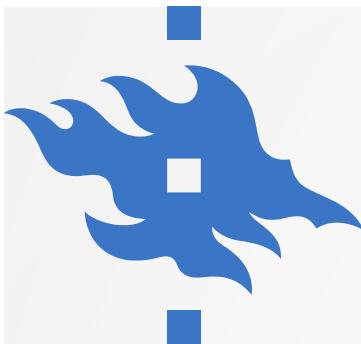


HISTORY OF ENGLISH AS PUNCTUATED EQUILIBRIA?

Terttu Nevalainen, Turo Vartiainen &
Tanja Säily

(with Aatu Liimatta & Jefrey Lijffijt)



OUTLINE

Theoretical background & hypotheses

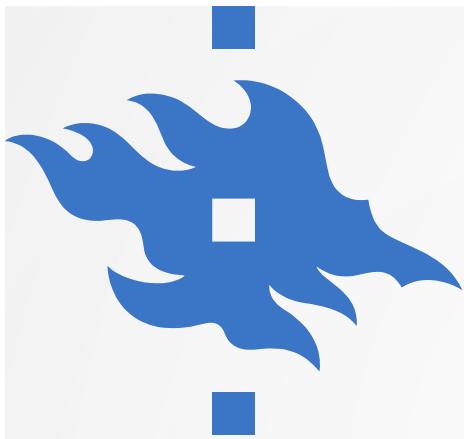
Material: Language Change Database

Initial exploration

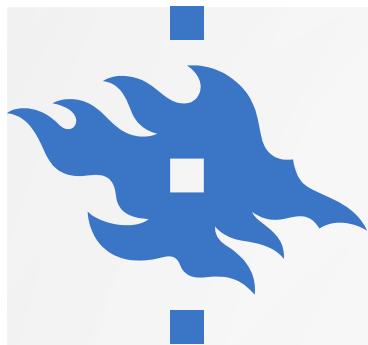
Method

Analysis

Discussion & conclusion

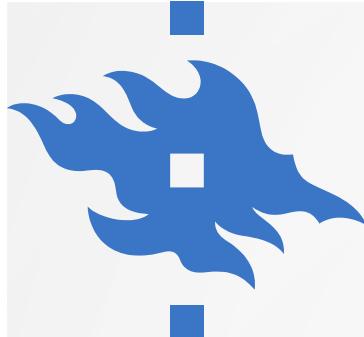


BACKGROUND

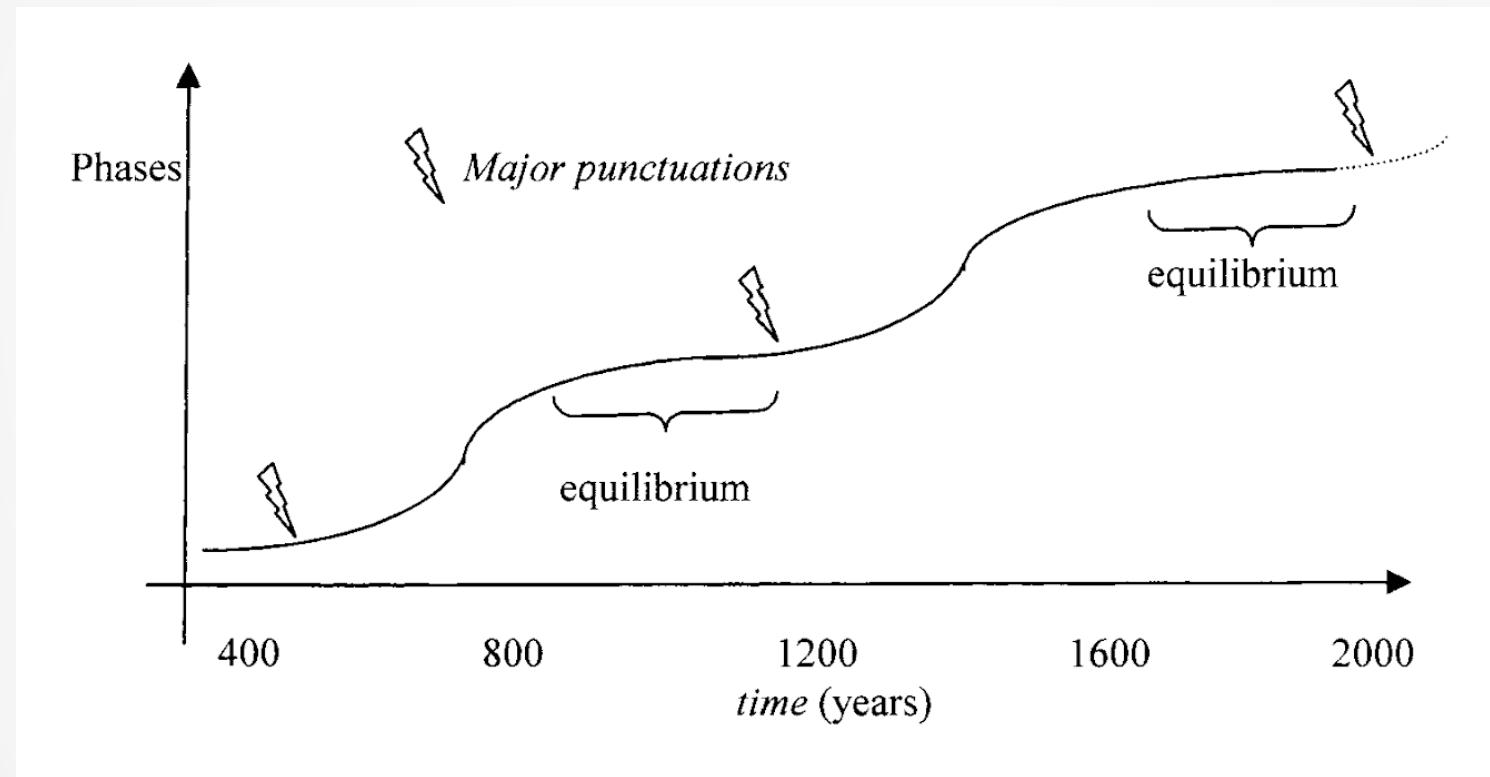


VARIATION IN THE RATE OF LINGUISTIC CHANGE

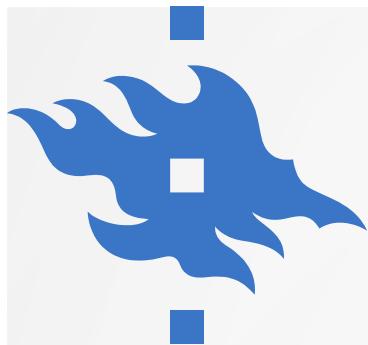
- **Non-linguistic factors** have been argued to precondition the rate of linguistic change
 - Trudgill (2011): community type a major factor
 - Bergs (2005): social networks (strong vs. weak network structures)
 - Denison (2003: 67–68): “Old English and (late) Modern English are relatively invariant, whereas Middle (and possibly early Modern) English show rapid change”
 - Dixon (1997: 76–85): punctuated equilibrium model



HISTORY OF ENGLISH AS PUNCTUATED EQUILIBRIA

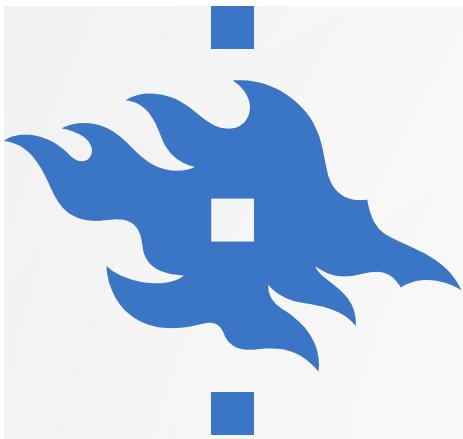


(Bergs 2005: 54, based on Dixon 1997)

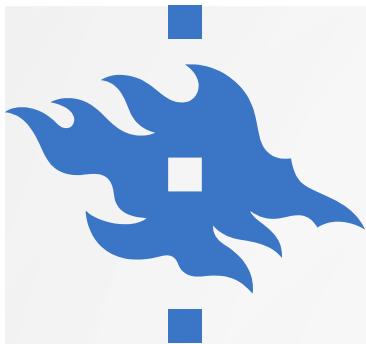


HYPOTHESES

- Major punctuations in the Middle Ages
 - Germanic invasions, 5th century onwards
 - Norman Conquest, 1066
 - Black Death epidemics, mid-14th century
- These accelerate change
 - “[T]he Norman Conquest may have ... triggered a fast change along some vectors that had already been present in Late Old English.” (Bergs 2005: 140)
 - Cf. Civil War Effect (Raumolin-Brunberg 1998)



