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The origins of epenthesis in liquid+sonorant clusters in Mid-Ulster English

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1. Introduction[1]

Epenthesis in liquid+sonorant clusters, in words such as *film* [ˈfɪləm] and *farm* [ˈfaɹəm], is a well known feature of Irish English, found in one form or another throughout the island of Ireland (Hickey 2007a: 307). The feature is usually believed to have developed as a result of contact with Irish (see Section 2), which is characterised by extensive epenthesis (Ó Siadhail 1989: 20-22). But given the diversity of Irish English dialects, the different ways these dialects developed, and the existence of similar epenthesis patterns in dialects of English and Scots in Britain, fundamental questions remain concerning the nature and origin of epenthesis in Irish English. This is especially the case as this epenthesis has not been described in detail for any Irish English dialect and a close comparison of it to patterns of epenthesis in Irish, English and Scots has never been made. What *is* the nature of epenthesis in Irish English, and is it true that this feature is derived from Irish?

This paper seeks to address these questions by examining epenthesis in one Irish English dialect in detail, Mid-Ulster English (particularly the variety spoken in southwest Tyrone), and by conducting a thorough comparison of it with patterns of epenthesis in Irish, English and Scots. In so doing, this paper shows that epenthesis in Mid-Ulster English, and indeed in Irish English more generally, has more in common with epenthesis in English and Scots in Britain than with epenthesis in Irish, and that significant problems arise if an origin of the feature in Irish is assumed. As is the case with a number of other phonological features which have previously been claimed to be the result of Irish influence, Irish at most only played a reinforcing role in the development of epenthesis, a finding which has significant consequences for our understanding of the role played by language contact in the formation of the phonology of Mid-Ulster English and other Irish English dialects.

This paper is organised as follows. In Section 2, I review previous descriptions of epenthesis in Irish English and explanations for it, followed by an introduction to Mid-Ulster English, its history, and a characterisation of epenthesis in it. In Sections 3-5, I provide a detailed examination of epenthesis, with a historical focus, in Irish, English and Scots. In Sections 6-8, I explore the similarities and differences between epenthesis in Mid-Ulster English, Irish, English and Scots, and discuss the implications of this analysis for understanding the historical development of Mid-Ulster English and other Irish English dialects.

2. Background

In this section I review evidence for epenthesis in liquid+sonorant clusters in Irish English (2.1), in order to set the context for the specific case study on the nature and origin of epenthesis in Mid-Ulster English (2.2 and 2.3).

2.1. Epenthesis in Irish English

Almost every account of Irish English describes epenthesis in liquid+sonorant clusters as a characteristic feature of varieties in Ireland, at least in passing. General surveys mentioning the

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feature include Adams (1948), Braidwood (1964), Barry (1982), Wells (1982), Bliss (1984), Hickey (1986, 2007a, 2007b), Harris (1997), Joyce (1910), Ó Baoill (1997), Ó hÚrdail (1997), Moylan (2009), Corrigan (2010), and Kallen (2013). For example, Hickey (2007b: 145) states that epenthesis is found in "vernacular varieties throughout the entire island". More specifically, epenthesis is recorded in diverse locations across Ireland, including Belfast (Patterson 1860), southwest Tyrone (Cunningham 2011), central county Down and east County Donegal (Gregg 1985), north Donegal (Evans 1997), south Donegal (Adams 1950), Roscommon (Henry 1957), Galway (Sell 2012), Dublin (Bertz 1975, Hickey 2005), Kilkenny (Moylan 1996), Waterford (Hickey 2001) and Cork (Leahy 1915). In almost every case, epenthesis is described as occurring in /lm/ (especially in the word *film*) and in /rm/ (e.g. in *farm* and *warm*), where the epenthetic vowel is transcribed as [ə]. A number of studies also note the occurrence of epenthesis in /rn/ (e.g. Henry 1957 for Roscommon, Braidwood 1964 for Ulster, Bertz 1975 for Dublin, Evans 1997 for north Donegal, Hickey 2007a for Irish English generally, and Kallen 2013 for Southern Irish English) and /rl/ (e.g. Henry 1957 for Roscommon, Evans 1997 for north Donegal, Hickey 2007a for Irish English generally, Cunningham 2011 for southwest Tyrone, and Kallen 2013 for Southern Irish English), though this is less common. Finally, sporadic cases of epenthesis in other clusters are occasionally noted: Leahy (1915) records it in *herbs* in Cork, Adams (1948) mentions it in *fork* in Ulster, Evans (1997) gives *herbs* and *starve* with epenthesis in north Donegal, and Hickey (2007a: 308) includes epenthesis in /ln/ (in *kiln*) in his list of environments in which it occurs in vernacular Irish English.

In most cases where comment is made concerning the origins of epenthesis in Irish English, contact with Irish is implicated. Thus Adams (1948), Barry (1982), Hickey (1986, 2007a), Joyce (1910: 96), Ó hÚrdail (1997), Ó Baoill (1997), Pilch (1990: 584), Moylan (2009), Corrigan (2010), and Cunningham (2011) all refer to Irish influence as the likely source of the phenomenon in Irish English. For example, Ó Baoill (1997: 84) described epenthesis in words such as *film*, *farm* and *warm* as "a process that has been borrowed from Irish where it is obligatory", and Corrigan (2010: 40) states that "Vocalic epenthesis is a much described feature of Irish dialects, so its occurrence in N[orthern]I[rish]E[nglish]/U[lster]S[cots] and in other Celtic Englishes (or varieties influenced by them) is likely to be a substratal feature". Given that epenthesis is such a central feature in Irish phonology (see Section 3), and the fact that Irish English is generally perceived as being divergent from other varieties of English in this respect, this contact explanation is not surprising. But two researchers strike a note of caution, with Braidwood (1964: 67) stating that such epenthesis is "also native English and widespread in British dialects" and Harris (1997: 205) pointing out that "The similarities with Irish have led some to conclude that substratal transfer has been at work here … even though the same characteristic is attested in Scots and in some rural areas of England". Kallen (1994: 175) also points to parallels between epenthesis in Irish English and epenthesis in England, noting that "This feature is not unique to Ireland, though the lexical incidence of it may differ from that found elsewhere".

This brief overview of previous comment on the nature and origin of epenthesis in liquid+consonant clusters in Irish English illustrates a number of important points. Firstly, epenthesis in liquid+sonorant clusters is widespread in Irish English, being most common in /lm/ and /rm/, but also found in some locations in /rl/ and /rn/. It is rarely attested in other clusters. Secondly, influence from epenthesis in Irish is usually assumed to be the explanation

for the phenomenon, even though very few of these studies analyse either epenthesis in Irish (which occurs in a wide range of environments) or in Irish English in any detail. Thirdly, all but one of the examples given of epenthesis in Irish English involve morpheme-final (indeed usually word-final) clusters (the exception is epenthesis in *curlew* in Roscommon, as recorded in Henry 1957). But there is much that we would like to know about epenthesis in Irish English that we don't, and about how it compares with epenthesis in Irish on the one hand, and with English and Scots in Britain on the other. It is to this issue that I now turn. In order to try to understand the nature and origins of epenthesis in Irish English, I examine one dialect in detail, Mid-Ulster English, with special reference to the variety spoken in southwest Tyrone.

2.2. Mid-Ulster English

Mid-Ulster English (MUE) is the name given to the distinctive Irish English dialect spoken across the province of Ulster in the north of Ireland, from Belfast in the east to Donegal Bay in the west (see Harris 1984: 116-117 for a summary and map of Ulster dialect areas). Although the dialect of this area is by no means uniform (including as it does such distinctive varieties as the urban vernacular of Belfast, the rural traditional dialects of west Ulster, and Standard Northern Irish English), it is readily distinguishable from Ulster Scots to the north (Gregg 1985) and from Southern Irish English to the south (Barry 1981), with 'Southern Ulster English' being a transitional variety between this and MUE (Harris 1985: 33-41).

Mid-Ulster English developed as a result of the 17th century Plantation of Ulster and associated settlements from Britain (Bardon 2011, Corrigan 2010: 114-117, Perceval-Maxwell 1973, Robinson 1984), in a context of contact between English, Scots and Irish. By 1659, Robinson (1984: 105) estimates that 37% of adult males and married females in Ulster (excluding Tyrone and Cavan, for which contemporary figures are not available) were of British (i.e. Scottish or English) origin. These British settlers were concentrated in the towns and lowland agricultural areas. Although the initial plan for the Plantations was to remove the Irish from the lands, this policy was never realised, as the population figures in Robinson (1984) testify. Nevertheless, the settlements from Britain dramatically changed the population of Ulster, not only in the introduction of large numbers of English and Scots settlers to lowland areas, but also in the geographical, social and linguistic marginalisation of the Irish.

Although English was spoken in Ireland before the Plantations, it is generally considered to be the case that most varieties of Irish English, including Mid-Ulster English, derive from the Early Modern British settlements of the island (Filppula et al. 2008, 153-154; Kallen 2013: 18-22). Prior to the Plantation of Ulster and associated settlements in the early 17th century, the population of this part of Ireland mostly spoke (Ulster) Irish, whilst the British Plantation settlers for the most part spoke varieties of English and Scots. The majority of Scottish settlers came from south and southwest Scotland (Perceval-Maxwell 1973: 274-289) and, given their geographical origins (see Fischer 1989: 619), mostly spoke Early Modern varieties of Central, Southwest and South Scots. The English settlers came from various regions, particularly from the Midlands (Braidwood 1964), and would have spoken a variety of Early Modern English dialects, as well as versions of Early Modern Standard English. Thus by the second half of the 17th century, it is likely, in light of the figures given in Robinson (1984), that up to 40% of the population of Ulster spoke English or Scots, and this figure may have been much higher considering that some Irish speakers were already becoming bilingual

in this period. Corrigan (2010: 121) suggests that in the 17th century rural areas near the new British towns would have been characterised by "stable Irish-English bilingualism", whilst in the towns and villages themselves a situation of "unstable bilingualism with Gaelic increasingly recessive" would quickly have developed. Although some of the (Protestant) British settlers must have spoken Scottish Gaelic or learned Irish, and later conversions and intermarriage meant that some Protestants spoke Irish natively (McCoy 1997), bilingualism was unequal, with the English of the founding British population much more likely to be learned by Irish speakers. This prolonged, unequal and ever increasing bilingualism was the first stage in the large scale language shift from Irish to (Mid-Ulster) English (Ó Cuív 1951: 26-7) so that by the late 18th century only 19% of the population of Ulster is estimated to have spoken Irish (Fitzgerald 1984: 127). Indeed, in some parts of Ulster the figure was much lower. Fitzgerald gives the following estimates for each county for the period 1771-1781: Antrim 3%, Armagh 18%, Cavan 39%, Donegal 56%, Down 3%, Fermanagh 16%, Derry 10%, Monaghan 33%, Tyrone 19%. By the 1860s, the over-all figure for Ulster had collapsed to just 4% (Fitzgerald 1984: 127), with the vast majority of Irish speakers confined to Donegal. Indeed, most of the lowland MUE area was devoid of Irish speakers by the mid-19th century (Fitzgerald 2003). The fall in the percentage of Irish speakers from about 60% in the second half of the 17th century, to 19% in the second half of the 18th century, and to 4% in the second half of the 19th century, represents a steady decline over three centuries across Ulster rather than a single shift of large numbers of Irish speakers to English in the space of a few decades. By the mid-20th century, Irish had died out in Ulster as a native language outside of parts of Donegal, with it otherwise surviving longest in the mountainous regions of north-east Antrim and north Tyrone (Wagner 1958-64).

