R-coloured vowels in Irish English

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Abstract Due to the preservation of tautosyllabic /r/ in Irish English a large number of contrasts are found which are no longer present in Standard English (Southern British English). An analysis of the long vowel and short vowel phoneme inventories in Irish English is given, with particular emphasis on the realization of vowels before /r/. Additionally, processes such as suffixation and epenthesis are considered inasmuch as they affect vowel realization. Attention is also devoted to the possibility of Irish influence on this area of Irish English phonology.

The two phonemes which, in Standard English and the dialects of Southern British English, inasmuch as the latter deviate from the standard, have shown a tendency to be lost, /h/ and /r/1, at least in certain positions, have been fully retained in all varieties of Irish English. There is no /h/-dropping (Wells, 1982: 253ff.) in Irish English and /r/ is maintained in all positions where it is indicated by the orthography. The orthography offers a convenient yardstick here as the two innovative occurrences of /r/ in Received Pronunciation, linking /r/ and intrusive /r/ (Gimson, 1980: 208ff.), are not represented unambiguously whereas in Irish English there is an exact correspondence between the phonetic and the graphemic tokens of /r/.

The conservatism of Irish English in this respect is remarkable and may have obtained passive support in the retention of the above segments due to their simultaneous existence, with the same distribution, in Irish. It is difficult to determine the extent to which Irish has been of importance here. If post-vocalic /r/ was an innovation in Irish English then it might be possible to trace it back to Irish influence, just as say deaspiration of voiceless stops in Finnish Swedish is a low-level interference phenomenon from Finnish. The identity of the post-vocalic (non-palatal) /r/ of Irish with that of Irish English could be assumed to have played a role here if one also assumes that the English dialects of Ireland in the 17th and early 18th centuries had an inherent tendency to lose post-vocalic /r/. But as there is no evidence for such an assumption (Bliss, 1979:242) the question of Irish influence is left unanswered.

Varieties of Irish English

For this treatment of /r/-coloured vowels in Irish English I have taken that variety spoken by the southern urban middle class. This obviously entails a certain under-differentiation. Not so much that I have excluded Northern Irish English, as this is for several reasons a collection of quite distinct varieties whose demarcation corresponds roughly to the present political division of the country (Barry, 1981), but rather that I regard urban middle class Irish English of the Republic as being a unified variety. To minimalize this under-differentiation I will refer to variants in the area of vowel realization found within the variety being considered here. The unqualified term Irish English as used below is to be taken as referring to urban middle class southern Irish English.
Vowel contrasts before /r/

The retention of /r/ has had further consequences for the sound system of Irish English. It has led to a certain set of vowel contrasts being preserved into present-day Irish English which have long ceased to exist in Received Pronunciation and other non-rhotic varieties of English. In any language there is always a phonotactic position where the set of oppositions is at its greatest. For vowels this is the position of primary stress, just as for consonants it is immediately preceding a stressed vowel. In English all short vowels are maximally distinguished under full lexical stress and reduced to /i/ and /a/ and possibly to just the latter when unstressed. This statement is equally applicable to Irish English. For long vowels the set of oppositions is greater in stressed than in unstressed position but is further enhanced in the environment immediately preceding /r/. This situation is one which Irish English shares with other rhotic varieties of English, notably Scottish English (Wells, 1982:407f.). The large number of vocalic oppositions before /r/ is a conservative feature which was undermined in Standard English on the vocalization of post-vocalic /r/. As this was vocalized to /p/ it had a lowering effect on the vowel preceding it. With back vowels the result was the falling together of /o:/ and possibly /u:/ with /o:/ as in:

1. a  pour /po:ɾ/ → /po:ə/ → /po:/
2. b  paw /pɔ:/ → /pɔ:/ /pɔ:
3. c  poor /puɾ/ → /pu:ə/ → /pɔ:/

The advanced Received Pronunciation realization of /ɔ:/ as [ɔ:] as in horse [ho:z] is possibly due to a raising of mid back vowels on the further diphthongization of [ou] to [ɔu], increasing the acoustic separation of the diphthong and monophthong.

