

A Phonological Sketch of Awing

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Abbreviations

In this paper, we have separated prefixes and stems by a hyphen '-', and also used the following abbreviations and conventions:

C	consonant
V	vowel
N	syllabic nasal
S	semivowel
v	verb
n	noun
sf	short form of verb, noun or functor
PERF	perfective aspect
PRES	present tense
P1	recent past tense (a moment ago)
P2	past tense (yesterday/a month ago)
HAB	habitual aspect
//	slashes mark underlying data
[]	square brackets mark phonetic data
H	high tone
L	low tone

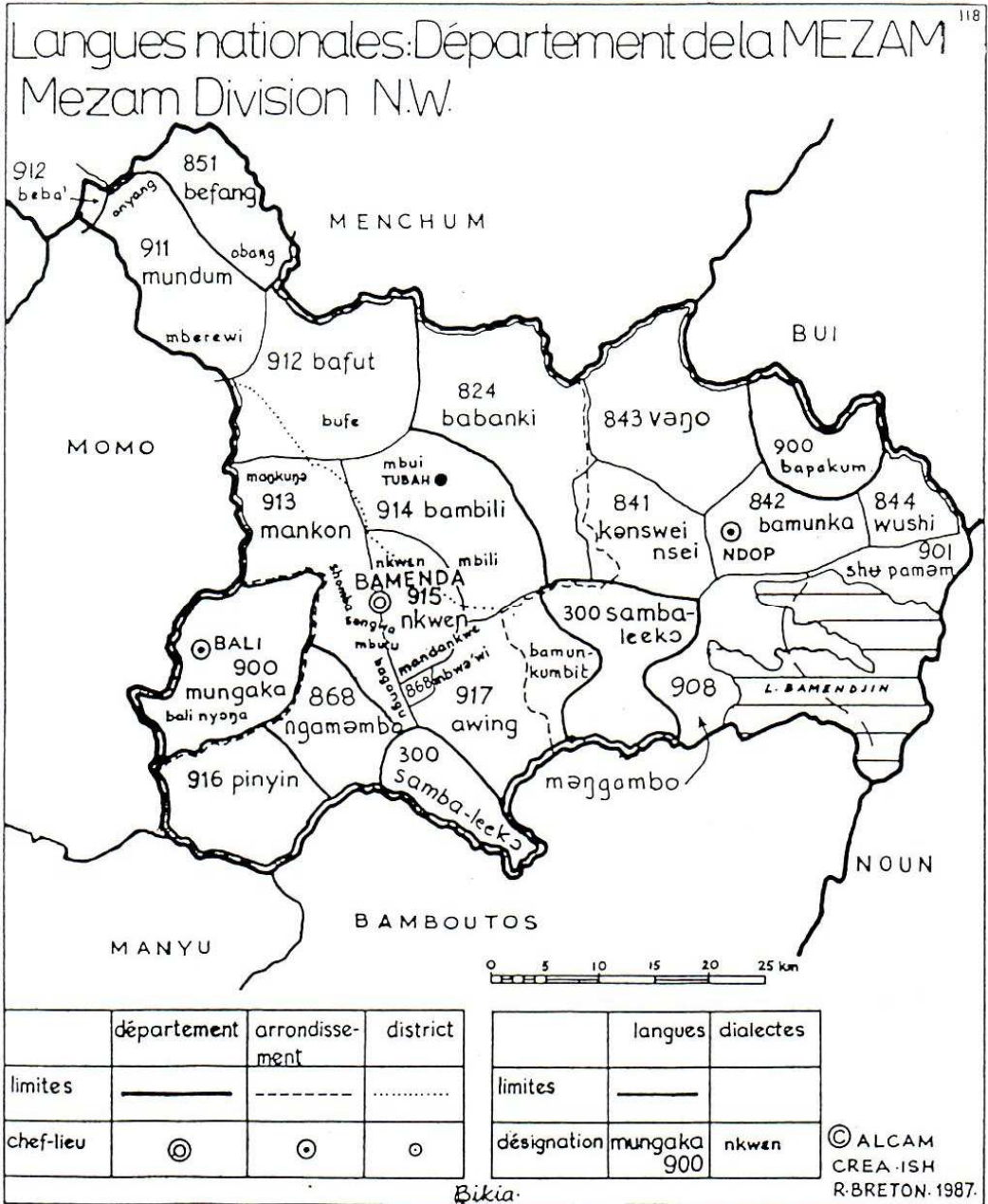
1. Introduction

The Awing language is spoken by about 22,000 people (extrapolated to 2006 from the 1987 census figures). Other 2006 figures are: 32,000 according to Awing health Centre census, 40,000 according to Awing Civil Status Registrar and 60,000 according to Awing Palace statistics. The Awing people live in and around the village of Awing, which occupies the valley east of Mount Lefo, in the Santa subdivision, Mezam division in the North West province of Cameroon. According to Azieshi (1994), Awing is one of the 8 villages of the Bamenda district together with Menda-Kwe, Nkwen, Nsongwa, Mankon, Akum, Pinyin and Baligham.

