HISTORY OF ENGLISH AS PUNCTUATED EQUILIBRIA?

Terttu Nevalainen, Turo Vartiainen & Tanja Säily

(with Aatu Liimatta & Jeffrey 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”
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](http://www.helsinki.fi/lcd)
<table>
<thead>
<tr>
<th>Grammar</th>
<th>Adjectives</th>
<th>Adpositions</th>
<th>Adverbs</th>
<th>Complementizers</th>
<th>Connectives</th>
<th>Determiners</th>
<th>Nouns</th>
</tr>
</thead>
</table>

- "Without except(ing) unless...": on the grammaticalisation of expressions indicating exception in English
  - Rissanen, Matti
  - 2002

- ENOUGH and ENOW in Middle English
  - Peitsara, Kirsti
  - 1997

- Epicene HE and THEY and the development of English indefinite expression during the period 1500-1800
  - Laitinen, Mikko
  - 2007

- HERE compounds in English: mere satellites of THERE compounds?
  - Österman, Aune
  - 2007
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
  - Annotated for dialect, text category and mode of production
HC: MIDDLE ENGLISH DIALECTS

Dialects

- EM w/ N features
- Unidentified
- N w/ EM features
- Northern
- West Midlands
- East Midlands
- Kentish
- Southern

M1
M2
M3
M4
HC: TEXT CATEGORIES IN ME1 – EModE3
HC: PROSE vs. VERSE IN ME1 – EModE3
INITIAL EXPLORATION
40+ PROCESSES OF CHANGE
A SIMPLE MEASURE OF THE RATE OF CHANGE

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

<table>
<thead>
<tr>
<th>ME1</th>
<th>ME2</th>
<th>ME3</th>
<th>ME4</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>40</td>
<td>20</td>
<td>10</td>
</tr>
</tbody>
</table>

2. Absolute difference between adjacent periods

<table>
<thead>
<tr>
<th>ME1–ME2</th>
<th>ME2–ME3</th>
<th>ME3–ME4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40-20 = 20</td>
<td>20-10 = 10</td>
</tr>
<tr>
<td></td>
<td>30-40 = 10</td>
<td></td>
</tr>
</tbody>
</table>

3. Proportion of overall change that occurs between the periods

= rate of change between the periods

<table>
<thead>
<tr>
<th>ME1–ME2</th>
<th>ME2–ME3</th>
<th>ME3–ME4</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/(10+20+10) = 0.25 (25%)</td>
<td>20/(10+20+10) = 0.5 (50%)</td>
<td>10/(10+20+10) = 0.25 (25%)</td>
</tr>
</tbody>
</table>
ANALYSIS
RATE OF CHANGE: SUMMARY

Proportion

Period

NESS/ITY
Degree words
Gerunds
Pronouns
THERE-comp/subord+THAT
Verbs

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RATE OF CHANGE: RECESSIVE FEATURES

Proportion

Period

NESS total
SWIPE total
ME/HIM THINKS
ENOUGH
EACH
relative THERE
RATE OF CHANGE: INCOMING FEATURES

Proportion

ME1..ME2 ME2..ME3 ME3..ME4

Period

NEED v.2
intensifying MOST
relative WHERE
ITY total
intensifying RIGHT
(AFORE)SAID
auxiliary CAN/COULD
verbal gerunds
BODY indefinites
definite nominal gerunds
EVERY
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
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

Proportion

BODY indefinites
intensifying MOST
simple reflexive
RIGHT adjunct
(AFORE)SAID
intensifying RIGHT
SELF reflexive
RIGHT modifier of neg. particles
ONE indefinites
simple indefinites
MAN indefinites
RIGHT focusing modifier
THERE compounds
subordinator + THAT

Period

ME1. ME2
ME2. ME3
ME3. ME4
ME4. EModE1
EModE1. EModE2
EModE2. EModE3

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UNIVERSITY OF HELSINKI

VARIENG

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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!
REFERENCES

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


• 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/Helsinki Corpus/
REFERENCES


RATE OF CHANGE, ME–EModE WITHOUT ME2

Proportion

Period

ME1..ME3  ME3..ME4  ME4..EModE1  EModE1..EModE2  EModE2..EModE3

BODY indefinites
intensifying MOST
SELF reflexive
simple reflexive
(AFORE)SAID
ONE indefinites
RIGHT adjunct
RIGHT modifier of neg. particles
simple indefinites
MAN indefinites
THERE compounds
intensifying RIGHT
subordinator + THAT
RIGHT focusing modifier
## ME2 TEXT CATEGORIES

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