Angus McIntosh Centre
for Historical Linguistics

Charting the rise and demise of a phonotactic change

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Diachronic Phonotactics Workshop
7-8 September 2017
University of Vienna

THE UNIVERSITY of EDINBURGH

The FITS Project (***F**rom **I**nglis **T**o **S**cots*)

- 4-year project at the Angus McIntosh Centre for Historical Linguistics
- Researching the **sound/spelling history of early Scots**
- Data: *A Linguistic Atlas of Older Scots* (LAOS, Williamson, 2008)
  - c.**1,250** 'local documents' (c.400,000 words) dated **1380-1500**
- Focus on **Germanic** root morphemes

- **Main RQ: What phonological facts underlie the diversity of spelling attested in Scots of the period 1380-1500?**

Grapho-phonological parsing

1. Resolve individual forms into units of spelling:

<fisch>	<f> | <i> | <sch>
<fysch>	<f> | <y> | <sch>
<fiß>	<f> | <i> | <ß>
<fyss>	<f> | <y> | <ss>
<fyß>	<f> | <y> | <sß>

Grapho-phonological parsing

2. Attach a provisional sound value to each spelling unit

<fisch>	<f> | <i> | <sch>
<fysch>	<f> | <y> | <sch>
<fiß>	<f> | <i> | <ß>
<fyss>	<f> | <y> | <ss>
<fysß>	<f> | <y> | <sß>

Sound value [f] | [ɪ] | [ʃ]

Grapho-phonological parsing

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<fisch>	<f>	<i>	<sch>
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<fiß>	<f>	<i>	<ß>
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<fysß>	<f>	<y>	<sß>
Sound value	[f]	[ɪ]	[ʃ]

?

Grapho-phonological parsing

3. Compare the OSc reconstruction with its source form and classify any differences

OE [f] | [i] | [ʃ]

OSc [f] | [ɪ] | [ʃ]

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OE	[f]	[i]	[ʃ]
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[i] > [ɪ]: Short vowel lowering ('SVL')

Grapho-phonological parsing

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OE	[f]	[i]	[ʃ]
OSc	[f]	[ɪ]	[ʃ]

Cf. The methodology of *A Corpus of Narrative Etymologies from Proto-Old English to Early Middle English* ('CoNE')

[i] > [ɪ]: Short vowel lowering ('SVL')

Grapho-phonological parsing

4. Maintain an inventory of observed developments
   - ‘corpus of changes’

Corpus of Changes

www.amc.lel.ed.ac.uk/cgi-bin/fits/php/allchanges.php

Phonotactic phenomena

OSc *goud* ‘gold’

l-vocalisation (LV)

OE	[g]	[o]	[l]	[d]
OSc	[g]	[ou]	–	[d]
OSc	<g>	<ou>	–	<d>

Phonotactic phenomena

OSc *lenth* 'length'

cluster simplification (CS)

OE	[l]	[e]	[ŋ]	[g]	[θ]
OSc	[l]	[e]	[n]	–	[θ]
OSc	<l>	<e>	<n>	–	<th>

Phonotactic phenomena

OSc *wirt* ‘writ’

r-metathesis (RM)

OE	[w]	[r]	[i]	–	[t]
OSc	[w]	–	[ɪ]	[r]	[t]
OSc	<w>	–	<i>	<r>	<t>

Phonotactic phenomena

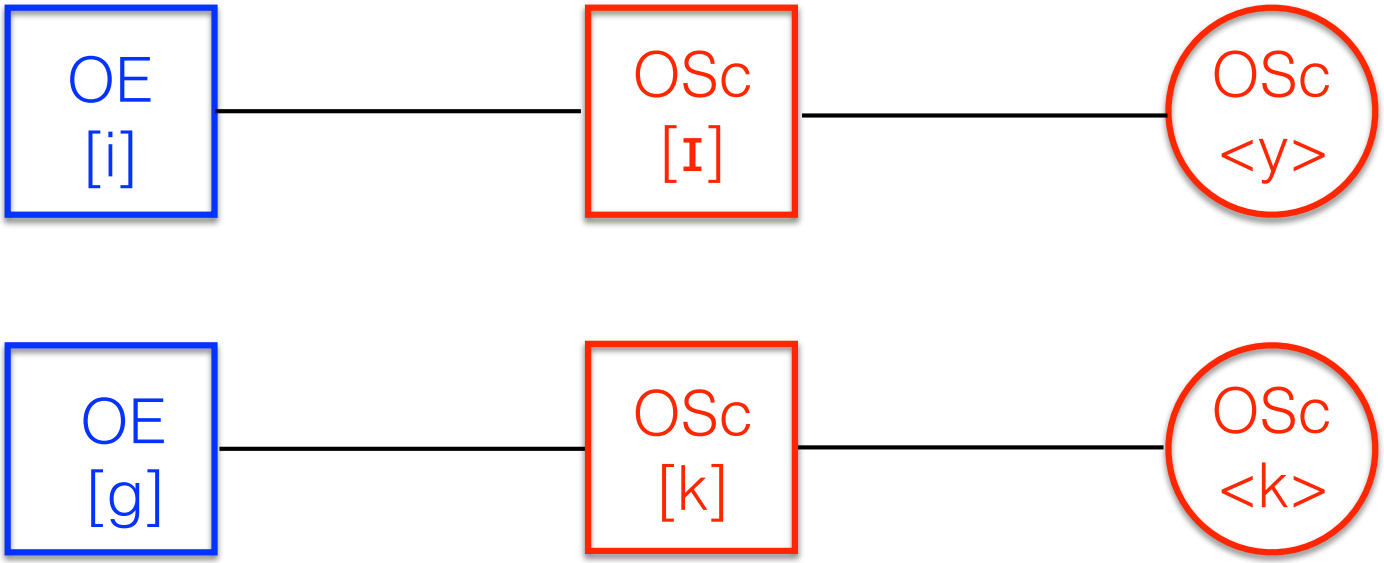
OSc *thynk* 'thing'

final devoicing (FD)

OE	[θ]	[i]	[ŋ]	[g]
OSc	[θ]	[ɪ]	[ŋ]	[k]
OSc	<th>	<y>	<n>	<k>

Grapho-phonological parsing

Produces a corpus of triads



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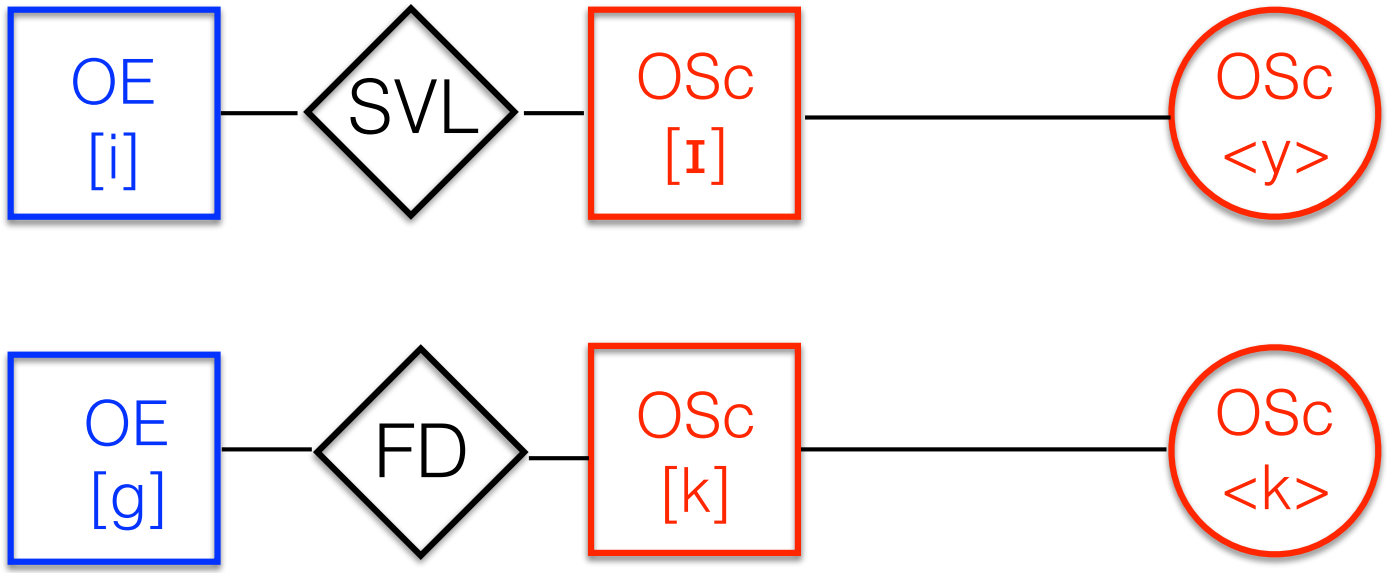
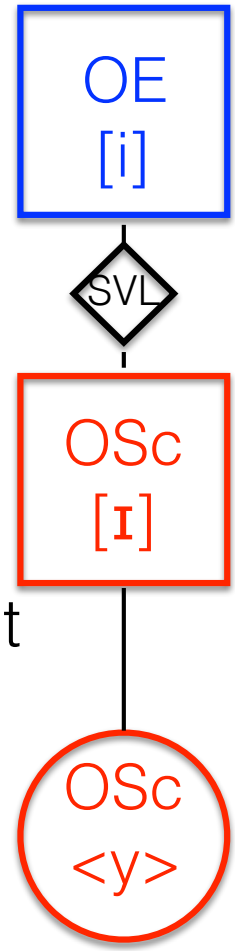


Grapho-phonological parsing

- Number of tokens
- Morphemes in which attested
- Words in which attested
- Date & place of origin of source mss
- Word-internal position, e.g.:
  - pre- or post-nuclear, 1st/2nd/3rd element of a cluster, word-final, morpheme-initial
- Adjacent segments



Medusa: Our search and display tool

- *Medusa* displays all pairings of OSc sound and spelling units in our corpus
- In due course it will also display all pairings of OSc sounds and their source sounds

Medusa

www.amc.lel.ed.ac.uk/fits/fits-display-synchronic-data3.html

Using the FITS database: Examples

- Synchronic Older Scots
  e.g. what clusters are attested and in what frequencies?
- Diachronic (regressive)
  e.g. sources of Older Scots [u:]
- Diachronic (progressive)
  e.g. what are the reflexes of OE /f/? How do they distribute?
- For *any* unit, diad or triad: context in which attested
  Extra-linguistic: text, date, place

  Linguistic: morpheme, word, internal position, neighbouring segment(s), etc

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Case study: reflexes of OE /f/

The GP-parsing procedure has shed new light on OSc reflexes of OE /f/

It has shown that the reflexes fall into several categories

- some of these are very straight-forward one-to-one correspondences between spellings and OSc sounds
- others are more complex, and reflect attempts by OSc scribes to represent important phonotactic changes in the history of the language
- examining the data in detail allows us to determine exactly what changes were happening and how consistent the scribes were at representing them

OE /f/ in OSc: non-final contexts

	Initial	**Medial**	
Exemplar	*fisch*	*eftir*	*sevin*

OE /f/ in OSc: non-final contexts

	Initial	**Medial**	
Exemplar	*fisch*	*eftir*	*sevin*
OE	[f]	[f]	[v]
ModSc	[f]	[f]	[v]

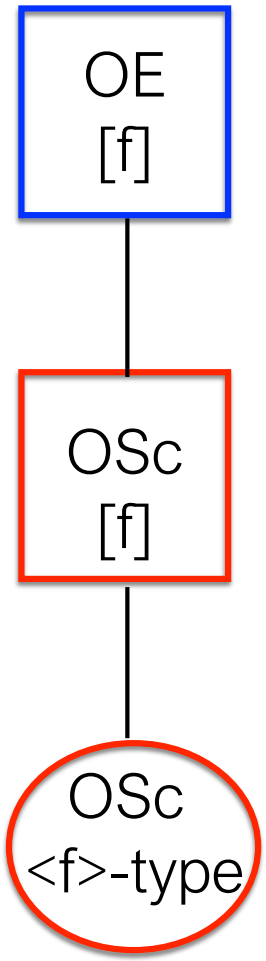
OE /f/ in OSc: non-final contexts

	Initial	**Medial**	
Exemplar	*fisch*	*eftir*	*sevin*
OE	[f]	[f]	[v]
15C Scots	<f>	<f(f)>	<u, v, w>
ModSc	[f]	[f]	[v]