ALCAM (Dieu and Renaud, 1983) classifies Awing (917) as Niger-Kordofan, Niger-Congo, Bénoué-Congo, Bantoid, Bantu, Grassfield, Eastern Grassfield, Ngemba. Along with Pinyin, Mankon, Nkwen, Bafut, Mundum, Babanki, Vengo, Bamunka and Wushi, Awing is part of the Ring group. In the Ethnologue the classification is as follows: Niger-Congo, Atlantic-Congo, Volta-Congo, Benue-Congo, Bantoid, Southern, Wide Grassfields, Narrow Grassfields, Mbam-Nkam, Ngemba.

Most of the charts in this paper¹ were generated by SIL's PTEST software (designed with the analysis of Bantu languages in mind) from a corpus of 724 nouns and 765 verbs with single roots.

¹ I would not have been able to write this paper without the immeasurable help of many friends who have been consistently supportive and encouraging. I want to thank and acknowledge ALOMOFOR Christian, who was invaluable because of his quick understanding of the concepts and his ability to find crucial examples. A number of SIL consultants have been of great help to me; Robert HEDINGER in the early stages, Phil DAVISON later on, and especially Steve ANDERSON, who kept me going with his joyful enthusiasm. Last but not least I would like to mention my husband, for encouraging me to do things that help me grow, thank you, Nelis!



The above map is taken from ALCAM (Dieu and Renaud, 1983) and shows the Mezam division with Awing (917) situated South-East of Bamenda.

2. Consonants

2.1 Consonant Phones

The following chart shows all the phonetic consonants found in Awing. Note that of these, only b, d, g, ʔ, m, n and ŋ can occur stem-finally, and word-finally only in the short form² of the word.

	Bilabial	Labiodental	Alveolar	Postalveolar	Palatal	Velar	Glottal
Plain voiceless stops	p pw pj		t tj tɕ			k kw kj kɕ	ʔ
Plain voiced stops	b bw bj		d dɕ			g gw gj gɕ	
Vcl asp stops			tʰ				
Plain voiceless affricates			ts	tʃ tʃɕ			
Plain voiced affricates			dz	dʒ dʒɕ			
Plain voiceless fricatives		f fw fj	s	ʃ ʃɕ			
Plain voiced fricatives			z	ʒ ʒɕ		ɣ	
Nasals	m ɱ mj		n ɳ nɕ		ɲ	ŋ ŋ ŋw ŋɕ	
Liquids			l lj lɕ				
Rhotics			r				
Semivowels	w				j		

² An interesting phenomenon in Awing is the existence of long and short forms for singular and plural nouns, verbs and pronouns. The trigger which results in these forms is not yet identified.

In the course of this sketch, we show that these 54 surface consonants can be analyzed as being allophones, or combinations of just 16 underlying consonants. It should be noted that we analyze certain consonant clusters as resulting from two different underlying consonant clusters: [Cy] from /Cy/ and both [Cw] and [Cɥ] from /Cw/.

2.2 Consonant Clusters

The following chart summarizes the surface realizations of the underlying consonant clusters.

/C/	∅	+ /-j/	
		before non-back vowels	before back vowels
b	[b]	[bj, pj]	[bw, pw]
t	t	[tj]	[tɥ]
d	d	[dj]	[dɥ, lɥ]
k	k	[kj]	[kɥ]
g	g	[gj]	[gɥ]
f	f	[fj]	[fw]
s	[s]	[sj]	[sɥ]
z	[z]	[zj]	[zɥ]
ts	[ts]	[tʃj]	[tʃɥ]
dz	[dz]	[dʒj]	[dʒɥ]
m	m	[mj]	
n	n	[nj]	[nɥ]
ŋ	ŋ		[ŋɥ]

Examples:

[kàŋ-tê]	stumble
[kɥág-ə]	cough
[kwú-nə]	enter
[kjàŋ-ə]	cut a big slice

2.2.1 Consonants plus /w/

In Awing, the presence of /w/ after consonants has two realizations: [w] after back vowels and [ɥ] after non-back vowels.

2.2.1.1 Consonants plus [w]

The following consonants are followed by phonetic [w] in the data:

pw	kw
bw	gw
fw	ŋw

In Awing, both the set of consonants that can be followed by [w] and their environments are extremely limited. Consonants plus /w/ only occur root-initial. The following chart shows that consonants plus [w] only occur before two back vowels and that labial consonants plus [w] are always followed by [ɔ], while velar consonants plus [w] are always followed by [u].

[CS]	ɔ	u	Total
pw	5		5
bw	1		1
fw	8		8
kw		43	43
gw		6	6
ŋw		5	5
Total	14	54	68

One reason for the rarity of consonants followed by [w] is complementary distribution with consonants followed by [ɥ] (see section immediately below). When /w/ functions as a single consonant [w], it can precede any vowel, but when it functions as the second consonant of a consonant cluster, it will surface as [ɥ] before non-back vowels. Compare the corresponding examples below:

[pə-wè pə-kwú-nè:mə] sows

[ŋ-gɥè kwú-nè:mə] sow

[wà:r-ə] slaughter

[ŋ-gɥəd nè:mə] butcher

There are two interesting observations about the distribution of consonants plus [w]: first, coronal phones are never followed by [w] (though they are followed by [ɥ], see section below); second, there is no restriction between consonants plus [w] and long or short vowels.

