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# *Hindi Pronunciation & Accents*

*Geo-social Applications of the Natural Phonetics & Tonetics Method*

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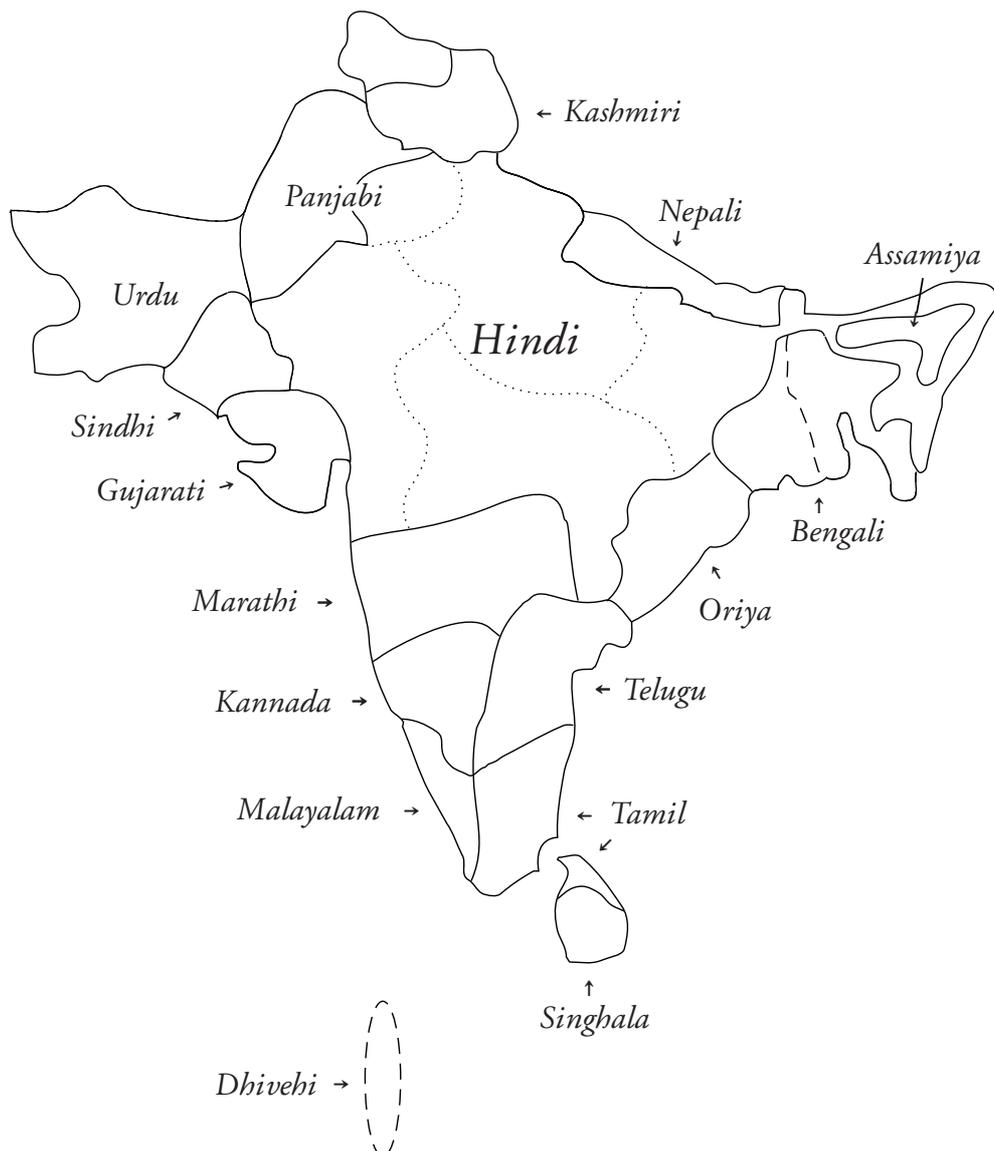
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# 13. Hindi regional accents in India and some neighboring nations (& map)

13.0.1. In this chapter, we will provide the phonopses of 16 ‘regional accents’ of Hindi, which are typical of bilingual people in India and in some neighboring nations. For each koiné, the vocogram and tonogram will be shown, for adequate com-

fig 13.0.1. Hindi *regional* accents: pronunciation map (also see fig 6.13).



# 6. Hindi vowels

6.1.1. fig 6.1 shows the orograms of the Hindi vowels, which are ten: three short, *i, a, u* [ɪ, ɐ, ʊ], and seven 'long'. As can be seen, we do not list phonemes in a silly alphabetical order. On the contrary, we always show them in a strict phonic way.

The 'long' ones are actually diphthongs: *five* are monotimbric, with very narrow movements, but nevertheless perceptible, *ī, ē, ā, ō, ū* [ii, ee, aa, oo, uu].

The other two are more evident, because they are ditimbric, even if, generally, they are simply described as long vowels, themselves: *ā, ā* [aɛ, əσ]. As a matter of fact, native speakers think they are monophthongs, including the variants given. Thus, Indian people generally use them as such when learning foreign languages, unless they have been adequately trained in *natural phonetics*.

Although these two diphthongs are ditimbric, we phonemicize them as /εε, ɔɔ/, because they are the most changing phonemes of the Hindi language, with several realizations, not only regionally, as we will see.

Here are some examples of the three short vowels: *din* ['dɪn], *par* ['pəɾ], *kul* ['kʊl].

fig 6.1. *Neutral* Hindi vowels: orograms.

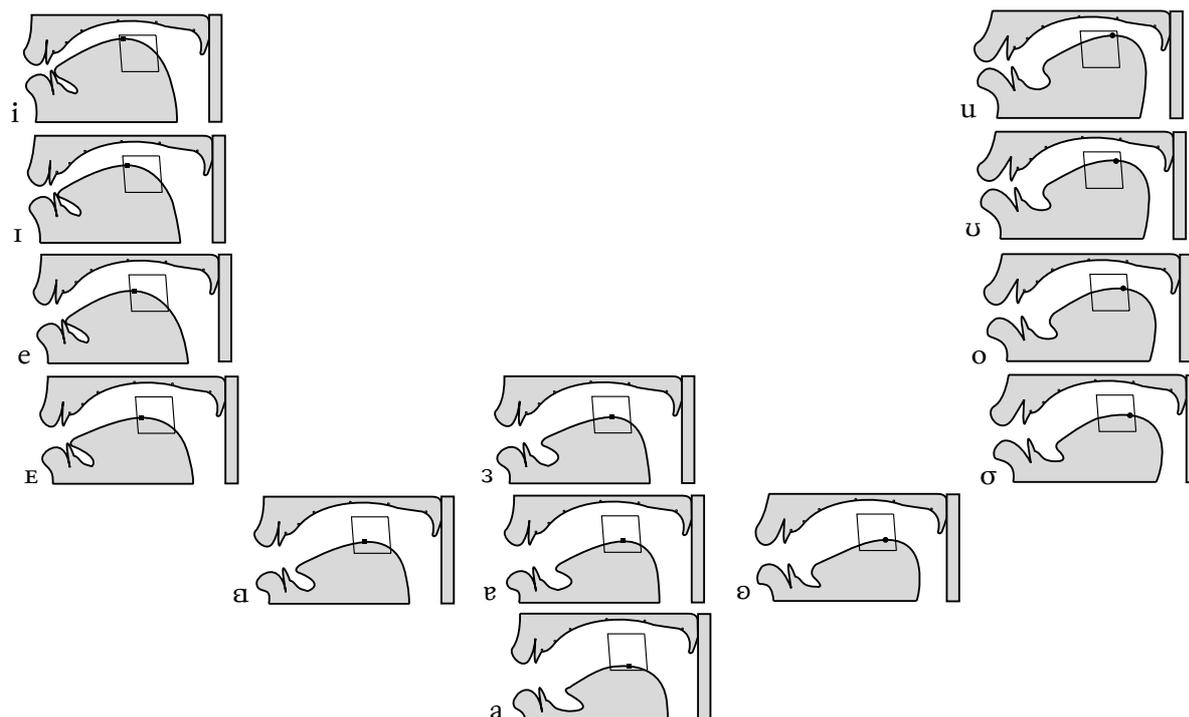
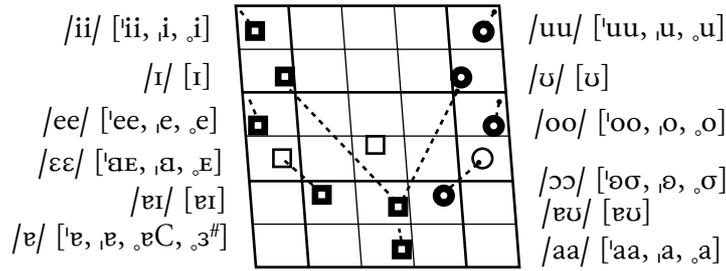
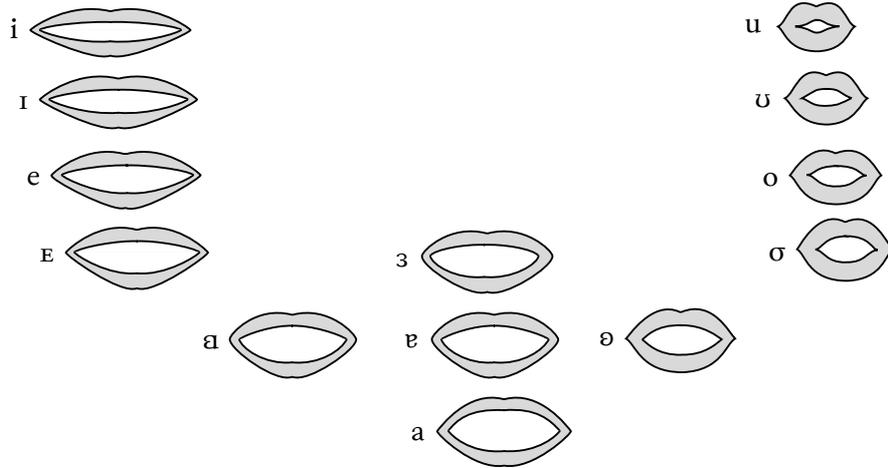


fig 6.2. *Neutral* Hindi vowels: vocogram.fig 6.3. *Neutral* Hindi vowels: labiograms.

The three corresponding narrow diphthongs are: *dīn* [ʰdiin], *pār* [ʰpaar], *kūl* [ʰkuul]. The other four narrow diphthongs are: *bēr* [ʰbeer], *bār* [ʰbaer], *bōr* [ʰboor], *bār* [ʰbōor].

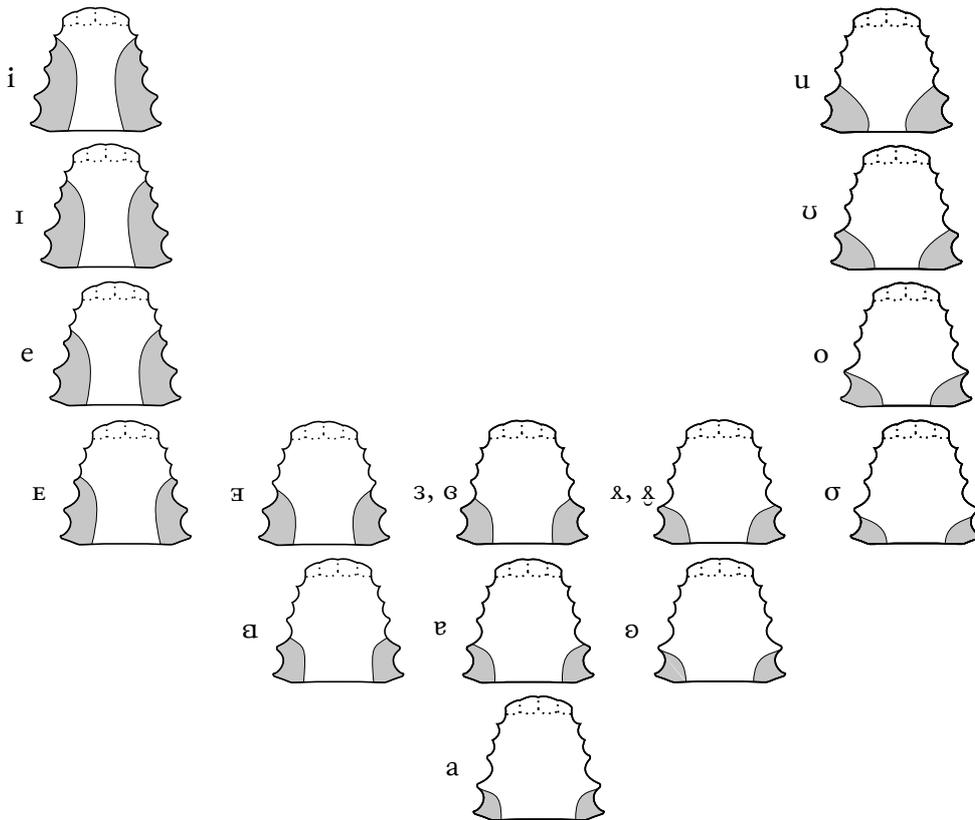
Let us cursorily indicate some tiny differences, between different parts of the core Hindi-speaking area. So: *bār* [ʰbaer] /ʰbaer/, *bār* [ʰbōor] /ʰbōor/ are generally [ʰbaer, ʰbaor] (or ↓[ʰbaer, ʰbaor]) in the *east* (Bihar), or [ʰbaer, ʰbōor] in the *west* (Rajasthan), or [ʰbaer, ʰbaor] in the *middle* (Madhya Pradesh).

