#### **ILLUSTRATIONS OF THE IPA**

# Kabiye

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Kabiye is a Gur (Voltaic) language that belongs to the Eastern Grusi (also Gurunsi) sub-branch of Central Gur, which in turn sub-branches from Gur that is part of the greater Niger-Congo language family (Naden 1989: 147). The number of native Kabiye speakers is estimated at 730,000, with approximately 700,000 speakers living in Togo, 30,000 in Benin, and a very small number in Ghana (Grimes 2000: 242). The original homeland of the Kabiye people is in Northeastern Togo, with the region of Kozah serving as the community's cultural center. From the early 20th century, however, the community began to spread southward and now encompasses locations in the central and southern parts of Togo, as well as in the neighboring countries (Ali-Napo 1997: 20).

Regional varieties of Kabiye have been grouped into four types according to their geographic centers: Kèwe, Lá'mádísı, Lıgbá, and Lámba (Delord 1976: 3). As a language with a limited literature and only a recent history of writing, no one variety of Kabiye has been clearly established as the standard. However, considered the most prestigious variety of the language, Kèwe, which is also the variety with by far the largest number of speakers, functions as the *de facto* provisional standard, representing Kabiye as a whole to the outsider. Therefore, it is also often learned and adopted by the speakers of the other three varieties. The examples in this description were recorded from a female speaker of the Kèwe variety from the town of Somdina.

		Labio-			Alveo-			Labial-	
	Bilabial	dental	Alveolar	Retroflex	palatal	Palatal	Velar	velar	Glottal
Plosive	(p) b		t d	(t) d			k g	kp gb	
Affricate					t∫cჭ				
Nasal	m		n			ր	(ŋ)		
Trill			(r)						
Тар				(t)					
Fricative		f v	s z						h
Approximant						j		w	
Lateral approximant			1						

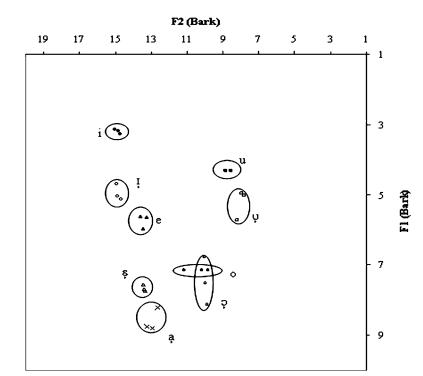
## **Consonants**

(p	pówỳ	рэwʊ	'to stretch')	ʤ	kà¢zàká	kəjəka	'beauty'
b	sýbýr é	səbəde	'mosquito net'	m	mộýŋ	<i>m</i> ววŋ	'noses'
t	tộm	təm	'story'	n	ný	пэ	'cow'
d	kỳdộń	kudəŋ	'disease'	ր	nýkỳỳ	ñɔkʊʊ	'to congratulate'
(t	tźm̀	dэт	'salt')	(ŋ	sźŋ̀	səŋ	'bad smell')
d	<u>à</u> ròndòlà	adəŋdəla	'green algae'	f	fàlàtà	fələtə	'fiber bag'
(r	kúrúrúrú	kududu	'very (dry)')	v	sànìvớ	sanıvə	'army ants'
(r	sỳkỳrý	səkədə	'fufu (meal)')	s	sźŋ̀	səŋ	'bad smell'
k	kộm	kəm	'to come'	z	<u>à</u> zòòtà	azəəta	'mess'
g	ệgộm	egəm	'guest'	h	hộ	hэ	'hearts'
кр	kpýný	kpənə	'bread'	j	jýsý	yəsə	'mother-in-law'
gb	ìŋg͡bộự	ŋgbəv	'clay pot'	w	wísì	wisi	'sun'
t∫	t∫ộtứỳ	cətvv	'to wash'	1	làkà	ləkə	'well'

