Mergers, losses and the spread of English

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1 Introduction

The current chapter is intended to take a focussed look at a specific type of phonological development in forms of English, especially those which have arisen in the course of the last four centuries. The development in question leads to mergers, either of vowels or of consonants which were distinguished in the varieties of English taken to overseas locations during the colonial period.

The mergers to be considered vary considerably in their occurrence across the anglophone world. Some are virtually universal, e.g. the homophony in the TURN – TERM set. The lack of other mergers is now practically only found in the British Isles (Upton and Widdowson 1996; Wells 1982), e.g. distinct vowels in the MEAT – MEET lexical sets. Still other mergers are now confined to a specific phonotactic environment, e.g. homophony in the PEN – PIN set which is confined to pre-nasal positions.

Some mergers appear to lie below the level of consciousness for speakers, going on popular comments on emerging varieties in former English colonies (see the discussions in Hickey ed., 2010). This is true of the HOARSE – HORSE merger which has occurred virtually everywhere in overseas varieties of English (but see section 5.1 below) and which has always led to a raising of the open vowel in the HORSE set. Sociolinguists in general believe that mergers are not the object of censorious comments (Labov 2010: ???) even though they may lead to homophony.

Consonantal mergers are an equal source of insight into the development of overseas varieties of English. Certain mergers are very confined geographically and numerically, e.g. the WET – VET merger (Trudgill, Schreier, Long and Williams 2004; Childs and Wolfram 2008: 247) whereas others are so widespread as to be the norm for all overseas varieties of English, e.g. the WHICH – WITCH merger, now only typical of conservative forms of Scottish and Irish English.

There are also consonantal mergers which are indicative of independent developments in second language varieties of English or indeed in pidgins and creoles. One of these is the THIN – TIN merger and another is the HALL – ALL merger, though the latter has at least one source in input colloquial varieties of south-eastern British English.

Apart from a brief discussion of these mergers this chapter will attempt to account for the phonological motivation behind these mergers and will mention the role of the merged pairs in the overall sound system of the varieties with the mergers.

It should be pointed out that not all mergers lead to the loss of a sound. For instance, the PEN – PIN merger did not remove all instances of the DRESS vowel in those varieties in which it occurred so it is a merger without loss. However, the WHICH – WITCH merger did indeed lead to the loss of the [w]-sound when it took place. This distinction is important in the analysis of the sound system of a variety
but there is no evidence that the loss of a potential segment through merger is in any way a retarding factor in the operation of the merger. In this chapter, for reasons of clarity, vowels are transcribed in relatively simple form, monophthongs with a single phonetic symbol and diphthongs with two. However, realisations of phonological segments can show phonetic nuances, not necessarily captured in transcription, which are crucial for the maintenance of distinctions between the members of different lexical sets. For instance, off-glides from vowel nuclei can help to keep distinctions in varieties which show a tendency towards mergers. For instance, the THOUGHT and LOT lexical sets have been traditionally kept apart in Southern American English by an offglide in the members of the former set, i.e. THOUGHT words have had [ɔo] whereas LOT words have had [ɔ]. But the offglide is often a socially stigmatised feature (Tillery and Bailey 2008: 120) and increasingly is dropped by Southern urbanites leading to the merger of the THOUGHT and LOT lexical sets. There may also be the situation that a vowel has an offglide but the same combination is used in two lexical sets, that is there is a merger, e.g. FORCE and NORTH in African American English which both have [ɔo] (Edwards 2008: 185).1

Homophony is the result of merger, but the latter is not the only source of former. For instance, by the deletion of segments homophones may arise but without a merger of vowels or consonants. A case in point would be the homophony which resulted from the loss of syllable-coda /l/ in African American English. Because of this, word pairs like roll and row are homophonouns, both [ro] (Edwards 2008: 186),

2 Non-conditioned mergers

This class of mergers is characterised by the fact that the two segments which become identical have not done so due to their phonotactic environment. Word position may be a factor (see the WHICH — WITCH merger in the following section) but with non-conditioned mergers the removal of a phonetic distinction between members of two formally distinct lexical sets is not triggered by surrounding sounds, especially the following sound. A clear example of a conditioned merger is the coalescence of PEN and PIN (see section 4.1) where the mid vowel of the first word is raised due to the raising effect of the following nasal.

