Ling 105
Sounds of Language
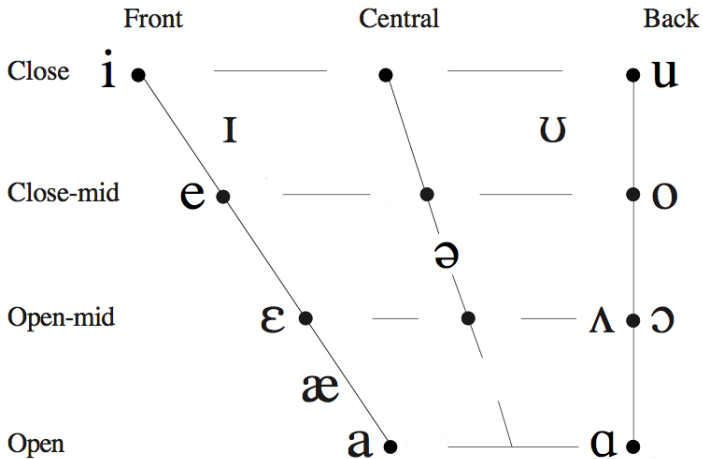
Tuesday, September 17, 2024

Kevin Ryan

	Front	Central	Back
Close	i • y	ɨ • ʉ	ɯ • u
	ɪ Y		ʊ
Close-mid	e • ø	ɘ • ɵ	ɤ • o
		ə	
Open-mid	ɛ • œ	ɜ • ɞ	ʌ • ɔ
	æ	ɐ	
Open	a • ɶ		ɑ • ɒ

Where symbols appear in pairs, the one
to the right represents a rounded vowel.
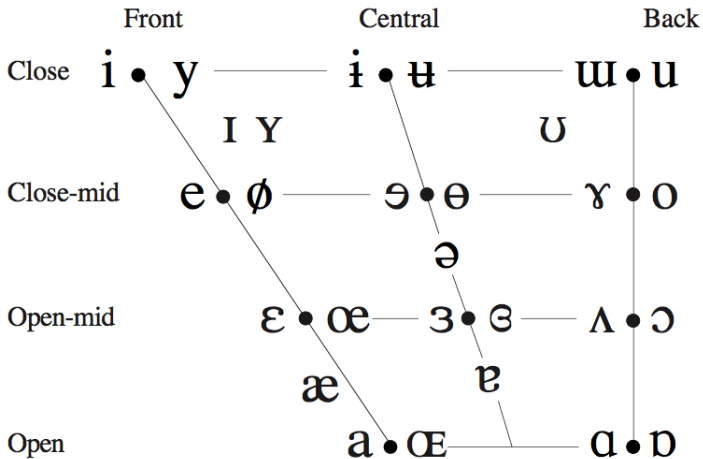
# < 50% relevant for English

Where symbols appear in pairs, the one to the right represents a rounded vowel.

English vowel orthography

- Most languages that use the Roman alphabet retain the approximate Roman values: {*a, e, i, o, u*} = [ɑ, e, i, o, u]
- These "international values" are also used by the IPA
- In English orthography, everything is shifted
  - *goose* is not [ɡos], but [ɡus]
  - *geese* is not [ɡeɪs], but [ɡis]
  - *name* is not [nɑm], but [neɪm]
  - *nine* is not [nin], but [naɪm]

Great Vowel Shift
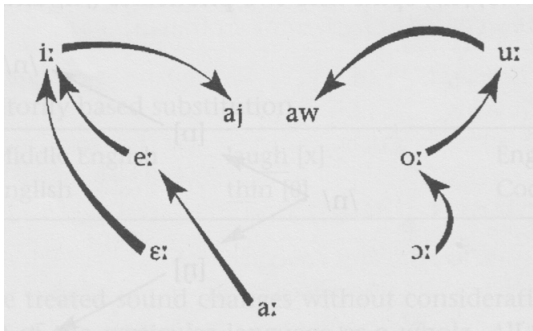
Great Vowel Shift
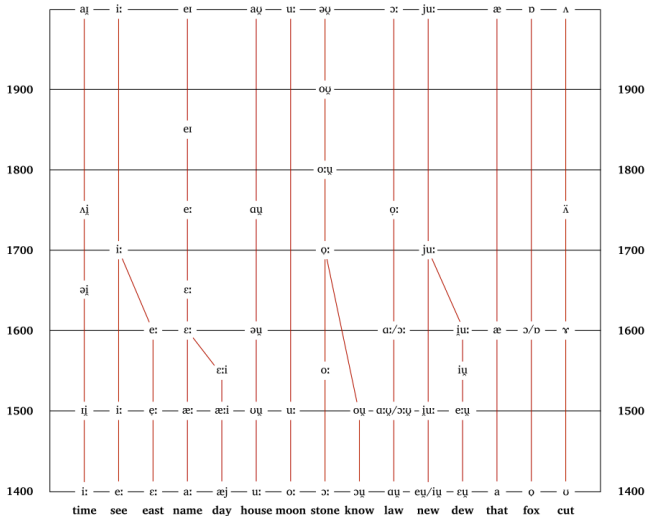
(Kip Wheeler)

