



**Angus McIntosh Centre**  
for Historical Linguistics

# **Grapho-phonological parsing of C15 Scots**

A reassessment of the [v]~[f] alternation

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Joanna Kopaczyk & Warren Maguire**  
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Adam Mickiewicz University in Poznań



THE UNIVERSITY  
of EDINBURGH

# The FITS Project (*From Inglis To Scots*)

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- 4-year project at the Angus McIntosh Centre for Historical Linguistics
- Researching the early **sound/spelling history of Scots**
- Data: *A Linguistic Atlas of Older Scots* (LAOS, Williamson, 2008)
  - c. **1250** Scots 'local documents' (c. 400k wds) dated **1380-1500**
- Restricted to **Germanic** root morphemes

- **Main RQ:**

**What phonological facts underlie the diversity of spelling  
in Scots (1380-1500) and how did it develop?**

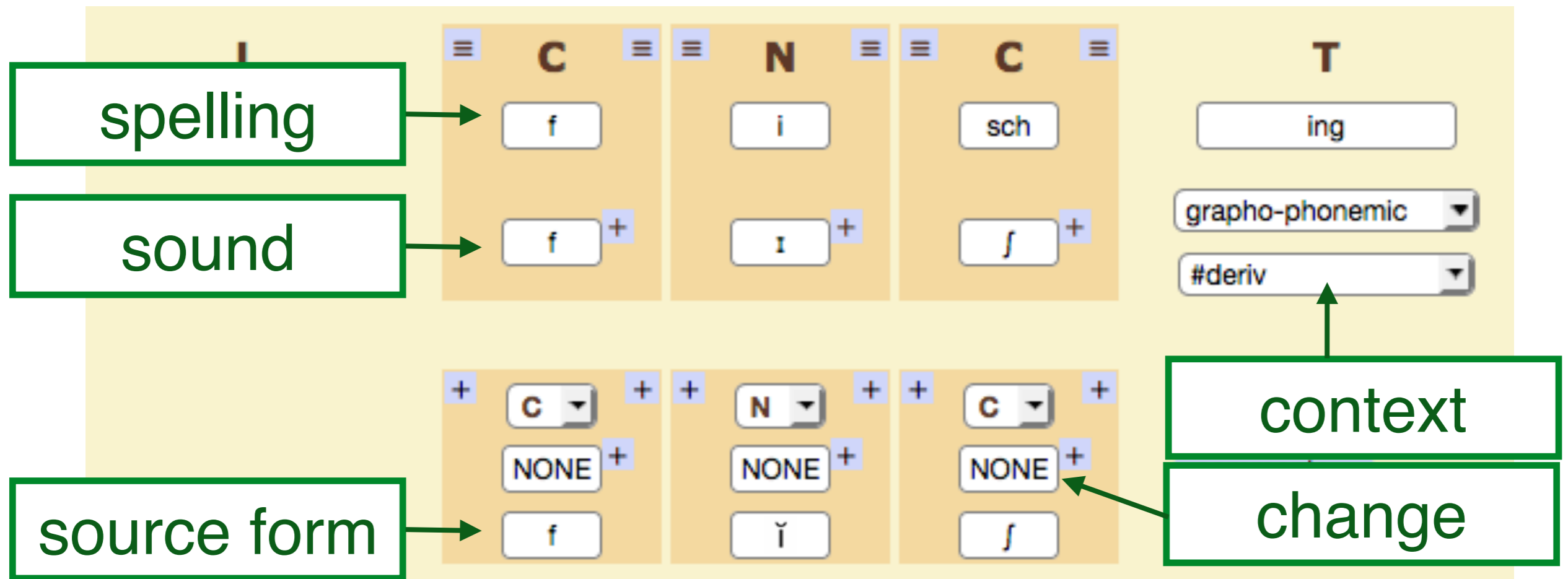
# Grapho-phonological parsing (GP parsing)

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- Resolves word forms into units of spelling, e.g.
  - <fisch> 'fish'      <f> | <i> | <sch>

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Tools developed by Vasilis Karaiskos & the FITS Team

# Metadata

**FORM DATA**

Morpheme label  LAOS lexel

Grammatical context marker  LAOS grammel

FITS transcription  LAOS transcription

Analyst

[get texts ↓](#)

Analysis issues

```
form -- text -- tokens -- location -- date -- type
FISCH+ING -- 254 -- 1 -- 308 687 -- 24/06/1467 -- cartulary / c
FISCH+ING -- 452 -- 2 -- 247 688 -- 11/07/1493 -- charter / gra
FISCH+ING -- 9528 -- 1 -- -- 11/01/1487 -- no type
```

links to LAOS  
word class  
number of tokens  
text identifiers (number, location, date, type)

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# How do we reconstruct OSc sound values?

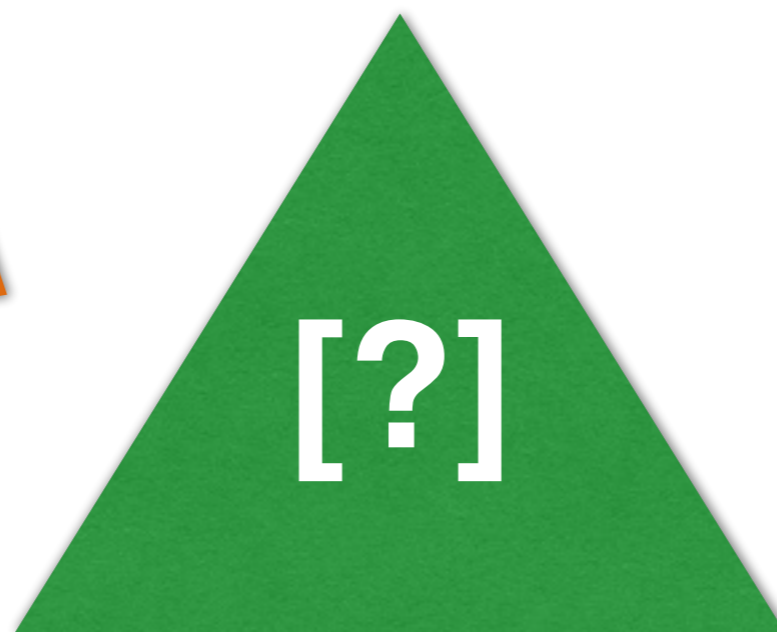
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*Triangulate:*