The history of Scots in Ulster is less clear. Although Scottish settlers were to be found across Ulster, and indeed contributed a large proportion of the settlers in parts of Tyrone and Armagh (Robinson 1984: 94), by the mid-20th century (Ulster) Scots dialects had become restricted to only those parts of counties Down, Antrim, (London)Derry and Donegal which had received the most concentrated Scottish settlement in the Early Modern period (Gregg 1985). Scots settlers in other areas shifted to English. Given the close and intertwined relationship between Scots and English (Maguire 2012c, 2015), we are in effect dealing here with something closer to dialect contact than language contact, which can give rise to new dialects remarkably quickly (Trudgill 2004), so that a prolonged survival of Scots outside of the core Ulster Scots areas seems unlikely.

Whatever other inputs were involved in its development, MUE remains at its core a dialect of English. At the levels of phonetics, phonology, morphology and syntax, the vast majority of features of the dialect have their origin in English. As has long been recognised, MUE is of an archaic English Midland type, closely related to the ancestor of modern Standard English (see the discussion in Braidwood 1964). The Scots element in MUE is also plain to see, speaking of significant input from that language in the formation of the dialect. As well as a large number of lexical borrowings (Macafee 1996), there are obvious cases of Scots input in the phonetics and phonology of the dialect, including the complex Scottish Vowel-length Rule (SVLR, Aitken 1981; see also Harris 1985), and the quality and lexical distribution of various vowels. These include lowering and centralisation of the KIT vowel to [ɛ̈]~[ə]~[ɜ], lowering of the DRESS vowel to [ɛ̞]~[æ], backing of the TRAP vowel, especially in voiced contexts, to [ɑ(:)], centralisation of the GOOSE vowel to [ʉ(:)], the presence of /i/ (rather than

/ɪ/) in words such as *idiot*, *kick*, *king* and *swim*, the presence of /a/ (rather than /ɔ/) next to labial consonants in words such as *drop*, *fond*, *off*, *shop*, *soft*, *stop*, *Tommy*, *top*, the presence of /ʌ/ (rather than /ɪ/) after /w/ in words such as *whip*, *window*, *winter*, the lack of a distinction between the LOT and THOUGHT vowels in some varieties of MUE, the use of the same vowel (/ʉ/) in the GOOSE lexical set and in many words in the FOOT lexical set, and the creation of a distinction between /əi/ and /aɪ/ in final position, for example in the pairs *die-dye*, *eye-I* and *lie* ('fib')-*lie* ('recline') (see Harris 1985 for further details on all of these features). Instances of Scots influence on the morphology and syntax of MUE are more subtle, and are sometimes difficult to distinguish from input from regional English dialects, but here too Scots influence is evident (for example, many of the distinctly Scots morpho-syntactic features described in Miller 2003 are also shared by MUE). Suffice it to say that although MUE is at its core a dialect of English, Scots has made fundamental and unmistakable contributions to it.

The influence of Irish on Mid-Ulster English is in some cases obvious and in other ways uncertain. There are a number of lexical borrowings, sometimes replicating aspects of Irish phonology (e.g. *cailey* [ˈcɪəlɪ]~[ˈcɪəljɪ] 'social visit' from Irish *céili*), though these are not as common as borrowings from Scots (Macafee 1996; cf. Thomason & Kaufman 1988: 129). Most place-names in the Mid-Ulster area are also of Irish origin, Anglicised in form but sometimes retaining specifically Irish phonological features. MUE shares several of the characteristic syntactic patterns of Irish origin in Irish English (see Filppula 1999), though in some cases there are parallels (to one degree or another) in other dialects of English or in earlier varieties of the language, so that the origin of several of these constructions may be more complex than straight-forward borrowing from Irish (see the various discussions throughout Filppula 1999). When it comes to (segmental) phonetics and phonology, things are even less clear. Although a number of features of Irish English shared by MUE have been repeatedly claimed to be of Irish origin, especially Clear-L in all positions (Moylan 2009: 36), Pre-R Dentalisation (Maguire, 2012a, 2017), Velar Palatalisation (Harris 1997), and the pronunciation of the STRUT vowel (Harris 1990), in almost every case an alternative explanation based on earlier forms of English is available (the particular case of Epenthesis, also usually claimed to be the result of Irish influence, is of course the main topic of this paper). Indeed, explanations based on an origin in English (and Scots in some cases) are superior for all of these features, given the close similarity of them in Irish English and British varieties, as argued in the studies referred to (which for the last three are the only detailed studies that have been made of the origins of these features; a detailed study of the origins of Clear-L in Irish English has yet to be made, though Moylan (2009) argues clearly if concisely for an English origin). Although Harris (1997) suggests that Velar Palatalisation possibly has multiple origins, it is difficult, once we set these features aside, to come up with a list of phonetic and phonological features of MUE which are likely to have their origin, even in part, in Irish (other than some phonological features of lexical and place-name borrowings, as previously mentioned). Why this might be and what it means for our understanding of the phonological origins of MUE is considered throughout this paper, particularly in Sections 7 and 8.

2.3. Epenthesis in Mid-Ulster English

As is the case with other Irish English dialects, no detailed study of epenthesis in MUE has been published, though brief comments have been given in various accounts (see Section 2.1).

In order to remedy this situation, I give here a description of epenthesis in my native MUE dialect from southwest Tyrone (around the villages of Fintona and Dromore). Like much of the lowland MUE dialect area, this part of Tyrone was settled by a mix of English and Scottish settlers, but retained a large (probably majority) Irish population (Braidwood 1964: 28-30, Robinson 1984: 119-123). Nevertheless, Irish dwindled throughout the period after the Plantation in this area too; Fitzgerald (1984) estimates the percentage of Irish speakers to have been in the 20-29% range for the barony of Clogher in the cohort of speakers born 1771-91, 10-19% between 1791 and 1811, 3-9% between 1811 and 1831, and 0-2% thereafter. The figures for the barony of East Omagh are rather higher (30-39% from 1771-1801, 20-29% from 1801-1811, 10-19% from 1811-1831, and 3-9% from 1841-1861), since this barony includes part of the upland north Tyrone Gaeltacht, where Irish survived into the mid 20th century (see Fitzgerald 2003: 199-200 for a discussion of this point). However, the lowlands around Dromore appear to have followed the same pattern as the barony of Clogher (see Fitzgerald 2003, Maps 1, 2 and 2d). There appears to be no living memory of native Irish being spoken in the area.

Over the last 15 years, I have collected a corpus of 40 hours of audio recordings of older male and female conservative speakers of the dialect, both Protestant and Catholic. Southwest Tyrone English (SwTE) is a typical conservative rural dialect of MUE, sharing much in common with other MUE dialects as described, for example, in Harris (1985) and in Mather and Speitel (1986), and the patterns of epenthesis in it are typical of the MUE dialect area. There are three liquid+sonorant clusters which are subject to epenthesis in SwTE: /lm/, /rm/ and /ln/. No other such clusters are broken up in this way, so that there is no epenthesis in, for example, /rl/ (e.g. *girl*, *world*)[2] or /rn/ (e.g. *burn*, *corn*), though variable epenthesis in a few other environments not discussed in this paper also occurs (e.g. in *Henry* [ˈhɛn(ə)ɹe] and *Aghnamoe* [ˌäħ(ə)nəˈmoʊ]). In /lm/, /rn/ and /ln/, epenthesis occurs in stem-level coda position only; other than in the name *Armstrong*, this is in effect equivalent to morpheme-final position.

Epenthesis is regular in /lm/ in the dialect, with an epenthetic vowel always being produced by old-fashioned speakers in the words *elm*, *film*, *helm* (though this word isn't really used in the dialect), *overwhelm* and *realm*. The most common of these is *film*, which is universally pronounced with epenthesis (e.g. [ˈfɛ̆ləm]) in the SwTE dialect, and only speakers with non-local or highly standardised accents are likely to produce it without the epenthetic vowel. Other words with /lm/ are uncommon, and the extent to which epenthesis in them is still typical in the wider community is unclear. Since epenthesis in /lm/ only affects the cluster in stem-final coda (essentially morpheme-final) position, there is no epenthesis in words and names such as *Elmer*, *Gilmour* (a common local surname), *helmet*, *Thelma* or *Wilma*, but epenthesis does occur before inflectional suffixes in *filmer*, *filming*, *filmy* and *overwhelming*.

