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Comparison of vowel systems in British, American and Irish English: A review

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Abstract. This paper explores the comparative analysis of vowel systems within British, American, and Irish English accents, examining their phonetic characteristics, historical roots, and social implications. English has evolved into numerous varieties worldwide, primarily influenced by regional and social factors. The paper focuses on Received Pronunciation (RP) in British English, General American in American English, and Supraregional Irish English in Irish English, highlighting their distinct phonological features. Rhoticity and lexical sets are examined as key aspects of variation. Differences in the pronunciation of /r/ contribute to unique phonetic landscapes, with British English exhibiting non-rhoticity and American and Irish English maintaining rhoticity. The presence of centering diphthongs in British English and vowel contrasts before /r/ in Irish and American English further distinguishes these accents. Analysis of lexical sets reveals variations in vowel quality and realization, emphasizing the dynamic nature of phonological systems across accents. By examining these differences, the paper underscores the intricate interplay of historical, geographical, and social factors in shaping linguistic diversity. Understanding these nuances is essential for appreciating the complexity of English language variations and their cultural significance.

Keywords. Vowel Systems, American English, British English, Irish English, Rhoticity, Lexical Sets, Mergers, Splits.

1. Introduction. English is the most spoken West Germanic language, a branch of Germanic languages which includes German and Dutch among others. With hundreds of varieties around the world, most varieties of English share one origin, the Anglo-Saxon Old English which originated from West Germanic dialects in what is now England and Southern Scotland during the Medieval period.

English variations base themselves on either regional or social elements. Accents – out of all other language aspects- are the most sensitive to those variations. The different regions where people belong (regional variations) and their ethnicity, gender, and class (social variation) strongly manifest in one's patterns of pronunciation (accent). In England, regionality is more salient because English existed for a longer period creating more variations than in North America, for example, where anglicization is more recent. Still, not all accents are created equal. Certain accents can trace their roots in people's localities, while others are not tied to a particular region, giving their people the merit of not having an accent.

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British English standard accent known as Received Pronunciation is a supraregional accent with no roots to associate it with a specific location in the British Isles. It is spoken by the upper middle class and will be one focus of this paper. It is good to mention here that the British Isles, Great Britain, and the United Kingdom are not interchangeable terms. The British Isles consist of Great Britain, Ireland and some thousands of other islands. On the other hand, Great Britain or Britain refers geographically to England, Scotland, and Wales. Politically, the United Kingdom refers to England, Scotland, Wales, and Northern Ireland. RP is spoken by a meager 10 percent of the British people in England who are mostly educated with decent jobs (Wells, 1982). However, RP is not just a single accent, it comes in different shapes and sizes. The Upper-class RP, dubbed U-RP is one facet of it and others include mainstream RP, Refined RP, and Traditional RP.

The one of interest here is simply called RP which does not differ much from Traditional RP. Although it has no geographical origin, it was mostly spoken in London and the South where they used to hold control over linguistic status. Similar to British RP, there is no standard American accent in North America, this is why the term dialect is often used to mean both dialect and accent. Still, however, they have a form representative of the continent which does not belong either to north, south, or east.

The General American accent was first proposed by George Krapp - referring to the midwestern and western dialects- and is the one many references in the field used to refer to as the standard. This accent is spoken everywhere except in the south (New York, Northern and Southern California, North and South Carolina, Georgia, Alabama, Mississippi, Tennessee, Kentucky, Virginia, Arkansas, Louisiana, and eastern New England) (Wells, 1982, 527). As such, the vowels of this area are reviewed as the paper's one reference dialect, a vowel system found in what Ladefoged described as the Standard American Newscaster English heard by American TV presenters (Ladefoged et al., 2001).

The island of Ireland consists of the Republic of Ireland and Northern Ireland, the latter fell under the dominance of the UK at the beginning of the 20th century. Like England, English existed in Ireland since the Middle Ages. However, it became an official language starting in the 17th century before which Irish or Gaeilge was the indigenous and only language. The Irish people who adopted English back then - which happened on a wider scale in the 19th century - left traces of their mother tongue creating a variety with an Irish flavor, some features of which are still spotted in the elderly speech of rural areas.

The different varieties of English in Ireland were distinct from each other and from the British which was shunned nationwide. The present-day Irish English varieties are the rural Northern, rural Southwest and West, popular and fashionable Dublin, local and non-local Dublin, and the Supraregional Irish English (Kortmann et al., 2004). The latter being the standard is based on the non-local Dublin variety of the middle class.