2.2.1.2 Consonants plus [ɥ]

The following consonants are followed by phonetic [ɥ] in the data:

tɥ	kɥ
dɥ	gɥ
nɥ	ŋɥ
ʃɥ	tʃɥ
ʒɥ	dʒɥ
lɥ	

As mentioned previously, [w] and [ɥ] are in complementary distribution after consonants: [w] before back vowels and [ɥ] before non-back vowels, as shown below:

[nə-kwù-mó] sort of basket
 [nə-kɥíŋ-ə] upper arm

The following chart shows which consonants can be followed by [ɥ] before front or central vowels (with the exception of [i]):

[CS]	i	e	ɛ	ə	ɑ	Total
tɥ	4	1	1	3		9
kɥ	10	5	10	10	28	63
nɥ	1				2	3
dɥ	1					1
lɥ	5	1	2		1	9
tʃɥ	20		2	1	15	38
dʒɥ	1	1		1	1	4
ʃɥ	3	1	1	4	4	13
ʒɥ	7	1	2	2	6	18
gɥ		1	1	1	6	9
ŋɥ	2	1	1		6	10
Total	54	12	20	22	69	177

There are two interesting observations about the distribution of consonants plus [ɥ]: first, labial phones are never followed by [ɥ]; second, there is no restriction between consonants plus [ɥ] and long or short vowels.

2.2.2 Consonants plus /j/

The following consonants are followed by [j] in the data:

pj	tj	kj
bj	fj	gj
mj	lj	

Again both the set of consonants plus [j] and their distribution are quite restricted. The following chart shows velar consonants followed by [j] only occurring before front and central vowels while labial and coronal consonants followed by [j] only occur before the central vowel [a]. The reader is referred to the following section of this paper to see what happens when these coronal consonants are involved:

[CS]	i	e	ɛ	ɑ	Total
pj				4	4
bj				1	1
mj				1	1
fj				17	17
tj				7	7
lj				4	4
kj	4	13	8	13	38
gj		3	2	2	7
Total	4	16	10	49	75

As mentioned before, we analyze /Cj/ as a consonant cluster, where the second consonant is /j/. The chart doesn't show alveolar fricatives or affricates, because /s, z, ts, dz/ become alveopalatal fricatives or affricates when they precede /j/ or high vowels [i, i, u] (see the following section).

2.2.2.1 Alveolar Fricatives plus Underlying Semivowels

The alveolar fricatives and affricates /s, z, ts, dz/ become alveopalatal on the surface when they precede /j/, /w/ or any of the high vowels [i, i, u]. The result is that phonetic [s, z, ts, dz] only occur before non-high vowels, and can never be followed by either /w/ or /j/.

Their palatal counterparts [ʃ, ʒ, tʃ, dʒ] only occur before high vowels and [a]. These phones might almost be analyzed as allophones of the same underlying consonants if their distributions did not overlap. However, both series occur before [a] and thus we need to maintain the contrast.³

/ mḁ-sáj-ḁ/	[mḁ-sáj-ḁ]	broom
/ sjám-nḁ/	[ʃám-nḁ]	be wide
/ tsjám-tḁ/	[tʃám-tḁ]	whisper
/ tsám-tḁ/	[tsám-tḁ]	chew many things
/ ḁ-dzjá/	[ḁ-dʒá]	shrimps
/ ḁ-dzàḁ-ḁ/	[ḁ-dzàḁ-ḁ]	xylophone
/ zḁ:-nḁ/	[zḁ:-nḁ]	find
/ zjḁ-nḁ/	[ʒjḁ-nḁ]	find each other

³ This is probably the result of a historical change where the former allophones are slowly becoming separate underlying forms.

In order to explain this contrast, we postulate an underlying cluster of /sj/ and /zj/ whenever they are realized on the surface as [ʃ] and [ʒ]. The following chart shows in which environments alveolar fricatives become alveopalatal (with [s] and [ʃ] being representative of all the members of their class):

/C/	i	e	ɛ	a	ə	ɪ	ɔ	o	u
/s/		s	s	s	s		s	s	
/sj/	ʃ			ʃ		ʃ			ʃ
/sw/	ʃw	ʃɥ	ʃɥ	ʃɥ	ʃɥ				

This chart shows the near-complementary distribution between [s] and [ʃ], except before /a/. Note also that with /j/ the semivowel drops out, but with /w/ it doesn't. In both cases, it is the "high-vowel" characteristic of the semivowel that backs the consonants.

2.2.2.2 Alveolar Nasals plus Underlying Semivowels

When looking at the distribution of alveolar nasals and alveopalatal nasals, one can see a similar pattern as observed above with the near complementary distribution between [s] and [ʃ] (and other members of that class).

/C/	[C]	i	e	ɛ	a	ə	ɪ	ɔ	o	u
/s/	[s]		13	12	26	13		6	15	
/sj/	[ʃ]	8			7		1			6
/sw/	[ʃw]	23	1	3	19	5				
/n/	[n]	1	8	2	11	many	4 ⁴	3	11	6
/nj/	[ɲ]	7			5					
/nw/	[nɥ]	1			2					

While the above data shows a similarity of distribution between the fused phonetic outputs [ʃ] and [ɲ], that similarity would be even stronger if we had cases of [ɲ] before the [i] and [u] vowels, something that is not the case.