6.1.2. Each Hindi vowel may be (distinctively) *nasalized* (cf fig 5.8), keeping the same basic timbers as their ‘normal’, oral counterparts: *thī* [ʰhī], *hā* [ʰhā], *mā* [ʰmā], *ā* [ʰā]. Of course, to nasalize vocoids, it is necessary to lower the velum, as we normally do for nasal contoids. Let us consider, for instance, this comparative example: *rag* [ʰræg] ‘vein’ and *rāg* [ʰrēg] ‘color’.

Currently, in *colloquial* or *mediatic* pronunciations, words such as *hans* [ʰhəns] /ʰhəns/ tend to be confused with *hās* [ʰhəs] /ʰhəs/. But, in *neutral* pronunciation, they must be accurately distinguished, even if [ɳ] has no full contact with the alveolar ridge (cf § 8.2.1-2).

When *ā*, *ā* are followed by /j, v/, they become *ai*, *au* [eɪ, eʊ] /eɪ, eʊ/: *maiya* [ʰmɛɪ-ja, ʰmɛɪa, maɪˈjaa mɛɪˈaa], *taiyār* [ʰtɛɪjaar, tɛɪˈaar, ʰtɛɪjar, ʰtɛɪar], *hauvā* [ʰhɛʊʋaa, ʰhɛʊa, hɛʊˈʋaa, hɛʊˈaa]. The same should hold for Sanskrit words with *ai*, *au* [eɪ, eʊ] /eɪ, eʊ/; but, currently, these become [ɛɛ, ɔɔ] /εε, ɔɔ/.

fig 6.4. Neutral Hindi vowels: palatograms.



Intra-lexemic sequences /eəC, oəC/ may be realized with short vocoids, even when stressed: *sēhrā* [ˈseɪh-ra, ˈseɪ-, seɪˈraa], *mōhlat* [ˈmoɪh-lət, ˈmoɪ-, moɪˈlət]. When there is grammemic derivation, no shortening occurs (if stressed): *lēhy* [ˈleɪh-jɐ], *mōhnā* [ˈmoɪh-na, moɪˈnaa].

Even in English loanwords, we find (more or less evident) shortenings: *peet* ‘stomach’ [ˈpeɪt], but *peet* ‘pet (animal)’ [ˈpeɪt, ˈpeɪt, ˈpeɪt].

The sequence /əh/, in front of a consonant or /v/, or at word boundary (/əhC, əhə, əh#/), is realized as [ˈaɦ, ˈaɦ] (which, perhaps, could be marked as [ˈɛ/]): *kahnā* [ˈkaɦˈna, kəɦˈnaa], *pahlā* [ˈpaɦla, pəɦˈlaa], *lahar* [ləɦˈɪɾ], *tah* [ˈtaɦ].

In the other cases, /v/ remains (cf the following section), with the following realizations [v, ɜ, ɛ, ɞ, ɹ, ɻ]: *kahā* [kəɦˈaa], *dahī* [dɜɦˈii].

In Sanskrit loans we find /v/ before /hə/, as well: *rahasy* [rəɦˈɪs-jɐ, rəɦˈɪsɔ], *gahan* [gəɦˈɪɪn], *mahattv* [mɜɦˈɪtːvɔ].

6.1.3. In *unstressed syllables*, ‘inherent’ *a* is pronounced only when it is necessary to give substance to a phono-syllable. Thus, it is often not pronounced at all, except in the case of consonant clusters which are not so easy to utter.

Consequently, at the end of words (or word-internally, mainly after /h/), some free phono-syllables are generally produced with a fading vocoid of the [ɜ] type (cf fig 6.2). However, this timbre, although attenuated (in length as well), changes in accordance with the contoids preceding it (even in /Ch/ sequences).

fig 6.5. Attenuated taxophones of /<sub>ə</sub>v<sup>#</sup>/ – [ɪ, ʌ, ɐ, ɘ, ɤ]: [Cɜ; jɪ, jɪ; ɔɘ], [mɐ, p(h)ɐ, b(h)ɐ, φɐ, βɐ; k(h)ɤ, g(h)ɤ, qɤ, ʂɤ, ʀɤ].

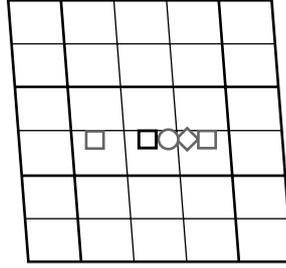


fig 6.6. Attenuated taxophones of /<sub>ə</sub>v<sup>#</sup>/: orograms.

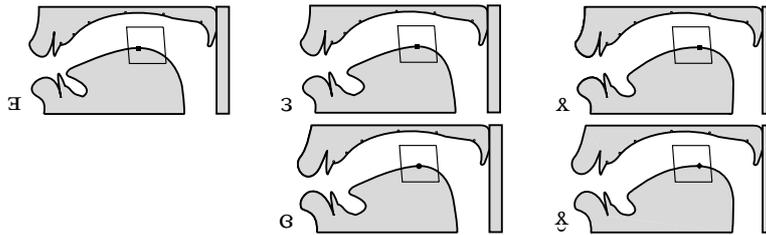
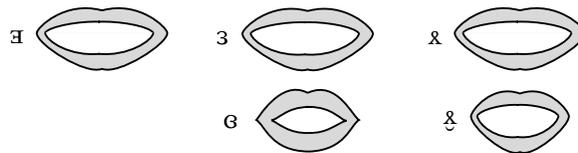


fig 6.7. Attenuated taxophones of /<sub>ə</sub>v<sup>#</sup>/: labiograms.



Therefore, as shown in fig 6.5-6, after *labials* ([m, p(h), b(h), φ, β]) it has rounded lips: [ɐ]. After *velars* or *uvulars* ([k(h), g(h), q, ʂ, ʀ]), it moves back: [ɤ] (besides, after [ɔ], we have [ɘ], with partial rounding).

After /j/, it moves forwards: [ɪ]. As already seen, this phone generally also occurs in *abC* [ʌhɪC, ɤhɪC] /ɐhC/. And with /h/ near  $\bar{e}$ ,  $\bar{a}$  [ee, ɛE] /ee, εE/, as well (as an echo assimilation): *bēhtar* [ˈbeɪtɐɾ, -ɪɾ].

It is a good thing to manage to use these five vocoids (in their attenuated, rather than full, forms), since their coarticulatory logic is quite evident. However, a rather satisfying result can be achieved, if we systematically use an attenuated [ɜ] (while a full [ɐ] would sound too pushy).

Let us see some examples (but it should be noted that, often, in various published texts, we find ‘[ə]’ for [ɐ], even if stressed): *kaṇṭh* [ˈkəŋt̪-hɜ], *pañc* [ˈpəŋt̪ɜ], *karm* [ˈkəɾmɐ] (‘karma’), *bāṅg* [ˈbaɳgɤ] ([ˈbaɳŋ] is possible, as well), *mūrkh* [ˈmuɾk-hɤ], *anvay* [ɐnʌˈβeɪɪ], *agamy* [ɜˈgɐm-jɪ], *aṅy* [ˈɐɳ-jɪ], *agany* [ɜˈgɐŋ-jɪ], *mōhnā* [ˈmoɦɜna, moɦɜˈnaa], *mahl* [ˈmaɦɐl], *mēhtar* [ˈmeɦɪtɐɾ, ˌmeɦɪˈtɐɾ], *kāmmy* [ˈkaam-mɜɪ]. Arguably, all these examples can even be uttered with more reduced vocoids: [ɐ, ɜ, ɪ, ɐ, ɤ, ɘ, ɤ].

6.1.4. In unstressed syllables, the phonetic diphthongs are normally realized as short monophthongs (or, in slow or more accurate pronunciation, as half-lengthened

monophthongs, [V<sup>•</sup>]): *kahānī* [kə'haani, kəha'nii], *lēnā* [l'eena, le'naa], *hāthī* [h'aathi, ha'thii], *yādō* [j'aadō, ja'dōō], *śābās* [ʃ'a'baaʃ, ʃ'aabaʃ]. According to stress strength in sentences, for /εε, ɔɔ/, as in *hā*, we have, for instance: [h̄εε, h̄ε, h̄ε] /hεε/.

Unfortunately, Hindi grammars persist in placing among the 'vowels' a grapho-syllable which in Sanskrit indicated /r/ [r̄] and traditionally is transliterated *r̄*. But today, it currently stands for /rɪ/ [rɪ] *rī* (ie an obvious /CV/ sequence): *śrī* [ʃrɪ]. In *mediatic* or *regional* pronunciation, we can also find [rɪ, rə; rʊ, rɔ, rɐ].

In Ch 9 we will see that there are very many consonant sequences. But also vowel sequences are rather numerous, as in the following examples, which exhibit both true diphthongs and hiatuses (including mediatic exchanges).

*Diphthongs*: *lēī* [l'leei, le'ii], *nāī* [n'naai, na'ii], *lōī* [l'looi, lo'ii], *gaū* [g'əu, g'əuu], *blāuz* [b'l'aaʊz], *tāū* [t'aaʊ, ta'uu], *suar* [s'ʊər, s'ʊər], *huā* [h'ʊa, h'ʊ'aa], *sūā* [s'uuā, su'aa].

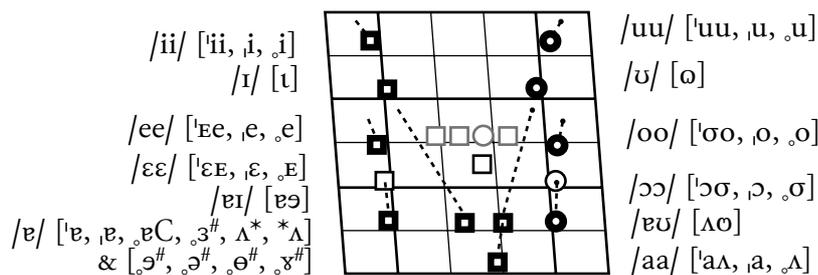
*Hiatuses*: *kāī* [k'ə'ii], *nāē* [n'ə'ee], *sūī* [s'u'ii], *khōā* [k'h'o'aa] (more rarely [k'v'ei, 'n'v'e, 'sui, k'hooa]).

Arguably, oscillations between diphthongs and hiatuses are rather common for different speakers and for single speakers, as well. This is also true of longer words, which can show alternative stress placements, because stress is not distinctive in Hindi, as we already know.

## Mediatic Hindi vowels

6.1.5. The vowels of *mediatic* pronunciation are somewhat different from those of *neutral* pronunciation, as can be seen by comparing fig 6.8 with fig 6.5, including /e/ [ɛ], in contact with [ŋ, t̪, d̪, ʃ; ʂ], and its reductions, in free unstressed syllables: [ə, ə, ɐ, ɜ].

fig 6.8. Hindi *mediatic* vowels.

