

# English epenthesis in *lC* and *rC* clusters

Areal effect or drift?

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## I Epenthesis and areality

### I.1 Epenthesis in Irish English

- Epenthesis in liquid+sonorant clusters, especially /lm/, is a well-known, indeed stereotyped feature of Irish English
  - Also commonly found in /rm/, and in /rn/ and /rl/ in some dialects
  - *film* ['fɪləm], *farm* ['fɑːləm], *corn* ['kɔːləm], *girl* ['gɜːlə]
  - Almost always ascribed to Irish influence (e.g. Joyce 1910, Adams 1948, Barry 1982, Hickey 1986, Pilch 1990, Ó hÚrdail 1997, Kallen 1997, Ó Baoill 1997, Corrigan 2010, Cunningham 2011)
- ‘By a sort of hereditary custom this peculiarity finds its way into our pronunciation of English.’ (Joyce 1910, p. 96)
- ‘A process that has been borrowed from Irish where it is obligatory’ (Ó Baoill 1997, p. 84)

### I.2 Epenthesis as an ‘areal feature’ in Ireland

- Hickey (2004, p. 41) describes epenthesis as an ‘areal feature of both Irish and English in Ireland’
  - This would seem to imply *convergence* (Hickey 1999)
  - But convergence from what, to what?
  - Is epenthesis in Irish English similar to epenthesis in Irish?
  - Was epenthesis borrowed from Irish into Irish English?
  - Was there already epenthesis in the English (and Scots) input varieties to Irish English?
  - Cf. the criteria in Thomason (2010)
- Braidwood (1964) and Harris (1997) note similarities between epenthesis in Irish English and epenthesis in English and Scots in Britain

## 2 Epenthesis in the languages of Britain and Ireland

### 2.1 Irish

- See e.g. Ó Siadhail (1989); Ní Chiosáin (1999)
- Basic rule: insert a vowel between a sonorant and a consonant: *bolg* ‘belly’ [bʌlʲəɡ], *dorcha* ‘dark’ [dʌrəxə]
  - ...unless the consonants are homorganic: *iolra* ‘plural’ [ʌl(\*ə)rə]...
  - ...or the second consonant is a voiceless stop: *olc* ‘evil’ [ʌl(\*ə)k]
- The vowel is [ə] or [ɪ], depending on consonant palatalization
- Restrictions on epenthesis are *phonological*
  - Blocked after long vowels and diphthongs: *léargas* ‘vision’ [lʲe:r(\*ə)ɡəs], *dualgas* ‘duty’ [dual(\*ə)ɡəs]
  - Blocked before another two syllables: *scolgarnach* ‘cackling’ [skʌl(\*ə)ɡərnəx]
- No morphological restrictions, no restriction to stem-final codas: *airgead* ‘money’ [arʲiɡʲəd]

### 2.2 Scottish Gaelic

- See e.g. Clements (1986); Bosch & de Jong (1997); Hind (1996); Wentworth (2005)
- Similar conditioning to Irish:
  - *dearg* ‘red’ [tʲɛrək], *doirbh* ‘difficult’ [tʲɔ̃ʲv]
  - Not in *olc* ‘evil’ [ɔ̃lʲk], *dòrn* ‘fist’ [to:rn]
  - Not after long vowels/diphthongs: *mìorbhàil* ‘miracle’ [mʲiərvaɫʲ], *mòrchuis* ‘splendour’ [mo:rxuʃ]
- Vowel is generally a copy of the stressed vowel, or influenced by surrounding consonants: *builg* ‘bellies’ [pulʲukʲ] or [pulʲikʲ], rarely generalized [ə] as in Irish
- Unlike Irish, does not straightforwardly count as a syllable:
  - Speaker intuitions (e.g. Borgstrøm 1937, Hammond et al. 2014)
  - Morphophonology (Smith 1999, Iosad 2015)
  - Inert in metre: *nìor ghlac cliath, colg no gunna* is a 7-syllable line

### 2.3 Epenthesis in Gaelic: summary

- Original situation is probably more like Scottish Gaelic
  - Regular echo vowel
  - Metrical invisibility, including resistance to syncope
- Cf. Greene (1952) on the ‘middle quantity’ of Old Irish tradition
- First instantiations possibly already in Ogam Irish (Eska 2010)

## 2.4 Brythonic Celtic

- See e.g. Simon Evans (1964); Schumacher (2011)
- Widespread in Middle Welsh, particularly in /lv/ and /rv/: <palyf> ‘palm’, <aryf> ‘weapon’
- Also in /lm rm/, though these are rare in Middle Welsh, and /ðv/ <dedyf> ‘law’, <gwdyf> ‘neck’
  - Mostly word-final, albeit with some cyclicity <gwdyfeu> ‘necks’
  - Vowel begins as schwa, later echoes preceding vowel: <araf> ‘weapon’
  - Not regular, much variation
- Modern dialects (Iosad 2017): copy epenthesis, irregular within and across dialects, adds a syllable
  - Nantgarw *ffurf* ‘form’ [firv] but *barf* ‘beard’ [ba:ra:v]
  - More examples with /lm rm/: *ffwrn* ‘bench’ [fu:rom], *helm* ‘corn stack’ [e:lɛm]
- No epenthesis in clusters like /ln rn/
- Breton (Jackson 1967): some epenthesis in /rk lx rx rz lz/ but not always clearly syllabic

