

A Phonological Sketch of Hewa

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1 Phonology

In this section, the basic phonology of Hewa is outlined. In section 1.1, the consonant and vowel inventories are given. In section 1.2, the spelling system is presented. Section 1.3 shows (near)-minimal pairs to give evidence for the contrasts among different phonemes. Section 1.4 gives an overview of the syllable structure and phonotactics. Section 1.5 briefly discusses stress patterns. Finally, a list of the vocabulary compiled so far is presented.

1.1 Phoneme inventory

1.1.1 Consonants

Our consultant on Hewa shows 15 contrasting consonants, shown in table 1 below. The affricate /dʒ/ so far only appears in the lexical item *meja* ‘table’, which is a borrowing from Indonesian in turn borrowed from Portuguese.¹ All consonants on the chart can appear in onset position (see section 1.4 for the restrictions on coda position).

	Bilabial	Dental/Alveolar	Postalveolar	Velar	Glottal
Voiceless plosives	p	t		k	ʔ
Voiced plosives	b	d		g	
Affricates			(dʒ)		
Fricatives	β	s			h
Nasals	m	n		ŋ	
Laterals		l			
Rhotics		r			

Table 1: Contrasting consonants in Hewa

The dental plosives /t/ and /d/ appear as a retroflex [ɖ] and [ɗ] in certain positions; their distribution needs more research.

¹See section 1.2 for orthographic conventions.

The rhotic /r/ seems to always appear as a trill. There is no contrast between a trilled rhotic /r/ and a tapped rhotic /ɾ/.

The acoustic properties of the bilabial fricative /β/ are unclear; further analysis could result in its reclassification as a labiodental approximant /ʋ/.

1.1.1.1 Consonant sequences and clusters

Consonants rarely appear together within a word (see section 1.4 as to why). The only two consonant combinations attested so far, be it clusters or sequences, happening within the word are the clusters [pl], [bl], and [kl] in words such as *plēka* ‘to cut’, *blon* ‘long’, and *kleren* ‘branches’.

More data is needed to describe how consonants act when in contact across word boundaries.

1.1.2 Vowels

Our consultant shows six distinctive vowel sounds, with /ə/ being restricted to the first syllable in between certain consonant combinations. All vowels become long in word initial position in open syllables, as well as in final position in monosyllabic words.

	Front	Central	Back
High	i		u
Mid	e	ə	o
Low		a	

Table 2: Contrasting vowels in Hewa

1.1.2.1 Vowel combinations

Vowels often appear next to one another within a word, but rarely become a diphthong, instead often making up separate syllables, at least in careful speech. The only confirmed diphthong is in the word *blau*’ ([blawʔ]) ‘to fear’, which seems to be constrained by the final glottal stop. More data is needed to characterize the interaction of vowels across word boundaries.

1.2 Spelling system

For the present sketch grammar, I have decided to design a simple orthography by which those sounds whose IPA representation does not correspond directly to a Latin alphabet grapheme are represented in the following way:

- <'> for the glottal stop /ʔ/
- <w> for the bilabial fricative /β/
- <ng> for the nasal velar /ŋ/
- <j> for the post-alveolar affricate /dʒ/
- <ë> for the mid central vowel /ə/

All other sounds are represented with their Latin alphabet counterpart. I am using this orthographic system throughout the present sketch grammar unless specified with the use of square brackets or slashes for phonetic symbols.

1.3 Phonemic contrasts

In this section I show some examples of phonemes the contrastiveness of which could in principle be argued.

1.3.1 Initial and final glottal stops /ʔ/

Word initial and word final glottal stops /ʔ/ are not easily perceived by speakers of languages, such as most European ones, which do not have it as a contrastive phoneme. In Hewa, the contrast between the presence or absence of a glottal stop /ʔ/ in word initial positions is clear when looking at vowel length: the vowel only becomes long in the absence of a consonant, not limited to, but including, the glottal stop /ʔ/.

- (1) *a'u* ([a:ʔu]) 'I' vs *'au* ([ʔau]) 'you (singular)'

Glottal stops in final position do not seem to affect the adjacent vowel in the same way as they do in initial position, but the speaker does point it out when repeating the elicited word back to him. A clear minimal pair is (2), which is a sequence of words that also happens to occur in natural speech.

- (2) *'ita* ([ʔita]) 'we (inclusive)' vs *'ita'* ([ʔitaʔ]) 'to see'

1.3.2 Mid-front and central vowels /a/ /e/ /ə/

Below are some examples that show that /ə/ is a distinctive sound in Hewa. Example (3) shows that [ə] is not an epenthetical vowel, as it appears in between consonants which would otherwise form an acceptable cluster.