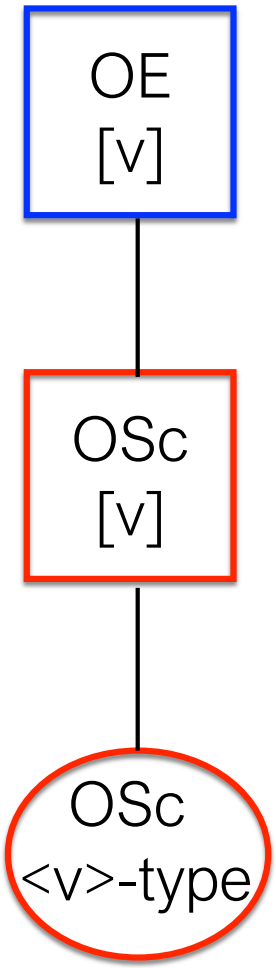
OE /f/ in OSc: non-final contexts

	Initial	Medial	
Exemplar	*fisch*	*eftir*	*sevin*
OE	[f]	[f]	[v]
15C Scots	<f>	<f(f)>	<u, v, w>
	MATCH	MATCH	MATCH
ModSc	[f]	[f]	[v]

OE /f/ in OSc: non-final contexts



	Initial	Medial	
Exemplar	*fisch*	*eftir*	*sevin*
OE	[f]	[f]	[v]
15C Scots	<f>	<f(f)>	<u, v, w>
15C Scots	**[f]**	**[f]**	**[v]**
ModSc	[f]	[f]	[v]



OE /f/ in OSc: final contexts

	Word-final		**Pre-inflection**
	original	new	
Exemplar	*lif* (< OE *līf*)	*luf, gif* (< OE *lufu, giefan*)	*liff+is, giff+in* ('lives', 'given')

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OE	[f]	[v]	[v]
ModSc	[f]	[v] (/Ø)	[v] (/Ø)

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OE	[f]	[v]	[v]
15C Scots	<f(e, ff(e> <v(e,u(e,w(e>	<f(e, ff(e> <v(e,u(e,w(e>	<f, ff> <u, v, w>
ModSc	[f]	[v] (/Ø)	[v] (/Ø)

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OE	[f]	[v]	[v]
15C Scots	<f(e, ff(e> <v(e,u(e,w(e>	<f(e, ff(e> <v(e,u(e,w(e>	<f, ff> <u, v, w>
	MISMATCH	MISMATCH	MISMATCH
ModSc	[f]	[v] (/Ø)	[v] (/Ø)

OE /f/ in OSc: final contexts

OE [f]

OSc ?

OSc <f>, <v>

	Word-final		Pre-inflection
	original	new	
Exemplar	*lif* (< OE *līf*)	*luf, gif* (< OE *lufu, giefan*)	*liff+is, giff+in* ('lives', 'given')
OE	[f]	[v]	[v]
15C Scots	<f(e, ff(e> <v(e,u(e,w(e>	<f(e, ff(e> <v(e,u(e,w(e>	<f, ff> <u, v, w>
15C Scots	**[?]**	**[?]**	**[?]**
ModSc	[f]	[v] (/Ø)	[v] (/Ø)

OE [v]

OSc ?

OSc <f>, <v>

Summary

Metadata collected via GP-parsing reveals reflexes of OE /f/ are spelled predictably root-initially and root-medially

Unexpectedly:

- <v>-type spellings occur where OE & ModSc have [f] (i.e. word-finally in *lif*-type words), e.g. *lyve* 'life'
- <f>-type spellings occur where OE & ModSc have [v] (i.e. historically pre-vocalic, and pre-inflectionally), e.g. (a) *luff* 'love', (b) *liffis* 'lives', (c) *luffit* 'loved'

	lif-type	*luf*-type	*lif*+	*luf*+
<f>-type	97.7	75.5	86.0	53.1
<v>-type	2.3	24.5	14.0	46.9

Phonotactic change

Variable final schwa loss, leading to important phonotactic changes in Scots (and English)

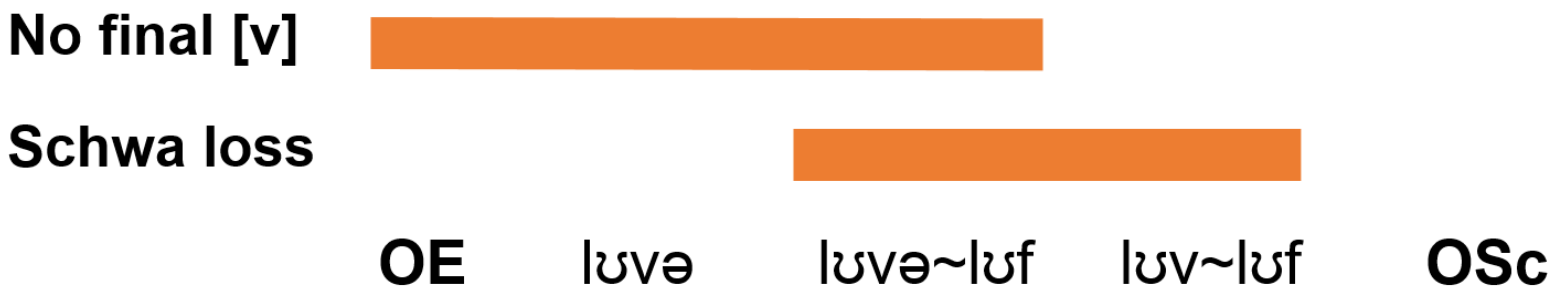
- Minkova (2014: 231) states that after a long period of variation it was probably complete in English by 1450, though it likely reached this stage earlier in the north

But the OE restriction on final fricatives being voiceless continued into this period (i.e. no final [v])

- Final devoicing of [v] (and other voiced fricatives) suggested by previous researchers (Wright & Wright 1928: 108; Jordan 1934: 191; Mossé 1952: 40; Fisiak 1968: 61)
- Johnston (1997: 104): The devoicing of [v] in final position is "diagnostic of Scots as a whole … final /v/ is almost always represented by <f>, or the giveaway sign of voicelessness, <ff>"

Explaining variation between <f(f)> and <v, u>

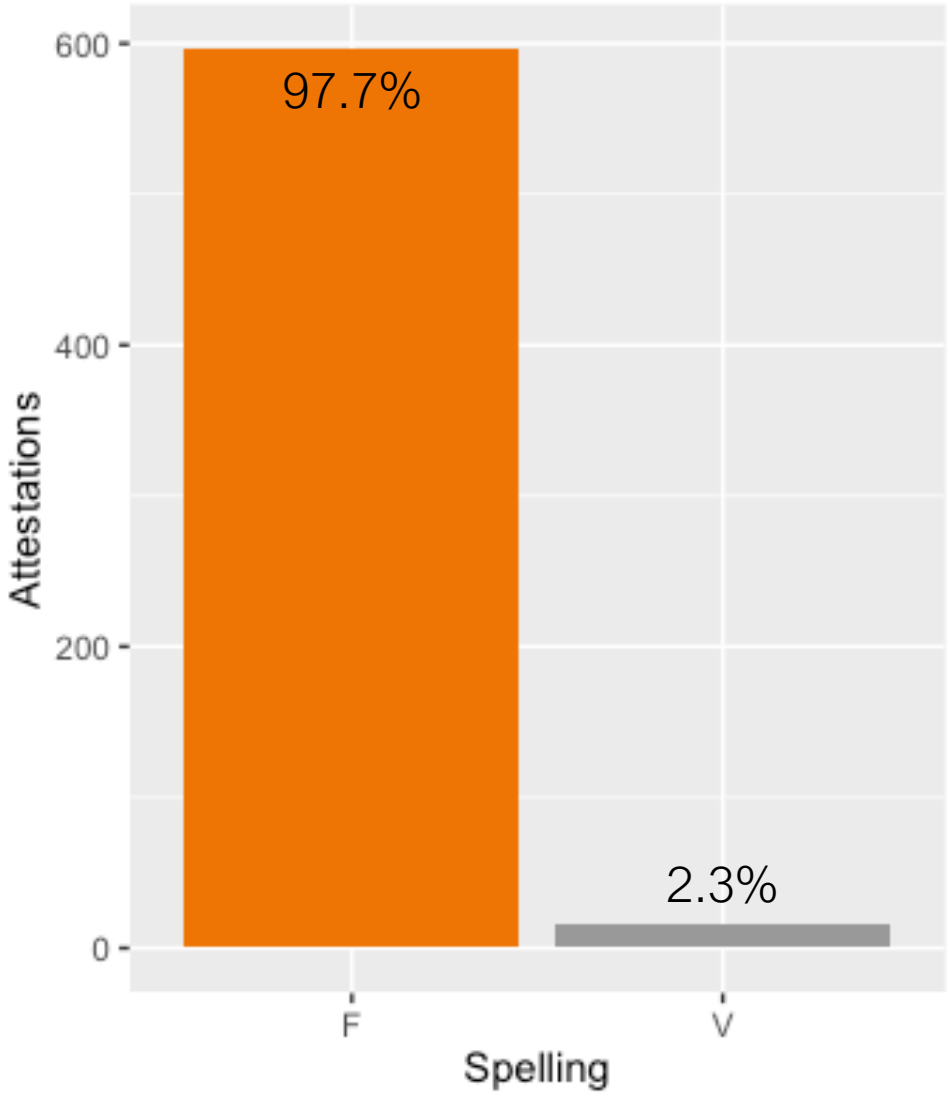
The interaction of these two regular changes/constraints results in variable output:



At the same time, variation between [v] and [f] in word-final position spread by analogy into pre-inflectional position, e.g.

- *lif*, *lives* > *lif*, *liffes*
- *luf*, *luves* > *luf*, *luffes*
- Cf. Modern Scots *wife~wi*[f]*es*, *house~hou*[s]*es*

Word-final *lif*-type (< OE [f])



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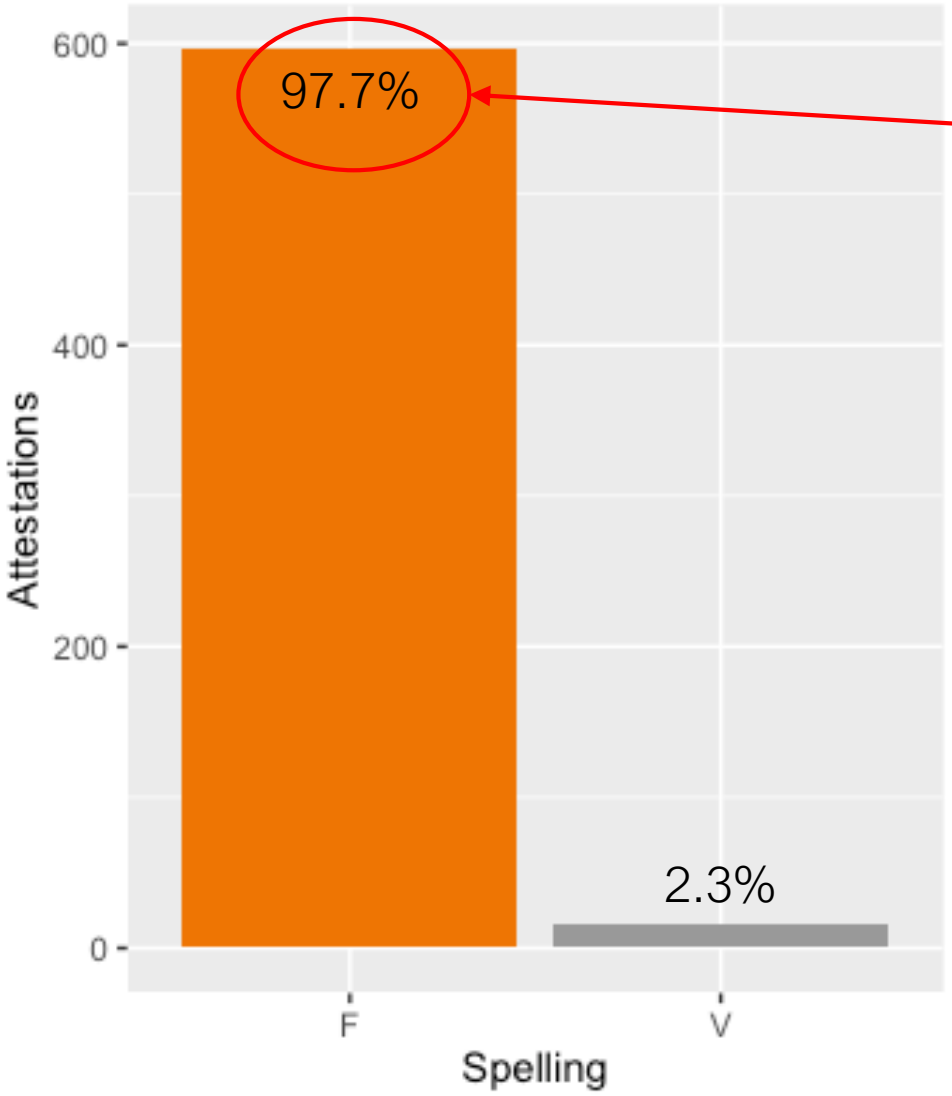