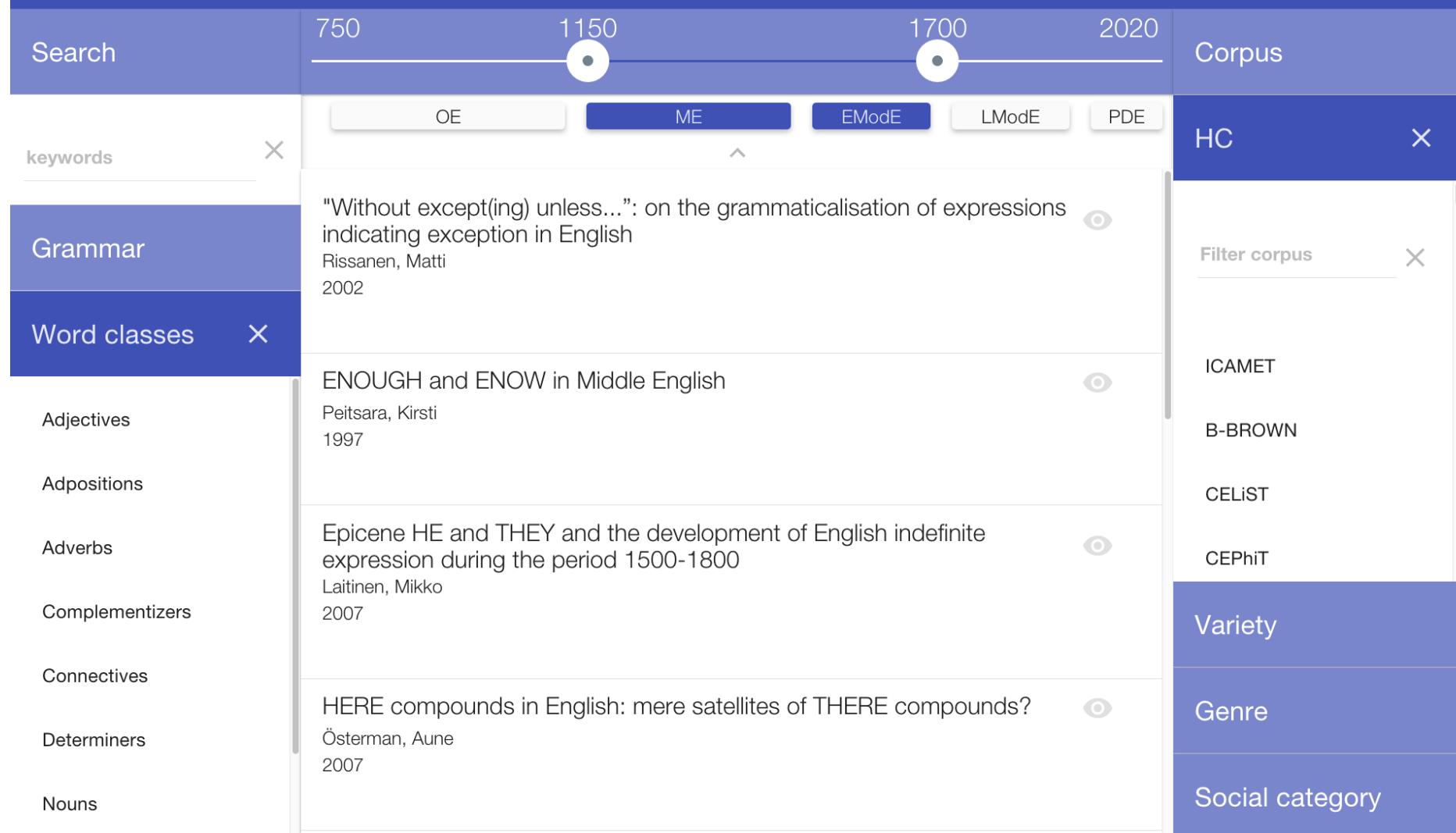
MATERIAL

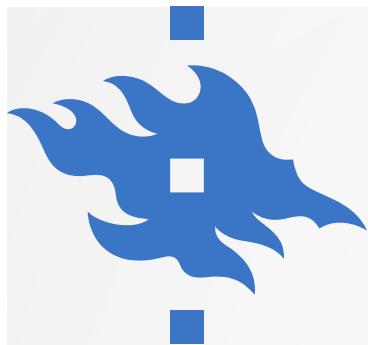


LANGUAGE CHANGE DATABASE (LCD)

- Comparative, real-time **baseline data** for modelling change in progress
- Currently **summarises** the results of c. 300 corpus-based research articles on variation and change in English
- **Numerical data** in a computer-readable form
- Can be used to carry out **meta-analyses** of a large number of linguistic changes
- www.helsinki.fi/lcd

LCD proto 1





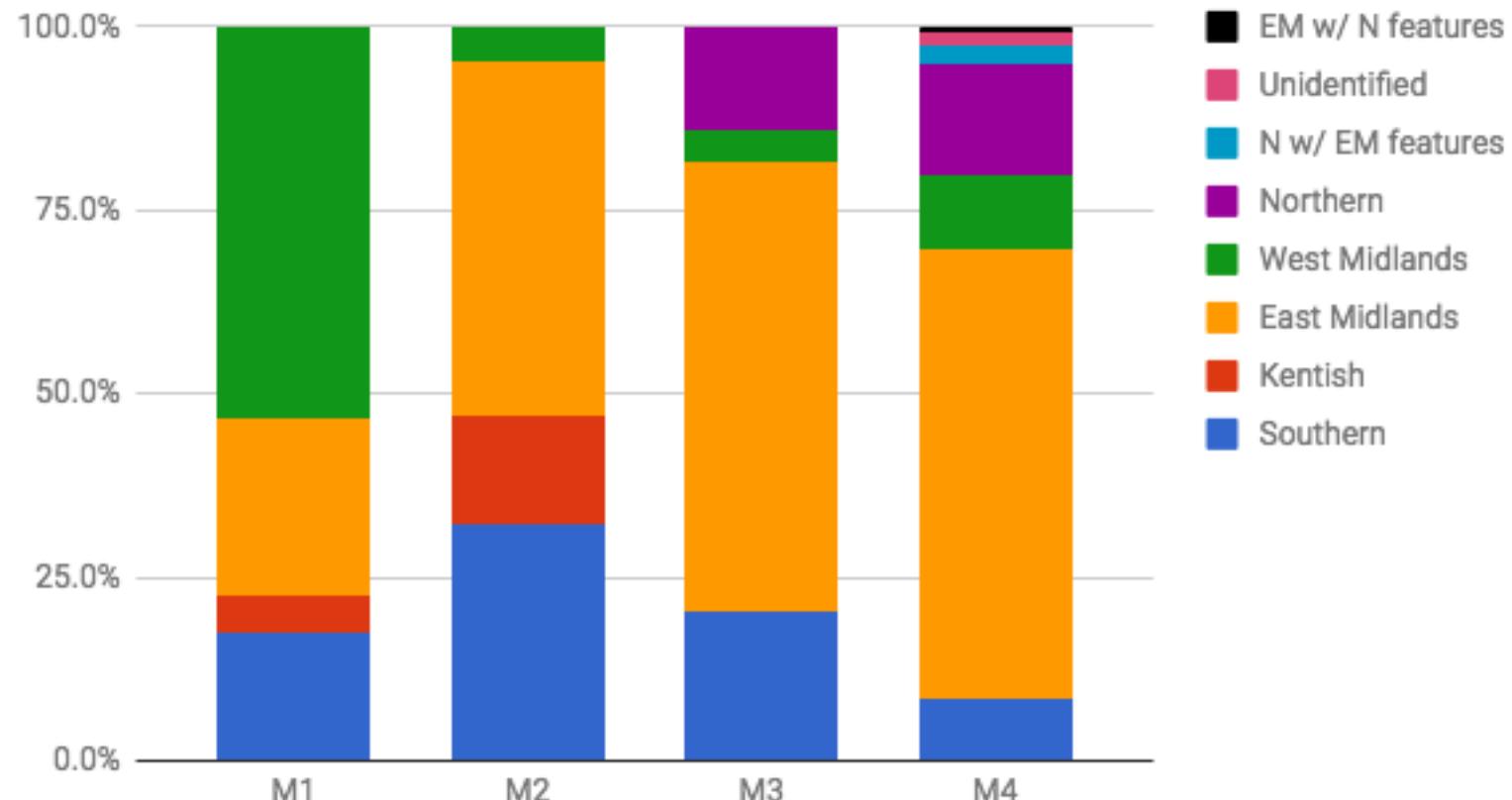
DATA USED

- Previous research based on the Middle English part of the **Helsinki Corpus of English Texts** (HC), 608,570 words
 - 44 individual changes
 - Random selection including e.g. modal auxiliaries, degree words, indefinite pronouns, quantifiers, relative adverbs
- HC period division
 - ME1: 1150–1250, ME2: 1250–1350, ME3: 1350–1420, ME4: 1420–1500
 - Annotated for dialect, text category and mode of production
 - http://www.helsinki.fi/varieng/CoRD/corpora/HelsinkiCorpus/middle_english.html



