*Phonetics (음성학) vs. Phonology (음운론)

phonetics, the study of the production and description of speech sounds,
Phonology, study of the sound patterns that occur within languages.

Phonetics, the study of speech sounds and their physiological(생리적인) production and acoustic(소리의, 음향학적) qualities. It deals with the configurations(요소의 상대적배치, 형태) of the vocal tract(기관) used to produce speech sounds (articulatory phonetics 조음음성학), the acoustic properties of speech sounds (acoustic phonetics 음향음성학), and the manner of combining sounds so as to make syllables, words, and sentences (linguistic phonetics).
Auditory phonetics 청각음성학

Phonology, study of the sound patterns that occur within languages. Some linguists include phonetics, the study of the production and description of speech sounds, within the study of phonology.
Diachronic (historical) phonology examines and constructs theories about the changes and modifications in speech sounds and sound systems over a period of time. For example, it is concerned with the process by which the English words “sea” and “see,” once pronounced with different vowel sounds (as indicated by the spelling), have come to be pronounced alike today. Synchronic (descriptive) phonology investigates sounds at a single stage in the development of a language, to discover the sound patterns that can occur. For example, in English, *nt* and *dm* can appear within or at the end of words (“rent,” “admit”) but not at the beginning. https://www.britannica.com/science/phonetics/Phonological-rules

*Phoneme (음소) vs. allophone (이음) ; minimal pair (최소대립쌍)

Phoneme: The smallest unit of sound that can be altered to change the meaning of a word is called a phoneme (L&C)

Phonemes are the linguistically contrastive or significant sounds (or sets of sounds) of a language. Such a contrast is usually demonstrated by the existence of **minimal pairs** or **contrast in identical environment (C.I.E.)**. Minimal pairs are pairs of words which vary only by the identity of the **segment** (another word for a single speech sound) at a single location in the word (eg. [mæt] and [kæt]). If two segments contrast in identical environment then they must belong to different phonemes. A **paradigm** of minimal phonological contrasts is a set of words differing only by one speech sound. In most languages it is rare to find a paradigm that contrasts a complete **class** of phonemes (eg. all vowels, all consonants, all stops etc.).
http://clas.mq.edu.au/speech/phonetics/phonology/phoneme/index.html

Phoneme, in linguistics, smallest unit of speech distinguishing one word (or word element) from another, as the element *p* in “tap,” which separates that word from “tab,” “tag,” and “tan.” A phoneme may have more than one variant, called an allophone (*q.v.*), which functions as a single sound; for example, the *p*’s of “pat,” “spat,” and “tap” differ slightly phonetically, but that difference, determined by context, has no significance in English. In some languages, where the variant sounds of *p* can change meaning, they are classified as separate phonemes—*e.g.,* in Thai the aspirated *p* (pronounced with an accompanying puff of air) and unaspirated *p* are distinguished one from the other.

Phonemes are based on spoken language and may be recorded with special symbols, such as those of the International Phonetic Alphabet. In transcription, linguists conventionally place symbols for phonemes between slash marks: /p/. The term *phoneme* is usually restricted to vowels and consonants, but some linguists extend its application to cover phonologically relevant differences of pitch, stress, and rhythm. Nowadays the phoneme often has a less central place in phonological theory than it used to have, especially in American linguistics. Many linguists regard the phoneme as a set of simultaneous distinctive features rather than as an unanalyzable unit.

Allophone, one of the phonetically distinct variants of a phoneme (*q.v.*). The occurrence of one allophone rather than another is usually determined by its position in the word (initial, final, medial, etc.) or by its phonetic environment. Speakers of a language often have difficulty in hearing the phonetic differences between allophones of the same phoneme, because these differences do not serve to distinguish one word from another. In English the *t* sounds in the words “hit,” “tip,” and “little” are allophones; phonemically they are considered to be the same sound although they are different phonetically in terms of aspiration, voicing, and point of articulation. In Japanese and some dialects of Chinese, the sounds *f* and *h* are allophones. https://www.britannica.com/topic/allophone

The Articulation of Phonetic Sounds

http://www.phonetics.ucla.edu/course/chapter1/chapter1.html

Classification of NAE Consonant Phonemes

Manner of Articulation	Place of Articulation						
	Bilabial	Labiodental	Dental	Alveolar	Palatal	Velar	Glottal
Stop Voiceless	p			t		k	
Voiced	b			d		g	
Fricative Voiceless		f	θ	s	ʃ		h
Voiced		v	ð	z	ʒ		
Affricate Voiceless					tʃ		
Voiced					dʒ		
Nasal Voiced	m			n		ŋ	
Liquid Voiced				l	r		
Glide Voiced	w				y		

Figure 1 Classification of NAE consonant phonemes +/hw/ (Celce-Murcia et al. 2010)

Celce-Murcia et al. (2010). Chapter 3. The Consonant System, Chapter 4. The Vowel System.