2.2.3 Summary Chart of Consonant Clusters

The following chart summarizes the distribution of C plus [w], C plus [ɥ] and C plus [j]. We note that C plus [ɥ] occurs with both coronal and velar consonants before both front and central vowels. C plus [w] however only exists with labials and velars before a certain back vowel. C plus j occurs with all consonants before central vowels and with velar consonants before front vowels.

⁴ This combination does not exist in the citation form but often as the short form for roots with [nə] or [nə:]. Eg. [nə:nə], [ɲɲɲ] 'be abundant'

	Front vowels	Central vowels	Back vowels
Labials	- -	C [j] (only before a) -	- C [w] (only before ə)
Coronals	- C [ɸ]	C [j] (only before a) C [ɸ]	- -
Velars	C [j] C [ɸ]	C [j] C [ɸ]	- C [w] (only before u)

2.3 Consonants Preceded by Syllabic Nasals

The following surface combinations of a syllabic nasal (symbolised /N/ for underlying form) with a following consonant are found in the data:

	ɲt	ɲk
ɱb	ɲd	ɲg
	ɲts	ɲtʃ
	ɲdz	ɲdʒ

The following chart shows the distribution of consonants preceded by syllabic nasals (N), regardless of whether those consonants are followed by a vowel or semivowel:

/N/	b	t	d	ts	tʃ	dz	dʒ	k	g	Total
ɱ	37									37
ɲ		14	35	12	9	18	5			93
ɳ								41	41	82
										212

Note that the phone [p] is never found preceded by /N/ in Awing. This is because [p] and [b] are allophones of the phoneme /p/ with the allophone [b] only following /N/.

Also, note that there is always Place Assimilation with syllabic nasals, thus the nasal prefix shares the place of articulation of the following consonant.

If a verb has a syllabic nasal prefix, the syllabic nasal has a high tone, whereas syllabic nasal prefixes for nouns always have a low tone.

Whenever /z/ is preceded by /N-/, a homorganic plosive is generated before the [z]⁵:

/zò:m-ə/	[zò:m-ə]	insult (v)
/ŋ-zòm-nə/	[ŋ-dzòm-nə]	insult (n)
/mə-ŋ-zòm-nə/	[mə-n-dzòm-nə]	insults (n)

Likewise, whenever /zj/ is preceded by /N-/, a homorganic plosive is generated before the [ʒ]:

/zjùb-ə/	[ʒùb-ə]	skin (v)
/ŋ-zjùb-kə/	[ŋ-dʒùb-kə]	something peeling off
/mə-ŋ-zjùb-kə/	[mə-n-dʒùb-kə]	some things peeling off

There are no cases of a homorganic plosive added in front of [s, ʃ, f] after a preceding (syllabic) nasal, because in Awing /N-/ changes to [ə-] before voiceless fricatives.

[ə-sáʔ-ə], [mə-sáʔ-ə]	needle, needles
[ə-ʃú-ə], [mə-ʃú-ə]	fish, fish
[ə-fóŋ-ə], [pə-fóŋ-ə]	reader, readers

Similarly, an epenthetic velar plosive is added in front of [j, w] when they follow a (syllabic) nasal. The result is a consonant cluster [Cɰ] or [Cj]:

[wà:r-ə]	slaughter
[ŋ-gɰəd nè:mə]	butcher
[jé:-rə, ŋ-gjé:-rə]	lose your mind (2 different grammatical forms)

A slightly different process changes [p, l, ɣ] to their respective voiced plosive counterparts following a (syllabic) nasal⁶.

[pwód-kə]	appease, pacify
[ŋ-bwód-nə]	blessing
[lɰéŋ-kə]	to fill
[sáŋ jì ŋ-dɰéŋ-kə-nə]	full moon
[ɣán-tə]	visit a little
[ŋ-gé:nə]	visit (with verbal prefix)

⁵ Compare with Post Nasal Hardening in Bakoko (Kenmogne 2000).

⁶ Compare with Delateralization and Post Nasal Voicing in Bakoko (Kenmogne 2000).

Compare the following two sets of data. The first set shows nouns of noun classes 1/2 in which /N-/ is a clear, separate noun class prefix. In these cases the normal phonological rules apply and thus stem-initial [l] preceded by /N/ changes to [nd], [p] preceded by /N/ changes to [mb] etcetera:

[ŋ-dó:-nə]	[pə-ló:-nə]	beggar(s)	cf: [ló:-nə] want
[m̩-bíʔ-ə]	[mə-píʔ-ə]	hem(s)	cf: [píʔ-tə] fold
[ŋ-gəm-ə]	[pə-ɣəm-ə]	sister(s) -in-law	
[ŋ-dzǎ:-rə]	[pə-zǎ:-rə]	thief(s)	cf: [zə:-rə] steal

The second set however consists of nouns of classes 1/6 or 9/6 with a /N-/ noun class prefix which does not change according to the phonological rules and an additional plural noun class prefix is added before the singular N prefix. /N-/ does not retain its syllabicity in this position but a low-level desyllabification rule takes away the syllabicity of the syllabic nasal prefix when it is no longer word-initial.

