Morphological Segmentation

Annotation Guidelines

Appendix: Hindi V2

Linguistic Data Consortium

Change log:

- Internal vowel and consonant alternations in derived verbs are marked

The following tables represent classes of morphological patterns in Hindi that can be annotated in the task. Note that these examples do no necessarily explicitly indicate what the annotation should be.   In the following examples and charts, the standard academic transliteration is used. In the annotation, the output of the CASL tokenizer is used.

In general, number/gender/case markers are separated from other elements in the annotation.

kah t ā 'says' (masc. sing. direct) and **not** kah ā
kar e g ī 'will do (fem. sing.) and **not** kar e gī

For intransitive/transitive/causative alternations, suffixes are split off in the annotation. Internal vowel and consonant alternations are explicitly marked.

kar 'do' ~ kar ā 'get done' ~ kar vā 'have someone get done'
sun 'listen ~ sun ā 'tell'
ṭūṭ 'be broken' ~ ṭ<o><ṛ> 'break'

	Singular	Plural
Direct ending	-आ -aː	-ए -e
Example	लड़का laṛkaː 'boy'	लड़के laṛke 'boys'
Oblique ending	-ए -e	-ओं -õ
Example	लड़के laṛke	लड़कों laṛkõ
Vocative ending	-ए -e	-ओ -o
Example	लड़के laṛke	लड़को laṛko

Table 4.1: Inflection of Class I masculine nouns (ending in -आ /-aː/)

	Singular	Plural
Direct ending	∅	∅
Example	आदमी aːdmiː 'man'	आदमी aːdmiː 'men'
Oblique ending	∅	-ओं -o ~ -यों -yõ
Example	आदमी aːdmiː	आदमियों aːdmiyõ
Vocative ending	∅	-ओ -o ~ -यो -yo
Example	आदमी aːdmiː	आदमियो aːdmiyo

Table 4.2: Inflection of Class II masculine nouns

	Singular	Plural
Direct ending	-ई -iː	-इयाँ -iyãː
Example	बेटी beṭiː 'daughter'	बेटियाँ beṭiyãː 'daughters'
Oblique ending	-ई -iː	-इयों -iyõ
Example	बेटी beṭi:	बेटियों beṭiyõ
Vocative ending	-ई -iː	-इयो -iyo
Example	बेटी beṭi:	बेटियो beṭiyo

Table 4.3: Inflection of Class III feminine nouns ending in -ई /-iː/

	Singular	Plural
Direct ending	∅	-एँ -ẽ
Example	माता ma:ta: 'mother'	माताएँ ma:ta:ẽ
Oblique ending	∅	-ओं -õ
Example	माता ma:ta:	माताओं ma:ta:õ
Vocative ending	∅	-ओ -o
Example	माता ma:ta:	माताओ ma:ta:o

Table 4.4: Inflection of Class IV feminine nouns

Prefix	Example stem	Resulting combination
अ- a- ~ अन- an- 'not'	हिंसा hinsa: 'violence'	अहिंसा ahinsa: 'non-violence'
अप- ap- 'down, dis-'	मान ma:n 'honor'	अपमान apma:n 'insult, dishonor'
कु- ku- 'bad'	कर्म karm 'action, deed'	कुकर्म kukarm 'wicked deed'

Table 4.5: Common derivational prefixes

Suffix	Class change	Example stem	Resulting combination
-वाला va:la: 'person (M')' ~ -वाली va:li: 'person (F)'	Noun, Adverb, Oblique infinitive → Noun (human)	दूध du:dh 'milk'	दूधवाला du:dhva:la: 'milkman'
-ता -ta: '(abstract nominalizer (F))'	Adjective → Noun	विशेष viśeṣ 'special'	विशेषता viśeṣta: 'specialization'
-इयत -iyat '(abstract nominalizer (F))'	Adjective, Noun → Noun	इनसान insa:n 'human'	इनसानियत insa:niyat 'humanity'
-आई -a:i: '(nominalizer (F))'	Adjective → Noun	लंबा lamb-a: 'tall'	लंबाई lamba:i: 'height'
-ई -i: '(abstract nominalizer (F))'	Adjective, Noun → Noun	ख़ुश khuś 'happy'	ख़ुशी khuśi: 'happiness'
-आई -a:i: '(deverbal nominalizer (F))'	Verb → Noun	चढ़- caṛh- 'rise'	चढ़ाई caṛha:i: 'ascent'
-आव -a:v '(deverbal nominalizer (M))'	Verb → Noun	लग- lag- 'attach'	लगाव laga:v 'attachment'
-आवा -a:va: '(deverbal nominalizer (M))'	Verb → Noun	बुल- bul- 'call'	बुलावा bula:va: 'summons'
-आवट -a:vaṭ '(deverbal nominalizer (F))'	Verb → Noun	लिख- likh- 'write'	लिखावट likha:vaṭ 'handwriting'
-नी -ni: '(deverbal nominalizer (F))'	Verb → Noun	कर- kar- 'do'	करनी karni: 'action'
-गार -ga:r 'agent (M)'	Noun → Noun (agent)	मदद madad 'help'	मददगार madadga:r 'helper'
-बान -ba:n 'agent (M)'	Noun → Noun (agent)	बाग़ ba:g '(large) garden'	बाग़बान ba:gba:n 'gardener'
-दार -da:r 'agent (M)'	Noun → Noun (agent)	दुकान duka:n 'shop'	दुकानदार duka:nda:r 'shopkeeper'