2.1 WHICH — WITCH

At the beginning of the twenty-first century there are very few varieties of English which maintain a consistent distinction between the initial sounds in words like which and witch. The difference is between a voiceless labiovelar fricative [ʍ] (written wh-) and a voiced one [w] (written w-). In conservative forms of American English the distinction was known to have existed but it is highly recessive even in traditional forms of English in both the United States (Nagy and Roberts 2008: 61). In Ireland which and witch are now homophones for all young speakers of supraregional Irish English (Hickey 2003) so that Scotland is the sole anglophone

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1 Weldon (2008: 198), reporting on the speech of single speaker, maintains that there is a phonetic distinction between realisations of NORTH and FORCE in Gullah.
region in which this distinction is still maintained consistently by large numbers of
speakers.
In all cases where the homophony of which and witch has arisen the resulting
single sound is voiced, i.e. [w]. Because of the high sonority of glides, it is not
surprising that the merger is to the voiced member of the pair. Furthermore, there
was already a phonotactic restriction which applied to [w]: it only occurred in
absolute word-initial position whereas [w] was, and is, found in post-consonantal
position, e.g. twin [twin].

One interpretation of the merger of [w] with [w] (Hickey 2007: ???) sees it as
motivated by the phonological regulation of the relationship between vowels and
glides, all of which are voiced in those varieties which have no voiceless [w]. So
one can consider the system-based evidence for analysing [w] in Irish and Scottish
English as consisting of /h/ + /w/. One might think to begin with that /w - w/ form a
voiced - voiceless pair in English like /s - z, t - d, p - b/, etc. However, the arguments
for regarding [w] as /h/ + /w/ are more compelling. The first segment in /hw/
correlates with /h/ word initially, that is, to postulate /h/ + /w/ has additional
justification in the fact that initial /h-/ occurs anyway (in all varieties with [w]).
Conversely, no variety of English with /h/-dropping also has [w], i.e. lack of /h-/
precludes the cluster /hw-/, i.e. [w]. There is a further argument from syllable
position. Standard wisdom on syllable structure sees an increase of sonority from
dge to centre. Analysing [w] as /hw/ means that one has a fricative /h/, then a glide
/w/ (a continuant with open articulation) and a following vowel which is in keeping
with the sonority cline for sound segments. There are also other considerations.

(1) a. \[w\] = /hw/

\[
\begin{array}{cccccc}
\text{voiceless} & \# & \text{voiced} & \text{voiced} & \text{voiced} & \text{voiced} \\
\text{obstruents} & \# & \text{obstruents} & \text{sonorants} & \text{glides} & \text{vowels} \\
[h] & \# & \text{w} \\
\end{array}
\]

Syllable edge \-------------> Centre

b. \[w\] = /w/

\[
\begin{array}{cccccc}
\text{voiceless} & \# & \text{voiced} & \text{voiceless} & \text{voiceless} & \text{voiced} \\
\text{obstruents} & \# & \text{obstruents} & \text{sonorants} & \text{glides} & \text{glides} & \text{vowels} \\
[w] & \# & \# \\
\end{array}
\]

Syllable edge \-------------> Centre

Cross-linguistic observations have led in phonology to many valid statements
concerning markedness, here understood in a statistical sense (ref., check de Lacy
2006: ???; ed., 2007: ???). Thus voice is unmarked for vowels, glides and sonorants
just as voicelessness is for obstruents, i.e. there are more languages with voiced
sonorants than with voiceless ones and more languages with voiceless obstruents
than with voiced ones. English does not have voiceless sonorants or glides, so that to
posit /w/ would mean that there would be an unevenness in the distribution of
sonority going from syllable edge to centre as can be seen from the two
interpretations of [w] given in (1).