## 2.5 Irish English and Highland English

- Irish English (Maguire 2018)
  - Epenthesis in liquid+sonorant clusters, especially /lm/ *film* and /rm/ *warm*
  - Also in /rl/ *girl* and /rn/ *corn* in some dialects
  - Occasionally also in /ln/ in *kiln*, though this replaces the traditional pronunciation (shared with English and Scots) *kill*, so is not of long standing
- In stem-level coda position *only*
  - Mid Ulster English *fil*[ə]*m*~*fil*[ə]*ming*, *war*[ə]*m*~*war*[ə]*mer* but not in *helmet*, *German*
  - MUE *Ar*[ə]*mstrong*, Roscommon English *cu*[rəlɟ]*ew* (Henry 1957)
- Highland English
  - As far as we can tell, the same patterns
  - Epenthesis only in /lm/, /ln/ and /rm/ (Shuken 1984, p. 160)

## 2.6 Early Modern English

Ring the alarum-bell. Murder and treason! (Macbeth II.3.49)

- Jespersen (1909, pp. 274, 362) hypothesises that this vowel is instead the result of an emphatic pronunciation of trilled French [r] in this word.
- But that cannot explain Shakespeare’s spelling of *film* as <philome> in *Romeo and Juliet* (I.4.63), nor epenthesis in /rm/ in other words in other sources

- Two of Shakespeare's contemporaries also provide evidence for epenthesis in liquid+sonorant clusters in Early Modern English
  - William Bullokar (1585) records epenthesis in *carl*, *elm*, *helm*, *storm* and *turn* in his *Booke at Large* (Kökeritz 1953, p. 292); see also Dobson (1957, p. 913)
  - Philip Henslowe spells *warm* as <warem> in his diary (Greg 1904, p. 38); see Kökeritz (1953, p. 293).

## 2.7 Modern English

- Epenthesis is highly characteristic of traditional north-east English dialects (Ellis 1889, Orton & Dieth 1962, Rydland 1998), and some neighbouring northern English dialects
  - In /lm/, /rm/, /rn/, /rl/, /rd/ (*word*) and /rz/ (*Thursday*)
  - Beyond that, epenthesis is widespread in /lm/
  - Also not uncommon in /rm/
- Otherwise rather sporadically attested in modern English dialects
  - Contrast consistent epenthesis in /rl/ in Dent (Yorks.) and Naunton (Gloucs.)
  - Found in stem-level coda position only

## 2.8 Modern Scots

- The prevalence of epenthesis in modern north-east English dialects is undoubtedly connected with ubiquitous epenthesis in liquid+sonorant clusters in Scots, north of the border
- [fɛɫəm] *film*, [e:rəm] *arm/airm*, [bɔrən] *born*, [kʌrɐɫ] *curl*
- See Maguire (2017)
- Epenthesis in Scots also only in (stem-level) coda position, just as in English
- Though of course it is much more widespread and common in Scots

## 2.9 Middle English and Older Scots

- Lass, Laing & Alcorn (2013): 'Sonorant cluster vowel epenthesis' (SCVE)
- 'Insertion of an epenthetic vowel between two consonants, one of which must be a sonorant'
- Middle English Dictionary <http://quod.lib.umich.edu/m/med/>
  - /lm/: *elm* (<ellem>), *whelm* (<quillum>)
  - /rm/: *alarm* (<alarom>), *arm* (<arum>), *farm* (<verem>), *harm* (<hareum>), *storm* (<storeum>), *worm* (<wireum>)
  - /rl/: *churl* (<cherel>), *earl* (<erel>), *pearl* (<perel>), *smerl* 'ointment' (<smerel>), *thirl* 'hole' (<thirile>), *whirl* (<whoril>)

