

ILLUSTRATIONS OF THE IPA

Goemai

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Goemai is an Afroasiatic (Chadic, West Chadic A, Angas-Goemai group) language spoken in Central Nigeria. The name Goemai [gəmâi] is used by the speakers themselves to refer to both their language and their ethnic group. To outsiders, they are better known under the name Ankwe – a name that is also commonly found in the older linguistic, anthropological and historical literature. The Goemai live as farmers, fishermen and hunters in villages throughout the lowland savannah region south of the Jos Plateau and north of the Benue River, an area that is known geographically as the Great Muri Plains. The economy is based on agriculture (yam, millet, guineacorn, groundnut, beniseed) and is supplemented with fishing and hunting. Politically, the area belongs to Plateau State, and more specifically to the Local Government Areas Shendam and Qua'an Pan. Smaller Goemai-speaking communities are found in surrounding Local Government Areas as well as in Jos, the capital of Plateau State.

Goemai is a major indigenous language in Plateau State, but its use and distribution is decreasing rapidly in favour of Hausa. Hausa is the language used in administrative, religious and educational settings as well as in everyday contact with non-Goemai neighbours. Among the younger generation, Hausa has become the language of everyday communication even in intra-group contexts. Moreover, children in all larger settlements grow up with Hausa as their first, and often only, language. In 1995, there were an estimated 200,000 ethnic Goemai (Lewis, Simons & Fenning 2013), but the number of actual speakers is assumed to be smaller: while members of the older generation are still fluent speakers, the variety spoken by middle-aged speakers already shows considerable influence from Hausa; and those among the younger generation who still speak Goemai resort to extensive code-mixing and code-switching strategies. In addition to Hausa, many Goemai speakers also speak other local languages, and some also speak English, the national language of Nigeria, which is used in limited official domains (e.g. in education and some mass media).

The speaker in this Illustration is Mr Louis Longpuan, an elderly speaker who was recorded over a period of several years (between 1998 and 2005, when he was between 63 and 70 years of age approximately). He is a speaker of the K'wo dialect (other dialects are

Dorok, Duut and East Ankwe), and a resident of the city of Jos. The data for this Illustration were recorded by the second author, and phonetic analysis was carried out by the first author. All Goemai words that appear in this article are listed, annotated, in the appendix.

The starting point for this illustration is the phonological analysis presented in the second author's grammar of Goemai (Hellwig 2011: 17–66), and the interested reader is referred to this grammar for details. These details include the justification of all posited phonemes by means of minimal pairs, the description of all allophones, as well as detailed discussions about the possible diachronic origins of innovated phonemes. From the perspective of West Chadic, Goemai exhibits a number of typical phonological features: the existence of implosive consonants, a phonemic contrast in vowel length, and two level tones. Unexpected features include an innovated contrast between aspirated and non-aspirated obstruents, a lack of ejective consonants, the extensive modification of consonants through secondary articulation (palatalization, labialization, prenasalization), a large vowel inventory that arises through the innovation of several long vowel phonemes, the existence of predominantly monosyllabic words with a preferred syllable structure of CV(V)C, as well as a severely restricted consonant inventory in word- and syllable-final position. With the exception of the first point, all unexpected features are shared by related and non-related neighbouring languages, and possibly constitute areal features of the Jos Plateau *sprachbund* as a whole (see also Wolff & Gerhardt 1977, Pawlak 2002).¹

Consonants

	Labial	Alveolar	Alveo-palatal	Velar	Glottal
Stops	p p ^h b	t t ^h d		k k ^h g	
Implosives	ɓ	ɗ			
Fricatives	f f ^h v	s s ^h z	ʃ ʃ ^h ʒ		h
Nasals	m	n		ŋ	
Liquids					
lateral		l			
trill		r			
Glides	w		j		

The consonant inventory is characterized by a four-way laryngeal contrast in oral stops, and a three-way laryngeal contrast in fricatives. Both oral stops and fricatives occur as voiced, voiceless and aspirated variants, and the bilabial and alveolar places of articulation also include implosives. The full consonant inventory occurs in syllable- and word-initial position only, and this section therefore only exemplifies consonants in this position (see the discussion below on syllable structures for details).

Although Hellwig (2011) considers the contrast between the two types of voiceless oral stops to be one of aspiration, other students of Goemai have analysed the contrast differently. Wolff (1959), for example, labels the contrast as fortis vs. lenis, and Hoffman (1975) labels it as glottalized vs. non-glottalized. Hellwig notes that a glottalized variant is possible for the

¹ Note that such an inventory differs from the ones attested in other branches of Chadic, notably in Central Chadic: languages there are known to have a small inventory of short vowels only (in some cases, only /a/ and possibly /ə/), whose realization depends on palatalization and labialization prosodies (leading to their realizations as front and back vowels, respectively) and metrical structures (leading to their realization as long vowels in some metrical environments).

unaspirated velar /k/ [kʰ]. In the present speaker's data, the voiceless aspirated stops /pʰ tʰ kʰ/ show mean burst/aspiration values of between 66 ms and 87 ms, whereas the unaspirated /p t k/ show mean burst/aspiration values of 21–35 ms (based on 441 non-final voiceless stop tokens). This provides evidence that aspiration plays a key role in the contrast between the two sets of voiceless stops, at least for this speaker.

Goemai is also described as having aspirated and unaspirated fricatives. Hellwig describes the aspiration contrast in fricatives as being mainly cued by duration (with aspirated fricatives having a longer noise portion than unaspirated fricatives) and by truncated formant transitions (for aspirated fricatives, formant values at vowel onset are closer to vowel target values). However, examination of 198 non-final voiceless fricative tokens from the present speaker suggests that these cues are not reliable in all instances. Although mean consonant duration values were greater for aspirated /fʰ jʰ/ than for unaspirated /f j/, this was not the case for /sʰ/ vs. /s/. And only /ʃʰ/ vs. /ʃ/ appeared to show a difference in F2 onset values, with the unaspirated /ʃ/ having a higher F2 onset value than aspirated /ʃʰ/ (i.e. further removed from the vowel target value). Examination of FFT spectra at both fricative midpoint and at around the fricative/vowel boundary likewise failed to show consistent differences between aspirated and unaspirated fricatives (it was hypothesized that a more breathy quality may persist into the vowel following the release of aspirated fricatives). It is therefore clear that the contrast between aspirated and unaspirated fricatives requires further instrumental phonetic investigation.

In addition to voiceless aspirated and non-aspirated obstruents, Goemai has voiced obstruents and implosives. Hellwig describes the implosives as being similar to the creaky voiced implosives of Hausa and other Chadic languages (i.e. characterized by a few irregular periods of voicing during the closure and an irregularity in the first few voicing periods at the onset of the vowel). However, this was not obvious in all tokens of the present speaker's data. Instead, the contrast between regularly voiced stops and implosives seemed to be largely cued by the intensity of voicing and by a much higher F1 value at stop release. Figure 1a shows that the spectral peak below 1 kHz (possibly reflecting a combined f0-F1 spectral prominence) is much greater in intensity following the implosive stops than following the regular voiced stops (note that there is no velar implosive). Relatedly, Figure 1b shows that the F1 onset value for implosives is much lower than for regular voiced stops (this observation applies across high, mid and low vowel contexts for this speaker's data, with the exception of the regular voiced bilabial /b/ in the low vowel context). As noted by Ladefoged (1964), the lower F1 value following implosives is due to the expansion of the pharyngeal cavity, which results when the larynx is lowered to produce an implosive stop. It is therefore noteworthy that in the present speaker's data, the regular voiced /b/ also has a low F1 value when the following vowel is low, since the entire tongue is already low at the moment of stop release, presumably with a large pharyngeal cavity as well as a large oral cavity already in place.

Alveo-palatal fricatives developed diachronically from palatalized alveolar and velar obstruents in some environments. The secondary feature of palatalization is often still audible in the case of the non-aspirated voiceless alveo-palatal fricative (e.g. /ʃǎŋ/ 'hunt' in the present dataset), occurring in free variation with the non-palatalized form. Synchronically, however, alveo-palatal fricatives do not allow for the secondary feature of labialization (see below). In addition, the voiced alveo-palatal fricative may be alternatively realized as a voiced alveo-palatal stop (also in free variation).