Schwa

- [ə] always (in English) unstressed, reduced, roughly centered
- Most AE speakers have two reduced vowels, [ə] and [ɪ] (e.g. *Rosa's roses*)
- [ə] vs. [ʌ]
- Unstressed "er" is rhotacized schwa [ɚ]

Tense/lax

- Longer, more peripheral
- Rule of thumb: Roman letters are tense, others lax
    - ɑ e i o u
    - æ ɛ ɪ ɔ ʌ ʊ ə
- Another hint: if it can occur at the end of a monosyllabic (formal English) word, it's tense: *spa*, *lay*, *lee*, *low*, *loo*
- Tense vowels normally don't precede codas [ŋ] or [ʃ]

Syllable structure
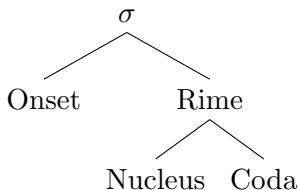
- Nucleus is obligatory (universally)
- Onset & coda are optional (in English)
- Onset & coda can contain only consonants
- Nucleus is usually a vowel, but can be a syllabic consonant in some languages

Syllabic consonants

- English: ḷ, m̩, n̩
  - One sometimes sees [ɹ̩] instead of [ɚ] or [ɝ]
- Always unstressed
  e.g. *apple*, *bottle*, *bottom*, *button*, *blossom*
- Typologically, any consonant can be syllabic

- Marked by ' before the **syllable** (not just the vowel!)
- Always mark stress, even for monosyllables
    - *stub*
    - *syllable*
    - *syllabic*
- Secondary stress (usually unnecessary): ˌ

Allophonic vowel nasalization in English

- Contextual variants = allophones (general phenomenon = allophony)
- English vowels nasalized before nasal codas (can_cat.wav)
- In some languages, vowel nasalization is contrastive (minimal pair in French?)

Flap

- (Doesn't apply to all English dialects, but is standard in General American)
- *Waiter*, *wader*: neither [t] nor [d], but [ɾ]
- Usually spelled *t(t)* or *d(d)* in English, but often *r* in other languages (cf. Spanish *pero*)
- [r] akin to multiple [ɾ]

Distribution of flap

- "Flap" and "tap" have the same IPA symbol
- [ɾ] whenever /t/ or /d/ is between vowels/approximants and the following syllable is unstressed
- Flapped
  - *butter* [ˈb̥ʌɾɚ] (Praat)
  - *bottle*
  - *fader*
  - *cuddle*
  - *party*
  - *radio*
- Not flapped
  - *ideal*
  - *fades*
  - *candid*

- [r̃]
- Whenever /n/ occurs in flapping context in English, e.g. *winner* [ˈwɪɾ̃ɚ] (Praat)

Glottal stop

- /t/ can also be realized as [ʔ], especially before a nasal, e.g. [ˈb̥ʌʔn̩]

Aspiration & devoicing in English

- Aspiration
  - A voiceless stop is aspirated (e.g. $[p^h]$) when initial in a word or stressed syllable (e.g. *tip*, *stack*)
- Devoicing
  - A voiced plosive is optionally devoiced (e.g. $[\overset{\circ}{b}]$) utterance-initially

Approximant devoicing in English

- Approximant consonants of English: {j w ɹ l}
  - (ɾ is also an approximant, but irrelevant here)
  - Technically, vowels are also approximants
- When a would-be aspirated stop immediately precedes an approximant consonant, instead of aspiration, the approximant is devoiced, e.g. *play*: [ˈpl̥eɪ], not *[ˈpʰleɪ]

tr affrication

- /t/ is usually affricated before /ɹ/ <small>(Praat tea_tree.wav, trip_tip.wav)</small>

Light vs. dark *l*

- /l/ is dark (a.k.a. velarized) in codas, and light elsewhere
  (Praat feel_leaf.wav)
- Merger with [oʊ] in some dialects

Word-final stops in English

- Word-finally, voiceless stops are optionally unreleased and/or glottalized
- IPA for no release: [t˺]
- IPA for simultaneous glottal stop: [ʔ͡p]
- Usually not transcribed, since optional & low-level

English allophony: summary so far

- Aspiration
- Initial devoicing
- Approximant devoicing
- Flapping (including nasal flapping)
- Affrication of /tɹ/
- Glottal stop allophone of /t/
- Vowel nasalization
- Dark l

- Narrow transcription should reflect all these, as well as stress & syllabic consonants

Broad(er) vs. narrow(er) transcription

- *plain* /plen/ vs. [ˈpl̥ẽ͜ĩm]