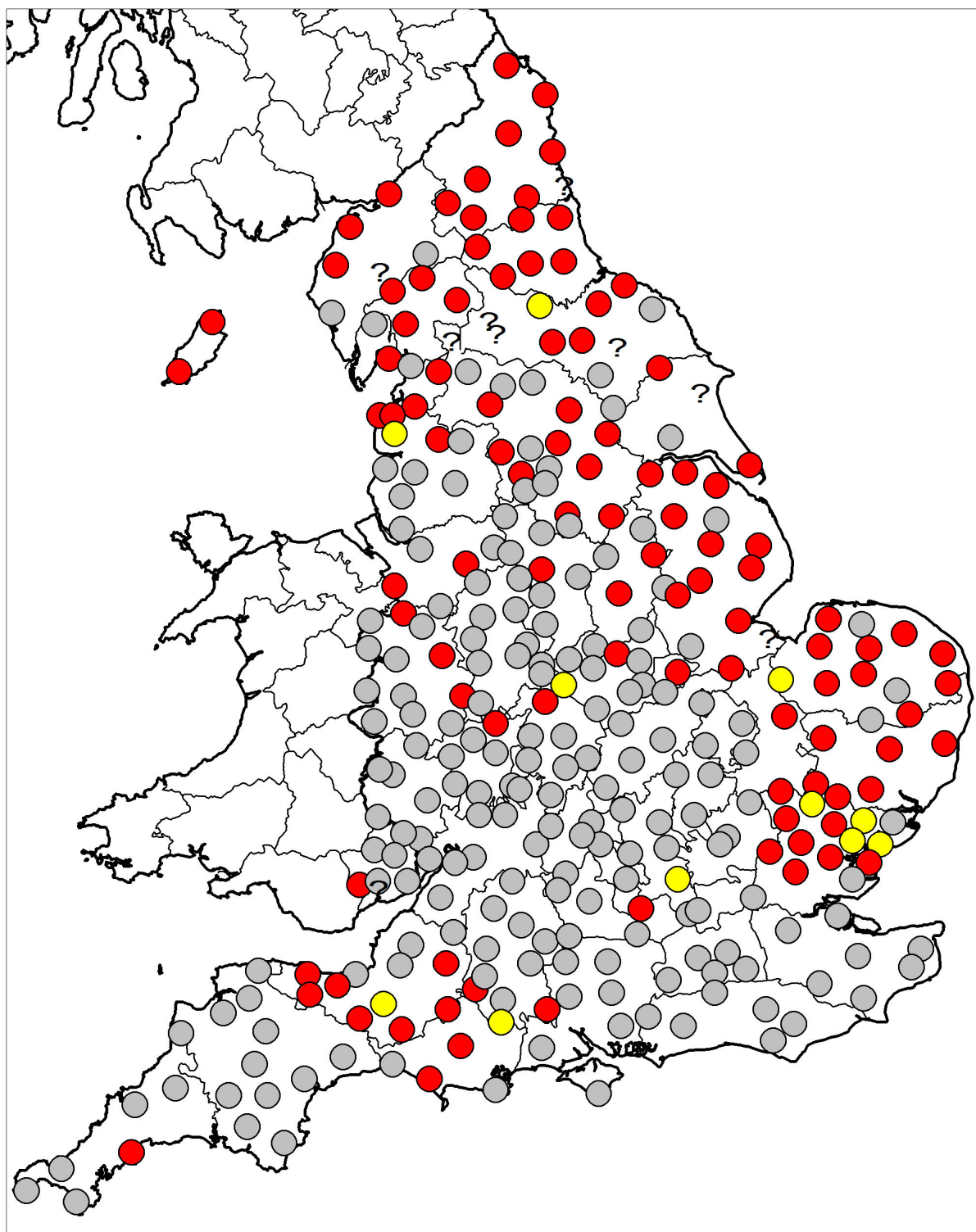


Figure 1: Epenthesis in *elm* in the SED

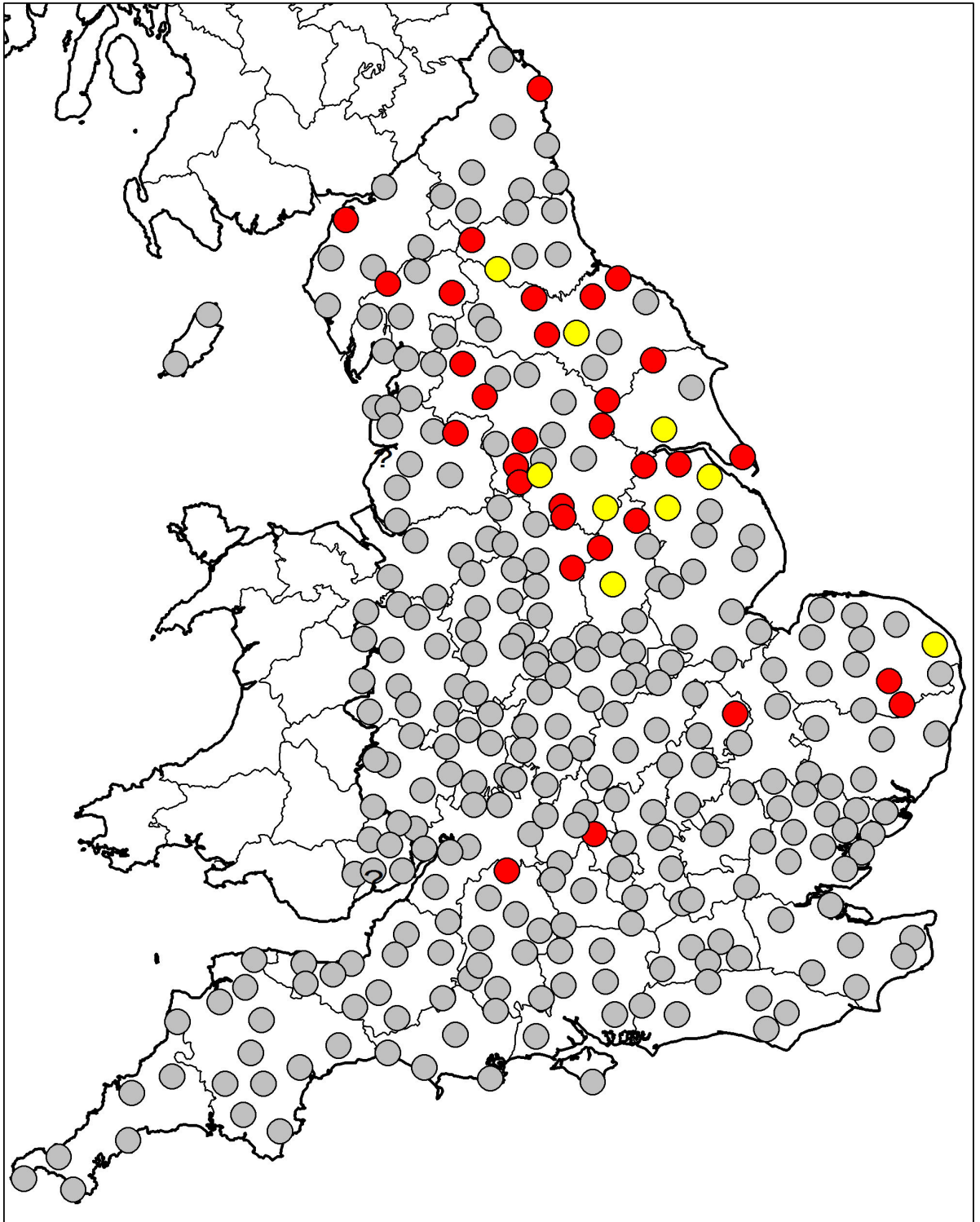


Figure 2: Epenthesis in *worm(s)* in the SED

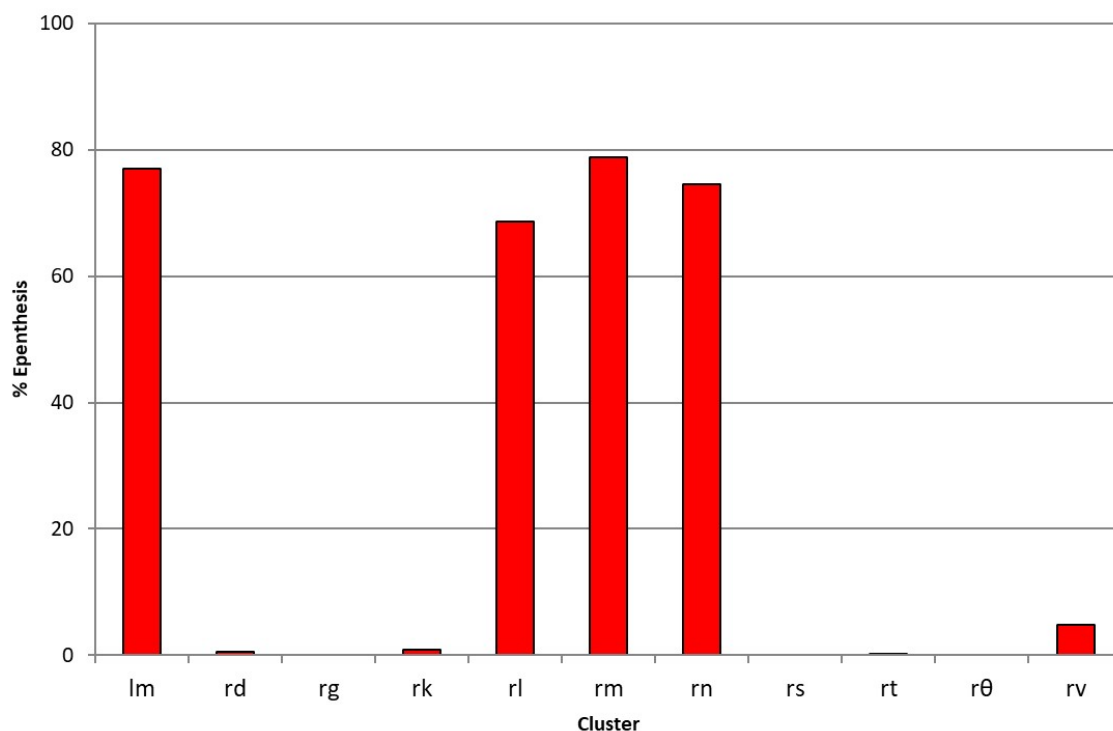


Figure 3: Prevalence of epenthesis in Scots

- /rn/: *barn* (<baren>), *bairn* ‘child’ (<berun>), *corn* (<coren>), *fern* (<feren>), *morn* (<moren>), *quern* (<queren>), *scorn* (<scoren>), *sharn* ‘dung, manure’ (<sherren>), *stern* (adj.) (<steren>), *thorn* (<thorun>), *urn* (<urin>), *warn* (<waran>)
- Occasionally in other clusters (e.g. in /rd/ in *word*, in /rk/ in *mark*)
- Cf. Older Scots <fereme> *firm*, <eril> *earl*, <turyn> *turn*, <thurisday> *Thursday*
- Jordan (1934, pp. 147–148)
  - Early epenthesis of <i>, <e>, <y> in <rd rth rl rn>, mostly in the North, which later disappears
  - Later epenthesis of back vowels before <w>, sometimes also <m>, <n>, <f>: <arum> *arm*, <oref> ‘cattle’, <wurem> *worm*, described as rare.