The actual phonetic nature of /r/ after vowels is irrelevant to the retentions which it supports. Thus Scottish English has an alveolar tap [ɾ], a post-alveolar continuant [ɾ] or occasionally still a trill [ɾ] (Wells, 1982:410f.) while Irish English /ɾ/ is a velarized post-alveolar frictionless continuant [ɾ]. This /ɾ/ is found throughout the entire Republic of Ireland with the exception of South Tipperary and adjacent parts of Waterford and East Cork which may have an uvular /ɾ/ ([ɾ]) in rural varieties. In Northern Ireland, which I do not subsume under the term Irish English for the present article, /ɾ/ tends to be retroflex, a fact which does not usually effect the preceding vowels however.

Before giving actual forms with /ɾ/ a few remarks on transcription are necessary. I have throughout transcribed /ɾ/-coloured vowels as sequences of vowel plus /ɾ/ as in for example door /doɾ/. But as the term ‘/ɾ/-coloured’ suggests these vowels are not non-rhotic vowels followed by an /ɾ/. With the word /doɾ/ the apex of the tongue is bent back to a post-alveolar position for /ɾ/ immediately after the release of the initial stop; in a word like ore /oɾ/ the tongue tip has this configuration before the vowel is begun. The body of the tongue then has the relevant position for the word in question. It is thus phonetically accurate to call the vowels being dealt with here ‘/ɾ/-coloured’ or ‘rhotacized’. This coarticulation does not affect the phonological analysis of V + /ɾ/ just as the coarticulation behind segments such as [ç] and [ʍ] in say
(2) a  hue  [çuː]  
   b  which  [wɪtʃ]

does not affect the phonological composition of them as /h/+glide (/j/ or /w/).

Coarticulation of vowel and /r/ is determined by syllable structure. In those instances where /r/ is followed by an epenthetic vowel coarticulation does not take place for the reasons outlined below (see 4.2.).

The long vowel phoneme inventory

The long vowel system of Irish English is characterized by the monophthongal character of the vowels, especially before /r/. For transcription purposes one can use the symbols /eː/ and /oː/ for the vowels which in Received Pronunciation are both transcribed and pronounced /eɪ/ and /ʌ/ /ʊ/. Slight diphthongization of these is perceptible when they are word-final, in which case they have a slight off-glide, and when they are followed by velars.

(3) a  bay  [beːj]  
   b  bow  [boʊ]  
   c  bake  [beːk]  
   d  poke  [poʊk]

When before alveolars and labials and when before /r/ monophthongization is most clearly evident.

(4) a  pane  [peːn]  
   b  phone  [foʊn]  
   c  paper  [peːp]  
   d  pope  [poʊp]  
   e  pear  [peɹ]  
   f  pour  [poɹ]

In the above instances the mid long vowels have been used for the purposes of illustration. The entire long vowel inventory of Irish is as follows:

(5) /iː/, /eː/, (/εː/), /æː/, /ɒː/, /oː/, /ʌ/  

As the above presentation is phonological it is necessary to parenthesize [ɛː] for while it occurs regularly in lower class urban speech, particularly in Dublin, in middle class speech it represents an environmentally conditioned variant of /ɛː/, only occurring before /r/.
Retraction before /r/ 

A following /r/ has the effect not only of retracting a vowel (see remarks on /a:/ below) but also of lowering the vowel slightly. Thus a somewhat more open realization of /e:/ is normal before /r/. Only is those varieties where [e:] occurs in other environments apart from that immediately preceding /r/ can the open [e:] realization be accorded systematic status.

(6)  

\begin{verbatim}  
a pay [pe:] ~ [pe:r]  
b pear [pe::r] ~ [pe:r]  
\end{verbatim}

In the vowel system of (5) I have posited a low central vowel /a:/ as this is found commonly in Irish English, consider:

(7)  

\begin{verbatim}  
a last [l:a:st]  
b aunt [a:nt]  
\end{verbatim}

When it is found before /r/ it has a retracted realization.