Differences between Accents

The phonetics of vowels is a dynamic field characterized by constant change and variability. Minor differences between vowels pronunciations, shifts in pronunciation along with the original variations across accents, and different speakers' backgrounds all create distinct accents. Differences between accents can be either in phoneme numbers, their realizations or inconsistent lexical-phonemic parity.

- Systemic Differences

The type of differences that happen when a phoneme carries more details in one accent than another or when more phonemes are available for one accent. (McMahon, 2002)

- Distributional Differences

That is when sharing the same phoneme system in two accents does not guarantee that the phonemes are realized in the same environment in both (McMahon, 2002).

- Lexical Differences

In the same lexical item, a certain grapheme is realized with one phoneme in an accent and a different phoneme in another accent (Wells, 1982, 78).

Rhoticity, rhotacization, and vowel contrasts before /r/

Rhoticity is the pronunciation of /r/ sound postvoclically. It is not a simple binary feature but one with gradients: an accent can be non-rhotic, slightly rhotic, rhotic, or highly rhotic. Irish and American English reserved the /r/ so it is pronounced whenever indicated orthographically. On the other hand, English spoken in England - and Wales - is non-rhotic, /r/ is pronounced only initially and intervocalically. It is good to note that /r/ is pronounced in BrE before a vowel sound not a letter so, it is pronounced in berry but not in bored. Both rhoticity and non-rhoticity are linked to prestige in British and American English respectively while in Irish English non-rhoticity is considered nothing but snobbish (Hickey, 2005). IrE being rhotic resulted in the absence of linking and intrusive /r/ and the British centering diphthongs (/ʊə/, /eə/, and /ɪə/) which replace - along with long vowels- the absence of /r/ in British English. Also, rhoticity allowed for the appearance of almost the full set of vowel contrasts before /r/ which does not exist in British English. This explains how British English homophones are minimal pairs in Irish English.

As mentioned, the dropping of /r/ in BrE lead to the birth of the centering diphthongs /ʊə/, /eə/, and /ɪə/. This happens, according to Wells, because of Breaking and Laxing (Wells,1982, 213). The current vowels [ɪ, ɛ, ɔ, ʊ] used to be [iː, eː, oː, uː]. These long vowels went through a Pre-R Breaking by which a schwa is inserted between the vowel and the /r/. The resulting vowels will look like [iːə, eːə, oːə, uːə], then they go through the next phonetic development which is Pre-Schwa Laxing by which the long vowels will turn into their short or lax counterparts. The resulting vowels as such are [ɪə, ɛə, ɔə, ʊə] which happen only in the environment before /r/.

In American English, there are 16 contrastive vowels with the exception of /ə/ and /ɜ/ which do not appear in all environments similar to the rest. Because of its rhoticity, the American /r/ exists in more positions than in other accents and as a result there are more interplay between vowels and /r/ than other sounds. The vowels that appear in the environment before /r/ are /i/, /ɪ/, /u/, /ʊ/, /e/, /æ/, /ɜ/, /ʌ/, /ɔ/, and /oʊ/. “Neutralization” or merging between “paired vowels” before /r/ results in a lesser number of contrasts as follows (Wells,1982, 485):

(1) /i/ and /ɪ/ merge as /ɪ/ in AmE and other accents as you can see in the MIRROR-NEARER merger below.

(2) /u/ and /ʊ/ merge as /ʊ/ in AmE and other accents as well leading to the SECOND FORCE merger.

(3) /e/ or /ɛ/ and /æ/ are not contrasted before /r/ in AmE and merge as /ɛ/, however, they may do in other accents including BrE. This results in the MERRY-MARY-MARRY merger below.

(4) /ɜ/ and /ʌ/ do not contrast in American English and merge as /ɜ/ which result in the SECOND NURSE merger below.

(5) /ɔ/ and /oʊ/ where the latter is often monophthongised before /r/ to /o/. The merge to /ɔ/ results in the HORSE-HOARSE merger.