Goemai also has a glottal stop [ʔ] (not included in the chart above) and a glottal fricative/approximant /h/. Their phonemic status is not entirely clear. In Goemai, all vowel-initial syllables are phonetically preceded by a glottal stop. As such, the occurrence of the glottal stop is predictable, and it is (tentatively) not analyzed as a phoneme. However, the analysis is complicated by the observation that there are no close front or back vowels in vowel-initial syllables. The glides, by contrast, show a complementary distribution in precisely this environment: /j/ precedes /i/, and /w/ precedes /u/. This distribution suggests that at least some glides are phonetically-conditioned variants, preceding close vowels in vowel-initial syllables.

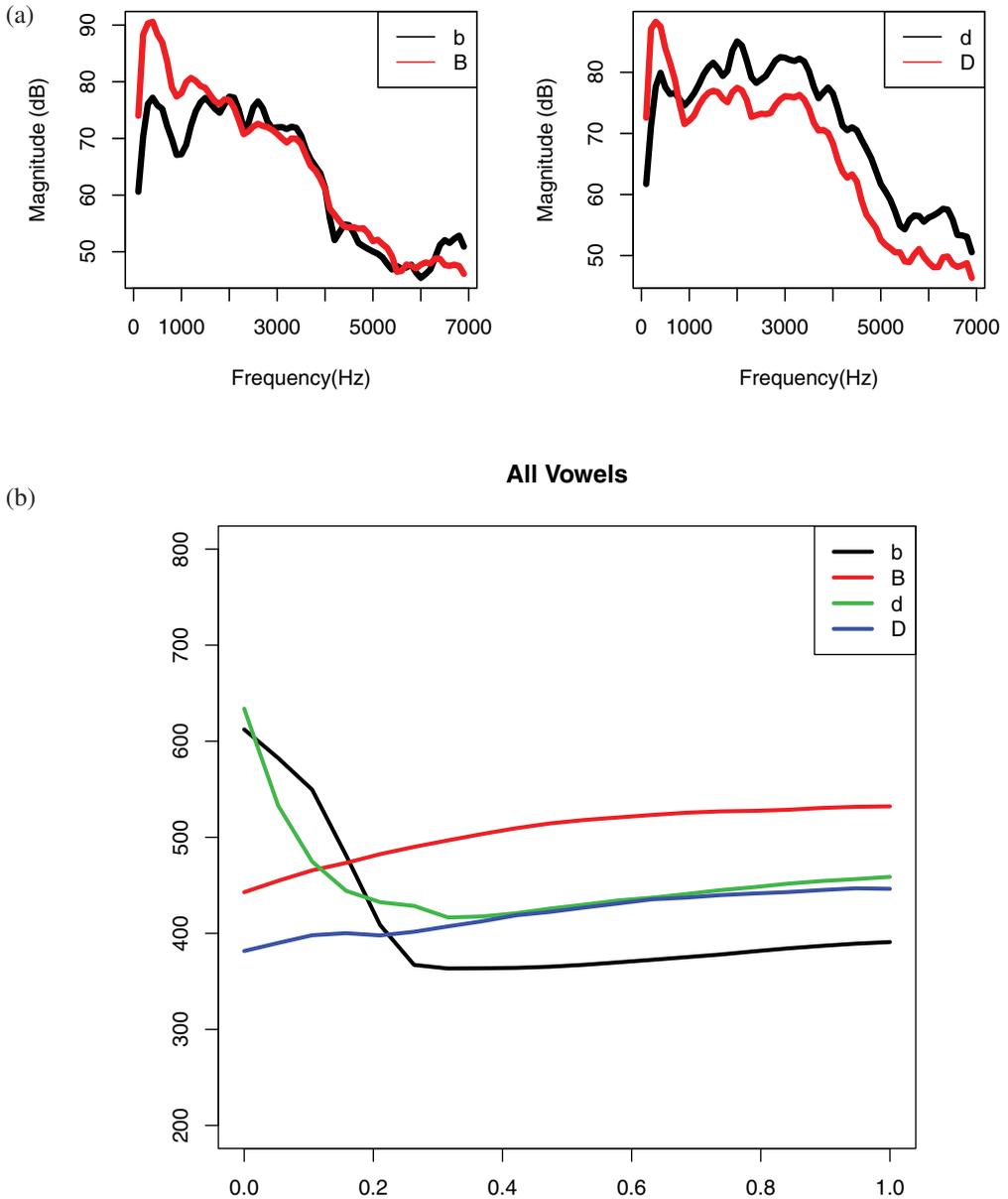


Figure 1 (Colour online) (a) Averaged FFT spectra of voiced and implosive stops, taken at stop release, and based on 431 non-final tokens (bilabial and alveolar only). (b) Averaged, time-normalized formant trajectories for the same voiced and implosive stop tokens. In both figures, data are collapsed across vowel contexts. Capital letters represent implosives, and lower-case letters represent regular voiced stops.

In other environments, however, glides do contrast, and are thus considered phonemes. A further complication is introduced by the glottal /h/: it is possible that it also plays a role in the realization of vowel-initial syllables, as it never precedes close front or back vowels. The distribution of [ʔ], /h/, /w/ and /j/ is as follows:

Distribution of glottals and semivowels

	[ʔ]	/h/	/w/	/j/
i	–	–	–	ʃín ‘say’
u	–	–	wún ‘sweat’	–
ə	ʔó.rám ‘beans’	hǎn ‘I’	wón ‘search’	jón ‘plenty’
o	ʔó ‘yes’	hó ‘greetings’	wò ‘snake’	jó ‘rise’
a	ʔán ‘mind’	háj ‘tree’	wáj ‘pot’	jáj ‘stalk’

Finally, Goemai has nasals and liquids. In the case of nasals, Goemai contrasts three places of articulation. While the labial and alveolar nasals are frequently found in initial position, the velar nasal occurs only very rarely in this environment. In the case of liquids, Goemai contrasts a lateral and a trill (note that the plain lateral is occasionally realized as a lateral fricative).

It should be noted that Goemai does not have any geminated consonants occurring in native Goemai words.

Below is a list of (near-)minimal pairs for the obstruent, nasal and liquid consonants, respectively, of Goemai.

Obstruents

/p ^h /	/p/	/b/	/β/
p ^h ít ‘monkey’	pít ‘net’	dí.bít ‘all’	βít ‘day’
p ^h úk ‘tree’	púk ‘calf’	búk ‘return’	βú ‘grass’
p ^h əp ‘master’	pót ‘exit’	bó.báp ‘bird’	βəp ‘fish’
p ^h ól ‘hide’	pót ‘narrow’	bói ‘cowrie’	βót ‘tie’
p ^h áj ‘snake’	páj ‘stone’	báj ‘calabash’	βáj ‘red’

/t ^h /	/t/	/d/	/d̪/
t ^h íp ‘press’	tít ‘sprinkle’	đíp ‘all’	đíp ‘hair’
t ^h ù ‘kill’	tú ‘bottle’	đu ‘they’	đu ‘smell’
t ^h əp ‘black’	təp ‘next’	dəp ‘penis’	dək ‘up/down’
t ^h ók ‘practice’	tón ‘sit’	dók ‘past’	dók ‘quiet’
t ^h áj ‘search’	tán ‘bat’	dáj ‘tail’	dáj ‘lizard’

/k ^h /	/k/	/g/
k ^h ú ‘coil’	kúr ‘burn’	gú ‘you’
k ^h əp ‘lake’	kəp ‘short’	gəp ‘cut’
k ^h ón ‘stream’	kón ‘snake’	gón ‘nose’
k ^h áj ‘join’	káj ‘guard/wait’	gáj ‘palm’

/f ^h /	/f/	/v/
f ^h ín ‘grinding stone’	fím ‘cotton’	ví.lín ‘circle’
f ^h úm ‘fold’	fú ‘scatter’	vú ‘tuber’
f ^h è ‘owner’	fàl.fé ‘viper’	vè.lú ‘grass’
?	fót ‘listen’	vòm ‘blind’
f ^h à.làk ‘liver’	fàl.fé ‘viper’	vá.rám ‘grass’