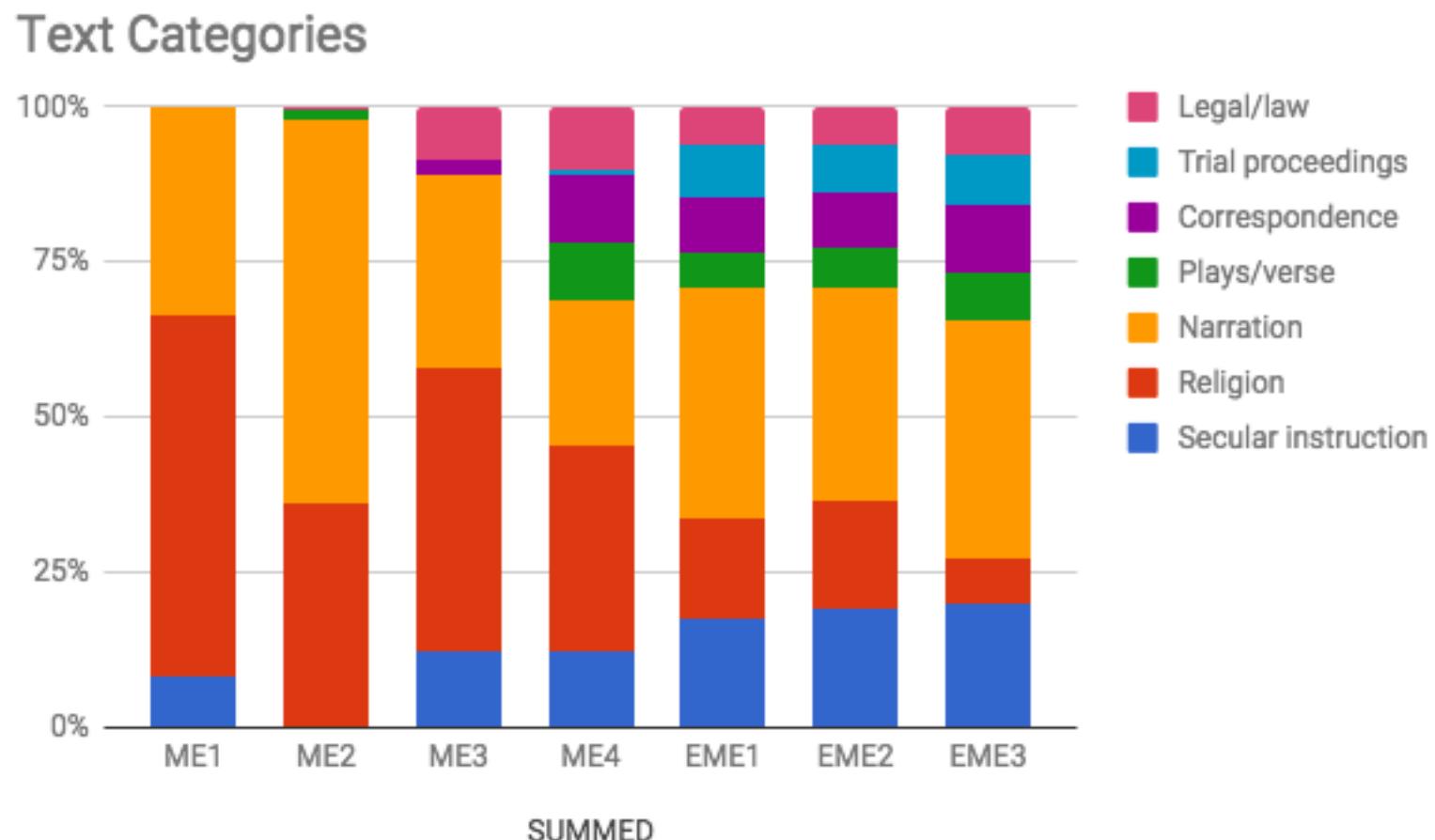
HC: MIDDLE ENGLISH DIALECTS

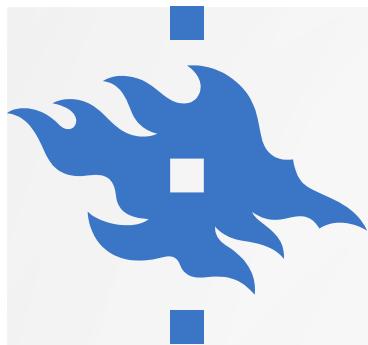
Dialects





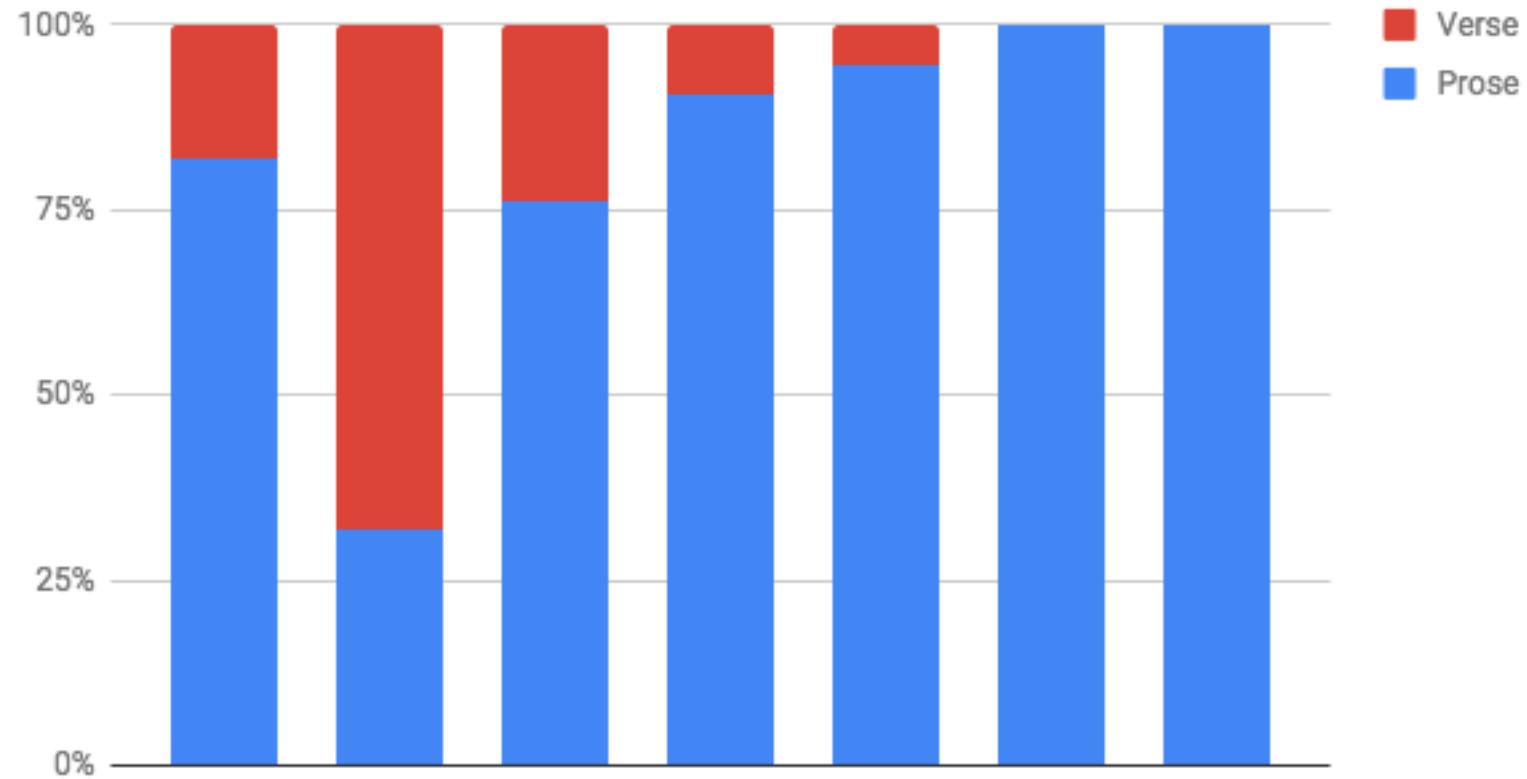
HC: TEXT CATEGORIES IN ME1 – EModE3

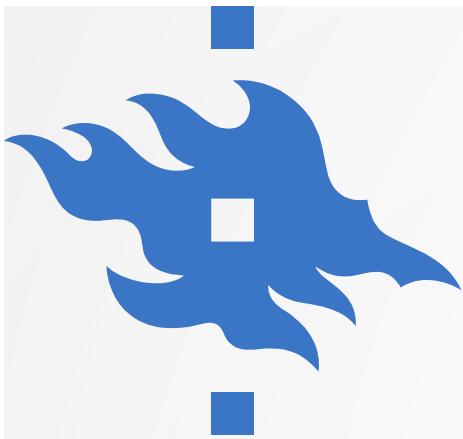




HC: PROSE vs. VERSE IN ME1 – EModE3

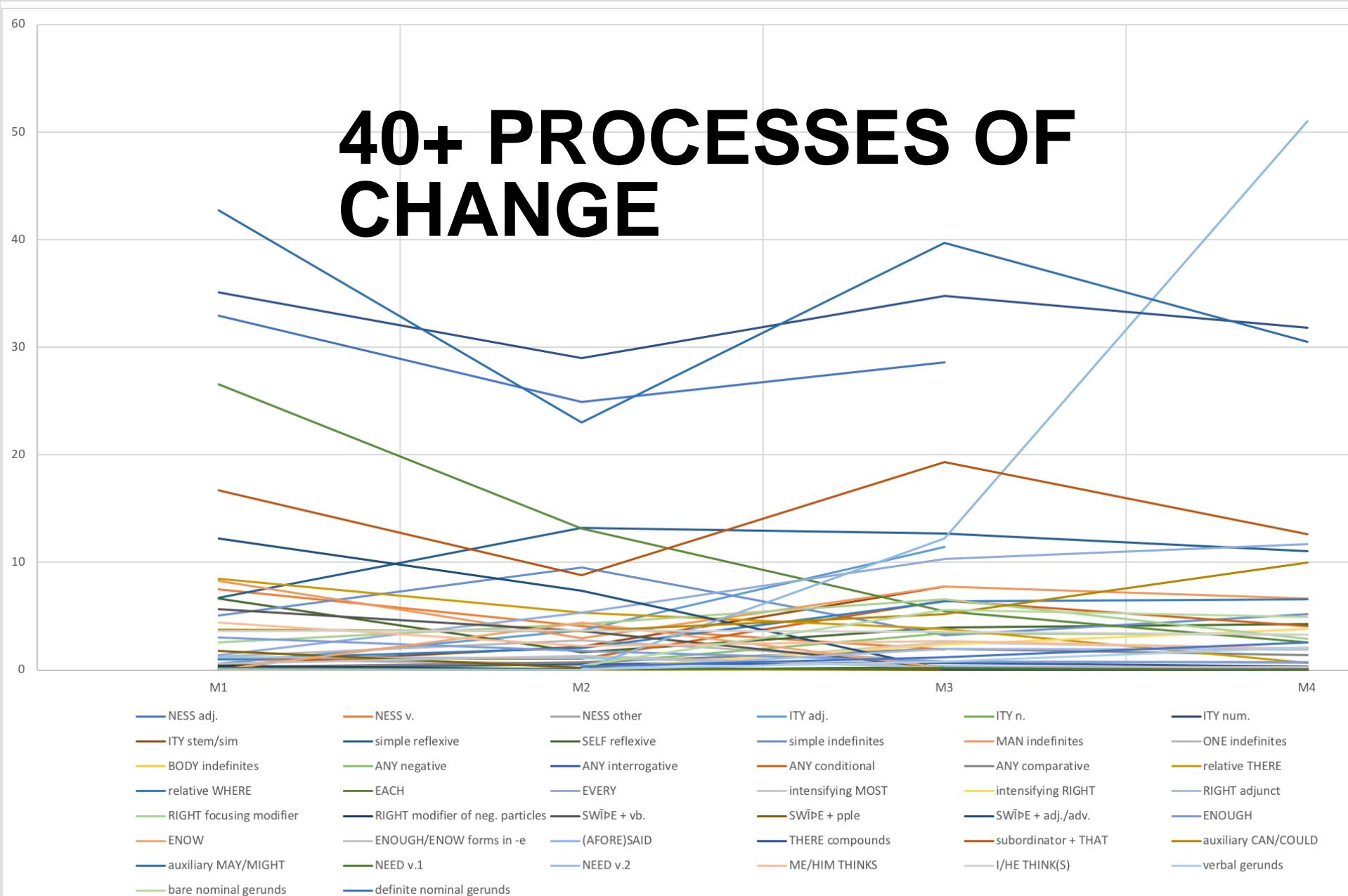
Prose and Verse

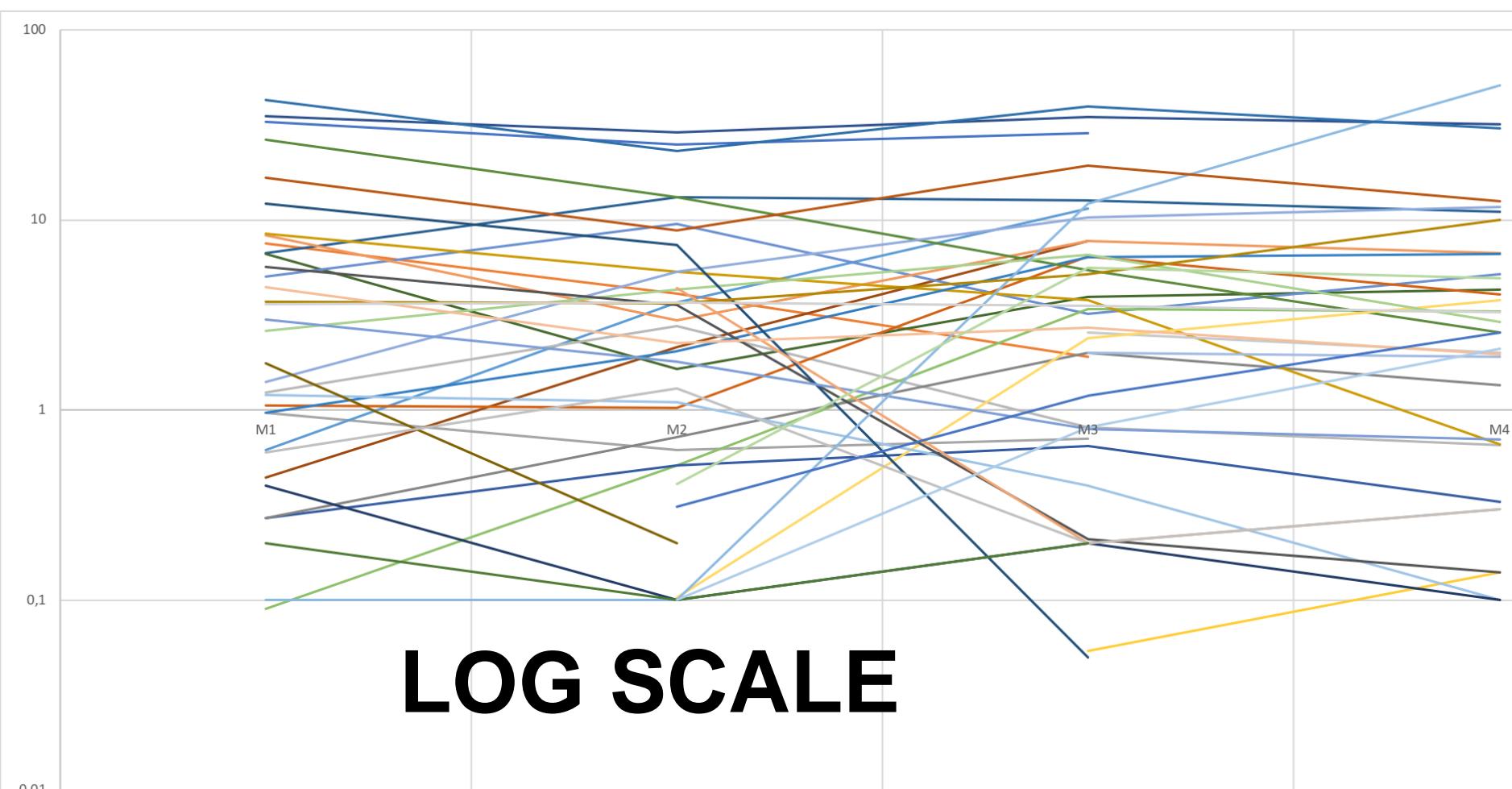




INITIAL EXPLORATION

40+ PROCESSES OF CHANGE





LOG SCALE

NESS adj.	NESS v.	NESS other	ITY adj.	ITY n.	ITY num.
ITY stem/sim	simple reflexive	SELF reflexive	simple indefinites	MAN indefinites	ONE indefinites
BODY indefinites	ANY negative	ANY interrogative	ANY conditional	ANY comparative	relative THERE
relative WHERE	EACH	EVERY	intensifying MOST	intensifying RIGHT	RIGHT adjunct
RIGHT focusing modifier	RIGHT modifier of neg. particles	SWIPE + vb.	SWIPE + pple	SWIPE + adj./adv.	ENOUGH
ENOW	ENOUGH/ENOW forms in -e	(AFORE)SAID	THERE compounds	subordinator + THAT	auxiliary CAN/COULD
auxiliary MAY/MIGHT	NEED v.1	NEED v.2	ME/HIM THINKS	I/HE THINK(S)	verbal gerunds
bare nominal gerunds	definite nominal gerunds				