## 2.10 Old English

- Several kinds of epenthesis according to sources, see especially Campbell (1959, §320–322) and Hogg (1992, §6.34–6.37)
- Early epenthesis between a sonorant and a fricative
  - Mostly before dorsal/glottal
  - Vowel mostly agrees in backness with stressed vowel
  - <ðerih> *through*, <gewarahtæ> ‘made’, <berecht> *bright*

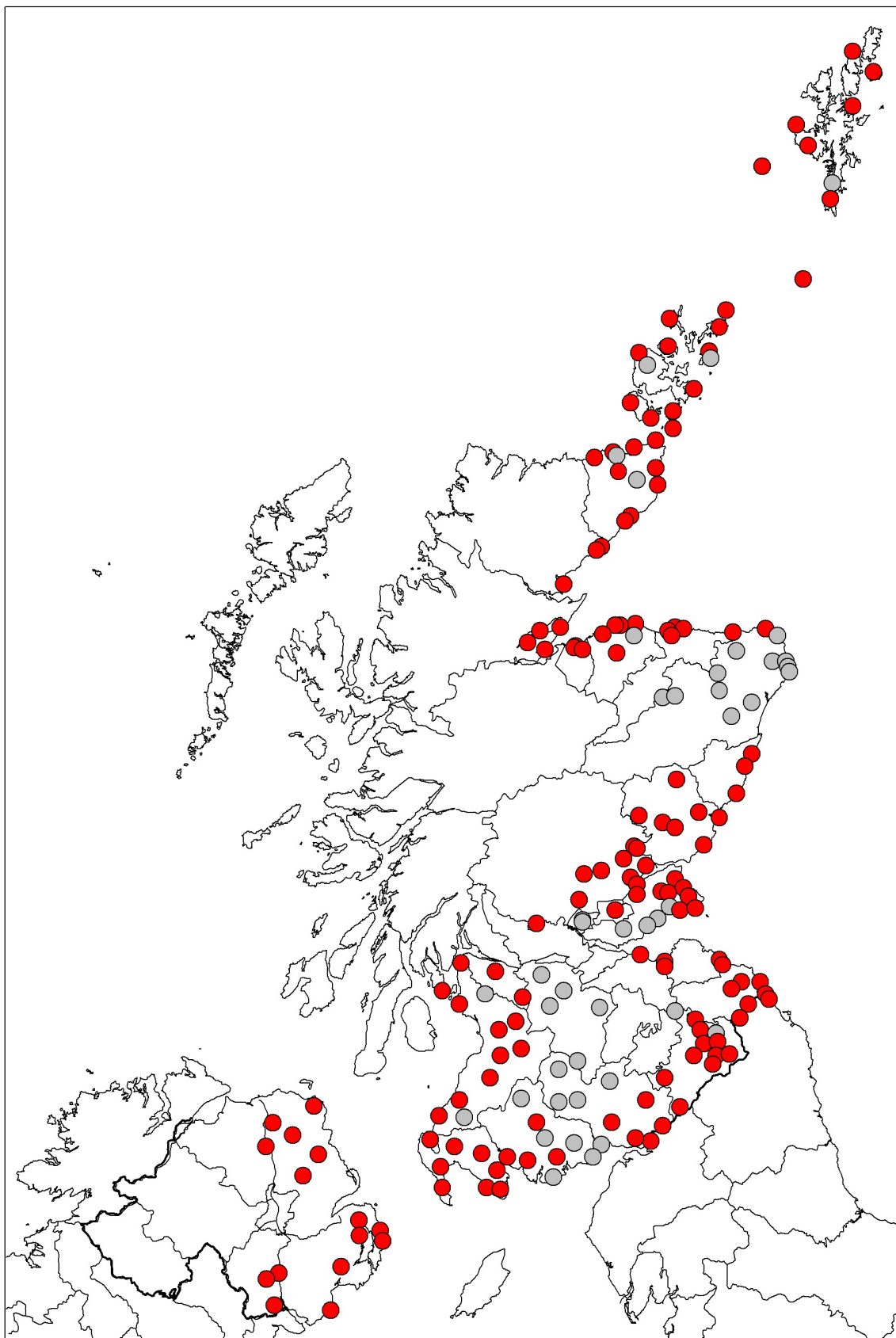


Figure 4: Epenthesis in /lm/ in unpublished LSS materials



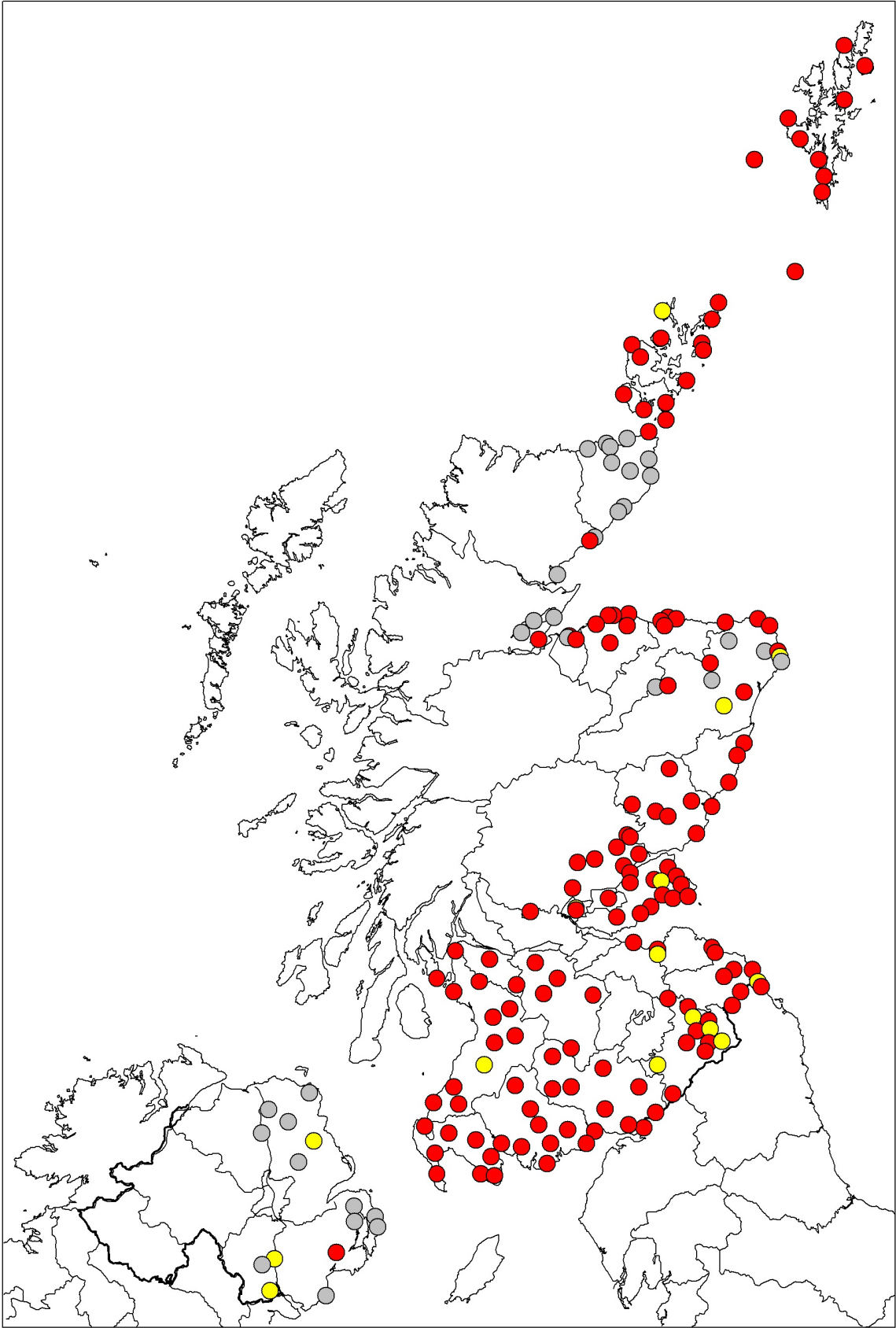


Figure 5: Epenthesis in /rm/ in unpublished LSS materials

- But also <wylif> ‘she-wolf’
- Persists (or re-occurs?) in later Northumbrian, e.g. <burug> *burgh*, <fyrihto> *fright*, but also <culufro> *culver* ‘dove’
- Very rarely in other later dialects: <byric> *birch*, <weoruc> *work*
- Later West Saxon epenthesis of *i*, *u* after light syllables in *Cj*, *Cw* clusters
  - <byri(g)> *burgh*, <herigas> ‘armies’, <swaluwe> *swallow*
  - Mostly late; very rare in other dialects
- No or very few OE examples for /ln/ (except <elin> *ell* ‘forearm’, if this is not preserved from \**elinu-*), /rm/, /lm/, /rl/ (Ringe & Taylor 2014, §6.9.5)
- The data is scant, but mostly consistent with the analysis that OE epenthesis targeted morpheme-final codas
- Clusters targeted
  - Change over the course of the OE period
  - Different from Middle English and Modern English
  - Effects of OE epenthesis obscured by later syncope and vocalization
- Hogg (1992, §6.42): ‘[The] evidence would suggest that it is a persistent and continuing variation in OE’