/s ^h /	/s/	/z/
s ^h úk ‘yourself’	súk ‘rubbish’	bè.zún ‘chest’
s ^h ám ‘ourselves’	sám ‘name’	zəm n ^h è ‘like’
s ^h ól ‘metal’	sóm ‘horn’	zòm ‘cold’
s ^h án ‘myself’	sán ‘slip’	zàn ‘barren’

/ʃ ^h /	/ʃ/	/ʒ/
ʃ ^h im ‘skin’	ʃim ‘iguana’	ʒim ‘ferment’
ʃ ^h əl ‘game’	ʃəl ‘wound’	ʒəl ‘surround’
ʃ ^h ɔ:m ‘guineafowl’	ʃɔ:l ‘locust’	ʒɔ:m ‘chin’
ʃ ^h əŋ ‘glance’	ʃəŋ ‘hunt’	ʒəŋ ‘careless’

Nasals

/m/	/n/	/ŋ/
mĩ ‘be related’	nĩ ‘elephant’	
mù.rú ‘fig tree’	nú ‘sea’	
mă ‘we’	nă ‘my’	
mónŋ ‘study’		ŋónŋ ‘bells’
màŋ ‘take’	nàŋ ‘that’	ŋàŋ ‘monkey’

Liquids

/l/	/r/
gə.líp ‘bird type’	mó.ríp ‘soul’
lú ‘settlement’	rú ‘enter’
má.lóp ‘wink’	róp ‘itch’
k ^h í:k.lók ‘small’	ròk ‘sweet’
lànŋ ‘hang’	rànŋ ‘think’

Secondary articulation

Most morpheme-initial consonants can occur with a secondary articulation of labialization, palatalization or pre-nasalization. Note that these are local phenomena that modify the consonant only. They are thus very different from the palatalization and labialization prosodies of Central Chadic languages that affect the realization of all vowels in the word. Labialization and palatalization are mutually exclusive, but pre-nasalization can co-occur with either of them. However, labialization and palatalization cannot occur before close vowels. Labialization is realized as [ɸ] following labial and glottal consonants, and as [w] elsewhere.

Vowels

i:	ɸ:	u:
i	ɸ	u
e:	ə	o:
	ɔ:	
	a	
	a:	

Goemai has a large vowel inventory of four short and seven long vowel phonemes. The full inventory only occurs in syllables of the type CV(V)C; only a restricted set of vowels occurs in syllables of the type V(V)C (see the discussion on the glottal stop above), and the distinction between long and short vowels is neutralized in syllables of the type CV.

The short vowels contrast with long vowels in identical environments: /a/ vs. /a:/, /ə/ vs. /e:/ (note the accompanying difference in vowel quality), /u/ vs. /u:/, and /i/ vs. /i:/ (note that this last contrast is attested in a handful of near-minimal pairs only). The three long vowels /ɸ:/, /o:/ and /ɔ:/ do not contrast phonemically with their short counterparts: they have

short allophones in environments where Goemai does not allow for long vowels (especially when preceding a velar consonant), but are otherwise long. They might have originated through the loss of intervocalic consonants: cognate forms in other Angas-Goemai group languages almost always contain sequences of -VCV-, compare e.g. Goemai [sɔ́:m] with Mwaghavul [soɣom] ‘horn’ (Hoffman 1975). Note also that vowel length interacts with labialization and palatalization: when following such a modified consonant, short vowels can alternatively be realized long, e.g. /n^hák/ ‘breathe’ is realized [n^há:k] in the accompanying recording.

In addition, the distribution of close vowels is very restricted for diachronic reasons. The close front vowels /i/ and /i:/ cannot follow the alveolar fricatives (/s^h/, /s/ and /z/) and the velar stops (/k^h/, /k/ and /g/) because these sound combinations gave rise to the present-day alveo-palatal fricatives (/ʃ^h/, /ʃ/ and /ʒ/). Furthermore, no close vowel can occur in syllables of the type V(V)(C) or be preceded by /h/. The reason is again a diachronic reason. Goemai did not allow for vowel-initial syllables on a phonetic level: non-close vowels were preceded by a glottal consonant in this environment, while close vowels were preceded by their corresponding glide – i.e. the occurrence of the glides was predictable (/i/ and /i:/ were invariably realized as [ji] and [ji:], and /u/ and /u:/ as [wu] and [wu:] in this environment), and the glides thus did not constitute phonemes. In the present-day language, however, there are reasons to analyze the previously phonetically conditioned variants [h], [w] and [j] (albeit not [ʔ]) as phonemes (see above for their distribution), and to posit the existence of vowel-initial syllables on a phonemic level. This process of phonemicization has had repercussions for the synchronic distribution of the close vowels: /i/ and /i:/ are preceded by the synchronic phoneme /j/, while /u/ and /u:/ are preceded by the synchronic phoneme /w/ in all words that were diachronically vowel-initial. Or stated negatively, it is reflected in the synchronic restriction that /i/ and /i:/ cannot be preceded by /w/, and /u/ and /u:/ cannot be preceded by /j/, and neither of them can be preceded by a glottal or occur in a vowel-initial syllable. Finally, no close vowels are synchronically attested following labialized or palatalized consonants as such sound combinations have been re-analyzed as long vowels.

There is a tendency for speakers of all dialects to realize short [a] in loanwords as [ə], e.g. Hausa /t^háðà:/ ‘have ever/never done’ is often realized as /t^háðà/.

Vowel length and vowel quality furthermore interact with prosodic prominence in that a prosodically prominent (i.e. ‘stressed’) open syllable – independent of its position within a word – is realized phonetically long and is never realized as schwa. Instead, schwa is realized as [ɔ:] in this environment.

Goemai also has a limited set of diphthongs, which are not lexically frequent. These are [au], [ou], [ai], [ei] and [oi].² It can be seen that the second vowel target can only be [u] or [i]; unlike long vowels, these diphthongs cannot occur with a consonant coda. Hellwig (2011: 39–40) analyzes these diphthongs phonologically as sequences of vowels plus glides.

In addition, the sequences [ɸə] and [ɸa] exist as variant realizations of the secondary feature of labialization following a labial consonant e.g. /mɸəp/ *mɸəp* or /mɸà:n/ *mɸààn* in ‘The North Wind and the Sun’ passage – more accurately transcribed [mɸəp] and [mɸə:n].

Figure 2a shows the long and short vowel phonemes of Goemai based on the speaker in this Illustration (all tokens taken from non-final position). It can be seen that the corner vowels /i, a, u/ are more peripheral when long, and that the schwa vowel is truly central. Moreover, it can be seen that the mid back vowels /o: ɔ:/ are relatively close together in the vowel space and show a good deal of overlap. Figure 2b shows the length-neutralized final vowels, based on 196 tokens.

² Hellwig (2011: 39) represents this diphthong as [o:i]: it occurs in one word only, where she perceived it as phonetically long.

