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Two more, three less: Diphthongs in British English

Linguists agree that the spelling system of a language cannot be taken as evidence in any discussion of the phonological system of that language. The phonological transcription system of a language, however, is seen as an analysis of the language. This is unfortunate if a transcription system has been fossilized in the last fifty years, as is the case with British English. In this paper we argue that contrary to what the widely used transcription systems of Gimson (1967) and his successor Wells (1990, 2008) claim, the vowels of NEAR (ɪə), SQUARE (eə), and CURE (ʊə) are not diphthongs, ie current British English has no centring diphthongs at all, and that the vowels of FLEECE (iː) and GOOSE (uː) are not long monophthongs but diphthongs, both phonetically and, more importantly, phonologically. Accordingly, current British English has seven diphthongs: the vowels of FLEECE, FACE, PRICE, CHOICE, GOOSE, GOAT, and MOUTH; and six long monophtongs: the vowels of NEAR, SQUARE, START/PALM/BATH, NURSE, NORTH/FORCE/THOUGHT, and CURE. For many speakers CURE merges either with NURSE or with NORTH/FORCE/THOUGHT.

1 "Centring diphthongs"

Let us first look at the vowels listed as centring diphthongs in the British transcribing tradition one by one. We are also going to include the vowel of FORCE which has more or less got to the end of its monophthongization path by the beginning of the 20th century, but is still listed among centring diphthongs by Jones.

1.1 SQUARE

Jones says "ɛə, as I pronounce it, is a diphthong. . . " (1960 : 113). Although when discussing the variants of this vowel, he only mentions that some speakers have æə, others eə or ɛʌ, Jones's restriction quoted above suggests that there existed speakers of Received Pronunciation in his times[1] who did not pronounce this vowel as a diphthong, but as a monophthong.

[1] I quote the 9th edition of the book, the first one came out in 1918.

Gimson explicitly says "[a]nother form of advanced RP uses a pure long vowel [ɛː] [...] especially in a non-final syllable, e.g. *careful*" (1989 : 144). So *I don't care* is -kɛə, but *be careful* is -kɛːf̩l. And Wells also notes that "RP /ɛə/ often involves very little diphthongal movement," as well as "[i]n much English and southern-hemisphere speech, and in Wales, the opposition exemplified by *shed* vs. *shared* is one of duration rather than quality, [ʃɛd] vs. [ʃɛːd] etc." (1982 : 157). The 9th edition of the Concise Oxford English Dictionary (1995), under the auspices of Clive Upton, starts to transcribe this vowel by the long monophthong symbol ɛː.

1.2 FORCE

Jones lists the vowel of FORCE among centring diphthongs (1960 : 115). He uses the symbol ɔə to transcribe it. But then he soon adds: "It must be noted on the other hand that many speakers of Received English, myself among them, do not use the diphthong ɔə at all, but replace it always with ɔː" (1960 : 116). It seems like ɛə and ɔə go — or rather went — along the same monophthongization path. The monophtongization of ɔə had to be indicated in transcription because the vowel system already contained the vowel ɔː (NORTH, THOUGHT), so this change resulted in a merger. Therefore it was inevitable for Jones to recognize FORCE as a monophthong, since pairs like *morning* and *mourning* or *saw* and *soar* became homophonous. The case of the front counterpart, ɛə, is different, since its monophthongization to ɛː is only a realizational change, not a systemic one. Thus there is no pressure to indicate in transcription a change that does not alter the system.

1.3 NEAR

The vowel of NEAR (and of CURE) are different from SQUARE and FORCE in that the latter two do not alternate in current British English, they are uniformly monophthongal. NEAR and CURE on the other hand may show variation, along the same lines as Gimson has noted above: in a non-final syllable a monophthongal pronunciation is more common, in final position something that sounds as a diphthong may be heard. Compare *here it is* hɪːr ɪt ɪz, *near me* nɪː miː and *it's here* ɪts hiːə, *very near* vɛriː niːə. However the variant iːə of the NEAR vowel is not a diphthong, but two syllables (cf Lindsey 2013).

It is not easy to show that the nonmonophthongal variant of NEAR is not a diphthong but FLEECE + schwa. English word stress rules used to be sensitive to syllable weight, but they are not anymore: the lengthening of final i and u in *carry* 'kariː and *value* 'valjuː does not change the stress

pattern of these words. If it did, these words would have final stress, like *agree* əˈgriː or *taboo* təˈbuː.