The interpretation of the WHICH — WITCH merger which sees it as the shift
of /hw/ to /w/ has a further advantage when one considers the spread of English. The establishment of symmetry in the distribution of approximants, glides and vowels, as sketched in (1a) above, obviates the necessity to posit a historical connection and a common external motivation for those varieties which have gone through the WHICH — WITCH merger. Thus early New Zealand English, in the late nineteenth century, showed [ʍ] to a certain degree (E. Gordon 2010: 351), but lost this later independently of developments elsewhere in the anglophone world.

2.2 HORSE — HOARSE

Among present-day varieties of English only a small number still have a distinction between the vowels in horse /hɔː(r)s/ and hoarse /hoːrs/. This merger has been described by J. C. Wells under the lexical sets FORCE and NORTH (Wells 2003: 234-237) where the former has the lower vowel and the latter has the higher vowel. This is true of other word pairs such as morning and mourning (Kurath 1971) with [ɔː] and [oː] respectively. In all varieties where the distinction is missing it is the higher [oː]-vowel which is found (unless there is a general lowering of /oː/). The historical distribution of the [ɔː] and [oː] vowels shows a slight historical preference for the high vowel in Anglo-Norman loanwords, e.g. court, force, sport. Native Germanic word show a mixed distribution, e.g. corn, horn with [ɔː] but torn, shorn, worn with [oː].

One possible motivation for the merger of [ɔː] and [oː] might be that, because the distribution is unpredictable, speakers decided on one vowel for the elements of the FORCE and the NORTH lexical sets. However, there are many instances of lexicalised pronunciations in English so that putative difficulties with assigning vowels to individual words is not convincing as an explanation for mergers, at least with L1-speakers. Furthermore, speakers of varieties which maintain the distinction between [ɔː] and [oː] do not have any difficulty in keeping the members of the two lexical sets apart. Furthermore, the ‘difficulty with assignment’ explanation does not account for why the higher vowel wins out in the merger.

However, an internal motivation (Hickey 2012a) for this merger can be given. Consider that in the early modern period (at different times for different varieties) the distinction between inherited [eː] and [ɛː] – as in meat and meet respectively – was lost with the two vowels merging to [ɛː] which was then raised to [ɛː]. The net effect of the merger was to remove a systemic unit, here /eː/, from the sound system of English. The merger of morning and mourning did the same, but among back vowels, so that varieties with the latter merger have a more symmetrical distribution of vowels across phonological space.

(2) *Four long vowel systems in the history of English*

<table>
<thead>
<tr>
<th>Level</th>
<th>Front</th>
<th>Back</th>
<th>Late Middle English outset</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>iː</td>
<td>uː</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>eː</td>
<td>oː</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>eː</td>
<td>oː</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>aː</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The merger of both Middle English /eː/, /eː/ and /ɔː/, /ɔː/ did produce several cases of homophony so that an argument based on the avoidance of homophony would not account for the developments considered here (Milroy 1992: 14-15). Equally, the retention of distinct pronunciations in some vernacular varieties can hardly be motivated by this argument either because, if it was, then one would have to offer reasons in principle why one set of varieties maintained the distinctions while others did not.

Section 2.3 MEAT — MEET

This merger, alluded to in the previous section, essentially refers to the raising of Middle English /eː/, as in the word meat, to /eː/ at which stage it shared its further development with those words which had Middle English /eː/, finally reaching /iː/ in the seventeenth century in southern England (ref. from Lass/Dobson/McMahon). Many conservative varieties of English in the British Isles, notably Scottish and Irish varieties, retained the non-raised vowel /eː/ or /eː/ in words which now have /iː/, i.e. in both the MEAT and the MEET lexical sets.

The raising of both /eː/ and /eː/ to /iː/ did not, however, leave English without an /eː/-vowel as all instances of Middle English /aː/ (except before /r/) were raised to /eː/, resulting in the FACE lexical set, e.g. pace, tale, mane, etc. In addition, the Middle English diphthong /ai/ was smoothed to /eː/ further increasing the token of this mid front vowel, e.g. tail, gain, hair. These developments led to the vowel configuration given in (2ii) above.