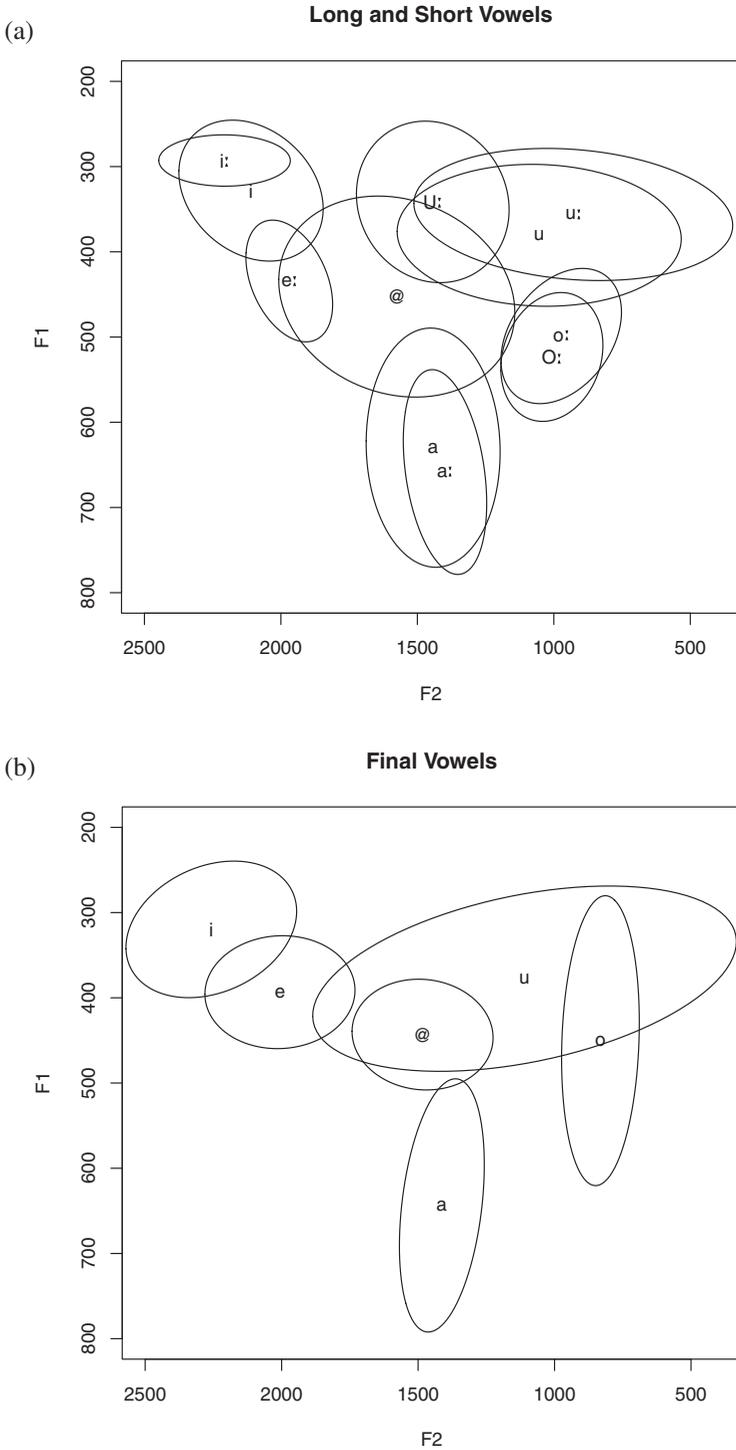


Figure 2 (a) Long and short vowel phonemes of Goemai, based on 1349 medial tokens. (b) Neutralized final vowels, based on 196 tokens. The speaker is Mr Louis Longpuan. Formants were sampled at the token midpoint using the Pitch and Formant tool in Emu 2.3 (default window setting modified to Hamming). Note that @ = /ɔ/, u: = /ɯ:/ and o: = /ɔ:/.

Vowel examples³

Medial position (short vowel)

/i/	/u/	/ə/	/a/
tíl ‘greed’	t ^h ùl ‘limpet’	t ^h ál ‘deep’	t ^h àl ‘ask’
tún.gì.lít ‘bird’	tún ‘fry’	tón ‘tree’	tán ‘bat’
	dùm ‘bend’	dóm ‘tip over’	dám ‘spoil’
đík ‘build’	đúk ‘pulsate’	đək ‘up/down’	đàk ‘care’
ʃín ‘mix’			ʃǎŋ ‘hunt’
ʃ ^h in ‘do’		ʃ ^h ón ‘beniseed’	ʃ ^h án ‘enlarge’
zír ‘jealous’		zól ‘surround’	zár ‘straight’
ník ‘effort’	ⁿ nùk ‘whip’	nók ‘thick’	nàk ‘fetch’
ví.lín ‘circle’	k ^h ú.lún ‘vine’	lón ‘hang (PL)’	lán ‘hang (SG)’
jin ‘say’		jón ‘plenty’	

Medial position (long vowel)

/i:/	/æ:/	/u:/	/e:/	/o:/	/ɔ:/	/a:/
	b̄a:r ‘weed’	b̄u:r ‘rich’	b̄e:r ‘scrape’	gó.bó:r ‘hedgehog’		
				bót ‘able’	bót ‘tie’	
	gó.tá:n ‘shore’	tú:n ‘hole’				tá:n ‘fall’
	ⁿ dò:l. ká:n ‘gecko’		ⁿ ké:n ‘thorn’	kó:n ‘face down’	kò:n ‘snake’	
f̄i:t ‘fish’		f̄u:t ‘vomit’			f̄ɔ:t ‘listen’	
				jón ‘nail’		já:n ‘hoe’
			hé:s ‘sand’		hò:s ‘tooth’	hà:s ‘egg’

³ Some of the examples in this list are represented with a rising tone. Such rising tones are always realized as level tones in isolation (see the section on tone for details).

*Final position*⁴

/i i:/	/u u:/	/e:/	/ə/	/o:/	/a a:/
t ^h i.nĩ 'palm'	t ^h ù 'kill'	g ^w à.t ^h é 'dish'	t ^h ə 'emphasis'	t ^h ó 'okay'	t ^h á.ráp 'snap'
ⁿ tí 'rabbit's son'	tú 'bottle'		tó.róp 'lie (PL)'	tó 'lie (SG)'	tá 'fall'
bú.lú.dí 'fish'	dũ 'they'	dé 'near'	dó 'come'	dò 'very'	dà.bák 'stomach'
dĩ 'anaphor'	dú 'set down'	dě 'exist'	dē.dǝŋ 'well'		dǎ 'future'
f ^h i 'dry'		f ^h é 'owner'	f ^h ə.róm 'knee'		f ^h à.làk 'liver'
ji 'deny'		jé 'foot/leg'	ǰə.ǰán 'nice'		ǰá 'desire'
mĩ 'be related'		mè 'barn'	mǎ 'we'		mà 'surpass'
ǰi.rĩ 'antelope'	rú 'enter'	k ^h ə.rè 'crow'	rə.rək 'sweetly'	bó.ró 'Fulani'	rà 'weave'
jĩ 'year'	–		jǎ 'you'	jó 'rise'	jà 'catch'

Diphthong examples

[au], [ou]	[ai], [ei], [oi]
gòu 'small calabash'	tó.gái 'middle-sized calabash'
môu 'not'	gè.mâi 'Goemai'
bòu 'arrow'	ⁿ bài.z ^w ám 'jackal'
	bôî 'cowrie'
t ^h àu 'bow'	téi 'yet'

Tones

Goemai is a tonal language, and all lexical items and almost all affixes and clitics have an inherent tonal pattern. There are two level tones (high H and low L), which can be combined on one syllable to give a HL pattern. Such HL patterns are predominantly found on long vowels. An underlying LH pattern is posited for a small number of items from different word classes (especially subject pronouns, but also including some nouns, verbs and TAM (= Tense Aspect Mood) markers). Such LH patterns never surface on a single syllable – instead, they are distributed as follows: the L tone surfaces on all syllables of the first word, and the H tone on the first syllable of the following word. Compare the different tonal realizations below of the two cognate object constructions /k^wál k^wál/ and /k^hùt k^hùt/ (both meaning 'talk a talk'). In the first set, they are preceded by the cliticized pronoun /mǎ = / '1PL': the L tone of the pronoun is realized on the first word (pronoun plus verb), and the H tone on the second (the cognate object), thus resulting in identical patterns. In the second set, they are preceded by a word comprised of the proclitic /hǎn = / '1SG' and the TAM particle /tǝŋ/ 'irrealis'. Again, the L tone of the pronoun is realized on the first word (the phonetically reduced pronoun plus the TAM particle), and the H tone on the second word (the verb); from the third word onwards (the cognate object in this case), the underlying tones surface again.

⁴ No examples were found for /ɔ(:)/in final position; and /ʉ(:)/was only found in three examples.

In environments where a LH pattern cannot be realized over two words, it is simplified to a level high tone. Phonetically, downstepped H tones are also present.

