CHAPTER 2
BENGALI SPEECH SOUNDS

The Bengali Phonemes :*

Standard Colloquial Bengali contains 35 essential phonemes. There are also 5 non-essential phonemes, which occur only as variants of other sounds, or in borrowed foreign names and words; they are not used by all speakers.

These phonemes are symbolized by the following letters in the notation of the International Phonetic Association. [ p, b, t, d, t, d, k, g, c, f, m, n, o, l, r, s, h, ñ, j, i, e, æ, a, ɔ, o, u, ʊ ] and the non-essential phonemes [ f, f, f, f, u, z ]. The ten aspirated stops and affricates [ ph, bh, th, dh, kh, ] are characteristic and essential sounds of the language, but as they are not simple sounds, but compounds with the glottal fricative, they should not be properly regarded as separate phonemes. Several of these phonemes include more than one sound, e. g. the [n]-phoneme, the [l]-phoneme, the [h]-phoneme.

Formation of the Bengali Sounds**

Vowels :

[iː] When long, the Bengali [i] is slightly lower than Cardinal [i], and perhaps slightly retracted. It is a pure vowel, not a diphthong like the ordinary Southern English sound in see, be ( = Slj, bj ), etc. Nasalized [i] has about the same position of the tongue as long [iː]

Bengali short [i] is lower than the corresponding long sound, being about half way or slightly below half-way between cardinal [i] and [e]. The short sound is slightly retracted. It is a “lax” sound, unlike the long [iː], which is rather “tense”, and thus to some extent resembles the Southern English [i] in pit, pin, etc.

Bengali long [eː] Slightly higher than the short [e], and the latter seems to be slightly above half-way between Cardinal [e] and [e]. It is closer than the ordinary Southern English [e] in get (= g e t). Nasalized [e] has about the same tongue-position as long [eː]. Long [eː] is a pure vowel, not in the least diphthongized ; it is thus different from the South English vowel in day ( = dei ).

* Chatterjee, Suniti Kumar, - A Bengali Phonetic Reader, p. 9
** Ibid. - p. 17 - 19
[æ : æ], - Position a little above Cardinal No. 4, somewhat lower than the Southern English sound of [a] in man (= maen). Bengali [æ] has the tongue somewhat lower than the English [æ]. Nasalized [æː] is possibly a little higher in tongue – position than [æː]; being thus nearer in quality to cardinal [e].

[a : a] – These sounds have a position about half-way between Cardinal Vowels 4 and 5, only short [a] is a little more advanced towards No. 4. This sound does not possess the “dark” guttural quality of the [a] in Southern English father (=/f a : d/) which is nearer to No. 5. Bengali nasalized [ã], however, is retracted more towards No. 5.

In Dialectal Bengali, [a] more forward [ã], like Cardinal Vowel No. 4, occurs side by side with the central [a] of Calcutta Bengali. The distinction between the forward [ã] (which is from an earlier [ai]) and the retracted [a] is unknown in Calcutta Bengali. Thus Dialectal Bengali has [kãːl < kail] (yesterday, tomorrow) and [kaːl] (time), but Calcutta Bengali only [kaːl] for both the words.

The long [ɔː] and nasalized [ɔː] of Bengali are slightly lower than Cardinal No. 6, and [ɔ] short is about midway between Cardinals No. 6 and 5. The tongue is thus considerably retracted towards the throat. There is not much lip-rounding, except when the sound is lengthened and emphasized. The sound is, however, notably higher than the ordinary Southern English sound of [o] in not (=/n ðt/).

The Bengali long [oː] nasalized [õː], and short [o] are situated between the Cardinal Vowels 7 and 6, the former two being slightly higher in tongue-position. There is considerable amount of lip-rounding. The long [oː] of Bengali has not any trace of a diphthongal element: the sound must be carefully distinguished from the South English diphthongal [ou] in such words as go, boat (= gōU, bōUt).

In standard Bengali [ɔː] and [o] are often inter-changeable, and frequently, especially in learned words, there is a hesitancy as to which sound to employ. This leads to an unconscious compromise, viz. a very low variety of [o], which may be symbolized in transcription by [õ].