(8)  

\begin{verbatim}  
a barn [b:a:rn]  
b bar [b:a:r]  
\end{verbatim}

Here the vowel is similar to the long [a:] of Received Pronunciation but is rhotacized. It can be assumed that this pronunciation is a conservative characteristic as Received Pronunciation [a:] arose through the loss of /r/ after Early Modern English /a:/ had been retracted to [a:]. In this interpretation of Irish English [a:r] and [a:] represent a distribution of /a:/ which was a characteristic of Early Modern English.

The retraction of /a:/ can be seen as velarization of the vowel under the influence of the velar /r/ of Irish English. As such the realization is normal assimilation. Such assimilation to /r/ is found in other languages as well, for example in Swedish where consonants after /r/ are retroflex due to the retroflex articulation of /r/ (in those dialects of Swedish with an apical /r/, Malmberg, 1971:86ff.). Standard High German, which has [ɛ] provides another instance of retraction before /r/. It has a long low central vowel phoneme as does Irish English, seen in Bahn /ba:n/ ‘train’, for example. When followed by /r/ a retracted variety of /a:/ occurs, this being the only distinguishing feature in minimal pairs, such as that in (9), as post-vocalic /r/ has been vocalized in Standard German.

(9)  

\begin{verbatim}  
a Hahn [ha:n] ‘cock’  
b Harn [ha:n] ‘urine’  
\end{verbatim}

Although low vowel retraction before /r/ is an automatic phonetic phenomenon it is nonetheless something which Irish English speakers are aware of. Two items of evidence can be presented to show this. The imitation of an English accent on the part of the Southern Irish shows the deliberate use of the retracted [a:] in non-rhotic contexts such as
Secondly, the use of a non-retracted vowel before /r/ is stigmatized in Irish English as being a southern rural pronunciation or indicative of colloquial Cork speech (without vowel length for the latter however).

(10) \textit{grand} \quad \text{IrE: [graːnd]}, \quad \text{imitation RP: [grəːnd]}

(11) a \quad \textit{park} \quad [park] \quad \sim \quad [park] \\
    b \quad \textit{tar} \quad [taːr] \quad \sim \quad [tar]

The transcription /ɒ:/ is used in (5) to represent the long vowel of a form like caught. It is the continuation of the monophtong arising from Middle English /æu/. In Received Pronunciation this vowel is considerably closer (see remarks above) while in Irish English the realization is so open that the Received Pronunciation pair /ɒ/ and /ɔ:/ are distinguished solely by length.

(12) a \quad \textit{cot} \quad [kɒt] \\
    b \quad \textit{caught} \quad [kɔːt]

Again this can be taken as a conservative feature of Irish English as the reflex of Middle English /æu/ was, according to orthoepic evidence of the 17th century, a low back vowel (Dobson, 1968: 783) which then was raised in the subsequent development of Standard English. This vowel merged with Middle English /ɔ:/ before /r/. In Irish English this is represented in forms like

(13) \textit{horse} \quad [hɔːrzs]

Equally the rounded variant of /a/ which developed after labials (Dobson, 1969: 716ff.) in words like \textit{was} [wɒs], \textit{what} [wɒt] and which was long before /r/ merged with the vowels in both (12b) and (13) as can be seen from

(14) \textit{war} \quad [wɒːr]

\textbf{Middle English /ɔː:/ before /r/}

The set of mergers above involved vowels from three sources. The fourth potential source was Middle English /ɔː/. This was not diphthongized before /r/ in accordance with the stabilizing influence of /r/. This influence is only to be expected. The vowels in question were rhotacized and so /r/ was produced while the body of the tongue held a position for a certain vowel. That /r/ was pronounced while the tongue body shifted from one position towards another is unlikely. Witness the non-existence of rhotacized diphthongs in English. Even those varieties which have /r/ after /ai/ (as in \textit{iron} /aːrn/) have rhotacization only towards the end of the diphthong, i.e. [æn].

Now /r/ also caused lowering so that Middle English /ɔːr/ shifted to [ɔɹ], [ɔːːr], [ɔːr] eventually merging with Middle English [ɔːr] when the /r/ was lost and the two vowels were close together in terms of their articulation (Dobson, 1968: 735ff.).
In Irish English Middle English /ɔːr/ has been retained fully. Its realization is slightly lowered in accordance with general lowering before /r/.