Another, more productive stress assignment process found in compounds and phrases is stress shift. Words that have two stressed syllables are accented on the end if nothing follows: eg *sàrdíne, kàngaróo, àcadémic,* but at the beginning if followed by something prosodically more prominent: eg *sárdine sándwich, kángaroo mérchant, ácademic yéar* (cf Hayes 1984, Selkirk 1984, Halle & Vergnaud 1984). However, there seems to be a tendency that stress does not shift in three syllable words where the first two syllables are stressed and the second is accented: eg *Òctóber ráin* (not *Óctober ráin*), *Tìtánic's bánd* (not *Títanic's bánd,* cf Szigetvári & Törkenczy 2011). If so, the number of syllables in a word that ends in the NEAR vowel determines the possibility of stress shift. The intuition of some native speakers is that Cairo's *Tahrir Square,* which was recently much talked about, would be either tɑːˈriːə ˈskwɛː or ˈtɑːrɪː ˈskwɛː, thus the pronunciation with FLEECE + schwa counts as three syllables, that with a long monophthong as two.[2]

1.4 CURE

Already Jones notes that many speakers have ɔə or ɔː for this vowel, thus merging it with FORCE (1960 : 117), and, if monophtongized, also with NORTH and THOUGHT. Besides this, Gimson also mentions the possibility of centring this vowel, especially when it follows j (or perhaps palatals: LPD3 has *jury* ʤɜːri). Lindsey (2012a, 2012b) has a third monophthongal variant, one which is centred, but not unrounded, ɵː. It seems that this vowel is currently rather unstable in British English. Whichever of the outcomes gains ground in the future, the vowel has become a long monophthong. In a final syllable, the split of CURE into two vowels, GOOSE + schwa, is also a possibility, just like in the case of NEAR.

The centring diphthongs of Jones and Gimson come from several historical sources: FLEECE/GOOSE + r (eg *near* and *cure*), FLEECE/GOOSE + schwa (eg *Ian* and *cruel*), and unstressed KIT/FOOT + schwa (eg *India* and *influence*).[3] However, monophthongization is an option only for those instances that had developed from FLEECE/GOOSE + r, but not those that come from

[2] Obviously this is just a prediction whose empirical validity awaits corroboration—or refutation.

[3] In the case of the third centring diphthong, SQUARE, the unstressed checked vowel + schwa option is not available, but the other two are: FACE + r (eg *care*) and FACE + schwa (eg *prayer*), the one-syllable pronunciation, however, is rare in the latter case.

vowel + schwa sequences.[4] Accordingly, the two types can in most cases be told apart based on their spelling, but native speakers do not normally turn to such information when speaking. It is most likely that they never really merged (Lindsey 2013).[5]

The following chart contains the variants of the four vowels discussed in this section. The high vowels, (1a–b), show variation: for some speakers they have a two-syllable version, especially in final position. Others only use the monophthong pronunciation, but for CURE there are several competitors for this slot in the vowel system. Two of the competitors cause merger with the NORTH/FORCE/THOUGHT or the NURSE set, the third is a novel monophthong in the language. For none of these vowels is the diphthong pronunciation of widespread currency in current British English, as marked by the daggers. For the two mid vowels, (1c–d), only the monophthong pronunciation survives. The two-syllable versions of these vowels only exist as non-r-types within a morpheme (eg *mayonnaise, boa*) or across a morpheme boundary (eg *betrayal, lower*).

(1)

	vowel	2-syll.	diphthong	monophthong
a.	NEAR	iːə	†ɪə	ɪː
b.	CURE	uːə	†ʊə	əː/ɔː/əː
c.	SQUARE	*eːə	†ɛə	ɛː
d.	FORCE	*oːə	†ɔə	ɔː

Note that the first vowel of the two-syllable variants are uniformly transcribed as long monophthongs here (iː, uː, eː, oː), unlike in the Jonesian tradition, where the high ones are monophthongal, but the mid ones are diphthongal. We turn to an alternative unification of these two types presently.

2 High long vowels

We will now look at what our sources have to say about the vowels of FLEECE and GOOSE. To anticipate: the possibility of a diphthongal pronunciation of these two vowels already appears in Jones.

[4] With some notable exceptions, like *idea* ɑiˈdɪːə.