Example realization of LH patterns⁵

GLOSS	UNDERLYING TONES	REALIZATION
‘we talked a talk’	mǎ _s = k ^w ál _v k ^w ál _o	mǎk ^w əl k ^w ál
	mǎ _s = k ^h ùt _v k ^h ùt _o	mǎk ^h ùt k ^h ùt
‘I will talk a talk’	hǎn _s = tóŋ k ^w ál _v k ^w ál _o	ǎntòŋ k ^w ál k ^w ál
	hǎn _s = tóŋ k ^h ùt _v k ^h ùt _o	ⁿ tòŋ k ^h ùt k ^h ùt

s = subject, v = verb, o = (cognate) object

Tone is clearly a distinctive phonological property of the languages, but it has to be kept in mind that its functional load is restricted: most minimal pairs belong to different parts of speech; grammatical tone often neutralizes lexical tone; and grammatical constructions are primarily marked by segmental morphemes rather than tone.

Tone examples

H	L
ǒák ‘here (ADV)’	ǒàk ‘disregard (V)’
k ^h úm ‘foolish (V)’	k ^h ùm ‘masquerade (N)’
k ^w át ‘pay (V)’	k ^w ət ‘coil (V)’
ʃé ‘foot/leg (N)’	ʃè ‘learn/teach (V)’
há:s ‘flour (N)’	hà:s ‘egg (N)’
rè:p ‘girl (N)’	rè:p ‘mix (V)’
wún ‘sweat (V)’	wùm ‘bury (V)’
dúŋ ‘whisper (V)’	dùŋ ‘ridge (N)’
dóp ‘raise ridge (V)’	dəp ‘penis (N)’
dó:r ‘gift (N)’	də:r ‘limp (V)’

Although tone serves to distinguish lexical items, lexical tone is not necessarily realized on the lexical item itself. This is largely due to a high-tone spreading rule originating in some subject pronouns and nouns (the LH patterns mentioned above). It should be noted that high-tone spreading to the right is the most common type of spreading in Goemai, but there are also a few high-frequency lexical items that trigger high-tone spreading to the left. In addition, there are a number of intonational processes that affect the realization of tones. The two most prominent such processes are: (i) downdrift (where a L tone triggers a downstep in a following H tone), and (ii) a phrase-final low tone (which causes H tones to be realized as falling, and L tones as extra-low).

Syllable structure

The syllable structure template is (C)V(V)(C), whereby the first consonant can be modified by the secondary features of labialization, palatalization or prenasalization. Goemai has a small number of vowel-initial syllables, which are preceded phonetically by a glottal stop. As discussed above, the phonemic status of the glottal stop is questionable, and it is tentatively not analyzed as a phoneme.

⁵ The speaker in these sentences is Shalyen Mbai Nwang (a male speaker of the K’wo dialect of Goemai, 23 years of age at the recording time). These sentences are extracts from stories told by him in the year 2000.

SYLLABLE STRUCTURE	REALIZED WITH SECONDARY ARTICULATION				
(C)V	(C ^w)V	(C ^j)V	(ⁿ C)V	(ⁿ C ^w)V	(ⁿ C ^j)V
(C)VC	(C ^w)VC	(C ^j)VC	(ⁿ C)VC	(ⁿ C ^w)VC	(ⁿ C ^j)VC
(C)VVC			(ⁿ C)VVC		
N					

Goemai can be characterized as a predominantly isolating language: morphemes tend to be monosyllabic, and words tend to be monomorphemic. The vast majority of words thus have the structures ⁽ⁿ⁾C^(w/j)V, ⁽ⁿ⁾C^(w/j)VC and ⁽ⁿ⁾CVVC. Polysyllabic words are rare and arise through one of the following processes: the addition of a prefix or proclitic of the shape N or CV to a lexical item of any shape (note that there are only few such affixes and clitics), the partial reduplication of lexical items of any shape (adding an initial CV syllable), a small number of pluralactional verbs and plural nouns (of the shape CV.CVC) as well as a small number of lexicalized nominal compounds (of all shapes). In all cases, a number of phonetic processes are attested: simplification of medial consonant clusters, assimilation of nasals, lenition of intervocalic consonants and reduplicated implosives, and changes in the vowel length and vowel quality of non-prominent syllables. These processes are responsible for the majority of polysyllabic words to be of the shape CV.CV(V)(C), with schwa being by far the most common vowel in the initial CV syllable.

The full consonant inventory occurs in initial position, and only a small subset is allowed in final position. The laryngeal contrast between obstruents is neutralized in final position. Note also that only one fricative (/s/) is attested in this position at all. As a result, the only consonants which appear in syllable-final position are /p t k s m n ŋ l r w j/. Following /u/, the labial stop /p/ is alternatively realized as the velar stop [k].

Transcription

This version of ‘The North Wind and the Sun’ was translated and recorded by Louis Longpuan in Jos (Nigeria) on 26 October 2005. In all three renditions of the story, the text is broken down into numbered sentences (as determined by Louis Longpuan). Commas represent pauses in the recorded version and ‘(. . .)’ represents omitted material due to a false start.

Goemai orthography

(1) nhàt mp’áng ñdòe p’úús muèp b’yóól nyèb’yóól ñdòe sék muép pé, à góenàng k’óóm tóe mà góenyé yì. (2) ñdòe gòemuààn muààn, dóe p’ét k’á muép, gòng sék múk góe lé gòegòng k’út. (3) muèp yín, gùrùm gòepé lá b’óót gòe sà gòemuààn muààn, ñndehòe, kwén twén múk, hók, bá nní, à ní tóe, à gòek’óóm má yì. (4) nhàt mp’áng sù sék gòezèm k’yák jí. (5) bòet’óng sù múk hók, gòemuààn muààn b’ép t’óng, gòng súún kúút, góe lé gòeb’áan. (6) nyáng má nhàt mp’áng nní, sái, kwán, nyèb’yóól hók nk’wà. (7) p’úús, p’ét kúút b’áan làp pè díp. (8) gòemuààn muààn, wép (. . .) lé jí, gòeb’áan kúút, kwán. (9) sái nhàt mp’áng yìn, hái, yìn à p’úús tóe, à gòek’óóm má yì.

Phonemic transcription

(1) ^hhàt ⁿpáj ⁿdà pú:s muəp b’jó:l n’èb’jó:l ⁿdà s^hák muəp p^hé, ?à gónàŋ kó:m t^hé mà gón’é jì. (2) ⁿdà gəmua:n muà:n, dó pát ká muəp, gòŋ s^hák múk gó lé gəgəŋ kút. (3) muəp jín, gùrùm gəp^hé lá bó:t gə s^hà gəmua:n muà:n, ⁿnəhə, l’wən t^hwən múk, hók, bá ⁿní, ?à ní t^hé, ?à gəkó:m má jì. (4) ^hhàt ⁿpáj s^hù s^hák gəzəm k’ák zì. (5) bətóŋ s^hù múk hók, gəmua:n muà:n bəp tŋ, gòŋ s^há:n k^hút, gó lé gəbá:n. (6) n’áj má ^hhàt ⁿpáj ⁿní, s^háj, k^{hw}án, n’èb’jó:l hók ⁿk^wà. (7) pú:s, pát k^hút bán làp p^hé díp. (8) gəmua:n muà:n, wép (. . .) lé zì, gəbá:n k^hút, k^{hw}án. (9) s^háj ^hhàt ⁿpáj jìn, háj, jìn ?à pú:s t^hé, ?à gəkó:m má jì.

Interlinearized version

This version contains the following four lines:

- Goemai orthography (using hyphens to indicate morpheme breaks)
- Phonemic transcription
- English gloss, making use of the following grammatical abbreviations: COMIT = comitative; COND = conditional; CONJ = conjunction; CONS = consequence clause; DEF = definite article; EMPH = emphasis; FOC = focus; I = independent pronoun; IRR = irrealis; LOC.ANAPH = locative anaphor; LOG.SP = speaker logophoric (co-reference with the speaker); M = masculine; NMLZ = nominalizer; PL = plural; POSS = possessive; S = subject pronoun; SEQ = sequential; SG = singular; SPEC = specific article
- Reverse literal translation of the Goemai version back into English

(1)

nhàt	mp'áng	ńdòe	p'úús	muèp	b'yóól	nyè-b'yóól	ńdòe
ⁿ hàt	ⁿ páj	ⁿ dè	pú:s	mʉəp	ʃ'ó:l	n ^h è-ʃ'ó:l	ⁿ dè
wind	north	CONJ	sun/time	3PL.S	deny/argue	NMLZ-deny/argue	CONJ

sék	muép	pé,	à	góonàng	k'óóm	tóe	mà
s ^h ək	mʉəp	p ^h é	ʔà	gónàŋ	kó:m	t ^h ó	mà
BODY	3PL.POSS	THAT/WHEN	FOC	which(SG)	bec.strong	EMPH	surpass

góonyé	yì
gón ^h é	ǰì
neighbour(SG)	CONS

‘The North Wind and the Sun, they argued a dispute amongst themselves about which(ever) one is stronger than the other.’

