



THE DECLINE OF *-MENT*

WAS GENDER A FACTOR?

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HISCOP PROJECT



- *Historical Sociolinguistics Meets Construction Grammar: The Case of Productivity in English*
 - Academy of Finland, 2020–2023
 - Funded researcher: **Tanja Säily**
 - Collaborators: **Martin Hilpert**, **Jukka Suomela**, Florent Perek, Turo Vartiainen
- Aim: extend CxG by drawing on historical sociolinguistics
 - What do speakers have to know to be able to use a language? Social aspects largely missing so far
 - Focus on productivity of constructions in historical text corpora



-MENT

- Nominal suffix, usually derives nouns denoting an **action/result/means** from verbs
 - e.g. *adjustment, assortment, refreshment*
- Borrowed from French (+ Latin) in Middle English
- OED evidence: productivity (new types) peaked C16, then a continuous **decline**
 - Unproductive in Present-Day English but > 1,000 types remain in the language
- Hilpert (2013), OED: the *V-ment* construction underwent different stages favouring different patterns of internal factors
 - C19: increasingly strong right-branching pattern (e.g. *over-enrichment*), dominant by C20
 - Did the external factor of **gender** play a role in the decline of *-ment*? (cf. Säily 2014)



MATERIAL: COHA

- *Corpus of Historical American English*, 400 Mw, 1810–2009
- Fiction section: c. 50% of the data
 - **Gender metadata** developed by Öhman et al. (2019)
 - Promising material for sociolinguistic investigation: a more speech-like genre (dialogue)
 - Types of fiction (e.g. short stories, drama, movie scripts) unevenly distributed over time
→ restriction to novels only, c. 150 Mw

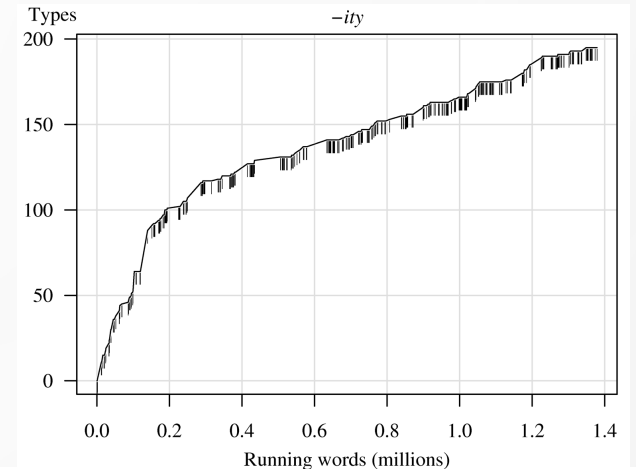


METHODS



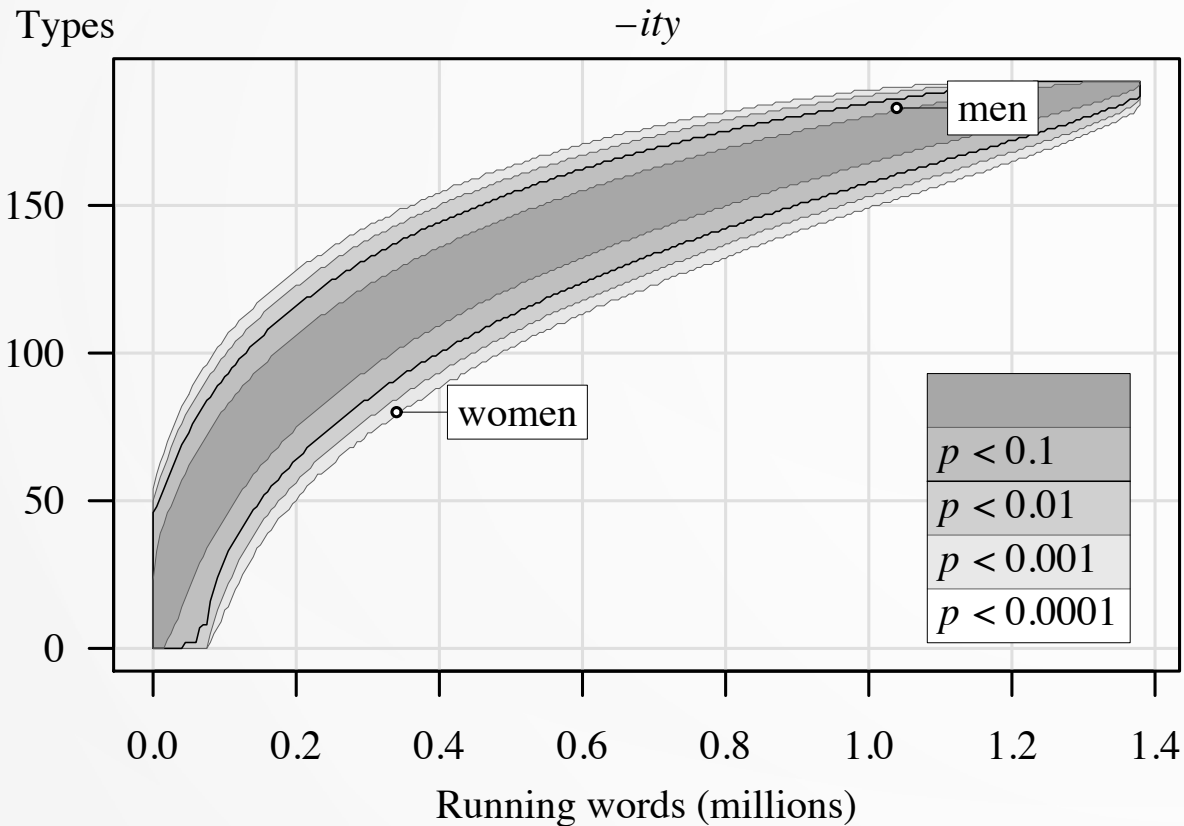
MORPHOLOGICAL PRODUCTIVITY

- The readiness with which an element enters into new combinations (Bolinger 1948)
- **Quantitative measures** (e.g. Baayen 1993; Cowie & Dalton-Puffer 2002):
 - Number of different words containing the morpheme in a corpus (**types**)
 - Number of types occurring only once in the corpus (**hapax legomena**)
 - Number of types not occurring in previous periods (**new types**)
- **Problem:** Difficult to compare across (sub)corpora
 - Different amounts of data from different periods & groups
 - Type-based measures grow nonlinearly with corpus size
→ **normalization not justifiable**





SÄILY & SUOMELA (2009, 2017): PARTIAL SOLUTION



- Compare each subcorpus with subcorpora of equal size, randomly sampled from the corpus as a whole
- Automatically provides a measure of statistical significance
- **Problems:**
 - Comparisons over time still difficult; x-axis = corpus size, not time period
 - Only measures variation within a morpheme, not between morphemes