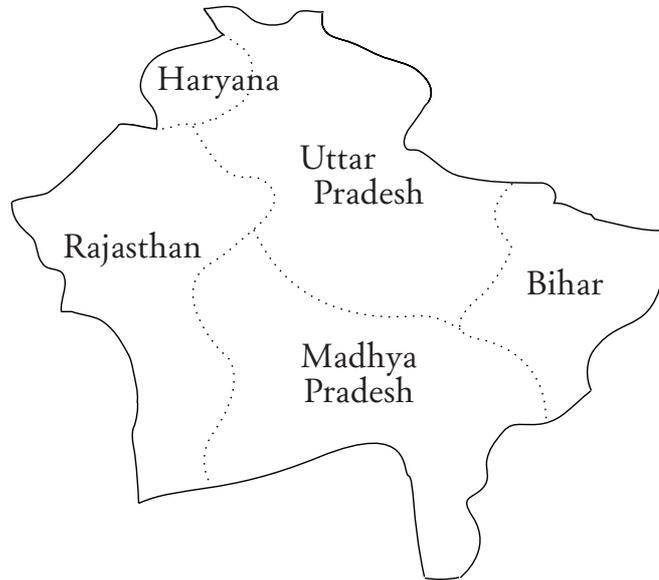


## Some minor regional differences

6.1.6. Let us add some *regional* differences within the area where 'proper' Hindi is considered to be typical. Actually, it is mostly in western Uttar Pradesh, northern Madhya Pradesh, eastern Rajasthan and Haryana that people usually speak using a kind of *neutral* pronunciation. In fact, tendentially neutral speakers of Hindi are found in the areas shown on the map (although together with speakers of other dialects and languages, as well).



fig 6.13. Proper Hindi *internal regional* areas: *North* (Uttar Pradesh), *West* (Rajasthan), *South* (Madhya Pradesh), *East* (Bihar) – also see fig 13.0.



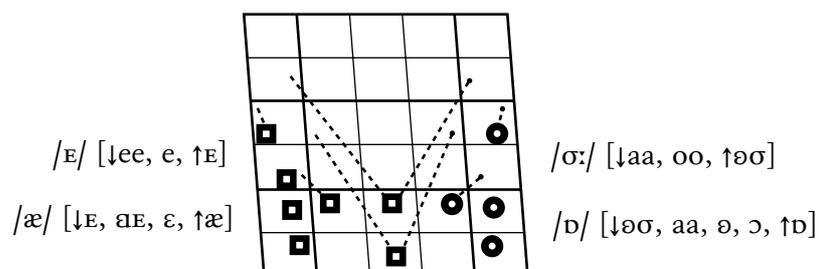
### Some English xenophonemes

6.1.7. Hindi people who are not fluent in English, or do not speak it properly, tend to use English words as a result of code-mixing, or code-switching. In these circumstances, they normally use the taxophones of their own language, like [ii, i; ɪ; ee, e; æ, a; ɐ; aa, a; əσ, σ; oo, o; u; uu, u; ɛɪ; ɐʊ].

These Hindi speakers generally merge /e, ɜ:/ into [ɐ], while /ə/ corresponds to its spelling, using current Hindi vocoids. For the five typical diphthongs, they usually have [ee, ↑eɪ], [oo, ↑oʊ], [ɛɪ, ↑æə], [ɐʊ, ↑aʊ], [əɪ, ↓ɛɪ], respectively

While, for /E, æ, ɒ, σ:/, they may oscillate between [↓ee, e, ↑E], [↓E, æE, ε, ↑æ], and [↓əσ, aa, ə, ɔ, ↑ɒ], and [↓aa, oo, ↑əσ], respectively (as shown in fig 6.14), in words like: *pēt*, *bæŋk*, *dəɒlar*, *Śō* ('pet, bank, dollar, Shaw'). See, however, ④ 16 for a fuller treatment of the Indian-English accent.

fig 6.14. Some *xenophonemes* for English words often used in Hindi conversations.



# 8. Hindi consonants

8.1. fig 8.o.1-2 show the consonants of Hindi, including further phonemes for lofty or loan words, coming from Sanskrit (corresponding to *ṅ, ṇ, ṣ*) and Arabic, Persian, Turkish and English (*q, f, z, k, g*), and (contextual) taxophones, as well.

The contoids are arranged by *places and manners of articulation*. fig 8.o.1 is a simplified version, with all contoids which are needed for *neutral* pronunciation, while fig 8.o.2 provides all the contoids which will be shown in the orograms of the following figures.

It may be interesting to observe that for Sanskrit (and consequently for Hindi, too) ancient grammarians had a rather scientific knowledge of articulatory phonetics (still used in illustrations in medical-sciences treatises, starting from the back of the mouth, rather than from the lips).

At least for consonants which are produced by means of a complete occlusion in the mouth. In fact, stops, stopstrictives, and nasals have always been presented in a table, shown by points and manners of articulation.

Thus, we find: *k, kh, g, gh, ṅ - ḥ, ḥh, ḥ - ṭ, ṭh, ḍ, ḍh, ṇ - ṭ, ṭh, ḍ, ḍh, n - p, ph, b, bh, m*. Arguably, we prefer an even more scientific and modern order (shown with phonic symbols and excluding ‘aspiration’, which we treat as sequential clusters, not as separate phonemes): [m, p, b] [n, t, d] [ɳ, ʈ, ɖ] [ɳ, ʈ, ɖ] [ɳ, ʈ, ɖ] [ɳ, ʈ, ɖ] [ɳ, ʈ, ɖ]

fig 8.o.1. Table of *neutral* Hindi consonants (simplified).

	bilabial	dental	alveolar	postal-veolar	postalveo-palatal	palatal	prevelar	velar	velar rounded	preuvular	uvular	laryngeal
N	m	[ɳ]	n	[ɳ]	[ɳ]	[ɳ]	[ɳ]	[ɳ]		[ɳ]	[ɳ]	
K	p b	t d		t d			[k g]	k g		[q]	[q]	[ʔ]
KS					ʈ ɖ							
X	[ɸ] β											
S		s [z]		[ʂ]	ʃ							
J						j [j]			[ɰ]	[ɰ]	[ɰ]	[h] ɦ
R			r	ɽ							[ɽ]	
L		[l]	l	[l]	[l]							

fig 8.o.2. Table of *neutral* Hindi consonants (complete).

	bilabial	labiodental	dental	alveolar	postal-veolar	postalveo-palatal	palatal	prevelar	velar	velar rounded	preuvular	uvular	laryngeal
N	m		[n]	n	[ŋ]	[ɲ]		[ŋ]	[ŋ]		[ɳ]	[ɳ]	
Ṇ	[m̃]		[ñ]	[ñ]	[ŋ̃]	[ɲ̃]	[ɲ̃]	[ŋ̃]	[ŋ̃]		[ɳ̃]	[ɳ̃]	
K	p b		t d		ʈ ɖ			[k̠ ɡ̠]	k ɡ		[q]	[q]	[ʀ]
Ṁ	[p̃] [β]												
X			s [z]		[ʂ]	ʃ							
S						ɺ							
J		[v]					j [j]			[w]	[ɣ ʁ]	[ɣ, ʁ]	[h] ɦ
R				r	ɽ							[ɽ]	
L			[l]	l	[ɭ]	[ɭ]							

## Nasals

8.2.1. There are two fundamental nasal phonemes, /m/ [m], and /n/ [m, n, ŋ, Ṇ, ṅ, ṇ], since /nC/ sequences are homorganic.

Besides, [m̃] (or [β]) occurs before [w, β, φ]; [ñ] (or [ʒ̃]) before [s]; [ɲ̃] (or [ʃ̃]) before /j/; [ŋ̃] (or [ũ̃]) before /h/, with a rare [ŋ̃], which would give /ŋh/ or /ngh/ [ŋgh, ŋ̃h]. This clearly shows the advantage of considering sequences of /Ch/ as biphonemic, even for stops (and not some metempsychosical and metempirical migration).

It is worth observing that [m̃, ñ, ŋ̃, ɲ̃, ʃ̃] are semi-nasal phones, ie nasals with no full contact: *semi-labial*, *semi-alveolar*, *semi-postalveo-palatal*, *semi-palatal*, and *semi-velar*, respectively, in addition to *semi-postalveolar* [ɲ̃] ([ʒ̃]), as well.

The *semi-nasal* taxophones occur before continuant contoids, while full nasals occur before other nasals, stops, and stopstrictives.

Examples: *mōh* [ˈmoʊh], *sambal* [ˈsɛmbɐl, sɛmˈbɐl], *tīn mātāē* [ˈtiim maˈtaāē, mataāē], *samvād* [sɛmˈvaad, sɛmˈvad], *nabh* [ˈnɛbh], *kañṭh* [ˈkɛŋʈh], *kañj* [ˈkɛŋʈʒ], *vañś* [ˈβɛʃʃ], *añy* [ˈɛʃ-ʒɛ], *pañk* [ˈpɛŋk], *iñqalāb* [ɪŋqɐˈlaab, ɪŋqɐˈlab].

In some words, we find /m, n/ before heterosyllabic consonants: *barāmdā* [bɛˈraāmda, bɛramˈdaa], *amrūd* [ɛmˈruud, ɛmˈrud], *gumṭī* [ˈgumʈi, gumˈʈii], *camcā* [ˈtʃɛmʈʃa, tʃɛmˈʈʃaa], *jhumkā* [dʒ̃ˈɦumka, dʒ̃-ɦumˈkaa], *mēnkā* [ˈmeēnka, menˈkaa] (generally, indicated in writing by the segments *m, n*, instead of by the spelling diacritic sign *anusvār* [ɛnusˈʃaar, ɛˈnusʃar]).

8.2.2. Furthermore, in lofty Sanskrit words, also /ŋ, ṅ/ [ŋ, ɲ̃; ŋ] occur, and have specific graphemes, *ṅ, ṅ̃*, but generally change to /n/. The more frequent genuine realization of /ŋ/ is [ɲ̃], a nasalized postalveolar flap, or even a nasalized postalveolar approximant, [ʒ̃].

So, it is better to use the symbol of the diaphone, [ɲ̃], which incorporates these values, although it generally becomes /n/, too.

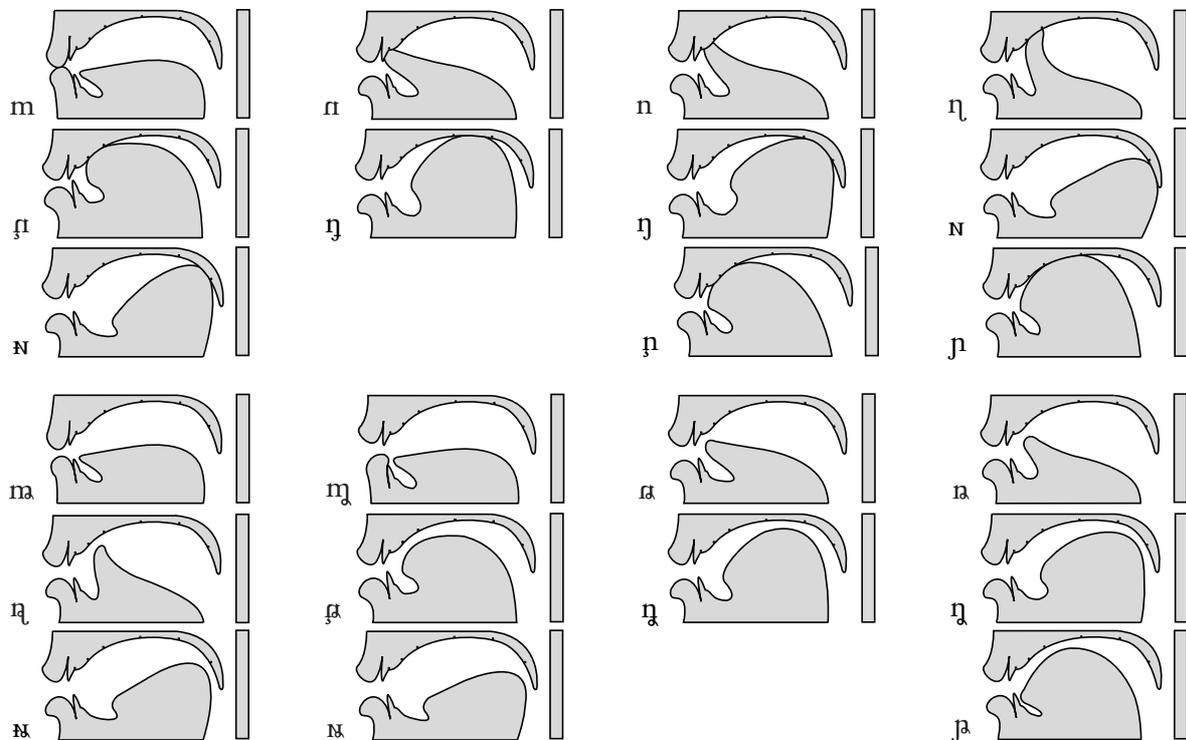
Also [ɲ̃] has a particular grapheme, *ñ̃*, even if it does not represent a phoneme

(as was the case, instead, in Sanskrit): *bām* [ˈbaām], *bān* [ˈbaān], *bāṅ* [ˈbaāṅ, ˈbaāṅ, ˈbaān], *gaṅeś* [gʌˈŋeʃ, gʌˈŋeʃ, gʌˈneʃ], *agany* [ʌˈgɛŋjɐ, ʌˈgɛŋjɐ], *vānmay* [ˈvaāṅmɐɪ, -ŋmɐɪ, -ŋm-, -nmɐɪ, -mmɐ, -mmɐ], *bāṅg* [ˈbaāṅgʌ, -ŋg, -ŋ].