(2)

ńdòe	gòe-muààn	muààn,	dóe	p'ét	k'á	muép,
ⁿ dè	gè-mʉà:n	mʉà:n	dá	pót	ká	mʉəp
SPEC	NMLZ(SG)-go(SG)	going(SG)	come	exit(SG)	HEAD(SG)	3PL.POSS

gòng	sék	múk	góe	lé	gòe-gòng	k'út
gòŋ	s ^h ək	múk	gó	lé	gè-gòŋ	kút
cover	body	3SG.POSS	COMIT	goods/clothes	NMLZ-cover	numbness

‘A traveller came out here upon them, (he) had covered his body with clothes that covered (him) against the cold.’

(3)

muèp	yín,	gùrùm	gòepé	lá	b'óót	gòe	sà
mʉəp	jín	gùrùm	gəp ^h é	lá	bót	gè	s ^h à
3PL.S	SAY	person	THAT/WHEN	COND	gain.expertise(SG)	SEQ	make

gòe-muààn	muààn,	ńnòe = hòe,	lwén	twén	múk,
gè-mʉà:n	mʉà:n	ⁿ nè = hà	l ^w ən	t ^h wən	múk
NMLZ(SG)-go(SG)	going(SG)	LOC.ANAPH = exactly	take.off	cloth	3SG.POSS

hók,	bá	n-ní,	à	ní	tóe,	à	gòe-k'óóm
hók	bá	ⁿ -ní	ʔà	ní	t ^h ó	ʔà	gè-kó:m
DEF	return(SG)	COMIT-3SG.I	FOC	3SG.I	EMPH	FOC	NMLZ(SG)-become.strong

má yì
 má jǐ
 surpass CONS

‘They said, the person who is able to make this traveller take off his cloth, (and) return with it (i.e. the success), (it) is him (who) is the strongest.’

- (4) nhàt mp’áng sù sék gòe-zèm k’yák jí
 ˚nhàt ˚npáj sʰù sʰák gè-zəm kʰák ʒí
 wind north run(SG) BODY NMLZ-like heart/neck:POSS SGM.LOG.SP.POSS
 ‘The North Wind ran as his heart liked.’

- (5) bòe = t’óng sù múk hók, gòe-muàan muàan
 bə = tɔŋ sʰù múk hók gè-muà:n muà:n
 HOW/WHERE = IRR run(SG) 3SG.POSS DEF NMLZ(SG)-go(SG) going(SG)

b’ép t’óng, gòng súún kúút, góe
 bəp tɔŋ gəŋ sʰu:n kʰút gə
 do.again sit(SG) cover body.SGM.LOG.SP.POSS just COMIT

lé gòe-b’áan
 lé gè-bá:n
 goods/clothes NMLZ(SG)-bec.warm
 ‘(But) how(ever) (hard) he ran, the traveller kept sitting (and) just covered his body with warm clothes.’

- (6) nyáng má nhàt mp’áng n-ní, sái, kwán,
 n’áj má ˚nhàt ˚npáj ˚n-ní sʰáj kʰwán
 hate(SG) surpass wind north COMIT-3SG.I then/until throw

nyè-b’yóól hók nk’wà
 nʰè-b’ó:l hók ˚nkʷa
 NMLZ-deny/argue DEF away
 ‘Refusal (i.e. lack of success) overpowered the North Wind, and then (he) gave up the dispute.’

- (7) p’úús, p’ét kúút b’áan ləp pè díp
 pʰ:s pət kʰút bá:n ləp pʰè díp
 sun/time exit(SG) just bec.warm receive place all
 ‘The Sun came out, just warmed up (and) covered the whole place (in warmth).’

- (8) gòe-muàan muàan, wép (. . .) lé jí,
 gè-muà:n muà:n wəp lé ʒí
 NMLZ(SG)-go(SG) going(SG) untie goods/clothes SGM.LOG.SP.POSS

gòe-b’áan kúút, kwán
 gè-bá:n kʰút kʰwán
 NMLZ(SG)-bec.warm just throw
 ‘The traveller just untied (. . .) his clothes, the warm ones, (and he) threw (them) away.’

(9) sái nhàt mp'áng yìn, hái, yìn à p'úús tóe,
 s^háj ⁿhàt ⁿpáj jìn háj jìn ?à p^á:s t^hó
 then/until wind north SAY hey SAY FOC sun/time EMPH

à gòe-k'óóm má yì
 ?à gə̀-kó:m má jì
 FOC NMLZ(SG)-bec.strong surpass CONS
 'Then the North Wind said, hey, (he) said (it) is the Sun (who) is the strongest.'

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Appendix. Wordlist

This wordlist contains all Goemai words that appear in this article. The lexical entries are structured as follows: (i) sequential index number (linking the entry to the accompanying recording), (ii) lexeme (in Goemai orthography), (iii) lexeme (in IPA), (iv) part of speech, and English gloss, and (v) abbreviated gloss (as used in the main body of the article and in the accompanying recordings). The entries are listed in alphabetical order, following a modified version of the Goemai orthography developed in Sirlinger (1937): a b b' d d' e f f' g h i j k k' l m n ng o o oe p p' r s s' sh sh' t t' u u v w y z.

The following abbreviations are used in the appendix: *adv* = adverb; *conj* = conjunction; *dem* = demonstrative; *interj* = interjection; *n* = noun; *part* = particle; *pl* = plural; *pron* = pronoun; *relator* = relator noun; *sg* = singular; *v.ditr* = verb (ditransitive); *v.intr* = verb (intransitive); *v.tr* = verb (transitive).

No.	Orthography	IPA	Part of speech. Gloss.	Abbreviated gloss (used in text)
001	án	?án	<i>n.</i> mind, intelligence, thought.	mind
002	báng	báj	<i>n.</i> long round calabash.	calabash
003	bèèr	bê:r	<i>v.tr.</i> scatter something by means of scraping (e.g. chickens scratching at corn) or spreading (e.g. a rotten fruit). <i>v.intr.</i> become scattered or spread.	scrape
004	bôì	bôì	<i>n.</i> cowrie shells.	cowrie
005	bóró	bóró	<i>n.</i> Fulani.	Fulani
006	bóebép	bóbáp	<i>n.</i> fruit pigeon.	bird
007	bòezúng	bə̀zúnj	<i>n.</i> 1) chest. 2) strength, courage.	chest
008	búk	búk	<i>v.intr.pl.</i> 1) return. 2) repeat, do again. 3) do the same as someone else. <i>part.pl.</i> and also.	return
009	búlúdí	búlúdí	<i>n.</i> type of fish.	fish
010	búür	bû:r	<i>v.tr.</i> become rich or wealthy in something. <i>v.intr.</i> become rich.	rich