**Scholarly  
literature**



**Spelling  
evidence**



**Phonological  
theory**



**Data from  
earlier and  
later stages**

**Typology  
of sound  
change**

# Using the FITS database: Examples

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- Synchronic 15C Scots
  - e.g. interpretations of <ou>
  - e.g. spellings of [ʃ]
- Diachronic (regressive)
  - e.g. sources of 15C Scots [u:]
- Diachronic (progressive)
  - e.g. reflexes of OE /f/
- For *any* unit of sound or spelling
  - Contexts in which attested (linguistic & extra-linguistic)

# OE /f/ in 15C Scots: Non-final contexts

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	<b>Initial</b>	<b>Medial</b>	
<b>Exemplar</b>	<i>fisch</i>	<i>eftir</i>	<i>sevin</i>



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<b>OE</b>	[f]	[f]	[v]
<b>PD Scots</b>	[f]	[f]	[v]

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<b>OE</b>	[f]	[f]	[v]
<b>15C Scots</b>	<f>	<f(f)>	<u, v, w>
<b>PD Scots</b>	[f]	[f]	[v]

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	<b>MATCH</b>	<b>MATCH</b>	<b>MATCH</b>
PD Scots	[f]	[f]	[v]

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<b>15C Scots</b>	<b>[f]</b>	<b>[f]</b>	<b>[v]</b>
<b>PD Scots</b>	[f]	[f]	[v]

# OE /f/ in 15C Scots: Final contexts

	<b>Word-final</b>		<b>Pre-inflection</b>
	original	new	
<b>Exemplar</b>	<i>lif</i> (< OE <i>lif</i> )	<i>luf, gif</i> (< OE <i>lufu, giefan</i> )	<i>liff+is, giff+in</i> (‘lives’, ‘given’)

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<b>OE</b>	[f]	[v]	[v]
<b>15C Scots</b>	<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>
<b>PD Scots</b>	[f]	[v] (/∅)	[v] (/∅)

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<b>PD Scots</b>	[f]	[v] (/∅)	[v] (/∅)