The Bengali [u]-sounds (u : ū, u) present a parallel to the [i]-sounds. The sounds are somewhat lower than Cardinal [u], and seem to be slightly advanced. The long [u] and nasalized [ũ] are higher in tongue-position than short [u]; the latter resembles to some extent the Southern English sound in put (= pʰuUt).

Some speakers occasionally employ a central vowel resembling the Southern English
sound of [u] in but (the phonetic symbol for which is \(\Lambda - b\Lambda t\)) in pronouncing certain rare foreign words, e.g. \(b\Lambda s\) (enough;). This vowel is not a genuine Bengali sound, and a Bengali speaker would normally substitute for it [æ], [a] or [ɔ], as the case may be.

Vowels in contact with a nasal consonant are slightly nasalized in Bengali.

### Formation of the Bengali Vowels.

A. diagram illustrating approximately the tongue-positions of the Bengali Vowels, with reference to the Cardinal Vowels.

(The dots indicate the positions of the highest point of the tongue)

Cardinal Vowels: ♦

Bengali Vowels: ○
Description of Bengali Sounds *

**Vowels (svara-dhvani):**

A vowel is defined as a voiced sound which is formed when air passes through the mouth in a continuous stream without any obstruction and constriction in its passage in the mouth cavity.

Bengali possesses seven vowels in pronunciation (though in writing there are eleven letters including two diphthongs). These are viz. \[ Û, a, i, u, e, æ \] and \[ o \]. All such sounds are distinguished from one another and are short in length. In normal speech Bengali has lost the length of its vocalic quality in contrast to Hindi and some other Indo-Aryan as well as European languages. But the important point to note is that in Bengali alphabet there still remain the symbols for long \[ i \] and long \[ u \] sounds to follow the spelling. All vowels are capable of nasalisation. Nasalisation of vowels is made by simultaneous emission of breath through both nasal and mouth cavities. The characteristics of the production of vowel sounds are the following.

**Characteristics of \[ a \ dez \]**

(i) Height of the tongue – low-mid;
(ii) Position of lips – slightly rounded;
(iii) Opening between jaws – medium to wide.

Like English \[ Û \] in \[ b Û I \] (ball), \[ f Û I \] (fall) etc.

Examples: \[ Ûnek \] ‘many’; \[ Ûto \], ‘how much’ \[ Ûm \] ‘less’, \[ Ûth \] ‘way’ etc.

\[ Û – Û \] in nasalisation

Examples: \[ gÛd \] ‘adhesive’, \[ pÛca{\=i} \] ‘eighty five’.

**Characteristics of \[ a \ a \]**

(i) Height of the tongue – low; open;
(ii) Position of lips – neutral;
(iii) Opening between jaws – medium to wide.

Examples: \[ ar \] ‘and’, \[ alada \] ‘different’ \[ kaj \] ‘work’, \[ sÛkal \] ‘morning’ \[ mÛja \] ‘fun’, \[ garî \] ‘car’ etc.

\[ a – a \] in nasalisation

Examples: \[ kāca \] ‘green’ \[ khāca \] ‘cage’ \[ pāc \] ‘five’, \[ bāsi \] ‘flute’.

* Dr. Alibha Dakshi – Learning Bengali, p. 15-41
Characteristics of \textit{i} \& \textit{i} \textit{i}

(i) Height of the tongue – high, close;
(ii) Position of lips – fully spread;
(iii) Opening between jaws – narrow to medium.

Like English \textit{i} in it, sit etc.


[\textit{i} – \textit{i}] in nasalisation


Characteristics of \textit{u} \& \textit{u} \textit{u}

(i) Height of the tongue – high, close;
(ii) Position of lips – fully rounded;
(iii) Opening between jaws – narrow to medium.

Like English \textit{u} in ful (full), put (put), gud ((good), etc.

Examples: uni he/she (honorific, remote), [guni] ‘talented’. [tumi] ‘You’ (ordinary) [dupur] ‘noon’ etc.

[\textit{u} – \textit{u}] in nasalisation


Characteristics of \textit{e} \textit{e}

(i) Height of the tongue – high-mid, half-close;
(ii) Position of lips – spread;
(iii) Opening between jaws – medium.

Like English \textit{e} in bel (bell), pet (pet), tel (tell), etc.