The chart above illustrates the most significant sounds of Kabiye. Phonologically, the consonant system comprises 21 sounds. The labial-velar plosives /gb kp/ are found in Kabiye, just as in other larger and more extensively studied West African languages such as Igbo and Yoruba. Phonetically, voiceless plosives are moderately aspirated and voiced sounds tend to have a degree of breathiness in the pronunciation of some speakers. The current orthography, which uses several graphs from the IPA, is generally very close to the phonological form on which it is based. However, the orthography departs from the IPA in several cases: IPA  $[t d_{3} n j t]$  are represented by the graphs (c j n y d), respectively. The graph (d) is used in the orthography to represent both the phonologically underlying /d/ and its phonologically conditioned variants [t], [r] and [r]. The allophone [t] is restricted to initial positions, e.g. /dón/ [tón] don 'strength', whereas [t] appears between vowels as in /hádáa/ [hátáa] hadaa 'farmers', and [r] is found in the type of words called ideophones such as [tớrớrớrý] 'very' in [lèléŋ týrýrýrý] 'very sweet' or in [nýmýỳ týrýrýrý] 'very straight path'. The graph  $\langle \chi \rangle$  is also found in the orthographic inventory of consonants. Phonologically however, we analyze it not as a separate sound but as a secondary feature of velarization [v] (also referred to as 'pharyngealization' in Paaluki 1995) that affects the quality of front vowels (as well as a/a) in Kabiye. Velarization can be contrastive, for instance, only velarization distinguishes between some forms of words (cf. [sàà] saa 'drive!' vs.  $[sa^{\lambda}a^{\lambda}]$  say 'sculpture!', [fù] tii 'descend!' vs.  $[ti^{\gamma}i^{\gamma}]$  tiy 'rub!', and [tee'] tee 'sing!' vs.  $[te^{\gamma}e^{\gamma}]$  tey '(keep) singing').

This language exhibits some noteworthy phonetic intricacies. Two rules constrain the surfacing of the underlying voicing specifications of obstruents. One rule categorically disallows surface voiced obstruents in initial positions after a pause of any kind, namely the absolute utterance-initial position, the beginning of a word in isolation, and after a pause in a sentence. Another rule has the opposite effect after morpheme boundaries in an utterance, where obstruents become voiced. The application of these rules can be seen in the following examples: /sęwý/ [sęwý] 'to greet' vs. [píyà zèwý] 'to greet children' and [è-zé bíyà] 'he greeted children', /zɛtíµ/ [sɛtíµ] 'to cut' and [sɛtí nìmìyé] 'cut the rope!' vs. [píyà zɛtí nìmìyé] 'the children cut the rope'. The paradigmatic consequence of the application of these rules is often a complete overlap of the voicing specifications of obstruents on the surface that can cause confusion. Adding to this confusion is the independent fact that some grammatical tenses in this language such as the Simple Present, the Simple Past, the Immediative, the Past Progressive, the Future, etc. appear to carry an inherent floating morpheme for voicing that also affects initial obstruents. The underlying voicing specifications, however, surface in a limited number of contexts, specifically, with those grammatical tenses that do not have an inherent floating morpheme for voicing such as the Consecutive, the Past Perfect, the Past Perfect Continuous, the Optative, etc. (viz. /kàdíý/ [kàtýỳ] 'to lock': [è-gátí<sup>v</sup>í<sup>v</sup>] 'he locks' vs. [é-kátí] 'then he locked' and [è-gàtáậ] 'he locked' vs. [ìì-kàtáậ] 'he had locked', and /dɛktíỳ/ [tʃɛtíŷ] 'to lie': [è-dɛtiħ] 'he lies' vs. [é-dɛtħ] 'then he lied' or [è-dɛtħå] 'he lied' and [ìì-dɛtħå] 'he had lied'), and after long vowels and negation morphemes (viz. /kàdíŷ/ [kàtíŷ/ [kàtíŷ] 'to lock': [è-gàtfå] 'he locked' vs. [è-dì-kàtf] 'he did not lock' and [ìì-kàtfå] 'he had locked'; and /dɛktíŷ/ [tʃɛtíŷ] 'to lie': [è-dɛtħå] 'he lied' vs. [è-dì-dɛtħ] 'he did not lock' and [ìì-kàtfå] 'he had locked'; and /dɛktíŷ/ [tʃɛtíŷ] 'to lie': [è-dɛtħå] 'he lied' vs. [è-dì-dɛtħ] 'he did not lie' and [ìì-dɛtħå] 'he had lied'). In word medial position where there is no morpheme boundary, the word structure constraint is not operative and therefore, minimal contrasts between voiced and voiceless obstruents are found. Peculiarly, the voiced /b/ and /d/ are found in all environments other than initial positions after pauses, where their respective allophonic variants [p] and [t] occur exclusively, thus resulting in a defect in the voiceless obstruents' phonological inventory. Distributional restrictions also affect all consonants in general in syllable coda or word-final. Only the nasals [m ŋ] are found in these positions where they are syllabic as well as in syllable peak. [ŋ] is found in syllable coda as a significant variant of either of the phonemes /n/ or /p/.

Previous inventories showed different sets of phonemic obstruents. In Delord (1976), for example, all the obstruents but /b/ and /d/ are voiceless. In contrast, the inventories posited by Lébikaza (1999) and Roberts (2002) recognize the voiced alveolar sounds /d/ and /z/ but they do not include Delord's voiced obstruents. Moreover, Lébikaza on the one hand agrees with Delord with regard to the presence of a velar phoneme /y/ while Roberts on the other hand agrees with Delord in including a velar nasal /ŋ/ in his inventory.



