

REVISITING THE STATUS OF LABIALISED CONSONANTS IN CONTEMPORARY AMHARIC

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ABSTRACT

Though a lot of studies have been conducted on Amharic, studies on its phonology are very few and even those studies do not agree on the number and inventory of Amharic consonant phonemes. This study argues that there are 19 labialised Amharic phonemes. The study argues that overgeneralization of labialisation and loss of /w/ cannot account for all the occurrences of labialised consonants in Amharic. Minimal pair test and derivation of agentive and adjunctive forms are presented as evidences to show the phonemic status of labialised consonants in Amharic.

[1] INTRODUCTION

Amharic is a South Ethio-Semitic language spoken by over 21 million Native speakers according to the 2007 census (Central Statistical Agency (CSA) 2018). It is spoken mainly in central and northern parts of Ethiopia mainly in the Amhara National Regional State that comprises of Wollo, Gojjam, Gonder and North Shoa. It is spoken as a second language by more than 4 million speakers (Office of Population and Housing Census Commission (OPHCC) 1998) and is a lingua franca in almost all towns in Ethiopia (Meyer & Richter 2003, Meyer 2006). Amharic is the working language of the federal government and four regional states: the Amhara, the Benishangul Gumuz, the Gambela and the Southern Nations, Nationalities and Peoples regional states. It is also the working language of the two city governments: Addis Ababa and Dire Dawa.

Amharic has an interesting phonology due to the presence of ejectives, palatals and labialised consonant phonemes. There is, however, no agreement on the number and inventory of Amharic consonant phonemes. The number varies from 21 (Mulugeta 2001) to 30 (Baye 2008) depending mainly on the status of palatal and labialised consonants. Mulugeta states that the palatal consonants (ʃ, ʒ, tʃ, dʒ, ɲ) are not part of the systematic phonemes as their occurrences are predictable based on rules (Mulugeta op. cit., p. 9). He also does not consider the labialised velar consonants /k^w, g^w, k^w/ to be part of the consonant inventory of

Amharic. Sande and Hedding in their recent publications, e.g. Sande & Hedding (2017), propose a phonemic inventory of Amharic consonants that excludes the velar labialised consonants. Baye (2008), however, puts the number of Amharic consonant phonemes to 30, including the palatals and velar labialised consonants.

Manner of Articulation	Place of Articulation												
	Bilabial		Labio-dental		(Denti-) ¹ Alveolar		Post-alveolar		Palatal		Velar		Glottal
	vl	vd	vl	vd	vl	vd	vl	vd	vl	vd	vl	vd	vl
Stop	p	b			t	d					k ^w	g ^w	ʔ
	p'				t'						k'	k' ^w	
Fricative			f	(v ²)	s	z	ʃ	ʒ					h
					s'								
Affricate							tʃ	dʒ					
							tʃ̣						
Nasal		m		n							ɲ		
Central Approximant		w									J		
Lateral Approximant				l									
Trill				r									

TABLE 1: Consonant inventory of Amahric (Baye 2008)

- [1] Most researchers use the term 'alveolar' only and a few (e.g., Sumner 1957) use dental. Baye (2008) admits that some of the sounds grouped as alveolar could be dental. Since no experimental study has identified the sounds as either dental or alveolar, I have used this label to compromise the two.
- [2] This phoneme is found in borrowed words from foreign languages such /velo/ 'veil' and /villa/ 'villa'. In recent days the sound has found itself into the proper names of individuals such as /fevɛn/ 'Feven'. In most cases /v/ is found in free variation with /b/ as in /velo/ and /belo/ having the same meaning 'veil', but in some cases there appears to be a development of contrast with /b/ as in /villa/ 'villa' versus /billa/ which means 'knife' unless the context makes it clear that a person is talking about a type of house. The phoneme is included in neither earlier nor recent studies Leslau (1969), Mullen (1986), Baye (1994, 2008, 2010).

Gemination³ is phonemic and grammatical in Amharic. Gemination is also widespread in Amharic due to assimilation at morpheme boundary. All consonants except /h/ and /ʔ/ can be geminate.

[2] LABIALISATION IN AMHARIC

Labialisation as a morphophonemic process is widespread in Amharic. It results in labialised allophones of most of the Amharic phonemes across morpheme boundaries involving subject markers followed by object markers in verbs. The following data illustrate this.