- Similarly, Ringe & Taylor (2014, p. 332): ‘[T]here could have been robust, stable variation in the phonetics of these unstressed syllables between speech communities, within speech communities, and even in the speech of single individuals’

## 2.1.1 Epenthesis in Insular West Germanic: conclusion

- Found throughout the history of English and Scots, from the Old English period onwards
- Though the details vary by period and location, epenthesis occurs in:
  - Liquid+consonant clusters in (stem-level) coda position
  - Especially in liquid+sonorant clusters
- Prominent in Middle English/Older Scots, Modern Scots, and modern north-east English dialects
- Also attested in Early Modern English and sporadically in Modern English dialects further south
  - However, epenthesis in /lm/ is widespread (or at least was until recently)
- Irish English and Hebridean English epenthesis replicates epenthesis in Anglic, does not match Gaelic patterns
  - Triggering clusters
  - Restriction to coda position
- So where does it come from?

### 3 Epenthesis in Germanic

#### 3.1 Old High German

- Epenthesis (*Sproßvokal*) is widespread in Old High German from the oldest attestations and increasing over time (e.g. Schmidt 1871, Reuter-crona 1920, Braune 2004)
- Usually *a* or *o*, but can agree in quality with surrounding vowels (more often following than preceding)
  - /lh rh/: <bëraht> ‘bright’, <duruh> <durah> *through*, names in <Alah-> (Gothic *alhs*)
  - /rw lw/, rarely /sw/: <farwa> <farawa> <farowa> ‘colour’ (*Farbe*)
- Larger range of clusters in Upper German
  - /rk rh rg/ and /rb rp rf rm/: <werah> *work*, <waram> *warm*, <perege> ‘mountain’ (*Berge*)
  - More rarely /rl/, even more rarely /rn/: <charal> *churl*