Epenthesis in /rm/ (in words such as *farm*, *firm*, *harm*, *warm* and *worm*), whilst also found in the dialect, and indeed being something of a stereotype of old-fashioned speech, is

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[2] As was noted in Section 2.1, Cunningham (2011: 216) mentions epenthesis in *girl* in southwest Tyrone. I have not recorded this in the dialect in this or any other word. It may well be an instance of epenthesis in /rl/ of the sort recorded elsewhere in Ireland that is only used by some people or in some locations in Tyrone, but it could perhaps also be a hypercorrective form, since words and names like *barrel*, *Carol*, *Cyril*, *Farrell*, *Harold* and *peril* are subject to deletion of the unstressed vowel in traditional forms of the dialect, with reintroduction of the vowel in less traditional speech. Thus, if *peril* [pɛɹl̩] > [ˈpɛɹəl], then by analogy [ɹɛɹl̩] (the usual pronunciation of *girl* in the dialect) could conceivably > [ˈgɛɹəl]. See further Section 6.

essentially restricted to older male speakers, and even with them it is much less common than epenthesis in /lm/. Epenthesis in /rm/ similarly only occurs in stem-level coda position, so that no epenthesis is possible in, for example, *armour*, *army*, *Burma*, *enormous*, *German*, *Gorman*, *Mormon*, *Norma*, *Norman*, *sermon*, *turmit* 'turnip', *vermin*, but it can occur word-internally before an inflectional ending (e.g. in *farmer*, *farming*), though this is rare. In my corpus of recordings, epenthesis in /rm/ does not occur at all in the speech of women, and occurs at a rate of just over 5% for men (in 9 out of 177 tokens). Perhaps not surprisingly given the small number of tokens it occurs in, there is no significant difference between levels of epenthesis in /rm/ for Catholic and Protestant speakers (3 out of 37, and 6 out of 140 tokens respectively).

The status of epenthesis in /ln/ in the SwTE is rather less clear, especially since there is only one relevant word, *kiln*, which is rarely used. The original form of this word in the dialect, which is also found in traditional English and Scots dialects, is 'kill' (e.g. [cël]), with historical loss of the /n/ after /l/ (this pronunciation is also recorded for Ulster dialects in Macafee 1996). Thus there was no epenthesis since the cluster had been simplified. But this pronunciation (and indeed local memory of the corn kilns which once dotted the countryside) is now moribund, and speakers of the dialect, when asked to pronounce *kiln*, are somewhat unsure as to which pronunciation to use. [cël] pronunciations aside, most pronounce it without epenthesis (e.g. [cëln]), but some produce epenthetised pronunciations such as [ˈcëlən]. Morpheme-internal examples of /ln/ are uncommon, but speakers of SwTE do not have epenthesis in the names *Kilner* or *Milner*. Given the traditional lack of epenthesis in MUE in *kiln*, and the fact that this cluster is not found in Irish, I do not discuss epenthesis in /ln/ further in this paper.

In summary, then, there are three liquid+sonorant clusters which may have epenthesis in SwTE: /lm/, in which epenthesis is general; /rm/, in which epenthesis is traditional but now recessive; and /ln/, in which epenthesis is sporadic. In all cases, epenthesis is only possible in stem-level coda position, and may be maintained before inflectional suffixes where these occur. Other liquid+sonorant clusters (/rl/, /rn/) never have epenthesis. Thus SwTE is consistent with many of the descriptions of epenthesis in Irish English referred to in Section 2.1, but it is also more restricted in the kinds of epenthesis it allows, though it is worth noting that epenthesis in /rl/ and /rn/ is much less commonly recorded generally in Irish English than epenthesis in /lm/ and /rm/. The constraint in SwTE on epenthesis essentially only occurring in stem-level coda position appears to be general to Irish English, since, other than the single example of epenthesis in *curlew* reported for Roscommon in Henry (1957), the examples given of epenthesis in Irish English in other sources (see Section 2.1) only involve morpheme-final coda position (i.e. it is never reported in words like *helmet* or *armour*). Since the word *curlew* is recorded by Henry as having medial [rəlj], it appears that this variety, just like SwTE, also has epenthesis in morpheme-internal codas.

3. Epenthesis in Irish

Epenthesis in consonant clusters involving liquids and nasals is a central feature of the synchronic and diachronic phonology of all dialects of Irish. This feature of Irish phonology has a long history in the language, certainly predating substantial contact with English and the formation of Irish English as we know it today. O'Rahilly (1932: 201-202) dates its development to the 13th century, a date endorsed by McManus (1994: 350). As was discussed in Section 2.1, epenthesis in Irish has usually been implicated in the development of epenthesis

in Irish English. This being the case, it is crucial to examine epenthesis in Irish in order to determine how similar it is to epenthesis in Irish English, since the mere presence of epenthesis of one kind or another in both languages is not sufficient for us to assume that these two cases of epenthesis are connected. It is important to note that the patterns of epenthesis described below are remarkably uniform across Irish dialects, and indeed are very similar to those found in Scottish Gaelic, which attests to their antiquity in the language.

The following account is based on the descriptions of epenthesis provided by O'Rahilly (1932: 199-200), Ó Siadhail (1989: 20-22), and Ní Chiosáin (1999; 2000). An epenthetic vowel (according to Ní Chiosáin [ə] between broad consonants, [i] between slender consonants)[3] is inserted in an underlying consonant cluster in Irish between a liquid or nasal and a following non-homorganic consonant; however, there is no epenthesis when the second consonant is a voiceless stop. The epenthesising cluster can be word-internal (where it may cross a syllable boundary) or word-final, but epenthesis does not occur after a long vowel, e.g. *téarma* [tʹeːrmə] or when the cluster is followed by two or more syllables, e.g. *barbarach* [barbərəx] (Ní Chiosáin 1999: 565-566). There is a single exception to the restriction of epenthesis to non-homorganic clusters: epenthesis does occur in the cluster /rn/, but only in word-final position, not in word-internal position (Ní Chiosáin 1999: 561), and, according to O'Rahilly (1932: 200), only in southern Irish dialects (i.e. not in Ulster Irish, nor in Scottish Gaelic).

Adding all of this together, we get the epenthesis in the following clusters (there are a number of gaps due to the non-occurrence of certain clusters in Irish), with example words from Ní Chiosán (1999): [4]

- **r+C**: /rb/ (e.g. *borb*, *Bairbre*), /rg/ (e.g. *fearg*, *airgead*), /rf/ (e.g. *dearfa*), /rx/ (e.g. *dorcha*), /rv/) (*carbhat*, *searbh*, *seirbhís*), /rm/ (*gorm*, *dearmad*)
- **l+C**: /lb/ (e.g. *bolb*, *dalba*), /lg/ (e.g. *sceilg*, *alga*), /lx/ (e.g. *tulchach*), /lv/ (e.g. *sealbh*, *gealbhan*, *soilbhir*), /lm/ (e.g. *colm*, *calma*)
- **n+C**: /nb/ (e.g. *binb*, *Banba*), /nx/ (e.g. *Donnchadha*), /nv/ (e.g. *leanbh*, *ainmhí*), /nm/ (e.g. *ainm*, *meanma*)
- /rn/ (in word-final position, and only in southern dialects, e.g. *dorn*)

Epenthesis does not occur in the following clusters:

- /rp/ (e.g. *corp*), /rt/ (e.g. *gort*), /rk/ (e.g. *cearc*), /lp/ (e.g. *spalp*), /lt/ (e.g. *alt*), /lk/ (e.g. (*olc*), /nt/ (e.g. *caint*)
- /rl/ (this cluster only occurs in word-internal position, e.g *orlach*)

Ní Chiosáin (1999: 563) explains the synchronic process of epenthesis in Irish, within the framework of Optimality Theory, as being the result of a highly ranked constraint "which requires that linearly adjacent segments be a certain distance from each other along a defined sonority hierarchy". In other words, the constraint disfavours sequences of liquid/nasal and certain consonants, and Ní Chiosáin notes that this is "not a constraint on complex codas" (p.

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[3] The distinction between 'broad' (often velarised) and 'slender' (usually palatalised) consonants is a central feature of Irish phonology; see Ó Siadhail (1989: 83-86 for an overview).

[4] Following the practice of the listed researchers, I abstract here away from the slender/broad distinction, giving only the broad consonant symbols for exemplification; the slender consonants act in the same way.

563), since epenthesis affects clusters such as /rg/ whether they are in coda position (as in *fearg*) or split across syllable boundaries (as in *airgead*).

If we compare epenthesis in Irish to epenthesis in Irish English, it is clear that the two are rather different phenomena. In Irish, epenthesis is a thorough-going process, affecting a wide range of consonant clusters in word-internal and word-final position (though noticeably not /rl/, though this cluster only occurs word-internally in Irish), with the key phonological constraint acting on sequences of consonants regardless of syllable structure. This is different than in Irish English (including MUE), where the constraint is against clusters of liquid and sonorant in coda position (at least at stem level). Thus in Irish English, epenthesis almost exclusively occurs in morpheme-final position. It is most common in /lm/, with epenthesis in /rm/ also being widespread, and epenthesis in /rn/ and /rl/ being attested less commonly. Although some of the epenthesising clusters in Irish do not exist in Irish English outside of obvious Irish loans and names (/rx/, /lx/, /nb/, /nx/, /nm/), others do occur, but without epenthesis. The following words, which never have epenthesis in SwTE, illustrate this point:

- /rb/: *barb*, *disturb*, *kerb*, *urban*
- /rg/: *morgue, organ*
- /rf/: *scarf*, *turf*
- /rv/: *curve*, *nerve*, *servant*, *serve*, *starve*
- /lb/: *bulb*, *elbow*
- /lg/: (no examples)
- /lv/: *selves*, *shelves*, *silver*, *solve*, *twelve*
- /rn/: *barn*, *corner*, *learn*, *turn*

In other words, epenthesis in Irish and in Irish English overlap in morpheme-final position only, in the clusters /lm/, /rm/ and, in southern dialects, /rn/. If Irish was involved in the development of epenthesis in Irish English, the question arises as to why epenthesis only developed in these clusters and not in the others. That is, if speakers shifting from Irish to English carried across their epenthesis rule, giving, for example, [fɪləm] for *film* on the model of Irish [koləm] for *colm*, why did they not also apply this rule to words like *disturb* (*[dɪˈstʌɹəb]), *morgue* (*[mɔɹəg]), *curve* (*[kʌɹəv]) and *solve* (*[sɔləv])? And why did the Irish epenthesis rule fail to operate word-internally (e.g. in *helmet* *[ˈhɛləmət] and *armour* *[ˈaɹəməɹ])? I return to these questions in Sections 6 and 7, but it is worth noting at this point that epenthesis in Irish and epenthesis in Irish English are rather dissimilar in several fundamental ways, and an explanation of epenthesis in Irish English based on influence from Irish is not unproblematic despite its initial appeal.

4. Epenthesis in English

England may not seem like the most obvious place to look for the origins of a feature which is absent from mainstream varieties of English outside of Ireland, and which has usually been explained as a result of contact with Irish by previous researchers. But Irish English is, after all, English, and any explanation of its linguistic features must first take account of the phonology, historical and synchronic, of that language in its homeland. The chilling 'alarum-bell' in Shakespeare's *Macbeth* not only signifies the death of the king but also points to the presence of epenthesis in 17th century English, at least in at least some liquid+sonorant clusters.