According to Wells, The Irish English accent - specifically in Dublin - is distinct from other rhotic accents in keeping most of the vowel oppositions before /r/. This results in fewer

mergers, so homophones in BrE are contrasting or minimal pairs in IrE (Wells, 1982, 420). The vowels /iː, ɪ, eː, ɛ, aː, æ, ɒ, ɔː, oː, ʌ, uː, ʊ, aɪ, aʊ, ɔɪ, ə/ maintain their contrast as follows:

(1) /ɒr/ vs. /rɔː/ as in *for* vs. *war*

(2) /iːr/ vs. /ɪr/ as in *beer* vs. *fir*

(3) /eːr/ vs. /ɛr/ as in *pair* vs. *per*

(4) /aːr/ vs. /ær/ as *bar* in vs. *Finbar* (an Irish name)

(5) /ɛr/ vs. /ʌr/ as in *earn* vs. *urn*

(6) /ɔː/ vs. /oːr/ as in *horse* vs. *hoarse*

Lexical Sets

Vowel quality is the characteristic of a vowel sound that arises from interplay between mouth shape, tongue and lip positions giving each vowel its distinguishing sound. Vowels can be front or back, close or open, and rounded or unrounded. **Lexical sets** are groups of words in a language that share a similar phonological pattern, typically based on the pronunciation of a particular vowel sound or set of vowel sounds. They are used in phonological analysis to categorize words according to their pronunciation characteristics, particularly in the study of accents and dialects. The concept of lexical sets was introduced by linguist John C. Wells in his work on English pronunciation. Each lexical set is typically labeled with a specific symbol representing the vowel sound it contains, often derived from the International Phonetic Alphabet (IPA). For example, the lexical set "KIT" may include words like "kit," "sit," "fit," and "lid," which all share the same short "i" vowel sound. When organizing words into lexical sets, words within the set should share similar vowel qualities. The following is a review of the comparison between the lexical sets in the three accents:

LOT Vowel

The words that have the LOT vowel are generally ones with short [o] followed by a consonant and fewer words are realised with [a] (Wells, 1982, 130). For example, *acknowledge, knowledge, because, what, was, want, , wan,* and *yacht.* Generally, while the LOT vowel realization in British English and the superregional variation of Irish English are /ɒ/, the Americans and south Irelanders replace it with the unrounded PALM vowel /ɑː/, so they use the PALM vowel for LOT, PALM, and START words (Wells, 1982, 130). Hickey has two different recordings of the LOT vowel under the supraregional category. In 2004 it is /ɑ/ while in 2007 it is /ɒ/. Its current Dublin realization is unrounded - similar to the American accent - undergoing the back vowel raising.

THOUGHT Vowel

The THOUGHT vowel in British English is /ɔ/ but it cannot be followed by /r/- otherwise it will be part of the North-Force sets (Wells, 1982, 145). In American English, it is realized instead as the PALM vowel /ɑ/, a result of the low back merger known as COT-CAUGHT merger. In Irish English, its supraregional realization is /ɒ:/ while the fashionable and rural realizations can be British-like.

CLOTH Vowel

The CLOTH vowel does not have its own category as it is either part of the LOT or THOUGHT category. It has to be followed by a voiceless fricative or else it will be realized as the LOT vowel. In British English, the CLOTH vowel is in the same category with the LOT vowel, while in American English it is realized as the THOUGHT vowel (Wells, 1982, 136). In Irish English, it can either be part of the LOT or THOUGHT vowel, according to Hickey (2007).

PALM Vowel

/ɑ/ can be followed by a consonant or not except for /r/ (Wells, 1982,142). British English uses the PALM vowel in the places where the Americans use the TRAP vowel when it is before a) a voiceless fricative, b) a nasal or c) a consonant. For example:

a) *ask, after, bath*

b) answer, demand

PALM words are distributed in the American accent to the LOT vowel, in British English to the BATH vowel, and in Irish English it has the unique /a:/ realization.

TRAP Vowel

TRAP vowel is pronounced in American, Irish, and British English as /æ/. However, its current realization in BrE witnessed a partial lowering towards /a/ and a retracted realization especially "before voiced consonants" in IrE (Hickey, 2007). In AmE it is sometimes called 'flat a' and is pronounced in around 150 words.