Figure 2 American and British Pronunciation Differences

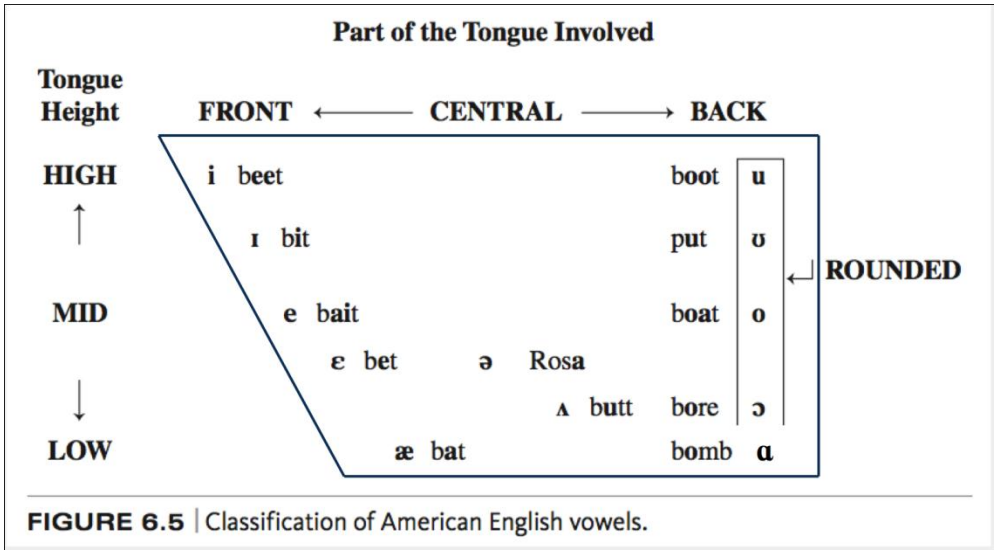

Figure 3 http://www.imagequiz.co.uk/quizzes/95279020

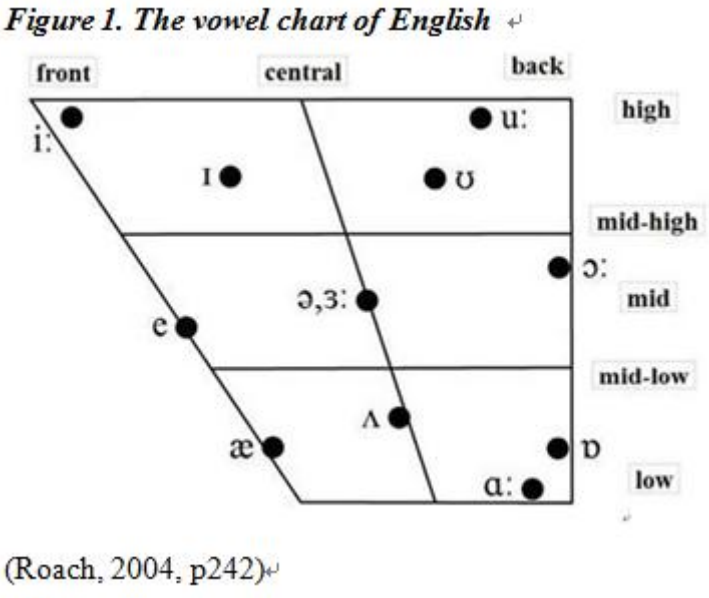

Figure 4 British English Received Pron

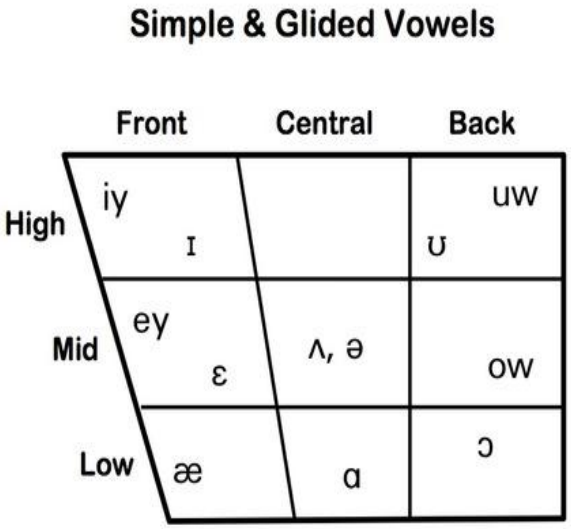

Figure 5 The Vowel Chart of NAE

Roach, P. (2004). British English: Received Pronunciation, *Journal of the International Phonetic Association 34 (2)*, 239–245.

Tongue Position

http://en.wikipedia.org/wiki/Vowel

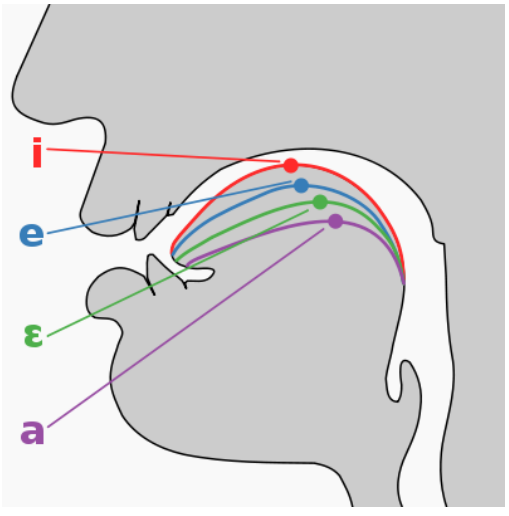

Figure 6 Tongue Position