

Laryngeal, place and manner features

Distinctive Features

Process of phonation

https://www.youtube.com/watch?v=Aoa_N1vQ54M

[+/-voice]

[+/- voice] distinguishes between those consonants that are associated with vibrating vocal cords and those which are not.

[+ voi] sounds are produced with airflow through the glottis, in which the vocal cords are close enough together to vibrate. These include the glides, sonorants and voiced obstruents, such as the [l], [m], [n] and [d] of [ˈsæləˌmændə] (ˈ indicates primary stress; ˌ indicates secondary stress);

[- voi] sounds are those produced with the vocal cords at rest, and is relevant primarily to obstruents, such as the [s] and [p] of [æsp].

From Mike Davenport's Introduction to Phonetics and Phonology

[+/-SG]

[+/-spread glottis] Pushing the vocal cords wide apart augments the airflow through the glottis and inhibits voicing. This gesture, which is associated with voicelessness and aspiration, is absent in non-spread sounds.

Spread sounds include aspirated stops; murmured and breathy voice sounds, voiceless vowels and voiceless glides. All other sounds are non-spread.

[+/-CG]

The constricted glottis features denotes the degree of closure of the glottis.

[+cg] implies that the vocal folds are held closely together, enough so that air cannot pass through momentarily, while [-cg] implies the opposite.

Examples of [+cg]: ʔ (glottal stop)
pʰ (ejectives)

Place features

- UNARY features:
 - LABIAL (lips)
 - CORONAL (tongue tip/blade)
 - DORSAL (tongue body)

LABIALS

- Sounds that are made using the lips.
- For vowels, an extra feature of [+/-round] is added here.

[+round]
w, u, o

[-round]
p, m, l, e

CORONAL

- There are 4 features within CORONAL
- The first one is [+/-anterior]
- [+/-anterior] basically means if the segment is articulated in the front of your oral cavity, i.e. the area from the alveolar ridge and outside.

- <https://www.youtube.com/watch?v=4KDkHvYksAE>

[+/-anterior]

[+ant]

θ, t, s

[-ant]

t, c,

[+/-distributed]

[+dist]= blade

[-dist]=tip

e.g. , , t, d , θ, ð

e.g. t, d, z, s

- Distributed sounds are made with an obstruction extending over a considerable area along the middle-line of the oral tract; there is a large area of contact between the articulators. In non distributed sounds, there is a smaller area of contact.

[+/-strident]

There are two conditions for a sound segment to be [+strident]

If the airstream is through the tongue blade + aimed at the teeth

e.g. s, z, , , t, d are [+strident]
θ, t, d, l are [-strident]

[+/-lateral]

<http://www.ipachart.com/>

Sounds that are pronounced when the airstream proceeds along the sides of the tongue.

e.g. , , , ,

Dorsal

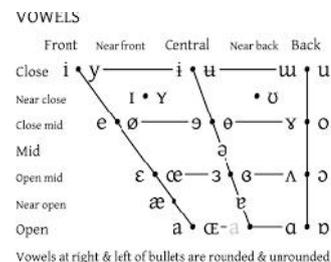
Dorsal sounds, i.e. sounds that are distinguished due to the position of the tongue body or modifications of the airstream by the tongue body are categorised further on the basis of tongue height and frontness. Therefore, the different dorsal features are

- [+/- high]
- [+/-low]
- [+/-back]



Dorsal features

[+/- high]
[+/-low]
[+/-back]



Manner features

/b/

-syllabic
-sonorant
+stop
-nasal
+labial
+voice

Manner features mainly characterise the way in which the airstream is obstructed in the production of a consonant.



[+/-continuant]

- Continuant are produced by impeding, but not completely blocking, the flow of air through the glottis, or the pharynx or through the centre of the oral tract; noncontinuant are made by completely blocking the flow of air through the centre of the vocal tract.

Affricates, nasals and oral stops and laterals are Non-continuant. All other sounds are continuant.



[+/-lateral]

[+/- lateral] separates [l]-sounds from all others, thus distinguishing [l] from [ɫ], with which it shares all other features:

[– lat] sounds are produced with central oral obstruction and airflow passing over one or both sides of the tongue;

[– lat] refers to all other sounds.

[+ lat]: [l]

[– lat]: [j, w, ɹ, n, m, ŋ, t, d, θ, ð, s, z, ʃ, ʒ, ʒ̃, ʒ̄, ʒ̅, k, g, h, f, v, p, b]

From Mike Davenport's Introduction to Phonetics and Phonology



[+/-nasal]

In the production of a nasal sound the velum is lowered to allow air to escape through the nasal cavity. Oral sounds are produced with the velum raised so as to block access to the nasal cavity and to allow air to go out only through the mouth.

Nasal sounds include nasal stops like [m n] (which are made with complete blockage of air at the place where the articulators meet) as well as nasalised consonants, glides and vowels. All other sounds are oral.



[+/-strident]

- Only fricatives and affricates can be strident. Acoustically, strident sounds are characterised by more random noise than that non-strident counterparts.

	[+strident]		[-strident]	
	Voiceless	voiced	Voiceless	voiced
Sibilant	s	z	ʃ	ʒ
	ʃ	dʒ	ç	j
non-sibilant	f	v		
	x	β		

[+/-Delayed Release]

- [+/-DR] is only applicable to sounds produced in the mouth cavity and distinguishes stops from affricates.

In stops, the closure is released abruptly while in affricates it is released gradually: the initial **hold phase of an affricate** is similar to that of a stop but in the later **release phase an affricate is like a fricative**.

Recap:

Laryngeal features:	[+/-voice] [+/-SG] [+/-CG]
Place features: LABIAL, CORONAL, DORSAL	
LABIAL:	[+/-round]
CORONAL:	[+/-anterior] [+/-distributed] [+/-strident] [+/-lateral]
DORSAL:	[+/-high] [+/-low] [+/-back]
Manner features:	[+/-continuant] [+/-lateral] [+/-nasal] [+/-strident] [+/-DR]

In the next class:

- Prosodic features and natural classes!

Pre-class reading and videos:

Katamba, Francis. *An introduction to phonology*. Vol. 48. London: Longman, 1989. (Pages 51-61)

Prosodic feature: Tone

https://www.youtube.com/watch?v=xxUNJ1O_-q8

Prosodic feature: Rhythm

<https://www.youtube.com/watch?v=AbUaxRPC2rM>

Prosodic feature: Syllable and foot

<https://www.youtube.com/watch?v=J5wk8ophl3Y>

Prosodic feature: Stress

https://www.youtube.com/watch?v=MG1_6bLIRgo