Furthermore, we find the sequences /mh, nh/ [mʰ, nʰ], which (together with /lh/ [lʰ] and, possibly, /ṅh, ṛh/, cf § 8.2.1) have no official *devanagari* (ie *dēvānāgarī* or *dēvnāgrī*) graphemes, but combinations. In fact, they did not occur in Sanskrit, contrary to ‘aspirated’ stops and stopstrictives, including /ṭh/ [ṭʰ], which comes from /ḍh/ [ḍʰ]: *kumbhār* [kʊmˈʱaaɾ, ˈkʊmʱaɾ], *kānh* [ˈkaānʱ].

This fact clearly highlights the inconvenient practice of using many ligatures, but only when they were already present in the Sanskrit ‘orthography’.

fig 8.1. Hindi *nasals* (first set) & *seminasals* (second set); a third small set gives two unsuitable full nasals, [ɹ, ɹ; ɹ̃], occurring in foreign languages.



## Stops

8.3.1. There are four diphonic pairs, /p, b; t, d; ʈ, ɖ; k, g/ [p, b; t, d; ʈ, ɖ; k, k, g, g]. In addition, we have the voiceless *uvular* xenophoneme /q/ [q, q], *preuvular*; which can even become [k], a true velar phone, before front vowels, especially *ī, i /ii, ɪ/*. But, currently, it merges with /k/ [k, k] (obviously, with [k] before *ī, i /ii, ɪ/*).

Examples: *pitā* [pɪˈtaa], *ab* [ˈɐb], *rāt* [ˈraat], *nadī* [nɔˈdii], *thīk* [tʰiik], *pinḍ* [ˈpɪnḍ], *kāñ* [ˈkəñ], *gānā* [ˈgaana, gaˈnaa], *kā* [ˈkʌɐ], *qā* [ˈqʌɐ, ˈkʌɐ, ˈkʌɐ], *qarīb* [qʌˈriib].

8.3.2. The most remarkable peculiarity of stops is that the elements of diphonic pairs may occur in sequences, with /h/, producing /ph, bh; th, dh; ṭh, ḍh; kh, gh/

[ph, bh; th, dh; ṭh, ḍh; kh, gh].

In *mediatic* pronunciation, it is not rare to find that the ‘aspirated’ voiced ones are, actually, partially devoiced [b̥h, d̥h, ḍ̥h, ḡh], in addition to a fully voiced *neutral* pronunciation.

Unfortunately, these sequences are, generally, considered to be unitary phonemes: ‘aspirated’ opposed to the corresponding ‘non-aspirated’. No doubt, this opinion derives from their artistic and ‘lacy’ –but infelicitous– traditional writing, as well, seeing that particular ‘specific’ graphemes are used.

But, a more modern and functional point of view requires that we actually consider them as mere sequences of /Ch/ [Ḍh, Ḍh̥].

Otherwise, being slave to spelling superstructures, also many other independent sequences ‘should’ absurdly be considered as ‘unitary phonemes’. But, traditional spelling has nothing to do with true phonemic structures.

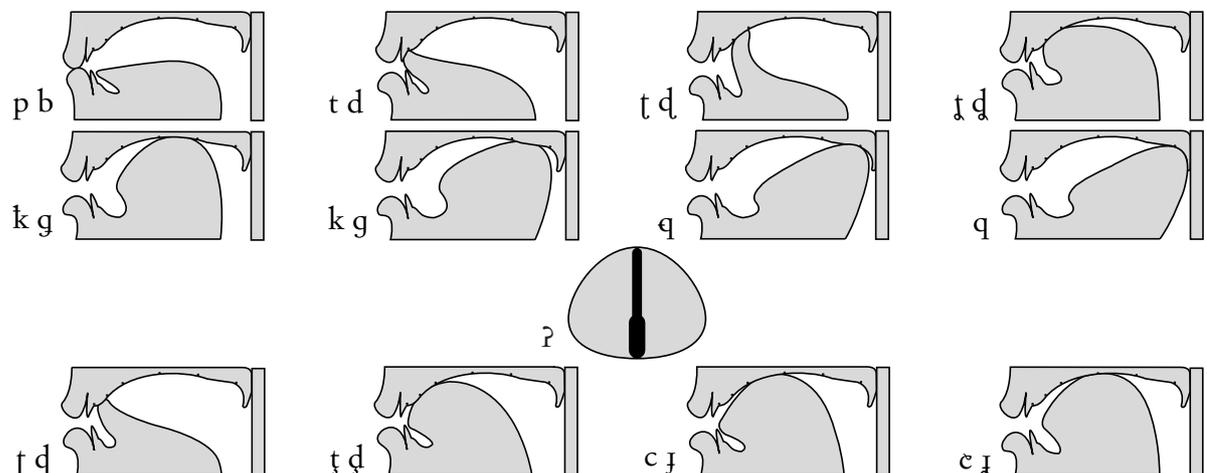
Even uneducated and illiterate people can understand this simple fact and fully functionally use the phonemes of their own language. As a matter of fact, they are quite free from preconceived illusory –clearly non-linguistic– ‘opinions’.

In fact, these ‘aspirated sounds’ are compellingly phonemic (and phonetic) sequences constituted by plain stops + /h/, which is realized as [h], after voiceless consonants, or as the normal (in Hindi) voiced laryngeal approximant, [ɦ], after voiced consonants. All the more so because, generally, they are realized as heterosyllabic, instead of tautosyllabic, sequences.

This can be seen by the placement of stresses, which is more evident and logical within a word or a rhythm group): *pal* [ˈpɛl], *phal* [pʰɛl]; *bālā* [ˈbaala, baˈlaa], *bhālā* [bʰaala, b-ɦaˈlaa]; *tal* [ˈtɛl], *thal* [tʰɛl]; *dāvā* [ˈdaaβa, daˈβaa], *dhāvā* [dʰaaβa, d-ɦaˈβaa]; *tappā* [ˈtɛppa, tɛpˈpaa], *thappā* [tʰɛppa, t-ɦɛpˈpaa]; *ḍīl* [ˈḍiil], *ḍhīl* [dʰiil]; *kāl* [ˈkaal], *khāl* [kʰaal]; *girā* [ɡɪˈraa], *ghirā* [ɡɦɪˈraa].

8.3.3. In *mediatic* pronunciation, it is not unusual for /b, bh/ to be realized as [β, βh]. Furthermore, attenuations are also possible for /k/ [k̠, k̠̥, k̠̥̥], /kh/ [xh, x], /g/ [ɣ, ɣ, ɣ], /gh/ [ɣɦ]. Before front vowels (or before /j/), /k(h), g(h)/ are realized

fig 8.2. Hindi consonants: *stops* (the last 4 are unsuitable foreign phones).



as prevelar, [(ŋ)k, (ŋ)g]. In final position, the stops may have inaudible release: *nāk* ['naak, 'naak'], *ab* ['ɐb, 'ɐb].

This is contrary to what happens to 'aspirated' sequences, which do not simplify, even if the laryngeal element may be less evident, in this final position (for other consonants, too).

But /h/ may not be fully missing, because it is distinctive: *sīkh* ['siikh, -k<sup>h</sup>], *nabh* ['nɐbh, -b<sup>h</sup>] (and: *bōjh* ['boodʒh, -dʒ<sup>h</sup>], *bārh* ['baaɾh, -ɾ<sup>h</sup>]). Actually, we often find [-Ch<sup>3</sup>].

Only within sequences like /ChC/, may /h/ be dropped (cf § 9.2.4). Also word-final /h/ may be attenuated (or even disappear completely): *byāh* [b'jaah, -aa<sup>h</sup>, -aa].

In addition, let us notice that [ʔ] is frequently used to separate vowels in contact between words, especially when the second (initial) vowel is stressed, so that /V<sup>#</sup>V/ becomes [V<sup>#</sup>ʔV]: *kharā ūt* [khɜɾə ʔūt], *tērī ōr* [teeri ʔoor, teerii].

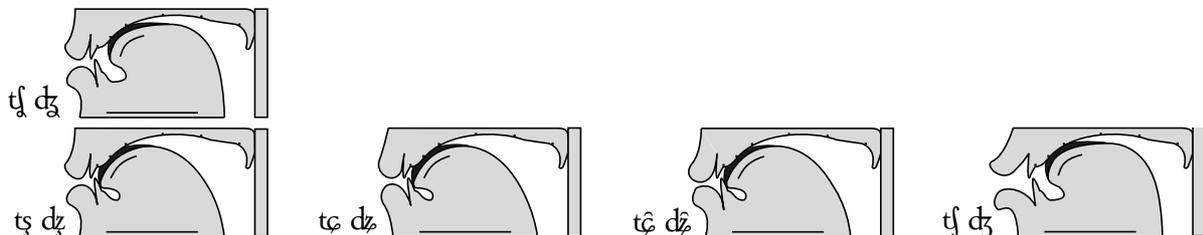
### Stopstrictives

8.4. We only find the *postalveopalatal* diphonic pair, /tʃ, dʒ/ [tʃ, dʒ] (too often indicated as /tʃ, dʒ/ and even [tʃ, dʒ], but, in Hindi, they have *no* lip protrusion).

The corresponding 'aspirated' sequences are also present /tʃh, dʒh/ [tʃh, dʒh], including the possibility of [dʒh] (as for the stops): *čatur* [tʃɜ'tur], *rāj* [raadʒ], *čāl* [tʃaal], *čhāl* [tʃhaal], *jāl* [dʒaal], *jhāl* [dʒhaal].

In various contexts, there may be frequent attenuated realizations (ie constrictive or approximant), even after a pause (or, instead, sharper ones, ie stops), for /tʃ/ [ʃ, ʒ; tʃ], /tʃh/ [ʃh, ʒh; tʃh], /dʒ/ [ʒ, ʒ; dʒ], /dʒh/ [ʒh, ʒh; dʒh]. This mostly happens in *mediatic* pronunciation. Their orograms are regularly shown in fig 8.4 & fig 8.2, respectively. Let us add that a word like *jñān* is normally realized as [jaān, ɲ-, ɲ-; dʒɲ-] (using 'special' phones, which are not typically Hindi). Let us also note: *muʃh-sē* [mʊtʃh'see, mʊtʃh'see].

fig 8.3. Hindi consonants: *stopstrictives* (only a pair; the last 4 are unsuitable foreign phones).