(15) a four [fo:ɹ]
b tore [tɔ:ɹ]

What is remarkable is that there has been no merger with [ɔːɹ]. For this two reasons can be forwarded. One is that non-rhotic /ɔː/ has been largely maintained as a monophthong so that the phonemic pairing of /ɔː/ and [ɔː] in the environment before /r/ is obvious whereas in Received Pronunciation the two vowels have long since been disjoined.

(16) a bored IrE: /boːrd/ RP: /bɔːd/
b bode /boːd/ /bɔːd/

The second is that Irish English /ɔː/ is much more open, viz. [ɔː]. It might be asked why [ɔː], assuming that this was common both to 17th century Irish English and the 17th century variety of educated southern English from which Received Pronunciation later arose, did not in Irish English share the development to [ɔː] as in Received Pronunciation. A possible answer, which is yet another example of a contributory influence of Irish is that [ɔː] remained at this value as it also occurred (and still occurs) in Irish, cf. bain [bɔːn] ‘white’. A further reason is simply that with the removal of varieties of English to the periphery of the English-speaking area their characteristics stabilized in accordance with the tendency to conservatism in peripheral areas of a language’s geographical extension.

A full list of the long vowel inventory of Irish English in a pre-/r/ environment is then as follows:

(17) a /iːr/ peer [piːɹ]
b /ɛːr/ pear [peːɹ]
c /æːr/ bar [bæːɹ]
d /ɔːr/ horse [hɔːɹ]
e /oːr/ hoarse [hoːɹ]
f /uːr/ boor [buːɹ]

Polymorphemic forms

All the examples given so far have been of monomorphemic forms. In those cases where a morpheme boundary is found immediately before the /r/ the vocalic sequence is a diphthong. Consider the pair

(18) a more /mɔːɹ/
b mower /mɔːɹ/
(19) a  gayer  /geːər/
b  newer  /nuəər/

there is justification in separating /ər/ (phonetically [ər]) and identifying it as the sound shape of the agent and comparative morpheme er; it is also the shape of the identical morpheme when it occurs post-consonantally.

(20) a  read  /riːd/
b  reader  /riːdər/

A couple of points arise in connection with these forms. The first is that the vowels under consideration are in fact different from those considered earlier. At the beginning the vowels were before /r/. But in the forms with the morpheme /ər/ they are now (at least phonologically) no longer pre- /r/ as they are separated by /ə/. What this means is that the realization of the vowels conditioned by their being pre- /r/ should no longer be found. Concretely this would cause the mid-close vowels to be realized as slight diphthongs as they are now morpheme-final; the expected forms of (19a) and (18b) would then be

(21) a  gayer  *[geːər]
b  mower  *[moːər]

The absence of word-final realizations in morpheme-final position would seem to be due to a prohibition on triphthongs in Irish English, as opposed to Received Pronunciation which phonetically has such triphthongs across morpheme boundaries in forms like

(22) a  flyer  [flæə]
b  plougher  [plaːə]

In Irish English the above forms are characterized by a palatal or velar glide occurring at the end of the first morpheme boundary, this giving the following contrasting pairs, the complex forms of which contain pronunciations which represent a salient feature of Irish English

(23) a  fire  [faːr]
b  flyer  [flæjər]
c  flour  [flaʊər]
d  plougher  [pləwər]

Note that there is no tendency in Irish English to develop diphthongs in the forms of (22a and b) as there is in advanced Received Pronunciation (i.e. [flaːə] and [plæːə]) (Gimson, 1980: 139f).