[ŋ-dzə:-mə]	[mə-n-dzə:-mə]	dream(s), vision(s)
[m̩-bíʔ-ə]	[mə-m-bíʔ-ə]	kidney(s)
[ŋ-kàŋ-ə]	[mə-ŋ-kàŋ-ə]	marriage ceremony(ies)

In these cases, where nouns have more than one prefix, we have chosen to call the additional plural noun-class prefix a pre-prefix. Compare the following two sets of examples:

[m̩-bíʔ-ə]	[mə-m-bíʔ-ə]	kidney
[m̩-bíʔ-ə]	[mə-píʔ-ə]	hem
[ŋ-dò:]	[mə-n-dò:]	valley
[ŋ-dó:-nə]	[pə-ló:-nə]	beggar

2.4 (Basic) Consonant Allophones

We have chosen to analyze C[w], C[ɥ] and C[j] as consonant clusters in which C2 is underlyingly /w/ or /j/. In the case of C/j/, the resulting cluster becomes one phone when C is an alveolar fricative. If we do this, the initial chart of complex consonants (see under 2.1) can be reduced to the following chart of simple phones that may or may not be followed by an optional semi-consonant:

	Bilabial	Labiodental	Alveolar	Palatal	Velar	Glottal
Plain voiceless stops	p		t		k	ʔ
Plain voiced stops	b		d		g	
Voiceless aspirated stops			t ^h			
Plain voiceless affricates			ts			
Plain voiceless fricatives		f	s			
Plain voiced fricatives			z		ɣ	
Nasals	m		n		ŋ	
Liquids			l			
Rhotics			r			
Semivowels	w			j		

However, Awing has allophonic rules that change a limited number of these underlying abstract consonants into different allophones in different environments. In the following subsections we will discuss these rules and the surface allophones that result.

2.4.1 Aspiration

The phone [t^h] is an allophone of /t/ occurring only before the 3 high vowels in both open and closed syllables. Examples:

[t ^h ú-ə]	pay
[ŋ-t ^h úm-kə]	entrance hut
[t ^h ím-ə]	string beads
[pə-t ^h ím-kə]	foolish person (foolish things)
[t ^h ím-nə]	wander
[ŋ-t ^h ĩ nùm-nə]	noon

Compare the examples above with their following unaspirated variants :

[à-tè]	rust
[à-tətá]	courtyard

2.4.2 Alveolar Allophones of /d/

The consonant phones [l], [d] and [r] are all allophones of /d/. Their distribution is the following:

[l] Stem-initial and either word-initial or following a V:

[pə̀-lìm-ə̀]	nephews
[lè:-rə̀]	hat

[d] Stem-initial after a syllabic nasal prefix:

[ŋ-dìm-ə̀]	nephew
[ŋ-dòŋ-ə̀]	duck

[d] Stem-final followed by a suffix consonant or just plain word-final:

[néd-kə̀]	groan with effort
[mə̀-γóð mə̀ pàŋ-nə̀]	palm oil

[r] in free variation with [l]: Stem-final followed by a suffix vowel or as first consonant of a suffix:

[néɾ-ə̀]	groan with pain
[néɻ-ə̀]	groan with pain
[mə̀-γóɾ-ə̀]	oil
[mə̀-γóɻ-ə̀]	oil
[à-kwúb-rə̀]	exchange
[à-kwúb-lə̀]	exchange
[kə̀:-rə̀]	run!
[kə̀:-lə̀]	run! ⁷

From this, we can conclude that [l], [r] and [d] are all allophones of /d/.

2.4.3 Voiced Velar Stop and Fricative

The phones [ɣ] and [g] are allophones of /g/ of which the first is realized stem-initially in the absence of a preceding nasal prefix:

7 In the pair of loan words [mə̀-káɾə̀] ‘white man’ and [mə̀-káɻə̀] ‘English language’ the last part of the word is seen as a suffix, although it doesn’t have that function. This explains the free variation.

[à-ɣàʔ-ə]	cave
[ɣàd-kə]	frighten
[pə-ɣəm-ə]	mothers-in-law

The allophone [g] occurs stem-initially following nasal prefixes and stem-finally regardless of what follows, as in:

[ŋ-gəm-ə]	mother-in-law
[ŋ-gwùr-ə]	descendant
[ŋ-gé:-rə]	gun
[móg]	fire
[ŋ-dɔ̀g-tə]	end
[nə-lég-ə]	eye

There is a limited set of words where [ɣ] occurs stem-initially preceded by [kə-]. We analyze [kə-] as an archaic prefix which has not yet become part of the root, making [ɣ] stem-initial. The normal noun-class prefix has now become a preprefix, as below:

[à-kə-ɣə]	stupidity
[à-kə-ɣàŋ-ə]	okra

2.4.4 Voiceless Velar and Glottal Stop

Similarly [ʔ] and [k] are in complementary distribution as allophones of /k/, where [k] occurs morpheme-initially whether following a nasal prefix or not, and [ʔ] occurs stem-finally whether a suffix is present or not. Examples:

[à-kàʔ-ə]	chair
[píʔ-kə]	twist
[ŋ-kjà-kə pèŋ-ə]	dawn (“loosening of outside”)
[ŋ-kjàʔ-ə]	light
[ŋ-kjàʔ nə-fàŋ-ə]	lightning
[ŋ-kàʔ-ə]	bucket

2.4.5 Voiceless vs. Voiced Bilabial Stop

Similarly, [p] and [b] are allophones of the same phoneme /b/, where [p] occurs stem-initially (but not preceded by a nasal prefix) and [b] elsewhere. Examples:

[à-pá:b-ə]	he-goat
[ŋ-tsòb pɛ]	twelve
[ŋ-bà:mə]	body

2.4.6 Distribution Chart of the allophones of /b/, /d/, /g/ and /k/

	Stem-initial ⁸	Stem-initial N/_	Stem-final _/C ⁹	Stem-final _/V	First C of suffix
/b/	p	b			–
/d/	l	d	r in free variation with l		
/g/	ɣ	g			–
/k/	k		?		k

2.4.7 Underlying Consonants

Once all these allophonic rules have been taken into account, we are left with the following 14 underlying consonants:

	Labial	Coronal	Velar
Voiceless stops		t	k
Voiced stops	b	d	g
Voiceless affricates		ts	
Voiceless fricatives	f	s	
Voiced fricatives		z	
Nasals	m	n	ŋ
Semivowels	w	j	

3 Vowels

3.1 Vowel Chart

While an underlying seven vowel system is common to Grassfields Bantu languages, Awing has, like many Western Grassfields languages, added additional central vowels [ɨ, ə], as shown in the following chart. These nine vowels are both underlying and surface vowels:

	Front	Central	Back
high	i	ɨ	u
mid	e	ə	o
low	ɛ	a	ɔ

⁸ “Stem-initial” includes “Word-initial”

⁹ “Stem-final _/C” includes “Word-final”.

[páʔ-ə]	braid, weave
[pèʔ-ə]	carry
[pě]	two
[páʔ-ə]	harvest of maize
[píʔ-ə]	hem
[pǐ fɛ]	return something
[póʔ-ə]	baboon
[pòʔ-ə]	mushroom
[pú:]	intensifier

3.1.1 Long Vowel Chart

There is contrastive vowel length in Awing, but it only occurs in the first syllable of the root and only with the following seven vowels, i.e. to date, we have found no occurrences of long /i:/ or long /ɛ:/.

	Front	Central	Back
high			u:
mid	e:	ə:	o:
low	ɛ:	a:	ɔ:

Five of the long vowels [e:, o:, ɛ:, ə:, a:] are quite frequent in Awing.

[à-pé:-nə]	bread
[à-pèŋ-ə]	outside
[à-fò:-nə]	hunting
[à-lòŋ-ə]	dance group
[dzə:-mə]	dream
[ŋ-dzəm-ə]	back
[à-kɥá:-rə]	support (n)
[mə-ŋkɥá:-rə]	midwife
[ə-lè:-rə]	bridge
[ə-lèr-ə]	beard

[tsɛ̀:-rɛ̀]	defeat
[tsɛ́r-ə̀]	stop up, patch

Two long vowels [ɔ: and u:] don't occur so often, but are nevertheless contrastive:

[fwɔ̀:-tɛ̀]	mumble
[fwɔ̀ʔ-ə̀]	hollow out
[nə̀-kwù:-nɔ̀]	entrance
[nə̀-kwú-nə̀]	local rice

3.2 Vowel Sequences

There are three possible combinations of adjacent vowels in Awing. All three of the sequences are high vowels followed by -ə: [iə, iə, uə]. In all of these cases, there is a morpheme break between the two vowels, the stem ending with a high vowel followed by a schwa suffix. There are many examples of [iə] and [uə] but there is only one occurrence of [iə]. The following two sets of examples attempt to show the contrast between these vowel sequences and consonant clusters. The high vowels in the first set are distinctively longer than the second C in the consonant clusters below, which are pronounced with less emphasis. Compare the discussion on moraic weight in Bafanji in Hamm and Hamm (2007). Compare the following two words:

[à-kwú-ə̀]	corpse
[mè-tɥə̀ŋ-nə̀]	burial

The fact that /w/ stays [w] and not [ɥ] in “corpse” shows that the [u] is functioning as the nucleus of a syllable. The suffix vowel also functions as the nucleus of a syllable with the result that you have two vowels functioning as syllables without a consonant in between them (though, admittedly, this only happens in Awing across a morpheme break).

4 Segmental Syllable Structure

4.1 Basic Syllable Types

We find 6 different basic syllable patterns in Awing, which are all very frequent (“S” is for the restricted set of semivowels that can occur between a consonant and a vowel):

V	[à-lě]	day
N	[ŋ̩-bê]	knife
CV	[kǒ]	snore

CVC	[kòŋ-tâ]	be pleased
CSV	[kjê]	pluck
CSVC	[kwúb-tà]	close

The following chart provides a summary of the restrictions of which syllable types can occur in which parts of speech:

Syllable Types	Funcutors	Prefixes	Roots (of N or V)	Suffixes
V	x	x	-	x
N	x	x	-	-
CV	x	x	x	x
CVC	x	- ¹⁰	x	-
CSV	-	-	x	-
CSVC	-	-	x	-

Included under funcutors are prepositions, pronouns, conjunctions and quantifiers.

