

Cwaya Phonology

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0. Introduction

Cwaya language is a Niger-Kordofanian (Heiban group) language spoken in Southern Kordofan in the Sudan. This language group lives in the area near Kadoogali. The language is spoken by about 10,000 people. The current write-up is based on linguistic studies by native speakers of the language for the purpose of deciding on a writing system for the language.

I. Consonants

The following consonants are found in Cwaya.

	Bilabial	Dental	Alveoloar	Palatal	Velar
Plosives vl.	p	t̪		c	k
vd	b		d̪	ʃ	g
Nasals	m		n	ɲ	ŋ
Fricatives vl.		f	s ʃ		x
vd		v	ð		
laterals			l		
Vibrants			r ɾ		
semi-vowels	w			y	

There appears to be length on alveolar plosives and nasals.

Distribution

The following data show where each of the consonants can occur in Cwaya.

	Beginning		Middle		End
p	peða	'white'	apá	'take'	-----
b	buðɾ	'punish'	ábaðaboð	'lung'	-----
			nəbba	'wings'	
f	fela	'pretty'	ləfoɾa	'lizard'	-----
v	viði	'cut hair'	ávil	'shadow'	-----

m	məŋga múku	'sister' 'mole'	ðima	'scorpion'	lóm	'fish'
w	wa	'wife'	ŋguwí	'that'	áw	'how?'
ð	ðiju	'intestines'	xəðala	'nose'	-----	
t̥	ʦaɾa	'small goat'	lót̥aɾ mərʦa	'baboon' 'horse'		tooth
t	ʦuða	'come out'	luʦuʦam	'immature sorghum'	-----	
ɖ	ɖarnná	'squeeze'	xáɖa	'near'	-----	
ɖ	ɖuǎ	'eight'	loɖum	'star'	-----	
s	sé	'all'	uɖənəsa ŋassa	'smell' 'bladder'	-----	
n	na	'and'	ðómani	'leg'	ɖɔn	'house'
l	lé	'bone'	ləmláka	'hippo'	lal	'flies'
r	rə	'hands'	yáru	'skins'	rar	'ropes'
ʦ	ʦə	'head'	yaʦu	'hairs'	-----	
ʃ	ʃwaya	Tribe name	----	-----	-----	-----
c	cán caan	'be quick' 'follow'	ŋərcid̥ xaceða	'sesame' 'follow'	-----	
ʃ	ʃila	'cold'	laʃoʦa	'hockey stick'	-----	
ɲ	ɲin	'dogs'	léɲa	'egg'	ŋaʦaɲ	'illness'
y	yaɾu	'hairs'	sabáya	'maize'	-----	-----
ŋ	ŋin	'dog'	ðəŋəla	'tongue'	ŋolaŋ	'seeds'
k	kɪnndá	'crested crane'	sukkəl	'pumpkin'	-----	-----

g	gínná	'three'	ləgru	'chest'	-----	-----
x	xəriŋ	'stomach'	maxo	'sew'		

It was found that the *ʃ* only occurs before 'w' and is only found in two words in the language: *ʃwaya* 'tribal name', and *ʃwol* 'sack or basket' which is an Arabic loan word. Therefore, it does not seem advisable to have separate letter for this sound and 'c' will work for it. The intervocalic 'x' is voiced, but there is no contrast, so it will be written as 'x'.

II. Vowels

The following vowels are found in Cwaya.

i	u
ɪ	ʊ
e	ə
ɛ	ɔ
a	

Distribution:

The following data show where each of the vowels can occur in Cwaya.

