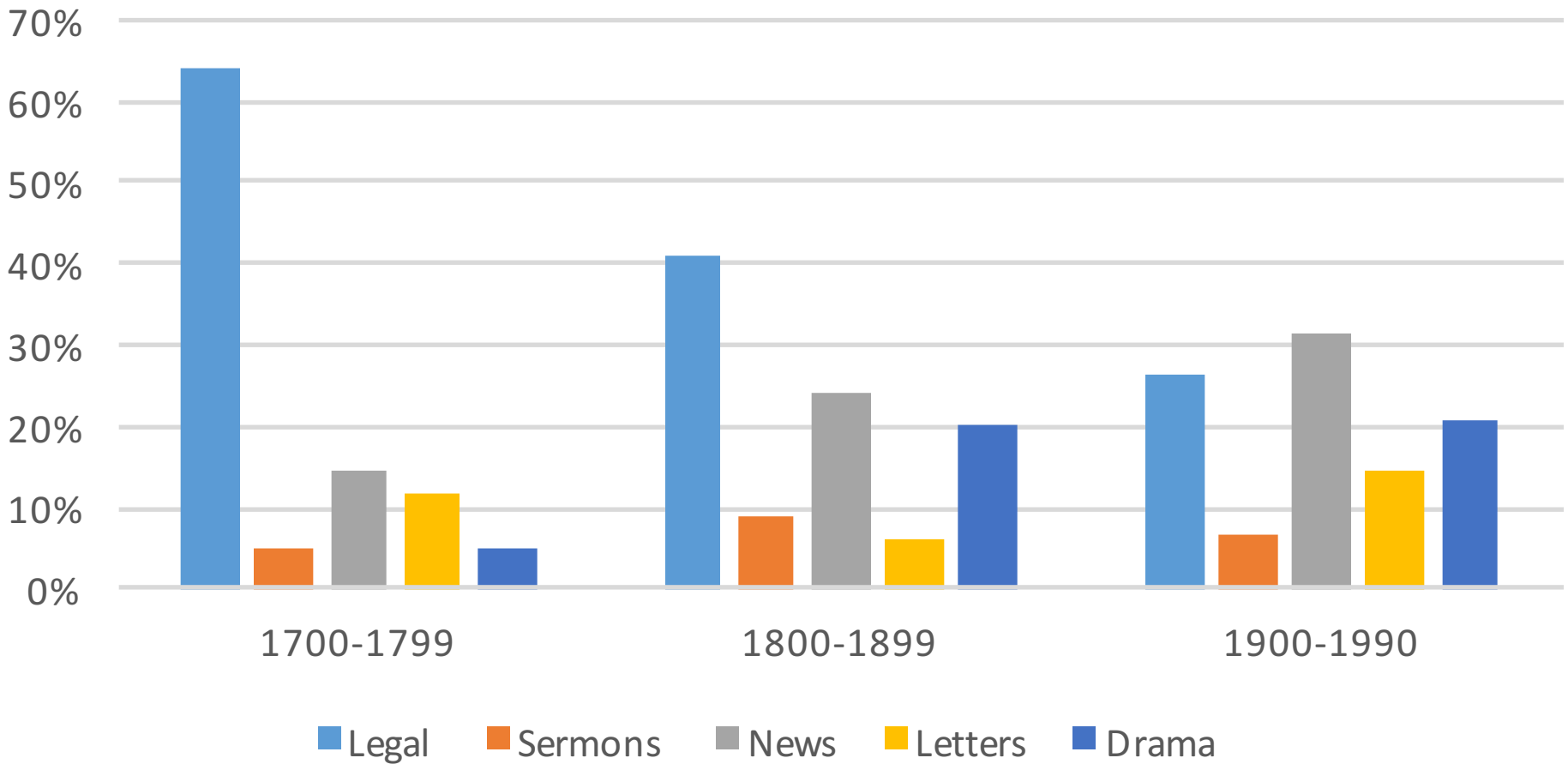

except and unless, ME–EModE
30
25
20
15
10
5
0
ME3 (1350-1420)
ME4 (1420-1500)
EModE1 (1500-1570)
EModE2 (1570-1640)
EModE3 (1640-1710)
except(ing/ed)
unless