- (3) *běli* ([bəli]) ‘to give’ vs *blon* ([blon]) ‘long’

Example (4) shows a near-minimal pair between /ə/ and /a/; (5) shows a near minimal pair between /ə/ and /e/.

- (4) *ləpo* ([lə'po]) ‘house’ vs *lapot* ([l'apot]) ‘to hit’
(5) *rəkak* ([rə'kak]) ‘nether regions’ vs *rekat* ([r'ekat]) ‘corner of the rice field’

1.4 Syllable structure

Almost all words in Hewa are monosyllabic or disyllabic. Tri- and quadrisyllabic words are attested but seem to be compounds; more research is needed in that regard.

Below is a list of syllable patterns observed in the data gathered so far.

1. V (final syllable only) - *wae* ([βa.e]) ‘face’
2. CV - *dula* ([du.la]) ‘belly’
3. VV - *ala* ([aː.la]) ‘head’
4. CVV (monosyllabic words only) - *to* [toː] ‘to laugh’
5. CVC (final syllable only) - *lurin* ([lu.rin]) ‘bone’
6. CCV - *plupi* ([plu.pi]) ‘to blow’
7. CCVC (monosyllabic words only) - *blon* ([blon]) ‘long’

All Hewa consonants appear in onset position. The coda position is more restricted. Some of the restrictions observed are listed below.

- Plosives are restricted to /t/, /k/, and /ʔ/, which means that the voicing distinction is lost. The bilabial plosive /p/ only so far only appears in the data in the word *lap* ‘to wipe’, which is an Indonesian loan word, in turn borrowed by Indonesian from Dutch. It can then be argued that /p/ is in general not an acceptable coda in Hewa.

- Fricatives do not appear in coda position, except for in loan words.
- Nasals are restricted to /n/ and /ŋ/, which means that the bilabial nasal /m/ is also not acceptable.
- Liquids are restricted to /r/, which means that the contrast between /r/ and /l/ is lost and that /l/ is not acceptable.

The coda position can only be filled on the last syllable; examples of medial codas only appear in loan words (*kursi* ‘chair’). Stressed syllables seem to require a weight of at least 2; in syllables without an onset or a coda, that is, in syllables where the only element is a vowel, said vowel is lengthened (e.g. *ahu* [a:hu] ‘dog’ vs *gahu* [gahu?] ‘hot’). The vowel is also lengthened in monosyllabic words with no coda, such as in *bo* ([bo:]) ‘to spit’. With these restrictions in mind, the syllable structure of a prototypical Hewa word can be summarized thus:

- A monosyllabic word may present the structure CVV (most commonly) or CVC (more rarely).
- A disyllabic word may have as its first syllable CV, CCV, or VV, and as its second syllable V, CV, or CVC. The structure of the first syllable does not seem to condition that of the second one; however, words with the structure VV.V are not attested, and would be typologically strange.

1.5 Stress

Stress in Hewa appears to be predictable and therefore not contrasting. Words in Hewa are generally stress initial, except for when the first vowel is a /ə/. It is unclear whether it is the /ə/ that shifts the stress away from the syllable or whether /ə/ is simply a result of a diachronic process of vocalic reduction stemming from a loss of stress on the syllable. The most likely explanation seems to be the latter, but this type of inquiry is beyond the scope of this sketch grammar.

Word list

Below is a list of the 187 lexical items compiled so far at this point in the research.

Lexical item	Gloss	Category
apa	what	Pronoun
'ëra	stand	Verb
ahu	dog	Noun
ala	head	Noun
anak	small	Adjective
awu	dust	Noun
a'u	I	Pronoun
baka	bite	Verb
bëli	give	Verb
bëli mate	kill	Verb
bërat	heavy	Adjective
bi'an	people	Noun
blara	sick	Adjective
blatan	cold	Adjective
blau'	fear	Verb
blon	long	Adjective
blosok	rub	Verb
bo	spit	Verb
bokak	liver	Noun
bokat	mushroom	Noun
dedi' anak	child	Noun
dedi' nurak	newborn	Noun
dëhan	to tell on somebody	Verb
dëka'	to flinch to sit	Verb
dëmen	correct	Adjective
dudun bëleng	forest	Noun
dula	belly	Noun
du'a	wife	Noun
du'ur	to dry food	Adjective
e'on	not	Adverb
gahu'	hot	Adjective
ganupan	how	Pronoun
gata'	to recite	Verb
gea	to eat (1PL)	Verb
	big	