	Beginning		Middle		End	
i	ɪnɔ	'mouth'	ŋɪn	'dog'	viðɪ	'cut hair'
ɪ			ɲɪn	'dog's	ðixɪ	thorn
e	ɛdɔda	'coconut tree'	fela	'pretty'	le	'eye'
ɛ	era					
ə		'leopard'	ləfɛr	'tail'	le	'bone'
a	avɪl		mavərələ	'sweep'	mavərələ	'sweep'
u	umbar	'shadow'	xaðala	'nose'	fela	'pretty'
ʊ	umbur	'lyre'	tuði	'come out'	yáru	'skins'
o	oɟɛl	'door'	lobu	'lake'	lobu	'lake'
		'piece of stone'	lóm	'fish'	maxo	'sew'

o	oɾɔ	'bowl'	ɖɔn	'house'	-----
	ɔlə	'to cry'			

III Contrast

A. Minimal pairs between consonants are shown below. B=Beginning of the word, V=between vowels, C=next to a consonant, E=End of the word. Only high tone is marked; the default is low tone.

b-p	B	beða	'dip'	peða	'white'
	V	abá	'beard'	apá	'take'
	C				
	E				
p-f	B	paða	'handful'	fela	'pretty'
	V	lapulla	'dot'	ləfora	'lizard'
	C	lampel	'toothless'		
	E				
b-v	B	xobéla	'shell groundnuts'	xovéla	'chase noisily'
	V	ɲaben	'kind of fruit'	ɲavin	'blood'
	C				
	E				
t-d	B				
	V	oɖa	'snake'	oɖa	'pick up'
	C				
	E				
ɖ-d'	B				
	V	xáɖa	'stone'	xáɖa	'near'
	C	luθar	'baboon'	xaðon	'house'
	E				
t-t	B				
	V	xatɪh	'have'	xatɪh	'get out'
	C				
	E				
t-d'	B				

	V C E	xatjala	'disappear'	xadala	'move'
ɖ-ð	B V C E	ɖuwa xəɖa	'eight' 'stone'	ðuwa xəða	'root' 'animal'
g-x	B V C E	gwi manɣa	'summer' 'brother'	xwi maxa	'yellow' 'sew' [maɣa]
s-ð	B V C E	sé xəsosa xəɽsá	'all' 'strainer' 'wine'	ðé xəðoða xəɽða	'to stab' 'losing' 'buy'
c-J	B V C E	cá xoceða	'abuse' 'follow'	Já xoJoða	'to call a goat when it runs away' 'thin'
t-s	B V C E	tɛ xarɕa	'iron stick' 'cry to'	sɛ xarsa	'all' 'said to'
k-x	B V C E	kála kuwa alkraw	'deep in' 'name of person' 'on the earth'	xála xuwa	'place' 'hot'
k-g	B V C E	gínná	'three'	kinní	'type of tree'
f-v	B V	fela ɣafer xəfelaná	'pretty' 'tails' 'happy'	vaða ɣáveɪ xəvélaná	'stop raining' 'kind of fruit' 'water tree'

	C				
	E				
l-ɫ	B	la	'be in area'	ɫa	'head'
	V	xela	'comming'	xɛɫa	'suckle'
	C E	abɛlaxur	'kind of bird'	abɫoxol	'groundnut shell'
r-l	B	rowa	'fences'	luwa	'meeting'
	V	era	'leopard'	ela	'come'
	C	xɛmbra	'head cushion'	xɛmla	'tortoise'
	E	rar	'ropes'	lal	'flies'
r-ɫ	B	rɛ	'hands'	ɫɛ	'head'
	V	yaru	'skins'	yɑɫu	'hairs'
	C	xɛrɛɫ	'cloth'	xɛɫɛr	'kind of grasshopper'
	E	rar	'ropes'		
c-s	B				
	V	asi	'girl's name'	áca	'to ignore him'
	C E				
ɲ-ŋ	B	ɲer	'girls'	ŋer	'girl'
	V	alɛɲa	'we eat'	alɛŋa	'you sing'
	C E	ŋolanɲ	'seeds'	ŋólɪŋ	'words'

B. Minimal pairs between vowels are shown below. B=Beginning of the word, M=middle of the word, E=End of the word. Only high tone is marked; the default is low tone.

e-ɛ	B				
	M	lela	'they are coming'	léla	'village'
	E	le	'eye'	le	'bone'
ɪ-ɛ	B	ira	'long grass'	era	'leopard'
	M				
	E	xɛbɫɪ	'monthly cycle'	xɛbɫɛ	'drop'
ɪ-e	B				
	M	xɪɾɪ	'to suckle'	xɛɾa	'small thorn'