Not surprising, as these words have always had [f]

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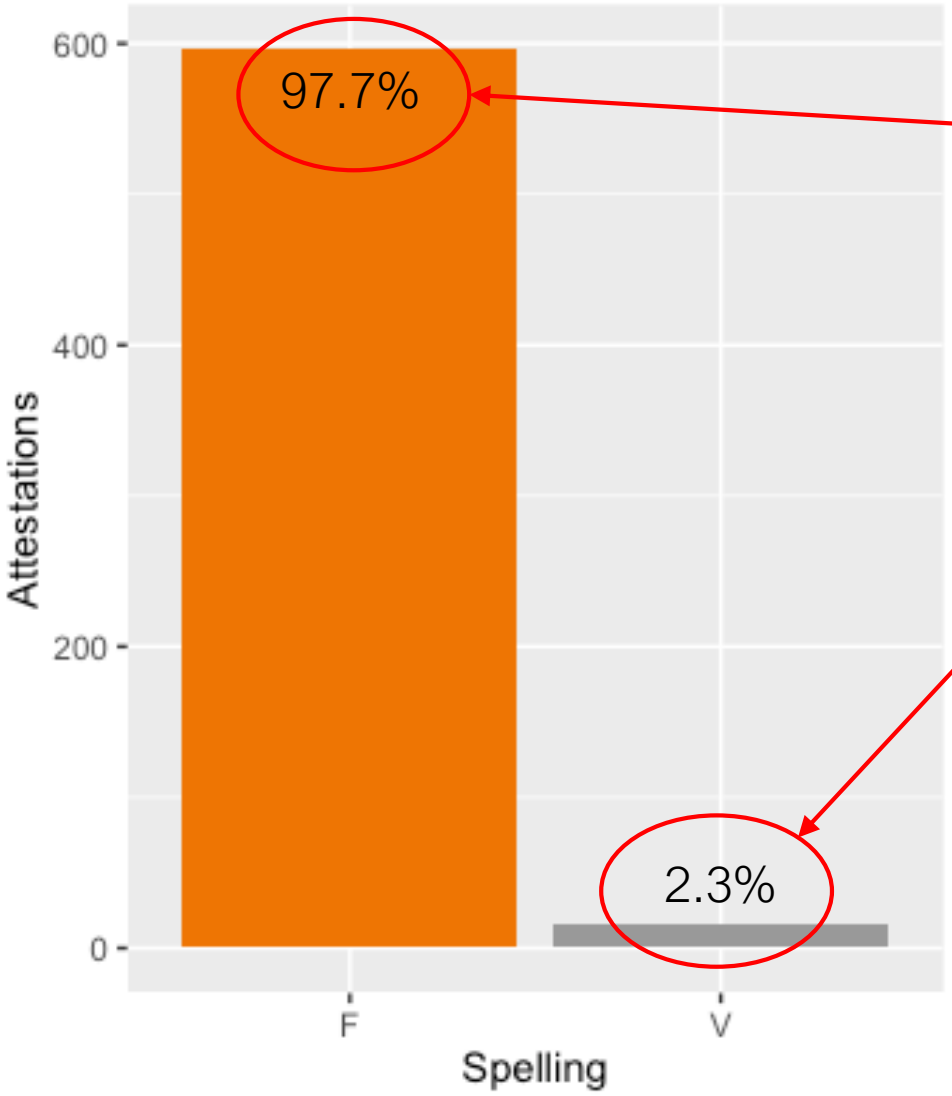

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Nouns with potential etymological confusion with aj./v. forms (e.g. *half/halve*, *life/live*)

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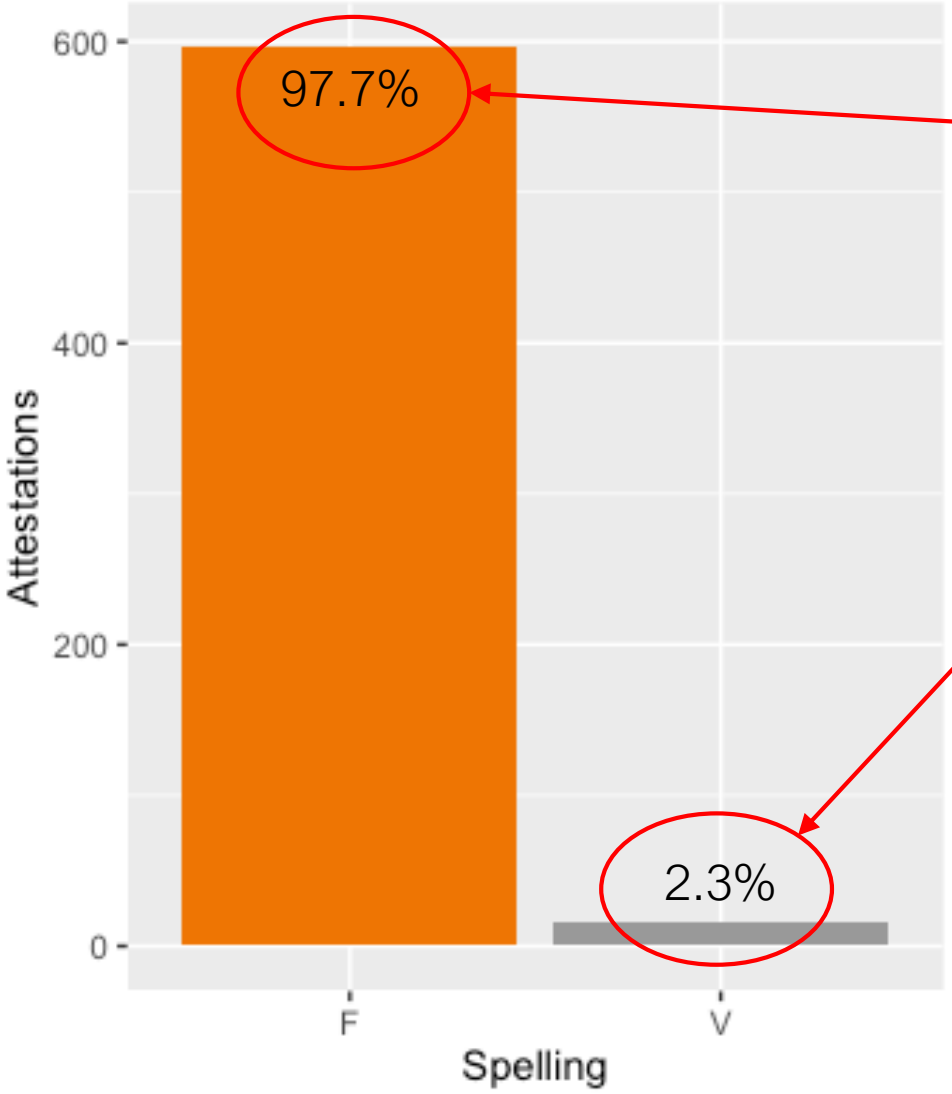

Not surprising, as these words have always had [f]

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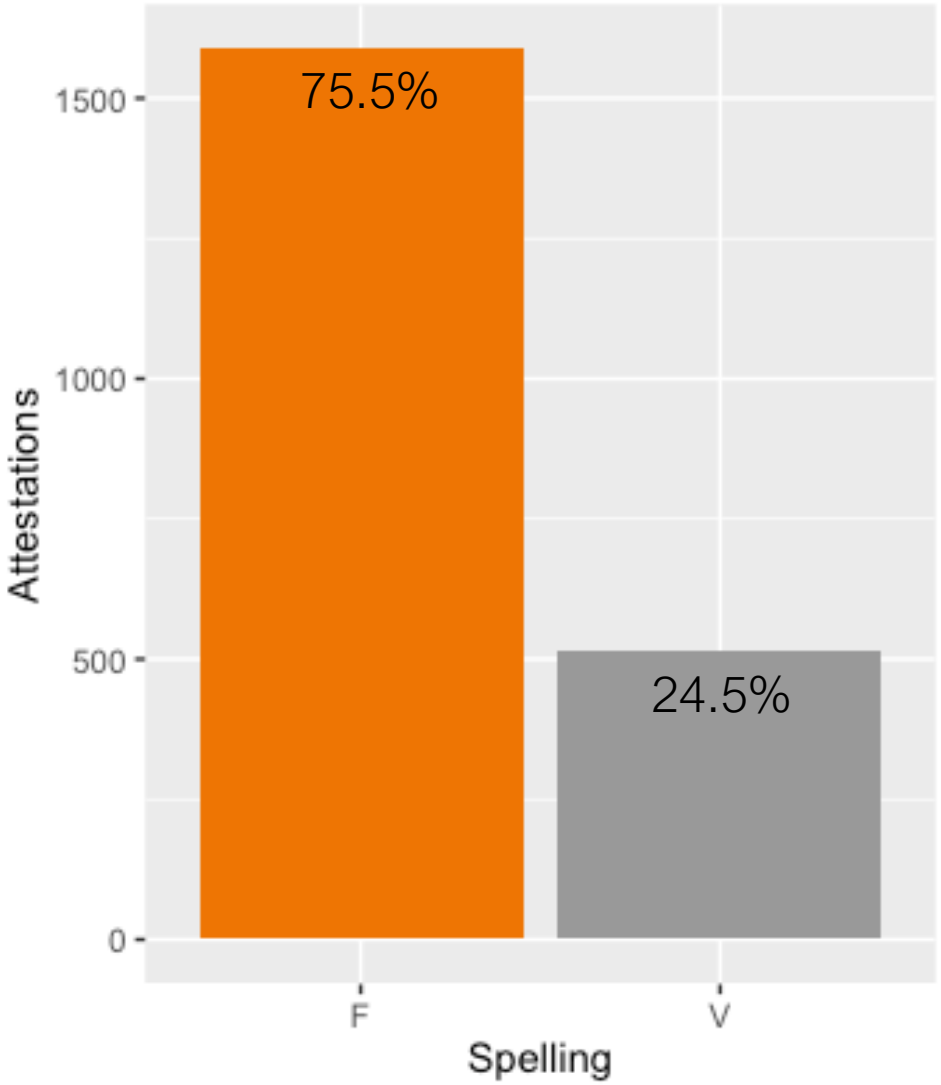
I.e. essentially regular too, with <f> = [f], as we would expect

Word-final *luf*-type (< OE [v])



