

Introduction to English vowels

September 2006

Description of vowels: HAR

- Three basic ‘dimensions’: Height, advancement and rounding
 - Height or ‘tongue height’:
 - High, mid, low
 - Advancement or ‘tongue advancement’
 - Front, central, back
 - Rounding or ‘lip rounding’
 - Rounded, unrounded
- Finer divisions may be useful (more steps)

The key ('point') vowels [i a u]

Real vowels http://www.ling.yale.edu:16080/ling120/Gestural_structure/MRI_Vowels/

Graphics unavailable.

Similar images at :

http://www.ling.yale.edu/ling120/Gestural_structure/MRI_Vowels/index.html

Artist's conception

Graphics unavailable.

For similar drawings, see Rogers 2000 p 28 29 30, figures 2.5 2.8 and 2.9

Stylized tongue positions

- Most phonetics books use “artists’ conceptions” of vowel articulation
 - Exaggerate differences of tongue position in oral cavity
 - Miss large differences in pharynx

Rogers Vowel Diagrams of GA (p 34)

- Graphics unavailable
 - See Figures 2.17, 2.18 and 2.19 p 34 of Rogers 2000

More X-rays with acoustics

- Graphics unavailable
- For related info see
[http://www.phon.ucl.ac.uk/home/johnm/ball
.htm](http://www.phon.ucl.ac.uk/home/johnm/ball.htm)

Traditional vowel diagrams

- The acoustic data based on F1 and F2 resonances are quite similar to traditional vowel diagrams
 - We'll talk more about F1 and F2 later in course
 - For now I'll let you hear them
- But basic descriptive properties are correlated with real physical differences
 - Anyway they're very useful and the HAR scheme is world standard for descriptive phonetics

Rogers' p. 33 table of GA Vs

- Graphic unavailable. See text p 33.
- “General American”

The Simple Vowels of General American (GA)

- The ‘simple’ vowels

Front	Central	Back*	
[i] ‘beat’		[u] ‘boot’	<i>higher high</i>
[ɪ] ‘bit’		[ʊ] ‘book’	<i>lower high</i>
([e])		([o])	<i>higher mid</i>
[ɛ] ‘bet’	[ə] ‘sofa’	[ɔ] ‘bought’	<i>lower mid</i>
	[ʌ] ‘but’		
[æ] ‘bat’		[ɑ] ‘Bob’	<i>(lower) low</i>

* Back vowels except [ɑ] are rounded; the rest are unrounded

The Simple Vowels W. Canadian (WCE)

- The ‘simple’ vowels

Front	Central	Back*
[i] ‘beat’		[u] ‘boot’ <i>higher high</i>
[ɪ] ‘bit’		[ʊ] ‘book’ <i>lower high</i>
([e])		([o]) <i>higher mid</i>
[ɛ] ‘bet’	[ə] ‘sofa’	<i>lower mid</i>
	[ʌ] ‘but’	
		[ɒ] <i>(higher) low</i>
[æ] ‘bat’		‘Bob, bought’ <i>(lower) low</i>

**All back vowels including [ɒ] are rounded; the rest are unrounded*

Note: The ‘official’ IPA description of /ʌ/ is a lower mid back unrounded vowel, but it we will call it a central vowel, since that is how the vowel symbol is used in English. (Strict IPA would have us use the symbol /ɐ/ for the vowel in ‘but’.)

Diphthongs of GA (and WCE)

- The ‘simple’ vowels

Front	Central	Back
-------	---------	------

[ej] ‘ <i>bait</i> ’	[ow] ‘ <i>boat</i> ’	<i>(higher) mid</i>
----------------------	----------------------	---------------------

[aj] ‘ <i>tide</i> ’	[aw] ‘ <i>loud</i> ’	<i>low</i>
----------------------	----------------------	------------

Variations on transcribing second part of diphthongs

- Vowel in ‘hide’ variously transcribed
 - [aj] [aɪ] [a^j] [a^ɪ]
- They all mean pretty much the same thing
- We’ll use Roger’s convention
 - I may slip up and use [aɪ]

The low back vowel in W. Cdn

- Rogers' p. 124 uses [ɑ] for Cdn vowel in 'Bob' or 'bought'
 - But he notes variation
 - Local pronunciation seems closer to [ɒ]
 - You can choose either symbol for broad transcription
 - I may vary on board

Next couple of weeks...

- We'll be concentrating on consonant sounds
- Transcription part of first quiz will include *broad* transcription of all English consonants
- Only the three 'point vowels' [i a u]