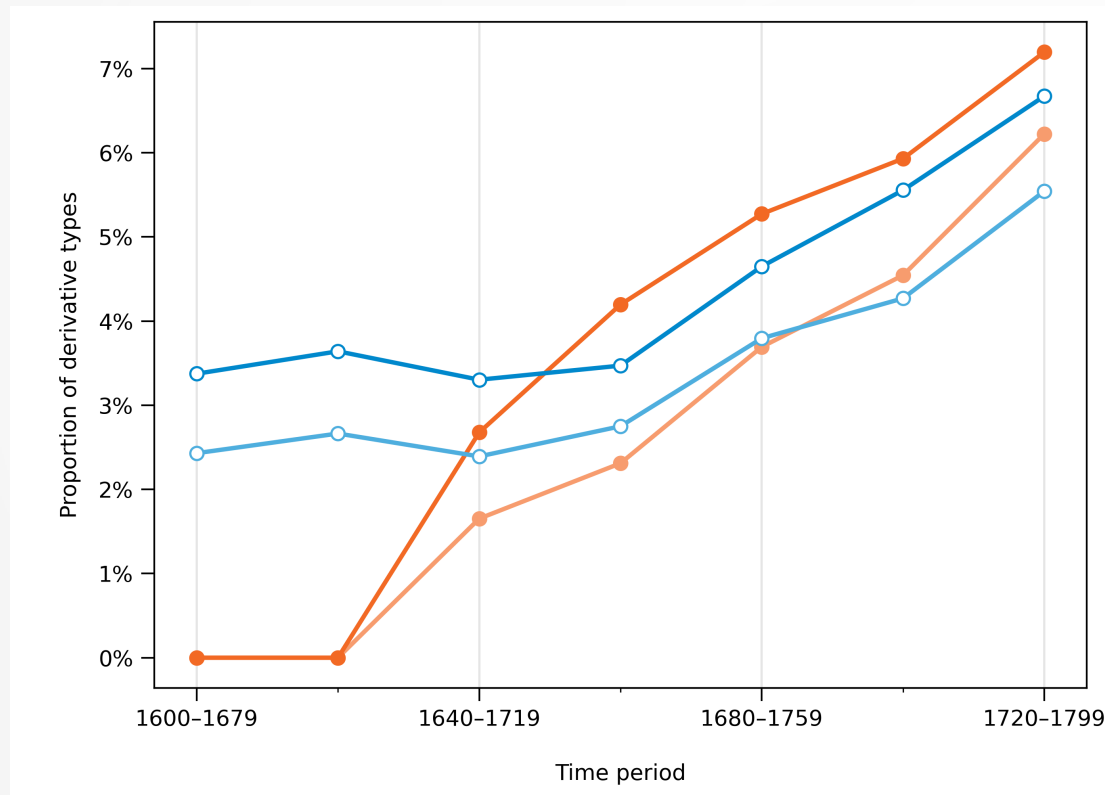


NEW METHODS

- Rodríguez-Puente et al. (2022); Säily et al. (in preparation)
- Idea: compare **proportions of types** (/hapaxes/new types) over time
 - Suffix competition: e.g. proportion of *-ity* types out of *-ity* and *-ness* types
 - Internal factors: e.g. proportion of right-branching types out of all types
- But: proportions of types grow nonlinearly with corpus size, too!
- 3 perspectives, each plotted over time
 - Trends over time + across social groups, significance of social group differences, significance of change over time



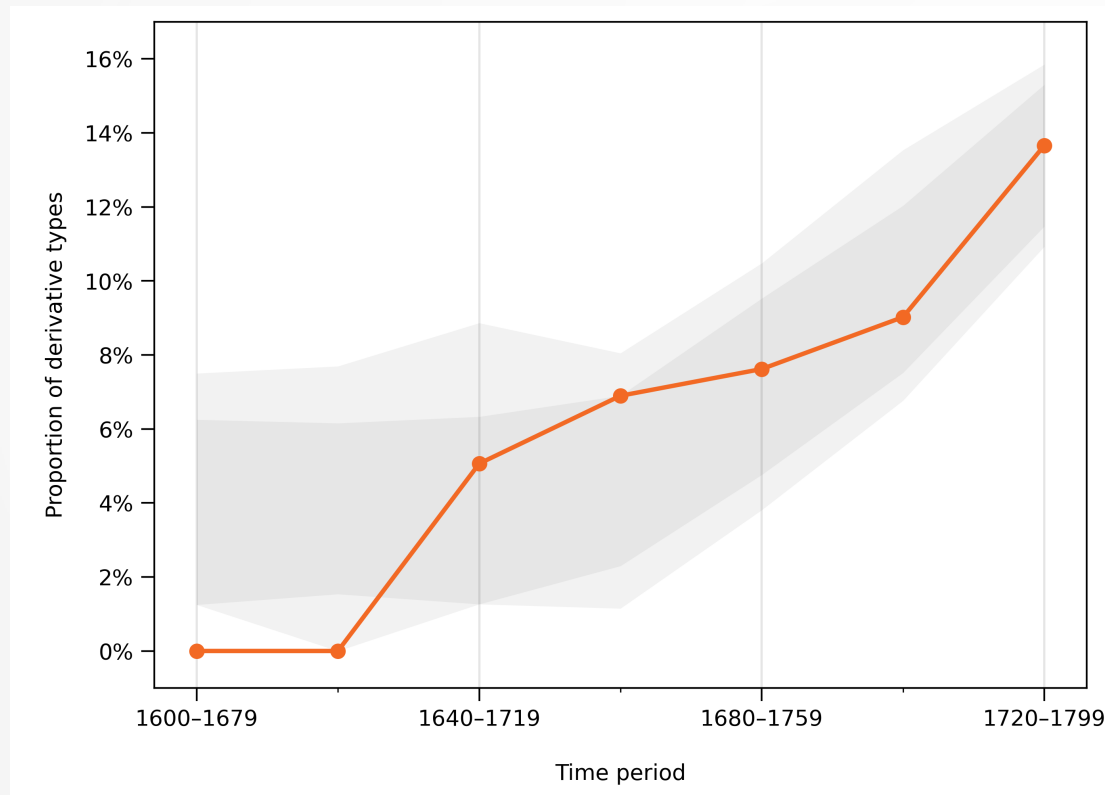
EXAMPLE: TRENDS (-ITY IN LETTERS, 1600–1800)



- Take samples of equal size from subcorpora based on time period (and gender)
- Women = orange, men = blue