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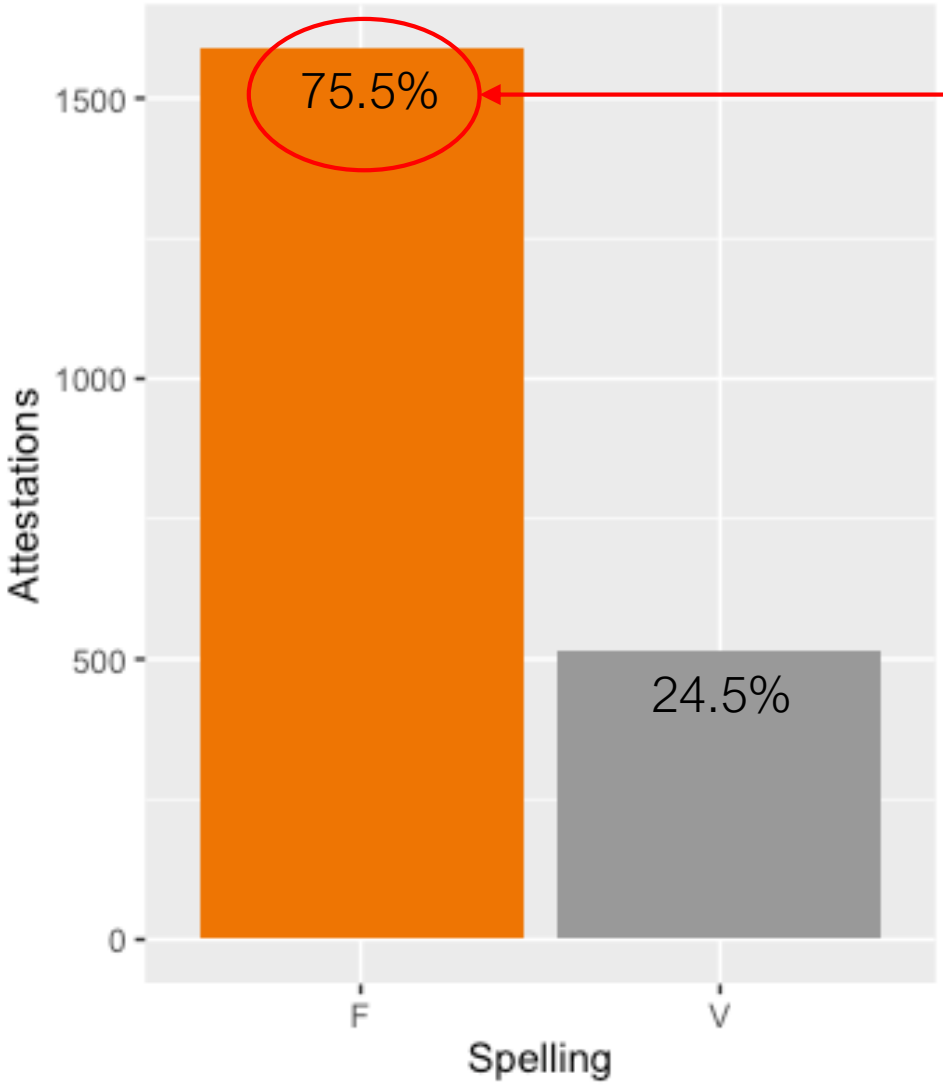

High level of <f(f)>, but significantly lower than for *lif*-type (97.7%)

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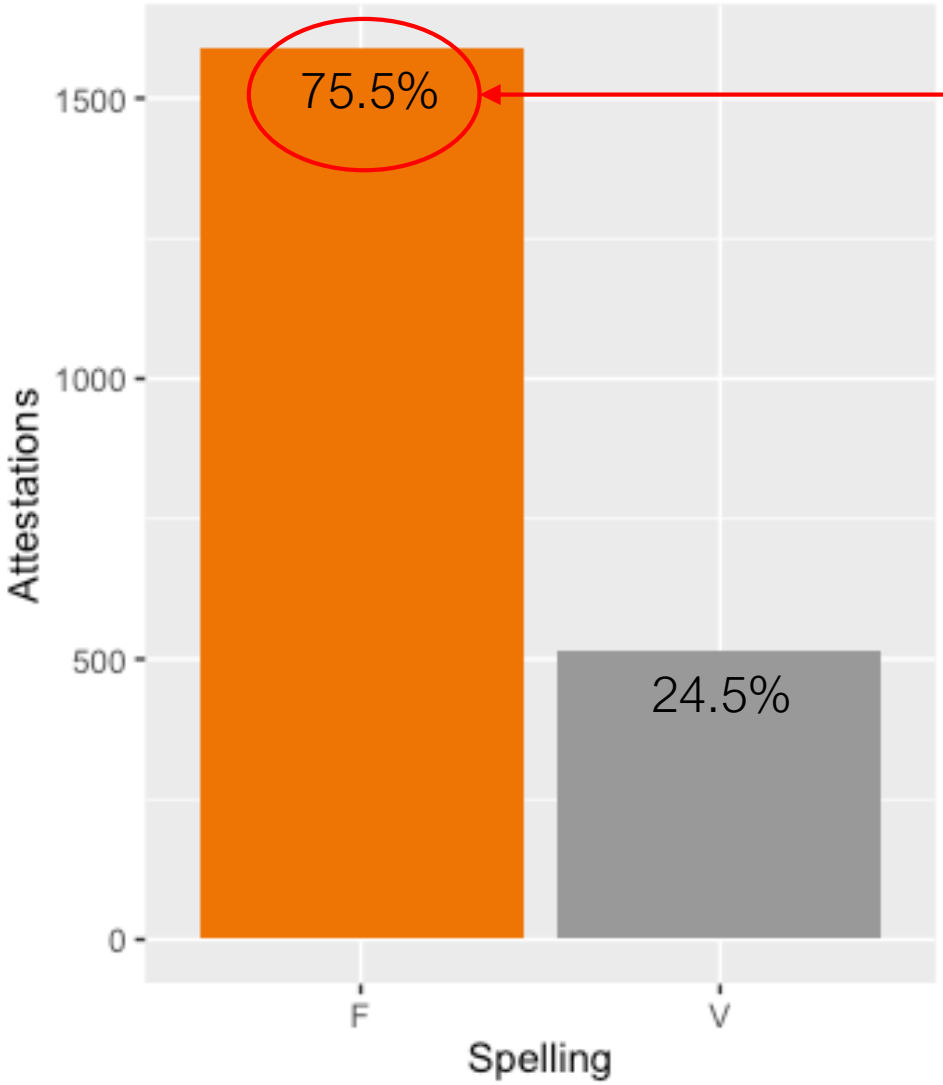

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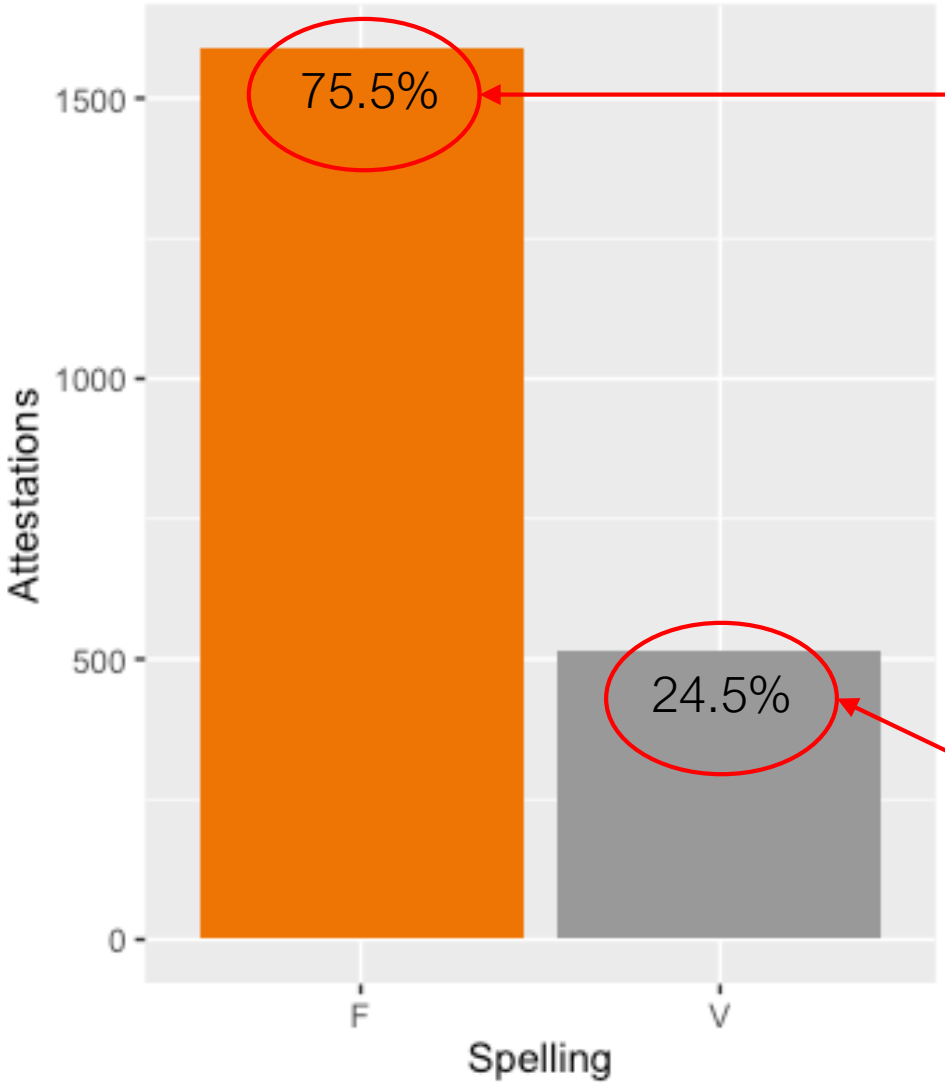

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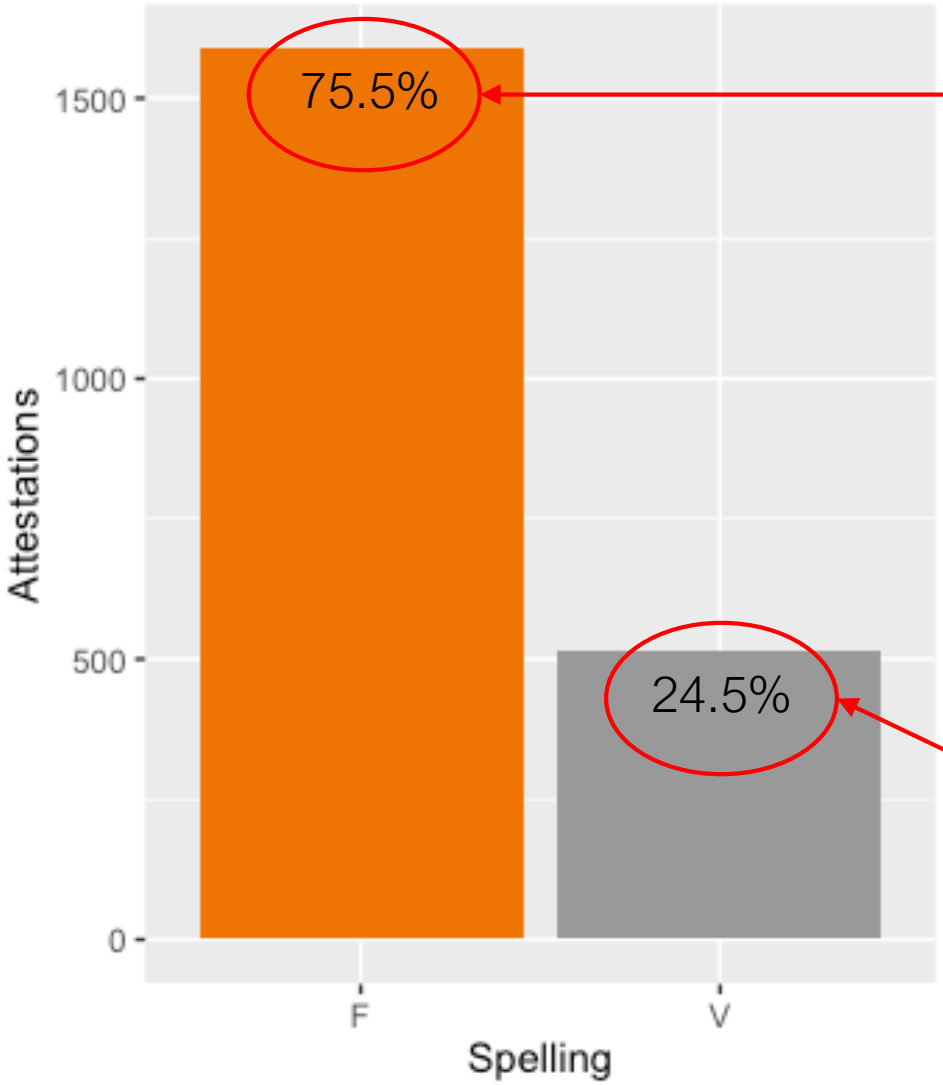

