Vowel shifts in English

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English vowels

English vowels may be divided into those that are found in *stressed* syllables, and those found in *unstressed* syllables. We will focus here on the vowels in stressed syllables, and the rest of this section is about stressed vowels when we do not explicitly mention stress. We may focus on monosyllabic words that are produced as a full utterance to guarantee that we are looking at a stressed syllable. Unstressed syllables allow two vowels, [ə] and [i] (e.g., the second vowels of *sofa* and *silly*) (and probably one more: the final vowel in *motto*). [1]

English vowels are divided into short and long vowels.

Among the short vowels, there are 3 front unround vowels, 2 back round vowels, and 2 back unround vowels. For the three front unround vowels, see Figure 1, where you see an example in standard orthography, in typical dictionary form, and in the IPA symbols that we shall use (that linguists normally use). For the 4 back short vowels, see Figure 2, left column. The vowels of *putt* and *pot* (in most dialects of the US) are unround.

Please note: many of you (at least half of you) do not distinguish between [a] and [ɔ]: you pronounce *cot* and *caught* the same way. If you are one of those people, which of these two vowels do you use for those words?[2]

The long vowels are all diphthongs:[3] they begin with a vowel which is followed by a glide, either [*y*] or [*w*]. The *glides* (here, [j] and [w]) are made like the corresponding vowels [i] and [u], but they are shorter than the vowels, and they are in the same syllable as the vowel that precedes them. We will get to syllables in a couple of classes.

There are 7 long vowels in English: 6 of them are on the right in Figures 1 and 2; the other is [ɔj], as in *boy*. Please notice that although the dictionary symbols for the vowels on the left and the right in a given row are similar (they are short and long versions of the same vowel symbol), the vowels themselves are quite different. There is a historical reason for that.

There is at least one more diphthong in (my) American English, one which we will discuss later; it is the vowel in *sand*, symbolized [$e^{\ə}$]. Don't forget it, but we will not focus on it for now. All of the diphthongs, including that one (but excluding [ij] and [uw]) are shown in Figure 4.

[1] That is perhaps controversial; one reason to believe it is that flapping is possible in words such as *motto* and *tomato*.

Short vowels			Long vowels		
pit	ĭ	[ɪ]	by	ī	[aj]
pet	ĕ	[ɛ]	Pete	ē	[ij]
pat	ă	[æ]	pate	ā	[ej]

Figure 1: **Front vowels**

Short vowels			Long vowels		
put	ŏo	[ʊ]	boot	ōo	[uw]
putt	ŭ	[ʌ]	bound	ou	[æw]
bought	ô	[ɔ]	boat	ō	[ow]
pot	ŏ	[a]			

Figure 2: **Back vowels**

[2] Do you distinguish the vowels in *Sean* and *Connery*? – or *Sean* and *John*, for that matter? *Hot* and *dog*?

[3] Maybe not, if you're from Minnesota.

American	h—d	h—	b—d	h—t	k—d
ij	heed	he	bead	heat	keyed
ɪ	hid		bid	hit	kid
ej	hayed	hay	bayed	hate	Cade
ɛ	head		bed		
æ	had		bad	hat	cad
a	hod	ha!	bod	hot	cod
ɔ	hawed	haw	bawd	haughty	cawed
ʊ	hood				could
ow	hoed	hoe	abode	Hoat	code
uw	who'd	who	booed	hoot	cooed
ʌ	Hudd		bud	hut	cud
ɚ	herd	her	bird	hurt	curd
aj	hide	high	bide	height	
æw		how	bowed		cowed
ɔj		ahoy	Boyd	Hoyt	
ɪɹ**		here	beard		
eɹ**		hair	bared		cared
ju	hued	hue			cued

