

Hindi

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ILLUSTRATIONS OF THE IPA

Hindi

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The variety described here is Standard Hindi used in everyday casual speech by educated speakers in cities such as Varanasi, Lucknow, Delhi, etc. Although there are a few differences in pronunciation among speakers of these cities, the differences are minimal. The transcription is based on a recording of a female third generation speaker of Standard Hindi who grew up mostly in Uttar Pradesh before moving to Delhi. For a detailed analysis of Hindi segments see Dixit (1963) and Ohala (1983).

Consonants

	Bilabial	Labio-dental	Dental	Alveolar	Post-alveolar	Retroflex	Palatal	Velar	Glottal
Plosive	p b p <sup>h</sup> b <sup>fi</sup>		t̪ d̪ t̪ <sup>h</sup> d̪ <sup>fi</sup>			t̪̠ d̪̠ t̪̠ <sup>h</sup> d̪̠ <sup>fi</sup>		k g k <sup>h</sup> g <sup>fi</sup>	
Affricate					tʃ dʒ tʃ <sup>h</sup> dʒ <sup>fi</sup>				
Nasal	m			n				ŋ	
Tap or Flap				ɾ		ɽ ɽ <sup>fi</sup>			
Fricative		f		s z	ʃ				h
Approximant		ʋ					j		
Lateral Approx.				ɭ					

p	pəl	‘nature’	t̪	t̪əl	‘beat’ (n.)	k	kəl	‘span of time’
b	bəl	‘hair’	d̪	d̪əl	‘lentil’	g	gəl	‘cheek’
p <sup>h</sup>	p <sup>h</sup> əl	‘knife blade’	t̪ <sup>h</sup>	t̪ <sup>h</sup> əl	‘platter’	k <sup>h</sup>	k <sup>h</sup> əl	‘skin’ (n.)
b <sup>fi</sup>	b <sup>fi</sup> əl	‘brow’	d̪ <sup>fi</sup>	d̪ <sup>fi</sup> ar	‘knife edge’	g <sup>fi</sup>	g <sup>fi</sup> an	‘bundle’
m	məl	‘goods’	n	nala	‘drain’ (n.)	ŋ	vaŋməj	‘literature’
f	farsi	‘Persian’	s	sal	‘year’	h	hal	‘condition’
ʋ	ʋala	‘pertaining to’	z	zəmin	‘ground’	j	jar	‘buddy’
			ɾ	ɾal	(tree species)			
			ɭ	ɭal	‘red’			
			tʃ	tʃəl	‘gait’	t̪̠	t̪̠əl	‘postpone’
			dʒ	dʒəl	‘net’	d̪̠	d̪̠əl	‘branch’
			tʃ <sup>h</sup>	tʃ <sup>h</sup> əl	‘tree bark’	t̪̠ <sup>h</sup>	t̪̠ <sup>h</sup> əl	‘lumber shop’
			dʒ <sup>fi</sup>	dʒ <sup>fi</sup> əl	‘glimmer’	d̪̠ <sup>fi</sup>	d̪̠ <sup>fi</sup> əl	‘shield’
			ʃ	ʃəl	(tree species)			
						ɽ	bəɽa	‘big’
						ɽ <sup>fi</sup>	bəɽ <sup>fi</sup> a	‘increase’ (imp.)

[f, z, ʃ] only occur in loans (from Perso-Arabic, English, or Sanskrit). They are, however, well established in Modern Standard Hindi. Some authors also include [ɽ] which occurs only in a few Sanskrit loans; in casual speech it is usually replaced by [n]. Sounds such as [x, ɣ, q], etc., do not occur in the variety of Hindi described here although they would be found in some varieties of Urdu, the form of the language used as the official language of Pakistan and by many Indian Muslims. [lʱ, rʱ, mʱ, nʱ] are considered clusters of a liquid or nasal and /h/ in the analysis adopted here.

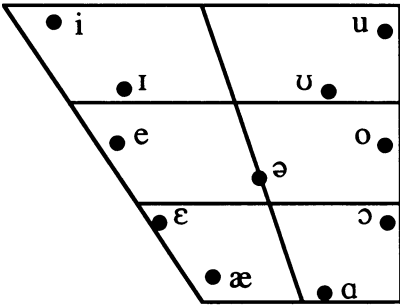
Geminates

All consonants can also occur with distinctive length (i.e. as ‘geminate’) except the following: [bʱ, ɽ, ɽʱ, h]. Geminates occur only medially and are always preceded by the non-peripheral vowels [ɪ, ə, ʊ]. Although the orthography preserves a few geminates in final position, in all but the most formal speech they are pronounced as singletons. All the geminates occur monomorphemically except [ʃ:] which occurs only in a few Sanskrit loans where a morpheme boundary could be posited in between: [nɪʃil] ‘without shame’ < /nɪʃ + ʃil/. Geminates are longer than singletons by a ratio of about 2:1. Some illustrative examples of the geminate contrasts are given below.