may take comparative and superlative suffixes, as shown in Table 4.14 (Kachru 2006).

	Comparative	Superlative
Sanskrit	-तर -tar	-तम -tam
Persian	-तर -tar	-तरीन -tari:n

Table 4.14: Persian and Sanskrit comparatives and superlatives

	Singular	Plural
masculine	-आ -a:	-ए -e
Example	देखा dekha: 'seen (M.SG)'	देखे dekhe 'seen (M.PL)'
feminine	-ई -i:	-ईं -ī:
Example	देखी dekhi: 'seen (F.SG)'	देखीं dekhī: 'seen (F.PL)'

Table 4.17: Perfective participles

	Singular	Plural
masculine	-ता -ta:	-ते -te
Example	देखता dekhta: 'see (M.SG)'	देखते dekhte 'see (M.PL)'
feminine	-ती -ti:	-ती -ti: (-तीं -tĭ: when no auxiliary follows)
Example	देखती dekhti: 'see (F.SG)'	देखती dekhti: 'see (F.PL)'

Table 4.18: Imperfective participles

	Present	Past	Future	Subjunctive
1st person singular	हूँ hũ:	था tha: (M), थी thi: (F)	हूँगा hũ:ga: (M), हूँगी hũ:gi: (F)	हूँ hũ: ~ होऊँ hoũ:
2nd person intimate (SG)	है hai	था tha: (M), थी thi: (F)	होगा hoga: (M), होगी hogi: (F)	हो ho
3rd person singular	है hai	था tha: (M), थी thi: (F)	होगा hoga: (M), होगी hogi: (F)	हो ho
1st person plural	हैं hãĩ:	थे the (M), थीं thĩ: (F)	होंगा hõga: (M), होंगी hõgi: (F)	हों hõ
2nd person familiar (PL)	हो ho	थे the (M), थीं thĩ: (F)	होगा hoga: (M), होगी hogi: (F)	हो ho
2nd person formal (PL)	हैं hãĩ:	थे the (M), थीं thĩ: (F)	होगा hoga: (M), होगी hogi: (F)	हों hõ
3rd person plural	हैं hãĩ:	थे the (M), थीं thĩ: (F)	होगा hoga: (M), होगी hogi: (F)	हों hõ

Table 4.19: The auxiliary/copula होना /hona:/

	Subjunctive	Future
1st person singular	-ऊँ -ũ:	-ऊँगा -ũ:ga: (M), -ऊँगी -ũ:gi: (F)
Example	बोलूँ bolũ: 'I may/should speak'	बोलूँगी bolũ:ngi: 'I (F) will speak'
2nd person intimate (SG)	-ए -e	-एगा -ega: (M), -एगी -egi: (F)
Example	बोले bole 'you (sg.) may/should speak'	बोलेगा bolega: 'you (M) will speak'
3rd person singular	-ए -e	-एगा -ega: (M), -एगी -egi: (F)
Example	बोले bole 'he/she may/should speak'	बोलेगी bolegi: 'she will speak'
1st person plural	-एँ ẽ	-एँगे -ẽge (M), -एँगी -ẽgi: (F)
Example	बोलें bolẽ 'we may/should speak'	बोलेंगे bolẽge 'we (M) will speak'
2nd person familiar (PL)	-ओ -o	-ओगे -oge (M), -ओगी -ogi: (F)
Example	बोलो bolo 'you may/should speak'	बोलोगी bologi: 'you (F) will speak'
2nd person formal (PL)	-एँ ẽ	-एँगे -ẽge (M), -एँगी -ẽgi: (F)
Example	बोलें bolẽ 'you may/should speak'	बोलेंगे bolẽge 'you (M) will speak'
3rd person plural	-एँ ẽ	-एँगे -ẽge (M), -एँगी -ẽgi: (F)
Example	बोलें bolẽ 'they may/should speak'	बोलेंगी bolẽgi: 'they (F) will speak'