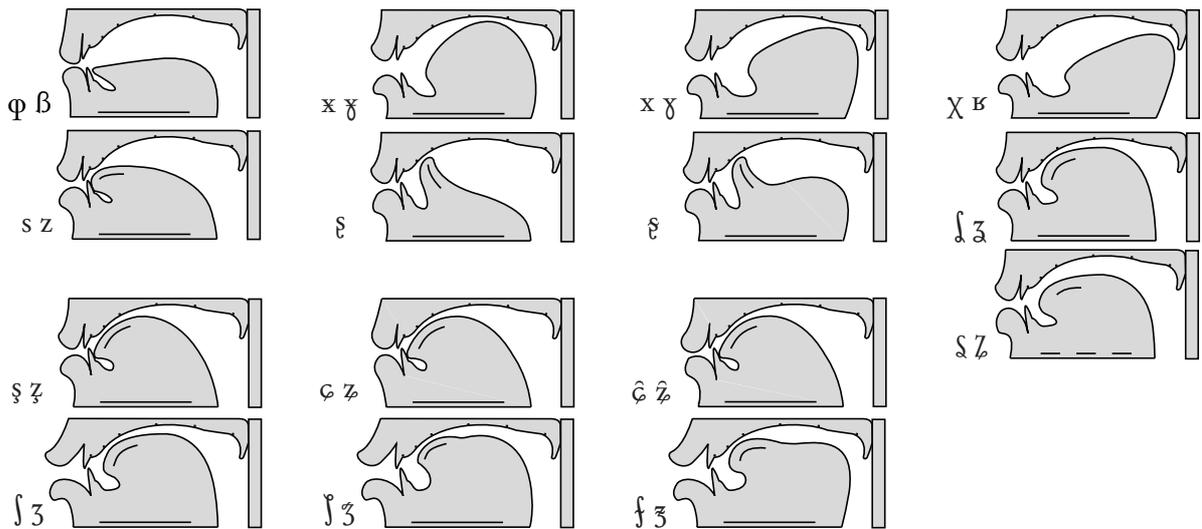
### Constrictives

8.5. In actual fact, we find two voiceless constrictives: *s, ś* /s, ʃ/ [s, ʃ] (cf fig 8.4). Sometimes, /ʃ/ [ʃ] is realized as velarized postalveolar, [ʃ̠], ie [ʃ̠] with velarization, especially in *mediatic* pronunciation.

In Sanskrit loans, we also find  $\varsigma$  / $\xi$ / [ʃ] (which currently becomes / $\xi$ / [ʃ]: *bis* [ˈbɪʃ, ˈbɪʃ]). On the other hand, /s/ becomes [ʃ], before /t/: *kaṣṭ* [ˈkəʃt] (shown in writing, as well).

In Persian, Arabic, and English loans, we find *f*, *z* / $\phi$ ,  $\zeta$ / [φ, z], too (which currently become /ph,  $\mathcal{D}$ / [ph,  $\mathcal{D}$ ]): *faqīr* [fəˈqiːr, -kiːr, -kiːr, phə-], *fut* [ˈfʊt, pʰʊt], *bāzār* [baˈzaːr, baˈ $\mathcal{D}$ ːaːr, ˈbaa $\mathcal{D}$ ːaːr].

fig 8.4. Hindi consonants: *constrictives* (& semi-constrictive [ʃ,  $\zeta$ ]; the last 6 are unsuitable foreign phones).



## Approximants

8.6.1. In this manner of articulation, there are three fundamental phonemes, with different and particular taxophones: *v* / $\upsilon$ / [β] (bilabial *constrictive*), [w] (rounded semi-velar approximant), *y* / $\jmath$ / [j, j] (the latter is a palatal semi-approximant), *h* /h/ [ɦ; h] ([ɦ] is a *voiced* laryngeal approximant).

Let us notice that both [h] and [ɦ] are clearly laryngeal *approximants*, not *constrictives* (or ‘fricatives’), as we are obliged to read in practically all publications, even for English – in the 3<sup>rd</sup> millennium!

Notice that, [w], mainly occurs after consonants, or after /uu, u/, and sometimes after a pause. But, in actual fact, the two types alternate quite freely: *sār* [ˈsɑːr], *kōśīs* [ˈkoːʃɪʃ, koːʃɪʃ], *ravivār* [rɔːvɪˈvaːr], *nīv* [ˈniːβ, niːβ, ˈniːm], *vrāt* [βˈrət], *hauvā* [ˈɦeːuːa, ˈɦaua, ɦeːuːaa, ɦeːuːaa], *svarg* [sˈwɛrg], *vahā* [βəˈɦā, |wɔːɦā] (ie after a pause).

In addition, [j] occurs between vowels, in unstressed syllables: *yē* [ˈjɛ], *dhyān* [dɦiˈjaːn], *liyē* [liˈɛ, liˈɛ], *sāyad* [ˈsɑːjɛd, ʃɑːjɛd]. When it occurs in unstressed final position (with an inherent *a*), it sounds [-jɛ] or [-ɛ].

When preceded by *i*, it drops, often closing /i/ ([ɪ] → [i]), except in careful pronunciation: *samay* [sɔːˈmɛjɛ, sɔːˈmɛɛ], *kṣay* [kʃɛˈjɛ, -ɛɛ, kʃ-], *cāy* [ˈtʃɑːjɛ, ˈtʃɑːɛ], *kṣatriy* [kʃɛt-ɾɪjɛ, kʃɛtˈɾɪjɛ, -ɪɛ, -iɛ, kʃ-, kʃ-].

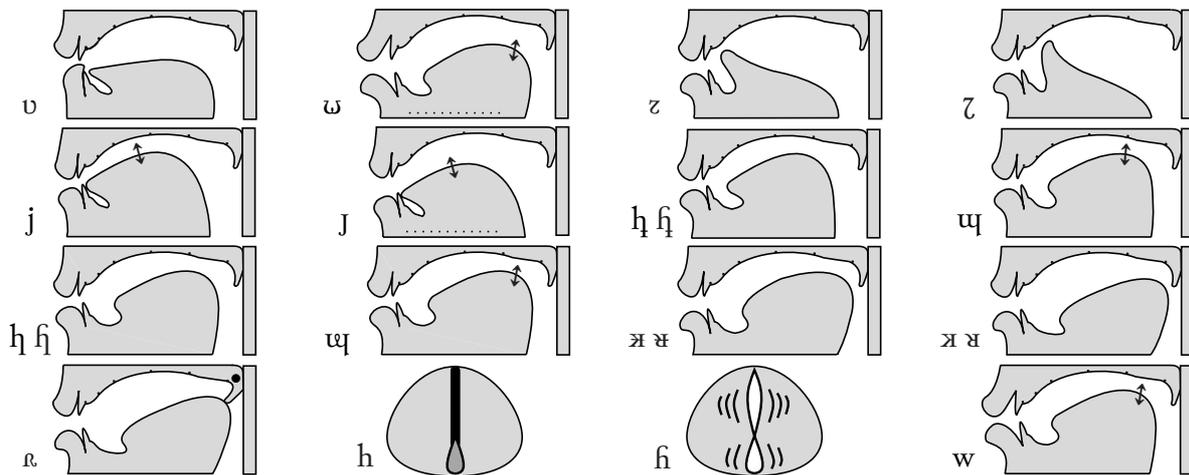
8.6.2. Generally, the /h/ phoneme is [h̄]; while [h] occurs with voiceless ‘aspirated’ consonants. Near nasalized vowels, /h/ becomes nasalized: *hāthī* [‘haathi, fiat’hi], *garh* [‘gər̄h̄], *pahlā* [pəh̄ːˈlaa, ‘pəh̄la, ‘pəh̄la], *tērah* [‘teerəh̄, te‘rəh̄, te‘rəh̄], *hāsnā* [h̄ēsˈnaa, h̄ēsˈna], *bāh* [‘bāāh̄], *kahā* [kə‘h̄āā]. In *mediatic* pronunciation, we often find [h̄, ḥ̄; ḥ̄, ḥ̄], both for /h/ and /Ch/.

There are two further approximants, for Persian and Arabic loans, for which the official uvular constrictive symbols are often used, ‘/χ, ʁ/’ (or, even less precisely, the velar ones, ‘/x, ɣ/’).

However, they are uvular *approximants*: /ɣ, ʁ/ [ɣ, ʁ] (preuvular [ɣ, ʁ] before /ii, i, j/). But, for the voiced one, the uvular *tap*, [ʀ], occurs more often.

In addition, they currently become /kh, g/ [kh, kh; g, g]: *dakal* [dɔːˈkʰəl, dɔːˈkʰəl], *kānā* [ˈkaana, k’haana, khaˈnaa] (cf *khānā* [k’haana, khaˈnaa]), *bāḡ* [ˈbaaʀ, ˈbaaʀ, ˈbaag] (cf *bāg* [ˈbaag]).

fig 8.5. Hindi consonants: *approximants* (& 2 semi-approximants, [ɟ, ʋ]; & foreign [w]).



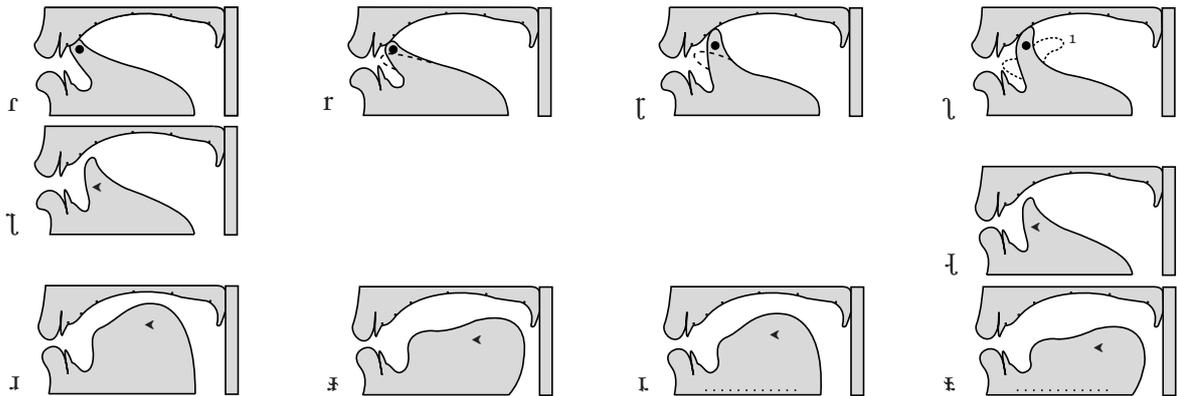
## Rhotics

8.7. In this category, we have an alveolar *tap*, /ɾ/ [ɾ], and a postalveolar *flap*, /ɻ/ [ɻ]. The former can become [r], especially for emphasis. The latter is generally rendered with the unsatisfactory official IPA symbol [ɻ]. In *natural phonetics*, the symbol [ɻ] represents a postalveolar *trill*, which would be too strong a phone for Hindi [ɻ].

They oppose distinctively (and, sometimes, the former may be stronger, a true trill: [r], or –on the contrary– weaker: an (alveolar) approximant [z]. On the contrary, /ɻ/ [ɻ] is often weaker than normal, becoming an approximant [ɻ], similar to British English [ɻ], but with no lip rounding at all.

Examples: *harāḡ* [h̄ɔːˈr̄ɔḡ, -ɻ], *lar̄kā* [ˈl̄ɔḡka, l̄ɔḡˈkaa, -ɻ]. There are also the sequences /ɻh/ [ɻh̄, ɻh̄], /r̄h/ [r̄h̄]: *bar̄hā* [b̄ɔḡˈhaa, -ɻˈhaa] (cf *barā* [b̄ɔḡˈaa, -ɻˈaa]), *ar̄har* [ˈɔḡh̄ɔḡ, ɔḡˈh̄ɔḡ].

fig 8.6. Hindi consonants: 'rhotics' (the last 5 are unsuitable foreign phones).