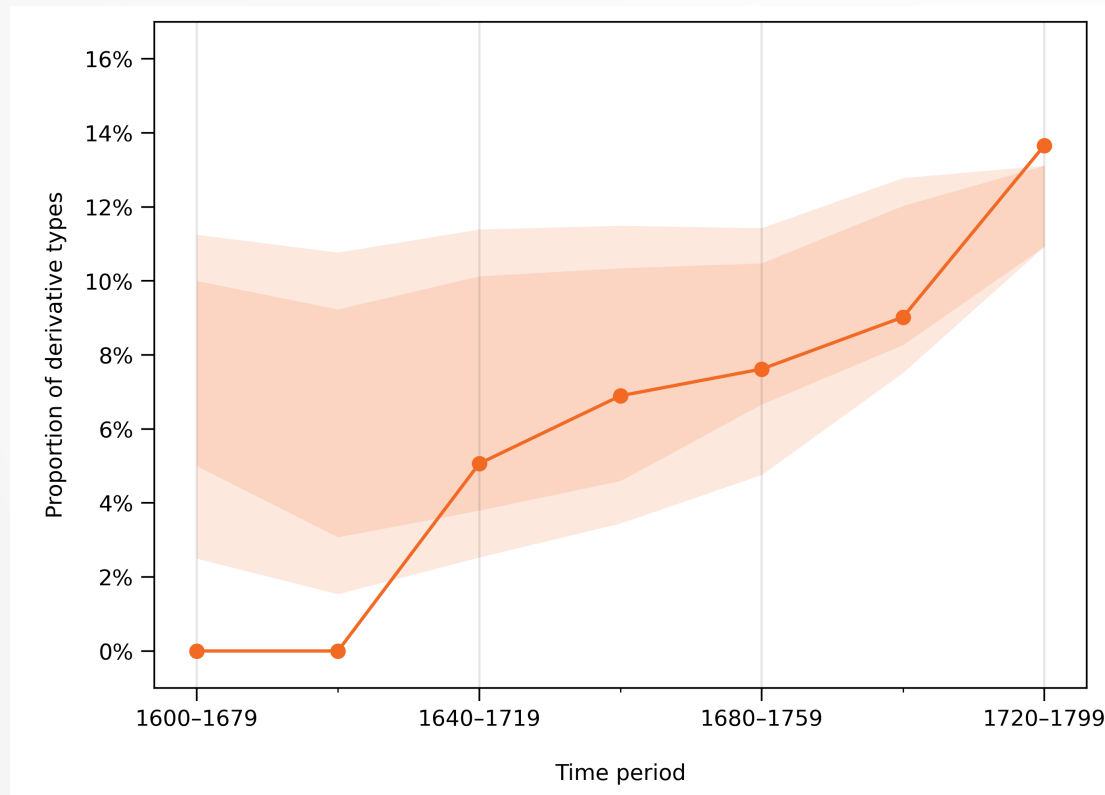
SIGNIFICANCE OF GENDER DIFFERENCES (-ITY IN LETTERS, 1600–1800)



- Compare e.g. women of each period with randomly composed subcorpora of the same period
- Women = orange, random = grey



SIGNIFICANCE OF CHANGE OVER TIME (-ITY IN LETTERS, 1600–1800)



- Compare e.g. women of each period with randomly composed subcorpora of women of all periods
- Women = orange



***-MENT*: INTERNAL FACTORS ANALYSED (HILPERT 2013)**

- **Etymological source:** borrowed, derived
 - *abolishment, abstainment*
- **Stem type:** verb, adjective, noun
 - *abstainment, funniment, scholarment*
- **Branching:** binary, left, right
 - [*puzzle-ment*], [[*be-devil*] -ment], [*non- [attach-ment]*]
 - Some of the analysis: right-branching types excluded
- **Transitivity:** transitive, intransitive
 - *punishment, unfoldment*
- **Semantic type:** action, result, means, place
 - *examinement, agreement, ointment, abutment*



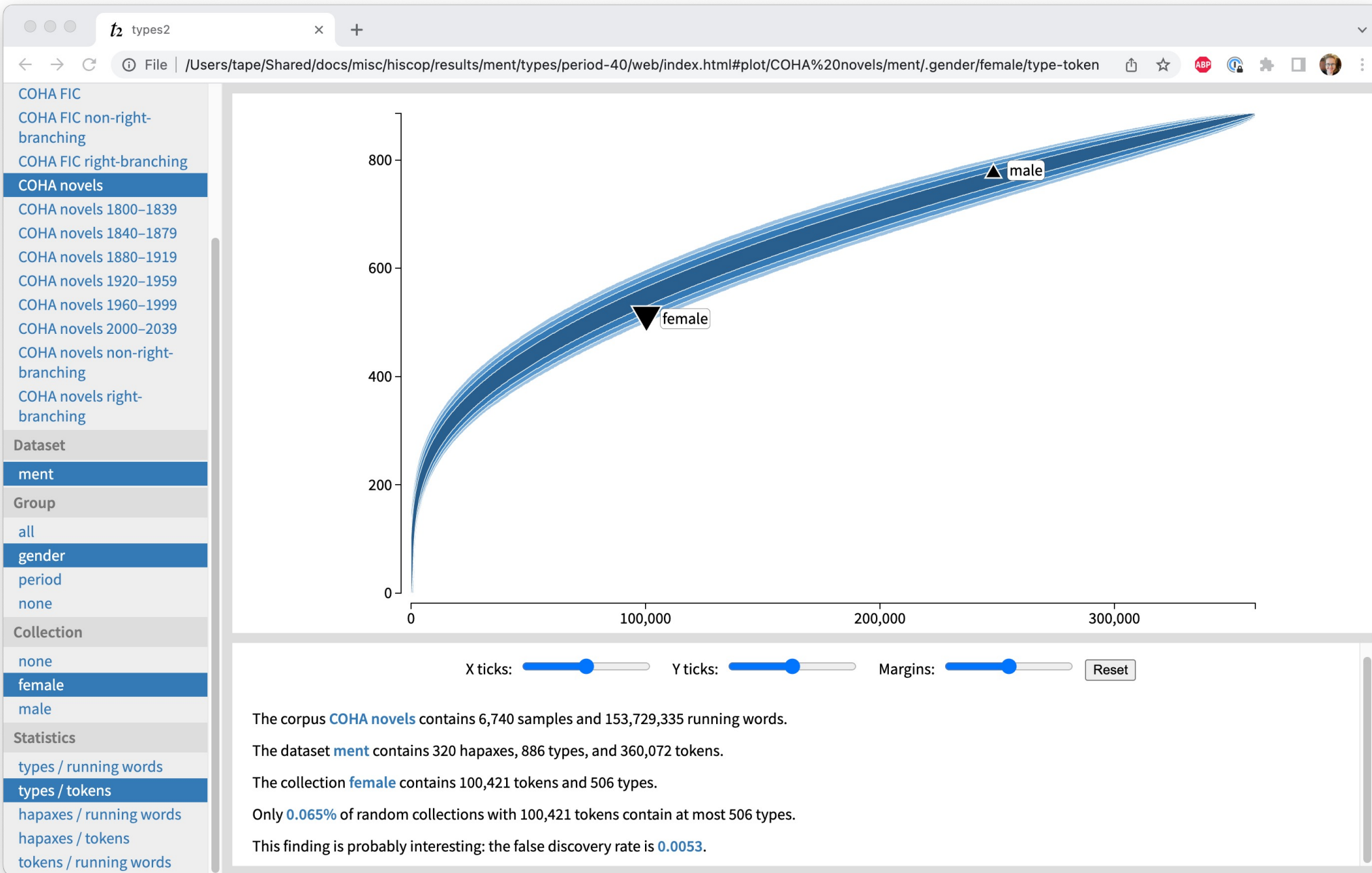
DATA RETRIEVAL

- Local version of COHA: computationally retrieved all words ending in *-ment(s)* + sample concordance lines
 - Compounds: only those written together or hyphenated (too many to check otherwise)
- Automatically mapped the words to a spreadsheet of OED data classified by Hilpert (2013)
- Remaining words first lemmatized manually, then remapped to spreadsheet
 - A lot of OCR errors
- Remaining words classified manually (127 still in progress → preliminary results!)
- Novels subcorpus: 360,072 *-ment* tokens representing 886 different types