[5] Note that the LPD (Wells 1990) introduces different symbols for them: ɪə for the r-type, iə for KIT/FOOT + schwa, and iːə for FLEECE/GOOSE + schwa.

2.1 FLEECE

Jones says "Many English people use a diphthong in place of a pure iː. The diphthong begins with an open variety of i and moves to a closer position; it may be represented by i̯i or ɯi or ij" (1960 : 65f). He adds "[a]n exaggerated diphthongal pronunciation sounds dialectal, an extreme form of the diphthong being used in the local dialect of London (Cockney)" (1960 : 66).

Gimson says "[t]he vowel is often noticeably diphthongized, especially in final positions. A slight glide from a position near to [ɪ] is common amongst RP speakers, being more usual than a pure vowel" (1989 : 101f).

2.2 GOOSE

Just like for the FLEECE vowel, Jones mentions the diphthongized version of the GOOSE vowel used by "many English people," transcribing it as ʉu̯, ɷu, or uw (1960 : 85). As can now be expected, Gimson also discusses the diphthongal GOOSE vowel, the first member of which is significantly fronted. Just like for FLEECE, "any exaggeration of the diphthong [. . .] is typical of popular (Cockney) London speech." In any case, "[j]ust as RP /iː/ is rarely pure, so RP /uː/ is usually diphthongized" (1989 : 121).

3 The System

Now the question cannot be avoided: if two vowels are "rarely pure," that is, they are more commonly pronounced as diphthongs, why are they transcribed as monophthongs? And similarly, if three vowels are usually monophtongal, why are they still transcribed as diphthongs?

The American transcribing tradition (eg Kenyon & Knott 1953) treats only three vowels, PRICE, MOUTH, and CHOICE, as diphthongs.[6] Accordingly, the short–long or monophthong–diphthong pairs of the Jones system are treated as lax and tense monophthong pairs in the American tradition. Let us compare the four nonlow pairs in the two systems, as well as Gimson's hybrid system.

(2)

	vowel pair	Jones	Gimson	K&K
a.	KIT–FLEECE	i–iː	ɪ–iː	ɪ–i
b.	FOOT–GOOSE	u–uː	ʊ–uː	ʊ–u
c.	DRESS–FACE	e–ei̯	e–eɪ	ɛ–e
d.	dog–GOAT	ɔ–ou̯	ɒ–əʊ	ɔ–o

[6] In fact, Kenyon & Knott also list ju (eg *using, fuse*) as a diphthong, but this is debatable and also irrelevant in this discussion.

In (2d) *dog* appears instead of LOT because the vowel of the latter is more often the low ɑ in General American.

We see that the contrast of the two high vowels, (2a, b), is indicated as a length contrast, while the two mid vowels, (2c, d), are transcribed as a short monophthong and a diphthong by both Jones and Gimson. Kenyon & Knott mark these four pairs uniformly as lax vs tense oppositions. But why should these long vowels and diphthongs be marked uniformly?

3.1 Vowel phonotactics

The vowels of English are often split into two groups according to whether they only occur before a consonant — these are the checked vowels — or also without a following consonant — these are the free vowels (cf Trubetzkoy 1969 : 178). Checked vowels are all short monophthongs (KIT, DRESS, TRAP, STRUT, LOT, and FOOT).

Free vowels are diphthongs and long monophthongs, these may all occur at the end of a word without a consonant following them. Free vowels are often split into two subgroups, one without a specific name (let us reserve the name free vowel for only these), the other subgroup is usually referred to as R(-controlled) vowels. These are NEAR, SQUARE, START/PALM/BATH, NURSE, NORTH/FORCE/THOUGHT, and CURE. As the spelling of the lexical sets shows most of these have a historical R, but other processes, like the BATH-broadening, the monophthongization of Middle English au, or, for some speakers, the CLOTH-broadening, also led to the development of such vowels.

While members of both subgroups of free vowels occur at the end of words, in current British English the R vowels do not occur in prevocalic position. The following chart shows this.

(3)

	__ C	__ #	__ V
checked vowels	✓	✗	✗
R vowels	✓	✓	✗
free vowels	✓	✓	✓

The only way an R vowel could occur before another vowel is if it is before a word-level affix, eg *sawing* sɔːɪŋ, but note that the ɔː of this word *is* word-final: there is a word boundary after it. Furthermore, most speakers of current British English pronounce this, and all other similar words with r between the two vowels: sɔːrɪŋ.