Table 1: From Ladefoged, but modified a bit

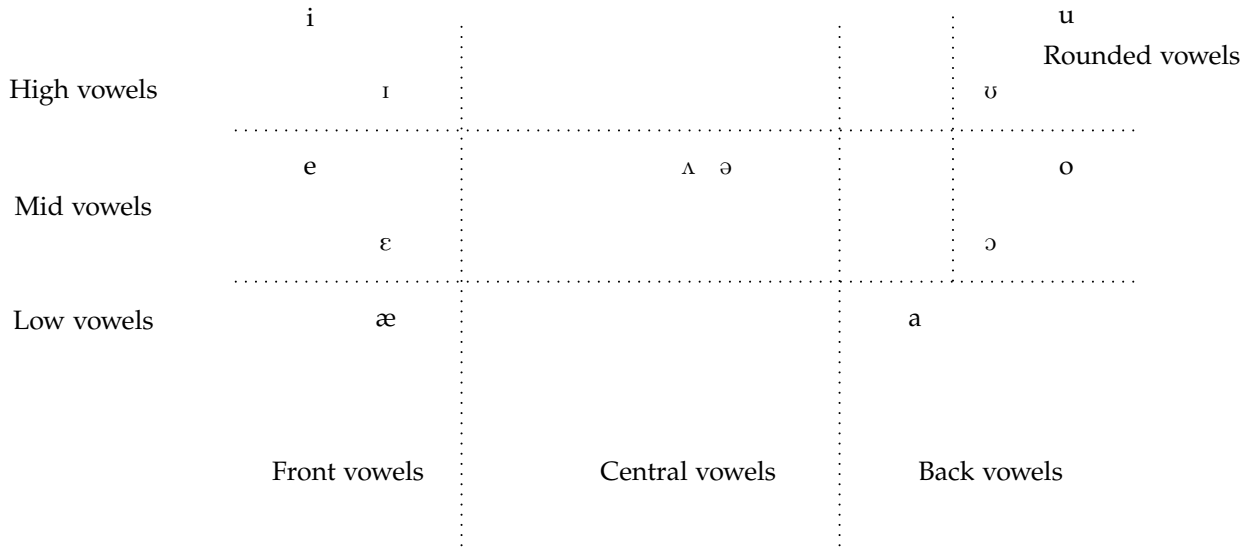
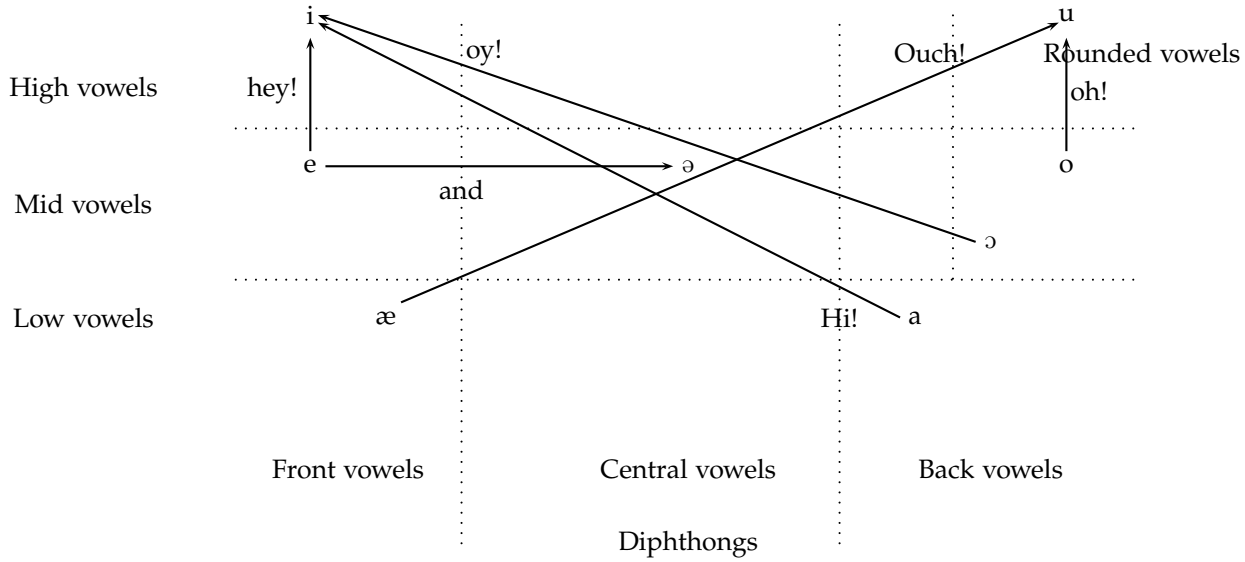