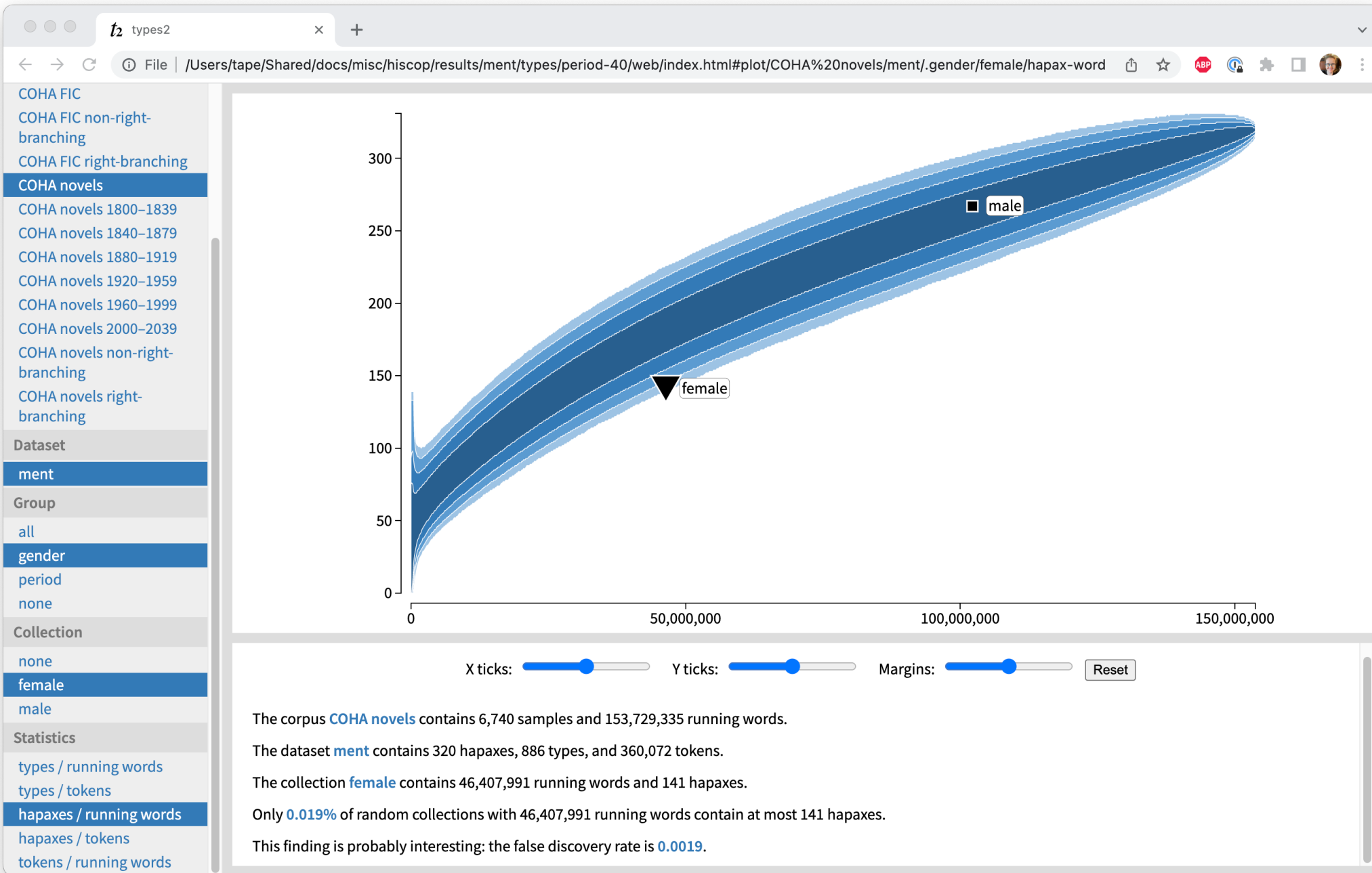


ANALYSIS: OVERVIEW

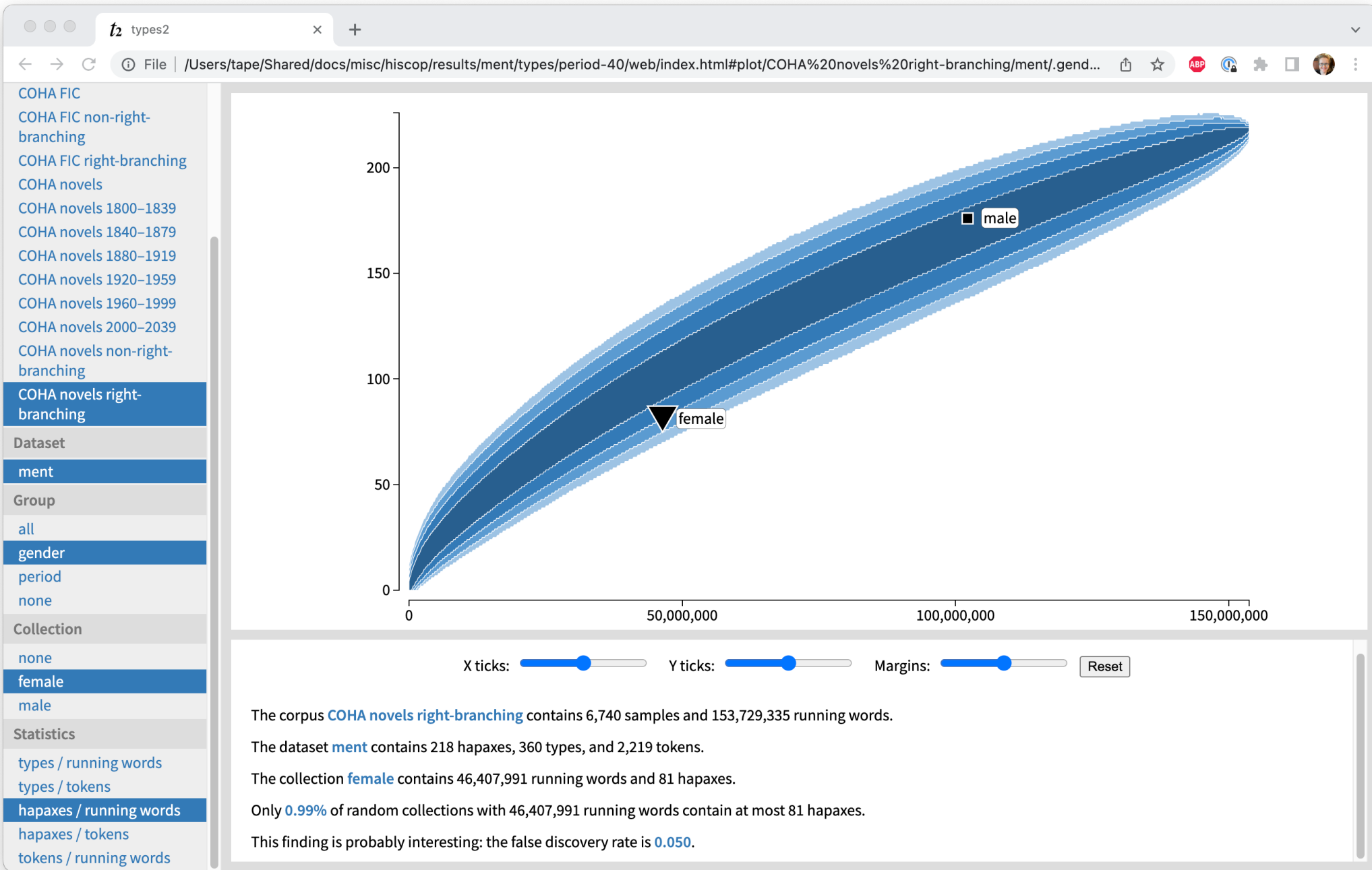