	E				
i-e	B				
	M	xira	'hanging'	xerá	'break'
	E	xarɪ	'injure'	xəɾe	'september'
i-i	B				
	M	ɲin	'dog'	ɲin	'dogs'
	E	xɪɾɪ	'gazelle'	xɪɾɪ	'to suckle'
a-ə	B				
	M	xarap	'kitchen'	xəɾɪp	'stomach'
	E	xáma	'porridge'	xəmə	'local doctor'
u-o	B	úɖalla	'name of person'	oɖállá	'kind of insect'
	M	uruɖ	'monster'	oroɖ	'kind of rat'
	E	xəðəbu	'type of tree'	xəðəbo	'name of place'
u-u	B				
	M	xuma	'thick'	xumma	'to catch'
	E	ɖuɾa	'stick'	ðúɾa	'back'
o-u	B	oma	'care'	uma	'ill'
	M	sokəl	'bird trap'	sukəl	'pumpkin'
	E	lubo	'mirror'	ləbú	'well'
o-o	B	orá	'bird trap'	oɾá	'to win'
	M				
	E				

IV. Tone *Needs more investigation*

There is evidence that tone is important in this language. There are two level tones and a falling tone. Below are listed words with lexical tone, and it should be noted that reading is considered very difficult when the tones are unmarked. In addition, direction is indicated by tone such that low-high indicates direction away from the speaker while low-low is direction towards the speaker. There are also instances of grammatical tone.

Away (L-H)		Toward (L-L)	<i>↳ eg pronouns -</i>
àpá	'take'	àpà	'bring'
èlá	'go'	èlà	'come'

'herd cattle away'

lèjà

'herd cattle to'

low tone - mid tone @ high tone
lámà 'chin' lámà 'pot'

There are many examples of tone contrast. Get more from group.

V. Syllable structure

The following syllable types are present in Shwaya language.

CV	le (ləi)	'eye'
CVC	lóm	'fish'
/C	áw	'how?'
CVCV	fela	'pretty'
CVC.CVC	lín.dí	'small melon'
	maŋ.ga	'sister'
	nəb.ba	'wings'
CV	ó.lə	'cry'
CV	gwí	'summer'
	lə.gru	'chest'
	ŋguwí	'there'

Intervocalic consonants may be either single or double.

á	'become bad'	óllá	'trachea'
na	'pot'	ləmma	'chin'
ma	porridge	xámmá	'1 st born girl'

Orthography

As a result of our study, we have shown that these consonants and vowels need to be included in our orthography. In this section, we will give the symbols that the community has approved.

Actual symbol	Proposed Orthography	
p	apá	'take it'
b	sabra	'dura'
f	lahfer	'tail'
v	ávil	'shadow'
m	láhmmá	'chin'
w	zowar	'heart'

ð	z	zó'ra	'back'
t	t	órtá	'bowl'
t	't	xa'ta	'kind of insect'
d	d	xahdam	'book'
d	'd	xá'da	'stone'
s	s	suhkâhl	'pumpkin'
n	n	lihnn'dil	'small melon'
l	l	elá	'go'
r	r	ngahrciht	'sesame'
ɾ	'r	xahr'ra	'beginning'
c	c	lacâl	'camel whip'
ʃ	j	ziju	'intestines'
ɲ	ny	lanyá	'herd away'
y	y	yazu	'breast'
ŋ	ng	ngah'rany	'illness'
ŋg	ngg	mangga	'sister'
k	k	kinn'da	'crested crane'
g	g	gínná	'three'
x	x	xo'tam	'neck'
a	a	ela	'come'
ə	ah	láhma	'pot'
e	e	lénya	'egg'
ɛ	eh	ehra	'leopard'
i	i	jila	'cold'
ɪ	ih	ngahrciht	'sesame'
o	o	zó'ra	'back'
ɔ	oh	óhla	'cry'
u	u	yáru	'skins'
ʊ	uh	suhkâhl	'pumpkin'

Tone will be written. Low tone will be unmarked since it is the commonly occurring tone. High tone will be marked with an acute (á). Length in both consonants and vowels will be indicated by doubling the letter as in gínná 'three' and caan 'follow'.

also falling tone with ^