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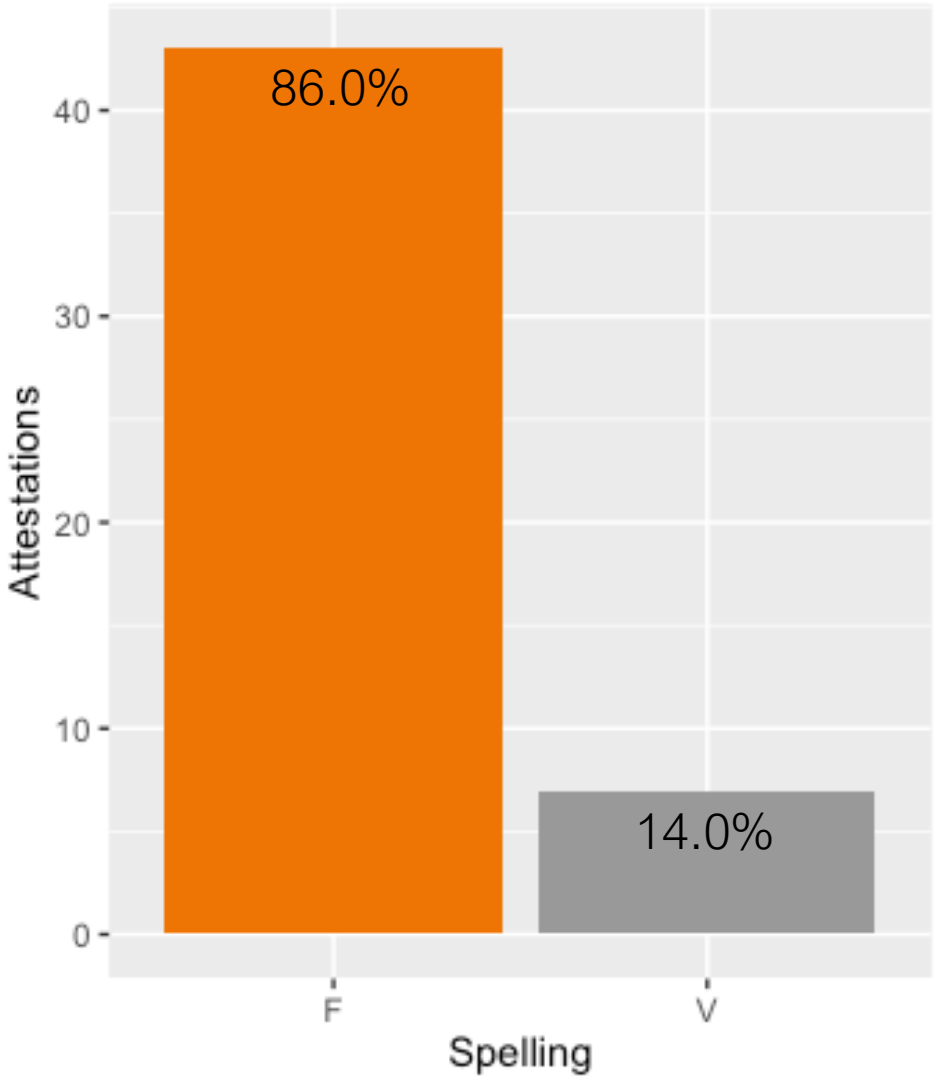
[lʊvə] > [lʊvə]~[lʊf] > [lʊv]~[lʊf]

Pre-inflectional *lif*-type (< OE [v])



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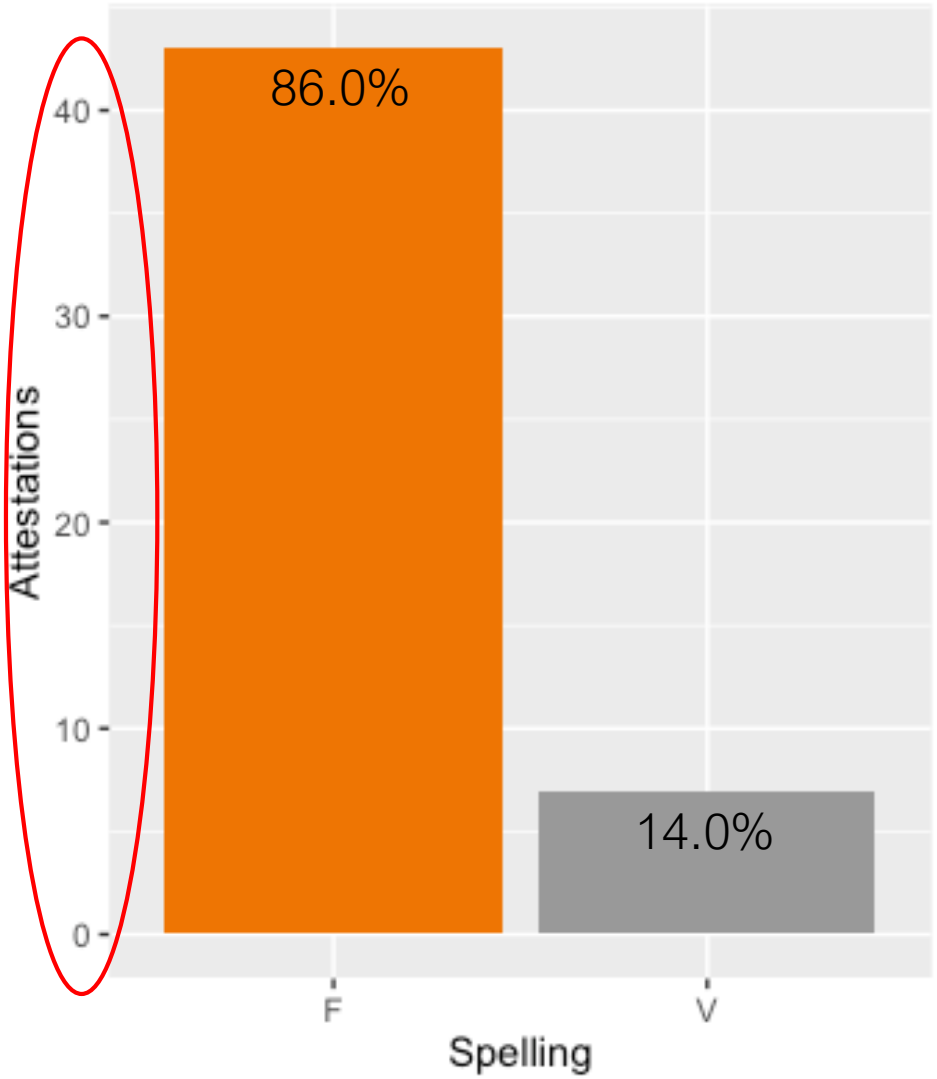

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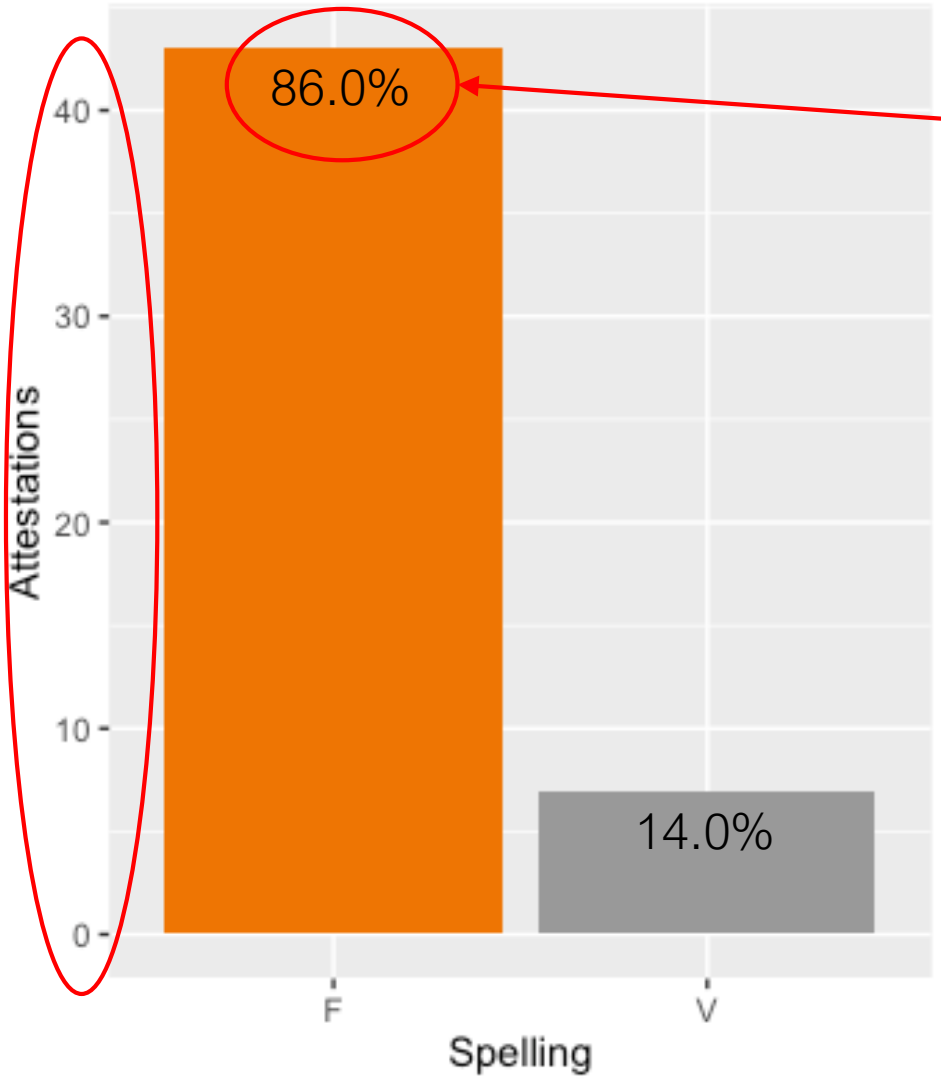

Analogical spread of final [f] into pre-inflectional position had centuries to happen

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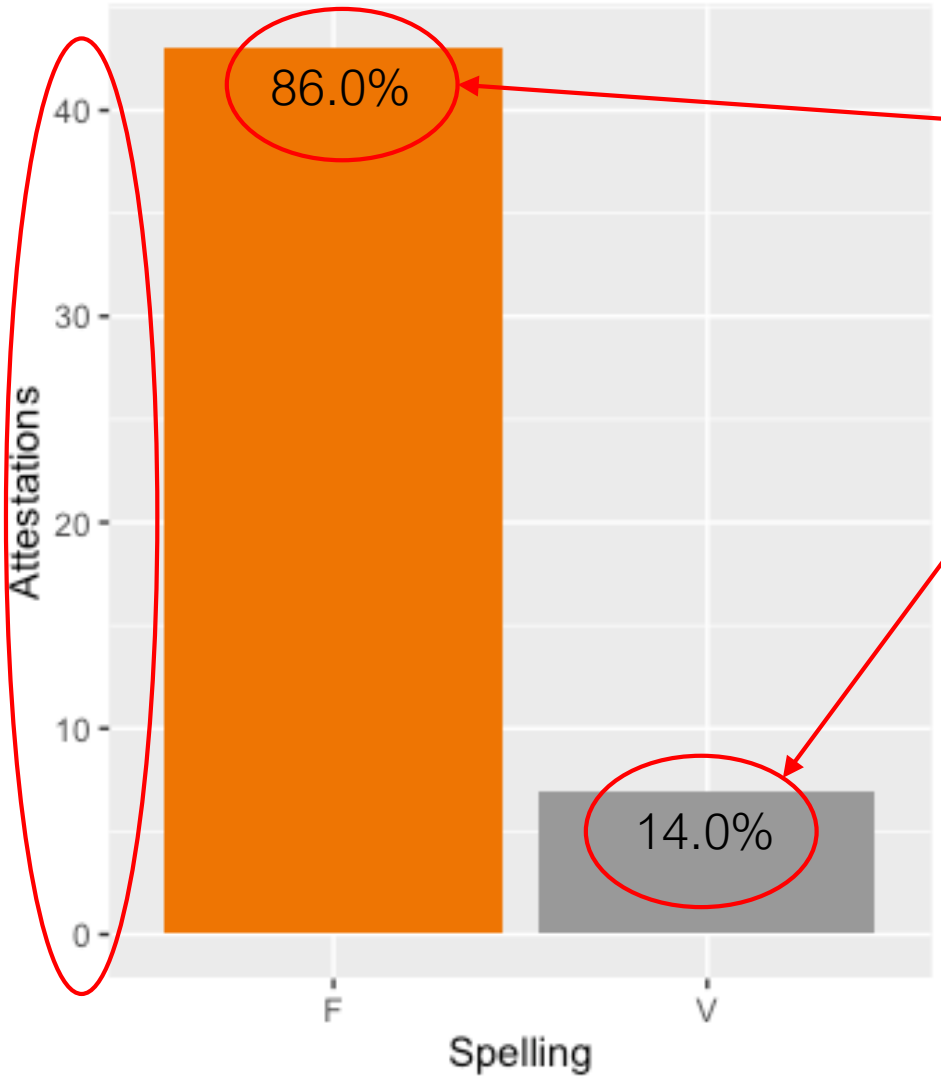