SÄILY & SUOMELA (2017) METHOD



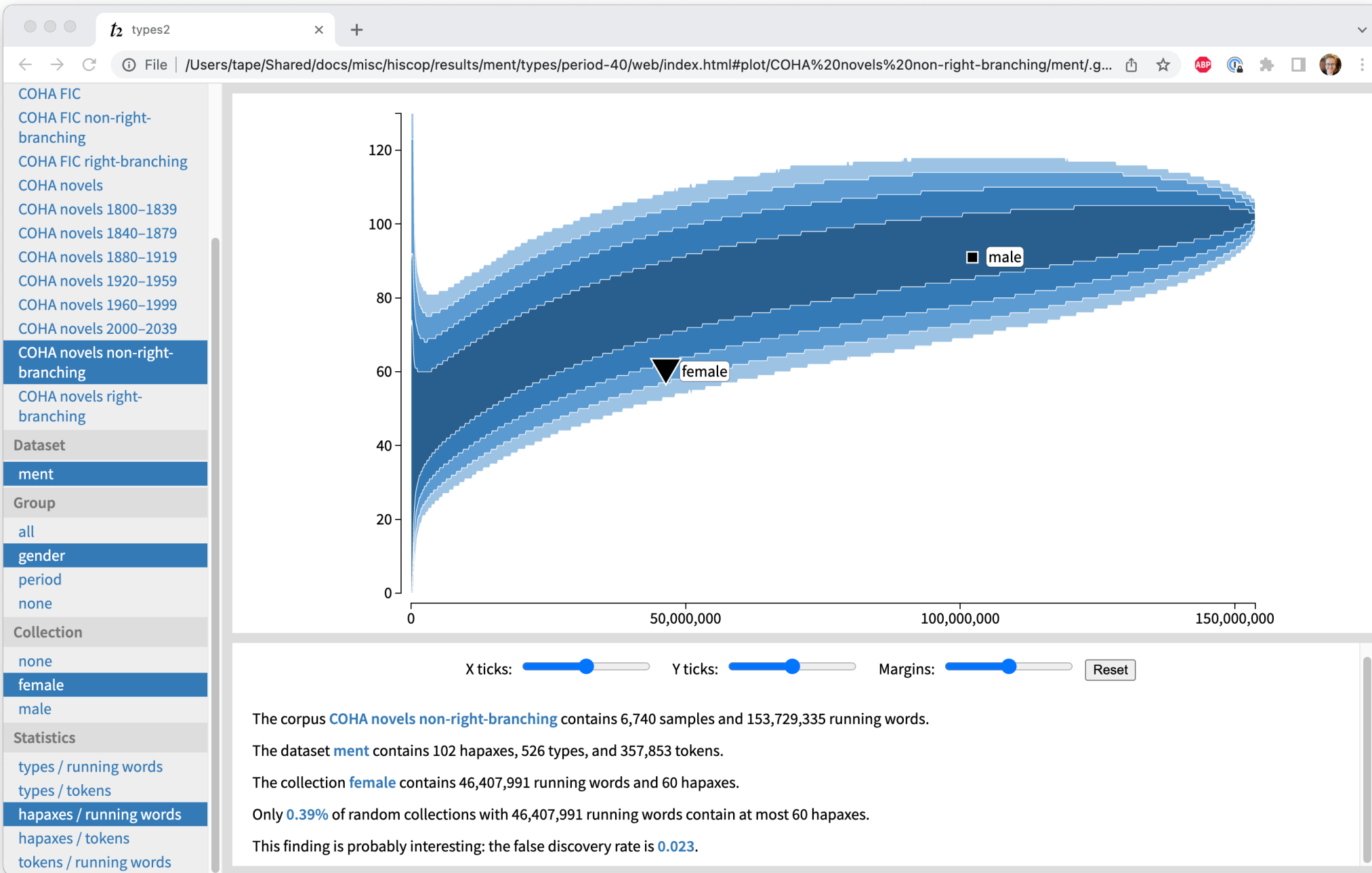
types2
(Säily & Suomela 2017)