The above remarks are made to account for the non-occurrence of the forms in (21). It might well be asked however on what evidence one should expect these forms in the first place. It could be maintained that the difference between morpheme-final and word-final position would account exhaustively for the non-occurrence of (21a+b). But looking at other long vowel forms leads one to conclude that for vowel realization
word-final and morpheme-final positions are identical, unless overridden by a further consideration such as the prohibition on triphthongs which leads to either maintenance of monophthongs or glide formation. These latter phenomena are due not to morphological factors but to the requirements of syllabification in Irish English. A further example of this is found with low vowels. Recall that Irish English has a phoneme /a:/ which in all positions except pre-/r/ has the realization [a:], see (7) above. Before /r/ it has a retracted realization [a:] as in

\[(24)\] a char [t'ær]  
  b marr [mær]

Now if the above forms are extended by the suffix /ær/ (for agency and adjectival comparison) one obtains the following forms which, while somewhat unusual from the point of view of content, are perfectly normal phonetically.

\[(25)\] a charer [t'ærər]  
  b marrer [mærər]

What has happened here is that the forms have a syllabification which runs contrary to their morphemic division.

\[(26)\] a [t'ær#ər] vs. [t'ær$ər]  
  b [mær#ər] vs. [mær$ər]

The non-retraction of /a:/ is due to its position in an open syllable, the morpheme-final /r/ now forming the onset of the following syllable. Although the forms in (25) are lexically contrived, if one allows onomastic evidence one can cite quite a number of words which show the same non-retraction of /a:/:

\[(27)\] a Clara [kla:$ər]  
  b Tara [ta:$ər]

For further evidence of the non-retraction of /a:/ before heterosyllabic /r/ see the remarks on epenthesis below.

The resyllabification of /r/ has meant that in Irish English, as in Standard English, quite a number of contrasts have been maintained which have collapsed before tautosyllabic /r/. The following shows the position with long vowels.

\[(28)\] a bleary /bli:ri/  
  b wiry /we:ri/  
  c gory /gori/  
  d fury /fjuri/

Only half-close and close vowels are represented here. The two remaining long vowels occur only onomastically: /o:/ in the personal name Laura /lɔ:rə/ and /a:/ as described above for (27). In terms of occurrence and type of realization only two phonotactic
possibilities have to be considered, namely tautosyllabic /r/ (before a consonant and word-finally) and heterosyllabic /r/ (before a vowel). The former case does not have to be further differentiated as the two subdivisions, given in parentheses above, show no differences in phonetic realization of the preceding vowel.

### Diphthongs

The treatment of vowels leads naturally to that of diphthongs. Here Irish English is notably less well endowed than Received Pronunciation. Not only does it not have the minor diphthongization of high vowels (cf. Received Pronunciation /iː/ = [iː] and /æ/ = [ʌ], Gimson, 1980: 102-121) but it does not have diphthongization of half-close vowels before /r/ either. There remain the three complex vowels /ai/, /au/ and /õi/. The first two of these occur regularly before /r/. the last is attested solely for the (Irish) personal name Máire. The form employer which would seem to offer an attestation of /õir/ is not an instance of the sequence in question but a case of /õi/ + /ɔr/. In accordance with glide formation it regularly gives [ŋɔðr] parallel to the forms in (23): employer [mʲplŋɔr].

(29) a wire /wair/
    b tower /taur/
    c Máire /mɔira/

For English speakers the last word has the sound shape given, see the not infrequent Anglicized orthographical rendering Moira, although its Irish source has /oː/ + /ɔr/ where the on-glide to the following (palatal) consonant is reflected in the tongue movement to /i/ in the English diphthong. In those instances where /r/ is followed by a vowel, resyllabification takes place and the diphthongs are retained without altered realization, as in the following monomorphemic forms.

(30) a wiring [waeŋr]
    b towering [taoŋr]

### Short vowels before /r/

The short vowel inventory of Irish English is the same as Standard English when /r/ does not follow, although the realization of the individual vowels is different, especially /ʊ/ which is still a back unrounded vowel, a slightly centralized [ʌ] and is never fronted to [ä] as in advanced Received Pronunciation (Gimson, 1980: 111); /æ/ is slightly lower than in Received Pronunciation as is /ɛ/ so that their values are nearer to those of the cardinal vowels /ɛ/ and /a/.