The above chart shows that only roots can have S, and roots must have at least a C and a V, suffixes must contain a vowel, and both prefixes and suffixes have a limited set of possible syllable types.

4.2 Syllable Sequences in the Word

4.2.1 Verb Roots and Suffixes

Basic verb roots are C(S)V(C), which must be followed by one of the following suffixes. The suffixes are in order of frequency, starting with the most frequent.

- ə Unspecified vowel, comparable to the Final Vowel in Proto-Bantu.
- tə Meaning often ‘a lot’, ‘many things’, ‘many times’, or ‘a bit’.
- kə Same meanings as /-tə/.
- nə Meaning often ‘each other’, i.e. reciprocal.
- rə/-lə Doesn’t follow short vowels or nasals. No common meaning.
- mə Only follows long vowels [ə:], [e:] and [o:]. No common meaning.

From this we could conclude that Awing verbs always end in a vowel, at least in their citation form. However, further research needs to be done on the use of what we call the

¹⁰ Whenever you have two underlying prefixes and the second one is a syllabic nasal prefix, the nasal prefix loses its syllabicity and you end up with a surface CVC syllable as the prefix.

‘short form’ in Awing. Verbs in the short form may end in a consonant. One of the instances where the short form is used is in the perfective aspect. See the following examples:

[m-ô-nè	à	γǝn]	
child	he	go-PERF	“Has the child gone?” (from [γǝn-â] go)

[à	tsǐd	ŋ-tsə:l-ə]	
he	lied-PERF	lie	“He lied.” (from [tsə:l-ə] lie)

4.2.2 Root Vowel Changes

A very interesting phenomenon in Awing, also needing more research, is the difference between long and short forms (sf) in general, not just of verbs. At this point we will only give examples of some processes that we have observed in the language.

Long vowels in an open syllable of the verb root become short when the -V suffix [-ə] is replaced by a CV suffix or root, due to resyllabification. In most cases, there is vowel lowering as well:

[pjá:b-ə]	protect	sf: [pjáb]
[pjáb ná nè-kàŋ-ə]	protect by charm	

[sé:n-ə]	cut open	sf: [sá]
[sán-tə]	cut open many things	

[sò:b-ə]	stab, pierce	sf: [sǒb]
[sǒb-tə]	stab continuously	
[mè-sǒb-sò:b-ə]	thorn	

[zò:m-ə]	insult	sf: [zǒ]
[zǒm-nə]	insult each other	

[tsé:b-ə]	talk	sf: [tsáb]
[tsáb-rə]	talk a lot	

[zó:-nə]	find	sf: [zǐ]
[zǐ:-nə]	find each other	

4.2.3 Vowel Elision

In associative constructions and compound nouns, word-final [-ə] is often deleted. This is another case to be taken into account when further study of the difference between long and short forms is done.

[nə-pòʔ-ə]	pumpkin
[nə-pòʔ-ə mə]	my pumpkin
[nə-pòʔ nə ké:n-ə]	melon (pumpkin of crab)
[mə-γóʔ-ə]	oil
[mə-γóʔd mə pàŋ-nə]	palm oil (oil which is red)

4.2.4 Other Morpho-phonemic Alternations

The whole last syllable can occasionally be deleted, sometimes combined with a vowel change:

[tə-tè:nə]	middle
[tə-tʰi nə-pù nə ŋ-góbà]	yolk of egg (middle-egg of fowl)
[ŋ-bè:mə]	body
[ŋ-bi ŋ-dê]	wall (body-house)
[nó:-rə]	snake
[nô ŋ-gám-ə]	python (snake-noun)

Class 7/8 nouns with long [e:] in the root change to their short form when they are the first part of a compound noun in the plural :

[à-mbê: mə-lùʔ-ə]	palm rat
[ə-mbâ mə-lùʔ-ə]	palm rats
[à-té:r-ə kò:-rə]	foot
[ə-tád mə-kò:-rə]	feet (feet-ends)

There is phonetic consonant assimilation, where the final C of the noun assimilates to the place of articulation of the first C of the associative marker. These have not been written in this paper.

[nə-pěd ná nú-ə] beehive (hive of bee)
 [mə-pěb mó nú-ə] beehives

A last process that needs mentioning is the echo vowel in CVCV nouns where V2 is [ə], and C2 is [ʔ]. V2 (a lenis vowel) echoes V1 (a fortis vowel).

[nǝʔ-ə] ~ [nǝʔ-ə] press
 [pěʔ-ə] ~ [pěʔ-ə] carry
 [páʔ-ə] ~ [páʔ-ə] braid

5 Tone

The Awing language is a tonal language and exhibits three phonetic tone levels: low, mid and high; and two contour tones: rising and falling.

