

Phonetic symbols for consonants and prosody

Linguistics 520, UNC-Chapel Hill
Elliott Moreton

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Goal: *Summarize the main consonantal and prosodic symbols needed for this course.*

1. *Articulatory descriptions* for consonants have a standard format, e.g., *voiceless-aspirated bilabial plosive*. The properties of the segment are described in the following order:
 - (a) *Laryngeal* properties of the pulmonic egressive airstream:
 - i. *Voicing*. For obstruents, this is often contrastive, and is compiled into the IPA symbol (e.g., [p b]). Sonorants, including vowels, are usually voiced. Voiceless sonorants lack their own IPA symbols; instead, the diacritic [̥] is used (e.g., [m̥ m]).
 - ii. *Aspiration*. Voiceless aspiration is indicated by a superscript [h] (e.g., [p^h].)
 - iii. *Airstream*. Ejectives are marked with an apostrophe ([p']), implosives have a hooktop ([ɓ]), and clicks use separate symbols ([ǀ]).

Table 1: Standard nomenclature for consonant place-of-articulation.

Passive articulator	Active articulator					Vocal folds
	Lower lip <i>labio-</i>	Tongue			Root	
		Tip <i>apico-</i>	Blade <i>lamino-</i>	Dorsum <i>dorso-</i>		
Upper lip	bilabial					
Incisors	labiodental	dental ^a				
Alveolar ridge		alveolar ^b				
Behind alv. ridge		retroflex	postalveolar			
(Hard) palate				palatal		
Velum				velar		
Uvula				uvular		
Pharyngeal wall					pharyngeal	
(None)						glottal

^aNo language is known to contrast apico-dental stops (oral or nasal) or fricatives with lamino-dental ones (Ladefoged and Maddieson, 1996, 20, 40–42), allowing these categories to be merged.

^bSimilarly, these categories can be merged because no contrast in stops or fricatives between apico- and lamino-alveolar is known to exist (*ibid.*).

- (b) *Place of articulation*. Actually expresses two variables, the active and passive articulators See Table 1.
 - i. Some segments have multiple articulations, e.g., [w] is labiovelar. The convention is that the primary articulation comes second in the compound.
 - ii. There are many diacritics for expressing secondary articulation (palatalization, velarization, labialization, etc.). We will deal with them as the need arises.
 - (c) *Manner of articulation*. This is expressed in the IPA by using different symbols, rather than with a diacritic.
 - i. *Degree of constriction*
 - A. *Stop* (oral or nasal).
 - B. *Trill, tap, flap*.
 - C. *Fricative*. There are more places of articulation for fricatives than for any other manner of articulation.
 - D. *Affricate*. Expressed by writing stop+fricative, often with a tie bar (e.g., [tʃ]).
 - E. *Approximant*.
 - ii. *Nasality*. For stops, expressed using different symbols (e.g., [b m]). For sonorants, including vowels, use superscript tilde (e.g., [ã]).
 - iii. *Laterality*. Expressed using different consonant symbols.
2. *Prosodic symbols*. Consonants and vowels are together called “segments”. The IPA provides notation for “suprasegmentals”, i.e., speech events which are larger than segments. The following properties cannot be reliably identified by inspecting a single segment in isolation:
- (a) *Stress*. Primary and secondary are distinguished, e.g., *a.stro.NO.mi.cal*, which you would transcribe as [ˌæ.stɹə.'nɑ.mə.kl]. Not relevant in all languages (e.g., Japanese).
 - (b) *Syllabicity*. When something other than a vowel forms the nucleus of a syllable, it may be marked with [ˌ], e.g., *button* [bʌtˌn̩].
 - (c) *Length*. Some languages distinguish long vs. short vowels, e.g., Japanese *naasu* [na:su] ‘nurse’ vs. *nasu* [nasu] ‘eggplant’. The [ː] marks the long vowel.

References

Ladefoged, P. and I. Maddieson (1996). *The sounds of the world’s languages*. Oxford, U.K.: Blackwell.