- | | | | | |
|-----|----|-------------------------------|---|--------------------------------|
| (1) | a. | s3bb3r-ku-attf3w ⁴ | → | [s3bb3rk ^w atftf3w] |
| | | break.PRF-1SG.SJ-3PL.OJ | | |
| | | ‘[I] have broken [them].’ | | |
| | b. | s3br-o-attf3w | → | [s3br ^w atftf3w] |
| | | break.IMPF-3SG.SJ-3PL.OJ | | |
| | | ‘[He] having broken [them].’ | | |
| | c. | b3ll-u-attf3w | → | [b3ll ^w atftf3w] |
| | | break.IMPF-3SG.SJ-3PL.OJ | | |
| | | ‘[They] ate [them].’ | | |
| | d. | s3rk’-o-attf3w | → | [s3rk ^w atftf3w] |
| | | break.IMPF-3SG.SJ-3PL.OJ | | |
| | | ‘[He] having stolen [them].’ | | |

As the data in (1) show, the [u-a] and [o-a] sequences at morpheme boundary trigger the labialisation of consonants.

Labialisation is also widespread in nominals that has 3FS pronominal suffix that mark possessive or definite marker for feminine.

- | | | | | |
|-----|----|---------------------------|---|-------------------------|
| (2) | a. | b3g -u-a | → | [b3g ^w a] |
| | | house-3SG -3FSG | | |
| | | ‘Her sheep’ | | |
| | b. | l3d3 -it-u-a | → | [l3d3it ^w a] |
| | | child-SING-3SG -3FSG | | |
| | | ‘The child(female) [one]’ | | |
| | c. | k’3jj-u-a | → | [k’3jj ^w a] |
| | | red-3SG -3FSG | | |
| | | ‘The red (female) [one]’ | | |

[3] In this article, gemination of consonants is represented by doubling the consonant.

[4] Gemination of affricates is shown by doubling only the first part of the affricate. Thus the sequence ttf represents the geminate voiceless palatoalveolar affricate.

- d. w₃fram-u-a → [w₃fram^wa]
 fat-3SG -3FSG
 ‘The fat (female) [one]’

Nevertheless, not all labialised consonants are found in this environment. There are labialised consonants that occur in contrastive environments with the plain ones causing a change in the meaning of the word and creating a different lexical item. This can be seen in word initial position, as presented in (2).

- (3) a. k^was ‘Ball’
 b. kas ‘[You 2MSG] give them [a] compensation’
 c. g^wal ‘a dug out par of soil that forms a bigg mass’
 d. gal ‘[You] be hot’
 e. k^war ‘a knot (of a stick or log)’
 f. kar ‘heartburn’

These words in (3) occur within a single morph. We cannot assume that they have an underlying /ua/ or /oa/ sequence as no two vowels come consecutively in Amharic. And as a result, some labialised consonants such as the velar ones in (3) have been accorded phonemic status (Baye 2008, Cowley et al. 1976).

The highest number of labialised phonemes identified in Amharic so far are 7: /k^w, g^w, k^w, f^w, m^w, h^w, b^w (Cowley et al. 1976). However, there are studies which never put any labialised consonant phoneme in the Amharic consonant inventory. The following table summarizes the proposals on the phoneme inventories by different authors over the past 100 years.

Authors	Labialised phonemes
Armbruster (1908)	None
Cowley et al. (1976)	k ^w g ^w k ^w h ^w f ^w m ^w b ^w
Mullen (1986)	k ^w g ^w k ^w
Mulugeta (2001)	None
Baye (2008)	k ^w g ^w k ^w
Sande and Hedding (2017)	None

TABLE 2: The phonemic status of labialised Amharic consonants in previous studies.

There are two reasons for this variation in the phonemic status of labialised consonants: overgeneralisation of the morphophonological labialisation and an assumption of the loss of /w/, which is reduced as a labialised form to the preceding consonant. The counter arguments for both of the arguments is

presented below.

Overgeneralising morphophonological labialisation to apply to all phonological environments where there is labialisation results in not recognising any labialised phoneme in Amharic. This means that all the examples in (3) above have the forms /ua/ or /oa/ sequences in the underlying forms rendering */koas/ or */kuas/ for (3a) for the word ‘ball’. This is not an acceptable proposal because two vowels are not allowed to occur within a word in Amharic. No Amharic monomorphemic word has a sequence of two vowels. Whenever two vowels come at morpheme boundary, either one of the vowels get deleted or there will be an insertion of a consonant, either /w/ or /j/, a process commonly known as glide insertion.