BATH Vowel

The group of words under the BATH lexical set are realized as either PALM or TRAP depending on the speaker's accent and the words themselves. This vowel is of British origin and its realization there is a bit tricky since it is merged with other vowels. It is pronounced with the PALM vowel /ɑ/ like the one in *father alf, half, halve, bath, ask, advantage, after, brass, calf, can't, castle, demand, draft, plaster,* and *rather.* Exceptions where the TRAP vowel is used are like *man, exam, romance,* and *cancel.* In North America it is realized as the TRAP vowel /æ/. However, it is going through a diphthongization phenomenon that Wells called Bath Raising (1982, 477), through which most Americans will have the tense vowel /ɛə/ instead of /æ/ especially before nasals as in *man*. In Irish English the vowel is realized as the low central /a:/ (Wells, 1982, 423; Hickey, 2007) which is the same realization as in the START vowel, unlike the once-prestigious Dublin 4 accent where it was a British-like /ɑ:/.

START Vowel

This vowel is realized with the /ɑ/ where there is a following /r/ in the AmE accent, /ɑ:/ with or without a following /r/ in the BrE accent, and in IrE it has a front realization /a:/ with a following /r/.

Whenever the START-NORTH merger is featured, the accent will lack the NORTH-FORCE merger. It is featured in some American accents as in Missouri and the Delmarva peninsula. This results in some homophonic pairs like *far-for, farm-form* and *barn-born* (Wells, 1982, 158).

FACE Vowel

This vowel category is realized with the diphthong /eɪ/ in the AmE, BrE, Dublin accent (with the exception of a following /r/) and as the monophthongal [e:] in the provincial IrE accent where *face* is [fe:s]. Hickey mentioned that this vowel is realized as the monophthong /e:/ only (2007). Wells noted that it is diphthongal /eɪ/ in Dublin and monophthongal in the northern areas of England, United States, and Celtic countries (Wells, 1982, pp.142, 425). Examples of this vowel include *April, bass, mane, main, grey, gray, weigh, they,* and *steak.*

GOAT Vowel

This vowel used to act the same way as the FACE vowel in having two realizations as monophthong and diphthong. However, it is currently diphthongal in the AmE, BrE and Dublin accent (with the exception of a following /r/) (Wells, 1982, pp. 146, 425). In BrE, it is the diphthong /əʊ/ with the central onset ə, and the American realization has a back rounded onset /oʊ/, while in IrE the onset of the diphthong is on a scale from /ʌ/ to /o/ and /ə/. In local Dublin English it is /ʌo/, in mainstream IrE and the supraregional variant it is /oʊ/, and the centralised onset /əʊ/ is characteristic of both advanced Dublin English and the Supraregional IrE (Hickey, 2007; Kortmann et al., 2004). Examples include *old, no, don't, boat, note, soul,* and *own.*

GOOSE Vowel

This vowel appears in the same words in the three accents realized as /u:/. Examples include *zoo*, *to*, *too*, *two*, and *you*. Other examples insert the semivowel /j/ known as yod before the vowel like *truth, mute, blue, pupil, deuce, argue, few, fruit, new, view,* and *beauty* (Wells, 1982, 148).

Yod Dropping is the phenomenon where the yod is omitted in stressed syllables after /s/, /z/, /ʃ/, /ʒ/, /t/, /d/, /θ/, /l/, and /n/. So instead of having the diphthongal pronunciation /ju:/ it will be just /u:/. This gave rise to homophonic pairs such as *threw- through* and *brewed-brood* [Wells, 1982, 206]. This definition is applicable to the AmE accent such that the yod exists only after /p/, /b/, /f/, /v/, /k/, /g/, and /ŋ/. In BrE, the yod is usually retained after /n/, /t/, and /d/ whereas this may or may not be the case after /s/, /θ/, /z/, and /l/ (Wells, 1982, 207). In supraregional IrE, the yod is dropped after alveolar sonorants in stressed syllables when they are in a non-initial position, and retained in unstressed syllables (Hickey, 2007).

NORTH Vowel

This vowel is usually merged with FORCE, and when it does not NORTH is realized as open /ɔ/ and FORCE as a close /o/. It should be followed by /r/ to be realized as /ɔ:/ in BrE and /ɔ/ in AmE accents. Wells mentioned that in IrE there is little distinction made between /ɔ:/ and /ɒ/ before [r] that is why Hickey recorded that this vowel s realised as /ɒ/ in Irish English (2004, 2007, 2024). Examples of the NORTH vowel include o*r, nor, for, short, order, warm.* Wells declares an exception where the American /ɔr/ is followed by a vowel it falls under the CLOTH set (Wells, 1982, 183).