/à-kò:l-ə/	[à-kò:r-ə]	leg
/à-kò:l-á/	[à-kò:r-ə]	latrine
/kóŋ-ə/	[kóŋ-ə]	ditch
/ŋ-dǎ/	[ŋ-dǎ]	race
/ŋ-dê/	[ŋ-dê]	house

5.1 Automatic Downstep

High tones become phonetically lower (mid) following low or falling tones. Because surface high tones never follow a low or falling and because mid tones never appear except after a low or falling, we treat all phonetic mid tones as the result of automatic downstep from high tone. We therefore have not written any of these predictable mid tones in this paper, except in this and the preceding subsection.

/ə-lêr-á/	[ə-lêr-ə]	beard
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5.2 Normal Tone Patterns

5.2.1 Prefix Tones

The following is a summary chart of noun class prefixes, showing that only class 9 singular nouns take the low tone syllabic nasal prefix:

Class	Prefix	Noun	Gloss
1	-	mǎ	mother
2	pə-	pə-mǎ	mothers
3	ə-	ə-kwúnó	bed
5	nə-	nə-kəŋó	pot
6	mə-	mə-kəŋó	pots
7	à-	à-láʔə	village
8	ə-	ə-láʔə	villages
9	ŋ̣-	ŋ̣-dùè	hammer

Noun class prefixes almost always have low tone in Awing. There is one exception, namely a few Class 1/2 nouns which have a high tone mǎ- or kǎ- prefix. These are all cases of archaic prefixes which are now reanalyzed as belonging to the noun stem, as can be seen when the plural prefix pə- is added.

[mǎ-tʃèʔǎ], [pə-mǎ-tʃèʔǎ]	caterpillar (-s)
[kǎ-fəmǎ], [pə-kǎ-fəmǎ]	sort of bee

Consecutive verbs always take a high tone nasal prefix except that roots starting with [s], [ʃ] and [f] take a high tone [ǎ-] vowel prefix. Below are some examples.

Nouns:		Verbs:	
[ŋ̣-kò:rə]	fight	[ŋ̣-kó:rǎ]	catch
[ŋ̣-dúmə]	road	[ŋ̣-dú:mǎ]	bite
[ŋ̣-gè:bə]	week	[ŋ̣-gé:mǎ]	visit
[ə-só:mə]	waste	[ǎ-só:mǎ]	waste

5.2.2 Tone Patterns on Nouns

The most common tone patterns on nouns are the following. Only tone patterns with 12 or more examples (from a total of 728 basic nouns) have been taken into account.

Tone			Total	Example	Gloss
	H-	H	20	lúm-tǎ	mosquito
	H-	L	12	sǎŋ-ə	moon
L	-H-	L	141	nə-fóg-ə	waterfall
L(N)	-H-	L	42	ŋ̣-tóʔ-ə	calabash
	L-	L	27	fʋwǎʔ-ə	chisel
L	-L-	L	63	à-ŋ̣ŋ̣-ə	claw
L(N)	-L-	H	41	ŋ̣-kjèr-ǎ	raffia
L(N)	-L-	L	51	ŋ̣-tsò:r-ə	mouth
L	-HL-	L	12	nə-tóg-rə	ear
L	-LH-	L	12	à-lěd-nə	wealth

From this chart we can conclude that suffixes can not be predicted from the root tone, and high tone suffixes are much less frequent than low tone suffixes. We also see that tone glides on roots never follow a zero or homorganic nasal prefix, nor do they have high tone suffixes.

5.2.3 Tone Patterns on Verbs

The most common tone patterns on verbs are the following. Only tone patterns with 12 or more examples (from a total of 770 basic verbs) have been taken into account.

Tone		Total	Example	Gloss
HL		13	nâ	insist
H-	L	396	láʔ-kə	thank
LH-	L	24	mĩ-ə	swallow
L-	HL	328	zòŋ-ə	follow

It appears that the four patterns above are really two patterns with predictable variation: the first two surface patterns show a HL pattern spread over one or two syllables respectively; the last two surface patterns show a LHL pattern conditioned by the presence or absence of a consonant between the two syllables.

Because Bantu verbs are famous for having just an underlying contrast between H and L, it seems possible that the first two patterns came from a H tone verb followed by HL floating tones and the last two patterns came from a L tone verb followed by the same HL floating tones.

5.3 Grammatical Tone

Certain grammatical changes in Awing are expressed solely by a change in surface tone. An example of such “grammatical tone” is the Habitual Aspect, which likely consists of an underlying high tone tonal morpheme between the tense marker and the verb, as shown in the following examples:

[yènə]	go!
[à yènə]	he has gone (a moment ago) (P1, unmarked)
[á yènə]	he usually goes (HAB)
[à tó ŋgènə]	he is going (Present tense)

[à kə yènə məté:nə] he went to the market (yesterday) (P2)

[à kǎ yènə məté:nə] he usually went to the market (P2 plus HAB)¹¹

¹¹ In [à kǎ yènə məté:nə] He usually goes to the market, we see the HAB marker [kǎ], not to be confused with the P2 marker [kə].

[kwá:rə̀]	help!
[pèn kwà:rə̀]	we have helped
[pě̀n kwá:rə̀]	we usually help (HAB)

These kinds of surface tone changes are very complex and quite numerous in Awing (as in other Grassfields Bantu languages). We leave an explanation of these complex tonal perturbations to some later time, when additional tone analysis has been done.

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