4.1. Epenthesis in Old and Middle English

In fact, epenthesis in liquid+consonant clusters has a long history in English, extending back to the Old English (OE) period (Campbell 1959: 150-151; Hogg 2011: 230-235), and epenthesis in liquid+consonant clusters is a feature of many West Germanic dialects (Iosad and Maguire 2018). In OE, epenthesis was particular common in coda clusters involving a liquid followed by a velar/palatal fricative, as in *berig* 'mountain', *ðerih* 'through' and *Walah-* (proper-noun). This kind of epenthesis involving palatal/velar fricatives continued into the Middle English period, but the fricative was subsequently vocalised so that it did not survive into Early Modern and Modern dialects of English (including Irish English). However, epenthesis in OE is occasionally recorded in other clusters, e.g. /lf/ (in *wylif* 'she-wolf', as noted in Campbell 1959 and Hogg 2011), and (see Minkova 2014: 120) in /rn/ (e.g. in *firen* 'transgression') and /rtʃ/ (e.g. in *berec* 'birch'). Although the data is scant, it appears to be the case that OE epenthesis targeted (morpheme-final) coda liquid+consonant clusters, a pattern which is repeated throughout the history of English.

Lass et al. (*Corpus of Narrative Etymologies*, CoNE; 2013) identify a change in the OE/Early Middle English period, 'Sonorant cluster vowel epenthesis' (SCVE), which involves the insertion of an epenthetic vowel between two consonants, one of which must be a sonorant. This is indicated by the appearance of a vowel symbol, usually <e> or <i>, between the two consonants of the cluster. SCVE includes within it the kinds of change discussed in this paper (i.e. epenthesis in liquid+sonorant or liquid+C clusters generally), but it covers other changes not discussed in this paper (i.e. epentheses in C+sonorant clusters, as in Lass et al.'s example, *children > childeren*). The words with SCVE identified in liquid+C clusters in CoNE (those involving palatal/velar fricatives aside, as noted above) are *arm* (<arum>), *bairn* 'child' (<baren>, <barin>, <beren>), *churl* (<cherel>, <cherril>), *corn* (<coren>, <keren>, <koren>), *earm* 'poor, wretched' (<arem>, <erem>), *forth* (<foret>), *north* (<norit>), *word* (<pored>), and *worm* (<worem>, <woreim>, <purem>). That is, epenthesis is found in the clusters /rm/, /rl/, /rn/ and /rθ/ (or perhaps /rt/) in (morpheme-final) coda position. No data are given for words with /lm/.

Later Middle English evidence for this change, specifically for epenthesis in liquid+sonorant clusters, is in fact copious. The *Middle English Dictionary* (MED;[5] see also Jordan 1934: 138-139) reveals that for every one of the relevant clusters except /ln/ (which, as discussed above, was subject to separate developments in the history of English), spellings indicative of epenthesis (i.e. with an extra vowel symbol between the two consonants of the cluster) are common. Indeed, for all clusters but /lm/ (i.e. /rm/, /rl/ and /rn/), at least one spelling form suggestive of epenthesis is recorded for almost every word with that cluster in morpheme-final coda position. Epenthesis is occasionally recorded in other clusters (e.g. in /rk/ in *mark*). Examples (modern English spellings, where available, used for headwords) include:

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[5] https://quod.lib.umich.edu/m/med/

- /lm/: *elm* (e.g. <ellem>), *whelm* (e.g. <quilum>); no epenthesis recorded in *film*, *helm* or *yelm* 'bundle of straw'
- /rm/: *alarm* (e.g. <alarom>), *arm* (e.g. <arum>), *farm* (e.g. <verem>), *harm* (e.g. <harem>), *storm* (e.g. <storem>), *worm* (e.g. <wirem>); no epenthesis recorded in *tharm* 'intestine'
- /rl/: *churl* (e.g. <cherel>), *earl* (e.g. <erel>), *pearl* (e.g. <perel>), *smerl* 'ointment' (e.g. <smerel>), *thirl* 'hole' (e.g. <thirile>), *whirl* (e.g. <whoril>), *world* (e.g. <woreld>); note that *world* has two syllables in OE (*weorold*), so some disyllabic variants of this in ME may represent survivals of that rather than epenthesis
- /rn/: *aforn* 'forward' (e.g. <aforen>), *barn* (e.g. <baren>), *bern* 'man' (e.g. <beren>), *bairn* 'child' (e.g. <berun>), *corn* (e.g. <coren>), *dern* 'secluded' (e.g. <derin>), *ern* 'eagle' (e.g. <eren>), *fern* (e.g. <feren>), *forn* 'before' (e.g. <foren>), *hirn* 'corner' (e.g. <hiron>), *morn* (e.g. <moren>), *quern* 'hand mill' (e.g. <queren>), *scorn* (e.g. <scoren>), *sharn* 'dung, manure' (e.g. <sherren>), *sorn* 'grief, sorrow' (e.g. <soren>), *stern* (aj.) (e.g. <steren>), *thorn* (e.g. <thorun>), *urn* (e.g. <urin>), *warn* (e.g. <waran>)

Dobson (1957: 913) interpreted the evidence provided in Jordan (1934: 138) as indicating that epenthesis in ME is particularly associated with the East Midlands. An analysis of the geographical distribution of epenthesised variants given above lies beyond the scope of this paper, but the details for them given in the MED reveal that although there are indeed numerous records of epenthesis from the East Midlands, such forms are commonly attested across England.

4.2. Evidence for epenthesis in Early Modern English

Perhaps the most well known example of what looks like epenthesis in a liquid+sonorant cluster in Early Modern English is the one referred to above, Shakespeare's *alarum* (< Fr. *à l'arme*), as found, for example, in the memorable line from *Macbeth* Act II, Scene 3 "Ring the alarum-bell. Murder and treason!". Whilst this looks like a classic case of epenthesis in /rm/, Jespersen (1909: 274, 362) hypothesises that this vowel is instead the result of an emphatic pronuniation of trilled French [r] in this word. Whether this explanation is valid or not, it cannot explain Shakespeare's spelling of *film* as <philome> in *Romeo and Juliet* (I.4.63; see Kökeritz 1953: 293), which unambiguously indicates epenthesis in /lm/. Two of Shakespeare's contemporaries, William Bullokar and Philip Henslowe, also provide evidence for epenthesis in liquid+sonorant clusters in Early Modern English. Bullokar records epenthesis in *carl*, *elm*, *helm*, *storm* and *turn* in his *Book at Large* (see Kökeritz 1953: 292, and Dobson 1957: 913), whilst Henslowe spells *warm* as <warem> in his diary (Kökeritz 1953: 293). Dobson (1957: 914) suggests that this feature is particularly associated with writers from the East Midlands and is a continuation of the same pattern in Middle English associated with this area by Jordan (1934). So although evidence for epenthesis in Early Modern English is hardly overwhelming, it was there, at least for some speakers/writers of Early Modern Standard English and it can be assumed that it was also present (given earlier and later evidence) in regional dialects in England in this period too (the sources reviewed in this section of course largely represent Early Modern emergent Standard English varieties). Again epenthesis occurs in (morpheme-final) coda liquid+sonorant clusters, with /lm/ and /rm/ most commonly attested with epenthesis.

4.3. Epenthesis in 19th and 20th century traditional English dialects

An important means of gaining further insight into the distribution of epenthesis in English is the examination of well documented traditional dialects from the 19th and 20th centuries. Although these are obviously removed from the dialects of English which were involved in the formation of Irish English in the 17th century by about 300 years, the archaic nature of these dialects, the detailed records we have of many of them, and the extent to which patterns of long standing in the language are well attested in them makes study of these dialects an important tool for understanding the history of the language, including its expansion to Ireland. Thus, for example, Maguire (2012a) showed that Pre-R Dentalisation, a characteristic phonological feature of Irish English, has its roots in England (and Scotland); in addition to evidence from the Middle English and Early Modern periods pointing to its existence in English in past centuries, data from traditional 19th and 20th century English dialects shows that Pre-R Dentalisation was a widespread feature in England and was essentially identical to Pre-R Dentalisation in Ireland in terms of its linguistic patterning. The inescapable conclusion is that Pre-R Dentalisation was once a common feature in English, and Irish English inherited it from this source. Of course, features are constantly subject to change, so that extrapolation from patterns found in traditional English dialects in the 19th and 20th centuries to earlier centuries must be done with care. But where we find that phonological patterns in traditional 19th and 20th century English dialects match descriptions of earlier stages of the language and indeed contemporary features in places such as Scotland and Ireland, we can be more secure in our projection of them into the past.

With this cautionary note in mind, I examine evidence for epenthesis in liquid+sonorant clusters (/lm/, /rm/, /rn/ and /rl/) in traditional 19th and 20th century English dialects in this section. Outside of northeast England, epenthesis in other clusters is almost entirely absent, with only very occasional examples, such as *work* and *shark* in Suffolk (Kökeritz 1932), being recorded. It should be noted that the northeast of England (specifically north Durham and Northumberland) was traditionally a hotspot for epenthesis (perhaps as a result of its unique uvular pronunciation of /r/), with Cumberland and northwest Yorkshire also having it to a degree, at least in the 19th century (as evidenced in Ellis 1889). These were likely an extension of the pattern described for Scotland (Section 5), and indeed Northumberland takes things further again, with epenthesis being common in /rd/ (e.g. *bird*) and /rz/ (e.g. *ours*, *Thursday*) too.[6] That is, the far north of England is a special case, and it is the state of affairs further south in England which will be considered in most detail in what follows.

4.3.1. Epenthesis in /lm/

In England, epenthesis in words like *film* is typically only associated with northeast England, where this pronunciation is the usual one used by vernacular speakers in the region to this day (Beal et al. 2012: 42). But the data gathered in traditional dialect studies in the 19th and 20th centuries reveals that epenthesis in /lm/ was in fact widespread in England until recently, and indeed was characteristic of the majority of dialects. The earliest survey of English dialect

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[6] In fact, epenthesis in *Thursday* is also present in Older Scots at least (see the *Dictionary of the Scots Language*, http://www.dsl.ac.uk/).

phonology was Ellis (1889), as discussed in detail in Maguire (2012b). Ellis gathered his data in the 1870s (usually) by means of intermediaries who provided phonetic transcriptions (in an alphabet known as the Palaeotype) for short texts and a more substantial wordlist. This wordlist included one word with the cluster /lm/, *elm*,[7] though unfortunately data for it was only gathered at a limited number of locations. Nevertheless, Ellis's data are sufficient to show that epenthesis was present in this word across England (and beyond), as Figure 1 illustrates.