Figure 3: The location of simple vowels in vowel space

Figure 4: Diphthongs: motion in vowel space



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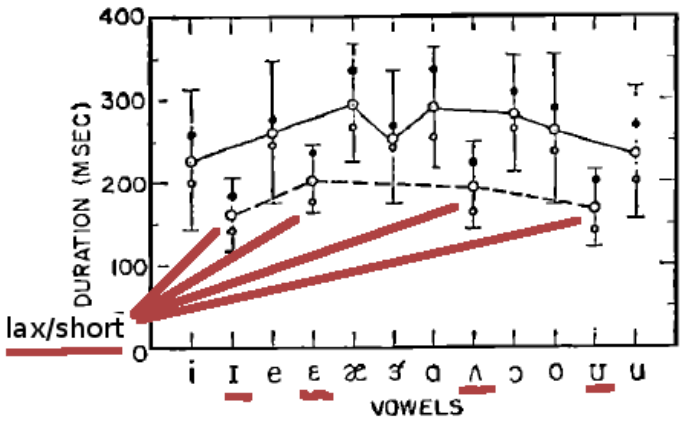
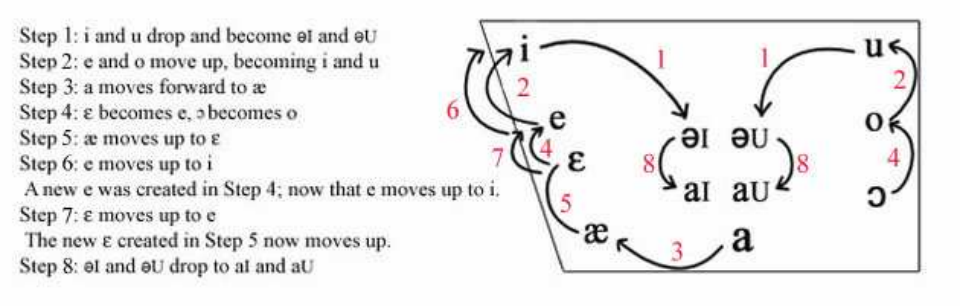


Figure 5: Arthur House (1960) On vowel duration in English (*JASA*). The large unfilled circles are means for each vowel in 14 contexts spoken by 3 subjectgs. The upper terminus of each vertical bar shows the average vowel duration in voiced contexts; the lower terminus is for voiceless contexts. The filled circle on each vertical bar shows the average vowel duraiton in frcative environments; the small unfilled circle is for stop environments. Lower line is lax vowels, the solid is the others.

Phonetics

The Great Vowel Shift (GVS)

The real facts about the Great Vowel Shift are *very* complex. But there is a big picture to take away.



From facweb.furman.edu/ mmenzer/gvs/what.htm

[4] And I do not expect you to memorize any of these facts or historical shifts. You might just memorize one or two pronunciations to amaze your friends and loved ones. This is one feat you *are* encouraged to try at home.

A little history

We English speakers are part of the same language family as most of the other people in Europe. We are especially close, linguistically, to speakers of Germanic languages: English is a Germanic language. We are also very close to French, because the royal language of England was French for several hundred years after the Norman Conquest.

We share a lot of words with French and with the Germanic languages because of borrowing (from French) and Germanic (because our languages are the evolving children of the same ancestral language).[5]

[5] It is also true that in recent times, all the Western European languages have invented new words from Latin and Greek roots, based on spelling more than sounds. I will ignore most of that.

Before the Great Vowel Shift, English speakers used to pronounce the vowels of the words that they shared with speakers of other European languages in much the same way.