[\textit{e} – \textit{e}] in nasalisation

Characteristics of \( \text{æ} \) \( \text{æ} \)

(i) Height of the tongue – low-mid, half-open;
(ii) Position of lips – spread;
(iii) Opening between jaws – medium to wide

Like English \( \text{æ} \) in \( \text{bad} \) (bad), \( \text{glæd} \) (glad), \( \text{mæd} \) (mad), etc.

Examples: \( \text{ækhon} \) ‘now’, \( \text{kæmon} \) ‘how’, \( \text{khæla} \) ‘to play’, \( \text{dækha} \) ‘to see’, \( \text{bæla} \) ‘day/ time’, \( \text{mæla} \) ‘a fair’.

\( \text{æ} \text{– æ} \) in nasalisation

Examples: \( \text{cæ cameci} \) ‘shouting’, \( \text{chæ cta} \) ‘a dry dish of vegetables’ \( \text{pæ ca} \) ‘owl’.

Characteristic of \( \text{ɔ} \) \( \text{o} \)

(i) Height of the tongue – high-mid, half-close;
(ii) Position of lips – almost rounded;
(iii) Opening between jaws – medium.

It has the long sound of Scots. English as in \( \text{[so:]} \) (so), \( \text{[sto:n]} \) (stone) etc.

Examples: \( \text{ɔ} \) ‘and’, address to husband by his wife, \( \text{kol} \) ‘lap’, \( \text{ghora} \) ‘horse’, \( \text{cokh} \) ‘eye’.

\( \text{ð} \text{– o} \) in nasalisation

Example: \( \text{gð} \) ‘obstinacy’, \( \text{hð k} \) ‘tendency’, \( \text{phð ta} \) ‘drop’ / ‘spot’, \( \text{bð ða} \) ‘blunt’ etc.

Diphthongs and Vowel Combinations

The following 25 Diphthongs occur in Bengali \( \text{[ie, ia, lo, lu, ei, ea, eo, eu; æe, æo, i ai, æ, ao, au; ðe, ða, ðo, oi, oa, ui, ue, ua, uo]} \). In ordinary speech of sufficient rapidity, those are falling diphthongs with the stress on the first element, if there is any stress. In slow, deliberate speech the vowels may generally be pronounced as distinct syllables; but sometimes when two vowels form separate syllables and not a diphthong, there is difference in meaning e.g. (ciphthongal) \( \text{[jai]} \). (I go), \( \text{nae} \) (bathes) \( \text{sɔɔe} \) (endures), but (disyllabic) jai (whatever), \( \text{nae} \) (by boat), \( \text{sɔe} \) (per hundred).
Double vowel groups are found in Bengali, each part being pronounced separately; e.g. ii, ee, oo.

The following triphthongal combinations also occur: [ei, eo, iae; eie, eio, eao, eoi, euo; aei, aoi, aie, aie, aoi, au, Ω, eie, eio, oei, oeo, oai, oae, oui, ute, uie, ueo, use, uao, uoe].

In rapid speech they are often reduced to a single syllable.

The following tetraphthongal groups, [eoai, eoe, aoei, aoi] are in reality composed of two diphthongs.

**Diphthongs (Dvisvara-Dhvani)**

The following diphthongs are in use in Bengali:

(i)  ডে - [chz>e] six, [n>c] - nine; [n>c] 'remain'
(ii)  সি - [khaj] 'I eat'; [caj] 'I want';
(iii)  কু - [chauni] 'shade', [lau] 'pump-kin', etc.
(iv)  দো - [n>o] you (ordinary) are not, [b>o] you (ordinary) carry; [h>o] you (ordinary) are etc.
(v)  আই - [kha] (he/she) 'eats'; [jai] (he/she) 'goes' [lai] 'alas' etc.
(vi)  আই - [khao] you (ordinary) 'eat', [dao] you (ordinary) 'give', [pao] you (ordinary) 'get' etc.
(vii) আই - [biuli] 'a kind of husked pigeon-pea, [miu] 'mew' etc.
(viii) আই - [tui] 'you' (intimate), [dui] 'two' [fui] 'I wash' etc.
(ix)  আই - [eij] 'this', [nei] 'not having' [sej] that etc.
(x)  আই - [kej] 'somebody', [dfej] 'wave' etc.
(xi)  আই - [khej] you (ordinary, imperative) 'eat', [gej] you (ordinary, imperative) 'sing', [jej] you (ordinary, imperative) 'go', etc.
(xii) আই - [daej] he/she 'gives', [nej] he/she 'takes', etc.
(xiii) আই - [kaegra] a screwpine flower, [nae] fond, [ae] 'moss' etc.
(xv)  আই - [kouto] 'box' with a lid, [nojko] 'boat'
(xvi) আই - [doej] she/he 'milks' (the cow), [dfej] she/he washes, [sfej] she/he 'lies down' etc.