#### 3.2 Middle and Early New High German

- In Middle High German (Michels 1979), epenthesis remains in many of the same clusters, but now also including /rn/
  - <koren> *corn*, <werec> *work*, <starib> ‘die!’ (*starb*), <arebeit> ‘work’ (*Arbeit*)
  - Alemannic and Rhine Franconian: syncope of unstressed vowels after a short vowel
    - + /r l/ targets both non-epenthetic and epenthetic vowels
    - \* Epenthetic: <arm> for OHG <aram> ‘poor’
    - \* Non-epenthetic: <wir nern> ‘we approach’ (morphologically <-en>)
- Early New High German (Ebert et al. 1993, §3.7.4)
  - Frequent in /rb rx/ especially in Bavarian: <heribst> *Herbst* ‘autumn’, <kirich> *Kirche* ‘church’
  - /lx/ in <milich> *Milch* ‘milk’
  - More rarely /rf rg/ (*werifen* ‘throw’, *berig* ‘mountain’), /r + coronal/ (*geburit* ‘birth’, *hirise* ‘millet’), /lb lg/ (*kalib* ‘calf’, *foligt* ‘follows’)

#### 3.3 Modern German

- Epenthesis is pervasive in German dialects, especially Upper and Middle German
- Not in the standard language
- Schirmunski (1962, pp. 401–402)
  - Much variation, but examples like *dorəf* ‘village’, *berič* ‘mountain’, *warəm* ‘warm’, *šdarik* ‘strong’, *haləm* ‘straw’, *kberič* ‘church’, *woləf* ‘wolf’, *khāləb* ‘calf’
  - Often word- rather than stem-final: *warəm* but *warmər*
  - Less common in *rn* (*šterən* ‘star’), *n* + obstruent (*finəf* ‘five’)

- Rare in non-final position except in Riparian: *ɛrəvə* ‘to inherit’, *hɛləpə* ‘to help’
- Liberman (1992): much variation in whether svarabhakti feeds open syllable lengthening (both <do:rəf> and <dorəf>), presumably linked to chronological variation
- Found in Luxembourgish standard language, although formerly more so than now (Gilles 2014): *Kallef* ‘half’, *wellech* ‘whichever’, *Vollek* ‘people’, *Hallem* ‘culm’, *fënnef* ‘five’, *Kärel* ‘guy’
- Found in Yiddish (Jacobs 2005) in /r l/ + velar clusters (*štarək* ‘strong’, *barək* ‘mountain’, *milix* ‘milk’) but not in medial position (*štarkə* ‘strong-PL’), also lexicalized remnants like *finəf* ‘five’

### 3.4 Old Saxon & Middle Low German

- Old Saxon (Gallée 1910): between /r l/ and certain consonants, vowel often copies either from the left or the right
  - /rp rɓ rw/: <skarapun>, <arabit> ‘work’, <staraf> ‘died’, <gegariuuui> ‘clothes’
  - /rm rn/: <uuaram> ‘warm’, <Berenmarus>
  - /rk rg rx/: <foraht> ‘fear’, <sorogon> ‘sorrows-DAT’, <giuuerekot> ‘does’
  - /lx lw/: <bifelahan> ‘recommend’, <baluuues> ‘evil-GEN’
- Middle Low German (Lasch 1914, p. 123):
  - Continuation of the Old Saxon pattern: <sceref> ‘sharp’, <barumhertlike> ‘gracious’, <bedereven> ‘spoil’
  - ‘New’ epenthesis during the MLG period, mostly in <lC> but also in some other clusters: <mellik> ‘milk’, <süllik> ‘such’, <werrelt> ‘world’
- Schirmunski (1962): almost not found in modern Low German

### 3.5 Dutch

- Characteristic of Dutch since the earliest period (van Bree 1987)
- Middle Dutch (van Loey 1976)
  - /r l/ + tautosyllabic consonant: <berich> ‘barrow’, <staref> ‘died’, <arem> ‘poor’, <herefst> ‘autumn’, <helecht> ‘helps’, <mellec> ‘milk’
  - Also between /r/ + onset consonant: <arebeit> ‘work’, <jereghetide> ‘season’ (MDu *jaargetijde*)
- Modern Dutch (Kirstein 2018): between /r l/ and a consonant in a complex coda, except when the consonant is a homorganic stop
  - *arm*, *help*, *harp*, *herfst* ‘autumn’, *elf* ‘eleven’, *melk*, *werk*, *alg* ‘alga’, *erg* ‘very’, *urn*, *hoorn*
  - Not *\*hart*, *\*halt*, *\*hals*, *\*damp*, *\*bank*
- Variable (Warner et al. 2001)
- Mostly restricted to codas, but can occur across a syllable boundary: *filmer* ‘camera operator’, *ergens* ‘somewhere’

### 3.6 Frisian

- Old Frisian (Steller 1928), usually *e* or *i*: <hallef> ‘half’, <erm> <erim> ‘poor’, <dolech> <dolich> <dolch> ‘wound’
- West Frisian (Visser 2017): variable epenthesis in non-homorganic *rC lC* clusters: *kalm* ‘calm’, *term* ‘intestine’, *wylch* ‘willow’, *skelk* ‘apron’, *skulp* ‘shell’
- North Frisian (Århammar 2001): much dialectal variation, cf. *salleff* ‘self’ but *dösälven* ‘the same’
  - Common in /lg rg/: *Halich* ‘island’ (OE *healh*), *fori(g)* ‘furrow’
  - Less common between /r k/ and /m w/: *hualew* ‘half’, *warem*, *sterew* ‘to die’
  - Even less common in /lr lp/, and /ln rn/ (after a long vowel): *hallep* ‘to help’, *eelen* ‘elbow’
  - Also possible in /rl/: *kiarel* ‘guy’