FORCE Vowel

In BrE FORCE is realised as /ɔ:/ while it is the closer /o/ in AmE and IrE followed by [r]. Examples are like *more*, *roar*, *floor*, and *four* (Wells, 1982, pp.160 & 162). In AmE /o/ is a "back half-close rounded monophthong" (Wells, 1982, 145) and the British /ɔ:/ is "back closely

rounded" mid monophthong falling between /ɔ/ and /o/ while the American /ɔ/ is "opener" falling between /ɑ/ and /ɔ/ (Wells, 1982, 143).

CURE Vowel

This vowel is realized as the centering diphthong /ʊə/ in BrE and /ʊ/ in AmE followed by /r/ (Wells, 1982, 162). The IrE realization according to Wells is /u:/ (1981, 419), in Hickey, however, it is /u/ followed by a rhotacized schwa (2005, 2007, 2024). In case of a following prevocalic /r/ CURE tends to be merged with the FOOT vowel in AmE, IrE and many rhotic accents while everywhere else the distinction between the two sets is valid (Wells, 1982, pp.163-164). This vowel also has a yod onset for which Wells gives a special division into sets with and without it. Examples of words that have the yod are *abjure, inure, demure, secure, mural, curious, furious, fury,* and *security.* Others like *poor, moor, your, tour,* and *tourist* lack it (1982, 164).

STRUT Vowel

British and American English agree in having /ʌ/ in closed syllables for this lexical category. Examples include *cut, much, run, love, onion, young,* and *blood* (Wells, 1982, pp. 131-132). Irish English makes an iconic divergence to what Hickey transcribes as [ʌ̈], a vowel close in pronunciation to the LOT vowel. He gives the example of Irish *rud* which is pronounced like the British *not.* (Hickey, 2007). Wells also described it as having a "centralized rounded quality" which is the case in the local variety of Dublin English where /ʌ/ is realized as /ʊ/, a famous example is *pub.* He also mentioned that in the conservative variety of Dublin English where the opposition is preserved, speakers do not make a distinction between the two vowels before /l/ as in *pull-dull* (Wells, 1982, 422).

MOUTH Vowel

The three accents agree on the realization of this vowel as /aʊ/ and on its lexical appearance. Wells described the prevalent Irish realization of it with /ʌʊ/ while in the popular Dublin variation it is /æʊ/ (Wells, 1982, 427). In Dublin there is an /au/ fronting, so a realization of the onset of the diphthong as /æ/ or / ɛ / is becoming common. For Hickey, in both popular Dublin and fashionable Dublin accents the realization is /ɛʊ/ (2004). Examples of it are *out, flour, pronounce, thou, down, towel, allow,* and *bough* (Wells, 1982, 152).

PRICE Vowel

Like the MOUTH vowel, this vowel shares the same realization in the three accents which is /aɪ/ as well as its lexical occurrence. In IrE, PRICE is part of the stereotypical idea about the accent as it retracted to /ɑɪ/ because of the Dublin vowel shift, which is the current realization of the Fashionable Dublin accent. Examples for this vowel are *ice, side, time, silent, liar, pint, type, height,* and *high.*

One feature of the British accent that originated in London is the monophthonging of diphthongs especially before a vowel, which was called "smoothing" by Wells. The resulting vowel is usually the onset of the diphthong, for example, /aɪ/ and /aʊ/ are smoothed when followed by a schwa to a range of vowels from /a:/ to /ɑ:/, so a word like *how* can be pronounced [hɑ:]. Similarly, *fire* can be smoothed to [faə] or [fa:] (1982, 238). Wells also described this kind of neutralization in the American accent of the midland that happens in the environment before /r/ where the PRICE vowel is realized as /ɑ/ followed by an r-colored schwa. For example, *fire* becomes homophonous of *far* like /fɑɚ/ (1982, 484).

FOOT Vowel

This vowel has the same realization /ʊ/ in the three accents. Examples of this category include *put, bush, good, woman, could, cuckoo,* and *cushion.* In Ireland, there is an exception in the pronunciation of this vowel when it is spelled with *oo* followed by *k* as in *book* as it will be realized as a GOOSE vowel (Wells, 1982, 133). This is reminiscent of the FOOT-GOOSE merger which is found in AmE in some areas of the Midland, where the two vowels are merged to the FOOT before /l/ as in *full-fool* (Labov & et al., 2006). Also, in AmE the FOOT can be realized as a GOOSE when it is in an unstressed position at the end of the word (Stuan, 2010).