No.	Orthography	IPA	<i>Part of speech.</i> Gloss.	Abbreviated gloss (used in text)
011	búùr	bû:r	<i>n.</i> type of weed.	weed
012	b'ák	ǎk	<i>adv.</i> here.	here
013	b'ák	ǎk	<i>v.tr.</i> disregard or despise something.	disregard
014	b'áng	ǎŋ	<i>v.tr.</i> make red or clear. <i>v.intr.</i> become red or clear. <i>n.</i> redness, clearness.	red
015	b'èp	ǎp	<i>n.</i> type of fish.	fish
016	b'ít	ǐt	<i>n.</i> day.	day
017	b'óót	ó:t	<i>v.tr.sg.</i> gain experience in, become able or capable of.	able
018	b'òu	òu	<i>n.</i> arrow.	arrow
019	b'óót	ó:t	<i>v.tr.</i> 1) tie, wear (by tying, e.g. a wrapper, a watch). 2) imprison someone. <i>n.</i> tying, wearing, imprisoning.	tie
020	b'ú	ú	<i>n.</i> type of grass.	grass
021	dàbák	dǎbák	<i>n.</i> stomach.	stomach
022	dám	dám	<i>v.tr.</i> spoil, damage, make sad. <i>v.intr.</i> get spoiled, sad.	spoil
023	dáng	dǎŋ	<i>n.</i> tail, ear (of grain). <i>relator.</i> behind, after.	tail
024	dé	dé	<i>relator.</i> in the vicinity, towards. <i>conj.</i> so that (introduces a purpose clause).	near
025	dém	dǎm	<i>v.tr.</i> tip someone off balance, overthrow (e.g. in wrestling, in court case). <i>n.</i> overthrowing.	tip over
026	dép	dǎp	<i>v.tr.</i> cultivate land through raising ridges.	raise ridge
027	dèp	dǎp	<i>n.</i> penis.	penis
028	díbít	dǐbít	<i>adv.</i> all, entirely.	all
029	díp	dǐp	<i>adv.</i> all, entirely.	all
030	dò	dò	<i>adv.</i> very.	very
031	dók	dók	<i>adv.</i> past, long time ago.	past
032	dóór	dó:r	<i>n.</i> gift of beer (from the brewer to her friends), gift of cooked food (from the wife to her husband).	gift
033	dòòr	dò:r	<i>v.intr.</i> limp.	limp
034	dóe	dé	<i>v.intr.</i> come.	come
035	dū =	dū [dú]	<i>pron.</i> they (logophoric; cross-refers to speaker in speech act context)	they
036	dùm	dùm	<i>v.tr.</i> 1) bend something forward (e.g. bow a head, tilt a pot). 2) put something upside down. <i>v.intr.</i> 1) bend forward, bow, dive. 2) become upside down.	bend

No.	Orthography	IPA	<i>Part of speech.</i> Gloss.	Abbreviated gloss (used in text)
037	d'á	ɖǎ	<i>part.</i> 1) future tense (tomorrow, someday). 2) progressive aspect. 3) habitual aspect. <i>conj.</i> when, if (introduces conditional clauses).	future
038	d'ák	ɖák	<i>v.tr.</i> take care of an animal or dependent person, heal, mend.	care
039	d'àng	ɖaŋ	<i>n.</i> monitor lizard.	lizard
040	ɖ'è	ɖɛ [ɖɛ]	<i>v.intr.</i> exist.	exist
041	d'èk	ɖək	<i>v.tr.</i> move up and down (e.g. winnow grain, nod head, wink eyes, herd domestic animals).	up/down
042	d'ì	ɖi	<i>adv.</i> locative anaphor.	anaphor
043	d'ík	ɖik	<i>v.tr.</i> 1) build. 2) marry, build up a family (said of a woman). <i>n.</i> marrying, marriage.	build
044	d'íp	ɖip	<i>n.</i> body hair, feather, fur.	hair
045	d'òk	ɖək	<i>v.tr.</i> keep silent about something. <i>v.intr.</i> keep silent, do quietly.	quiet
046	d'òed'óng	ɖəɖɔŋ	<i>adv.</i> well, beautifully.	well
047	d'ú	ɖú	<i>v.tr.sg.</i> set down.	set down
048	d'ú	ɖú	<i>v.tr.</i> 1) smell, sniff at something. 2) make someone sniff (by emitting a smell). <i>v.intr.</i> emit a (bad) smell. <i>n.</i> smelling, smell.	smell
049	d'úk	ɖúk	<i>v.tr.</i> pulsate, move something in quick succession (e.g. beating of heart, blinking of eye, stammer of speech). <i>v.intr.</i> pulsate, move in quick succession.	pulsate
050	d'úng	ɖúŋ	<i>v.intr.</i> whisper, reveal a secret, spread a rumor.	whisper
051	d'ùng	ɖuŋ	<i>n.</i> ridge, top of a furrow.	ridge
052	fàlàk	fʰàlák	<i>n.</i> liver.	liver
053	fè	fʰè	<i>relator.</i> owner of, source of.	owner
054	fí	fʰi	<i>v.tr.sg.</i> 1) dry. 2) make empty. 3) blow or fan at something. <i>v.intr.sg.</i> get dry, empty. <i>n.sg.</i> dryness.	dry
055	fín	fʰin	<i>n.</i> small grinding stone.	grinding stone
056	fóerém	fʰóróm	<i>n.</i> knee.	knee
057	fúm	fʰúm	<i>v.tr.sg.</i> fold or wrap up something, close the mouth. <i>v.intr.sg.</i> get folded.	fold
058	f'àlf'é	fàlfé	<i>n.</i> viper.	viper
059	f'ùt	fʰit	<i>n.</i> perch fish.	fish
060	f'im	fʰim	<i>n.</i> cotton.	cotton

No.	Orthography	IPA	<i>Part of speech.</i> Gloss.	Abbreviated gloss (used in text)
061	f'óót	fó:t	<i>v.tr.</i> listen, attend to something.	listen
062	f'ú	fú	<i>v.tr.</i> scatter, sow. <i>v.intr.</i> get scattered, dispersed, sowed.	scatter
063	f'úút	fú:t	<i>v.tr.sg.</i> 1) vomit something out. 2) cause someone to vomit. <i>n.</i> vomiting, vomit.	vomit
064	gàng	gàŋ	<i>n.</i> deleb palm.	palm
065	gép	gép	<i>v.tr.sg.</i> cut (with a knife or axe). <i>v.intr.</i> get cut.	cut
066	góng	góŋ	<i>n.</i> nose.	nose
067	gòu	gòu	<i>n.</i> small calabash.	small calabash
068	góebóór	góbó:r	<i>n.</i> hedgehog.	hedgehog
069	gòelíp	gèlíp	<i>n.</i> type of bird.	bird
070	gòemâi	gèmâi	<i>n.</i> Goemai.	Goemai
071	góet'úún	gátá:n	<i>adv.</i> opposite, beyond, at the shore.	shore
072	gū =	gū [gú]	<i>pron.</i> you (2PL.subject).	you
073	gwáté	g ^w át ^h é	<i>n.</i> yam dish.	dish
074	háás	há:s	<i>n.</i> flour.	flour
075	hààs	hà:s	<i>n.</i> egg.	egg
076	háng	háŋ	<i>n.</i> type of tree.	tree
077	héés	hé:s	<i>n.</i> coarse sand.	sand
078	hě̃n	hě̃n [hón]	<i>pron.</i> I (1SG.subject, independent).	I (1SG)
079	hó	hó	<i>interj.</i> greeting.	greetings
080	hòòs	hò:s	<i>n.</i> tooth.	tooth
081	jáng	záŋ	<i>n.</i> carelessness.	careless
082	jár	zár	<i>adv.</i> straight, parallel.	straight
083	jél	zél	<i>v.tr.</i> surround something.	surround
084	jim	zim	<i>v.intr.</i> ferment.	ferment
085	jir	zir	<i>v.intr.sg.</i> become jealous or envious. <i>n.sg.</i> jealousy, envy.	jealous
086	jirì	zirì	<i>n.</i> roan antelope.	antelope
087	jóóm	zóm	<i>n.</i> chin.	chin
088	káng	k ^h áŋ	<i>v.tr.</i> join something (to something else), make a fire (by joining wood). <i>v.intr.</i> get joined or connected.	join
089	kèp	k ^h èp	<i>n.</i> lake, pond.	lake
090	kóng	k ^h óŋ	<i>n.</i> stream, water body.	stream
091	kòerè	k ^h èrè	<i>n.</i> pied crow.	crow
092	kú	k ^h ú	<i>v.tr.</i> coil something up. <i>v.intr.</i> get into a coiled-up position (e.g. sleeping coiled up because of the cold, people sitting in the presence of elders with their legs coiled to the side).	coil