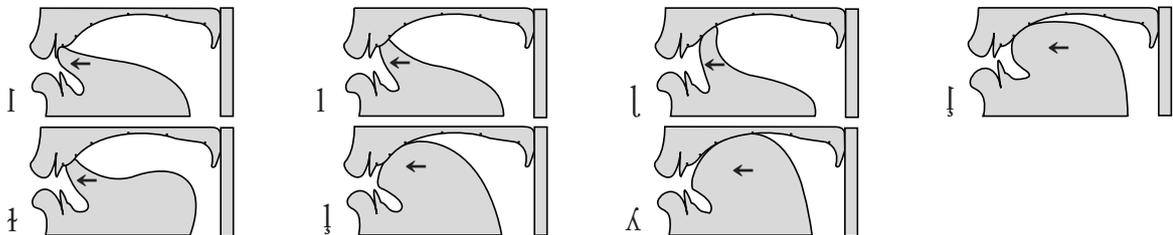


### Laterals

8.8. Hindi has only one lateral phoneme, /l/, but with three allophones: [l], [ɭ], [ɻ]. Notice that the symbol of *postalveo-palatal* [ɻ] differs from that of *prepalatal* [ɭ], used in other languages. In addition, there is the sequence /lh/ [lɦ].

Examples: *lāt* [ˈlaat], *malāl* [mɐˈlaal], *kal cālō* [ˈkɐɭ t̪ɔˈloo], *kal yahā āō* [ˈkɐɭ j̪ɦā̃ ˈaao], *ḍāḍḍā* [ˈɖaaɭɖa, ɖaɭɖaa], *kūlhā* [ˈkuul-ɦa, kulɦaa].

fig 8.7. Hindi consonants: laterals (the last 3 are unsuitable foreign phones).



# 9. Hindi structures

## Consonant gemination

9.1.1. As for the vowels, which oppose as short and ‘long’, or rather narrow diphthongs, as we have seen, *gemination* is distinctive for the consonants, too: *patā* [pə'taa], *pattā* [pə'tta, pət'taa], *baćā* [bə'tʃaa], *baććā* [bətʃ'tʃaa, bətʃ'tʃaa], *usē* [u'see], *ussē* [u'sse, us'see]. This fact changes the syllabic structure; consequently, often even stress can change (although without phonemic relevance).

We have already mentioned and demonstrated in some examples, that –in Hindi– sequences of two or three consonants syllabify moving the last one to the beginning of the next syllable: *saty* [sət-jɪ], *gadhā* [gəd'ɦaa], *abhrak* [əbhɪ'rək], *śukl* [ʃʊk-lɜ].

Obviously, in case of isolated initial sequences, the syllabicity scale joins the elements in one syllable, although some slight difference is maintained. However, if they are internal, they divide into two syllables, including a preceding vowel: *jhīl* [dʒ'ɦiil], and: *lambī jhīl* [lam'biidʒ 'ɦiil] (in spite of its strange appearance).

In fact, the Hindi sequences /ChV/ are [C'hV], rather than [ʰChV], as /CɪV/ are, as well. Notice that /W/ indicates a sonorant consonant like [m, n, r, ɾ, l, j, v] and their possible variants. A number of examples can be found in sections 9.2(.1-5) and elsewhere.

To be true, transcriptions like [ʰChV, ʰCɪV] would be misleading. It is sufficient to carefully listen to those sequences to be convinced that a syllabication with [C], rather than [ʰC], is much more realistic, although the transition from [C] to the next contour is less clear because of natural assimilation facts. Even passing from a [C] to a [V] has not an absolutely clear-cut division.

9.1.2. The Hindi geminates are heterosyllabic, [C<sup>#</sup>C], between vowels, but tautosyllabic, [C<sup>#</sup>], when followed by a consonant, even for /j, v, h, ɾ, ɽ, l/. In this last context, especially short stops and stopstrictives are often realized as [C<sup>#</sup>] plus a consonant. Thus, the difference with geminates is tendentially neutralized: *buddhā* [bʊdʃ'ɦa], *vidyālay* [βid(ɔ)'jaalɜɟɪ, -lɛɪ, -lɪ].

If the number of consonants in the sequences exceeds three, the last two move to the beginning of the second syllable: *Satyārthprakāś* [sət'jaarth-prɜkaʃ].

Another interesting phenomenon, that complicates the description and the acquisition of this language, concerns the epenthesis of a vowel. Therefore, an at-

tenuated vocoid is inserted (cf § 6.1.3, although here we indicate it simply as an audible offset, [\*]). This happens not only in complex consonant clusters, but also –in not fast pronunciation– at the end of words, even after a single consonant (especially if voiced).

Let us consider some examples: *agar* [ʌ'gɛr\*], *ūpar* ['uuper\*, u'per], *calnā* ['tʃel\*na, tʃel\*'naa], *phūl* ['phuul\*], *śarbat* [ʃ'er\*bet, ʃ'er'bet], *badmās* [bed\*'maaʃ, 'bed\*maʃ], *lar̥kā* [l'ɛr̥ka, l'ɛr̥'kaa], *khirkī* [k'hir̥ki, k'hir̥'kii], *abhyās* [eb\*ɦjas\*, eb\*ɦ'jaas\*], *samay* [sʌ'mɛj\*], *rakhnā* [rek'h\*'naa, 'rek'h\*na], *ugnā* [ʊg\*na, ug\*'naa], *ūghnā* [ʊ'ūgh\*na, ūgh\*'naa], *par* [p'ɛr\*], *parh* [p'ɛrɦ\*]...

### Consonant clusters (including /Ch/)

9.2.1. Hindi taxophonics presents some peculiar consonant clusters, either at the beginning or end of words (but also within words and phrases). In fact, we may find, for instance: *mrig* [m'rɪg], *mlān* [m'lān], *nyāy* [n'jaaɛ, n'jaaɟ], *nrisans* [nrɪ'ʃɛns], *pyālā* [p'jaala, p-ja'laa], *braj* [b'rɛdʒ], *blāk* [b'lāak], *bhram* [bh'rɛm], *tvarā* [tʌɟ'raa], *trās* [t'raas], *dvīp* [d'viip], *dhvast* [d'hvɛst].

Also: *dhruv* [d'ɦrʊβ], *dyōr̥hī* [d'jooɦi, djoɦ'ɦii], *cyut* [tʃ'jʊt], *jyōti* [dʒ'jooti], *kyā* [k'jaa], *kvāth* [k'waath], *khvāb* [k'hwaab], *grām* [g'raām], *glāni* [g'lāni], and *ghrāṇ* [gh'raāṇ, -ṇ, -n].

More: *kyāl* [k'jaal, k'ɦjaal], *hrās* [ɦ'raas], *śmasān* [ʃmɛʃ'aān], *śrānt* [ʃ'raānt], *ślath* [ʃ'lɛth], *skandh* [s'kɛndɦ], *skhalan* [sk'hɛlɛn], *star* [s'tɛr], *sthal* [s'thɛl], *smit* [s'mɪt], *snān* [s'naān], *syāh* [s'jaah], *svarg* [s'wɛrg], *sraṣṭā* [s'rɛʃṭa, s-rɛʃṭaa], *zyādā* [z'jaada, z-ja'daa], *vyathā* [βjɛthaa], *vrāt* [β'rɛt].

In Sanskrit loans, we find /<sup>#</sup>kʃ/ as well (but, in *mediatic* and *colloquial* pronunciation, people generally change it into [kʃ]): *kṣaṇ* [k'ʃɛṇ, k'ʃɛṇ, k'ʃɛn, k'ʃɛ-], *kṣīr* [k'ʃiir, k'ʃ-].

Furthermore, for initial sequences with /<sup>#</sup>sC(C)/, current pronunciation prefixes an epenthetic vowel, generally [ɪ, ɪ] – but, before non-front vowels, [ɛ, ɛ] is possible, as well (and also [ɜ, ɜ], with the other variants seen, cf § 6.1.3 & fig 6.5): *strī* [st'rɪi, ɪs-, ɪs-], *sphūrti* [sp'hūrtɪ, -i, ɪs-, ɪs-, ɛs-, ɛs-, ɜs-, ɜs-], *snān* [s'naān, ɪs-, ɪs-, ɛs-, ɛs-, ɜs-, ɜs-]. The same also happens with /ʃ/: *ślōk* [ʃ'lōok, ɪʃ-, ɪʃ-, ɛʃ-, ɛʃ-, ɜʃ-, ɜʃ-].

9.2.2. As far as word-final position is concerned, we find consonant clusters such as: *gupt* [g'ɟɪpt], *śabd* [ʃ'ɛbd], *lubdh* [l'ɟbdɦ], *ṭaps* [t'ɟɛps], *nabz* [n'ɛbz], *kubj* [k'ɟbdʒ], *muft* [m'ɟɪft], *uts* [ʊts], *rakt* [r'ɛkt], *dagdh* [d'ɛgdɦ], *akś* [a'kʃ], *mōkṣ* [m'ookʃ, -kʃ], *sakt* [s'ɛkt, -kht], *śaks* [ʃ'ɛks, -khs], *bakś* [b'ɛkʃ, -kʃ, -kʃ], *cust* [tʃ'ɟust], *svasth* [s'wɛsth], *kaṣṭ* [k'ɛʃt], *vāṣp* [βaaʃp].

In final position, geminates are possible, as well, realized as long contoids: *gapp* [g'ɛp:], *čitt* [tʃ'ɪt:], *radd* [r'ɛd:], *ann* [ɛn:], *sarr* [s'ɛr:, -r:], *praphull* [prɛph'ɟul:], *bhatt* [b'ɦɛt:], *ujadd* [ʊdʒ'ɛd:], *uć* [ʊtʃ:], *nilajj* [nɪ'lɛdʒ:].

Consonant sequences which include a laryngeal are also found: *jutth* [dʒ'ɟɪtɦ], *yuddh* [j'ɟudɦ], *sikkh* [sɪkɦ], *svacch* [s'wɛtʃɦ].

Final consonant clusters, in morphological derivation, resyllabify in accordance with the phonic structure of the Hindi language: *pāp* [ˈpaap], *pāpī* [ˈpaa-pi, paˈpi]; *rakt* [ˈrɛkt], *raktim* [ˈrɛk-tim, rɛkˈtim].

9.2.3. Short [ɪ, ɐ, ʊ] /ɪ, ɐ, ʊ/, in final position, have the peculiarity of *fading* (cf § 6.1.3), to a point in which they drop as well, as it happens to /e/, [ɐ; ɐ̃, ɐ̄, ɐ̅, ɐ̆, ɐ̇; ∅] (notice that here [∅] means a ‘zero’ vocoid). Our transliteration shows no *-a*.

Or else, /ɪ#, ʊ#/ *strengthen*, ie [i, u], simply as closer realizations of /ɪ, ʊ/, or actually becoming /ii, uu/. In this case, stress shifts are also possible, especially as *mediatic* pronunciation, according to the new weight of the syllables constituting given words: *ravi* [ˈrɐβi, rɐˈβii], *tithi* [ˈtɪθi, tɪˈθii], *śiśu* [ˈʃiʃu, ʃiˈʃuu], *vasu* [ˈβɐsu, βɐˈsuu]. However, in more *traditional* pronunciation, final *i, u* tend to remain [ɪ, ʊ], at least for some too careful speakers.

As just said, the change /V#/ → /VV#/ is not considered completely neutral, in spite of being very widespread indeed (with many supporters too), and in *mediatic* pronunciation, as well.

Finally, as many examples have already shown, sequences of /VVN/ + /V, #, C/ are realized as [ṼVN]: *hāni* [ˈɦaāni], *kām* [ˈkaām], *ākrānt* [akˈraānt]. The same goes for /VVV/ → [ṼVV]: *tīn mātāē* [ˈtiim maˈtaāē] (repeated just below for assimilation), and, in *mediatic* pronunciation, also /V#N/ → [Ṽ#N]: *nayā makān* [nəˈjaa məˈkaān, ↓nəˈjaa]. But, in more *traditional* pronunciation, all these nasalizations are not usual.

9.2.4. Dealing with *consonants*, we have already seen the typical *assimilation* characteristics within words.

The same holds in sentences, for words linked by meaning, especially if joined in rhythm groups, as in: *tīn mātāē* [ˈtiim maˈtaāē, mataāē], *tīn papītē* [ˈtiim pɐˈpiite, pɐpiˈtee], *tīn dālē* [ˈtiin ˈdʌalē, dʌlē], *tīn kamal* [ˈtiin kʌˈmɐl], *tīn gāyē* [ˈtiin ˈgaaē, -gaaē, -gaē], *tīn cāē* [ˈtiin ˈtʃaaē, ˈtʃaaē, ˈtʃaē], *tīn jāl* [ˈtiin ˈdʒaal], *tīn śarābē* [ˈtiin ʃˈraabē, ʃˈraabē], *tīn yār* [ˈtiia ˈjaar], *tīn varṣ* [ˈtiina ˈwɐɾɐ, -ɾ], *tīn qasāi* [ˈtiin qʌˈsaai, qʌsaˈii, -ɪ kʌ-, ], *tīn hāth* [ˈtiin ˈɦaath].