The MEAT — MEET merger is much earlier than the HORSE — HOARSE merger and separate pronunciations of the latter two lexical sets may have survived longest in conservative New World varieties such as Appalachian English (Montgomery 1989, 2001) but is not represented anywhere among supraregional varieties (Hickey 2012b) in the anglophone world. The disappearance of unraised /eː/
meant that no open mid-front vowels existed and would have exerted paradigmatic pressure on the open mid-back /ɔ:/-vowel in HORSE to shift upwards and coalesce with the /o:/ in the HOARSE lexical set as suggested in the previous section.

3 Pre-rhotic mergers

Two prominent types of merger are found in English which are determined by the following consonant, or its historical reflex. These are mergers before nasals and before liquids. The latter is a group which can be divided into two, mergers before /l/ and those before /r/ or its reflex in non-rhotic varieties. English does not have pre-rhotic vowel length distinctions in monosyllables, contrast the situation in German which has Herr /hɐ:ɐ/ [hɐt] ‘Mr., gentleman’ versus Heer /he:r/ [hɛr] ‘army’ in positions where [r] was found before its vocalisation to [v]. In English, the same phonotactic context, but with disyllables, can show vowel distinctions and standard varieties of English, both rhotic and non-rhotic, usually have distinct vowels in words like stern [stə:n] and very [veri]. A possible explanation for this would be to posit that the /r/ in the disyllabic words belongs to the second syllable, i.e. very is [ve.ri], so that the vowel in the first syllable is not affected by the /r/, i.e. it is not centralised. Phonologically, there is a difficulty with this in that it would imply that short vowels, such as /e/, can occur in an open syllable, e.g. [ve ], something which does not, however, apply to monosyllabic words in English, i.e. there is no word like ve /ve/. An alternative might be to interpret the /r/ in words like very, merry, ferry as ambisyllabic. This interpretation removes the necessity of interpreting the /e/ in a word like very as the coda of an open syllable but causes problems of its own because there is no agreement on what the phonetic correlates of ambisyllabicity are and hence what justification there is for positing it on a phonological level (ref., e.g. Minkova).

3.1 POUR — POOR

In general, a tautosyllabic /r/ has a lowering affect on a preceding vowel. This can be seen with front vowels in this position, e.g. pear is [pɛə] in RP where the former /r/ (now schwa) led to a lowering of /e/ to [ɛ]. The same is true of peer /piə/ which in advanced RP is phonetically [peə] (ref., Cruttenden). Among back vowels a similar lowering triggered by a former /r/, now vocalised to schwa, can be seen. Due to the lowering of /u:/ in poor to [ɔ:] or indeed [ɔ:] homophony can arise with pour [pɔːr].

This merger is a fairly recent development and is first documented in the twentieth century (ref., Jones English Phonetics). It does not appear in overseas forms of English, the only exception to this would be acrolectal forms of White South African English (ref., Boweman) or Australian or New Zealand English (ref., Cox and Hay respectively) which emulate features of advanced RP. Furthermore, it would seem to apply only to varieties which are non-rhotic, i.e. which have schwa as a reflex of historical /r/.

There are non-rhotic English dialects which also show diphthong smoothing with lowering leading to the same homophony as that just described for advanced
3.2 TOWER — TIRE

Apart from vowel lowering, a following vocalised /r/ can cause diphthong smoothing because of an extreme reduction of the upglide with rising diphthongs. The two vowels in question in English are /au/ and /ai/. In words such as TOWER and TIRE the former /r/, evident in the orthography, had a reflex as schwa, just as with other instances of former syllable-final /r/ (see previous section). However, the triphthongs /auə/ and /aiə/ can to be smoothed, with the loss of the middle element, resulting in /aə/ or /aː/ with complete monophthongisation (ref., Cruttenden). Phonetically, there may be a slight distinction in pronunciation for advanced RP speakers (Upton 2008: 247, his category is ‘speakers of Refined RP’) in that some may have a more retracted starting point for the TOWER vowel, i.e. [aː / aː] as opposed to [aː / aː] for TIRE. Where this is the case there is no phonetic merger.