	Lexical item	Gloss	Category
gëte		wide	Adjective
	guman	night	Noun
	guruk	still	Adverb
	hai 'ia	who	Pronoun
	halo	hello	Interjection
	harua	many	Pronoun
		a few	
	hika	split	Verb
	hini	salt	Noun
	hoka	to dig (with hoe)	Verb
	horo	fly	Verb
	ina	mother	Noun
	ina ama	parent	Noun
	iru	nose	Noun
	i'an	fish	Noun
	kantar	sing	Verb
	kapik	wing	Noun
	kekor	feather	Noun
	kënahoron	bird	Noun
	kera	sister's husband	Noun
	kikir	finger nail	Noun
	kleren	branches	Noun
	krtas	paper	Noun
	kursi	chair	Noun
	lap	wipe	Verb
	lapot	hit	Verb
	lau	that	Demonstrative
	lau 'ia	there	Adverb
	lënung	pillar	Noun
	lëpo	house	Noun
	lëro	sun	Noun
	leten	stick	Noun
	le'u wa'i ha	all	Pronoun
	lima	hand	Noun
		arm	

Lexical item	Gloss	Category
lodo	fall	Verb
lo'e	hair	Noun
lurin	bone	Noun
ma	tongue	Noun
manu	chicken	Noun
mata	eye	Noun
mate ba'a	die (already)	Verb
me1	newborn	Noun
me2	child (descendent)	Noun
me a'un du'at	daughter	Noun
me a'un la'it	son	Noun
medja	table	Noun
mei	blood	Noun
meon	cat	Noun
mun	close relatives	Noun
muta	vomit	Verb
nani	swim	Verb
napun	river	Noun
natar	village	Noun
nen	beach	Noun
nene'	grandparent	Noun
nene' ama	grandfather	Noun
nene' puda mo'a	grandparents	Noun
nene' wina	grandmother	Noun
nian tana	earth	Noun
nimu bi'an du'at	she	Pronoun
nimu bi'an la'it	he	Pronoun
niu	teeth	Noun
pano	walk	Verb
panolalan	walk	Verb
papan	part	Noun
përa	squeeze	Verb
petak	rice field division	Noun
pikr	think	Verb
plëka	cut	Verb

Lexical item	Gloss	Category
plëmet	suck	Verb
pligo	hold	Verb
plupi	blow	Verb
popo	wash	Verb
pu	brother in law	Noun
puhun	flower	Noun
punu wi'in	fight	Verb
pu'ur	short	Adjective
raha	chest	Noun
rakan	hunt	Verb
ramut	root	Noun
ra'itan	know	Verb
rëkak	nether region	Noun
rekat	rice field corner	Noun
rëmapira	when	Pronoun
rëna	see	Verb
reta	to	
rimu	you (pl)	Pronoun
	they	
robak	stab	Verb
roun	leaf	Noun
rumang	dark	Adjective
se1	lake	Noun
se2	go away	Interjection
sëga'	come	Noun
senter	flashlight	Verb
sogor	push	Verb
tahi'	sea	Noun
tali	rope	Noun
tana	ground	Noun
taran	horn	Noun
ta'idula	guts	Noun
tëbo	body	Noun
tëgu	throw	Verb
tëlon	egg	Noun

Lexical item	Gloss	Category
tëra	hard	Adjective
tëri	sit	Verb
te'er	to wait	Verb
tilu	ear	Noun
tinu	drink	Verb
to	laugh	Verb
to'e	back	Noun
tur	knee	Noun
tu'e	lay down	Verb
tu'e gëpa	sleep	Verb
ue	older brother	Noun
uhu	breast	Noun
ular	snake	Noun
ulit	bark	Noun
ulun	speak	Verb
uma	rice field house	Noun
unen	seed	Noun
upa	where	Pronoun
uran	rain	Noun
utu	louse	Noun
wa	mouth	Noun
wae	face	Noun
wair	water	Noun
wangak	flood	Noun
wari	younger brother	Noun
watu	stone	Noun
wa'an	grass	Noun
wa'i	leg	Noun
wina	mother (intimate)	Noun
wine	sister	Noun
wongak1	distracted	Adjective
wongak2	to look up	Verb
wuan	fruit	Noun
wulan	moon	Noun
wu'an	heart	Noun

	Lexical item	Gloss	Category
	'ai	tree	Noun
	'ai watu	forest	Noun
	'ali	dig	Verb
	'ami	1pl.excl	Pronoun
	'aro	scratch	Verb
	'au	you (sg.)	Pronoun
	'ea	eat	Verb
	'ëda	sand	Noun
	'ëkak	offering	Noun
	'ëla	fall	Verb
	'ëru	neck	Noun
	'ëtan	meat	Noun
	'ete	this	Demonstrative
	'ita	we (incl)	Pronoun
	'ita'	see	Verb
	'olon	bird	Noun