Combination of two vowels of the same type cannot be considered as diphthongs. These are namely ii, ee and oo.
Consonants (Vyañjana-dhvani) :

Consonant is defined as a sound produced by obstructing breath at some point in the mouth cavity. The consonants in Bengali can be classified on the basis of point of articulation and the types of sound producing and sound modifying mechanism in the mouth often referred to as manner of articulation. Thus we have nineteen stops including three nasals, four affricates, one rolled, one lateral, two fricatives, two flapped and four semi-vowels. Further, stops and affricates can be classified into four distinct voiced, unvoiced, aspirated and non-aspirated sound components.

Velar :

Articulated by the back of the tongue against the forepart of the soft palate. These are:

- **k** – unvoiced unaspirated velar stop;
- **kh** – unvoiced aspirated velar stop;
- **g** – voiced unaspirated velar stop;
- **gh** – voiced aspirated velar stop.

Examples:

- [kal] – tomorrow
- [khal] – canal
- [gol] – round
- [ghol] - whey
- [kan] – ear
- [gan] – song
- [kham] – envelope
- [gham] – sweat

Velar nasal – **O /n (voiced):**

Examples:

- [proñoña] - praise;
- [šohšar] - family
- [rɔŋ] - colour;
- [šutoraŋ] - so.
**Retroflex:**

Articulated by the tip of the tongue after being curled back towards the mid-palate region. These are:

\[ \rightleftharpoons \]
- \( t \) – unvoiced, unaspirated retroflex stop.
- \( \text{th} \) – unvoiced aspirated retroflex stop.
- \( d \) – voiced unaspirated retroflex stop.
- \( \text{dfi} \) – voiced aspirated retroflex stop.

Example:

- [p\text{h}k] – sour
- [\text{th}p\text{k}] – a cheat
- [daka] – to call
- [\text{dfi}aka] – to cover

Retroflex nasal \( n \) has no existence in pronunciation in Bengali, but it occurs only with retroflex series in conjunct. For example – [gh\text{h}\text{ta}] ‘bell’, \( k\text{h}\text{th}o \) ‘throat’ etc.

**Dental:**

Articulated by the tip of the tongue against the upper teeth. These are:

\[ \rightleftharpoons \]
- \( t \) – unvoiced, unaspirated dental stop;
- \( \text{th} \) – unvoiced, aspirated dental stop;
- \( d \) – voiced, unaspirated dental stop;
- \( \text{dfi} \) – voiced, aspirated dental stop.

Examples:

- [tan] – tune
- [th\text{n}] – sheets of cloth
- [tala] – lock
- [thala] – dish
- [dan] – gift
- [\text{dfi}an] – paddy
- [d\text{h}r] – price
- [dhar] – you (intimate, imperative hold)

**Alveolar nasal \([n]\) (voiced):**

Articulated by the tip of the tongue to touch the teeth-ridge.

Examples: [nam] ‘name’, [ne\text{h}a] ‘take’ etc.
Bilabial:

Articulated by two lips. These are:

- **p** – unvoiced, unaspirated bilabial stop;
- **ph** – unvoiced aspirated bilabial stop;
- **b** – voiced unaspirated bilabial stop;
- **bh** – voiced aspirated bilabial stop.

Examples:

- [pita] – father
- [phita] – ribbon
- [pan] – betel leaf
- [ban] – flood

Bilabial nasal [*m*] (voiced):

An affricate is a kind of stop consonant in the production of which the articulating organs are separated slowly than usual, so that the corresponding fricative is audible as the separation takes place. In Bengali we get affricates in palato-alveolar region.