A SIMPLE MEASURE OF THE RATE OF CHANGE

1. Normalized frequency /10,000 words (example)

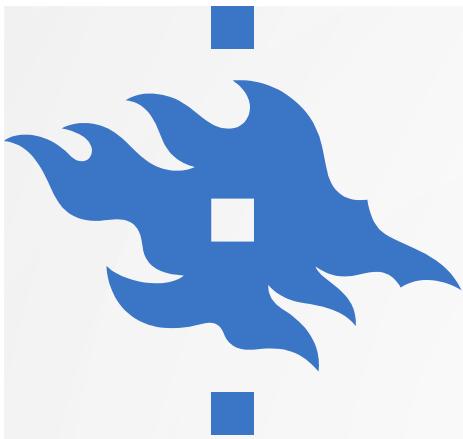
ME1	ME2	ME3	ME4
30	40	20	10

2. Absolute difference between adjacent periods

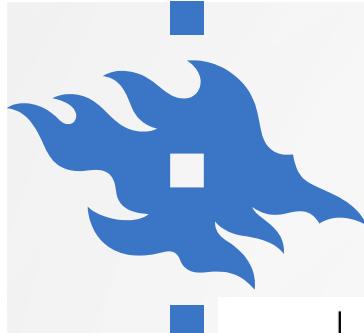
ME1-ME2	ME2-ME3	ME3-ME4
$ 30-40 = 10$	$40-20 = 20$	$20-10 = 10$

3. Proportion of overall change that occurs between the periods
= **rate of change** between the periods

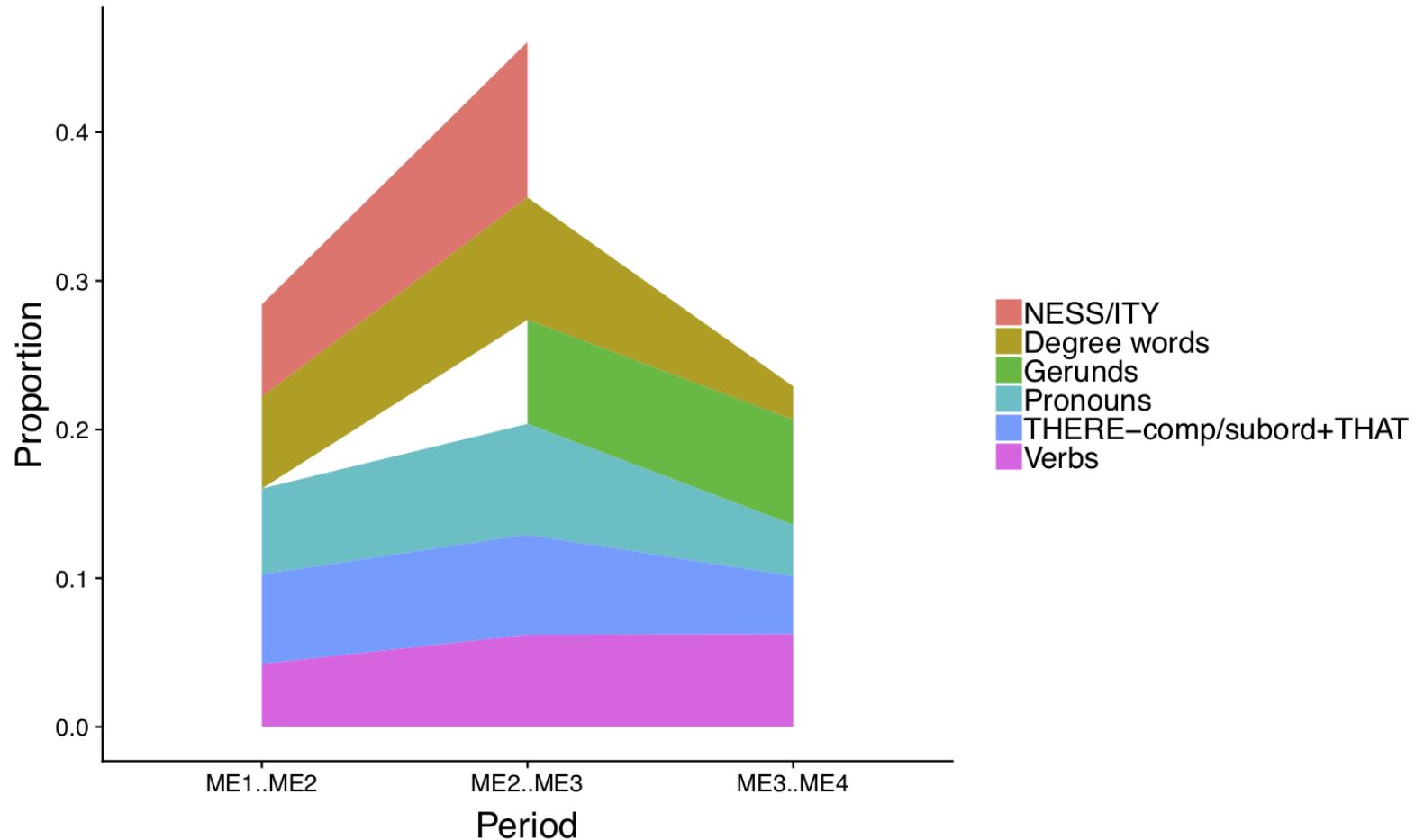
ME1-ME2	ME2-ME3	ME3-ME4
$10/(10+20+10) = 0.25$ (25%)	$20/(10+20+10) = 0.5$ (50%)	$10/(10+20+10) = 0.25$ (25%)