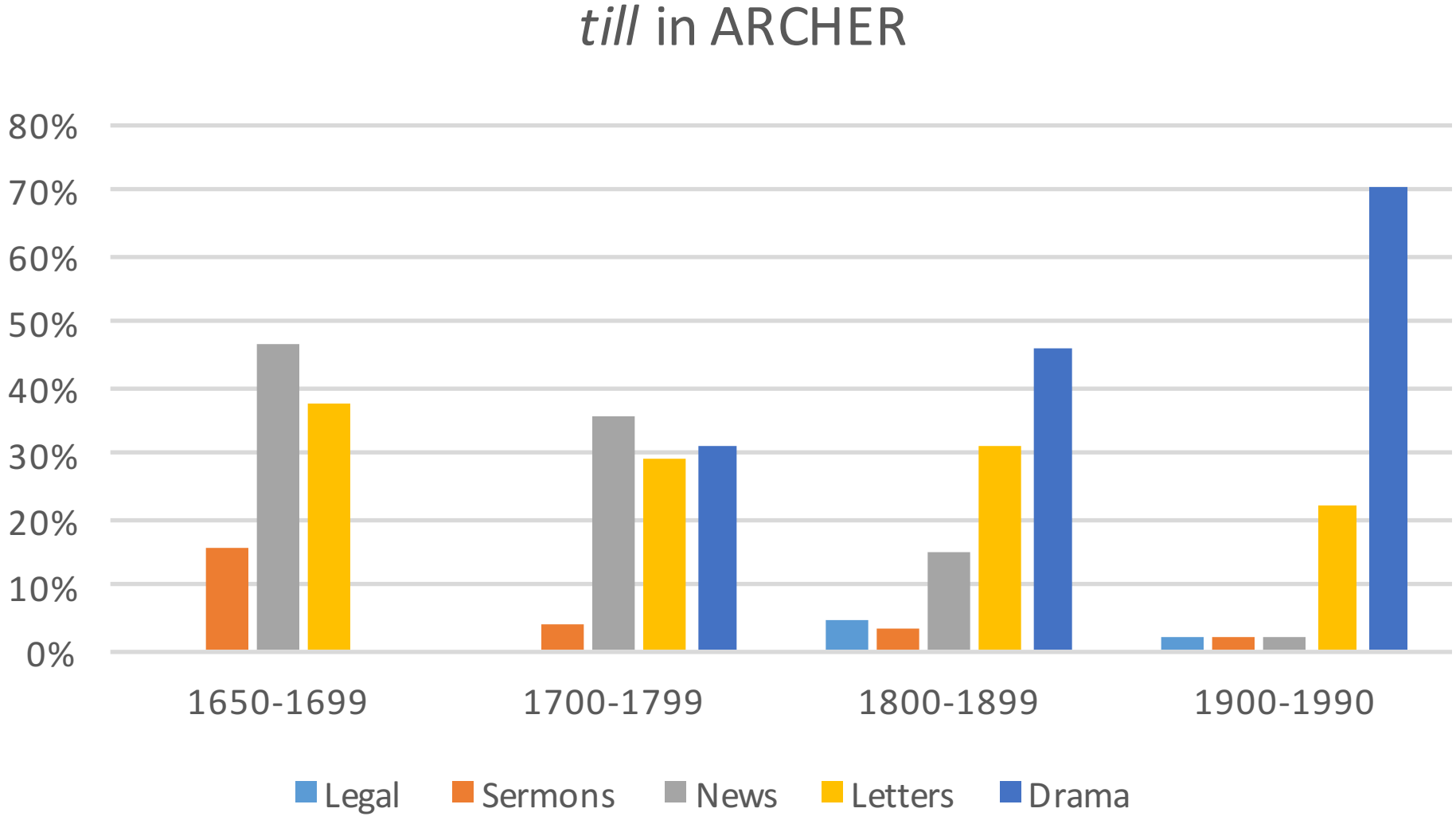

until and *till*, EModE
90
80
70
60
50
40
30
20
10
0
EModE1 (1500-1570)
EModE2 (1570-1640)
EModE3 (1640-1710)
until
till