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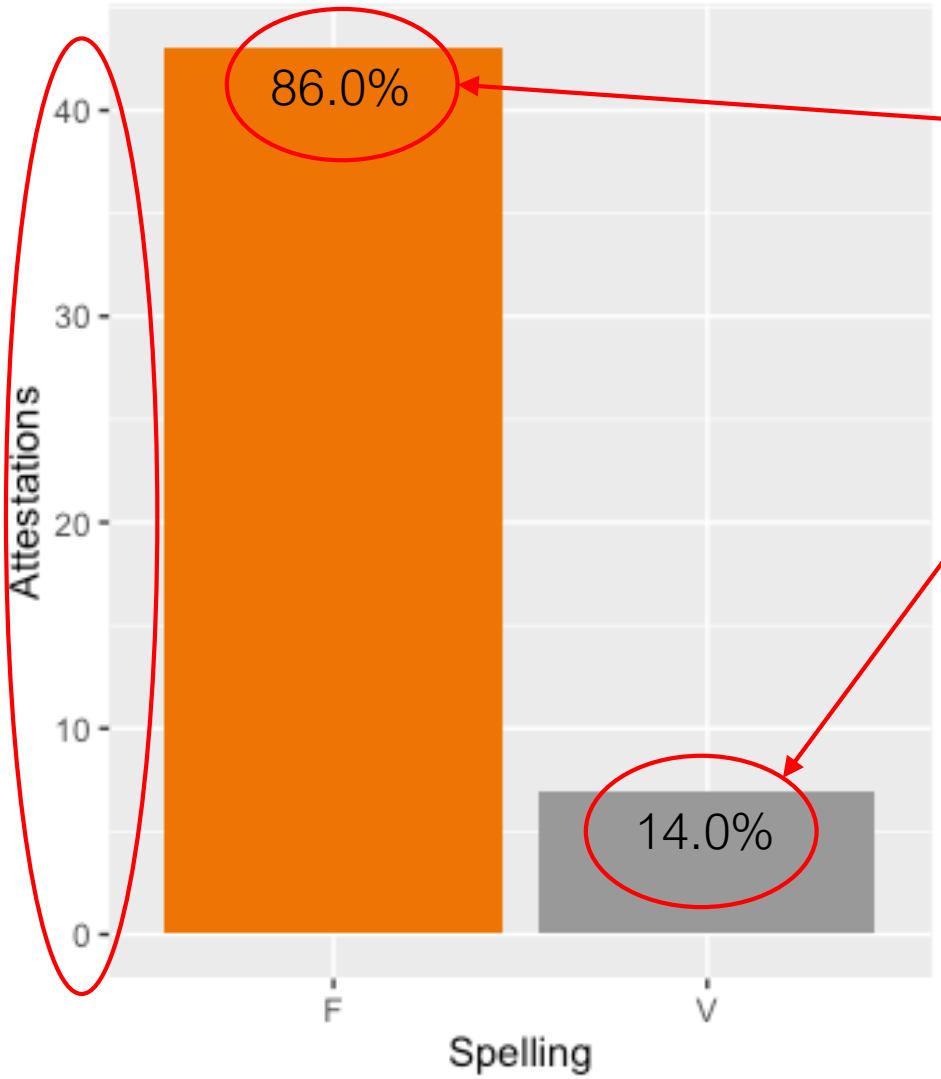

Analogical spread of final [f] into pre-inflectional position had centuries to happen

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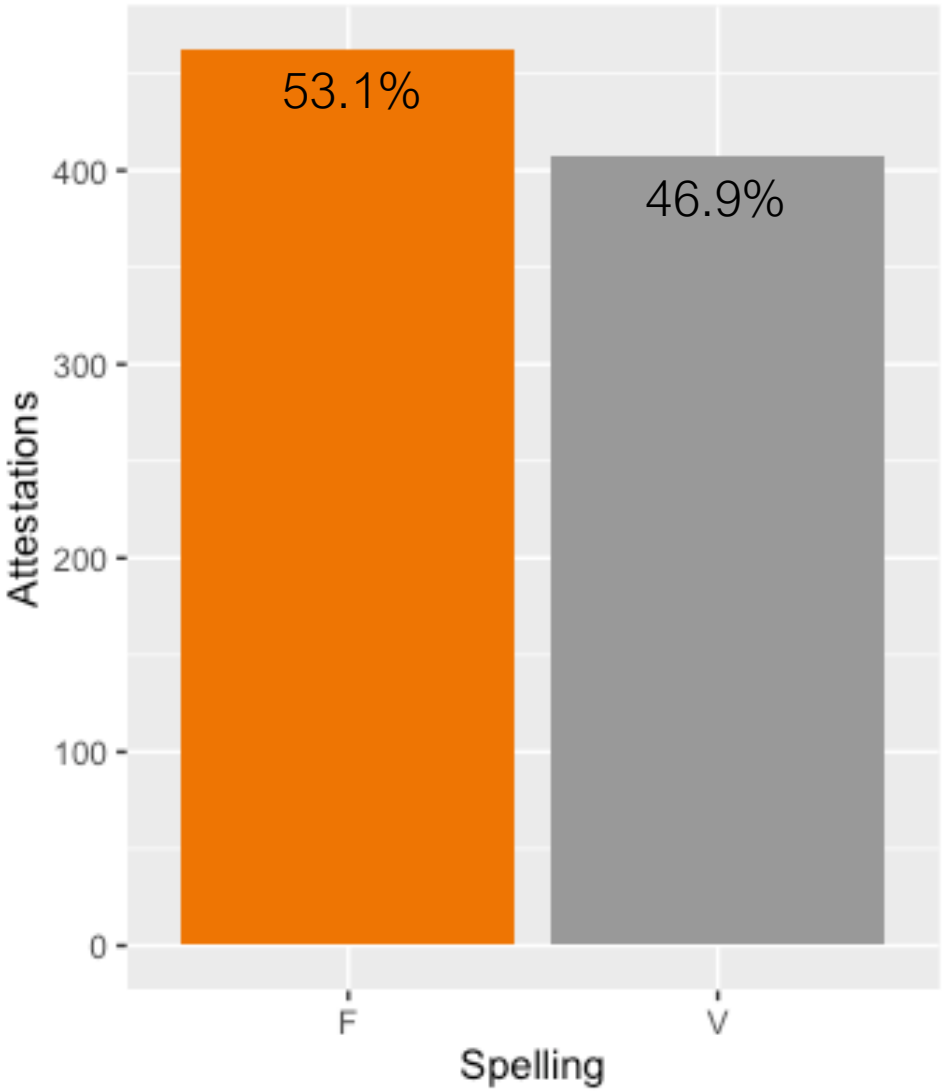
Still apparent in Modern Scots: *wife-wi*[f]*es*, *house-hou*[s]*es*

Pre-inflectional *luf*-type (< OE [v])



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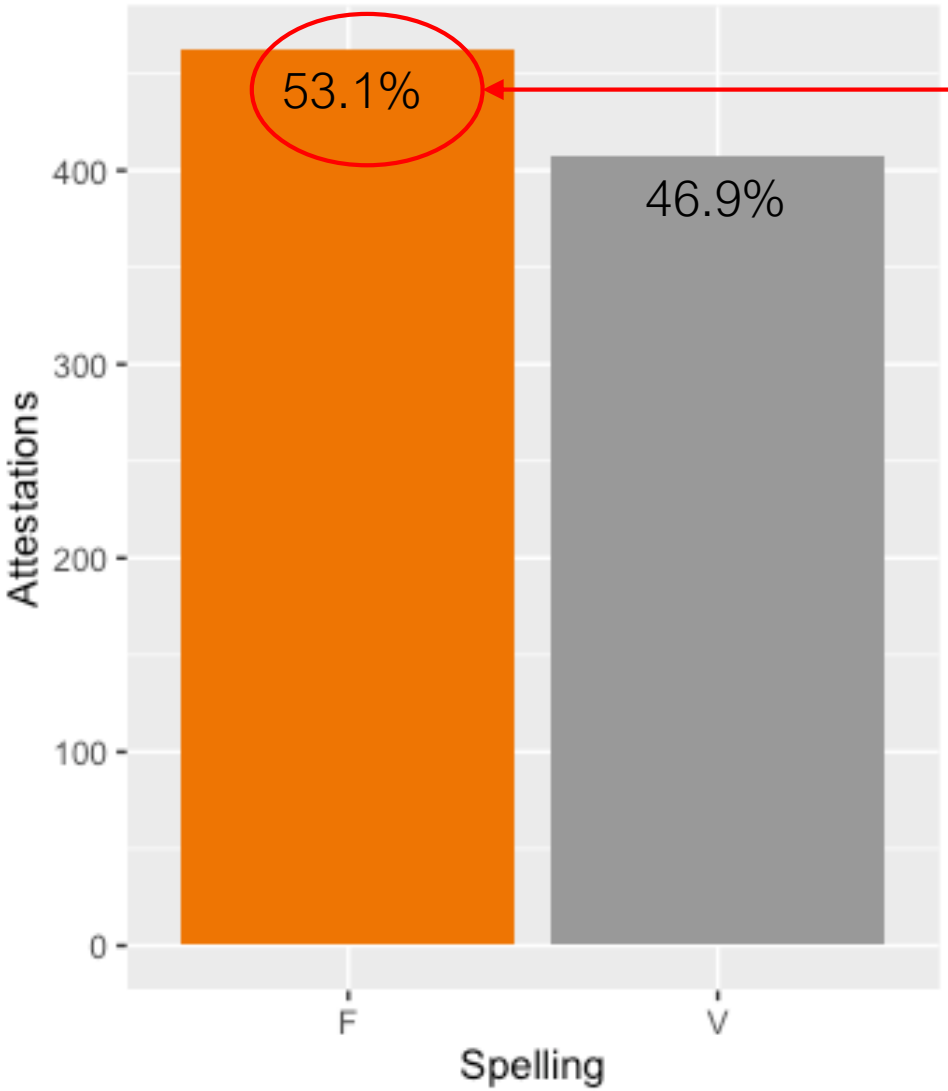