FLEECE Vowel

This vowel is realized with /i:/ in almost all accents. It can or cannot be followed by any consonant except for /r/. It is represented by either ee, ea, e, i, or ie. For example, *meet*, *week*, *meat, weak*, *these*, and *ski* (Wells, 1982, 141,142).

NURSE Vowel

The vowel in this lexical set is realized as /ɜ/ in both British and American English with rhotacization in the latter. In AmE, this vowel usually appears only before /r/, and the result vowel is an r-coloured /ɝ/. In IrE, there is no NURSE vowel since it did not go through the NURSE merger. Its realization belongs either to /e/, /ɛ/, /ʌ/ or /ə/ (Wells, 1982, 137, 138).

SQUARE Vowel

This vowel is a centering diphthong in BrE realized as /ɛə/. In AmE it is either /ɛ/, /æ/ or /eɪ/ which is more open that its British counterpart, it is a monophthong that gets diphthongized wen followed by a consonant (Wells, 1982, 485). in IrE it is /ɛ/ or /e:/ where it has the same realization as FACE. Examples of it are *care, air, wear, heir, vary,* and *fairy.*

NEAR Vowel

This vowel is the fifth of the centering diphthongs - among SQUARE, NORTH, START, and CURE - realized in BrE as /ɪə/, in AmE as /ɪ/ and in IrE accent is realized with /i:/ or /iɚ/ (Hickey, 2024).

HAPPY Vowel

The pronunciation of the HAPPY vowel started to become more tense than lax in Ireland and North America which is known as the **happy tensing**. In BrE the ending vowel is realized as /ɪ/ which is becoming more of /i:/ in the speech of younger British speakers. In AmE and IrE it is realized with the high /i/ (Hickey, 2007). It appears in words like *happy, lucky, body, coffee*, and *Audi* (Wells, 1982, pp.257-258).

MERGERS and SPLITS

Mergers are phonemic phenomena where two sounds that used to be distinct from each other merge so they are no longer distinguishable (Lehmann, 1992). This rephonemization leads to formerly distinct words becoming homophones as the distinguishing sound difference disappears. Mergers can manifest as either context-independent or unconditioned phenomena, where multiple contrastive segments are replaced by a single segment across all linguistic environments. An example of this is the MEET-MEAT merger. Alternatively, they may be context-dependent or conditioned, wherein the merging of phonemes only occurs within specific phonological contexts while maintaining their distinction in others. This one is found in the MARRY-MERRY merger. Unlike unconditioned mergers, this form of coalescence doesn't

entail the loss of phonemes but rather their redistribution within the phoneme system (Castaño, 2014).

MEET-MEAT merger (FACE-FLEECE Merger)

This is one of the oldest mergers, which is also known as the FLEECE merger or FLEECE-FACE merger. The two vowels /i:/ and /e:/ merge as in *meat* and *meet, sea* and *see,* and *speak* and *seek* (Wells, 1982, 194). Words that are under the FACE category are an exception, for example, *great, break,* and *steak* (Wells, 1982, 196). In Ireland, the merger is not complete throughout the whole nation. In some rural areas and in the accent of working class a pronunciation of *meat* like *mate* and *steal* like *stale* can be heard (Wells, 1982, 425).

PAIN-PANE Merger (FACE-FACE Merger)

As explained under the FACE vowel above, examples of it are expressed with (1) *a, (2) ai, ay, ei, ey,* and *(3) ea.* This merger happened with categories (1) and (2). Each of them went through changes in pronunciations till they met at [ɛ:] becoming the closer [e:] which later diphthongized to [eɪ]. As a result, words like *pane* and *pain*, *mane* and *main*, and *wave* and *waive* are pronounced the same (Wells, 1982, pp.192-194).

TOE-TOW Merger (GOAT-GOAT Merger)

Historically, lexical groups like *so-toe-sole* and *sew-tow-soul* came to be realized with /o:/ which was later diphthongized to /oʊ/ which is still the case in AmE accent. Other examples include *doe-dough, moan-mown,* and *throne-thrown* (Wells, 1982, 193).