Thus vowels fall into three groups based on a very basic phonotactic pattern, whether they occur in word-final and/or in prevocalic position. In (4) we list the vowels as transcribed by Jones[7] according to this classification.[8]

(4) a. checked vowels: i e æ ʌ ɔ u
b. R vowels: iə ɛə əː ɑː ɔː uə
c. free vowels: iː ei ai au ɔi əu uː

There are two oddities in the transcription symbols used by the Jones tradition. There are two vowels, FLEECE and GOOSE, which pattern with diphthongs and are pronounced as diphthongs, but transcribed as long monophthongs. And there are three vowels, NEAR, SQUARE, and CURE, which pattern with monophthongs, most of them were potentially pronounced as monophthongs at the beginning of the 20th century, and are certainly pronounced as monophthongs at the beginning of the 21st century, yet are still transcribed as diphthongs.

This is an undesirable situation because it blurs the system of current British English, and leads to many misconceptions about the phonotactics of vowels.

In (5) we give alternative symbols, devised by Lindsey (2012a), which neatly capture the phonotactic regularity discussed above.[9]

(5) a. checked vowels: ɪ ɛ a ʌ ɔ ɵ
b. R vowels: ɪː ɛː əː ɑː oː ɵː
c. free vowels: ɪi ɛi ɑi au oi əu ɵu

(5) shows that checked vowels are all short — but this is what everybody assumed all the way — R vowels are all and the only long monophthongs, and free vowels *are* the diphthongs of English.

[7] Some of Gimson's symbols are different in their shapes, but not in their classification as monophthongs and diphthongs.

[8] These are the symbols of EPD13 (Jones 1967).

[9] We differ from Lindsey in distinguishing the STRUT vowel from schwa and in using vowel symbols (i u, not j w) for the offglides of diphthongs, to resemble the Jones tradition. A discussion of why STRUT and schwa should/could be merged would be offtopic here.

3.2 The Subsystems

At this point it must be admitted that the R vowels transcribed as diphthongs in the Jones tradition are different from the R vowels that are transcribed as monophthongs. Members of the former group (NEAR, SQUARE, and CURE) occur before a word-final consonant very rarely, and never before two consonants. The other R vowels are very common before a word-final consonant, and also occur before two consonants.[10] (6a–c) list some of the very few examples for NEAR, SQUARE, and CURE in __C# position and (6d–f) give examples for START, NORTH, NURSE in __CC position.

(6) a. NEAR: Algiers, beard, Peirce, Sears, tierce, weird
b. SQUARE: bairn, cairn, laird, scarce
c. CURE: Lourdes, Udmurt (gourd, unless it is gɔːd)
d. START: after, Albany, almanac, arctic, ask, aunt, example, etc
e. NORTH: absorption, auction, augment, auxiliary, corpse, etc
f. NURSE: burst, excerpt, first, perspex, perspirant, etc

So NEAR, SQUARE, and CURE do pattern differently than START, NORTH, and NURSE. This does not justify grouping them with diphthongs, however. Real diphthongs, that is, the free vowels, do occur before two consonants rather freely. The two consonants are usually word final and often both coronal, but neither of these conditions is necessary, as the data in (7) show.

(7) a. FLEECE: beast, east, field, fiend, pizza, etc
b. FACE: acquaint, ancient, change, faint, traipes, etc
c. PRICE: bind, blind, child, Christ, deixis, Fiennes, etc
d. MOUTH: abound, bounce, council, count, oust, scrounge, etc
e. CHOICE: annoint, foist, moist, oyster, point, etc
f. GOAT: bold, bolt, coast, don't, hoax, holp, soldier, etc
g. GOOSE: acoustic, boost, roost, wound, etc

Therefore there is no reason to group NEAR, SQUARE, and CURE with other diphthongs: the latter may occur before consonant clusters, the former may not, the latter may occur prevocalically, the former may not. It is nevertheless reasonable to split R vowels into two subgroups, as shown in (8).

[10] We are not talking about "syllable-initial" consonant clusters, made up of an obstruent and a nonnasal sonorant, these count as single consonants in phonotactic regularities, and any vowel occurs before them: eg *Deirdre* dɪːdrɪi.