(31) /i/, /ɛ/, /æ/, /ɔ/, /ʊ/, /ɔ/ + /ɔ/

The largest set of contrasts when followed by /r/ is when the latter belongs to the following syllable. In this situation all vowels except /ʊ/ occur.
The lack of a contrast between /u/ and /ʌ/ in this position can be explained by the exceptionless shift of late Middle English /u/ to /ʌ/ before /r/, irrespective of whether preceded by labials as in worry, furry, etc. But many speakers, notably those of colloquial Dublin English do not have a distinction between /ʌ/ and /u/ generally, the latter being the only sound available to them, cf. the popular pronunciation of Dublin as [dublin]. With such speakers there is still only a five way contrast before heterosyllabic /r/ with the addition as in all varieties of Irish English of unstressed schwa before this /r/:

(33) slippery /ˈslɪpəri/

Short vowel contrast before tautosyllabic /r/

With tautosyllabic /r/ the set of contrasts is reduced but shows important variation. The socially prestigious system is that of minimal contrast where only one vowel exists, a central, rhotacized schwa, both stressed and unstressed.

(34) a  tern  /tərn/  [tərn]  
      b  lantern  /ˈlæntərn/  [læntərn]

Both of these vowels can be transcribed as /ə/. In Irish English there is less difference between the stressed and unstressed variants, the former being somewhat longer, with a slightly higher fundamental frequency and greater amplitude as have all vowels which differ from others only in being stressed. The fronted quality of (non-rhotic) [ə] in Received Pronunciation is not found anywhere in Irish English. In fact the vowel transcribed here as schwa is usually very similar to the Irish English realization of /ʌ/, bar the rhotacization of the former.

A characteristic of non-standard Irish English (lower-class urban and rural speech), particularly of the south and west of the country is to distinguish two short vowels before /t/, one low central, the second mid-front. These can be transcribed as /e/ and /ʌ/ as they correspond to the values of these phonemes when not before /r/. This division gives the possibility of contrasting pairs such as

(35) a  tern  /tɛrn/  
      b  turn  /tʌrn/  

The existence of such contrast may have been supported by Irish, though not caused by it as the contrast is an inherited one from late Middle English (Dobson, 1968: 746ff. + 755ff.). In Irish short vowels show a distribution of central back vowels before
non-palatal (i.e. velar) consonants and mid-central vowels before palatal consonants (Hickey, 1985a). These alternate in paradigms, e.g. with nouns, as the value which a consonant has for the feature [palatal] can change from positive to negative with a change in grammatical category. The alternation of /e/ and /æ/ is thus an important part of Irish morphophonemics and would have led, among Irish speakers of English, to a sensitivity to a distinction, if still present, between these vowels in the English they came into contact with The phonetic realization of /e/ and /æ/ in Irish is incidentally the same as in (western) Irish English.

(36) a  tróid  /trəd̪ː/  ‘fight-NOMINATIVE’
       b  troda  /trəd̪a/  ‘fight-GENITIVE’

A distinction between /i/ and /e/ in words such as fir and err is not found at all in southern Irish English and this despite the fact that in Irish the distinction is found before /r/ (though not as part of a morphophonemic alternation).

(37) a  fir  /fɪr/  ‘men’
       b  deir  /d̪eər/  ‘say’

Finally the occurrence of /æ/ before /r/ in Irish English is doubtful. There is a seemingly obligatory lengthening rule for the short low front vowel in Irish English.

(38) /æ/  →  [+long] /ː r#

which cannot be overridden. It is triggered automatically when an otherwise heterosyllabic /r/ becomes tautosyllabic due to truncation of a final syllable or syllables. This is very frequent with personal names in Irish English. By this means an internal /r/ then becomes word-final.

(39) a  Dorothy  [ˈdoʊrətɪ]  →  Dor  [dɔːr]
       b  Marion  [ˈmɑːrən]  →  Mar  [mɑːr]
       c  Finbar  [ˈfɪnbər]  →  Bar  [bɑːr]
       d  Barbara  [ˈbɑrəbərə]  →  Bar  [bɑːr]

The lengthened low vowel is also retracted as /ær#/ is an impermissible phonotactic sequence in Irish English. The form in (39b) which is the only potential source of /ær#/ where the derivational relationship would be unambiguous is thus not evidence, despite Wells’ contention (1982: 420), for the existence of a low short front vowel before word-final /r/.