 <f>-type spellings

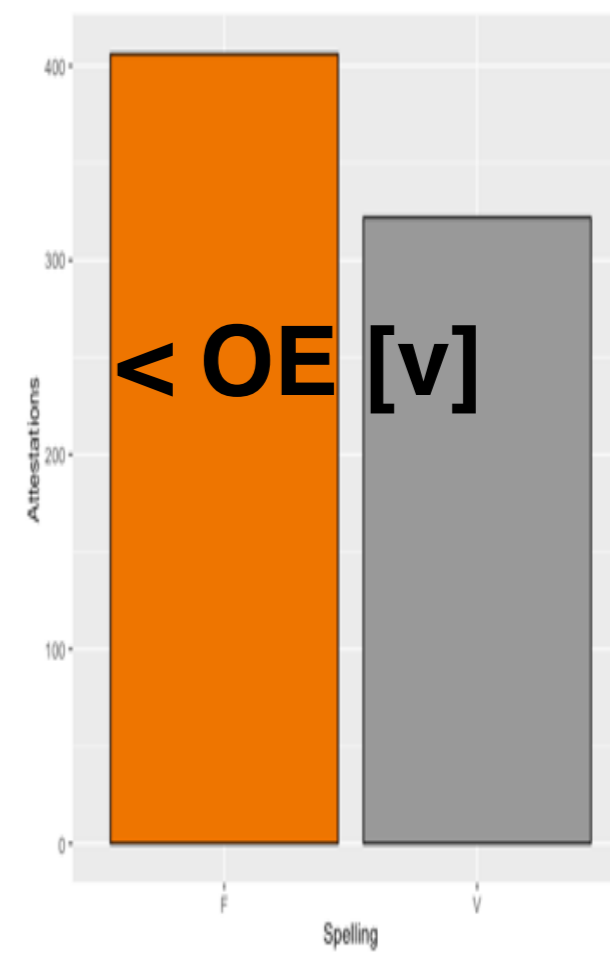
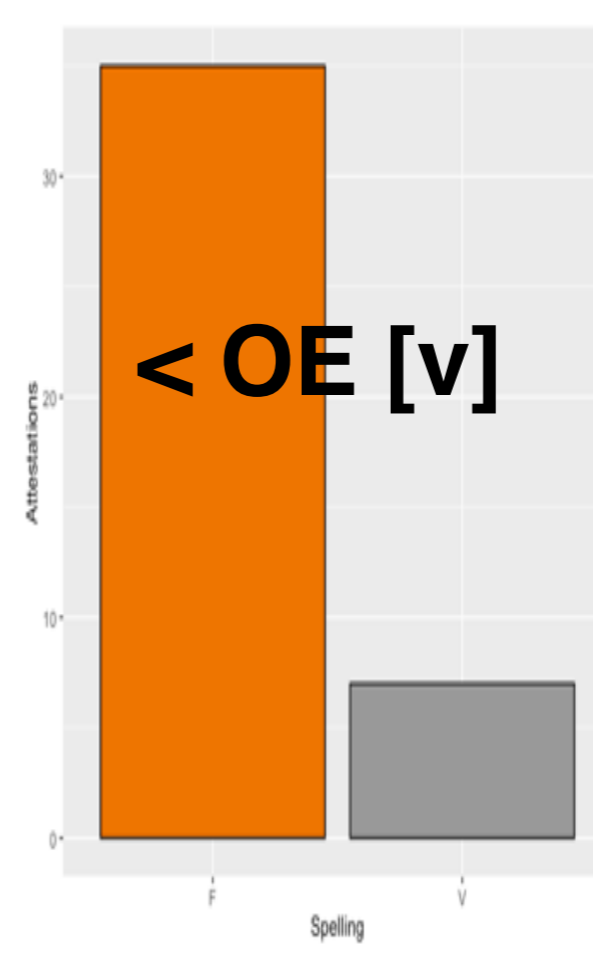
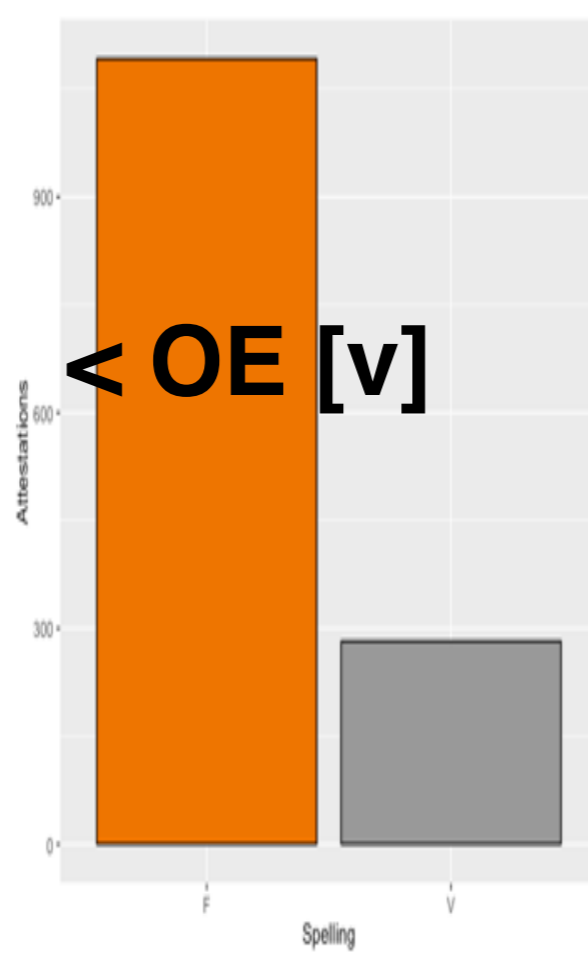
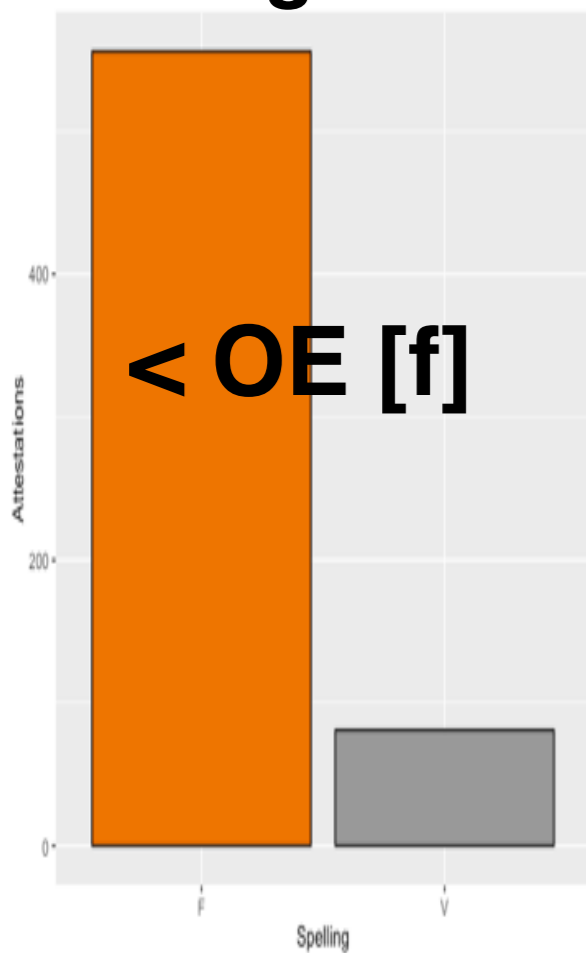
 <v>-type spellings

## Word-final

## Pre-Inflection

### Original

### New



*lif*-type

*luf/gif*-type

*lif*-type

*luf/gif*-type

# Final Devoicing (FD) in Mediaeval Scots

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- Post-Old English apocope led to eME and Pre-Scots having /v/ in word-final position.
- In northern dialects of eME, FD is claimed for fricatives (Mossé 1952: §45, Fisiak 1968: 61)
- Johnston (1997:104) claims that FD is an early “diagnostic of Scots as a whole” where etymological /v/ “is almost always represented by <f>”

