

# HUL242:: Phonetics- II

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In this section, we continue with the analysis of sounds, focusing particularly on vowels and manner classes.

## 1 Vowels

In order to classify vowels, we use criteria that are quite different from consonants. This is because the normal place/manner of articulation will not be useful for them- there is not enough friction or obstruction caused by the articulators in the vocal tract. Instead, we focus on three main features: the lips i.e. whether they are rounded or unrounded, the tongue height and tongue position (front or back).

With vowels such as /i/, the tongue is high and in the front whereas with vowels such as /a/ the tongue height is low and in the front.

With the case of /e/ and /a/, the difference is with respect to the height of the tongue- /e/ is lower than /i/.

When we contrast /i/ and /u/, the difference is with respect to the rounding of the lips as well as the tongue position i.e. front and back respectively

The vowels of a language are usually represented on a vowel chart or vowel quadrilateral. Figure 1 below shows the Hindi vowel system.

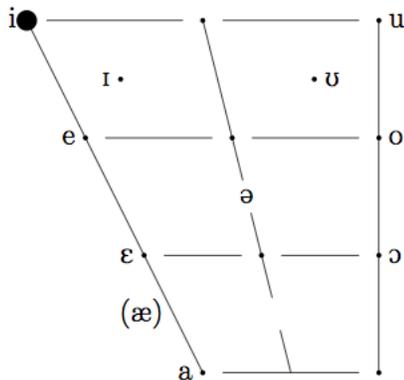


Figure 1: Hindi vowels



## 2 Class Features

While the vowel/consonant distinction between sounds is well understood, there are broader classifications of sounds that are useful in order to understand sound patterns in languages across the world.

Sonorants are an example of one such class. This class includes vowels as well as nasals, liquids and semi-vowels. This is because all these sounds are produced with much less constriction in the vocal tract as compared to the [-sonorant] class. With sonorants, the characteristic property of the airflow is continuous and non-turbulent. Also, these sounds are typically voiced.

Consonants are produced with some degree of constriction in the airflow—hence, nasals, liquids and obstruents are all [+consonantal]. Vowels and semi-vowels on the other hand have the property of [-consonantal]. The glides or semi-vowels are excluded from this class as they have the weakest consonant-like properties. Table 1 summarizes these properties.

Sounds	Sonorant	Consonantal
Nasals	+	+
Liquids /l/ /r/	+	+
Semi vowel or glides /w/ /j/	+	-
Vowels	+	-
Obstruents (Stops, fricatives, affricates)	-	+

Table 1: Sonorant and Consonant class features