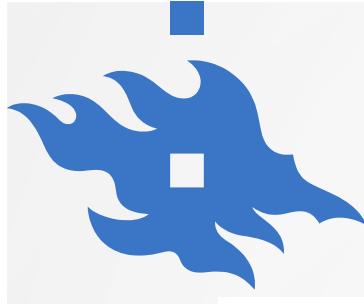


ANALYSIS

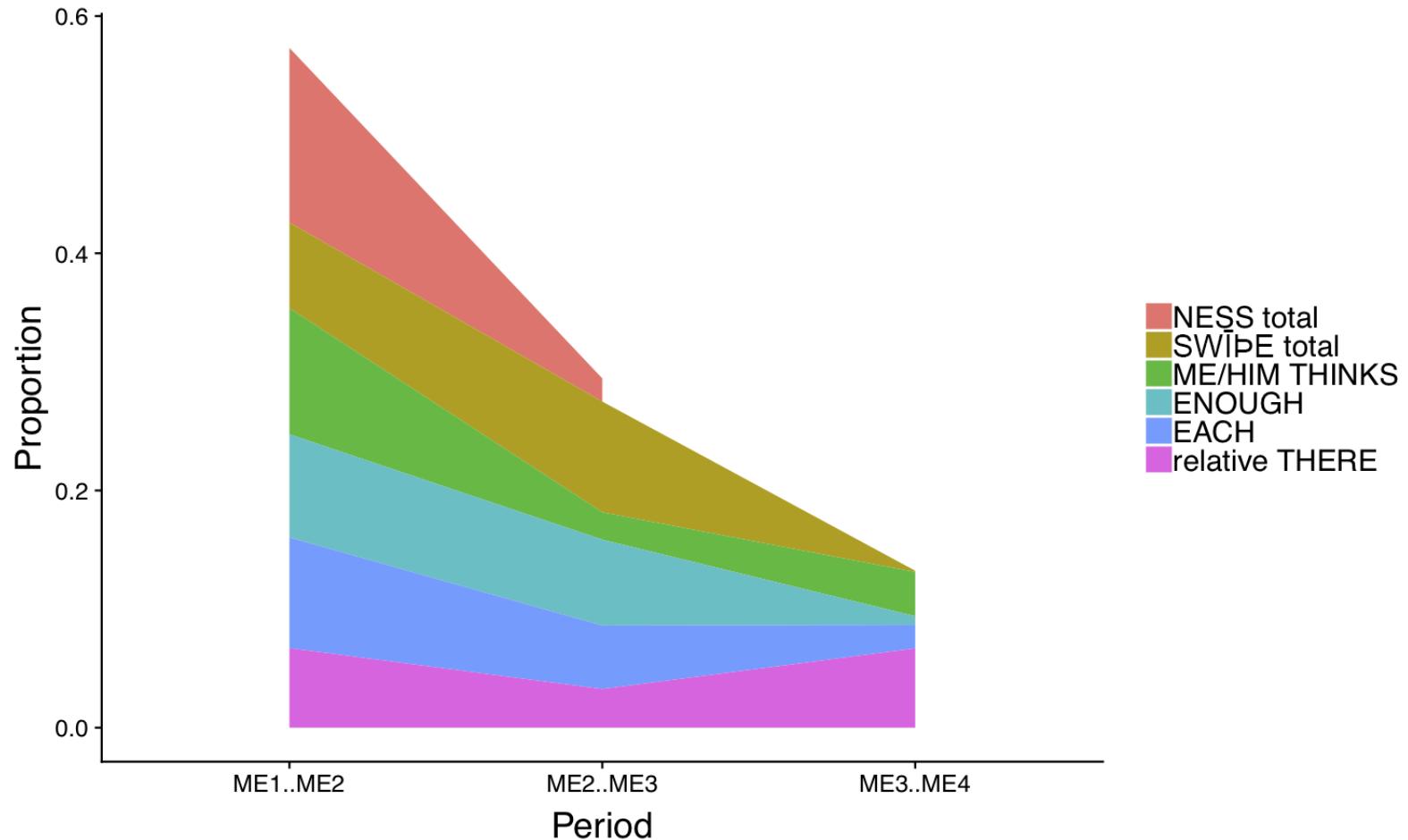


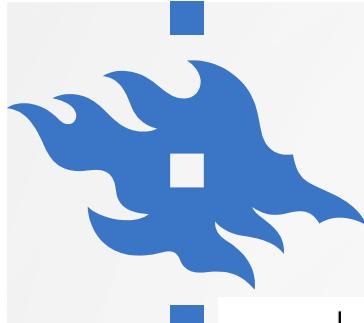
RATE OF CHANGE: SUMMARY



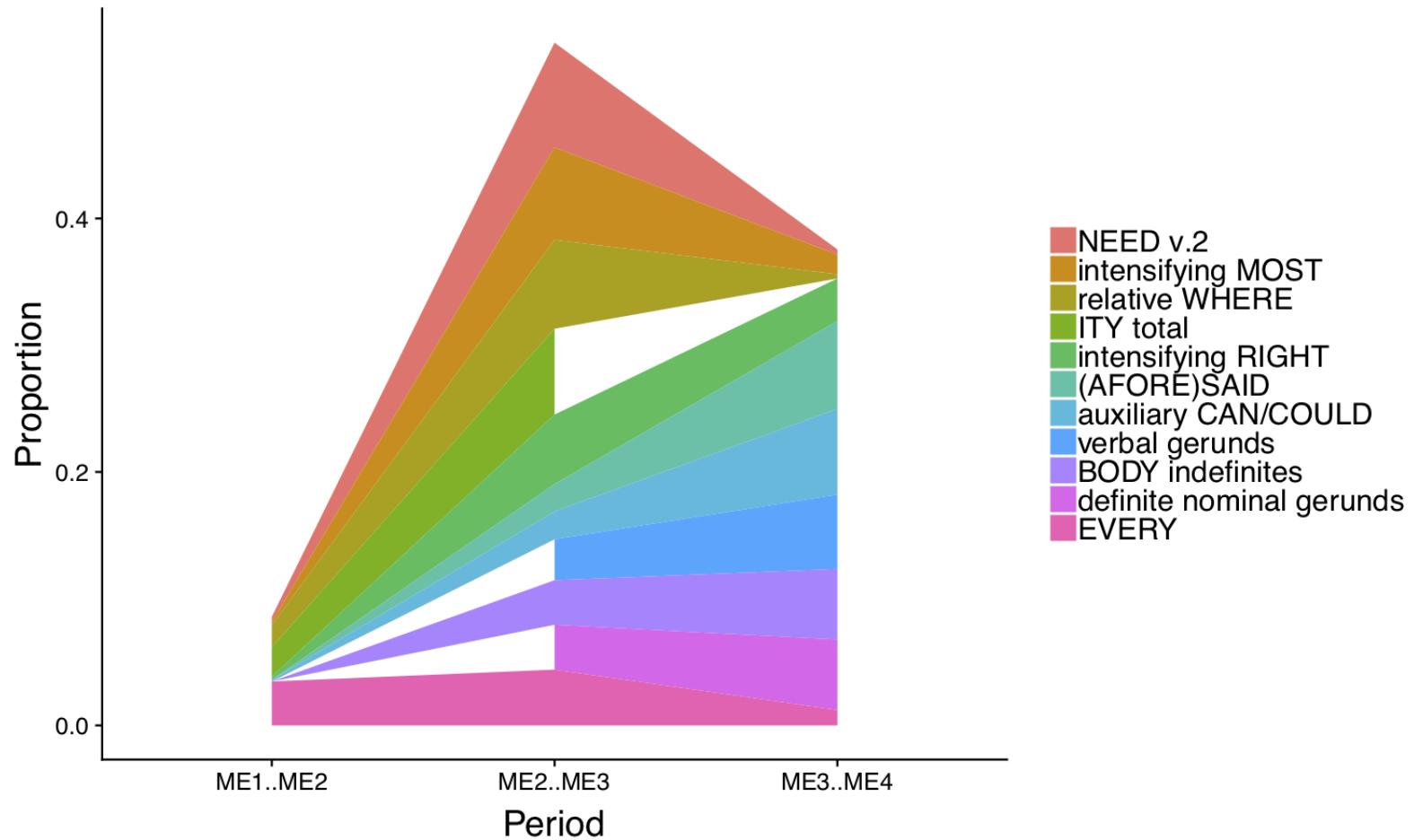


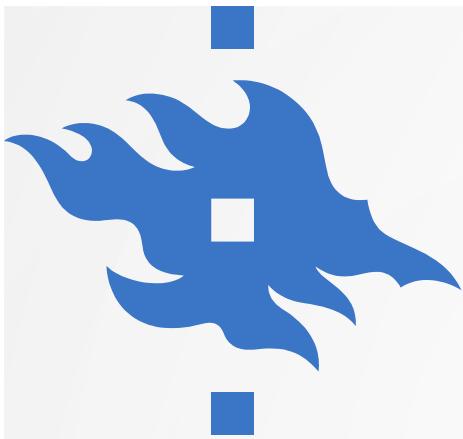
RATE OF CHANGE: RECESSIVE FEATURES



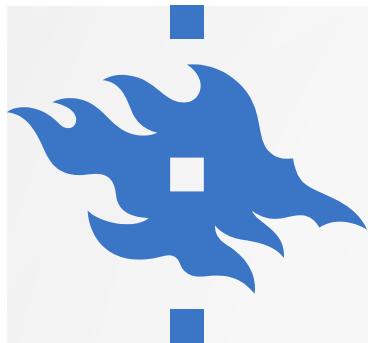


RATE OF CHANGE: INCOMING FEATURES



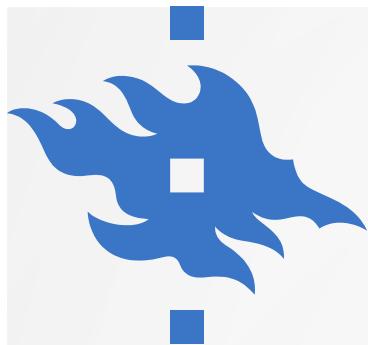


DISCUSSION AND CONCLUSION



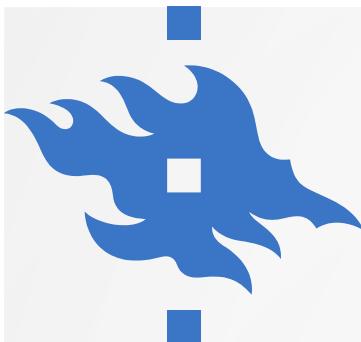
POST-CONQUEST EFFECTS ON TEXTUAL TRADITION

- Limited overall use of English in writing > lack of vernacular continuity in text production
- **Dialect shift** (ME1>ME2): shifting regional influence
 - Continued influence of Old English West-Saxon standard in ME1
 - Centre of culture and learning moved from Winchester to London > increasing number of Eastern texts in ME2
- **Verse–prose shift** (ME1<ME2>ME3): shifting cultural influence
 - No translations in ME1, but most texts in ME2 rely on foreign sources
 - Increasing bilingualism among the literate social section



POST-CONQUEST EFFECTS ON LINGUISTIC CHANGE

- Continued change: none of the 40+ linguistic processes completed in Early Middle English
- Hypothesis of **post-invasion acceleration** of change borne out:
 - **Recessive** features: change most rapid between ME1–ME2
 - **Incoming** features: in the majority of cases, change most rapid between ME2–ME3
- **Overall** change also most rapid between ME2–ME3



