Basic Phonology terminology

Phonetics

is the study of all speech sounds and is applicable to all languages. It is concerned with how humans produce sounds, how they are transmitted physically and how they are perceived and decoded.

Phonology

is to do with the sounds of a specific language rather than all human speech and it is this which concerns us here.

The phoneme

is the basic sound unit of a language. We combine phonemes into morphemes (meaning units) and into words. The phoneme is written with its symbol between two slash marks: /t/ = the 't' sound in *la̲ter*. Phonemes may be slightly differently pronounced depending on the speaker's accent and where in a word or phrase the sound comes. For example, the sound /p/ at the beginning of *pot* and after the 's' in *spot* are slightly differently pronounced but changing the pronunciations around will not interfere with comprehension (but will sound odd). Phonemes are, therefore, often described as sets of sounds rather than simply sounds.

Consonants

when you produce a sound by completely or partially blocking the air flow through the vocal tract, you produce a consonant. For example, if you block and then release air through pressing your lips together, you will produce the sound /p/. If you block the back of your mouth by raising your tongue, you will produce /k/.

Vowels

if you produce a sound without blocking the air flow you will make a vowel such as the 'a' in *cat* (/kæt/). The quality of the sound is affected by where your tongue is vertically and horizontally in the mouth and whether your lips are rounded or not. Some vowels are longer than others and this is shown by a colon after the symbol so, for example, /ɪ/ is the very short sound of the 'i' in *hit* and /iː/ is the longer sound of the 'ea' in *heat*. This is called a length mark.

Semi-vowels

are sounds which are produced like vowels but actually don't function like them. An example is the /j/ sound at the beginning of the word *yet*. The *y* letter represents a consonant in this case (and the word is transcribed as /jet/) but at the end of the word *fly*, it is a vowel and transcribed as /flaɪ/. The letter *w* also has this characteristic: at the beginning of *was* it is close to being a consonant (called a glide, in the trade) but in the centre of *cower* it is a vowel sound so the transcription of *was cowering* is /wəz ˈkaʊər.ɪŋ/.

Minimal pairs

are words which differ in meaning because of a change to a single phoneme. In fact, this is part of the definition of a phoneme.

For example, the words, *cat* and *hat* are only distinguished by the first phoneme; /k/ in the first case, /h/ in the second. In English, these are minimal pairs so the sounds are phonemes. Some languages do not recognise the distinction between /h/ and /k/ in this way so in those languages the words are not minimal pairs and the sounds are not phonemes.

For example, /p/ and /b/ can readily be seen to be phonemes in English by applying the minimal pairs test. We know that *bat* and *pat* are different words with different meanings so the sounds are phonemes. In some languages (e.g., most varieties of Arabic) changing /b/ to /p/ will have no effect on the meaning of a word so in those languages the sounds are not phonemes.

Allophone

if you say *kid* and *skid* aloud you will have produced two different allophones. In the first, there is a slight aspirant or /h/ sound following the /k/; in the second it is absent. These sounds are different but they are not phonemes. If you add the aspirant to the sound in *skid* you will not make a different word although it will sound odd. In some languages, the two sounds *are* phonemes and people will understand a different meaning if the /k/ is aspirated or not. These allophones are written either like this: /k/ or like this: /k^h/.

Voicing

describes how phonemes may be different depending on whether the vocal folds vibrate or not at the time of pronunciation. For example, the /k/ sound is made without voicing but the /g/ sound is made with the mouth parts in the same place but with voice added. If you put your hand on your throat and say the words *sue* and *zoo*, you will see what is meant and feel a slight vibration on the second word (/s/ is unvoiced but /z/ is voiced).

Intonation

is the way in which the speaker's pitch (or tone) rises and falls to signal, e.g., a question, surprise, disappointment etc.

Stress

is the term used to describe the emphasis speakers give to certain syllables in a word or certain words in a sentence. For example:

Word stress: when the stress falls on the first syllable in *export* the word is a noun *(**ex**port),* when it falls on the second, it's a verb (*ex**port***).

Sentence stress in English usually falls on the new information being provided and that, for English, generally comes towards the end of the utterance. So for example in the exchange:

A: *What did you do **yesterday**?*

B: *I went to see **my mother**.*

the first speaker will normally stress *yesterday* and the second speaker will normally stress *my mother* because that is the key information in both cases.