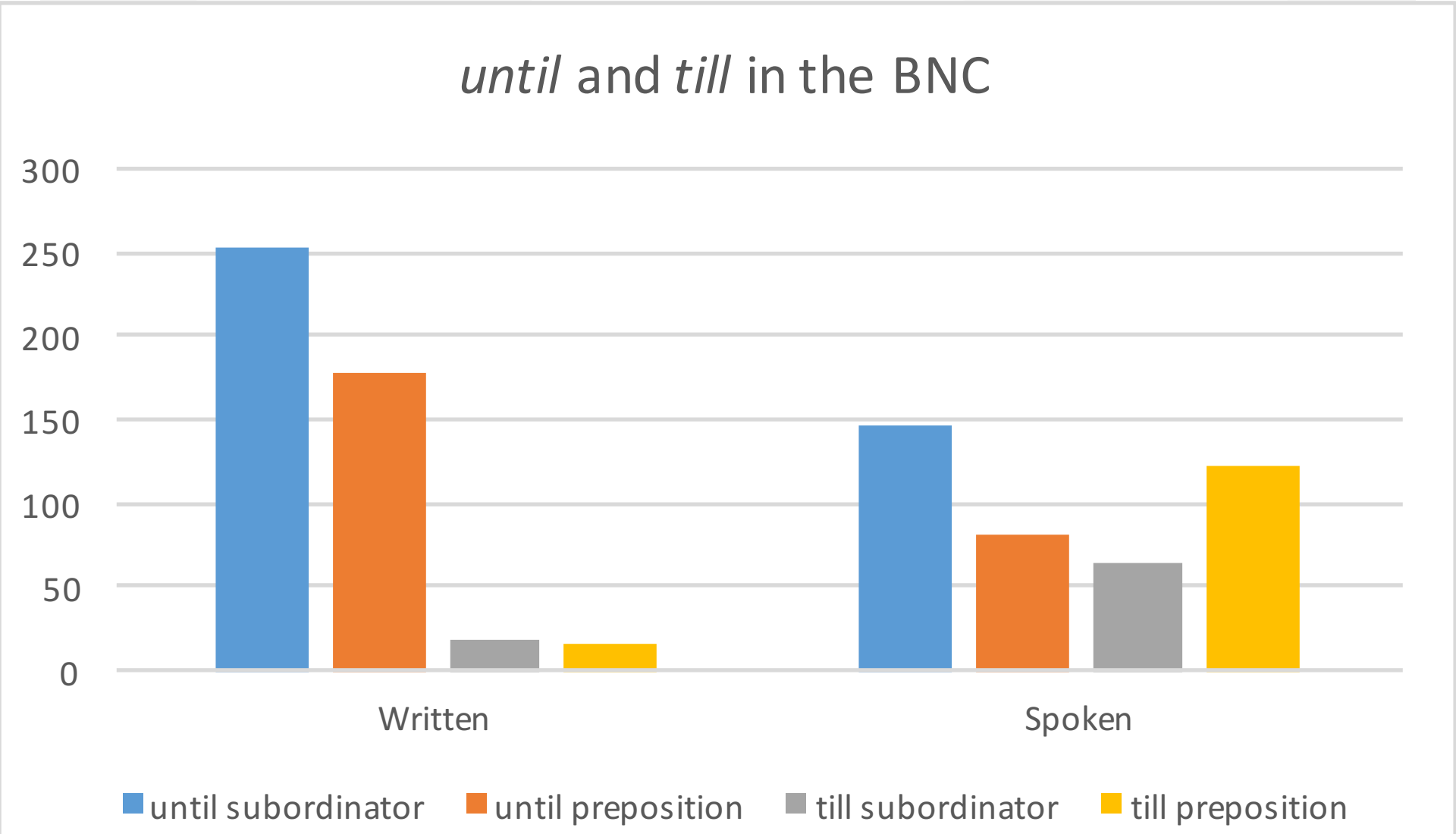
until and *till* in the long diachrony



until in ARCHER




till in ARCHER
80%
70%
60%
50%
40%
30%
20%
10%
0%
1650-1699
1700-1799
1800-1899
1900-1990
Legal
Sermons
News
Letters
Drama


until and *till* in the BNC
300
250
200
150
100
50
0
Written
Spoken
until subordinator
until preposition
till subordinator
till preposition

CASE REVISITED: FUTURE WORKFLOW

From Excel to **machine-readable tabular data** (RDF Data Cube)

