Sound change. Basic concepts

PHONEMES AND ALLOPHONES:

- Phonemes → smallest unit of speech distinguishing minimal pairs, as in /k/ vs. /p/, /b/, /m/, /r/ *cat pat bat mat rat*
- Allophones → any of the various realizations of a phoneme in the language. Allophones are in complementary distribution.
    - PDE /l/ → [l] before a vowel; *lip, late*; [ɬ] before a consonant *help* or in final position *bottle, fool, mill*.

/phonemes/

[allophones]

<graphemes>

VOWELS:

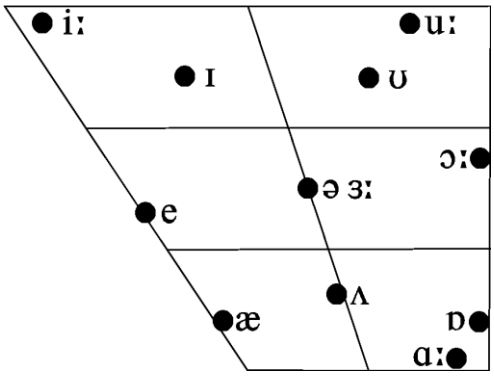
Phonetically, they are sounds articulated without a complete closure in the mouth or a degree of narrowing which would produce audible friction; the air escapes evenly over the centre of the tongue. If air escapes solely through the mouth, the vowels are said to be oral; if some air is simultaneously released through the nose, the vowels are nasal. (Crystal 2008: 517)

Vowels function as the nucleus of a syllable.

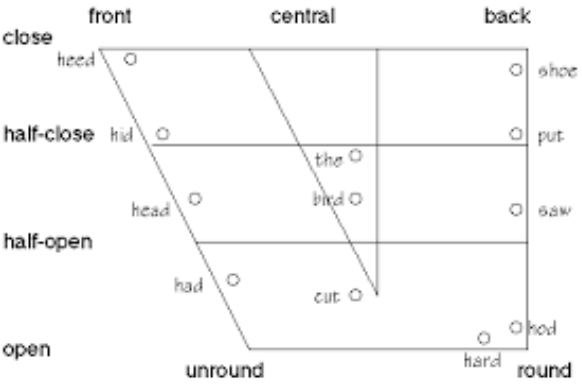
Important parameters for monophthongs:

- Height (position of the jaw): open, half-open, half-closed, closed.
- Backness (which part of the tongue is raised; cf. Video): front, central, back
- Lip rounding: rounded (e.g. /u:/), unrounded (spread lips; e.g. /i:/)
- Length: long (e.g. /u:/), short (e.g. /e/)

PDE VOWELS (RP):



(from https://upload.wikimedia.org/wikipedia/commons/8/8c/RP_vowel_chart_%28monophthongs%29.gif)



(from https://www.ugr.es/~ftsaez/fonetica/vowels.pdf)

The only vowels which can appear in unstressed positions are /ɪ/ and /ə/, and sometimes /ʊ/: e.g. *culprit* /'kʌlprɪt/; *writer* /'raɪtə/; *childhood* /'tʃaɪldhʊd/.

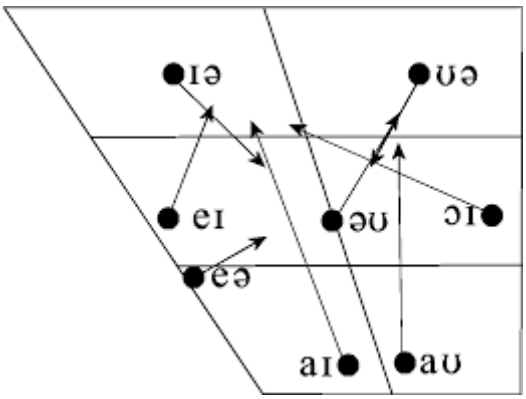
DIPHTHONGS:

diphthong (*n.*) A term used in the phonetic classification of vowel sounds on the basis of their manner of articulation: it refers to a vowel where there is a single (perceptual) noticeable change in quality during a syllable, as in English *beer, time, loud*. Related terms are monophthong, where no qualitative change is heard, and triphthong, where two such changes can be heard. Diphthongs, or 'gliding vowels', are usually classified into phonetic types, depending on which of the two elements is the more sonorous: 'falling' (or'descending') diphthongs have the first element stressed, as in the English examples: 'rising' (or 'ascending') diphthongs have the second element stressed. […]

Diphthongization is the term used to describe a process where a monophthong has become a diphthong (has been **diphthongized**), as in cases of historical or dialect

change. Diphthongs are transcribed using symbols which represent the extremes of vowel movement between the two positions, as in [aɪ] for the unit in *fine*. (Crystal 2008: 145)

PDE DIPHTHONGS (RP)



(from https://commons.wikimedia.org/wiki/File:RP_English_diphthongs_chart.svg)

SEMIVOWELS:
Sounds which are vowel-like in manner of articulation, but consonantal in function, are classified as semivowels or frictionless continuants. (Crystal 2008: 293). They are also called semiconsonants or glides.