- (4)
- | | | |
|----|--------------------------|--|
| a. | b ₃ re-ottʃ | b ₃ rewottʃ |
| | ox-PL | oxen |
| b. | b ₃ re-atʃn | b ₃ rejattʃn [b ₃ r ^h attʃn] or b ₃ reʔattʃn |
| | ox-1PL | our ox |
| c. | b ₃ k’lo-ottʃ | b ₃ k’lowottʃ |
| | mule-PL | mules |
| d. | b ₃ k’lo-e | b ₃ k’loje |
| | mule-1SG | my mule |
| e. | t’asa-ottʃ | t’asawottʃ |
| | can-PL | cans |
| | t’asa-a | t’asawa |
| f. | can-3FSG | her can |

As the examples in (4) show, there is a glide insertion whenever there are two vowels that come at morpheme boundary are the same. A glottal stop is also inserted in the place where the sequence of vowels at a morpheme boundary is /ea/ or /oa/. As a result, all labialised consonants in monomorphemic words cannot be accounted for a labialisation process involving a sequence of vowels.

The assumption of the loss of /w/ in words that have labialised consonants, the second reason for not considering labialised consonants as phonemes in Amharic, is a plausible explanation. As per this assumption, all the examples in (3a, c, e) above could be analysed as follows.

- (5)
- | | | |
|----|--|------------------------------|
| a. | k ^w as > /k ₃ was/ | ‘Ball’ |
| b. | g ^w əddələ > /g ₃ wəddələ/ | ‘[It] became less than full’ |
| c. | k ^w əllə > /k ^h əllə/ | ‘[He] roasted (something)’ |

This analysis is related to a historical account of some words that have labialised

consonants in Amharic being related to Ge'ez ⁵words that have /w/ as in the following examples.

(6)	Amharic	Ge'ez	Gloss
a.	/k'w3m3/	/k'3w3m3/	'He/it stood up'
b.	/m'w3t3/	/m3w3t3/	'He/it died'
c.	/z'w3r3/	/z3w3r3/	'He/it went around'

However, I argue that even in Ge'ez itself, /w/ was already lost as it is seen in manuscripts resulting in the same surface forms as in Amharic in (6). A simple search of the words ሞተ /m'w3t3/ 'He/it died' and መወተ/m3w3t3/ in Ethiopic Script at the manuscript collection of HMML resulted in only two results for the form ሞተ /m'w3t3/ in a 15th century Ge'ez manuscript but none for the form መወተ/m3w3t3/. As figure 1 next shows, the Ge'ez word መወተ/m3w3t3/ 'He/it died' is written as ሞተ /m'w3t3/, which is the same form as the one found in Amharic.

በስመ፡ አብ... መጽሐፈ፡ ዜናሆሙ፡ ለአበው፡ ወነገሮሙ፡ ዘተስእሉ፡ በበደናቲሆሙ፡ በዘ፡ ቦቱ፡
በቀ፡ ወወናይተ፡ ለዘ፡ አንበቦ፡ ወለዘሰምዖን፡ ወደሰመደ፡ ገነተ፡ ፡ አግዚአብሔር፡ ይጸግወነ፡
በረከቶሙ አሜን ፡ ደቤ፡ ቅዱስ፡ አንጦንሱ...፡ ገድል፡ ዘቅዱስ፡ ወብፀ፡ ፡ አርከሌድስ፡ ዘሞተ፡ በአንተ፡
ስመ፡ ክርስቶስ፡ አመ፡ ፤ወ፤ ለወርኅ፡ ጥር... ወሀሎ፡ አሐዱ፡ ብእሲ፡ በሀገረ፡ ሮምያ፡ ዘስሙ፡ ሲሞን፡
ነጋዲ ፡ ወፈራሄ፡ አግዚአብሔር፡ ወይገብር፡ ብዙኅ፡ ሠናያተ፡ ለአብተ፡ ክርስቲያናት፡ ለነዳያን፡
ወለምስኪናን፡ ወአምድኅረዝ፡ መዋዕል፡ ሞተ፡ ሲሞን...

FIGURE 1. A screen shot of the results of the search for the word /m'w3t3/ ሞተ 'He/it died' in the HMML's Legacy Catalogue.⁶ The highlighted forms represent the labialised form ሞተ/m'w3t3/ 'He/it died', which has lost the segment /w/, but retained it as a labialisation feature.

Even though there is no evidence to claim that Amharic had adopted the forms that has the labialised consonant from Ge'ez, the forms we find in Amharic consistently show that there is a labialised consonant for Amharic words where there is a lost /w/ in older Ge'ez forms or in Tigrinya, also a North Ethiopic sound.

[3] MORE LABIALISED PHONEMES?