In non-rhotic dialects of English diphthong smoothing is common. However, a merger of the TOWER and TIRE lexical sets is not necessarily the result. For East Anglian English Trudgill (2008: 188) notes that the original triphthongs in tower and fire (his examples) have been smoothed to [tʰə] and [fəː] respectively in ‘working-class speech’. That the distinctiveness of the smoothed triphthongs is tentative is clear from his remarks (Trudgill loc. cit.) that in ‘middle-class speech’ the vowels in both these words are central and words like tar and tower and homophones.

The TOWER — TIRE merger occurs in two other major anglophone regions overseas. The first is in the United States among the African Americans who do not have syllable-final /r/ and who do have general diphthong smoothing, i.e. [ɑː] for /ai/ as in my wife [maː waːf] (ref., Green, Wolfram). For such speakers the TOWER — TIRE merger would also apply but not because of any historical connection with developments in RP in Britain. In White South African English there is a tendency to smooth /ai/ in general (ref., Bowerman), e.g. [fːən] for /fain/ fine. This means that the /aʊə/ and /aɪə/ are also smoothed to [æː] or [ɑː] leading to a merger of the TOWER and TIRE lexical sets in which the same vowel is used.

3.3 FIR — FUR

A different type of merger can be seen with short vowels before tautosyllabic /r/. This involves historically short vowels in monosyllables. For all standard varieties of English there is a single vowel in all the words to consider here, i.e. [əː], or [œː] for rhotic varieties. This situation contrasts with other Germanic languages, e.g. German which has a three-way distinction among short vowels before /r/ (vocalised or not), e.g. wird ‘will-be.3.P.SG’, werde ‘will-be.1.P.SG’, wurde ‘was.PASSIVE.3.P.SG’.

For varieties of English the maintenance of a distinction between FIR, TERM and TURN would mean a two-way distinction among short front vowels before /r/ but only one back vowel in the same position. Thus the syncretism of the vowels in FIR and TERM (often referred to as the FIR — FUR merger or the BIRTH — BERTH merger, using near homophones) creates a balance between front and back vowels.
with a single vowel available (front and back) before tautosyllabic /r/ in monosyllables. A twoway system generally leads to FIR /fɪr/ being shifted to /fɛr/, i.e. the lexical set comes to have the same vowel as TERM /tɛrm/. The three-way distinction is generally assumed only to exist in Scotland (Stuart-Smith 2004: 55).

3.4 TERM — TURN

The present merger is historically the final step towards a single central vowel. The merger should be distinguished from dialectal variation in the realisation of a short pre-rhotic vowel. For instance, Upton and Widdowson (1996: 2f.) note the variation between [ʌ] and [ɛ] in the word BURIED across the regions of England. This variation does not of necessity mean that there is a distinction between [ʌ] and [ɛ] before tautosyllabic /r/ in these dialects. However, there are varieties of English where this is the case, chiefly in Scotland and Ireland in vernacular forms of speech. Where a twoway or three-way distinction exists, the TERM lexical set shows [ɛr] and the TURN has a somewhat centralised open back vowel which is conventionally transcribed as [ɜː]. A slightly raised and more central vowel is found in single-vowel systems, i.e. [ər]. In addition Scottish and Irish English may show epenthesis in the keywords of the two lexical sets here as they often have a vowel inserted between /t/ and a following tautosyllabic sonorant, i.e. TERM = [tɛrəm] and TURN = [tɜrən].

The TERM — TURN merger is the norm across overseas varieties of English and vowel epenthesis between clusters of /r/ + sonorant is not found as an active phonological process in overseas forms of English in either the Northern or the Southern Hemisphere.

3.5 Other mergers with central vowels

A number of further developments can be seen among mergers involving central pre-rhotic vowels. One such merger results from the extension of the TERM — TURN merger to disyllabic words, these then showing no distinction in vowel quality. This merger, often illustrated with the keywords FERRY and FURRY (M. Gordon 2008a: 78) and is found in traditional dialects in England (ref. Trudgill, Dialects of English) and in several varieties of American English (ref. Labov, Ash and Boberg).