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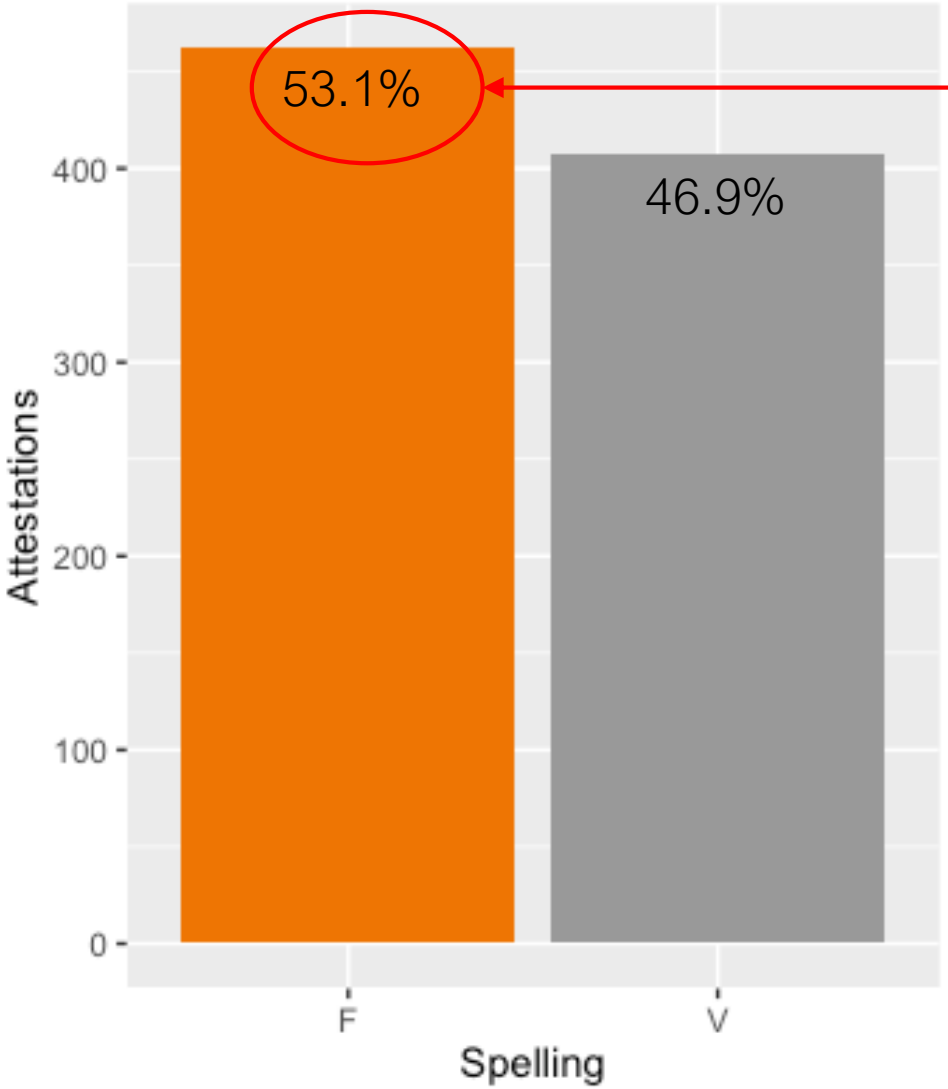

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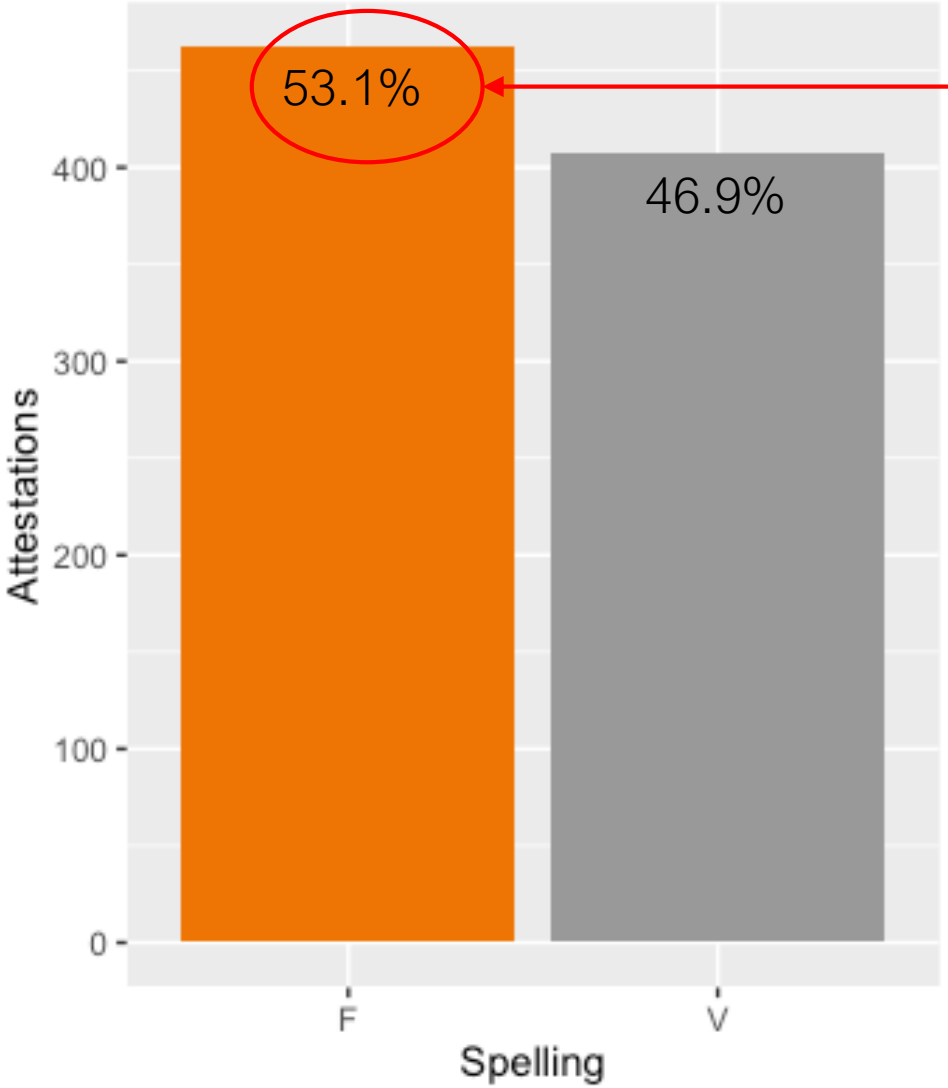

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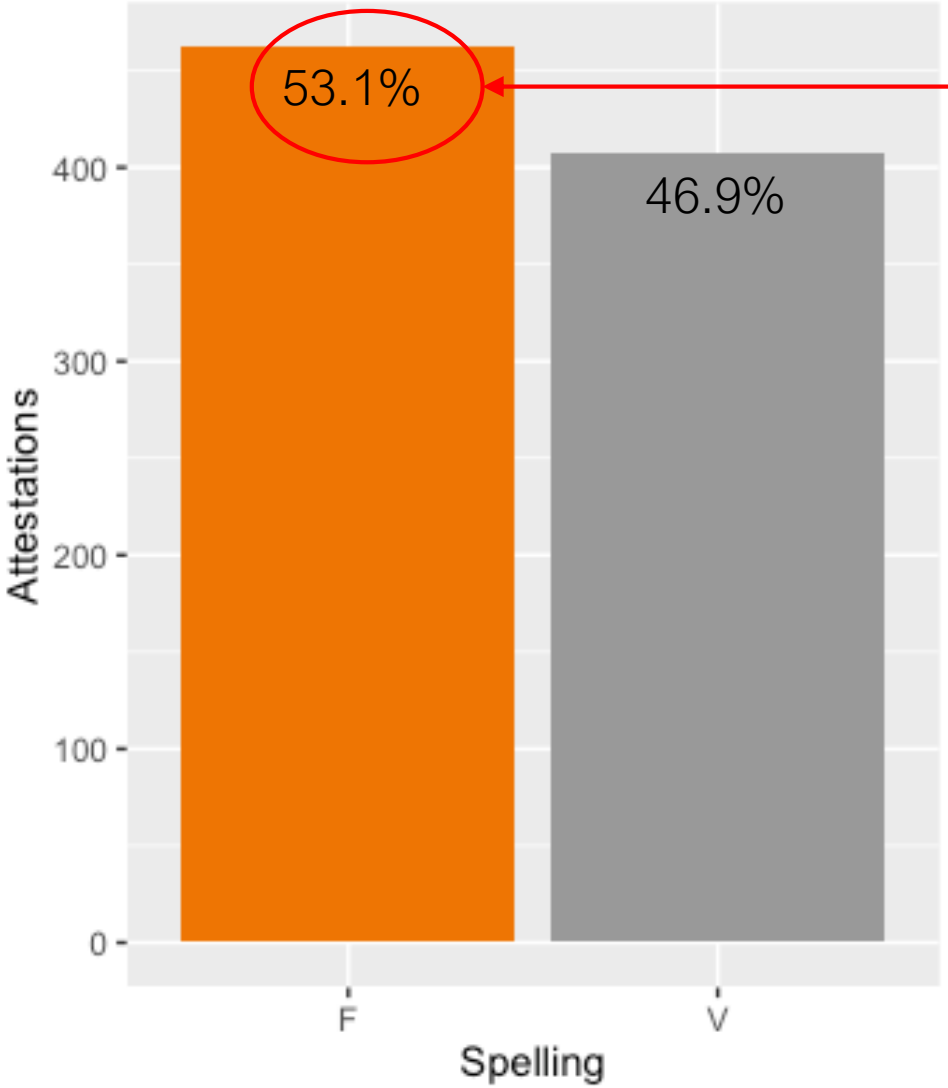