■ <f>-type spellings

■ <v>-type spellings

## Word-final context (NEW, i.e. *luf-/gif-type*)

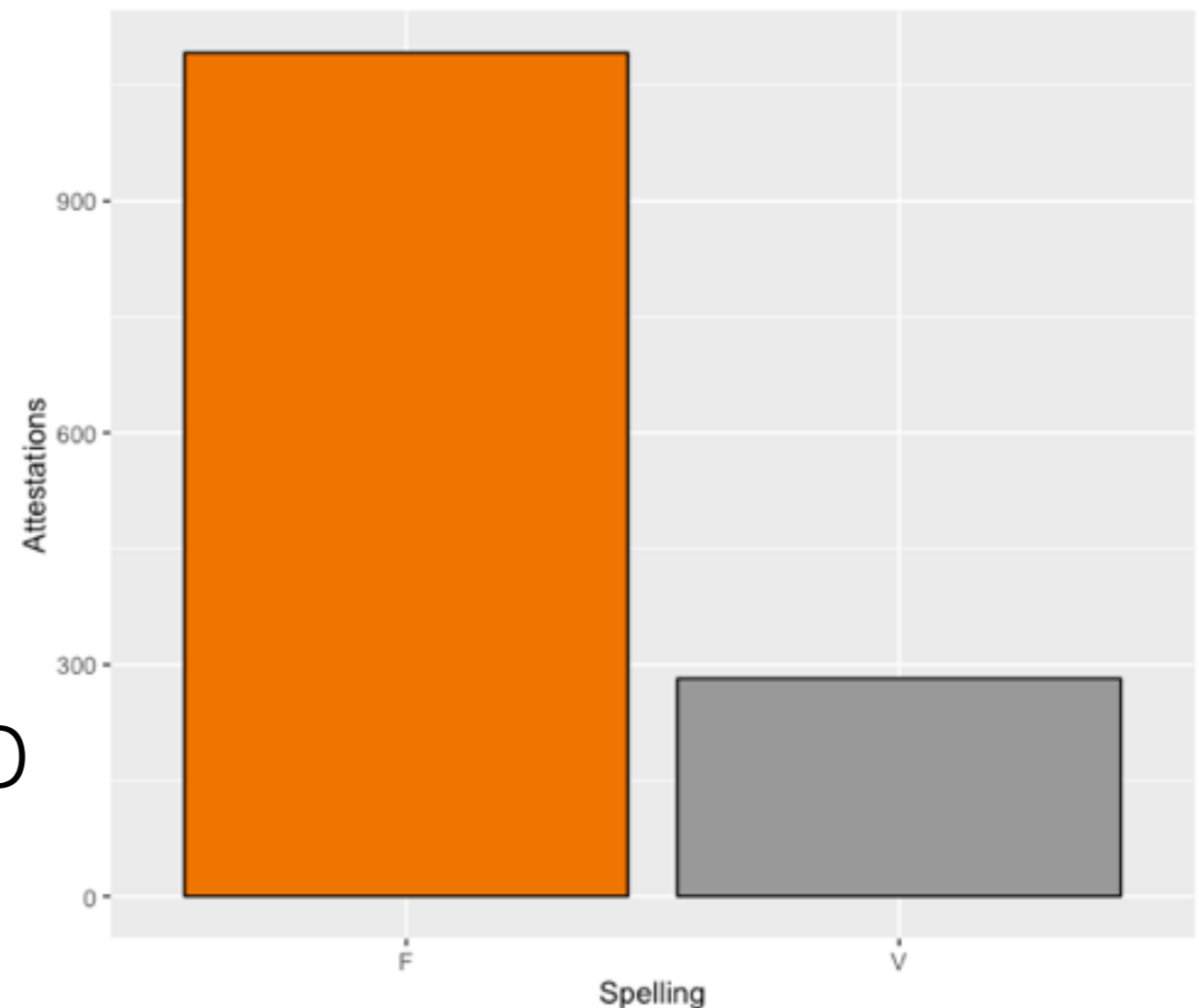
- Etymologically [v]

<f>-type spellings

- for [f] via FD

<v>-type spellings

- for [f] with ‘residual’ spelling
- or for [v] in cases without FD due to incomplete apocope