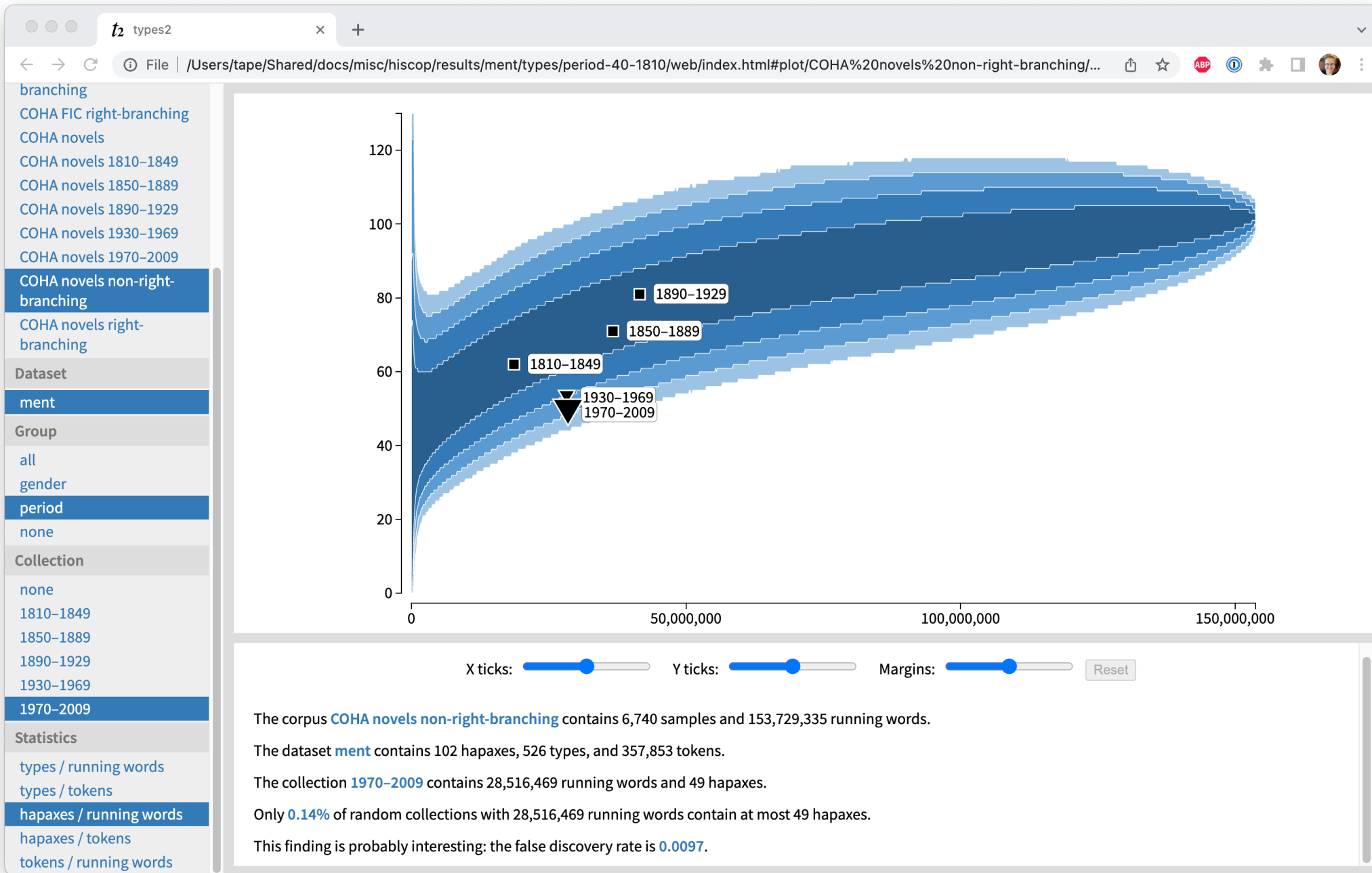
hapax
legomena



right-branching
 hapax
 legomena



non-right-branching
 hapax
 legomena



non-right-
branching
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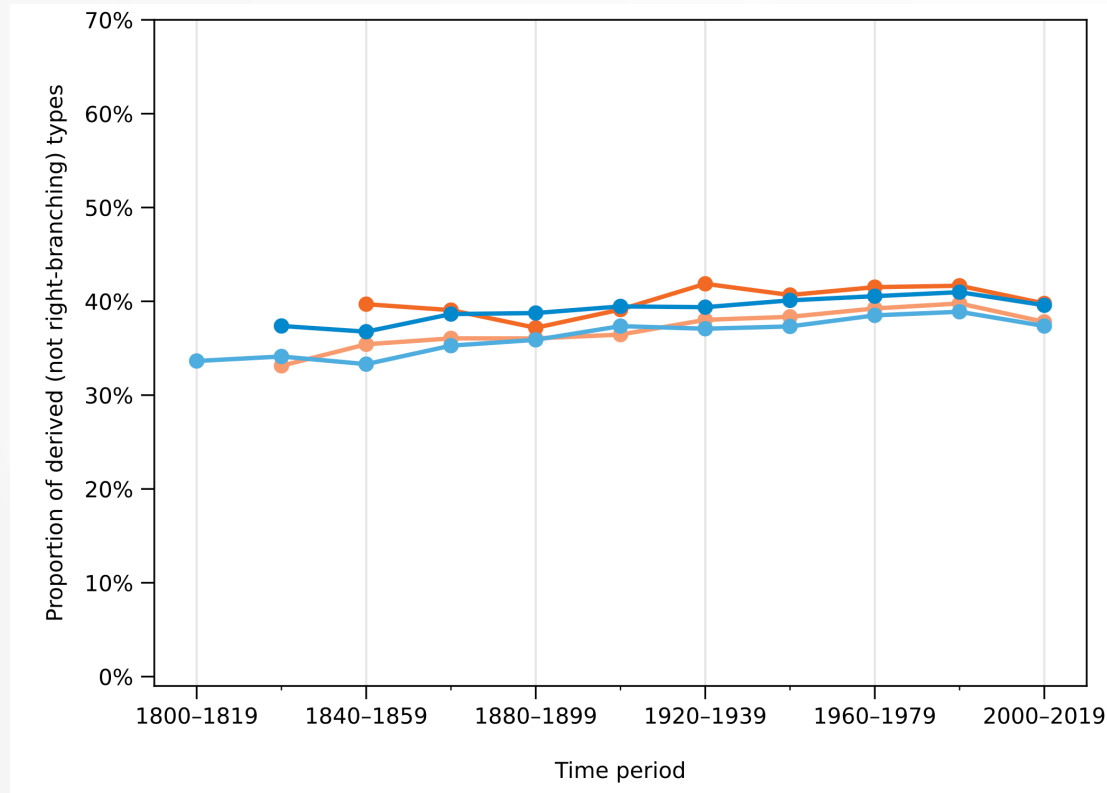


ANALYSIS: INTERNAL FACTORS

PROPORTIONS OF TYPES OVER TIME



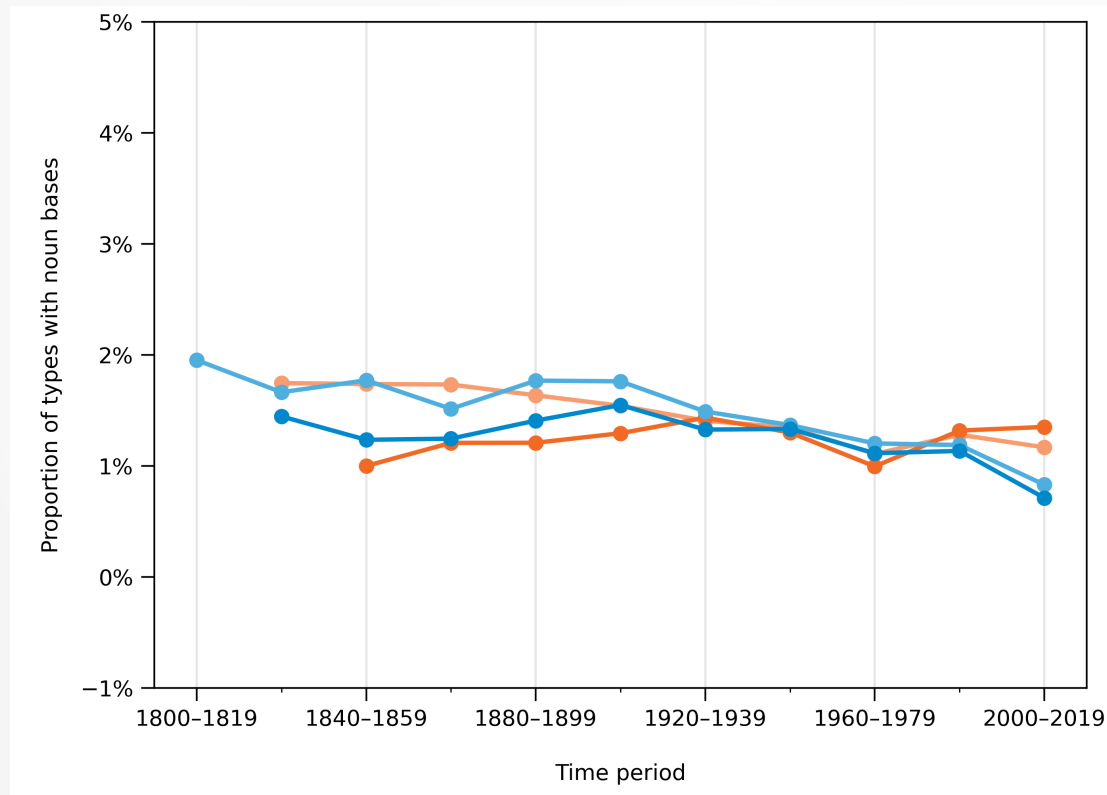
ETYMOLOGICAL SOURCE



- Trend: slight increase over time in the proportion of derived (not right-branching) types
- Other 2 perspectives (not shown): no significant differences in terms of gender or time period