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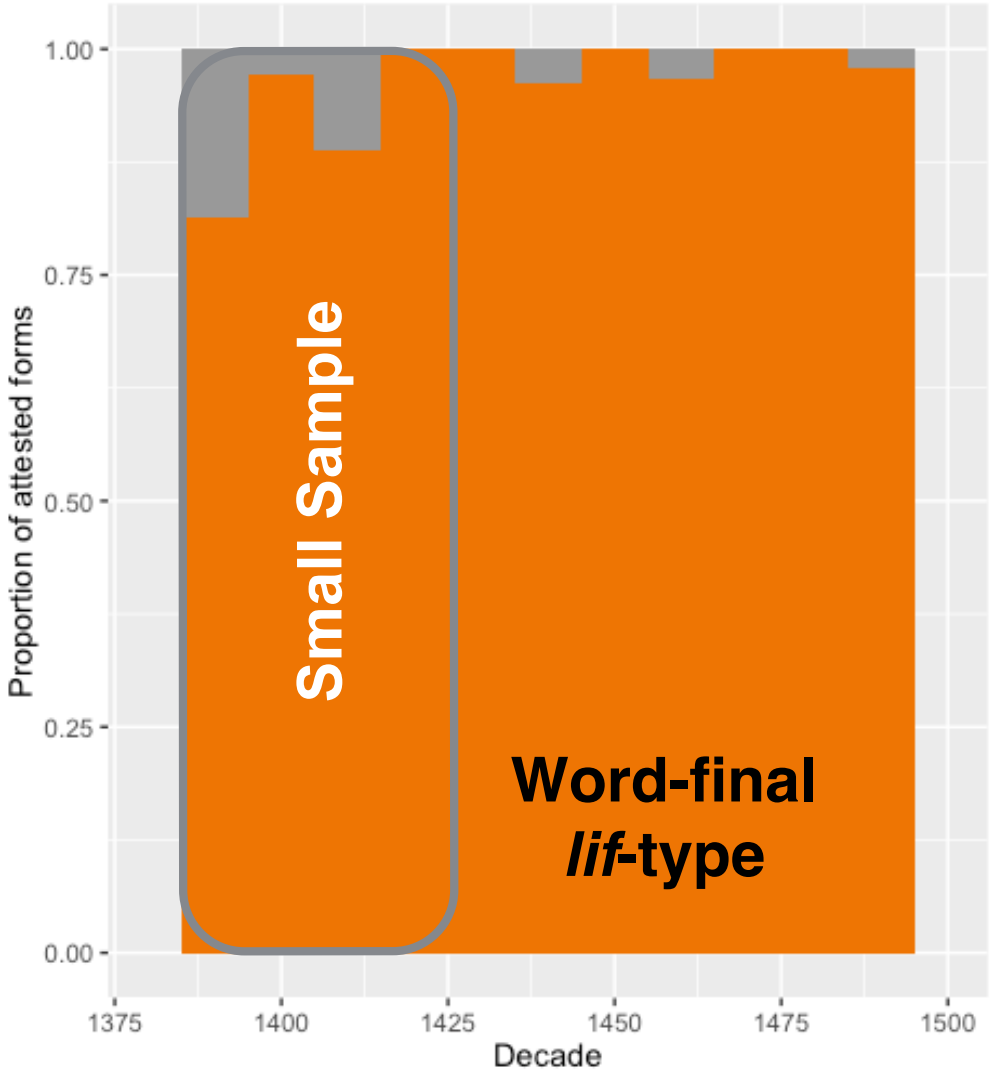
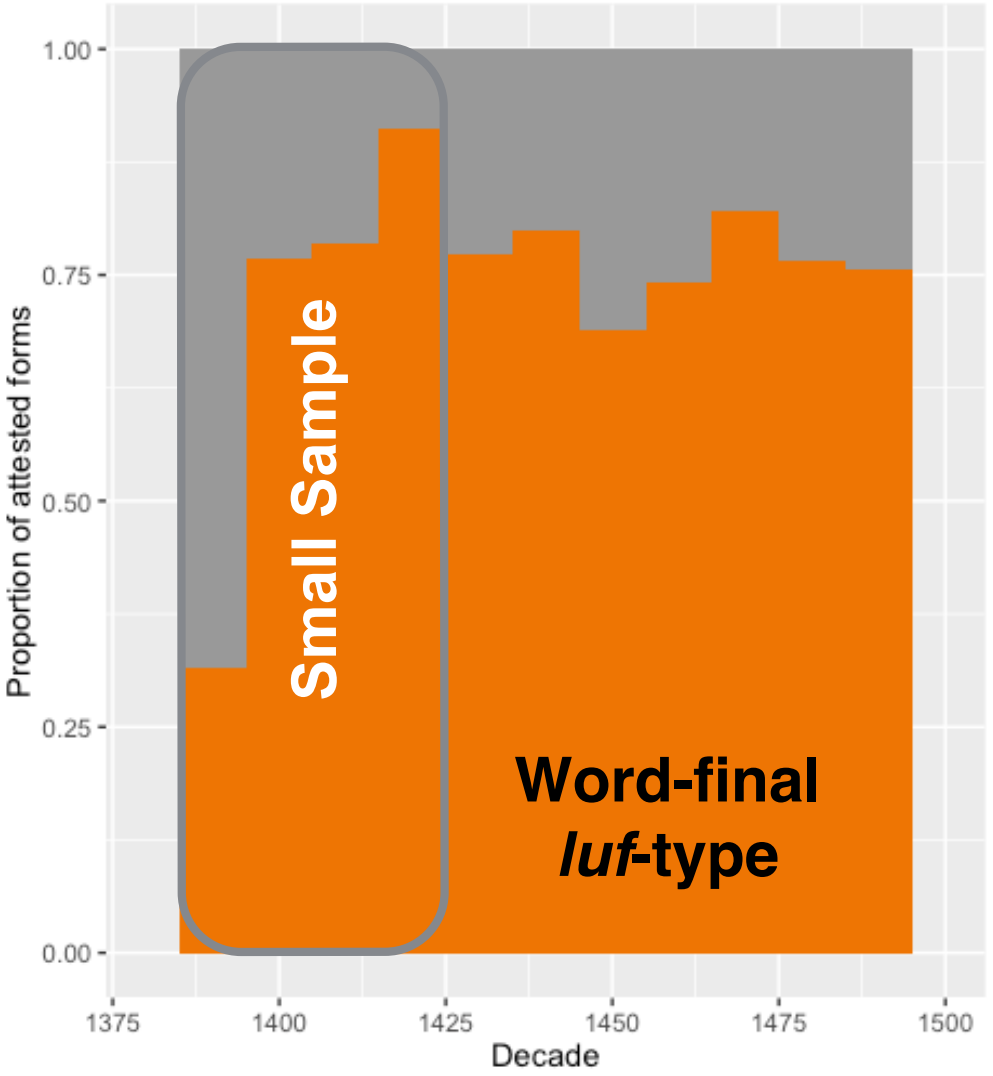
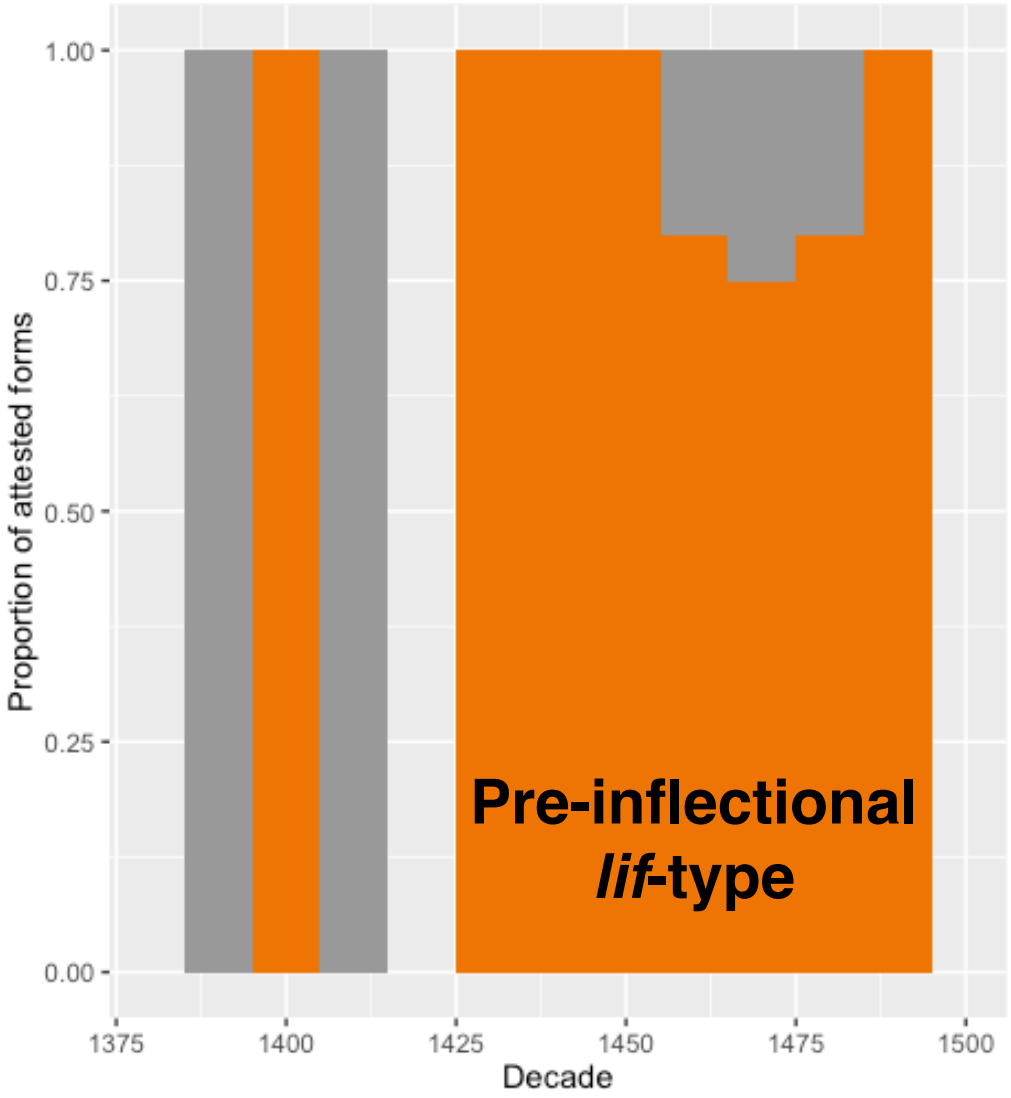
Hence lower levels pre-inflectionally

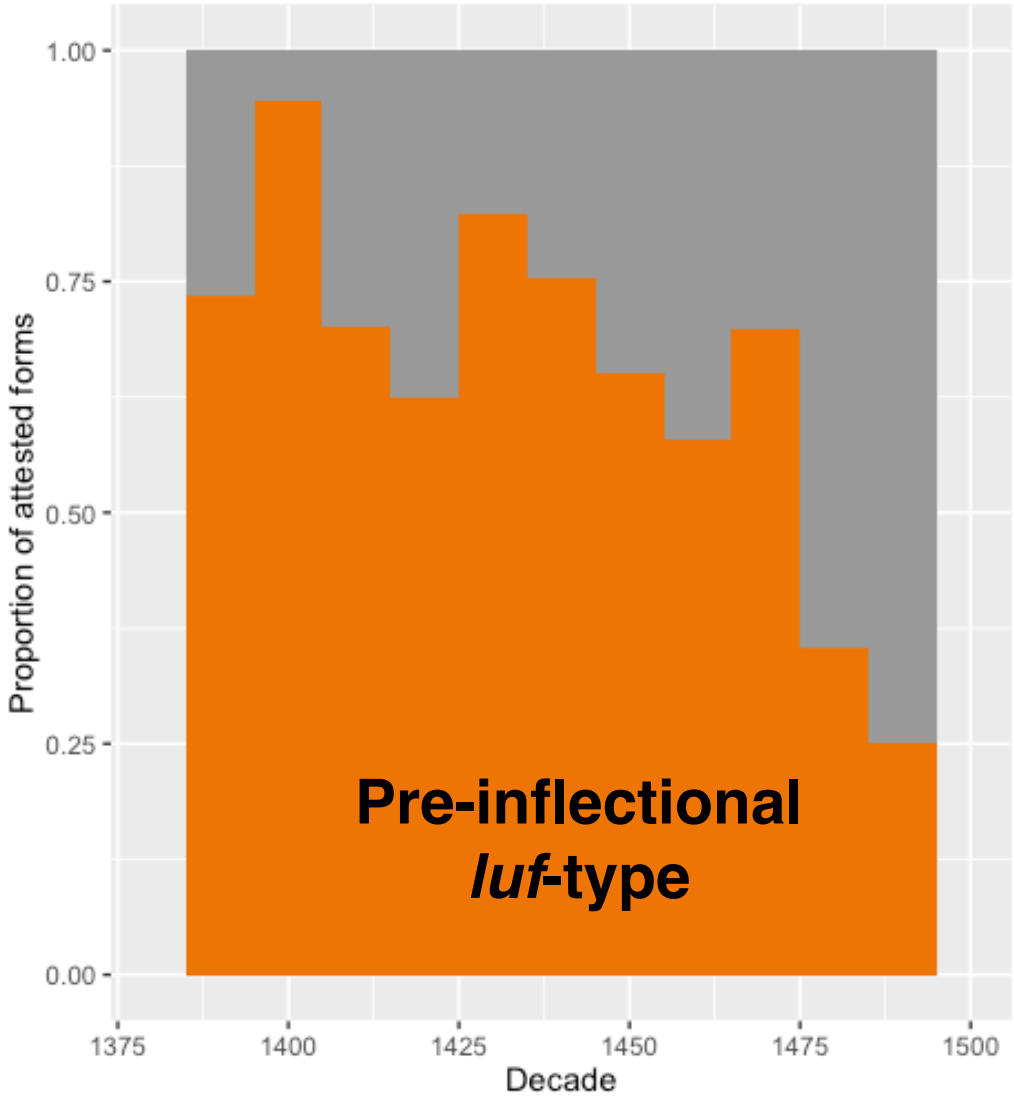
Word-final <f> and <v> through time





Pre-inflectional <f> and <v> through time





The retreat of Final Devoicing

The loss of [f] (<f(f)>) in *luf*-type is a result of variation in these words (but not in *lif*-type)

Especially in pre-inflectional position, where it was lost first (through the 15th century)

The variation makes this reversal possible. But why did this change reverse?

'Pan-Anglic pressure', i.e. Scots falling into line with English dialects, which mostly retained [v] in *luf*-type in all positions

- not to be seen as a sign of Anglicisation or standardisation any more than the shared GVS changes found in Scotland and England
- *neif~neive* (< ON *hnefi*) is the sole witness to this 'failed' change, perhaps surviving because it is a geographically restricted word

Conclusions

GP reveals that OSc spellings of OE /f/ seem to be out of synch with OE and Modern Scots pronunciations word-finally and pre-inflectionally

A close examination of the data reveals that the spellings were not random; they can readily be explained by the interaction of

- a phonotactic constraint retained from the OE period (no final voiced fricatives)
- an (initially variable) major phonotactic change in the history of Scots and English, final schwa loss
- analogical spread of word-final voiceless fricatives into pre-inflectional position

Conclusions

FITS lets us drill in quite fine-grained detail into the phonological history of Scots, for example:

- the development of Gmc /a/ in OSc
- the history of L-vocalisation in Scots
- the use of <y> (from þ) in OSc to represent [ð]

GP-parsing is a viable for the study of any language with a written history and a suitable system of spelling

Medusa is an innovative way to display the results of such analyses

- pilot project GP-parsing some early ME texts (RA)
- application of GP-parsing to historical Mapadungan (BM)

With thanks to:

Heinz Geigerich, Julia Fernández-Cuesta, Patrick Honeybone, Pavel Iosad, Meg Laing, Roger Lass, Caroline Macafee, Daisy Smith and Keith Williamson

(Refs on request)