**Metathesis**

To conclude this treatment of /r/-coloured vowels two processes must be mentioned which have a bearing on this topic. The first, metathesis, has the effect of suspending possible cases of /r/-coloured vowels.

There is a tendency in Irish English for unstressed short vowels plus /r/, when they
have a syllable-initial alveolar stop, to metathesize the vowel and the /r/ as in (40).

(40) a  modern  /mədrən/  
    b  pattern  /pætrən/  
    c  lantern  /læntrən/  

**Epenthesis**

The second process, epenthesis, is a phenomenon which is very extensive in Irish (Hickey, 1985b) and, if not an imported characteristic, can with reasonable certainty be regarded as an example of interference from Irish. Epenthesis would seem, like aspiration, to be a phenomenon which is present in given areas and which is shared by all languages and language varieties in that area. Epenthesis occurs most frequently in Irish English between clusters of sonorants, specifically between a liquid and a following nasal as in

(41)  film  [film]  

It has the effect of rendering disyllabic a form which before epenthesis was monosyllabic and is triggered by the unacceptability in Irish English phonotactics of tautosyllabic sonorant clusters.

Epenthesis is not a stigmatized phenomenon in Irish English when present in /lm/ clusters even in urban middle class speech. With the two other clusters in question here, /rm/ and /rn/, it is not usually found in the variety being described. But for those varieties which do have epenthesis it is commoner with /rm/ as epenthesis occurs preferentially between heterorganic segments and in fact can only be found in a homorganic cluster (i.e. /rn/) if both consonants are sonorants (i.e. /rl/, /rn/ and /ln/).

The relevance of epenthesis for vowel realization is that the realization of the vowel before a tautosyllabic /r/ is changed to that before a heterosyllabic /r/. In the case of /aː/ for example this means that [aː] is found where epenthesis has occurred.

(42)  /arm/  =  [ɑːrm]  +  epenthesis  →  [aːʂɾəm]  

With those words which phonemically have a stressed schwa plus /r/ the former is realized as might be expected by its nearest equivalent /ɨ/.

(43)  /bən/  =  [bən]  +  epenthesis  →  [bəʂɾən]  

Sequences of two liquids, i.e. /rl/, also induce epenthesis giving

(44) a  Charles  /ʧəːςɾəlz/  
    b  furl  /frəl/  

but these are quite stigmatized and epenthetic pronunciations such common words as *girl* are used by urbanites to imitate and ridicule rural accents. Epenthesis among liquid clusters can again be accounted for in western rural areas as an earlier contact phenomenon with Irish as its source. It is frequently accompanied by a front back
distinction among short pre-/r/ vowels. This distinction could be due to the transfer of the distinction from Irish or to the restoration of short vowel contrast on the shifting of /r/ to the following syllable.

\[(45)\] with short vowel distinction \\
\[\text{without this distinction}\]

\[\begin{array}{ll}
a & \text{girl} /\text{ger}\text{ə}/ & /\text{gar}\text{ə}/ \\
b & \text{curl} /\text{kər}\text{ə}/ & /\text{kər}\text{ə}/
\end{array}\]

Lastly it should be mentioned that epenthesis is also found after long vowels and diphthongs if these are followed by sonorant clusters. It has however no effect on vowel realization apart from a certain degree of subphonological shortening due to the spreading of one syllable to two without overall lengthening of the resulting syllabically complex form.

\[(46)\]  
\[\begin{array}{ll}
a & /\text{hɔrn}/ & = & [\text{hɔrn}] + \text{epenthesis} \rightarrow [\text{hɔ.ɾan}] \\
b & /\text{airn}/ & = & [\text{a.ɜrn}] + \text{epenthesis} \rightarrow [\text{a.ɜɾn}]
\end{array}\]

\textit{Note}

Below I use a relatively broad system of transcription unless it is necessary to specify phonetic detail in connection with some particular point. Thus I write /r/ and mean by that a frictionless alveolar continuant with some velarization, i.e. [ɾ]. As consonants are not my concern here I do not indicate details of their realization either; notably the fricativization of post-stress /t/ and /d/ (see Hickey, 1984) is not recorded.

\textit{References}