Phonologically long vowels can also merge with the central vowel in the NURSE lexical set (ref. Wells 1982: I.???). Two versions of this type of merger are known from northern varieties of English. The first is the SQUARE — NURSE merger which is traditionally characteristic of Liverpool and Merseyside in general (Beal 2008: 135) with the members of both lexical sets realised with either an [ɛː] or an [ɜː] vowel. The second is the merger of NURSE and NORTH where a back vowel is found, usually [ɔː] (Beal 2008: 135f.).

Another merger may involve the coalescence of two long vowels before /r/. A well-known instance of this is the NEAR — SQUARE merger which is an ongoing change in New Zealand English (Gordon and Maclagan 2008: 72).

3.6 MERRY — MARRY — MARY
The present case is a different kind of pre-rhotic merger and depends essentially on the levelling of (i) a quantitative distinction or (ii) a qualitative distinction among short vowels before /r/. In some varieties both quantitative and qualitative distinctions are missing in these three lexical sets leading to a tripartite merger.

(3)  
(i) loss of a quantitative distinction in pre-rhotic position  
(MERRY = MARY) ≠ MARRY

(ii) loss of a qualitative distinction in pre-rhotic position  
(MERRY = MARRY) ≠ MARY

(iii) loss of both a qualitative and quantitative distinction  
MERRY = MARRY = MARY

There are other variations of this merger, notably one where the distinction between /e/ and /æ/ in pre-rhotic position is lost, leading to the MERRY — MURRAY merger (M. Gordon 2008a: 78).

Varieties of American English are known to have varying degrees of the present merger types. M. Gordon (2008a: 73) states that either a twoway [æ] – [e] or three-way distinction [æ] – [e] – [e] is found in New York English. He suggests that the historically original three-way distinction is maintained in Philadelphia due to MERRY and MARY remaining separate (vowel length distinction in pre-rhotic position). M. Gordon (2008a: 81) remarks that outside the Atlantic coast the tripartite merger has occurred and confirms this specifically for the Inland North.

Kretzschmar (2008: 44) sees the tripartite merger as typical of standard varieties of American English with [æ] in the MARRY lexical set a ‘marked pronunciation’. Kretzschmar (2008: 44, 47) points out that MARY with [e] is common with educated Southern speakers. Thomas (2008: 92, 105) gives a twoway or possibly three-way distinction for older rural Southern white speakers while indicating that the tripartite merger (no distinction) is typical of younger speakers in this group.

Vernacular Dublin English generally does not have a length contrast among vowels in pre-rhotic position so that MERRY and MARY merge with the two distinction [æ] – [e], show in (3i) above.

4 Pre-nasal merger

4.1 PEN — PIN

Phonetically, this is a process that has an auditory basis. Nasals have resonance below 800 Hz and above 2000 Hz with anti-resonance in between (Fry 1979: 117-118). Consider the formant values for four vowels in English (Catford 1977: 58-62).

Table 1. Approximate formant frequencies (F1 and F2)

<table>
<thead>
<tr>
<th>Vowel</th>
<th>F1</th>
<th>F2</th>
</tr>
</thead>
<tbody>
<tr>
<td>/e/</td>
<td>570</td>
<td>1970</td>
</tr>
</tbody>
</table>

as in head
Nasal raising of /e/ to /i/ (and of /o/ to /u/) can be seen as a kind of assimilation maximising the distance between the first and second formants in anticipation of the distance between the two with nasals. In each case of nasal raising the distance between F1 and F2 increases.

The PEN—PIN merger is a very salient features of Southern American English (Brown 1991) and speakers may tend to avoid it for this reason. Tillery and Bailey (2008: 122) label its status as ‘contracting’ as opposed to the many other mergers in this region which they classify as ‘expanding’.

The PEN—PIN merger is also found in the southwest of Ireland (Hickey 2004: ??) where it is not generally the subject of sociolinguistic censure.