(8)

	__C#	__CC
NEAR, SQUARE, CURE	(✓)	✗
START, NORTH, NURSE	✓	✓

Finally let us note that based on its distribution schwa is also an R vowel: it occurs word finally, but not prevocalically. Within the group of R vowels it patterns with the START, NORTH, NURSE set, since it occurs before consonant clusters. Schwa only occurs in unstressed syllables, thus it seems to form a subgroup of its own.

4 Conclusion

To conclude let us combine the phonotactic charts drawn up above. (The weird notation _́_ means 'in stressed position', and, of course, is used to single out schwa.) For the NEAR, SQUARE, CURE set we will use the name *smooth* vowels, since the contraction of two vowels is often referred to by this term. START, NORTH, and NURSE are called *broad* vowels by Wells (1982), a name we also adopt.

(9)

	__C	__CC	__#	_́_	__V
checked vowels	✓	✓	✗	✓	✗
smooth vowels	✓	✗	✓	✓	✗
schwa	✓	✓	✓	✗	✗
broad vowels	✓	✓	✓	✓	✗
free vowels	✓	✓	✓	✓	✓

This chart does not reveal the graduality the more basic version in (3) did. Three groups of vowels occur in three kinds of environments that are different. Checked and smooth vowels are similarly restricted, but at different points. Schwa's extra restriction comes in it not ocurring in stressed position. Broad vowels are only banned from prevocalic position, while free vowels occur anywhere — just as their name suggests.

It seems that FLEECE and GOOSE are transcribed as monophthongs and NEAR, SQUARE, CURE as diphthongs only because of conservatism, neither phonetic, nor phonological facts justify this practice. But this practice renders transcription an alternative spelling, which necessarily blurs our view of the phonological system of the language. This practice must therefore be ended.

REFERENCES

Concise Oxford Dictionary, 9th ed. 1995. Ed. Della Thompson. Oxford: Oxford University Press.

Gimson, Alfred Charles. 1989. An Introduction to the Pronunciation of English (4th ed., revised by Susan Ramsaran). London: Edward Arnold.

Halle, Morris and Jean-Roger Vergnaud. 1984. An Essay on Stress. Cambridge, Mass.: The MIT Press.

Hayes, Bruce. 1984. The phonology of rhythm in English. Linguistic Inquiry 15 : 33–74.

Jones, Daniel. 1960. An Outline of English Phonetics (9th ed.). Cambridge: Cambridge University Press.

Jones, Daniel. 1967. Everyman's English Pronouncing Dictionary (13th ed., revised by A. C. Gimson). London: Dent.

Kenyon, John S. and Thomas A. Knott. 1953. A Pronouncing Dictionary of American English. Springfield, Mass.: Merriam-Webster.

Lindsey, Geoff. 2012a. The British English vowel system. Posted 2012-03-08, retrieved 2014-09-21 from http://englishspeechservices.com/blog/british-vowels

Lindsey, Geoff. 2012b. The demise of ʊə as in CURE. Posted 2012-04-30, retrieved 2014-09-21 from http://englishspeechservices.com/blog/the-demise-of-ʊə-as-in-cure

Lindsey, Geoff. 2013. The merger that never quite was. Posted 2013-10-02, retrieved 2014-09-21 from http://englishspeechservices.com/blog/the-merger-that-never-quite-was

Selkirk, Elisabeth O. 1984. Phonology and Syntax: The Relation between Sound and Structure. Cambridge, Mass.: The MIT Press.

Szigetvári, Péter and Miklós Törkenczy. 2011. A Thistle, or How to tell a reduced vowel. In: Bálint Gárdos, Veronika Ruttkay, and Andrea Timár (eds.), Rare Device: Writings in Honour of Ágnes Péter. ELTE Papers in English Studies. Budapest: Department of English Studies, Eötvös Loránd University. 503–513.

Trubetzkoy, Nikolai S. 1968. Principles of Phonology (translated by Christiane A. M. Baltaxe). Berkeley & Los Angeles: University of California Press.

Wells, John Christopher. 1982. Accents of English. Cambridge: Cambridge University Press.

Wells, John Christopher. 1990. Longman Pronunciation Dictionary. Harlow: Longman. (=LPD)

Wells, John Christopher. 2008. Longman Pronunciation Dictionary (3rd ed.). Harlow: Pearson Longman. (=LPD3)