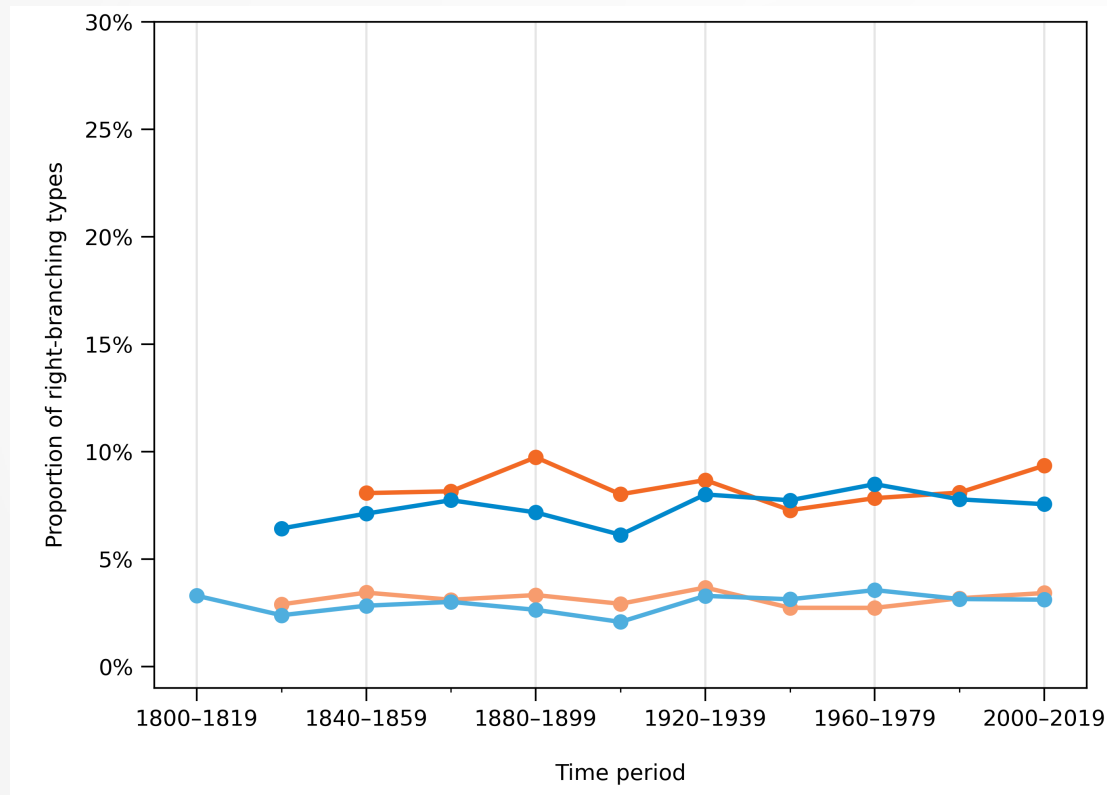
STEM TYPE



- Trend: slight decrease in the proportion of noun bases
- Nothing significant, numbers very small (1–5 types per period)
- Common types with noun bases: e.g. *casement*, *devilment*



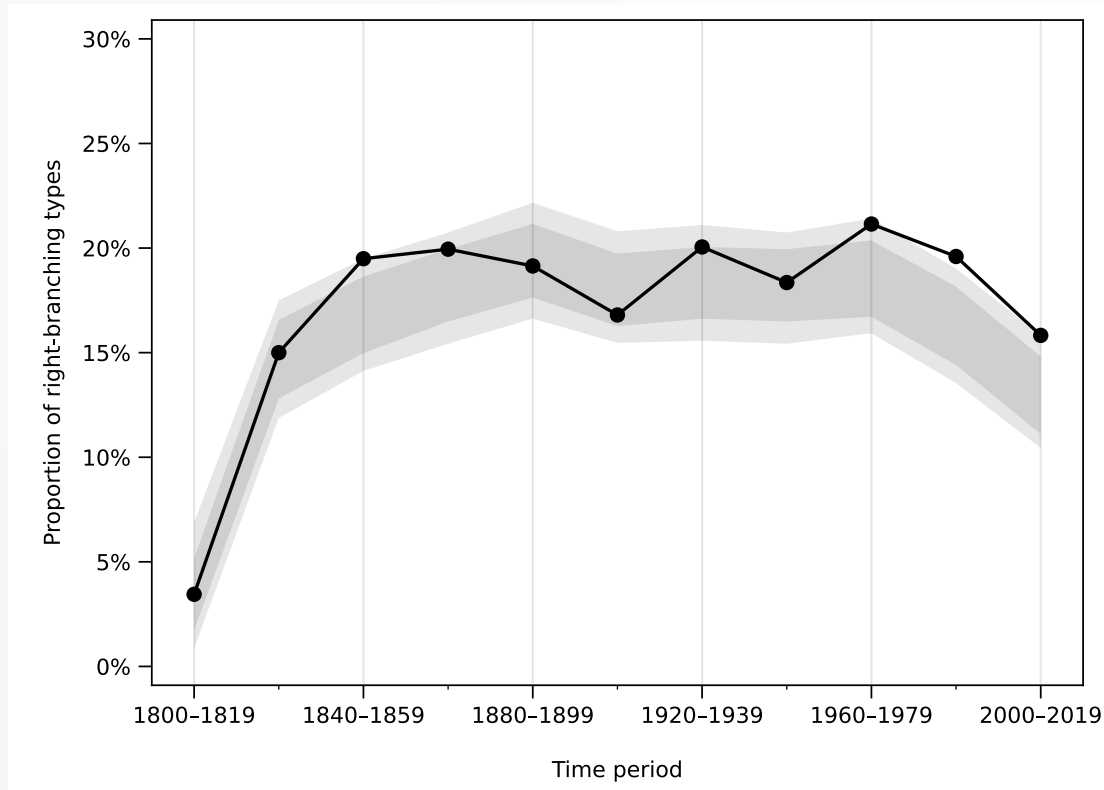
BRANCHING



- Trend: proportion of right-branching types seems to remain pretty stable! Women slightly in the lead C19?
- Gender differences not significant except for 1880–1899
 - Right-branching hapax legomena within the female subcorpus then: e.g. *discompliment*, *overrefinement*, *selfabandonment*