Given that both assumptions, i.e. the overgeneralization of labialisation and a lost /w/, could not account for all labialised consonants in Amharic, the last alternative is to posit that the labialised consonants could have a phonemic

[5] Ge'ez, also known as Ethiopic or Classical Ethiopic, is a north Ethio-Semitic language (Hetzron 1972). It is the oldest Ethio-Semitic language to have written sources starting between 1st and 3rd Century (Avanzi 2007) and thus is used as source in historical linguistics studies on Ethio-Semitic languages.

[6] <http://18.235.151.129/index.php?keyword=ሞተ&pageSize=5&subButton=>

status in environments that both the labialisation process and the lost /w/ could not explain. One such context is the presence of labialised sounds occurring in contrastive environments, a claim that can be supported by minimal pairs, showing they do contribute in changing the meaning of the word as in (7) below.

- (7) a. t^wari 'One who takes care of old relatives'
 b. t^hari 'One who works hard'
 c. b^watt'ɜt'ɜ ' [He] scratched something with his fingers'
 d. batt'ɜt'ɜ ' [He] misbehaved in a form of getting spoiled'
 e. m^wamm^wa ' [It] dissolved'
 f. mamma 'Tower'

In (7) above, there is a contrast between [t'] and [t^w], [b] and [b^w], and between [m] and [m^w]. These labialised consonants in the contrastive environments in (3) and (7) fulfil the criteria to be allophones of different phonemes.

In some other cases, the labialised sounds are not in any contrastive or complementary distribution but are used in typical lexical items as in (8) below.

- (8) a. tʃ^wahi 'One who shouts'
 b. r^watʃ 'Runner'
 c. ʃ^wami 'One who has an authority to appoint others for a position'
 d. f^waf^wate 'Fountain'
 e. dʒ^wɜro 'ear'

These forms in (8) are of two types: those from (8a-c) are agentive forms and (8d-e) is a noun. The forms in (8a-c) all are derived from biradical verbs in Amharic. These biradical verbs all have one common form. In contemporary Amharic, all the verbs start with a consonant plus /o/.

Cowley et al. (1976, p. 78) claim that the labialised consonants plus /ɜ/ alternate with plain consonant with /o/, as in /g^wɜjjam/ vs /gojjam/. This alternation may be true at a phonetic level, but at phonemic level, the underlying vowel in such contexts is /ɜ/ and the pronunciation could be one of the two alternating options mentioned by Cowley et al. (1976). I argue that the words with such alternative pronunciation forms had the labialised consonants plus /ɜ/ sequence in the underlying forms and this can be seen in the agentive constructions, which preserved the labialised forms to date. Through time the labialisation feature in the non-agentive constructions could still have both options in pronunciation though the plain consonant with /o/ sequence is more common and has been solidified by the Amharic orthography as it lacks

graphemes for labialised consonants plus /ɜ/ sequence except for four of the labialised consonants: ከ (k^w), ጎ (g^w), ቈ (k^w) and ኸ (h^w).

The data in Table 3 present Amharic verbs that I argue have labialised consonants in their radicals. These verbs may have pronunciations that do not have labialised forms in contemporary Amharic, at least in the Addis Ababa variety, which is taken to be the standard form.

Unlike the perfective form of the verbs, the derived agentive or adjunctive forms of most of the verbs have a labialised consonant that is pronounced in contemporary Amharic as Table 4 shows.

Old form	Contemporary form ⁷	Gloss
m ^w ɜtɜ	motɜ	'[He] died'
tʃ ^w ɜhɜ	tʃ ^w ohɜ	'[He] shouted'
r ^w ɜtɜ	rotɜ	'[He] ran'
ʃ ^w ɜmɜ	ʃomɜ	'[He] appointed'
k ^w ɜmɜ	komɜ	'[He] stood up'
tɜnb ^w ɜk'ɜbb ^w ɜk'ɜ	tɜnb ^w ɜk'ɜbb ^w ɜk'ɜ	'[He] became frightened'
l ^w ɜt'ɜll ^w ɜt'ɜ	lot'ɜllot'ɜ	'[He] loitered'
h ^w ɜnɜ	honɜ	'[It] became ...'
am ^w ɜk'ɜ	amok'ɜ	'[He] boiled [something]'
tɜns ^w ɜlɜss ^w ɜl	tɜnsolɜssolɜ	'[He] became very fast'
t ^w ɜfɜtt ^w ɜfɜ	tofɜttofɜ	'[He] became fat'
an ^w ɜk'ɜnn ^w ɜk'ɜ	anok'ɜnnok'ɜ	'[It] became soft (started to rot)'
z ^w ɜrɜ	zorɜ	'[He] moved around'
d ^w ɜfɜdd ^w ɜfɜ	dofɜddofɜ	'[He] became fat'
dɜgg ^w ɜmɜ	dɜggomɜ	'[He] subsidized'
t ^w ɜrɜ	torɜ	'[He] supported [somebody] in his/her old age'
s ^w ɜmɜ	s'omɜ	'[He] fasted'
tɜnf ^w ɜlɜff ^w ɜlɜ	tɜnfolɜffolɜ	'[It] poured/flushed a lot'