### 4 Pre-lateral mergers

The syncretism of vowel values in pre-lateral positions usually involves the loss of a length distinction, e.g. the merger of /i/ and /ɪ/ before /l/, resulting in words like fill [ɪ] and feel [ɪː] becoming homophones along with words containing other vowels, e.g. fell [ɛ] and fail [ɛː], pull [u] and pool [uː].

Thomas (2008: 105), when discussing rural Southern (American English) white accents, states that the merger is ‘ordinarily to [ɪ] or to a quality intermediate between [ɪ] and [ɪː]’ (for FEEL and FILL) and that [ɛ] is the usual result of the FELL—FAIL merger. Tillery and Bailey (2008: 122) give similar transcriptions for the merger in the speech of urban Southern speakers. M. Gordon (2008b: 136) reports that the lost of vowel contrast before tautosyllabic /l/ is very widespread across the West and Midwest of the United States; he also regards this merger as a ‘fairly recent development’ M. Gordon (loc. cit.).

Bauer and Warren (2008: 43) note that in New Zealand English the vowel length distinction is neutralised before tautosyllabic /l/ rendering words like pull and pool homophones. Bauer and Warren (loc. cit.) also remark that there is a qualitative merger of the DRESS and the TRAP vowels before /l/ in New Zealand English, stating that for the majority of younger speakers there is no distinction between Alan and Ellen or salary and celery. This type of merger applies to other vowels as well, e.g. in the KIT and STRUT lexical sets resulting in the homophony of words like kilt and cult with a centralised vowel in both cases.

### 5 The spread of English

#### 5.1 The HORSE—HOARSE distinction again

A distinction between HORSE and HOARSE is generally lacking among overseas varieties of English. If the distinction is found then only in more conservative forms of American English, e.g. in the parts of the north-east (Eastern New England, Nagy and Roberts 2008: 59) and the south of the United States (Labov, Ash and Boberg...
It is not found anywhere in the Southern Hemisphere with the possible exception of Scottish-influenced forms of English in the southern part of the south island of New Zealand. The highly restricted occurrence of the distinction would appear to be determined by the time of first settlement. North America was first settled at the beginning of the seventeenth century, a time when the HORSE — HOARSE distinction generally applied to dialects of British English. It was transported to North America and survived there for a considerable time, and could be observed in conservative forms of white settler English during the first half of the twentieth century when such works as Kurath et al. (1943) and Kurath and McDavid (1961) were being assembled. For the Southern Hemisphere the time of first settlement was much later: end of the eighteenth century for Australia, beginning of the nineteenth century for South Africa and the mid-nineteenth century for New Zealand. For these three countries the HORSE — HOARSE distinction would not have existed in the speech of southern British English speakers whose speech was to become dominant in later generations. The distinction among the Irish and Scottish emigrants to the large Southern Hemisphere countries was lost as were other salient features of their pronunciations when their offspring gravitated towards more southern British dominated speech styles in the respective countries.

5.2 The FOOT — STRUT split

In the south of England during the first half of the seventeenth century (Dobson 1968: II.585-590), the short high back vowel in the STRUT lexical set, /u/, was lowered and continued to be so during the following centuries leading ultimately to modern [ʌ] (Wells 1982: I.131-132). This movement would appear to be motivated by external factors. The initial lowering of the high back vowel /u/ would probably have been triggered by a preference for a slightly lowered realisation of the /u/-vowel which was within the normal range of target realisations for this high back vowel. With time the preference was enlarged and the lowered realisations were adopted by increasingly large sections of the southern English population. At some later point the phonetic distance to the original /u/-vowel was so great as to constitute a separate systemic unit in those varieties showing the shift, namely /ʌ/. The distinction was strengthened by the contrast of words like put [put] and putt [pat]. However, it did not generally apply in words where /u/ was followed by /ʃ/ or by a velarised l [ɻ], hence push and pull, both still with [u].

This shift affected those words which had inherited the /u/ from Middle English. But other instances of /o/ arose in English, such as in the word FOOT where Middle English /oː/ was raised (as part of the Great Vowel Shift), then shortened to /u/. However, this shortening happened after the lowering of inherited /u/ to /ʌ/ and so was not affected by this change. This applied to a number of words which experienced a shortening of /u:/ in the late modern period, e.g. took, look, book, cook.