■ <f>-type spellings

■ <v>-type spellings

## Word-final context (ORIGINAL i.e. *lif*-type)

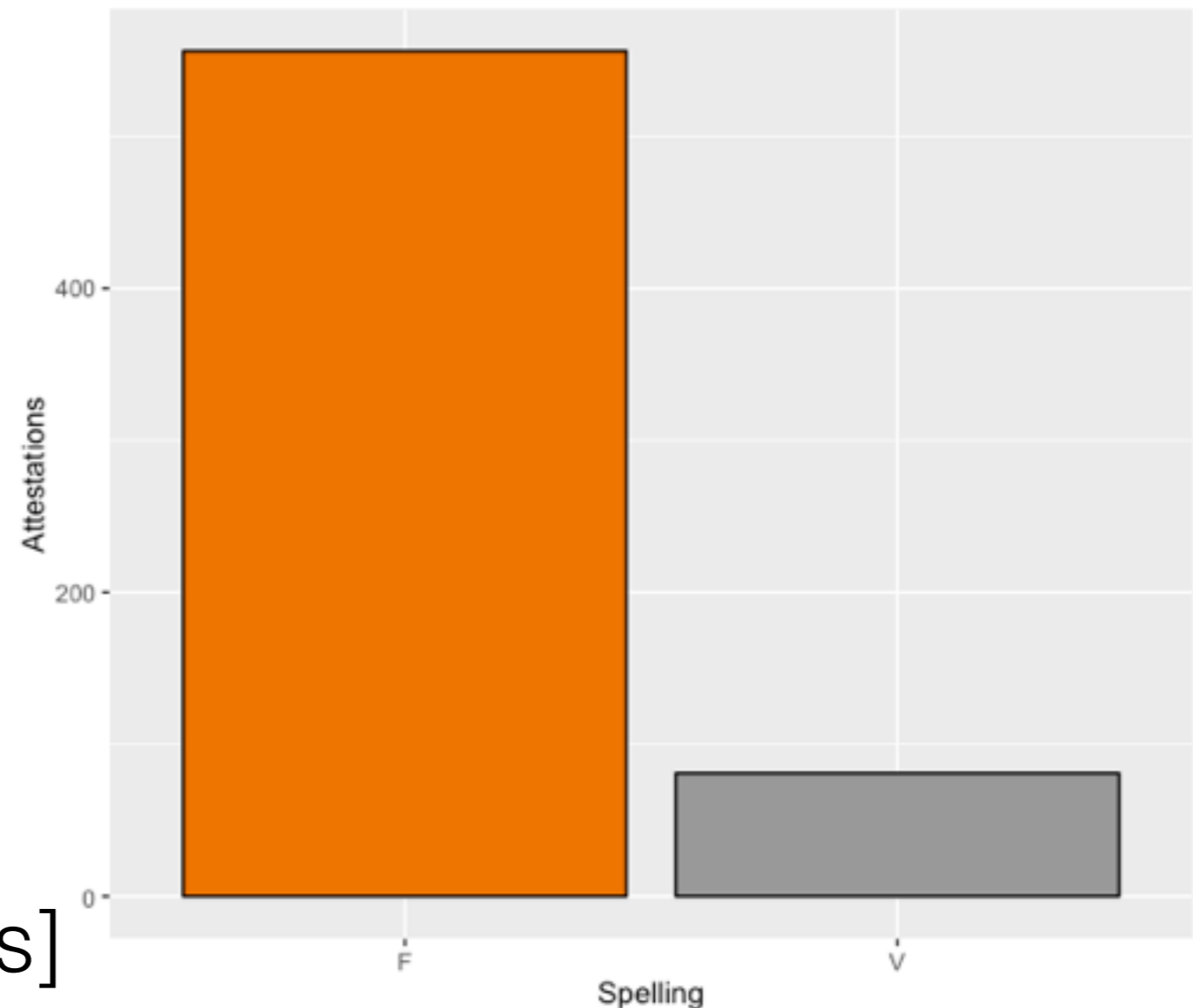
- Etymologically [f]

<f>-type spellings

- for [f], as expected

<v>-type spellings

- for [f] as back-spellings based on *luf*-type
- for [v] by levelling with inflected forms – [liv] < [livis]



■ <f>-type spellings

■ <v>-type spellings

## Pre-inflectional context (*lif*-type)

- Etymologically [v]