LOT-THOUGHT Merger (COT-CAUGHT Merger)

This merger exists in American English and Irish English except for Dublin where they are /ɑ:/, in British English they are minimal pairs: /ɒ/ vs. /ɔ:/ (Wells, 1982, pp. 130, 144). In IrE the two vowels are unrounded where LOT can be realized as /ɑ/ and THOUGHT as /ɑ:/ and in some Irish accents there is a total neutralization for lack of a distinct vowel for each (Wells, 1982, pp. 77, 419). The result of this merger is that the following pairs are pronounced the same: *dawn-don*, *not-naught*, and *cot-caught* (Wells, 1982, pp. 473-476). As you know by now in the American accent, /ɑ/ represents the vowel sounds found in words like PALM, LOT, and THOUGHT. Additionally, many Americans use it occasionally in the CLOTH lexical set.

Father-Bother Merger (PALM-LOT Merger)

The contrast between the long and short vowels in open syllables becomes less salient in this merger. The LOT vowel merges with the PALM in the AmE as /ɑ/ but not in the British accent. Some exceptions where a distinction of length is made before nasals as in *Tom* versus *calm* (Wells, 1982, 246). Wells mentioned that in Dublin English, the PALM vowel has the British realization /ɑ:/ (1982, 424) and since the LOT vowel has the American realization /ɑ/ the merge is applicable in this variety of IrE.

THOUGHT-CLOTH Merger

This merger is commonly used in the AmE accent. Since we already mentioned above that there is a LOT-THOUGHT merger in the US, it is normal to predict of LOT-CLOTH-THOUGHT-PALM merger, where the four sets use /ɑ/, which Wells mentioned was becoming prevalent there (1982, 136).

PIN-PEN Merger (KIT-DRESS before nasals**)**

The two vowels /ɪ/ and /ɛ/ are merged before nasals resulting in a vowel leaning towards /ɪ/ or simply a raising of /ɛ/ towards /ɪ/. This is the case in Irish English specifically in counties Cork and Kerry, and American southern accents so that any /ɛ/ before a nasal is nearly most of the time neutralized to /ɪ/. Examples are like *pin-pen*, *Jim-gem*, and *him-hem* (Wells, 1982, pp. 78, 129, 540).

HORSE-HOARSE Merger (NORTH-FORCE Merger)

This merger is referred to by Wells as the "First Force Merger" where FORCE and NORTH lexical sets are merged in British and American accents. After R Dropping happened, the FORCE /ɔə/ monophthongised to /ɔ:/, so both NORTH and FORCE share the THOUGHT vowel. It is good to mention that the RP realization is /ɔ:/ in both, while in London they are realized with /o:/ or /ɔə/. For example, *for-four*, *horse-hoarse*, and *warn-worn* (Wells, 1982, 234-236).

CURE-FORCE Merger (POUR-POOR Merger)

The Second Force Merger or the POUR-POOR merger arose as a result of replacing the /ʊə/ of CURE lexical set in BrE with /ɔ:/ while in AmE accent it is limited only to instances of CURE spelled with [oo] and [ou]. According to Wells, the CURE vowel went through lowering to /oə/ then /ɔə/ and finally monophthongised giving rise to homophonic pairs such as *pore-pour, moor-more, gored-gourd,* and *your-you're* (Wells, 1982, 237).

PRICE-CHOICE Merger

The distinction between the two vowels is established in all accents except a few. In IrE, the separation exists in the supraregional variety but is absent in the rural and fashionable Dublin varieties and also in some South England accents where the PRICE vowel is realized as /ɒɪ/ making *bile* and *boil* homophonic (Kortmann et al., 2004).

NURSE Merger

The Nurse lexical set that includes *worry, furry, hurry, heard, herd,* and *bird* are all realized with /ɜ/. In this set, there are two groups each representing a merger.

1- First Nurse Merger evolved from Middle English and can be heard in words like *heard, herd, bird,* and *word* which used to have /ɪ/, /ɛ/, and /ʊ/, but they went through merging to result in a schwa before /r/. This merger which is absent in Ireland gave us such allophones as *tern-turn, berth-birth,* and *serf-surf* (Wells, 1982, pp. 199-200).

2- Second Nurse Merger (NURSE-STRUT or FURRY-HURRY Merger)

As mentioned, the NURSE vowel is realized with *e, ea, eu, i, o, ou,* and u all before /r/. In BrE, words with *u* and *o* before /r/ are realized with /ʌ/ as in *hurry* and *worry,* while words with /i/ and /u/ before /r/ are realized with /ɜ/ as *bird* and *fur.* This distinction, called Second Nurse Merger, does not exist in American English and thus *hurry* rhymes with *furry* (Wells, 1982, 201).