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3 The distinction does not appear to occur in Canada (Boberg 2008: 153), including Newfoundland English though there may be a some variation with older speakers in the latter variety (Clarke 2008: 170).

4 Some varieties did indeed extend the /o/ to /ʌ/ shift to all instances of inherited /u/ and thus have push, pull and could, should, etc. with /ʌ/, e.g. in forms of Belfast English.
(primarily before velars but occasionally elsewhere, e.g. before /m/ as in *room* /rum/, at least for Received Pronunciation).

The developments just sketched led to a phonemic split in the FOOT and STRUT lexical sets. The split applies to all of the south of England (Wells 1982: I.196-199) and Scotland. It is not found in vernacular varieties in England north of a line from Chester in the west to the Wash in the east (Upton and Widdowson 1996: ???) and not in colloquial forms of English in Dublin, though the split does apply to all other forms of Irish English, including vernacular rural forms of southern Ireland. Clearly, the north of England and local Dublin English have /u/ in the STRUT lexical set as a conservative feature.

In the settlement of both parts of the Northern and the Southern Hemisphere there were speakers from the north of England, an area which contains a significant proportion of the population of England, indeed of the British Isles as a whole. What is remarkable, however, is that there is not a single variety of English overseas which has /u/ for the STRUT lexical set, i.e. everywhere in the anglophone world beyond the British Isles the FOOT – STRUT split applies. Given the fact that there were many northern English immigrants in the major overseas anglophone countries – USA, Canada, South Africa, Australia and New Zealand – the question why unshifted STRUT did not survive must be asked. In typological terms the split would be unfavoured compared to the lack of the split (the northern English situation). The lowering of /u/ to /v/ is an unusual shift and is not present in any other Germanic language, nor in any Slavic or Romance language, to mention the two other major Indo-European branches represented in Europe. However, for speakers of English with the FOOT – STRUT split the retention of unshifted /u/ in STRUT is highly salient. To this day it is a major item of linguistic comment by southern English people when remarking on northern speech in England. Given that in all the major anglophone colonies southern British English was the variety found in the colonial administration, even in the United States until the late eighteenth century, it is not surprising that the FOOT – STRUT split, which was already typical of southern English by the early eighteenth century at the latest, would have been the preferred option (Hickey 2003) for these two lexical sets in the emergent supraregional varieties of English in the overseas colonies.

6 Conclusion

This chapter has been concerned with viewing a number of mergers which have arisen in the past few centuries and it compared their distribution in traditional dialects of Britain and Ireland with that in overseas varieties. For the latter, settler English was considered because non-native varieties such as ‘New Englishes’ in Africa (Mesthrie 2010) and Asia, are different in character and contain different phonological constellations influenced by the background languages of speakers.

Some mergers, such as the MEAT – MEET merger, are well established and only found in some traditional British and/or Irish dialects. Other mergers are fairly recent, e.g. the WHICH — WITCH merger, and show how the distribution of types of segments within syllables can influence developments. Still other mergers are continuations of long term developments, such as the loss of vowel distinctions in pre-rhotic position. The tendency for the loss of vowel distinctions before liquids could be traced to the similarly high sonorant quality of vowels and liquids and
hence to the lack of a sharp decrease in sonority which one has, for instance, between a vowel and a following voiceless stop. Thus words like bit and beet do not show a tendency in varieties of English to lose their vowel length distinction whereas word pairs like fill and feel do show precisely this tendency.

(4) Sonority cline between vowel nucleus and non-vocalic coda

\[
\begin{align*}
\text{a. fill} & \sim \text{feel} \quad \text{b. bit} & \sim \text{beet} \\
/ i:/ & \sim / i:/
\end{align*}
\]

In sum, one can say that a variety of phonological explanations help to account for various type of mergers which have occurred in varieties of English throughout the anglophone world. There are connections between these varieties (Hickey in press) in that they share the same phonological tendencies but there does not necessarily have to be a direct historical connection between varieties for them to manifest similar mergers.

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