The Great Vowel Shift began before Shakespeare's time, and continued during his lifetime (1564-1616).

But the GVS affected the long vowels of Middle English, and began around 1400[6]—some time after the Black Death, the great plague that killed somewhere around half the population of Europe in the middle of the 14th century. But we really don't know what the social factors were that gave rise to it. Before then, the pronunciation of vowels (especially the long vowels) was very similar to that of the vowels in the sister-languages.

[6] We really don't know when; scholars argue about this question.

The long vowel spelled *i* (e.g., *time*) was pronounced [i:]. *like* was pronounced [li:k], much like English *leak* today.

The long vowel spelled *ee* was pronounced [e:]. *feet* was pronounced [fe:t], a *little* like English *fate* today.

1300	1400		1500	1600	1700	1800	present
driven	i:	ɪi	ei	ɛi	ʌi	ai	
house	u:	ʊu	ou	ɔu	ʌu	au	
feet	e:		i:				
fool	o:		u:				
beat	ɛ:				e:	i:	
foal	ɔ:				o:		əu
take	a:		æ:	ɛ:	e:	ei	
sail	ai		æi	ɛi	e:	ei	
law	au		ɒu	ɒ:		ɔ:	

This nice graphic based on material from Raymond Hickey, at www-uni-due.de, on Studying The History of English.

1400s

This is the century of the Battle of Agincourt, Joan of Arc, the fall of Constantinople, Leonardo da Vinci, and the discovery of America by Columbus.

In the English of the 1400s, [i:] as in *crime* became a diphthong, probably [ɪy]: *like*, *time*, *crime*. The first part of this diphthong would become lower over the following centuries.

At around the same time, [e:] (as in *feet*) became a long [i:] (but it did not get confused with the old [i:], which was no longer pronounced that way); and [ɛ:] was also raised, to take the place of [e:].

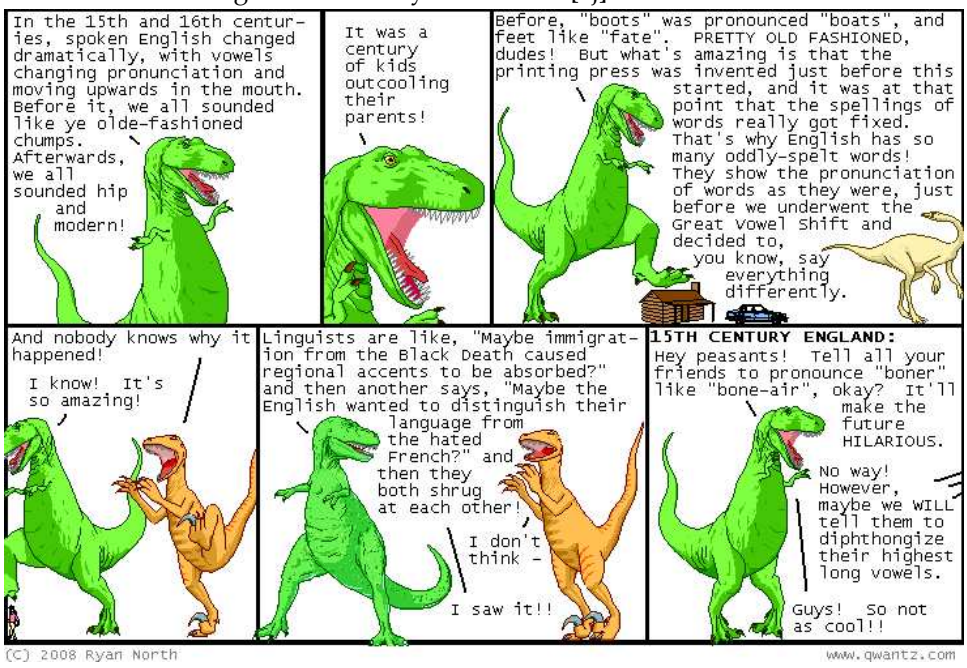
So the old *east*, which had been [ɛ:st], was now [e:st].