### 3.7 North Germanic

- Runic inscriptions: a few possible instances of epenthetic *a*: <worahto> ‘made’ (Tune), <-wulafr> *-ulfr* (Istaby); see Noreen (1923); Haugen (2012)
- Old Swedish: handful of examples in /rj rð rf/ (Noreen 1904, §159–163); no epenthesis in liquid + sonorant clusters: <karl>, <barn> (Wessén 1958, §62)
- Norwegian
  - Very few examples of Old Norwegian spellings with epenthesis in /rð rn rl/: <gareðe> ‘enclosure-DAT.SG’, <hverer> ‘who-ACC’, <æreleghr> ‘honest’, with unclear interpretation (Seip 1934, pp. 124–125)
  - Middle Norwegian (Petterssen 1975): isolated examples of epenthesis with vocalization in /ry ly/
  - Many clusters where epenthesis is observed elsewhere undergo other changes: /rð/ > /ɾ/, /rn/ > /dn/ or /n/, /rl/ > /dl/ or /l/

### 3.8 Danish

- Old Danish (Brøndum-Nielsen 1928, §220–224)
  - Usually <u> or <i> depending on context, unlike the -C\_R# epenthetic vowel <æ>, later <e>
  - /rk ry rm rn/: <danmarich> ‘Denmark’, <sterikt> ‘strong-NEUT’, <tørich> ‘marketplace’, <farughe> ‘colour’, <arum> ‘arm’, <baren> ‘child’
  - /lk ly lf/: <fyligh> <fulughæ> ‘following’, <talugh> ‘tallow’, <halluff> ‘half’, <galugh> ‘gallows’
- Danish dialects (Hansen 1962): vowel often preserved with loss of final consonant
  - /lf ly/ epenthesis is ‘especially common’ (*særlig almindelig*): <sielæf> ‘self’, <skaleff> ‘shook’, <talugh> ‘tallow’, dialectal *kalle* for <Kalleff> ‘calf’

- /rf rɣ/: dialectal forms like *tørre* for <tørff> ‘turf’, *spurre* for <spurw> ‘sparrow’, *bjerre* for <bieregh> ‘mountain’

### 3.9 Epenthesis in Germanic

- Much variation in what clusters are affected, within and across languages and time periods
  - Some languages target liquid + sonorant
  - Some languages target liquid + dorsal
  - Some languages target non-homorganic sequences
- Preference for domain-finality
- Continuous and persistent: we can often discern several iterations of epenthesis
- Lexically and phonologically irregular: proceeds by lexical diffusion, nowhere clearly *lautgesetzlich*
- Epenthetic vowels tend to build syllables of their own
- Epenthetic vowels are often subject to syncope processes alongside non-epenthetic medial vowels
- This agrees with English but not with Gaelic

## 4 Discussion

### 4.1 Why epenthesis?

- Motivation by sonority (e.g. Hickey 1985, 2014): descriptively plausible, but:
  - Post-sonorant epenthesis is clearly not the same process as T\_R# epenthesis
  - Insufficient to explain differences in triggering clusters
- Another facet of vowel lengthening (Ó Baoill 1980, Liberman 1992):
  - Unclear phonetic precursors
- Alternative to smoothing in the elimination of back glides (Howell & Somers Wicka 2007):
  - Could cover (some of) Old English, but it’s not clear to us if/how this extends to other systems even in English itself

### 4.2 Epenthesis as excrescence

- We endorse the analysis of epenthesis in sonorant + consonant clusters as *excrescence*
- See Levin (1987) and Hall (2006)
- Retiming of the vocalic gesture associated with the sonorant (Hind 1996, Hall 2006, Operstein 2010)
- Not the same phenomenon as sonority-driven epenthesis (e.g. in T\_R# contexts)
  - Notably, epenthetic and excrescent vowels can be distinguished both phonologically and phonetically in some languages (Levin 1987, Smith 1999, Hall 2013)

- We suggest, following the lead from Hogg (1992); Ringe & Taylor (2014), that a phonetic tendency to excrescence is/was common to much of Germanic, and is inherited in English

### 4.3 Germanic epenthesis

- The phonetic tendency is universal, or at least widespread across northwest Europe
- Variable epenthesis would have been found in Proto(-North-West)-Germanic, and inherited in many languages
- Excrescence *can* phonologize as a regular rule
  - We suggest this is what happened in Gaelic
  - This is likely what happened in some Sámi languages (Engstrand 1987)
- This is *not* what happened in Germanic

### 4.4 Conclusion

- Epenthesis in English and Scots is an instantiation of a phonetic tendency common in Germanic
- Irish English epenthesis is directly inherited from English (and Scots in the north)
- This tendency has variably been present throughout the history of Germanic
- The repeated occurrence of epenthesis in Germanic represents parallel development ('drift') via inheritance of a variable process (Joseph 2013)
- To the extent English epenthesis is an areal phenomenon, it is an extension of an area from the continent, not part of a Britain and Ireland area

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