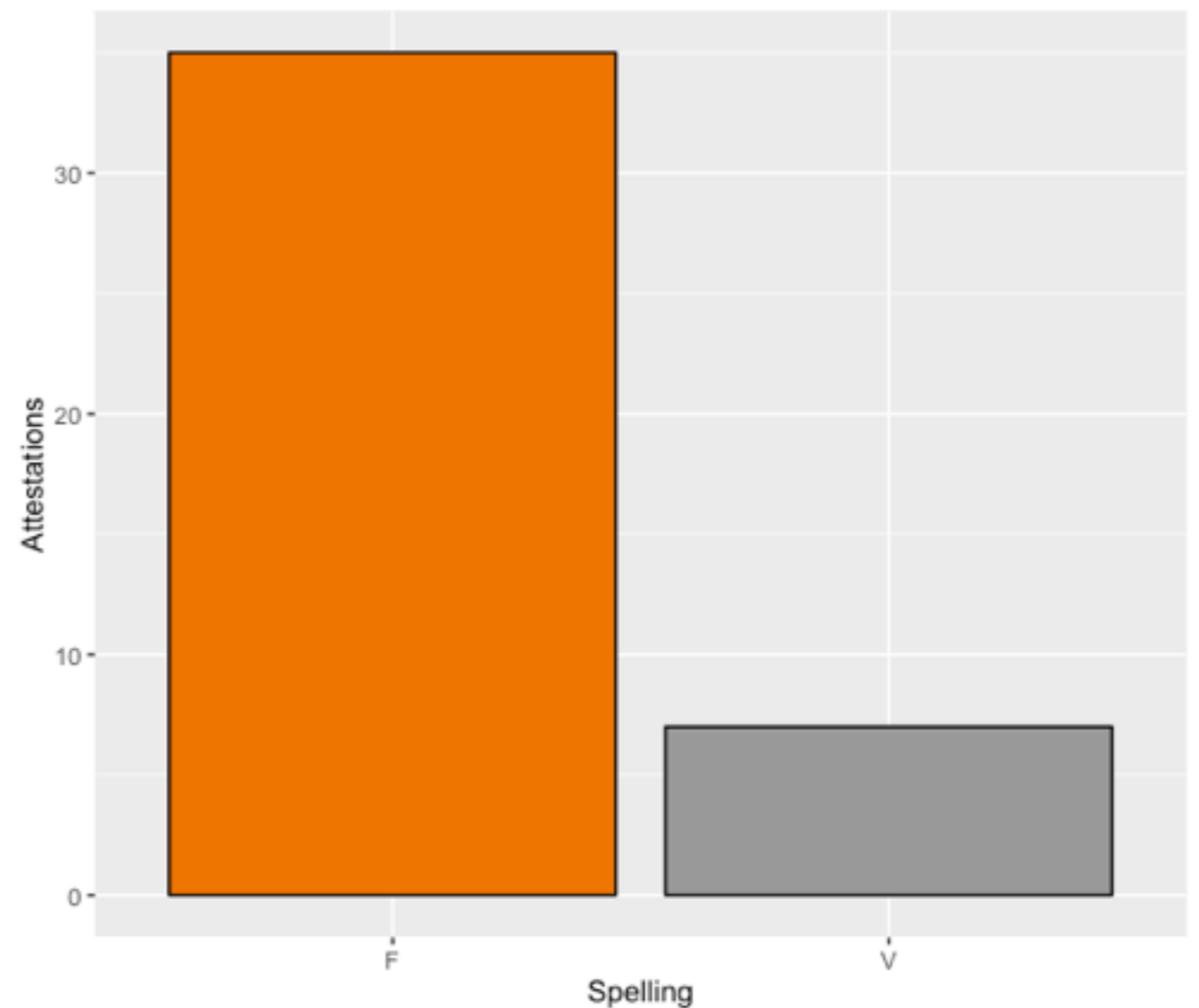
<v>-type spellings

- for [v] as expected

<f>-type spellings

- [f] spreads from word- to stem-level – via structural analogy

[liffɪs] < [lif]



■ <f>-type spellings

■ <v>-type spellings

## Pre-inflectional context (*luf-/gif-type*)

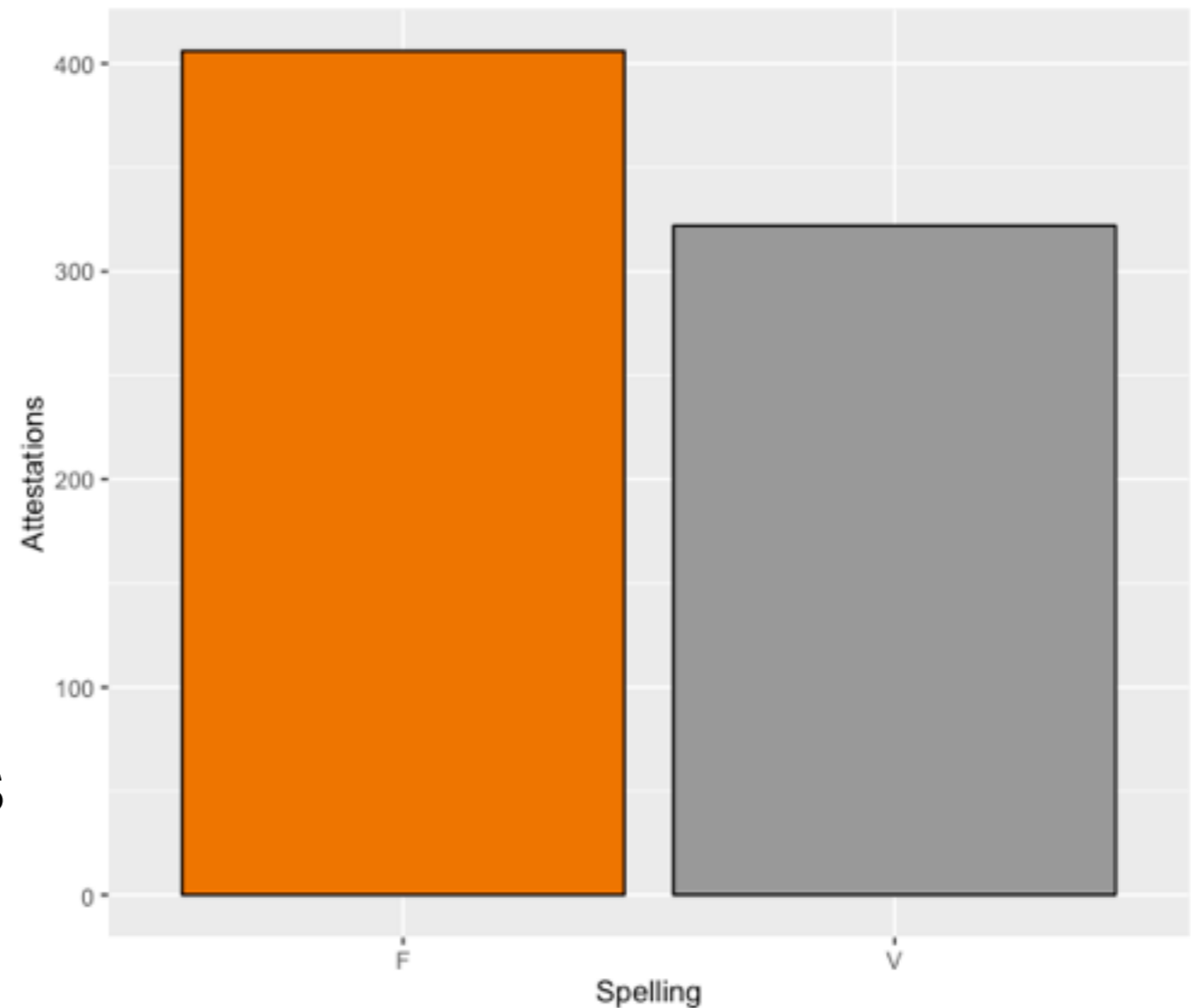
- Etymologically [v]