Figure 1 reveals that epenthesis in /lm/ was found from Devon in the southwest and Kent in the southeast to Cumberland in the far north, though it was not recorded in all dialects by any means. This pattern is further documented in Wright (1905), who recorded epenthesis in /lm/ in the words *film* and *helm* in Northumberland, Westmorland, Lancashire, Staffordshire, Leicestershire, Oxfordshire, Kent, Dorset, Somerset and Devon (Wright also recorded epenthesis in *elm*, but most of these data are derived from Ellis 1889).

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[7] Item 272 on Ellis's 'Classified Word List' (see Maguire 2012b).

*Figure 1: Epenthesis in* elm *as recorded in Ellis (1889).*[8]
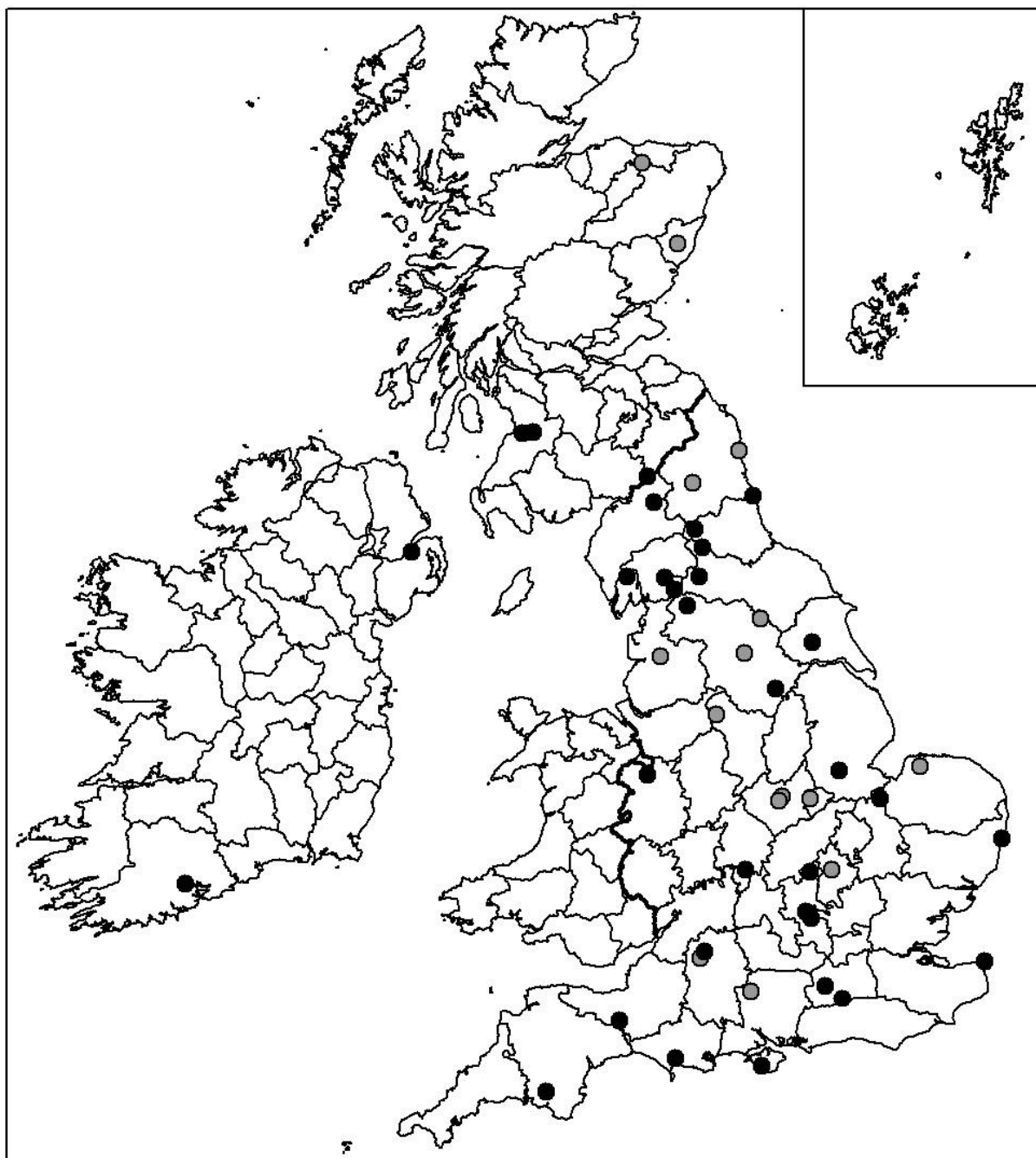
More substantial 20th century records of English dialects confirm this picture. Rydland (1998), a substantial compilation of traditional northeast English phonetic data from the 1920s and 1930s, reveals that epenthesis in /lm/ was ubiquitous in the area in the words *elm*, *film* and *helm*, whilst Kökeritz (1932) records it in *elm* and *helm* in Suffolk. In the mid-20th century *Survey of English Dialects* (SED; Orton and Dieth 1962-71), which is to date the largest survey of the phonology of English dialects, the pronunciation of one word with /lm/, *elm*, was recorded across much of England, as Figure 2 illustrates.

Figure 2: Epenthesis in elm *as recorded in the SED.*[9]
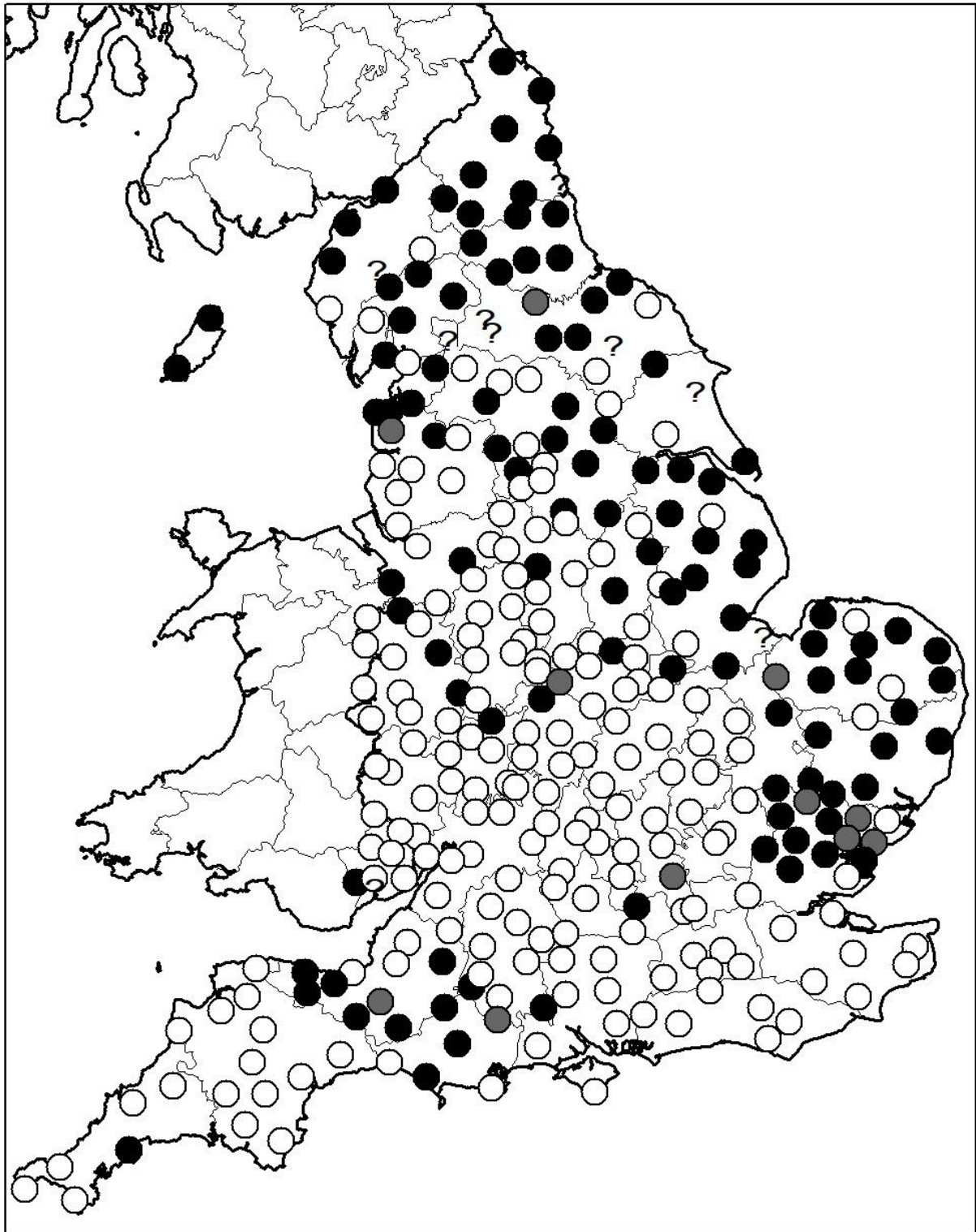
Figure 2 reveals that epenthesis in *elm* was particularly a feature of dialects in Dorset and Somerset, dialects in East Anglia, and in most of northern England (especially the northeast), though it could turn up sporadically in most parts of the country. Although it is difficult to compare the data from Ellis (1889) with the SED data due to the sparsity of locations in the earlier survey, both studies recorded it throughout England. These studies show that epenthesis in /lm/ was a feature of many 19th and 20th century traditional English dialects and, when compared with evidence from the Early Modern and Middle English periods, that /lm/ has long been a feature of English. If the frequency with which epenthesis in /lm/ is attested in the English dialects in the 19th and 20th centuries is long standing, then it is likely to have been common, or even usual, in the English input to Ireland in the 17th century.
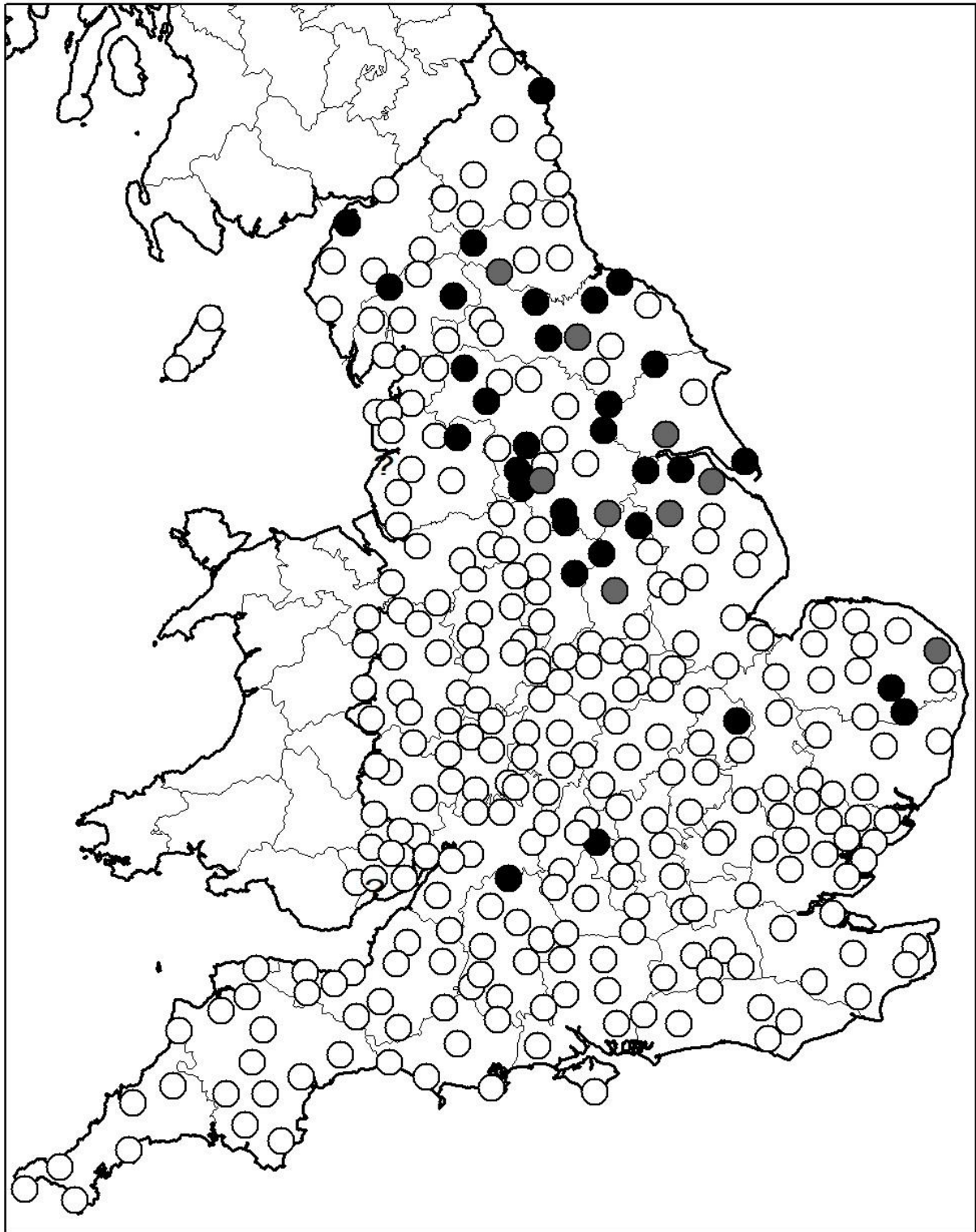
4.3.2. Epenthesis in /rm/