SUPPORTING EVIDENCE: ROMANCE LOANWORDS

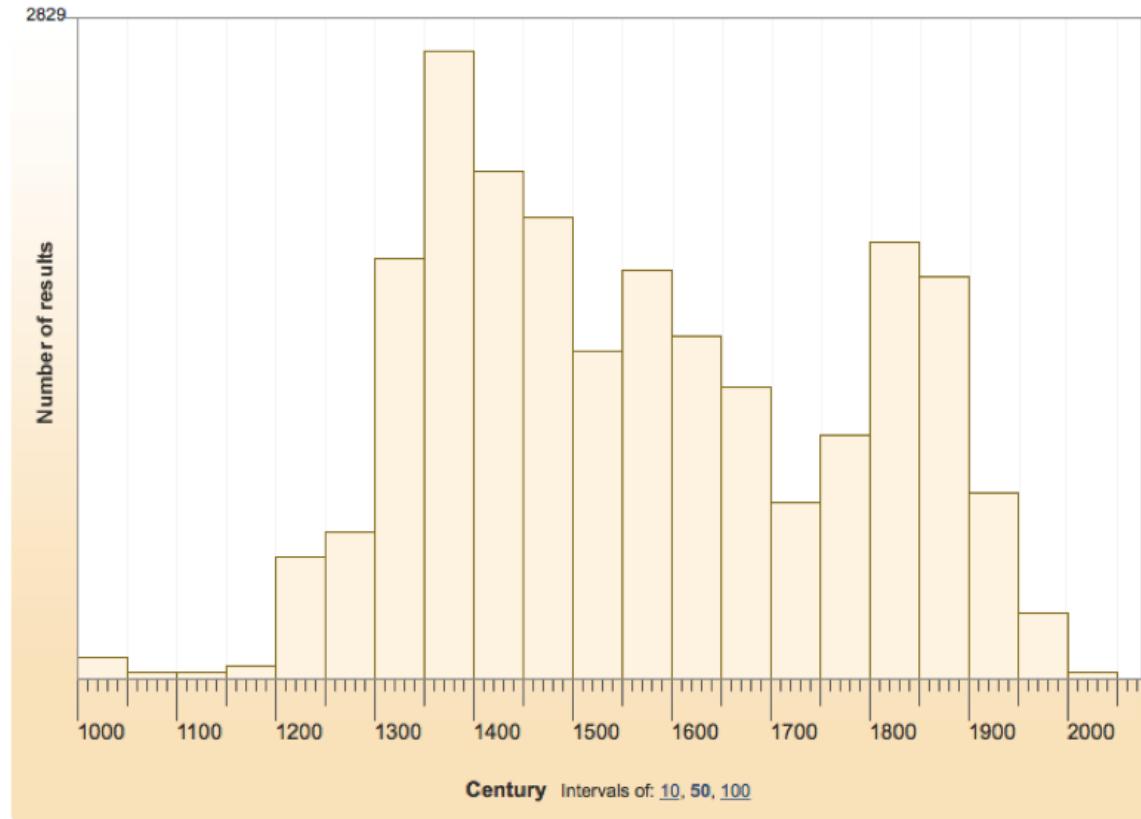
Timelines

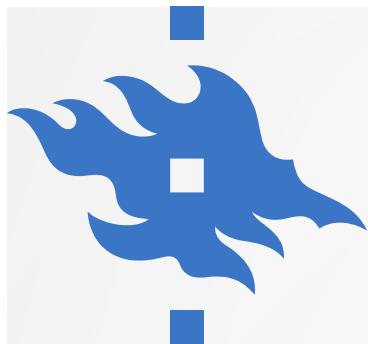
[Help on Timelines](#)

All Subject | ▾ Region | ▾ Origin | ▾

[View as List](#)

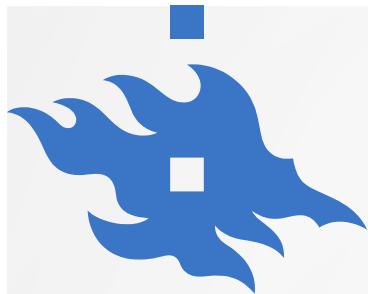
Showing results for [Origin](#) > [European languages](#) (84270) > [Italic](#) (65869) > [Romance](#) (27563) > [Italo-Western](#) (27393) > [Gallo-Romance](#) (23553) > [French](#) (23514)



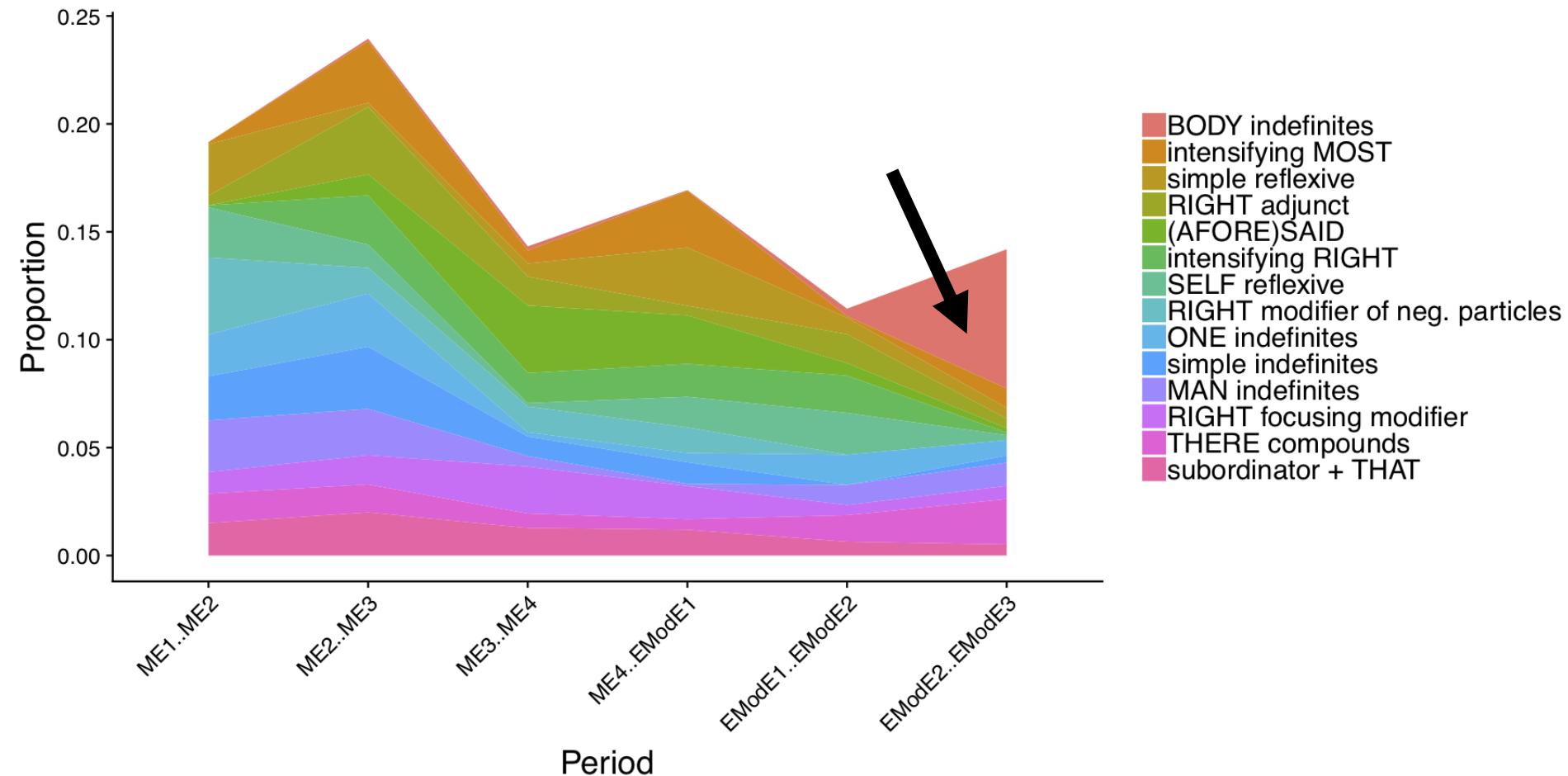


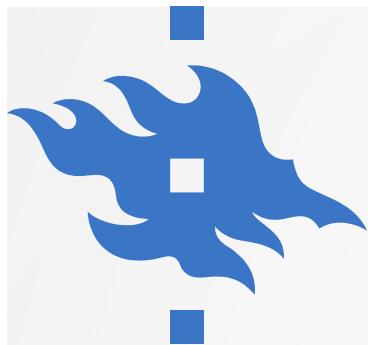
SIGNIFICANCE OF POST-CONQUEST EFFECTS?

- Sensitivity of “language states” to **sampling intervals**
- Significance of post-conquest acceleration tested by extending the time span to **Early Modern English**
 - EModE 1: 1500–1570
 - EModE 2: 1570–1640
 - EModE 3: 1640–1710
- ME2–ME3 acceleration stands the test of time
- slow-down follows in ME3–ME4



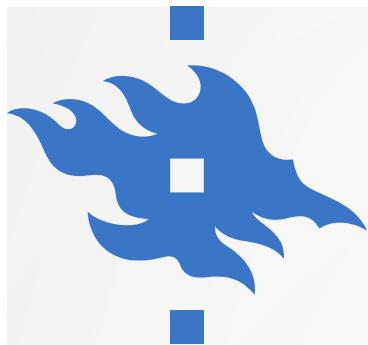
RATE OF CHANGE, ME1– EModE3





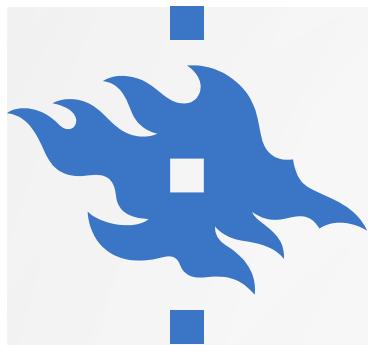
CONCLUSION

- Post-conquest acceleration evidenced in the processes of linguistic change studied
- Differences in timing:
 - Recessive features accelerate earlier (ME1>M2; cf. Bergs 2005)
 - Progressive features later (mostly ME2>ME3)
 - ME seems to be characterized by more rapid change than EModE
- Encouraging but exploratory, preliminary findings!
 - More data needed to compare e.g. different levels of linguistic organization, cf. Lass (1997)



THANKS ARE DUE TO...