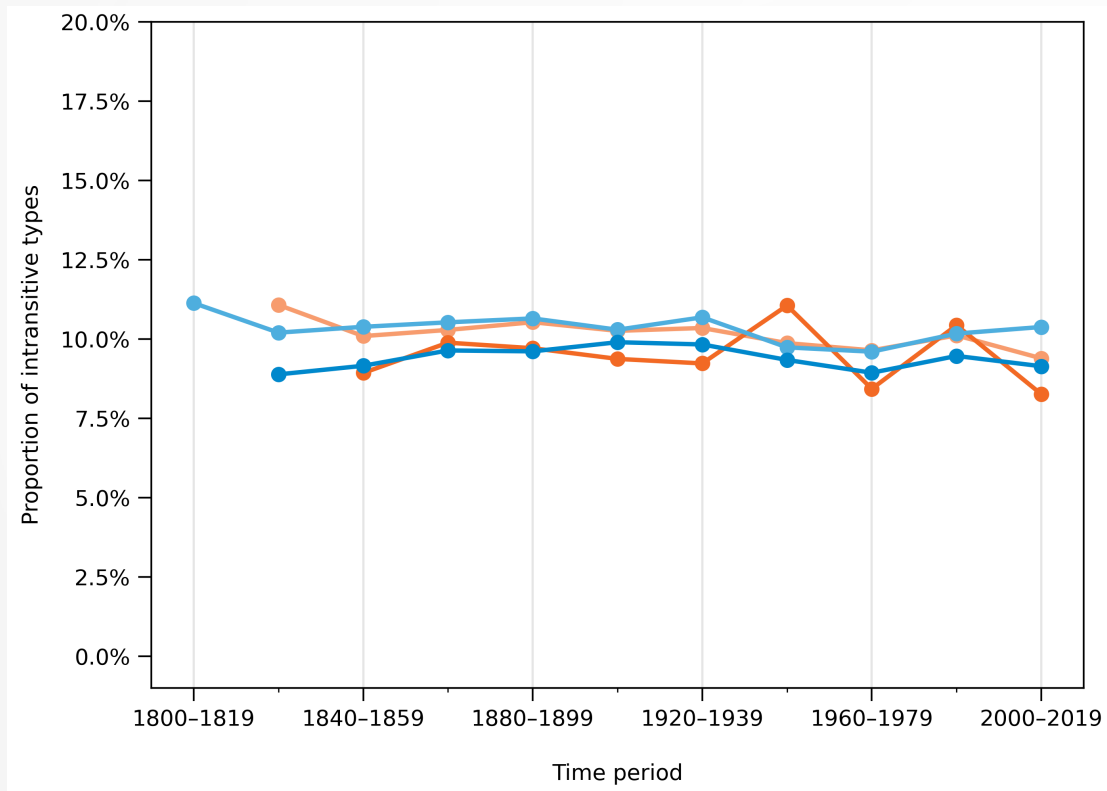
BRANCHING



- Significance of change over time: proportion of right-branching types high in the last three periods → does increase over time?
 - BUT pretty high already in 1840–1859



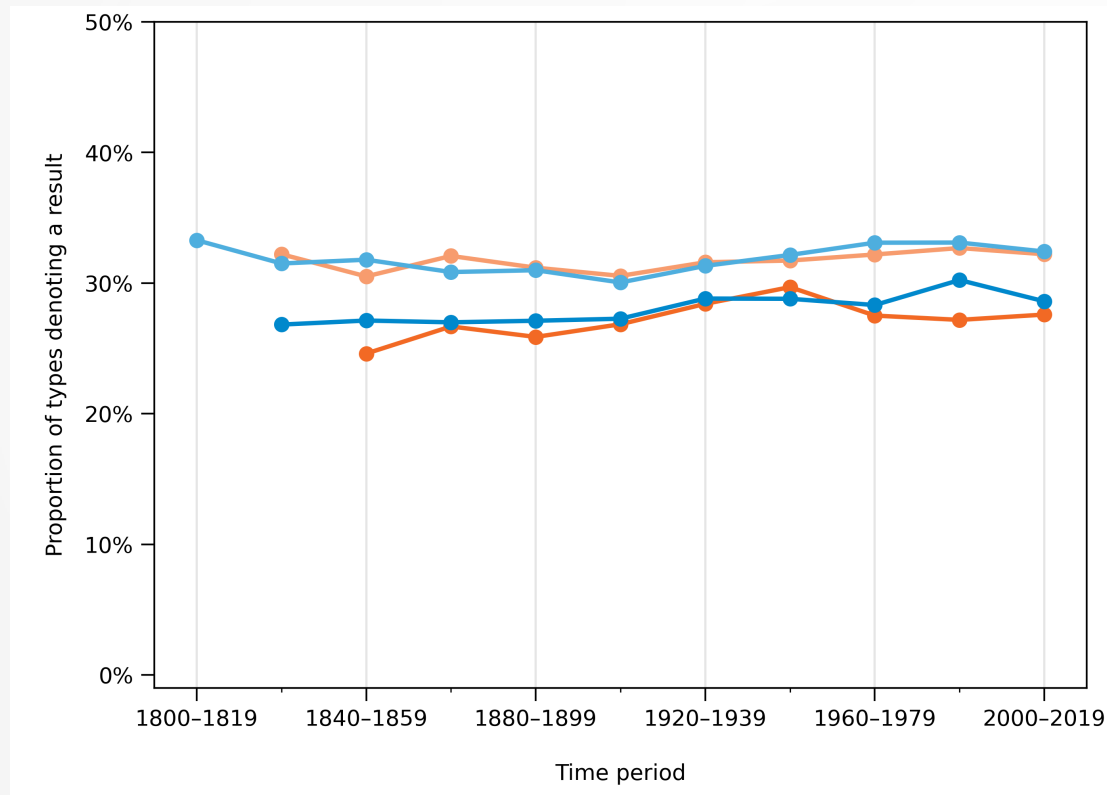
TRANSITIVITY



- No clear trends in the proportion of intransitive types
- Nothing significant except women's peak in 1940–1959
 - Intransitive hapax legomena within the female subcorpus then:
hatchment, noncommitment, oddment, partment, preachment, rangement, realignment, retirement, startlement



SEMANTIC TYPE



- Trend: proportion of ‘result’ sense slightly higher with men?
- Gender difference significant in some periods
- Significance of change over time:
 - ‘result’ sense peaks 1920–1959
 - Men’s hapaxes then e.g. *avengement*, *belittlement*, *disemployment*
 - ‘means’ peaks 1920–1939
 - ‘action’ dips 1920–1939



SUMMARY OF RESULTS

- Overview: women tend to use *-ment* less productively than men in COHA
 - Both right-branching and non-right-branching types
- Internal factors: surprisingly stable throughout the centuries!
 - At least when we look at proportions of types \approx extent of use
 - Proportion of **derived** (not right-branching) types increases slightly but non-significantly
 - Proportion of **right-branching** types significantly high in the last 3 periods (but also 1840–1859); women in the lead 1880–1899
 - **Intransitivity**: women peak 1940–1959
 - Semantic type: proportion of **'result'** sense slightly higher with men, 'result' peaks 1920–1959 while 'action' dips 1920–1939



CONCLUSIONS

- Decline of *-ment*: was gender a factor?
 - Women consistently disfavour *-ment*
 - More involved, less nouny style? cf. Biber & Burges (2000)
 - Women do use right-branching types (prefixation/compounding, not productivity of *-ment*) quite diversely for part of the 1800s
 - Men seem to lead the use of the ‘result’ sense, which peaks in 1920–59
 - Part of the final C20 pattern found by Hilpert (2013):
verbal, result, transitive, right-branching, derived
 - Both genders played a role? Women more C19, men more C20
- Future work: analyse hapaxes / new types; complete + improve factor annotation; return to the texts for interpretation; multivariate analysis?



THANK YOU!

We would also like to express our *thankfulness* to
CSC – IT Center for Science, Finland, for computational resources



BONUS EXAMPLES

“I lay ef de creeturs had a bin yer w’iles all dat **clatterment** gwine on dey’d a lef’ bidout tellin’ anybody good-bye. All ’ceppin’ Brer Rabbit.”

Joel Harris: *Nights With Uncle Remus: Myths and Legends of the Old Plantation*, 1881

Parson Welles: “We have convened on a serious **intendment**, and Brother Ramsdill would be in the way of Scripture to avoid foolish jesting which is not convenient, and whereby the brethren may be offended.”

Sylvester Judd: *Margaret [...]*, 1845