

## Guide to phonological features

**Note:** Feature definitions and the classification of particular segments can vary quite a bit from author to author (partly because of new data over the years, and partly due to personal taste and beliefs). The definitions and values given here are meant to provide you with a consistent set of features that will serve to describe as many of the sets of sounds that we encounter as possible.

These definitions are based on a guide to features by Bruce Hayes, at UCLA.

### 1 Feature definitions

#### 1.1 Manner

[syllabic]	forms syllable peak	[+syl]	vowels and syllabic consonants (ɹ, ɺ, ŋ, m, etc.)
		[−syl]	consonants ( <b>incl. glides</b> )
[consonantal]	artic.: oral constriction greater than a glide (acoustic: less sonorous than a glide)	[+cons]	stops, fricatives, affricates, nasals, liquids
		[−cons]	vowels, <b>glides</b>
[sonorant]	artic.: oral constriction too small to cause pressure buildup; voicing is unimpeded (acoustic: at least as sonorant as a nasal)	[+son]	vowels, glides, liquids, nasals (= sonorants)
		[−son]	stops, fricatives, affricates (= obstruents)
[continuant]	artic.: incomplete closure in oral cavity	[+contin]	vowels, glides, liquids, fricatives
		[−contin]	artic.: stops, <b>nasals</b>
		[+/-contin]	affricates
[strident]	acoustic: loud frication noise (artic.: frication produced with narrow channel)	[+strid]	sibilants (s, ʃ, tʃ, z, ʒ, dʒ, etc.)
		[−strid]	all others
[nasal]	velum is lowered, airflow through nasal cavity	[+nas]	nasal stops + nasalized vowels
		[−nas]	everything else
[lateral]	sides of tongue are lowered	[+lat]	l, ɭ, ʎ, ʟ, ʟ̥, etc.
		[−lat]	everything else

Additional features, as needed:

- [±delayed release]: closure of a [−continuant] sound is released slowly enough to produce a fricative-like period of frication after the stop closure ([+del.rel] = affricates)
- [±trill]: is a trill (or not) ([+trill] = [r, ʀ, ʁ])
- [±flap]: is a flap (or not) ([+flap] = [ɾ])
- [±stress]: carries some degree of stress (only [+syllabic] elements are eligible to carry stress)
- [±long]: categorically long (transcribed with [:] or doubled symbol)

## 1.2 Laryngeal settings

[voice]	vocal fold vibration	[+voi]	any voiced sound
		[−voi]	any voiceless sound
[spread glottis]	vocal cords held apart, aspiration	[+s.g.]	h, ɦ, ʌ, aspirated sounds
		[−s.g.]	everything else
[constricted glottis]	vocal cords held taut	[+c.g.]	ʔ, ejectives, glottalized sounds
		[−c.g.]	everything else

Additional features, as needed:

- [±implosive]: is an implosive sound: [ɓ, ɗ, ɠ, ɡ]

## 1.3 Place of articulation

CAPS = major place nodes; \* = features that are unspecified outside a major place node

[LABIAL]	articulation involving lips	[+LAB]	p, b, f, v, ɸ, β, p', ɓ, m, tʷ, etc., + all round vowels
		[−LAB]	everything else
[round]	articulation involved rounded lips	[+rnd]	rounded V's, labialized C's (e.g., tʷ)
		[−rnd]	everything else
[labiodental]*	articulation involving lower lip + upper teeth	[+lab-dent]	f, v, ɱ, etc.
		[−lab-dent]	other labials
		unspecified	non-labials
[CORONAL]	articulation involving tongue tip	[+COR]	(inter)dentals, alveolars, retroflexes, palato-alveolars, alveo-palatals, palatals
		[−COR]	everything else
[anterior]*	articulation at alveolar ridge or forward	[+ant]	dentals, alveolars
		[−ant]	palato-alveolars, retroflexes
		unspecified	non-coronal sounds
[distributed]*	articulation with tongue blade (as opposed to tip)	[+distrib]	(inter)dentals, alveopalatals, palatals
		[−distrib]	all other coronals
		unspecified	non-coronals
[DORSAL]	articulation involving tongue body	[+DORS]	palatals, velars, uvulars, <b>vowels</b>
		[−DORS]	everything else
[high]*	tongue body raised	[+hi]	palatals, velars; high vowels and glides
		[−hi]	uvulars, pharyngeals; non-high vowels
		unspecified	all non-dorsal sounds
[low]*	tongue body lowered	[+lo]	low vowels (æ, a, ɛ, ɑ, ɒ)
		[−lo]	non-low vowels
		unspecified	all non-dorsal sounds
[back]*	tongue body backed	[+bk]	back & central vowels and glides; also pharyngeals, uvulars, and retracted velars
		[−bk]	front vowels and glides
		unspecified	all non-dorsal sounds
[tense]*	tongue body more stiffly/extremely positioned	[+tns]	tense vowels (i, y, e, a, ø, o, ɤ, u, ɯ)
		[−tns]	lax vowels
		unspecified	all non-dorsal sounds

Diphthongs are tricky to characterize according to their place features, but they typically act as tense/long vowels.

## 1.4 Characterizing major classes

	Stops	Fricatives	Affricates	Nasals	Liquids	Glides	Vowels
[syllabic]	–	–	–	–	–	–	+
[consonantal]	+	+	+	+	+	–	–
[sonorant]	–	–	–	+	+	+	+
[nasal]	–	–	–	+	–	–	–
[continuant]	–	+	–/+	–	+	+	+
[delayed release]	–	–	+	–	–	–	–