Table 4.21: The subjunctive and future

Table 4.22: Verb "tenses": बोलना /bolna:/ 'to speak'

Construction type	Form of main verb		Auxiliary/ies			Example
Simple perfective:	Perfective participle		——			बोला bola: '(he) spoke'
Present perfective:	Perfective participle	+	होना hona: (present)			बोला है bola: hai '(he) has spoken'
Past perfective:	Perfective participle	+	होना hona: (past)			बोला था bola: tha: '(he) had spoken'
Future perfective:	Perfective participle	+	होना hona: (future)			बोला होगा bola: hoga: '(he) will/must have spoken'
Subjunctive perfective:	Perfective participle	+	होना hona: (subjunctive)			बोला हो bola: ho '(he) may have spoken'
Present imperfective (habitual):	Imperfective participle	+	होना hona: (present)			बोलता है bolta: hai ('he) speaks'
Past imperfective (habitual):	Imperfective participle	+	होना hona: (past)			बोलता था bolta: tha: '(he) used to speak'
Future imperfective:	Imperfective participle	+	होना hona: (future)			बोलता होगा bolta: hoga: '(he) will/must speak'
Subjunctive imperfective:	Imperfective participle	+	होना hona: (subjunctive)			बोलता हो bolta: ho '(he) may speak'
Present continuous:	Bare stem	+	रहना rahna: (masculine singular)	+	होना hona: (present)	बोल रहा है bol raha: hai '(he) is speaking'

Table 4.22: (continued)

Construction type	Form of main verb		Auxiliary/ies			Example
Past continuous:	Bare stem	+	रहना rahna: (masculine singular)	+	होना hona: (past)	बोल रहा था bol raha: tha: '(he) was speaking'
Future continuous:	Bare stem	+	रहना rahna: (masculine singular)	+	होना hona: (future)	बोल रहा होगा bol raha: hoga: '(he) must/will be speaking'
Subjunctive continuous:	Bare stem	+	रहना rahna: (masculine singular)	+	होना hona: (subjunctive)	बोल रहा हो bol raha: ho '(he) may be speaking'
Simple subjunctive:	Subjunctive		——			बोले bole '(he) may speak'
Future:	Future		——			बोलेगा bolega: '(he) will speak'

in some contexts.

	Ending	Example with बोलना bolna: 'to speak'
Intimate (with तू tu:)	Ø	बोल bol
Familiar (with तुम tum)	-ओ -o	बोलो bolo
Formal (with आप a:p)	-इए -ie~ -इये -iye	बोलिए bolie
Formal—extra polite (with आप a:p)	-इएगा -iega: ~ -इयेगा -iyega:	बोलिएगा boliega:

Table 4.23: Imperative verbs

Intransitive	Transitive	Causative (lengthening)	Causative (-वा -va:)
	सुनना sunna: 'to listen'	सुनाना suna:na: 'to tell'	सुनवाना sunva:na: 'to cause to tell'
मरना marna: 'to die'	मारना ma:rna: 'to kill, to beat'		
दिखना dikhna: 'to be seen'	देखना dekhna: 'to see'	दिखाना dikha:na: 'to show'	देखाना deka:na: 'to cause to be shown'
	करना karna: 'to do'		करवाना karva:na: 'to cause to do/to have done'

Table 4.24: Intransitive, transitive, and causative verbs

Infinitive	Perfective participle	Familiar imperative	Formal imperative	Subjunctive (1st person)
जाना ja:na:	गया gaya:			
होना hona:	हुआ hua:			हूँ hũ:, होऊँ hoũ:
देना dena:	दिया diya:	दो do	दीजिए di:jie	दूँ dũ:
लेना lena:	लिया liya:	लो lo	लीजिए li:jie	लूँ lũ:
करना karna:	किया kiya:		कीजिए ki:jie	
पीना pi:na:			पीजिए pi:jie	

Table 4.25: Irregular verb forms