Compared to /lm/, epenthesis in /rm/ is sparsely attested in traditional 19th and 20th century English dialects, except in the far north. Outside of Northumberland, Cumberland, Durham and northwest Yorkshire, Ellis (1889) only records it (in the word *storm*) in Syston in Leicestershire. Wright (1905) adds a couple of other attestations, recording epenthesis in *barm* in Dorset and in *harm* in Sussex (as well as in various words in northwest Yorkshire and Cumberland).

The SED also recorded epenthesis in /rm/ in the far northern counties (see, for example, question VI.6.8 *arm*), but beyond this area epenthesised forms are rare, though it should be said that the SED gathered very few tokens relevant to this feature for most locations, so that it may be that epenthesis in /rm/ is under-recorded in the survey. Thus, for example, the word *farm*, which might be expected to evidence epenthesis in a variety of dialects, is almost always attested in compound and morphologically complex forms (e.g. questions I.1.2 *farmstead*, I.1.3 *farmyard*, and VIII.4.7 *farmer*), which may disfavour epenthesis. A notable exception to this is the transcription given for *farms* for Deerhurst in Gloucestershire (Location Gl1), [fəːˡɾəmz], with epenthesis. Luckily, one word where we might expect epenthesis, *worms* (question IV.9.1), was gathered for all locations, and it reveals that epenthesis in /rm/ was reasonably widespread in traditional mid-20th century English dialects, though by no means a majority form. Figure 3 illustrates its distribution. As expected, epenthesis in *worms* is found in the far northern English counties, but it is not restricted to there. As well as it being recorded throughout Yorkshire, it is also attested in Derbyshire, Lancashire, Lincolnshire and Nottinghamshire in the north, and in a scatter of locations further south, from Wiltshire to Norfolk (and although the SED does not record epenthesis in this word in Suffolk, Kökeritz 1932 does).

Unlike /lm/, then, epenthesis in /rm/ was hardly a defining characteristic of traditional 19th and 20th century English dialects outside of the far northern counties. It was, however, present at low levels throughout much of the country, which accords with the evidence from earlier centuries, and suggests that it would have been present, to an extent, in (some of) the input English varieties in Ireland in the 17th century.

Figure 3: The distribution of epenthesis in worms *in the SED.*

4.3.3. Epenthesis in /rl/

Assessing the extent of epenthesis in /rl/ in traditional 19th and 20th century English dialects is also hampered by the small number of relevant tokens with this sequence gathered at most locations. The chief word we have evidence for is *girl*, which is not the usual word for a female child in many dialects, and which is subject to other changes (such as the frequent reduction to [gɛl]/[gal]) which mean that epenthesis is not an option. Not surprisingly, then, evidence for epenthesis in traditional 19th and 20th century English dialects is sparse, but whether this is because epenthesis was uncommon or because it is under-attested is unclear.

Ellis (1889) provides evidence for two words with /rl/, *girl* and *world*. Neither of these is unproblematic, *girl* for the reasons mentioned above, and *world* (in fact derived from a disyllabic Old English form such as *weorold*), which appears in some locations in the north and southwest in a metathesised form '*wordle*', a form that goes back to the late Old English period. In any case, epenthesis in the two words is only rarely recorded in Ellis (1889). Outside of Cumberland and northwest Yorkshire (where it was common), he recorded it Shorwell, Isle of Wight, in *girl*, in Tilshead, Wiltshire, in *world*, and in Winterborne Came, Dorset, in the additional word *twirl*. Wright (1905) adds very little more to the picture, giving *hurl* with epenthesis in east Dorset in addition to several of the instances recorded by Ellis.

Twentieth century evidence for epenthesis in traditional English dialects in /rl/ is sparse. This is partly because our main source of information for these dialects, the SED, includes only the word *girl* which, as noted above, is not used in many dialects and is phonetically reduced in most of those that do have it. Thus in the SED, there is only one record of epenthesis in /rl/ in *girl* (question VIII.1.3), from Oxfordshire (O4, Eynsham). Other 20th century sources provide a few other examples, with epenthesis in /rl/ being consistently recorded in northeast England (Rydland 1998), in Dentdale in northwest Yorkshire (Hedevind 1967), and, strikingly for a southerly location, in Nauton in Gloucestershire (Barth 1968: 47), which lies less than 15 miles west of Eynsham. So although epenthesis in /rl/ hardly appears to be a common characteristic of 19th and 20th century traditional English dialects, it does occur sporadically across the country, and it is possible that the paucity of data for this cluster means that other cases have gone unrecorded.

4.3.4. Epenthesis in /rn/

Of all of the liquid+sonorant clusters, epenthesis in /rn/ is the least common in the traditional English dialects of the 19th and 20th centuries, at least outside of the far north. Beyond this area, Ellis (1889) only records it in a single token (*horn*) in Keighley in southwest Yorkshire, and in two tokens (*corn* and *horn*) in Syston in Leicestershire. Wright (1905) also recorded it in *barn* in Dorset. Twentieth century sources, other than those for the far north, suggest that epenthesis in /rn/ was largely absent in the rest of England, with the SED, for example, only recording it in Northumberland (where it was common, as it was in the 1930s, according to the data in Rydland 1998) and in a single token in Holmbridge in south Yorkshire (*fern*). The essential absence of epenthesis in /rn/ over most of England in the 19th and 20th centuries represents a significant departure from the Middle English period, when it was common, a change which is prefigured by rare attestation of the feature in the Early Modern period.

4.4. Summary of epenthesis in England

Epenthesis in liquid+sonorant and, to a lesser extent, other liquid+consonant clusters has been a characteristic feature of English dialects throughout their history, sporadically recorded in OE (but with numerous parallels in other West Germanic languages), common in Middle English, and sparsely attested in Early Modern English. In 19th and 20th century traditional English dialects, epenthesis in /lm/ was widespread, epenthesis in /rm/ was not uncommon, and epenthesis in /rl/ and especially /rn/ was rarely attested outside of the far north. As is the case in Irish English (but not Irish), epenthesis was essentially restricted to morpheme-final position, with occasional instances in the 20th century dialects suggesting that it occurred more specifically in stem-level coda position (e.g. *Thur*[ə]*sday* in northeast England). As will be seen in the next section, the same constraints apply to epenthesis north of the Scottish-English border too.

5. Epenthesis in Scots

Epenthesis in liquid+sonorant clusters, for example in *airm* [eːrəm] ('arm'), is a well known feature of Lowland Scots, the Insular West Germanic language (or group of dialects under the wider umbrella of 'English') which developed from early northern Middle English in Lowland Scotland (see Maguire 2012c and 2015 for an overview). This section gives only a brief outline of epenthesis in Scots, since full details of it are laid out in Maguire (2017).