ɖ	pəɖɑ	‘address’ (n.)	tʃ	bətʃɑ	‘save’
ɖː	pəɖːɑ	‘leaf’	tʃː	bətʃːɑ	‘child’
ɖʰ	kəɖʰɑ	‘narrative’	t	pətɑ	‘to make someone agree’
ɖʰː	kəɖʰːɑ	‘red powdered bark’	tː	pətːɑ	‘a fold’ (in cloth)
ɖ̌	gəɖ̌ɑ	‘mace’ (weapon)	k	pəkɑ	‘cook’ (v.)
ɖ̌ː	gəɖ̌ːɑ	‘mattress’	kː	pəkːɑ	‘firm’

Vowels

There are eleven oral vowels in Hindi, as shown on the vowel chart. The vowel [æ] only occurs in English loans. All of these vowels except [æ] also have distinctively nasal counterparts. The sequences [əɪ] and [əʊ] also occur but are not listed separately because they are analyzed as vowel clusters and not as diphthongs.



i	mil	‘mile’				u	kul	‘shore’
ɪ	mɪl	‘meet’				ʊ	kʊl	‘lineage’
e	mel	‘harmony’	ə	məl	‘rub’ (imper.)	o	bol	‘speak’
ɛ	mɛl	‘dirt’				ɔ	kɔl	(a name)
æ	bæt	‘cricket bat’	a	mal	‘goods’			
i	sik <sup>h</sup>	‘lesson’	a	sas	‘mother-in-law’	u	b <sup>h</sup> uk <sup>h</sup>	‘hunger’
ĩ	sĩk	‘twig’	ã	sãs	‘breath’	ũ	b <sup>h</sup> ũk	‘dog’s bark’
ĩ	sĩtʃ	‘be irrigated’				õ	kõuər	‘prince’
ẽ	mẽ	‘in’	ǎ	hǎs	‘laugh’ (imper.)	õ	jõ	‘in this manner’
ẽ	mẽ	(1 sg. pn.)				õ	b <sup>h</sup> õ	‘eyebrow’

Stress

Stress is not distinctive in Hindi. It is also controversial as to whether there is even phonetic word stress, other than for emphatic contrast. For details, see Ohala (1991).

Conventions

The velar nasal by and large only occurs before homorganic consonants except in a few Sanskrit loans such as the word for ‘literature’ cited above. Palatal and retroflex nasals also occur followed by homorganic consonants and have been included in the list of phonemes by some authors. [ʋ] is in free variation with [v] (and can also be pronounced as [w]). [ɾ] can vary with [r]. The geminate [ɾ] is always an alveolar trill [r]. Stops in final position are not released.

Vowels are nasalized before nasal consonants. The schwa is often pronounced with the same value as the vowel in the English word *cut*, i.e. as a vowel traditionally transcribed as [ʌ]. However, the vowel is central and not back, and thus a more appropriate IPA symbolization would be [ə]. As in many other languages, vowel length varies as a function of the voicing of the following consonant with vowels being longer before voiced ones, at least for stops (Ohala and Ohala 1992).

Transcription of recorded passage

This translation of the North Wind and the Sun is a modified version of that presented in the 1949 version of the *The Principles of the International Phonetic Association*.

uʈːəri həvɑ ɔr surədʒɪs ɪs baʈ pər dʒ<sup>h</sup>əgər rəhe t̪<sup>h</sup>e ki həm ɖonō mē zjɑɖɑ  
bəlvan kɔn hɛ. ɪt̪ne mē gərəm tʃogɑ pəhne ek musafɪr uq̪<sup>h</sup>ər a nɪkla. həvɑ  
ɔr surədʒɪs ɖonō ɪs baʈ pər razi ho gəje ki ɖonō mē se dʒo pəhle musafɪr kɑ  
tʃogɑ uʈːrva degɑ vəhi zjɑɖɑ bəlvan səmdʒ<sup>h</sup>ɑ dʒajegɑ. ɪs pər uʈːəri həvɑ  
əpnɑ purɑ zor ləgəkər tʃəlne ləgi lekɪn vo dʒese dʒese əpnɑ zor bəɽ<sup>h</sup>ɑt̪i gəji  
vese vese musafɪr əpne bəɖən pər tʃoge kɔ ɔr b<sup>h</sup>i zjɑɖɑ kəs kər ləpet̪t̪ɑ

geja. ənt̪ mē̃ həva ne əpni kɔʃɪʃ bənd̪ kər̪ di. pʰɪr̪ surəd̪ʒ̪ t̪eʒi ke sət̪ʰ nɪkla  
 ɔr̪ musafɪr̪ ne t̪urənt̪ əpna t̪ʃoga ʊtar̪ d̪ɪja. ɪs lije həva ko manna pəra ki  
 un̪ don̪ō mē̃ surəd̪ʒ̪ hi zjəda bəlvən̪ h̪e.

### Orthographic version

उत्तरी हवा और सूरज इस बात पर झगड़ रहे थे कि हम दोनों में ज़्यादा बलवान कौन है। इतने में गरम चोगा पहने एक मुसाफ़िर उधर आ निकला। हवा और सूरज दोनों इस बात पर राज़ी हो गये कि दोनों में से जो पहले मुसाफ़िर का चोगा उतरवा देगा वही ज़्यादा बलवान समझा जायेगा। इस पर उत्तरी हवा अपना पूरा ज़ोर लगाकर चलने लगी लेकिन वह जैसे जैसे अपना ज़ोर बढ़ाती गई वैसे वैसे मुसाफ़िर अपने बदन पर चोगे को और भी कस कर लपेटता गया। अन्त में हवा ने अपनी कोशिश बन्द कर दी। फिर सूरज तेज़ी के साथ निकला और मुसाफ़िर ने तुरन्त अपना चोगा उतार दिया। इस लिये हवा को मानना पड़ा कि उन दोनों में सूरज ही ज़्यादा बलवान है

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### References

- DIXIT, R. P. (1963). *The segmental phonemes of contemporary Hindi*. M. A. thesis, University of Texas, Austin.
- OHALA, M. (1983). *Aspects of Hindi phonology*. Delhi: Motilal Banarsidass.
- OHALA, M. (1991). Phonological areal features of some Indo-Aryan languages. *Language Science* 13, 107-124.
- OHALA, M. AND OHALA, J. J. (1992). Phonetic universals and Hindi segment durations. *Proceedings of the International Conference on Spoken Language Processing, Banff*. Edmonton: University of Alberta: 831-834.