<v>-type spellings

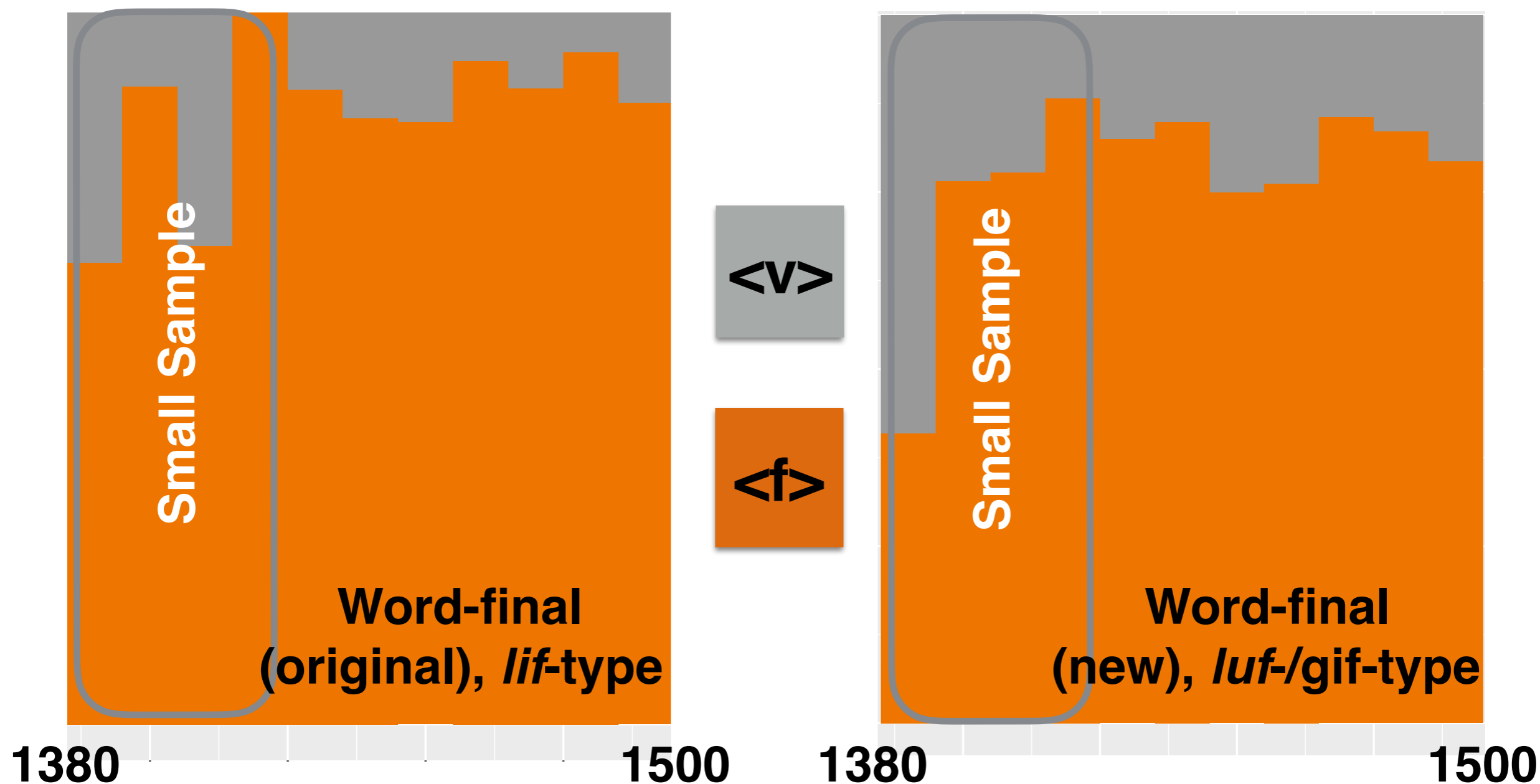
- for [v] as expected

<f>-type spellings

- Final devoiced [f] (**still in variation with [v]**) spreads from word- to stem-level – via structural analogy



# The diachrony of Final Devoicing (FD)



The proportion of <v> vs. <f> type spellings remains stable



# The diachrony of Final Devoicing (FD)



Within the LAOS period:

- <v> is on the rise, pre-inflectionally
- Partial analogical spread of [f] to stem-final position is waning
- The pan-Anglic trend to have pre-inflectional voiced fricatives is (re)instated
- This requires lexical diffusion advancing and then retreating, but aligns with present day data

# The diachrony of Final Devoicing (FD)

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## FD enters the Phonology of Pre-Scots

FD begins as phonetic and gradient, fed by apocope

- **[v]~[v̥] word-finally**

It eventually effects a change in phonological category

- **/v/ > /f/ word-finally**

/f/, however, probably remained in variation with /v/, as a result of FD applying before apocope was complete

- **/v/ ~ /f/ word-finally**

# The diachrony of Final Devoicing (FD)

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## **/f/ spreads to the stem-level in Pre-Scots**

By structural analogy, [f] in uninflected forms levels to inflected ones, spreading gradually across the lexicon

- **[v]>[f] stem-finally**

Structural analogy and lexical diffusion are both non-categorical, so the change is not complete

- **[v]~[f] stem-finally**

Greater proportion of <v> in luf/gif-type (as opposed to lif-type) stems from [f]~[v] alternation in the uninflected forms

# The diachrony of Final Devoicing (FD)

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## **Pre-inflectional [f] is replaced by [v] once again**

During the 15c pre-inflectional /f/ is again replaced by /v/ for the luf/gif-type words

- **[f] > [v] pre-inflectionally (luf-/gif-type words)**

This happens in a general region where pre-inflectional fricatives are voiced (pan-Anglic pressure)

Based on the present day data, *lif*-type words must have changed back from [f] to [v] pre-inflectionally, as did the *luf*-/*gif*-type, word-finally.

- **[f] > [v] pre-inflectionally (lif-type words)**
- **[f] > [v] word-finally (luf-/gif-type words)**

# Assessing the Final Devoicing account

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## Pros:

- Is consistent in following a transparent spelling/sound mapping for all positions of the fricatives
- Follows well attested phonological patterns in the spread of changes (FD, analogy, diffusion)

## Cons:

- Proposes a change that does not come to completion and actually retracts (after spreading)
- There are no unambiguous reflexes of FD in present-day Scots.