Maguire (2017), examining the unpublished data underlying the phonological component of the *Linguistic Atlas of Scotland* (Mather and Speitel 1986), showed that epenthesis in Scots occurs primarily in the morpheme-final coda clusters /lm/, /rm/, /rn/ and /rl/, and that epenthesis in all of these clusters is found, at very high rates (at levels close to or over 70%), across Lowland Scotland. Epenthesis in these clusters in word-internal position (which are almost always split across syllable boundaries, as in the word *corner*) is unrecorded in Scots, though Maguire noted that data are lacking for the feature preceding morpheme boundaries or in internal coda position. And although epenthesis is occasionally found in other clusters in some Scots dialects (e.g. /rb/ and /rk/), this is rare.[10] In all of these respects, epenthesis in Scots bears close similarity to epenthesis in English, including Irish English varieties.

Maguire (2017) also investigated the history of epenthesis in Scots and pointed to evidence suggesting that the feature is of long standing, going right back to the earliest Older Scots records from the late 14th century. Given that Scots and northern Middle English were barely separate entities at this time (see Williamson 2002), a connection between the highly similar forms of liquid+consonant (especially sonorant consonants) epenthesis found in Older Scots and Middle English (Section 4.1) is undeniable. That is, the essentially identical epentheses in Older Scots and Middle English have the same origin, so that epenthesis in Scots has nothing to do with epenthesis in Gaelic in Scotland (see Maguire 2017). That this is the case is reinforced by the facts that epenthesis in Scots is not all that similar to epenthesis in Gaelic, and that epenthesis in Scots is found equally across Lowland Scotland, including in areas which have not had contact with Gaelic in many centuries.

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[10] For the case of Scots epenthesis in /rz/, see Footnote 4.

Given the presence of epenthesis in liquid+sonorant clusters in most varieties of Scots, and the presence of epenthesis in the language throughout its recorded history, we must assume that epenthesis was present in the Scots dialects brought to northern Ireland in the 17th and early 18th century settlements from Scotland. And given that MUE is replete with features of unambiguous Scots origin, as noted in Section 2.2, the role of Scots in the development of epenthesis in northern Ireland (if not elsewhere in Ireland, where Scots settlement was rare or non-existent) must be considered.

6. Epentheses compared

Section 2.3 described epenthesis in Mid-Ulster English (particularly in Southwest Tyrone English), whilst Sections 3-5 laid out the patterning of epenthesis in Irish, English and Scots respectively. Table 1 compares these patterns of epenthesis so that the similarities and differences between them are made clear.

Table 1: Epenthesis in MUE, English, Scots and Irish.

Cluster	MUE	English	Scots	Irish
n + other	-	-	-	Y
r + other	rare	sporadic historically	rare	Y
rl	sporadic	sporadic / historical	Y	N
rn	sporadic	sporadic / historical	Y	southern dialects
rm	variably present	variably present in some dialects / historical	Y	Y
lm	Y	Y	Y	Y
l + other	N	N (sporadic in OE)	N	Y

Epenthesis in /lm/ is characteristic of MUE (indeed all of Irish English), most non-standard dialects of English into the mid-20th century, Scots and Irish. Likewise epenthesis in /rm/ is found in all these varieties, though it is only variably present in MUE and was almost certainly recessive in English dialects by the 20th century. Epenthesis in /rn/ is also found in all of the varieties, though it is only typical of southern dialects of Irish, had largely been lost in English by the 20th century, and is at most sporadic in MUE. Epenthesis in /rl/ is absent in Irish, and is again sporadic/historical in MUE and English. In other /rC/ clusters, epenthesis is regularly present in Irish unless the second consonant was a voiceless stop or /d/, whilst epenthesis in /rv/, /rb/ and /rk/ has only occasionally been recorded in some Irish English varieties, and a similar situation holds for Scots and Middle English. Epenthesis in other /lC/ clusters and in /nC/ is only found in Irish (*wylif* in OE aside).

The picture that emerges from this comparison is that MUE has epenthesis where all of the other varieties also have epenthesis. In fact, epenthesis in MUE looks most like epenthesis in English, then like epenthesis in Scots, and least like epenthesis in Irish, and if Irish were removed from Table 1, the same pattern would remain, and indeed would be stronger. The dissimilarities between Scots and English appear to be recent, since epenthesis in Middle English and in Scots (including in Older Scots) is very similar, with epenthesis in /rl/ and /rn/ mostly being lost in English (outside of the northeast) by the 20th century. The lack of epenthesis (other than sporadically) in /rl/ and /rn/ in MUE may reflect this loss in English, or it may be the result of a separate (though perhaps historically related) change. Traditional MUE dialects have typically lost schwa in historical /rən/ and /rəl/ sequences, as shown in the following examples (from traditional SwTE, where this loss is regular):

- *Aaron* (/ɛrn/), *currant* (/kʌrn/), *herring* (/harn/)
- *barrel* (/barl/), *Harold* (harl/), *peril* (/pɛrl/)

Given this loss of historical schwa between /r/ and /n/ or /l/, we would hardly expect epenthesis to create these sequences in the dialect, though of course it may have done in the past and been reversed by this change. That is, epenthesis in earlier forms of MUE may have been just like it is in Scots and in earlier varieties of English, but this would have been obscured by subsequent developments. The occasional records of epenthesis in /rl/ and /rn/ in some MUE dialects may reflect limited survival of this epenthesis, assuming that they aren't the result of hypercorrection (see Footnote 1).

Following this line of argument, it is worth briefly considering whether other epentheses, of the type found in Irish, were once found in MUE but have been masked by a similar loss of schwa in unstressed syllables, so that the differences in epenthesis between MUE and Irish can be explained by subsequent change. Given the lack of schwa loss in traditional MUE (in this case SwTE) in words such as *Arab* /arəb/, *cherub* /ʧɛrəb/, *sheriff* /ʃɛrəf/ and *Olive* /ɔləv/, it appears that such a scenario is untenable, and there is no evidence that epenthesis in clusters such as /rb/, /rf/ and /lv/ has been systematically lost in the dialect.

Table 1 only tells part of the story, however. In addition to differences in the clusters affected, epenthesis in Irish on the one hand, and MUE, English and Scots on the other, were subject to different constraints. In Irish, as is described in Section 3, epenthesis occurs in relevant clusters not only morpheme-finally but also morpheme-internally, including across syllable boundaries, unless there is a preceding long vowel or the cluster is followed by two or more syllables. In contrast, epenthesis in MUE (indeed Irish English generally), English and

Scots occurs almost exclusively in morpheme-final coda clusters (where it may be retained before inflectional suffixes in some varieties). The very few exceptions to this general rule (e.g. *Thur*[ə]*sday* in Scots and Northumberland, *Ar*[ə]*mstrong* in SwTE, and *cur*[ə]*lew* in Roscommon) suggest that the general English/Scots rule is that epenthesis is possible in stem-level coda position only, which in most cases mean morpheme-finally. In other words, the constraints on epenthesis in MUE, English and Scots are the same but are rather different than those on epenthesis in Irish, even ignoring the clusters that are affected.

In summary, then, an analysis of epenthesis in MUE, English, Scots and Irish shows that epenthesis in MUE is very similar to epenthesis in English and Scots, both in the clusters affected (especially if earlier epenthesis in /rl/ and /rn/ has been lost) and in its metrical constraints, but is not very similar at all to epenthesis in Irish. This is also true of other Irish English dialects. The consequences of these findings are discussed in the next section.

7. The origins of epenthesis in MUE

The analysis of epenthesis in Sections 2-6 points to a surprising conclusion: epenthesis in MUE, and indeed in Irish English generally, has much more in common with epenthesis in English and Scots than it does with epenthesis in Irish. This is despite the fact that most previous researchers have assumed an Irish origin for the phenomenon in Irish English. It is not hard to imagine why they might have done so (there are similarities), but the similarities are only superficial, and they are nowhere near as striking as the similarity between epenthesis in MUE and in English and Scots. Many of the English and Scottish settlers of northern parts of Ireland in the 17th and early 18th century spoke varieties of English and Scots characterised by stem-level coda epenthesis of the sort described in Sections 4 and 5 of this paper. The dialects of the majority of Scottish settlers would have had this kind of epenthesis if the historical and 20th century records of Scots are anything to go by. Epenthesis of the same sort would have characterised the speech of many of the English settlers too, especially in /lm/ (until the 20th century found throughout much of England), but also, probably to a lesser degree, in /rm/ (by the 20th century no longer present in many English dialects, but still reasonably well represented then and in earlier periods) and other clusters. Given the close similarity between epenthesis in Scots and English on the one hand, and in MUE (and other Irish English varieties) on the other, it is impossible that epenthesis in MUE does not have its origin, for the most part at least, in the epenthesis brought to Ireland by the English and Scots settlers (though subsequent change has largely removed epenthesis in /rl/ and /rn/ from the dialect). To think otherwise requires that the stem-level coda epenthesis which was certainly present in the English and Scots inputs did not survive the process of new dialect formation that gave rise to MUE, but that MUE nevertheless developed exactly the same kind of stem-level coda epenthesis as English and Scots, either independently, or as a result of influence from Irish, which has epenthesis of a rather different sort. The question is not whether English and Scots contributed significantly to the presence of epenthesis in MUE but whether Irish played any role in its development. Given the (admittedly superficial) similarities with Irish, is there any role for Irish in the development of epenthesis in MUE and other Irish English varieties? To put it another way, is it only by chance that a phenomenon which is so characteristic of Irish turns up, albeit in a rather different form, in Irish English too?

Given that Irish English (including MUE) is generally considered to show considerable evidence of Irish influence as a result of language shift, leading to transfer/imposition of Irish features (see, for example, Bliss (1984), Filppula (1999), Hickey (2007a), and the wider acceptance of this in general accounts of language contact, e.g. McColl Millar (2016: 97-105), Thomason (2001: 79), Thomason & Kaufman (1988: 43), and Winford (2005)) we might expect that Irish has played a role in the development of epenthesis. As Thomason and Kaufman (1988: 60) point out, "In interference through shift, if there is phonological interference there is sure to be some syntactic interference as well, and vice versa". We know that there has been syntactic interference from Irish in the development of Irish English, including some in MUE, so we might also expect to find evidence of phonological interference.