Palato Alveolar:

Articulated by the blade of the tongue against the back part of teeth-ridge towards palate. These are:

- **c** – unvoiced unaspirated palato-alveolar affricate;
- **ch** – unvoiced aspirated palato-alveolar affricate;
- **j** – voiced unaspirated palato-alveolar affricate;
- **jh** – voiced aspirated palato-alveolar affricate.

Examples:

- [cai] – I want
- [chai] – ashes
- [cal] – uncooked rice
- [chal] – skin
- [cal] – you (intimate) go
- [jal] – water
- [jama] – shirt
- [jham] – overburnt brick
- [jal] – net
- [jhal] – spicy hot
- [chap] – print
- jhāp – dive, jump

[f़ː] The Palato-alveolar nasal [*f़*] is rare in use in Bengali. In conjunct with [c, ch, j], and [jh] the palato-alveolar [*f़*] is pronounced as alveolar [*n*] such as [cañchaː], restless [lañchana] abuse etc.
**Rolled :**

The Rolled lingual [\(\text{r}\)] is formed by repeated taps of the tip of the tongue against the teeth-ridge. The nasal passage is blocked and vocal vibrate. It is a voiced sound.

Examples: [\(\text{ar}\)] 'and’, [\(\text{kara}\)] – ‘who’ (plural) [\(\text{rat}\)] ‘night’ etc.

**Lateral :**

This sound is formed by an obstacle in the centre of the air passage in the mouth by touching the tip of the tongue against the teeth ridge and the air passes either on one or both sides of the obstacle. The soft palate is raised to block the nasal passage. It is a voiced sound.

\[
\begin{array}{ll}
\text{[kal]} & \text{‘tomorrow’} \\
\text{[bali]} & \text{‘sand’} \\
\text{[g>mala]} & \text{‘neck’} \\
\text{[lal]} & \text{‘red’}
\end{array}
\]

**Fricative :**

While producing fricative there occur (i) incomplete closure in the mouth cavity at some point, (ii) narrow opening of the air passage and (iii) audible friction on release. A kind of hissing sound is produced when air is expelled through the mouth. Thus we get sibilant [\(\text{s}\)] and glottal fricative [\(\text{h}\)].

**Sibilant : palato – alveolar [\(\text{s}\)] (unvoiced)**

This is articulated by the blade of the tongue against the back part of the teeth-ridge towards palate. The teeth come rather incompletely close together with a narrow opening.

Examples:

\[
\begin{array}{llll}
\text{[a>sa]} & \text{‘hope’} & \text{[s’at]} & \text{‘sixty.} & \text{[mas]} & \text{‘month’}
\end{array}
\]

In Bengali [\(\text{s}\)] (alveolar / dental) and [\(\text{s}\)] (Retroflex) are pronounced [\(\text{s}\)] except a few conjuncts.

**Glottal fricative \(h\) (voiced) :**

This is produced while air is passing through the glottis. It is a voiced sound. There
is another variation of [fi] which is unvoiced and occurs in the final position of a word and also in conjunct. It is called [bisɾgo] = i.

Examples:

**Flapped**:

It is articulated by one single tap of the tip of the tongue against the mid palate region.

These are:
- r – voiced unaspirated retroflex flapped.
- rᵩ – voiced aspirated retroflex flapped.

They never occur initially. They occur medially and finally of the words.

Examples:

**Semi vowel**:

In the production of semivowel a weakly pronounced vowel – glide is formed when the speech organ starts in producing one vowel and moves to other. It is an independent vowel glide but treated as consonant. There are four semivowels in Bengali.

These are:
- i and e – palato alveolar voiced semivowels;
- u and o – bilabial voiced semivowles.

Examples:
[tai] ‘so that’. [ɾʊlik] ‘original’
[bhai] ‘brother’ [pɔna] ‘due’
[iɾe] ‘win’ [ʃɪda] ‘purchase’
[g∔ena] ‘ornament’

Reference: Dr. Alicha Dakshi —Learning Bengali (P 15–41)
Morphology of Bengalis and Tamil Verbs (P 5–16)