Besides, both within words and sentences, in not slow –nor emphatic– speech, for diphonic consonants (ie pairs of voiceless and voiced phonemes), voicing assimilation is regular, to the second element of a sequence (while a possible /h/ is lost).

Examples: *Akhbar* [ˈɛgbɐ, ɛgˈbɐ], *tasbīh* [ˈtɛzbiɦ, ˈtɛzbiɦ], *cup bāthō* [ˈtʃʊb ˈbʌɛt-ho, ˈtʃʊb bɛtˈhoo], *chap gayā* [ˈtʃhɐb gʌˈjaa], *sāth bāthō* [ˈsaad ˈbʌɛt-ho, ˈsaad bɛtˈhoo], *ab tak* [ˈɐp ˈtɛk], *hāth dō* [ˈɦaadɦ ˈdoo], *āk par* [ˈaakpɐ], *ēk din* [ˈeeg ˈdɪn], *jab ki* [ˈdʒɐpki], *bāg kā* [ˈbaaɣ ˈkaa, -k ˈk; -kh ˈk].

Several examples have shown, again, that /Ch/ are diphonemic sequences, and *not* unitary, independent phonemes (although we generally have [C-h, Cɦ] for /Ch/).

In addition, let us notice that /Cj/ sequences, *cy, jy, sy*, in *mediatic* pronunciation, may become [Cj] (sometimes, even plain [C]), instead of *neutral* [Cj].

9.2.5. Let us add some further examples of complex consonant sequences: *kvārā* [kʷāāra, kʷ-, -āraa], *gyārah* [gjaareɦ, gjaˈreɦ], *jyō* [dʒjō] (*mediatic* also: <sup>m</sup>[ɟj-, dʒj-]),

*jhājhri* [d͡ʒh̄h̄ɛd͡ʒh̄ɛri, d͡ʒh̄h̄ɛd͡ʒh̄ɛrii], *rāytā* [ˈraaɪta, <sup>m</sup>raaɪ, -ˈtaa], *fāydā* [ˈfaaɪda, <sup>m</sup>phaaɪ, -ˈdaa], *śāyri* [ˈʃaaɪri, <sup>m</sup>ʃaaɪ, -ˈrii], *kōylā* [ˈkooɪla, <sup>m</sup>kooɪ, -ˈlaa], *Dillī* [ˈdɪlli, dɪlˈlii], *brāhmaṇ* [ˈbraɦmɛɳ, braɦˈmɛɳ, <sup>m</sup>ˈmaɦɳ], *kṣati* [kʃˈɛti, -i], *bōrdiṅg* [ˈboordɪŋ, -ŋgʌ, -ˈdɪŋ], *huqm* [ˈɦuqmʌ, -k].

More: *vāky* [ˈbaakjɛ, ˈw-], *mukhy* [ˈmuk-hjɛ], *prācy* [ˈpraat͡ʃjɛ], *rājy* [ˈraad͡ʒjɛ], *nāty* [ˈnaat-jɛ], *dhanādhy* [dɦɛzˈnaad-hjɛ], *nity* [ˈnit-jɛ], *bhavy* [ˈbɦeβ-jɛ], *mūly* [ˈmuuljɛ], *hāsy* [ˈhaas-jɛ, -ɔ], *bhāsy* [ˈbɦaaɃjɛ, ˈɔ-ɔ], *sāṅkhy* [ˈsaaŋ-kɦjɛ, -j], *čāritry* [t͡ʃaˈɾɪt-rjɛ, ˈt͡ʃaa-ɾɪt-rjɛ], *matsy* [ˈmet-sjɛ], *danty* [ˈdɛnt-jɛ], *nindy* [ˈnɪnd-jɛ], *vindhy* [ˈbɪnd-jɛ], *arghy* [ˈɛrg-hjɛ], *varjy* [ˈvɛrɔd͡ʒjɛ, [ˈw-], *yāgyāvalky* [jag-jɛˈβelk-jɛ, ˈwɛlk-, jagˈjā-], *svāsthy* [sˈwaast-tɛ, sˈβ-], *laksy* [ˈlɛk-Ƀjɛ, -kɃj, ˈɔ-ɔ], *samay* [sɛˈmeɪjɛ, ˈmɛɛ], *pēy* [ˈpeejɛ], *ōṣthy* [ˈooɕt-jɛ, -ɕt].

Also: *zakm* [ˈzɛk-mɔ, ˈzɛkh-mɔ], *časm* [ˈt͡ʃɛɕ-mɔ], *adhyātm* [ɛdˈɦjaat-mʌ, ˈɛd-hjɛt-mʌ], *padm* [ˈpɛd-mʌ], *nazm* [ˈnɛz-mɔ], *grīsm* [griiɕ-mɔ, -ɕ], *qism* [kˈɦɪs-mɔ, ˈq-], *janm* [ˈd͡ʒɛn-mɔ], *vartm* [ˈvɛrt-mɔ, ˈw-], *vighn* [ˈbɪgɦ-nɛ], *yatn* [ˈjɛtʌnʌ], *dafn* [ˈdɛfɛnʌ], *praśn* [ˈprɛɕ-nʌ], *jñān* [ˈjaān, ˈɲ-, ˈɲ-], *nētr* [ˈneet-rɛ], *qadr* [ˈqɛd-rɛ, kˈɦɛd-], *vakr* [ˈβɛk-rɛ, ˈw-], *śiḡhr* [ʃiig-ɦrɛ], *kufɾ* [ˈkuɔf-rɛ], *haśr* [ˈɦɛɕ-rɛ], *ajasar* [ɛˈd͡ʒɛs-rɛ], *śakl* [ˈɕɛk-lɛ], *vasl* [ˈwɛs-lɛ, ˈβ-], *aml* [ˈɛm-lɛ].

Others: *paku* [ˈpɛk-βɛ], *murḡ* [ˈmʊr-gɛ, -rɛ], *śuɕk* [ɕuɕ-kɛ, ˈɔ-ɔ, <sup>m</sup>s-], *pr̥st̥h* [pɾ̥ɕt̥hɛ], *sarvasv* [sɛrˈβɛs-βɛ], *pandrah* [pɛndˈrɛɦɛ], *inflūēnzā* [ɪmɔɫˈveēnzɛ, -phɪl-, -dza, -sa], *inspēktar* [ɪnsˈpɛktɛr, -ɛr], *randhr* [rɛnd-ɦrɛ], *ūrdhv* [ˈuurd-ɦβɛ], *pārsv* [ˈpaarɕ-βɛ], *rāṣṭr* [ˈraaɕt-rɛ, -ɕt-], *kahnā* [kɦɛˈnaa, kɦɛˈna], *vah* [ˈwɛɦɛ, ˈβ-], *añcal* [ɛɾˈt͡ʃɛl, ˈɛɾt͡ʃɛl], *Ghanśyām* [gɦɛnˈʃjaām, gɦɛɾ-], *gamčhā* [gɛmt͡ʃˈhaa, ˈgɛmt͡ʃˈha].

In addition, let us see these ones, too: *gaiyā* [ˈgeɪa, geɪˈaa], *hauwā* [ˈɦɛɔwa, ˈɦɛua, ɦɛɔˈwaa, ɦɛuˈaa], *krikēt* [k-riˈkeet], *klab* [kˈleβɛ], *kanṭrōl* [kɛɾˈt̥rool], *graund* [gˈraauɳd͡ʒ, gˈrɛu-], *phrēm* [phˈreēm, ɔˈɦr-, ɔˈr-], *brēk* [ˈbreek], *bēṭ* [ˈbeɪt], *blauz* [bˈlaauɔd͡ʒ, bˈleu-, ˈz], *vhiskī* [ˈwɪski, wɪsˈkii, ˈβ-].

## Stress

9.3.1. In Hindi, the position of stress is not distinctive. In fact, the same speaker, in different occasions, may stress different syllables of the same word. Furthermore, these fluctuations also depend on the combination of words in sentences, on nearby words, on orthological highlighting and emphasis.

Still more important is the fact that stress is distributed among rhythm groups, usually moving back from the end, according to syllabic ‘weights’. This holds for isolated words as well, but always with a certain flexibility. For instance, in neutral pronunciation, we normally have *hindī* [ˈɦɪndi], but *hindī kē*, *hindī kā* [[ɦɪnˈdiːke, -ka]].

On the other hand, given its non-distinctiveness, native speakers use stress as something fluctuating (even without realizing that), frequently alternating, for rhythmic reasons, within rhythm groups. After all, it is the same thing for segmental duration and for syllabic pitch, in languages where they are not distinctive: they may change quite freely, without real problems.

In Hindi tunes (both for the three marked, and the unmarked one, or continuative), the terminal post-tonic syllable, generally, bears a secondary stress. This happens even immediately after a stressed syllable, as the examples *hindī kē/kā* have already shown, or in *Ēk din kī chutti* ['eek 'dɪnt̪ 'huʈʈi, huʈʈii], but *Kal chutti hā* ['kəʈʈ huʈʈiihɛ], or *Mā chutti par hū* ['māɛt̪ huʈʈii pər'hū].

This fact complicates the differentiation and identification of stress strength on the different non-light syllables (but, sometimes, on the light ones, too).

9.3.2. However, some rules may be formulated in order to produce a coherent effect, if rigorously applied. This is true even if these rules might be considered excessively precise or even mechanical, as regards current language.

We must accurately distinguish between *neutral* Hindi stress and *mediatic* Hindi stress, although even 'good' professional speakers, also in the recordings of language –and even pronunciation– courses, inevitably and unconsciously, oscillate between neutral and mediatic realizations.

Thus, we are obliged to provide both the neutral and the mediatic stress patterns, one after the other, although the one given first should be preferred, even if it is actually used more rarely than the other(s).

Regardless of the consonants that may precede a vowel, we define a *light syllable*, [ʃ], one which contains a short vowel, [ɪ, e, u] /ɪ, e, u/ not followed by any consonant (in the same syllable): *sumati* [sʊ'məti].

Within a word, the attenuated realizations of /e/, [ɜ, ɛ, ɛ, ɛ, ɛ], do not even count (cf § 6.1.3 & fig 6.5-7). In fact, they are usually more elusive, [ɜ, ɛ, ɛ, ɛ, ɛ]. They are just a mere physical support, necessary to make a word pronounceable, but they may drop completely, especially in faster speech.

Furthermore, we have *mid syllables*, [ʃ], constituted by /VC/ (ie a short vowel with a consonant), or by /VV/: *bal* ['bəl], *kyā* [k'jaa], *hindī* ['ɦɪndi, ɦɪndii], *śayyā* [ʃ'ejja, ʃ'ej'jaa]. They also include 'bisyllabic' syllables, in counting morae, as *bhāi* [b'ɦaai, b-ɦa'ii] ('/aa/ + /ii/' = four morae).

Besides, there are *heavy syllables*, [ʃ], formed by /VCC#/, or /VVC#/ (more rarely /VCCC#, VCCC#/), as well): *ant* ['ənt], *ām* ['aām], *ārt* ['aart], *vāśp* [βaaʃp, ʷ-], *astr* ['estrʃ].

9.3.3. Stress assignment, in isolated words, is done on the basis of the identification of the 'heaviest syllable', as in (always with the addition of mediatic variants): *upādhi* [ʊ'paadhɪ], *upānt* [ʊ'paānt], *ādyōpānt* [ad-jo'paānt, ad'joopant], *kalī* [kə'lii], *kamān* [kə'maān], *kāmnā* [kaāmna, kam'naa], *kōṇārk* [ko'ṇaark, ko'ṇaark, ko'naark, 'koonark], *kāndānī* [kaāndani, kaanda'nii], *jyāmiti* [dʒ'jaāmɪti], *tābēdār* [tabe'daar, ta'beedar], *tigunā* [tɪgʊ'naa], *prithvīrāśrō* [p-rɪthwɪ'raaʃr-ɾaso, p-rɪthwɪraʃr-ɾa'soo].