- Jefrey Lijffijt (Ghent University) for designing the quantitative method
- Aatu Liimatta (University of Helsinki) for data wrangling
- LCD project course participants for retrieving the changes and normalizing the figures
- Harri Siirtola (University of Tampere) for the stacked visualizations
- The authors of the original articles!
 - Dalton-Puffer 1992, 1996; De Smet 2008; Kahlas-Tarkka 1993, 1997; Kilpiö 1997; Kytö 1991; Loureiro-Porto 2008; Mendez-Naya 2003, 2006; Österman 1997, 2001; Palander-Collin 1997, 1999; Peitsara 1997a, 1997b; Raumolin-Brunberg & Kahlas-Tarkka 1997; Rissanen 1997

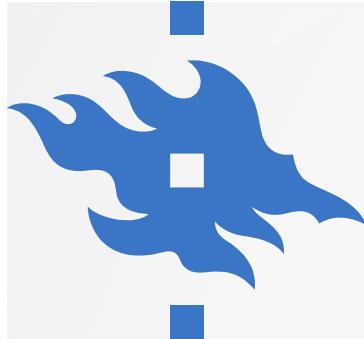


REFERENCES

<http://www.helsinki.fi/lcd/>

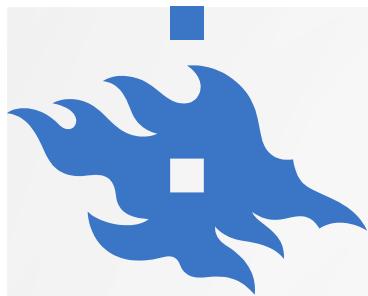
- Bergs, Alexander. 2005. *Social networks and historical sociolinguistics: Studies in morphosyntactic variation in the Paston Letters (1421–1503)*. Berlin & New York: Mouton de Gruyter.
- Denison, David. 2003. Log(ist)ic and simplistic S-curves. *Motives for language change*, ed. by Raymond Hickey, 54–70. Cambridge: Cambridge University Press.
- Dixon, R.M.W. 1997. *The rise and fall of languages*. Cambridge: Cambridge University Press.
- HC = *The Helsinki Corpus of English Texts*. 1991. Compiled by Matti Rissanen (Project leader), Merja Kytö (Project secretary); Leena Kahlas-Tarkka, Matti Kilpiö (Old English); Saara Nevanlinna, Irma Taavitsainen (Middle English); Terttu Nevalainen, Helena Raumolin-Brunberg (Early Modern English). Helsinki: Department of Modern Languages, University of Helsinki.

<http://www.helsinki.fi/varieng/CoRD/corpora/HelsinkiCorpus/>

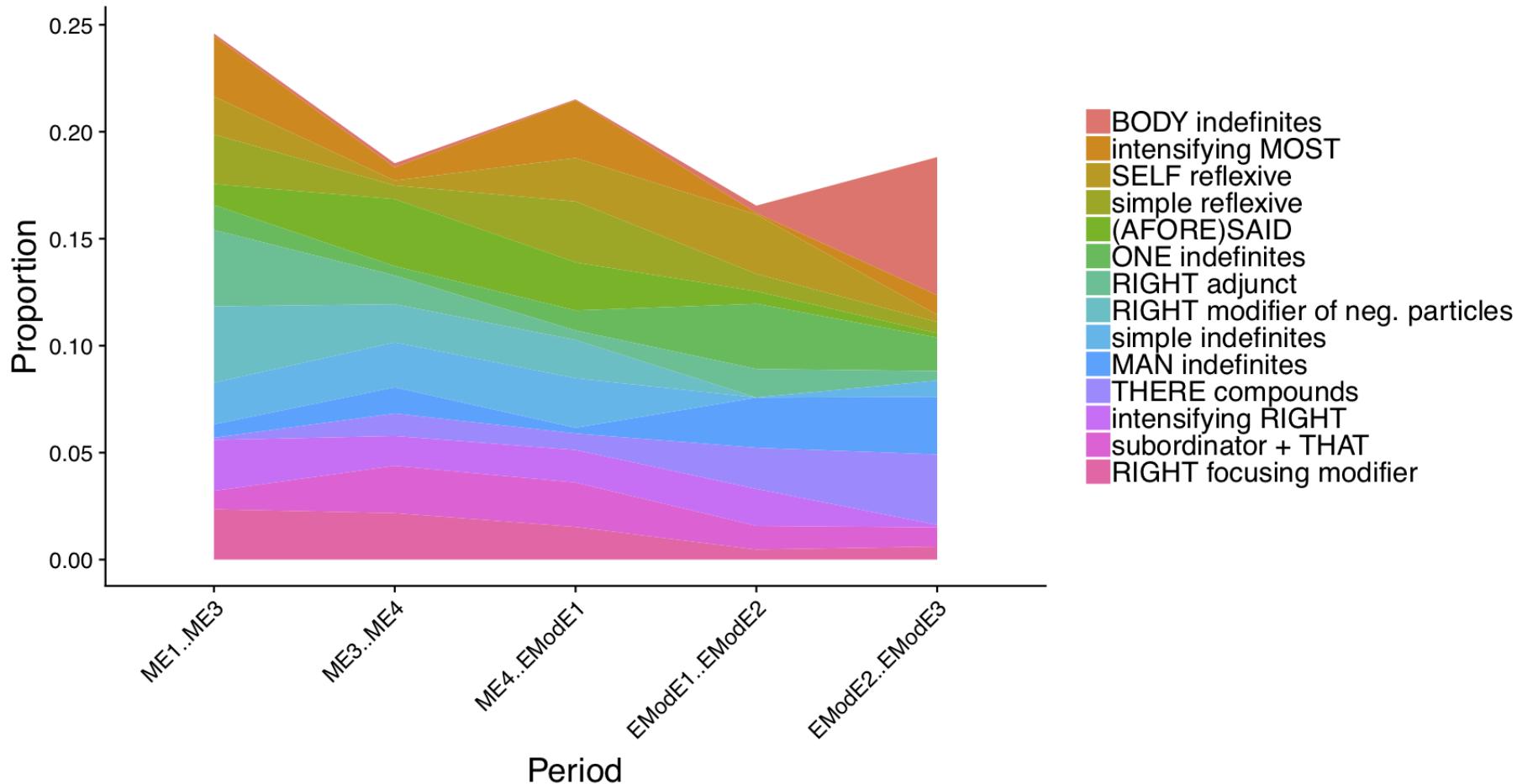


REFERENCES

- Kesäniemi, Joonas, Turo Vartiainen, Tanja Säily & Terttu Nevalainen. 2018. Open science for English historical corpus linguistics: Introducing the Language Change Database. *Proceedings of the Digital Humanities in the Nordic Countries 3rd Conference, Helsinki, Finland, March 7–9, 2018* (CEUR Workshop Proceedings 2084), ed. by Eetu Mäkelä, Mikko Tolonen & Jouni Tuominen, 51–62. CEUR-WS.org.
<http://ceur-ws.org/Vol-2084/paper4.pdf>
- Lass, Roger. 1997. *Historical linguistics and language change*. Cambridge: CUP.
- Milroy, James & Lesley Milroy. 1985. Linguistic change, social network and speaker innovation. *Journal of Linguistics* 21: 339–384.
- 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. doi:[10.1515/icame-2016-0006](https://doi.org/10.1515/icame-2016-0006)
- Raumolin-Brunberg, Helena. 1998. Social factors and pronominal change in the seventeenth century: The Civil-War effect? In Jacek Fisiak & Marcin Krygier (eds.), *Advances in English historical linguistics* (1996), 361–388. Berlin: Mouton de Gruyter.
- Trudgill, Peter. 2011. *Sociolinguistic typology: Social determinants of linguistic complexity*. Oxford: Oxford University Press.



RATE OF CHANGE, ME– EModE WITHOUT ME2





ME2 TEXT CATEGORIES

ME2	Statutory	Document	<i>The Proclamation of Henry III</i>	360
	Religious instruction	Homily	<i>Kentish Sermons</i>	3,360
		Religious treatise	<i>Dan Michel, Ayenbite of Inwytt</i>	10,680
			<i>Bestiary</i>	4,240
	Nonimaginative narration	History	<i>Robert of Gloucester</i>	10,240
			<i>Historical Poems</i>	2,990
		Biography: life of saint	<i>The Life of St. Edmund (South English Legendary)</i>	6,580
	Imaginative narration	Fiction	<i>Man in the Moon</i>	330
			<i>Dame Sirith and Interlude</i>	3,050
			<i>The Fox and Wolf</i>	1,820
			<i>The Thrush and the Nightingale</i>	1,100
		Romance	<i>Beues of Hamtoun</i>	6,240
			<i>Kyng Alisaunder</i>	10,900
			<i>Havelok</i>	9,990
			<i>King Horn</i>	7,250
X	Bible		<i>The Earliest Complete English Prose Psalter</i>	16,810
X		X	<i>Song of the Husbandman</i>	610
			<i>Satire on the Consistory Courts</i>	600
			<i>Satire on the Retinues of the Great</i>	330