/j/ as in *yes* /jes/, *you* /ju:/, *tune* /tju:n/	palatal semivowel
/w/ as in *work* /wɜ:k/, *what* /wɒt/	velar (it approximates to /u/)/ labial (it is pronounced with lip rouding)

CONSONANTS:
Phonetically, they are sounds made by **a closure or narrowing in the vocal trac**t so that the airflow is either completely blocked, or so restricted that audible friction is produced. Consonant articulations are relatively easy to feel, and as a result are most conveniently described in terms of **place** and **manner of articulation**. In addition, a routine phonetic description of consonants would involve information about the **mode of vibration of the vocal folds** (see voicing), and it is often necessary to specify the duration of the sound, the airstream mechanism involved and the direction of airflow (egressive or ingressive). From a phonological point of view, consonants are those units which function at the margins of syllables, either singly or in clusters. (Crystal 2008: 103)

Important parameters for consonants:

- Place of articulation: bilabial (e.g. /b/); velar (e.g. /k/), etc.
- Manner of articulation:
    - plosive / stop → there is a complete closure of the vocal tract, and the air is released with an explosion. E.g., /b/, /k/.

- fricative → there is an opening, the air is released producing friction. E.g. /f/, /z/.
- affricate →there is a complete closure of the vocal tract, and then the air is released gradually (like a combination of a plosive and a fricative). E.g. /tʃ/.
- nasal → there is a complete closure of the mouth and then all the air escapes through the nose. E.g. /m, n, ŋ/ as in *ram, ran, rang, sank* /sæŋk/
- lateral→ the air is released around one or both sides of a closure made in the mouth. E.g. /l/
- liquids → the flow of air is relatively free.
- rhotics → r-sounds

- Voicing: voiced (vibration of vocal folds), e.g. /z/; voiceless (no vibration), e.g. /s/.

	MANNER	VOICING	PLACE						
			Bilabial	Labiodental	Interdental	Alveolar	Palatal	Velar	Glottal
Obstruent	Stop	Voiceless	p			t		k	ʔ
		Voiced	b			d		g	
	Fricative	Voiceless		f	θ	s	ʃ		h
		Voiced		v	ð	z	ʒ		
	Affricate	Voiceless					tʃ		
		Voiced					dʒ		
Sonorant	Nasal	Voiced	m			n		ŋ	
	Liquid: Lateral	Voiced				l			
	Liquid: Rhotic	Voiced					r (ɹ)		
	Glide	Voiced	w				j	(w)	

(from https://www.myenglishteacher.eu/blog/phonetics-consonants-vowels-diphthongs-ipa-chart/)

Notes:

- Some speakers (BrE) pronounce a glottal stop /ʔ/ instead of /t/ in medial and final position. E.g. /'bʌʔə/ for *butter*.
- *-(e)s* of plurals and 3rd person singular present indicative form is pronounced /-s/ when following a voiceless sound (as in *stops*), /-z/ when following a voiced sound (as in *boys*), or /-ɪz/ when following a sibilant (as in *glasses* /glɑ:sɪz/).
- /ʒ/ does not normally occur in initial position. We may find it in borrowings from French like *genre*.
- /ŋ/ does not occur in initial position. It is found in final position (e.g. *sing*) or before a velar sound (e.g. *sink*).
- -ed is pronounced /-t/ when following a voiceless sound (e.g. *stopped*); /-d/ when following a voiced sound (e.g. *played*), and /-ɪd/ when following a dental sound (as in *painted*).
- Post vocalic /r/ is not pronounced in Standard BrE: as in *baker* /'beɪkə/. Standard BrE is non-rhotic. North American English is rhotic, that is, in AmE and Canadian English this word is pronounced /'beɪkər/. In BrE postvocalic /r/ is pronounced in connected speech if the following word starts with a vowel (linking /r/), as in *four apples* /fɔ:r æplz/.

Transcription exercises

beautiful	/……/
bushes	/……/
churches	/……/
clothes	/……/
cloths	/……/
counted	/……/
dogs	/……/
fountains	/……/
fusion	/……/
garage	/……/
heap	/……/
jeans	/……/
plucking	/……/
sea	/……/
see	/……/
singer	/……/
table	/……/
theatre	/……/
thinker	/……/
vision	/……/
wrote	/……/

References:

Crystal, David. 2008. *A dictionary of linguistics and phonetics*. 6th edn. Oxford: Blackwell.