More: *bandūkbāzī* [bɛnduɡ'baazi, bɛnduɡba'zii, bɛnduugbazi], *mardāngī* [mɛr'daāŋgi, mɛrdaŋ'gii], *māndhātā* [maɪnd'ɦaata, mandɦa'taa, 'maāndɦata], *Satyaprakāś* [sət-jəprɜ'kaaʃ, 'sət-jəprɜkaʃ], *Satyārthprakāś* [sətjə'arth-prɜ'kaaʃ, sət'jaarth-prɜkaʃ], *sāṅgōpāṅg* [saŋgʊ'paāŋ, -ŋg, -ŋgɛ, saŋ'gʊo'paŋ], *sāmān* [sa'maān, 'saaman], *hāni* [ɦaāni].

If a word has more than one non-light syllable of the same weight, there are two possibilities: a stress preferably hits either the last syllable but one or the last but two (or even the very last, especially if constituted by /VV/, as happens more often within a sentence, with particles and postpositions).

Examples: *śakuntalā* [ʃʌ'kuntʌ, ʃʌkuntʌ'laa], *garariyā* [gʌʀi'ri'aa], *bahādurī* [bʌ'ɦaaduri, bʌɦadu'rii], *mahābhārat* [mʌɦab'ɦaaret, mʌ'ɦaab-ɦaaret], *Yudhiṣṭhir* [jʌd'ɦiṣṭɦir, -ɦ̄t-, jʌdɦiṣṭ'ɦir, -ɦ̄t-], *sahūliyat* [sʌ'ɦuuliət, sʌɦuli'ət].

More examples: *āsīrvād* [aʃi'r'vaad, aʃiir'wad], *aqlmand* [ʌqʌ'l'mənd, 'eɔqʌlmənd, -kh-], *ānākānī* [ana'kaāni, anaka'nii], *dhvanī* [dɦvʌnii, -β-, -v-], *parvartī* [pʌr'vʌerti, pʌr'vʌrtii, -β-, -v-], *bartan* [bʌrtən, bʌrtən], *bastā* [bʌs-ta, bʌs'taa], *bhālā* [bʌɦaala, bʌɦa'laa], *samiti* [sʌ'mitii], *sālānā* [sa'laāna, sala'naa], *sañcālan* [sɛɽ'tʃaalen, sɛɽ'tʃa-l'en], *hērāphērī* [ɦɛrap'heeri, ɦɛrapɦe'rii].

9.3.4. The same stress pattern occurs in *inflected* and *derived* words, as well: *badhikō* [bʌd-ɦi'kōō], *laghutar* [lɛg-ɦu'tɛr], *śucitam* [ʃu'tɪ'tɛm], *maslēgā* [mʌs'leega, masle'gaa], *lāpatā* [laapɛta, lapɛ'taa], *galīyārā* [gʌli'aara, gʌli'a'raa], *pāgalpan* [pa'gɛlpən, pa'gɛl'pən], *sundartā* [sʌn'dɛrta, sʌn'dɛr'taa], *bahnāpā* [bʌɦ'naapa, bʌɦana'paa].

Among Hindi monosyllables, *lexemes* bear a stress, even in sentences, while *grammemes* (ie postpositions, conjunctions, auxiliaries, enclitics) are unstressed (or half-stressed, for rhythmic reasons, as shown in some examples below): *ab* [ʌb], *kam* [kəm], *kām* [kaām], *āṛ* [ʌɔr], *dēs* [dɛɛʃ]; but: *kā* [ka], *hā* [ɦā, ɦɛ].

9.3.5. Lexemic *compounds*, normally, have the following stress pattern [◊◊]. This is because the second stress, which is generally more attenuated, may sometimes reach a degree of prominence that is relatively slightly more perceptible than a secondary stress. The degrees of intensity strength is [◊] [◊̇] [◊̇̇] (respectively: primary, intermediate, and secondary stress).

Examples: *rasōighar* [rʌ'sooig'ɦɛr], *dēs'nikālā* [dɛɛʃ'nri'ka(a)la], *wiśvakōs* [βiʃʌ'ko(o)ʃ], *dūrdarśī* [duurdɛr'ɦi(i)], *diljalā* [dɪl-dʒʌ'la(a)], *nimnikhit* [nɪmn'ɪr'kɦit], *čandrakāntā* [tʃɛndrʌ'ka(ā)nta], *čandrakāntāsantati* [tʃɛndrʌ'ka(ā)nta'sɛntʌti].

More: *mahāsabhā* [mʌ'ɦaasɛb'ɦa(a)], *hindumahāsabhā* [ɦɪndʌmʌ'ɦa(a)sɛb'ɦa(a)], *tū karm-hīn vyakti hā* [tuu 'kɛrm'ɦi(i)na vjɛktɪɦa, -tiɦa], *tū karm-hīn hā* [tuu 'kɛrm'ɦi(i)ɦa], *ām-vām* [aām'va(ā)m], *kānō-kān* [kaānō'ka(ā)n], *kām-kāj* [kaām'ka(a)dʒ], *āṣā-vāṣā* [ʌɛsa'βɛ(ɛ)sa].

In the examples just seen, we indicate [◊(V)], because the prominence on those syllables may be sufficient as [◊V], but it may also need to actually become [◊VV].

Complete *reduplications* always keep both stresses strong: *lāl-lāl* [laal'laal], *dhīrē-dhīrē* [dɦiired'ɦiire].

9.3.6. There is a difference between *compounds* and *collocations*. The latter have independent sentence ictuses: *lāl-pagrī* [laal'pɛgʀi] 'policeman' (ie 'red-turban') and *lāl pagrī* [laal'pɛg-ɦi, laal'pɛg'ɦii] 'red turban', or: *kālā-pānī* [kaalapani] 'penal colony' (ie 'black-water'), and *kālā pānī* [kaala'paāni] 'black water'.



### The ‘Indian voice’

9.3.9. Paraphonically, there is a peculiar type of ‘Indian voice’, with *breathy voice* ⟨·⟩ (cf fig 3.4.F: lenis voicing) or, in the uneducated accents (↓), with *tense voice* ⟨÷⟩ (cf fig 3.4.J).

Besides, we also find *middorsal*, ⟨∇⟩, and *stiff jaw*, ⟨x⟩, settings (fig 9.1 & fig 9.2, respectively). Of course, these settings add up even more characteristics to the ‘Indian voice’.

Let us also observe that the posttonic syllables of the interrogative ([· ·]) and suspensive ([· ·]) tunes are generally accompanied by *falsetto*, for all kind of voices, (cf fig 3.4.I). In fact, these syllables are in the mid and high pitch bands (as will be clear from fig 10.7 & fig 10.8). In our phonotonic transcriptions, falsetto is marked with [\*] after the tunes.

We must keep in mind that, in sentences with an unstressed final syllable, a secondary stress is generally added, too (['\$,\$#]):

/·/: *Mā̃ hindī bōltā hū̃.* [ˌmā̃\_hɪndi bol\_taaɦũː.] [ˌɦũː.]

/·?/: *Kyā vah pustak paṛh rahī hā̃?* [çkː\_jaaβəh pus\_təkpeɽɦ rəɦiiɦeː\*] [ˌɦeː\*]

/;/: *Ĵab mā̃ ĵaldī-ĵaldī bōltā hū̃, āp mēri bāt nahī samajhtē.* [d͡ʒəb\_mā̃ē d͡ʒel\_dii d͡ʒel\_dii bol'taaɦũː\* ap\_meeri \_baat nə\_ɦii sɜmɛɦ\_teeː.] [ˌɦũː\*].

fig 9.1. Two paraphonic vowel settings.

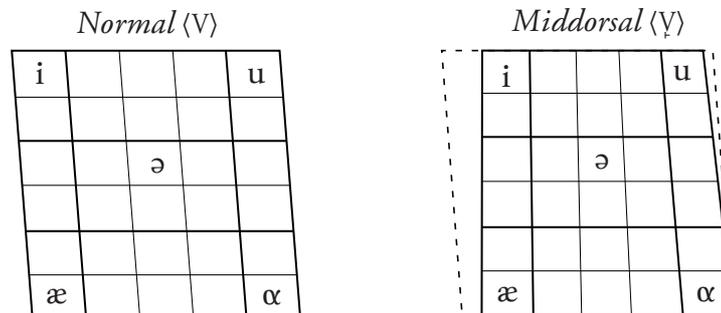
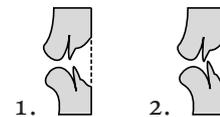


fig 9.2. Normal jaw position (1) ⟨⟩; stiff jaw position (2) ⟨x⟩.



# 14. International Hindi pronunciation

14.1. Hindi is a major language, spoken by a considerable number of native speakers (ie more than 400 million) and by still more foreign people especially bilinguals, in and around India.

Thus, it is inevitable to think about a kind of ‘international’ pronunciation to be suggested, rather than accepting the many national varieties of foreign accents. Such accents are often very different, although the language should be exactly the same.

14.2. Thus, our well thought-out proposal is a sort of mediation between actual *neutral* pronunciation and the various *bilingual* (but not *foreign*) accents. In a way, it may be more similar to the *mediatic* accent of Hindi itself.

In fact, it must be somehow simpler, but not artificial. As near as possible to the native neutral pronunciation, but with fewer complications. In addition, as far as possible, it should feature more natural and general phones and intonation patterns. Avoiding too peculiar, though native, characteristics.

14.3. Therefore, fig 14.1 shows the *vowels* of international Hindi. In addition to /eɪn eʊ/ [eɪ, eʊ], let us notice, in particular, /ɛɛ, ɔɔ/ [ɛɛ, ɔɔ], exactly matching our phonemic choice. In addition, the inherent /ɐ/ sound can be more present than not, provided it does not become too intrusive.

It is to be fully understood that the following unstressed taxophones of /ɛɛ, e, ɔɔ/ [ɛ, ɐ, ɔ] are not an additional problem, but something more natural.

14.4. The same principles must also be valid for the *consonants*. In fact, fig 14.2 provides the most proposable ones, with a view to more natural contoids, as well. Again, some consonantal taxophones, shown between square brackets, are simply natural assimilations to a following contoid. In addition, /ɦ/ [h] may sound a little peculiar, but still more general.

14.5. Prosodically, *stress* should not be too odd, trying to imitate the native usage, in spite of its oscillation, due to its non-distinctiveness.

In addition, *intonation* should not be too peculiar, too, but systematically constant. Again, it should not be too different from native patterns, in order not to distract hearers (cf fig 14.3).

14.6. Lastly, paraphonically it is not at all essential to be able to use the typical ‘Indian voice’, although native speakers (and hearers) –no doubt– would appreciate its use, provided it is done in a rather natural way.

fig 14.1.1. International Hindi pronunciation: *vowels*.

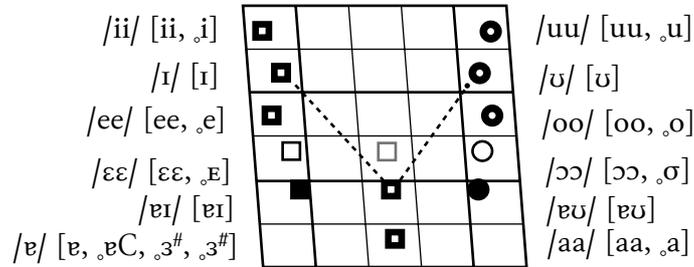


fig 14.2. International Hindi pronunciation: *consonants*.

	bilabial	dental	alveolar	postal-veolar	postalveo-palatal	palatal	prevelar	velar	laryngeal
N	m	[n]	n	ŋ	[ɲ]	[ɲ]	[ŋ]	[ŋ]	
K	p b	t d		t̪ d̪			[k̠ g̠]	k g	
KS					ʈ ʣ				
X									
S		s (z)			ʃ				
J	β					j			h [ɦ]
R			r	ɽ					
L		[l]	l	[ɭ]	[ɭ]				

fig 14.3. International Hindi pronunciation: *intonation*.