MARY-MARRY-MERRY Merger

This merger is a result of the contrast between the SQUARE and DRESS vowels and SQUARE and TRAP vowels. This contrast exists anywhere except for American English (not including some Eastern and Southern American English accents) which gave a 3-way merger: the vowels /æ/, /ɛ/, and /eɪ/are merged before a prevocalic /r/ into /e/ or /ɛə̯/. So, the three words are all realized as /mɛri/. In British English the merger did not happen, so they are three different vowels /eə/, æ/, and /e/ respectively (Wells, 1982, 482). Similarly, in Irish English there is no

merger, so they are pronounced with /eɪ/, /æ/, and /e/.

SQUARE-NURSE Merger (FAIR-FUR Merger)

This merger exists in local and new accents of Dublin where the lexical sets of SQUARE and NURSE are merged into / ɛː/ (Hickey, 2024). Because IrE did not go through the NURSE merger and lacks a NURSE vowel (Wells, 1982, 138), the latter is realized as either /ʊː/ or /ɛː/, with a different supraregional realization as /ɚ/ (Hickey, 2024). This results in *hair-her fair-fur* and *ware-were* being homophonic. It is noted that this merger which is disdained by Scousers – Liverpudlians – is considered prestigious by Dubliners (Wells, 1982, 421).

MIRROR-NEARER Merger

More prevalent in the AmE accent, this merger - sometimes called SERIOUS-SIRIUS merger - appears when /ɪ/ is followed by an intervocalic /r/ (Staun, 2010). Examples are like *nearer-mirror*, *serious-sirius*, and *serous-cirrus*. The two sets are /ɪə/ vs /ɪ/ in BrE and /iː/ vs /ɪ/ in IrE he two sets merge as /ɪ/ in rhotic accents (Wells, 1982, pp. 153-154).

Splits refer to the substitution of a single unit with two or more units occurring in different phonetic environments. Primary splits go hand in hand with conditioned mergers. When they happen the result is not a new phoneme but a sound shift of an allophone of the phoneme participating in the merge process (Lehmann, 1993).

NORTH-FORCE Split

The distinction between the two sets is lost in British and American English except for older generations in the latter. In Ireland, the NORTH-FORCE distinction is non-existent and as a result, the NORTH lexical set is realized as /ɒː/ and FORCE as /oː/. So, while *hoarse* and *horse, mourning* and *morning, four* and *for,* and *war* and *wore* are minimal pairs in Irish English, they are homophonic in American and British English (Wells, 1982, 235). However, according to Hickey, the NORTH-FORCE merger is spreading in the south of the republic, especially for the supraregional variation (2004).

FOOT-STRUT Split

The distinction between the two vowels /ʊ/ and /ʌ/ started around the 17th century in British English. It differentiated between words like *look* and *luck* which were both pronounced as /lʊk/ before the split. Other examples are *book-buck*, *could-cud* and *shook-shuck*. This pronunciation characteristic of Northern England is retained in the local variety of Dublin English as well, while anywhere else the split is the norm. Also, Wells mentioned that all the Irish accents differentiate between /ʊ/ and /ʌ/ to some extent, however, the lexical incidence of each does not fully match that of the standard accent (Wells, 1982, pp. 196-199).

Conclusion

The study of vowel systems across different English accents reveals fascinating variations shaped by historical, social, and linguistic factors. While British English and American English are often considered the standard accents for their respective regions, both exhibit unique phonological characteristics that distinguish them from each other and from Irish English. British English, particularly Received Pronunciation, serves as a supraregional standard but is far from monolithic, with various subtypes reflecting social and regional differences. American English, represented by General American, lacks a single standard accent due to the country's vast geographical and cultural diversity but is united by certain phonological features. Irish English, influenced by both its historical relationship with Britain and its unique linguistic evolution,

presents a blend of features distinct from both British and American varieties. The differences in rhoticity, vowel contrasts before /r/, and the realization of lexical sets highlight the dynamic nature of phonological systems across these accents. Lexical sets further illustrate these differences, with variations in vowel quality and realization providing insights into the unique phonetic landscapes of each accent.

In conclusion, the study of vowel systems in British, American, and Irish English accents underscores the intricate interplay between history, geography, and social factors in shaping linguistic diversity. As accents continue to evolve, understanding these nuances becomes crucial for appreciating the depth and complexity of the English language in all its varied forms.

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Statements and declarations

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