**Vowels** 

Basic (short) vowels						Long	vowels		
i	tì	ti ʻ	cut down!'			ii	tìì	tii	'descend!'
Į	tì	tı '	estimate!'			ΪĪ	sìì	sιι	'lay down!'
u		tu '	clear (land)!'			uu	tùù	tuu	'crawl!'
ប្	lỳ	lo '	wrestle!'			បូប	lừừ	luu	'weave!'
ą		ta '	bind!'			ųų àà	tàà	taa	'smear!'
e		te '	catch!'			ee	tèè	tee	'sing!'
Ę	tệ	te '	finish!'			şş	tģģ	$d\varepsilon\varepsilon$	'leave!'
0		lo '	cut at!'			00	lòò	loo	'serve!'
Ş	tộ	tə "	say!'			ခုခု	tộộ	<i>təə</i>	'eat!'
Vela	rized vowe	ls							
iY	sìvívjè	siyye	'back'			eY	sè <sup>v</sup> é <sup>v</sup> jè	seyye	'race'
ĮΥ	mìvìvná	<i>mi</i> γn	/ <b>1</b>			$\boldsymbol{\xi}^{\boldsymbol{\gamma}}$	pé <sup>v</sup> é <sup>v</sup> à	реза	'little pot'
$a^{\scriptscriptstyle Y}$	hávàv	hay	'dog'						

The vowel formant plot presented above is based on three tokens of each word used. Kabiye has nine contrastive vowel qualities. Long vowels also occur in the language, most often as a result of inflectional processes as seen in the Imperative forms that contrast with the short vowels in the words illustrated on the vowel chart. Long vowels show no noticeable difference in quality from the short vowels and are analyzed as sequences of short vowels. This is represented in the writing system by doubling the graph. The vowel system also shows two contrastive sets that have traditionally been described in terms of a difference in tongue root position ('Advanced Tongue Root' or ATR). Recent research (Edmondson & Esling 2006, and Edmondson, Padayodi, Hassan & Esling 2007) has shown that the mechanism involved in their articulation has to do not only with tongue root movement but also with aryepiglottic fold constriction as had been previously predicted by Esling (1996: 81; see also Esling 2005).

Traditionally, the difference in tongue root position has been expressed by means of a diacritic: either V signifying [+ATR] or V for [-ATR] and V signifying [-ATR] or [+ATR], respectively (cf. IPA 1999). The critical point is that the V quality is usually represented by the same symbol shape, with or without the diacritic. This paper, following Edmondson et al. (2007: 2067f.), argues that the two vowel sets of Kabiye differ in their articulatory postures not just in their resonance features: specifically, 'Kabiye constricted [i.e. [+RTR]] vowels are systematically narrowed forwards and upwards across the aryepiglottic sphincter, tongue-retracted, and larynx-raised'. Therefore, we have chosen a transcription that recognizes two vowel sets [i I, u  $\varphi$ , a, e  $\varepsilon$ , o  $\varphi$ ] in which the [+RTR] set is represented both by symbol and diacritic to express the pervasive differences of retraction of the tongue, forward and upward narrowing of the aryepiglottic sphincter, and the raising of the larynx. The [+RTR] set in this description corresponds to the traditional [-ATR] vowels, and the [-RTR] set corresponds to what has been called [+ATR].

Set 1	: [–RTR]	Set 2: [+RTR]			
i	u	Į	ប្		
e	0	Ę	Ş		
			а		

This division of the vowels into two sets is known to impose a constraint on the combination of vowels occurring in a word in a pattern of 'Vowel Harmony'. The Vowel Harmony in Kabiye allows only vowels of one set to appear together in a phonological word. The only exception we found is the case of compounds in which each constituent keeps its original vowel harmony, and borrowings such as [dtgli] 'hotel' (from the French *hôtel*, Lébikaza 1999: 177). Although the vowel /a/ has a special status that allows it to combine quite freely with either set, there is

sufficient evidence to support that it belongs to set 2. For instance, when /a/ is the first vowel in a verbal stem, any co-occurring vowel is from set 2 (cf. [tàḿsìỳ] 'to bind' but never \*[tàḿsìù]). Further confirmation comes from the articulatory phonetic perspective of the laryngoscopic studies by Edmondson & Esling (2006), which clearly show that the articulation of the vowel /a/ involves aryepiglottic constriction just as in the articulation of set 2 vowels in this language.