Further developments

In the 1500s,[7] the long vowel (we mark long vowels with a following colon) [a:], as in *name* [na:mə], now became [æ:]. In the 1600s, around the time of the English Revolution, it kept on moving, and became [ɛ:]. Around the time of the American Revolution, it became [e:], and by the time of our Civil War, it shifted to become a diphthong: [ej].

[7] This is the century of Henry VIII, Martin Luther, and Queen Elizabeth, and most of Shakespeare's life.

In the 1600s, English Revolutionary time, [ɪy], as in *crime*, kept on changing – to become [əj]. That is a *lowering* of the first part of the vowel, and that lowering has continued up to modern times; the pronunciation now begins with a very low vowel: [aj].



The Northern Cities Vowel Shift

The Northern Cities Vowel Shift is a major shift in the vowel quality of several short vowels in American English. It has some precedents in earlier times, but it seems to have started after World War II, in the Northern inland cities: Chicago, Detroit, Rochester, Cleveland. Its antecedents—the conditions that got it started—already existed further east, in New York, for example.

William Labov, the dean of sociolinguists in the 20th century, has studied this system in great detail, and there are two excellent interviews with him on NPR that are accessible on the internet.

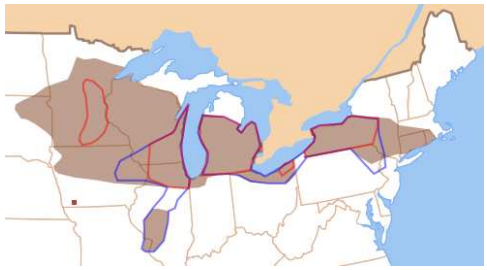


Figure 6: The region of the NCVS

Tense æ

It started with two slightly different pronunciations of the vowel in *cat* and *Sam*. Instead of pronouncing them both with the same vowel (*c*[æ]*t*, *S*[æ]*m*), many speakers throughout the United States

used a slightly raised and slightly diphthongized form in *Sam*. This vowel is often described as *tense*, and is [$e^{ə}$]

In fact, there was a phonological principle determining where they used this vowel: $e^{ə}$is used when followed by an *m* or *n* (but not [ŋ] = 'ng') *in the same syllable.* The consonant that *precedes* is of no importance.

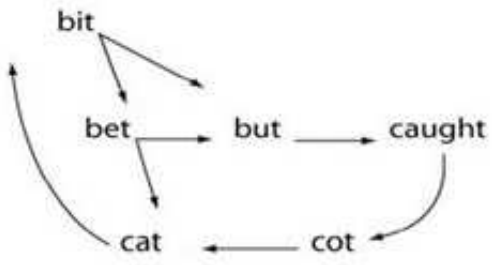
Sam	sand	sang
s$e^{ə}$m	s$e^{ə}$nd	sæng

Different syllables:

Pamela	Canada
pæmələ	kænədə

But then things started changing. In the Inland area—and this includes Chicago—*æ* changed unconditionally: everywhere there had been an *æ*, a tense $e^{ə}$was now used by many speakers, including in words like *hat, cat, that*, and *at* where this would not happen on the East Coast.

The other big change was that the vowel /a/ (as in *block, top*) started to move *forward*, and took over the phonetic pronunciation [æ], which was no longer being used for *cat* and *hat*.



Conclusion: vowels in motion

Linguists do not know much about the *causes* of the great changes in pronunciation of English, and other languages, over the decades. But for the last 200 years, linguists have been able to document and infer an enormous amount of change, in both vowels and consonants.

The one great constancy in language is change: languages continue to change in vocabulary, in pronunciation, and in grammar. This has not stopped; the rise of schools, television, and mass transporation has had an impact on language change, but it has not slowed it down. Each generation and each social group has the opportunity to add its particular twist to the way its language is pronounced, and often one group's twist is adopted by all, or almost all, of the rest of the speakers.