TABLE 3: The old and contemporary forms of Amharic verbs that have labialised consonants.

There is one labialised consonant /ɜ^w/ which is found in two words in the Amharic monolingual dictionary (, namely /ɜ^wa/ 'heavy rain' or 'to spill in a great amount', /ɜ^wamɜnɜɜ^wa/ 'to behave as one wishes' and in borrowed word /burɜ^wa/

[7] A study on the pronunciation of the contemporary forms by rural native speakers who have no formal education may even show that they are the same as the old forms, but this would need a different study.

‘burgeoise’.

Based on the arguments presented so far, all these labialised consonants that cannot be explained by a morpheme boundary labialisation and a lost /w/ should be part of the consonant inventory of Amharic. Thus, the total number of Amharic labialised consonants becomes 19: h^w, l^w, m^w, r^w, s^w, ʃ^w, k^w, b^w, t^w, n^w, k^w, z^w, d^w, g^w, t^w, tʃ^w, s^w, f^w, ʒ^w). The distribution of these labialised consonants is, however, limited to word initial and final positions preceding the vowels /ɜ/ and or /a/. Very few labialised consonants, namely /h^w, k^w. k^w, g^w/ could be found preceding /e/.

Agentive/adju- tative form in older form	Agentive/adjuta- tive form in contem- porary Amharic	Gloss
m ^w atʃ	m ^w atʃ	‘The deceased’
tʃ ^w ahi	tʃ ^w ahi	‘One who shouts’
r ^w atʃ	r ^w atʃ	‘Runner’
ʃ ^w ami	ʃ ^w ami	‘One who appoints’
k ^w ami	k ^w ami	‘One who is living, one who stood up’
b ^w ɜkb ^w akk’a	bokb ^w akk’a	‘Coward’
l ^w ɜt ^w l ^w att’a	lot ^w l ^w att’a	‘One who loiters’
ak ^w ah ^w anɜ	ak ^w ah ^w anɜ	‘[He] made [others] agree’
am ^w aki	am ^w aki	‘One who boils something’
s ^w ɜls ^w alla	sols ^w alla	‘One who is busybody’
t ^w ɜft ^w affɜ	toft ^w affɜ	‘One who is fat’
an ^w ɜk ^w n ^w ak’i	anok ^w n ^w ak’i	‘One who complains’
z ^w ari’	z ^w ari’	‘One who moves from one place to another’
d ^w ɜfd ^w affa	dofd ^w affa	‘One who is very fat’
dɜgg ^w ami	dɜgg ^w ami	‘One who subsidizes’
t ^w ari	t ^w ari	‘One who supports people during their old age’
s ^w ami	s ^w ami	‘One who fasts’
f ^w əlf ^w alla	folf ^w alla	‘One who enjoys being with people’

TABLE 4: The agentive/adjutative forms of Amharic verbs that have labialised consonants.

[4] CONCLUSIONS

This study set out to investigate the status of labialised consonants in Amharic. The study argued that there are 19 labialised consonant phonemes in Amharic in addition to the non-labialised ones. All of these consonants can occur in morpheme boundaries that trigger assimilation as well as contrastive environments with their plain counterparts or in individual words which result in non-words if replaced by their plain counterparts. The fact that the labialised consonants occur mostly in similar phonological environment, where they are mostly followed by the vowel /a/ cannot be a mere basis for categorizing them as non-phonemic. This proposal to consider labialised consonants as phonemes agrees with the genetic affiliation of Amharic to the South Ethio-Semitic languages, mainly the Gurage languages, for which about 10 labialized consonant phonemes (p^w, b^w, f^w, m^w, k^w, g^w, k^{'w}, x^w, ʔ^w, h^w) have been reported in the different varieties (Meyer 2011, p. 1226). An acoustic study into the pronunciation of words that are said to have labialised consonants historically but have 'lost' them to the plain ones in contemporary Amharic with a subsequent backing of the vowel is recommended to validate the proposal.

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