- Filter datasets
  - Grammar = Connectives or any narrower grammar concept
  - Expression = contains “unless”
- Possibility to automatically calculate normalised frequencies
  - Validate normalised frequency values against corpus details
- Query filtered dataset
  - Sum of frequencies
  - Group by time period
- Visualize

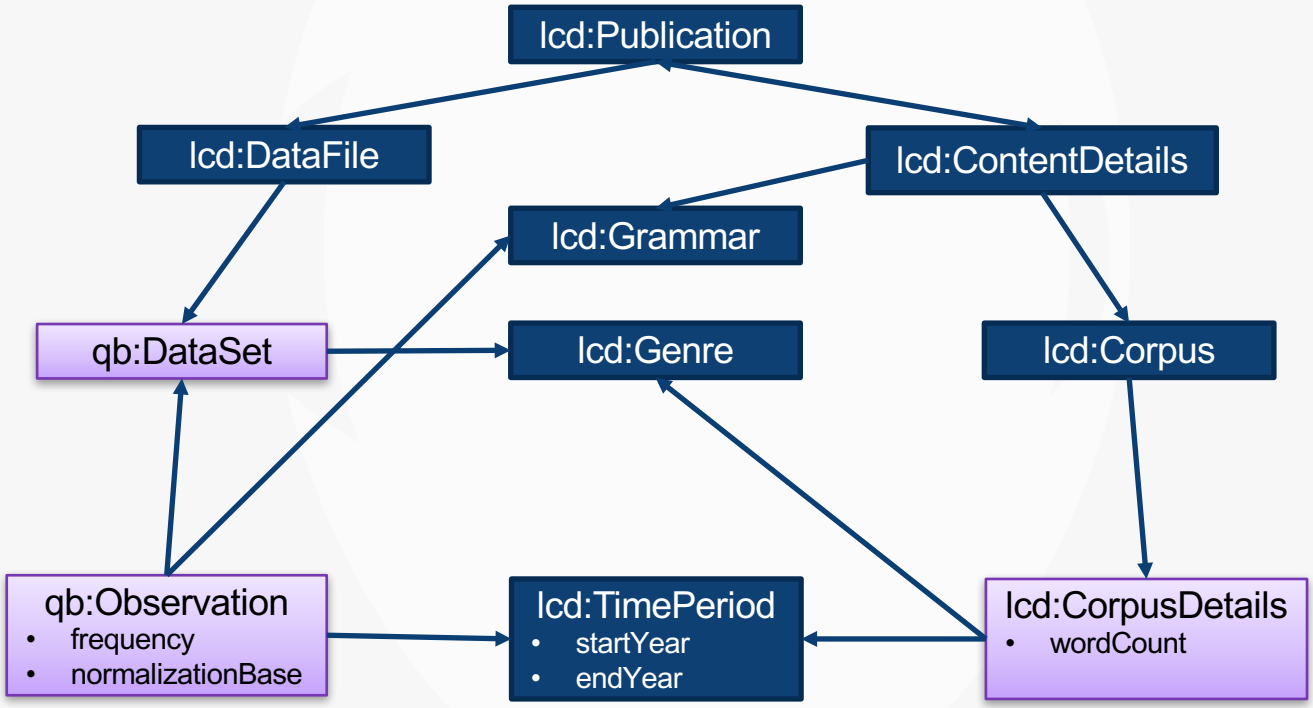
CONCLUSIONS (1)

- Workflow can be supported by one or more applications
- LCD works as common data source
- Proof-of-concept template for **storing and querying linguistic research data** for meta-analysis
  - Makes published research data ready for any kind of automated processing
  - Step towards re-usable research data

CONCLUSIONS (2)

- **Meta-analysis** possible at the level of:
  - Individual researchers
  - Linguistic topics
  - Time periods
- **LCD**: useful tool even at this stage
  - Will be published as an **open access** online resource by the end of the project (2018)
    - Wiki-style: researchers will be able to input their own studies
  - See Nevalainen et al. (2016)

DATA MODEL (SIMPLIFIED)



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- Nevalainen, Terttu, Turo Vartiainen, Tanja Säily, Joonas Kesäniemi, Agata Dominowska & Emily Öhman. 2016. Language Change Database: A new online resource. *ICAME Journal* 40: 77–94.
- Rissanen, Matti. 22 studies on connectives. **Thank you, Matti!**