Another type of harmony exclusively affects prefixes where the vowel in the prefix agrees with the first vowel of the stem with respect to front and back features. In this process, there is either a complete assimilation of the prefix vowel so that it becomes an exact copy of the stem vowel (e.g. /bV-dşɛțím) [pɛdşɛțím] pɛcɛtum 'their lie', /bV-tókò/ [pòdókò] potoko 'their shirt', /bV-sạàmídɛ/ [pàzàāmítɛ] pasaamudɛ 'their corn', /bV-tókà/ [pòdókà] potoku 'they eat', /V-lifdijé/ [lífidijé] eliidiye 'his money'), or the prefix vowel is partially assimilated, taking on only the [-back] or the [+back] features of the stem vowel (e.g. /V-líde/ [elítɛ] or [lítɛ] elide 'his root', /V-tókò/ [edókò] or [odókò] etoko 'his shirt'). The vowels /u/ and /u/ exceptionally do not partake in this harmony (viz. /bV-bu̯nu/ [pàbùnu/ [pàbùnu 'their goat', /bV-bú̯jɛ] papuyɛ 'their stone').

## **Prosodic features**

Two distinctive tone levels are recognized in Kabiye: high /'/ and low / \/. The language also exhibits a downstepped variant of the high tone [ $\downarrow$ ']. Syllabic nasals [m] and [ŋ] and vowels are the Tone Bearing Units with long vowels appearing to allow for the presence of limited tonal contours. It is also important to mention that the tone phenomena variously termed 'declination', 'downstep', and 'downdrift' in the literature are very apparent. Likewise, the process of tone spread is very common. To date, there has not been any solid study of these phenomena, so the very complex tonal processes of the language are not well understood.

# Transcription of recorded passage

In the current orthography, tone is still not represented, a lacuna that researchers are seeking to address. The practice of previous researchers is to show tone only in a privative way by leaving the low tone unmarked and only indicating the high tone and the downstepped high. In the phonetic transcriptions of the illustrations for this paper, however, we have chosen to indicate all the tones. The transcription style adopted in this illustration is relatively narrow in certain respects, reflecting the particular pronunciation in the recorded passage.

# hàjìkíý hèvèvlím nè wísì

hàjìkíń hè<sup>v</sup>è<sup>v</sup>lím nè wísì bàà mà<sup>v</sup>à<sup>v</sup>zíní mbý zì bànà zí ákílí dón || pìgèdáà lé | nýmòwòrú nóójỳ dèwà<sup>v</sup>á<sup>v</sup> | èhòkí èdìì dókò g bìngìzìm níňgỳ nàkýjỳ dàá || pánííná dámá zì wèjí érá bízýý élá nýmòwòrú éný éhózì òdókòò lé | éný gílíná dón ||

kélé | hàjìkíń hèvèvlím bází bímá déńdéé bíbízìvìv j<br/>ý || kýjý bìmákí dóň lé | ným<br/>àwòrú ní gbííkívív èdìì òdókò dàà gígbììkú || píníí hàjìkí<br/>ń hèvèvlím nè bíté<sup>1</sup>zí <sup>1</sup>jébù ||

k<br/>ę́lę́ wí¹sí ná síú¹gí ¹zíná²á² déú¹dé<br/>é ¹zíbízì²ì² jý | kàỳỳỳ || nýmỳwòrú dí ¹hộzý ¹édókó ¹<br/>ệlý ||

pèérèè bíré hàjìkíń hè<sup>v</sup>è<sup>v</sup>lím nì bídísì zì bàdàá lé | wísì gìlí<sup> $\downarrow$ </sup>ná dón nòòò ||

Orthographic version Hayikin Heelim ne Wusu Hayikin Heelim ne Wusu paa mayzuni mbu se pana zi akuli don. Pikedaa ele nomowodu nooyo deway, ehoki etii toko kpingizim ñingo nakoyo taa. Paniina dama se weyi eda pizoo ela nomowodu eno ehozi etokoo le eno kilina don.

Kele Hayikin Heelim pazı pıma dendee pıpızıy yo, koyo pımakı don le

nomowodu ñi kpiikiy etu etoko taa kikpiiku. Punu Hayikin Heelim ne pitezi yebu.

Kele Wisi ña singi siñay dendee sipiziy yo, kauu. Numowodu ti hozu etoko elo.

Peedee pide Hayikin Heelim ne pitisi se pataa le Wisi kilina don noo.

## **English version**

The North Wind and the Sun

The North Wind and the Sun were disputing which was the stronger, when a traveler came along wrapped in a warm cloak.

They agreed that the one who first succeeded in making the traveler take his cloak off should be considered stronger than the other.

Then the North Wind blew as hard as he could, but the more he blew the more closely did the traveler fold his cloak around him; and at last the North Wind gave up the attempt.

Then the Sun shone out warmly, and immediately the traveler took off his cloak. And so the North Wind was obliged to confess that the Sun was the stronger of the two.

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