How would this have worked with respect to epenthesis? Irish speakers, shifting to English/Scots, would have carried over their automatic, synchronic rule of epenthesis into the target language, creating epenthesis in the 'illegal' clusters /rb/, /rg/, /rf/, /rv/, /rm/, /rn/ (southern dialects only) /lb/, /lv/, /lm/ and /nv/. Other possible targets of epenthesis (/rx/, /lx/, /nb/, /nx/, /nm/) do not exist morpheme internally in English and Scots so could not be affected. The result would be that shifting speakers would have epenthesis in words such as *disturb*, *morgue*, *turf*, *starve*, *farm*, *burn* (sometimes), *bulb*, *twelve* and *elm*, and also in *barber*, *organ*, *Mervyn*, *turmit*, *elbow*, *silver*, *Gilmour* and *anvil*. Although some of these epentheses were found in the English and Scots of the settlers, or the Mid-Ulster English dialect which developed subsequently, this imposition of Irish epenthesis would have put these new speakers considerably out of step, in terms of epenthesis, with other speakers of English. In cases where epenthesis in the speech of shifting Irish speakers matched epenthesis in other speakers of English (i.e. in coda /lm/, /rm/ and, in some cases, /rn/), the over-all proportion of the population having epenthesis in coda position in /lm/, /rm/ and, possibly, /rn/ would have been increased, so that although there was variation in the amount of epenthesis in these clusters in English, and although general trends in English may have been for it to disappear (as was it doing in England, though note that epenthesis of various kinds survived there well into the 20th century), it was instead *reinforced* in Ulster (and elsewhere in Ireland). Conversely, epenthesis in other clusters (/rb/, /rg/, /rf/, /rv/, /lb/, /lv/, /nv/) and in non-coda position (e.g. in *turmit*, and *Gilmour*) would have been found only in the speech of shifting speakers, and would have received no support from other speakers of English. Thus, these kinds of epenthesis would have remained in the minority, especially if Irish speakers shifted to English over a prolonged period (as we know they did in most of Ulster – see Section 2.2) so that the number of newly shifted speakers at any one time was not a majority of the population. Thus these epentheses would have been levelled, not becoming part of MUE more generally.

This kind of reinforcement (that is, strengthening or preservation of a feature in the target language which might otherwise be expected to disappear due to it being a variable or recessive feature), is a well-known idea in models of language and dialect contact (see in particular Filppula (1999), Siegel (1999), Thomason and Kaufman (1988: 58, 242), and Trudgill (2004)). It is not unproblematic, however. Whilst it makes intuitive sense, it is impossible to prove that it happened if the reinforcement did not lead to some change, however minor, in the feature, distinguishing it from what might well have been inherited in any case (see Siegel 1999). That is, unless the process of reinforcement changed something, how do we know it happened at all? Arguments that a feature would not have survived in the new dialect as it has disappeared in other (non-contact) dialects of the language might lead us to suspect

that reinforcement has led to the preservation of the feature, but this is not in itself evidence of change, since divergence between dialects inevitably mean that some features will survive in one dialect and not in another. And if reinforcement did lead to some definitive change in a feature, such that the effects of imposition/interference can be clearly pinpointed, then we are no longer dealing with just reinforcement but with phonological interference/imposition of a more substantial kind.

When epenthesis in MUE is considered in this light, it is not clear that anything has definitively changed in its nature as a result of Irish influence. Epenthesis in MUE is essentially identical to epenthesis in English and Scots, subsequent change to /rl/ and /rn/ aside. The very sporadic records of epenthesis in clusters such as /rb/, /rv/ and /rk/ in MUE (or other Irish English varieties) hardly support Irish influence, as they are so rare, are found only in coda position, and have some parallels in (earlier) English and Scots. Indeed epenthesis in /rk/ is impossible in Irish, though it is occasionally attested in Scots and English dialects. There is no evidence of general extension of epenthesis to those clusters where it is only found in Irish, nor to non-coda position. All we have is the presence of epenthesis, exactly where we would expect it to be given the English and Scots antecedents, in a dialect which is known to have been in contact with Irish, which is not enough to allow us to definitely assign a reinforcing role to Irish. As Thomason (2001: 93-94) reminds us, "we must prove that the shared features – the proposed interference features – were not present in the receiving language before it came into close contact with the source language. That is, we have to prove that the receiving language has changed by innovating these features". Thus the inherent weakness in the idea of reinforcement forces us to say that Irish may well have reinforced epenthesis in MUE (and other Irish Englishes), but we can't really tell for sure.

Turning the questions around, is it possible that epenthesis in MUE developed without input from Irish? Is Irish necessary if Scots and English together, along with subsequent schwa loss in homorganic sequences, gets us the MUE situation, and if the constraints in MUE match English and Scots but not Irish? Given that stem-level coda epenthesis of the same sort as is found in MUE is characteristic of Scots and English throughout their histories, and that we can be confident that this feature was present in the speech of a substantial number of the English and Scots-speaking settlers in northern parts of Ireland in the 17th and early 18th centuries, the answer to this question has to be that the feature may well have been inherited by MUE without input from Irish. It is worth remembering that epenthesis was a consistent feature of most dialects of Scots into the mid 20th century, and is still common today. And although there are signs that epenthesis in English has been in decline since the ME period (Section 4), epenthesis in a number of clusters, especially /lm/, was a characteristic feature of most English dialects into the mid 20th century, and indeed is still found in northeast England today. Furthermore, Beal (2010: 20) hypothesised that epenthesis in /lm/ in particular has survived in northeast English partly as a result of the noticeably clear pronunciation of the /l/ in the area, "as a clear /l/ followed immediately by /m/ or /n/ is very difficult to produce". Maguire (2017: 167-168) found that this effect was also present in mid 20th century Scots dialects, with dialects characterised by clear [l] significantly more likely to have epenthesis in /lm/ than those with dark [ɫ]. Given that Irish English (including MUE) is well known to be characterised by clear [l] in all positions, it should be no surprise to discover, given that there is a positive correlation between clear [l] and epenthesis in /lm/ in other dialects of English/Scots, that epenthesis in /lm/ is also characteristic of MUE and other Irish English dialects. In other words, not only can

the presence of epenthesis in /lm/ in MUE be explained as a result of inheritance from English and Scots, it is also likely to be a result of the quality of /l/ in the dialect, which, despite claims to the contrary, was also inherited from English (Moylan 2009). Thus the unprovable reinforcement of epenthesis in MUE by Irish is only the weakest amongst several explanations of the phenomenon.

8. Conclusions

An important consequence of the analysis in this paper is that Irish does not appear to have played a major role in the formation of the segmental phonology of MUE. At most, it played a reinforcing role in the transmission of epenthesis from English and Scots into MUE. It is worth pointing out that in accounts of Irish influence on the phonology of Irish English, epenthesis is almost always one of the key features given as evidence of this influence. But if Irish played only a minor or even no role in the development of this most Irish-like of phonological features of MUE, then the supposed input of Irish into the phonology of MUE (and perhaps other Irish English dialects) has been overstated. And this is not only true of epenthesis. Some of the other key features of MUE (and many other Irish English dialects) that have regularly been assumed to be of Irish origin also turn out to have their source in English and/or Scots in Britain, with Irish at most playing a reinforcing role (see Section 2.2). All of these features have close parallels in contemporary and/or historical varieties of English and Scots whilst only having vague similarity to various phonological features of Irish. In light of this, the statement in Lass (1990: 148) that, phonologically, Irish English developed "not as a 'contact English' in any important sense … but as a perfectly normal first-language, internally evolved variety, with only marginal contact effects" does seem to have some truth, though of course for MUE that would involve ignoring the contact between English and Scots that has given rise to its distinctive phonology, and it ignores the obvious (if not always extensive) lexical and syntactic influence of Irish on MUE and other varieties of Irish English.

The idea that Irish may have had less impact on the development of the phonology of MUE (and perhaps other Irish Englishes) than has previously been assumed by most researchers may seem counterintuitive given that we know that Irish and English have been in contact in Ulster for centuries, we know that speakers of Irish have been shifting to English throughout most of that period, and we know there has been some (though not always extensive or unambiguous) influence from Irish on the lexis and syntax of MUE and other dialects of Irish English. How, then, might we explain the apparent sparsity of evidence for the influence of Irish on the phonology of MUE (as illustrated in this paper for one of the key 'Irish-like' phonological features of the dialect)? A detailed exploration of this issue will require much more research and is beyond the scope of this paper, but a few final thoughts are in order. It is not the case that language contact, more specifically language shift, need always lead to imposition/interference. The extent to which shifting speakers will influence the target language depends on a range of factors (Siegel 1999, Thomason 2001: 59-85, Thomason & Kaufman 1988: 46-57), including over-all demographics, the numbers of shifting speakers compared to the numbers of native speakers at any particular point in time, the time-scale of the language shift, the degree of bilingualism (and the extent to which shifting and native speakers are bilingual), the attitudes of speakers, and the structural compatability of the two languages. Thomason & Kaufman (1988: 41) note that "if the shift takes place over long

centuries, then the shifting population is likely to be truly bilingual in the TL. In such a case there is no imperfect learning, and consequently no interference in the TL". As was discussed in Section 2.2, bilingualism in the Mid-Ulster area was uneven, with the settlers being much more likely to be monolingual or dominant in English, and the Irish speakers learning English. These speakers of Irish in the Mid-Ulster area shifted to English over the course of almost four centuries, and they did so gradually, adopting the speech of an economically and politically more powerful community, so that at any one time the number of shifting speakers, whose speech may well have been full of phonological features of Irish origin, was small in comparison with the number of speakers of English. Thus the interference features would only have constituted a minority of forms in the speech community and would have been subject to levelling, especially if they were typically associated with the speech of low prestige, rural Catholic speakers.[11] But those features of Irish-influenced speech which found close parallels in English and Scots would have increased the numbers of speakers in the community with these particular patterns, and may have reinforced these features (assuming that they had any effect on their development at all). In such a scenario, epenthesis, a feature of English and Scots with a long history in Britain, was inherited by the Plantation settlers in Ulster and was learned and perhaps reinforced by the shifting speakers of Irish. But MUE epenthesis, and indeed epenthesis in other dialects of Irish English, has retained its West Germanic character and shares little in common with the extensive epenthesis found in Irish. The same may be true of the vast majority of phonological features of the dialect.

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[11] Todd (1984) hypothesised that Irish English features of Irish origin are specifically characteristic of Catholic speech in Northern Ireland, reflecting the greater likelihood that Catholics are descended from Irish-speaking Catholic ancestors (whilst Protestants are more likely to be descended from Protestant settlers from England and Scotland). Since levels of epenthesis in SwTE are the same for Protestant and Catholic speakers (see Section 2.3), either Todd's hypothesis is incorrect or this feature is not of Irish origin (or both).

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