We can, of course, stress other elements in order to emphasise their importance. This is called **special or contrastive stress**. For example, try reading these sentences aloud, stressing the word in **bold**:

a) *I went to London with my **brother*** (i.e., not another person)

b) *I went to **London** with my brother* (i.e., not to another place)

c) ***I** went to London with my brother* (i.e., it was not someone else who went with my brother)

d) *I went to London with **my** brother* (i.e., not someone else's brother)

Stress and syllable timing

The following is the theory.

There are, it is claimed, two fundamental forms of stressing.

In some languages, such as French, Italian, Spanish, Cantonese and Mandarin, every syllable is *perceived* as taking up the same amount of time. This is the so-called 'machine gun' sound of these languages. So we get:

I ... went ... to ... Lon ... don ... with ... my ... bro ... ther

That's **syllable timing**.

In other languages, notably English, Dutch, Farsi and Scandinavian languages, some syllables take longer to utter than others and this results in a reduction of the syllables in between. So we get

*Iwentto ... **L o n** d'n ... withmy ... **b r o** the(r)*

That's **stress timing**.

For this reason, the preposition *to* is not pronounced in its full form as /tuː/ (rhyming with 'two' and 'too') but with a weak form of the vowel /tə/. The funny, upside-down 'e' is called a **schwa** and is the commonest **weak form** in English. Additionally, *my* is often reduced to *m'* and so on and in most varieties of British English the final /r/ sound on *brother* is not pronounced.

Be aware that even if this distinction exists, it is not an either-or one. Languages will vary along a cline from syllable- to stress-timing tendencies.

(There is, in fact, a third form of timing: Mora timing. In Japanese, e.g., a vowel (V) takes the same time to utter as a consonant (C) plus a vowel so V takes the same time as CV and CVV takes twice as long as CV.)

Weak forms

Because English is a stress-timed language (allegedly), many vowels are reduced in rapid, connected speech so, e.g., *for* is pronounced /fə/ (not /fɔː/), *been* is heard as /bɪn/ (not /biːn/, *we* is heard as /wɪ/ and so on.

The phonemes of English

Here's the list of the phonemes in English (the list would be different for other languages).

/iː/	*sleep sheep free*	/æ/	*sat hat flab*	/ɪə/	*here beer mere*	/p/*	*pin pat pop*	/f/	*fan fear huff*	/h/	*hat hop hip*
/ɪ/	*kid slid blip*	/ʌ/	*blood cup shut*	/ʊə/	*shore pour door*	/b/	*big bad fib*	/v/	*van veer cover*	/m/	*man came mix*
/ʊ/	*put foot wolf*	/ɑː/	*part large heart*	/ɔɪ/	*boy joy toy*	/t/*	*tip tap pot*	/θ/	*thin think path*	/n/	*know near pan*
/uː/	*goose loose spruce*	/ɒ/	*hot cot shod*	/eə/	*lair share fair*	/d/	*dig dog pod*	/ð/	*this then breathe*	/ŋ/	*ring thing sang*
/e/	*set dead said*	/i/	*happy navvy sally*	/eɪ/	*lace day tray*	/k/*	*cake kick cot*	/s/	*sit kiss some*	/l/†	*love lull little*
/ə/	*about father across*	monophthongs		/aɪ/	*price wine shine*	/g/	*got bag hug*	/z/	*zoo houses maze*	/r/	*rear ran rob*
/ɜː/	*verse hearse curse*	diphthongs		/əʊ/	*boat coat note*	/tʃ/	*chair batch choice*	/ʃ/	*shut push shave*	/j/	*yet yacht yell*
/ɔː/	*fought caught brought*	consonants		/aʊ/	*south house louse*	/dʒ/	*judge badge jerk*	/ʒ/	*pleasure leisure measure*	/w/	*went win water*
		voiced consonants									

*These sounds are aspirated when the only consonant at the beginning of the stressed syllable or the first, stressed or unstressed, syllable in a word: /tʰ//pʰ//kʰ/

†/l/ has the allophones, 'light' [l] (leaf /liː f/ and 'dark' [ɬ] (feel /fiːɬ/)