# OE /f/ in Older Scots: conclusions

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## Case study:

- Shows how we identify and handle problems in our segmental histories
- Demonstrates the value of quantitative and qualitative data in the FITS database
- Illustrates how we can use FITS data to test and refine what others have claimed

## FITS database:

- Supports claims of final devoicing of /v/ in pre- Scots
- Offers new insights:
  - FITS data suggests devoicing: was variable; spread into new domains; had begun to recede in C15

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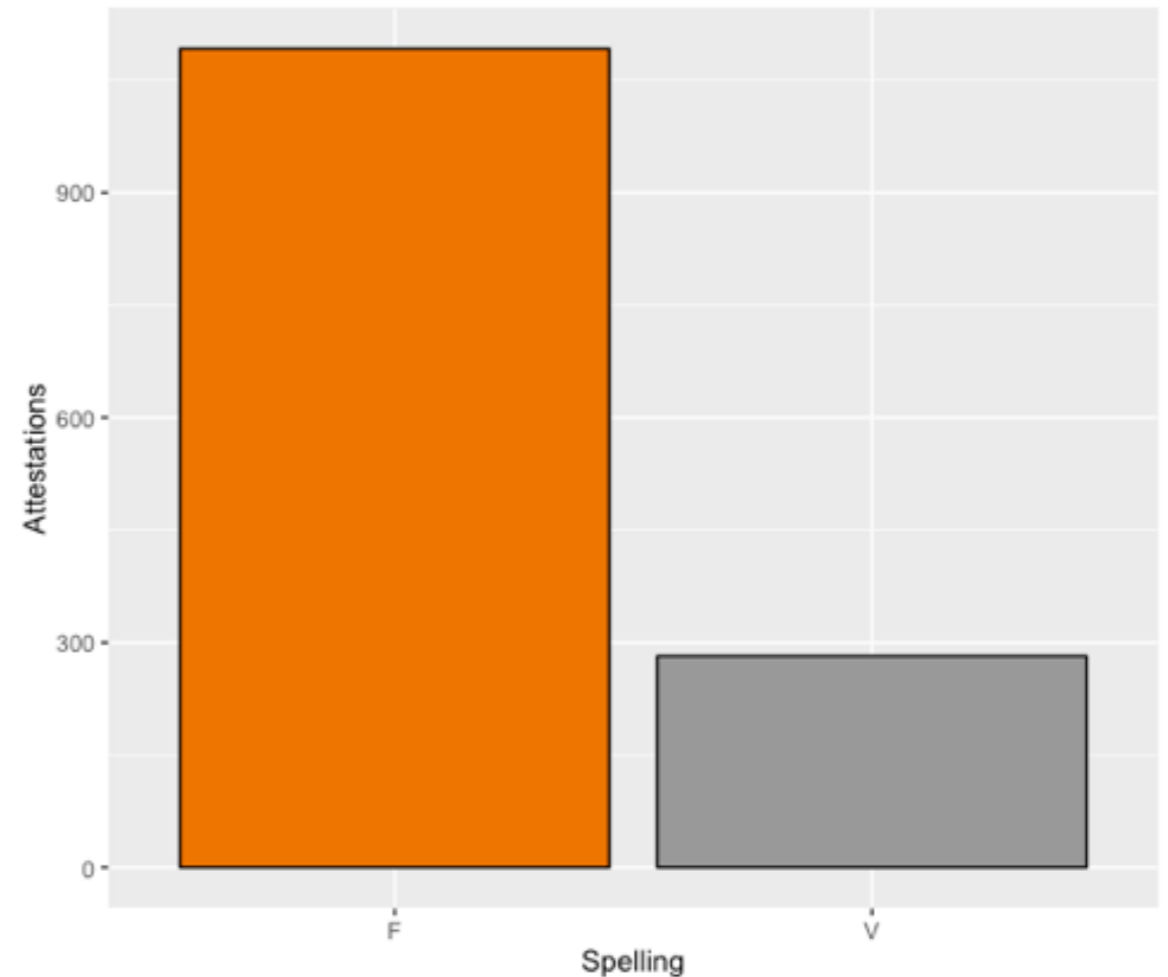
THANKS!

Additional thanks to: the rest of our team +  
Pavel Iosad, Patrick Honeybone, Heinz Geigerich,  
Keith Williamson, Meg Laing, Roger Lass and Julia  
Fernández-Cuesta

(Refs on request)

# Should we accept Final Devoicing in early Scots?

- Primary evidence is the preponderance of final <f> spellings for words with etymological [v] (e.g. *luf*, *gif*)
- Is there another explanation?



luf/gif-type



# The alternative to Final Devoicing

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- A spelling-only change? I.e. Did <f> come to be used for [v] word-finally and pre-inflectionally?

# The alternative to Final Devoicing

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- A spelling-only change? I.e. Did <f> come to be used for [v] word-finally and pre-inflectionally?
- Problems:
  - <f> usually represents [f], e.g. *fisch*, *offer*, *lif*, etc
  - [v] is spelled <v> elsewhere, e.g. *vicar*, *sevin*, etc
  - would mean OSc spellings are unreliable

## Hybrid version: FD **and** spelling change

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- Final <f> via FD; pre-inflectional <f> via levelling from word-final <f>
- Treats final <f> as the outcome of FD
  - *Problem*: no unambiguous PD reflexes
- Treats pre-infl. <f> as a spelling development: incipient standardisation?
  - *Problem*: diachronic trend is a reversal of pre-inflectional <f> in 15C
  - *Problem*: undermines our confidence in the phonetic faithfulness of OSc spellings