No.	Orthography	IPA	<i>Part of speech. Gloss.</i>	Abbreviated gloss (used in text)
093	kúlúng	k ^h úlúŋ	<i>n.</i> wild vine.	vine
094	kúm	k ^h úm	<i>v.intr.</i> behave foolishly.	foolish
095	kùm	k ^h ùm	<i>n.</i> name of a masquerade.	masquerade
096	kyóklók	k ^h ýklók	<i>adv.</i> 1) few, little. 2) small.	small
097	k'áng	kánŋ	<i>v.tr.</i> guard, protect, look after something, wait for something.	guard/wait
098	k'ép	káp	<i>v.intr.</i> become short (of sticks, roads, people).	short
099	k'óng	kónŋ	<i>n.</i> type of snake.	snake
100	k'óón	kó:n	<i>v.tr.sg.</i> 1) place something face down. 2) bake root crops (under a face-down pot). 3) become face down in relation to something. <i>v.intr.sg.</i> become face down.	face down
101	k'òòn	kò:n	<i>n.</i> type of snake.	snake
102	k'úúr	kú:r	<i>v.tr.</i> burn something. <i>v.intr.</i> become burnt.	burn
103	k'wát	k ^w át	<i>v.ditr.</i> pay someone something. <i>v.tr.</i> 1) pay back something. 2) pay for someone's benefit, pay for goods. <i>n.</i> paying, payment.	pay
104	k'wàt	k ^w àt	<i>v.tr.pl.</i> put in a coiled or crouching (e.g. snakes, humans, ropes) or rumpled (e.g. cloth, paper) position. <i>v.intr.pl.</i> coil, curl up, crouch, rumple.	coil
105	láng	lánŋ	<i>v.tr.sg.</i> hang or move something within a location. <i>v.intr.sg.</i> hang, be moving (within a location). <i>n.sg.</i> life.	hang (SG)
106	léng	lónŋ	<i>v.tr.pl.</i> hang or move something within a location. <i>v.intr.pl.</i> hang, be moving (within a location). <i>n.pl.</i> life.	hang (PL)
107	lú	lú	<i>n.</i> settlement (house, compound, village, town). <i>adv.</i> home.	settlement
108	mà	mà	<i>v.tr.</i> surpass, exceed. <i>n.</i> superiority, majority.	surpass
109	màng	mànŋ	<i>v.tr.sg.</i> 1) take, pick up, lift. 2) pass something on to someone. <i>v.tr.</i> 1) assume that. 2) keep on doing. 3) start to do. <i>v.intr.sg.</i> stop. <i>n.sg.</i> lifting.	take
110	mb'àiẏwám	ⁿ ḃàiz ^w ám	<i>n.</i> jackal.	jackal
111	mè	mè	<i>n.</i> barn, granary.	barn

No.	Orthography	IPA	<i>Part of speech.</i> Gloss.	Abbreviated gloss (used in text)
112	mì	mĩ	<i>v.tr.sg.</i> be related to someone. <i>n.sg.</i> blood relationship.	be related
113	móng	mónɣ	<i>v.tr.</i> study something closely, aim at something carefully.	study
114	môu	môu	<i>part.</i> negation.	not
115	môe =	mǎ [má]	<i>pron.</i> we (1PL.subject).	we
116	móelép	mólép	<i>v.tr.</i> wink eyes. <i>v.intr.</i> wink.	wink
117	móeríp	móríp	<i>n.</i> soul, spirit.	soul
118	mùrú	mùrú	<i>n.</i> fig tree.	fig tree
119	nàk	nàk	<i>v.tr.</i> fetch (water, food), go after men (said of women).	fetch
120	náng	nánɣ	<i>dem.</i> that, distal demonstrative root.	that
121	nd'òòlk'úún	^h nɔ̃:l ká:n	<i>n.</i> gecko.	gecko
122	nék	nók	<i>v.intr.</i> become thick (of liquid, gruel). <i>n.</i> thickness.	thick
123	ní	ní	<i>n.</i> elephant.	elephant
124	ník	ník	<i>v.intr.</i> make an effort.	effort
125	nk'één	^h n k'é:n	<i>n.</i> thorn.	thorn
126	nnùk	^h n nùk	<i>n.</i> whip.	whip
127	nóe	nó	<i>pron.</i> my (1SG.possessive).	my
128	nt'í	^h n tí	<i>n.</i> proper name (son of rabbit in folktales).	rabbit's son
129	nú	nú	<i>n.</i> sea, large-sized river.	sea
130	nyák	n'ák	<i>v.tr.</i> rest oneself. <i>v.intr.</i> breathe. <i>n.</i> rest, breath.	breathe
131	ngháng	ŋánɣ	<i>n.</i> type of monkey.	monkey
132	nghóng	ŋónɣ	<i>n.</i> bells.	bells
133	ó	ʔó	<i>interj.</i> yes (female speaker).	yes
134	óerém	ʔéróm	<i>n.</i> beans.	beans
135	páng	p ^h ánɣ	<i>n.</i> puffadder.	snake
136	pèp	p ^h èp	<i>n.</i> master.	master
137	pìt	p ^h ít	<i>n.</i> red monkey.	monkey
138	póól	p ^h ó:l	<i>v.tr.</i> hide or conceal something. <i>v.intr.</i> get hidden, concealed.	hide
139	púk	p ^h úk	<i>n.</i> type of tree.	tree
140	p'áng	pánɣ	<i>n.</i> stone, hill, mountain.	stone
141	p'ét	pát	<i>v.tr.sg.</i> 1) resemble. 2) ooze out, produce something. <i>v.intr.sg.</i> exit, go out, appear.	exit
142	p'ít	pít	<i>n.</i> fishing net.	net
143	p'óót	pó:t	<i>v.intr.</i> become narrow.	narrow
144	p'úk	púk	<i>n.</i> calf (of the leg).	calf
145	rà	rà	<i>v.tr.</i> weave.	weave
146	rǎng	rǎŋ [ránɣ]	<i>v.tr.</i> think of something.	think
147	réép	ré:p	<i>n.sg.</i> girl, daughter.	girl

No.	Orthography	IPA	Part of speech. Gloss.	Abbreviated gloss (used in text)
148	rèp	rè:p	<i>v.tr.</i> make something mixed up, entangled, confused. <i>v.intr.</i> become mixed, entangled, confused. <i>n.</i> mixing.	mix
149	rép	ráp	<i>v.tr.</i> make someone itch. <i>v.intr.</i> itch. <i>n.</i> itching, itch.	itch
150	ròk	ròk	<i>v.tr.</i> make something sweet. <i>v.intr.</i> become sweet. <i>n.</i> sweetness.	sweet
151	ròèròk	ròèròk	<i>adv.</i> sweetly.	sweetly
152	rú	rú	<i>v.tr.sg.</i> enter into. <i>v.intr.sg.</i> enter.	enter
153	sán	s ^h án	<i>n.</i> my body. <i>pron.</i> myself (1SG.reflexive).	myself
154	sém	s ^h ém	<i>n.</i> our body. <i>pron.</i> ourself (1PL.reflexive).	ourself
155	sóól	s ^h ó:l	<i>n.</i> metal, money.	metal
156	súk	s ^h úk	<i>n.</i> your body. <i>pron.</i> yourself (2PL.reflexive).	yourself
157	s'án	sán	<i>v.intr.</i> 1) slip. 2) be slippery.	slip
158	s'éém	sóm	<i>n.</i> name.	name
159	s'óóm	sóm	<i>n.</i> horn (of animal), trumpet.	horn
160	s'úk	súk	<i>n.</i> rubbish.	rubbish
161	shán	ʃhán	<i>v.intr.</i> enlarge, grow in size.	enlarge
162	sháng	ʃháj	<i>v.tr.</i> glance at something.	glance
163	shél	ʃhál	<i>n.</i> game, play, joke.	game
164	shén	ʃhón	<i>n.</i> beniseed.	beniseed
165	shím	ʃhím	<i>n.</i> skin (of human, animal, root crop), leather.	skin
166	shín	ʃhín	<i>v.tr.</i> 1) do. 2) try to do something. 3) make something happen. <i>v.intr.</i> happen.	do
167	shóóm	ʃhóm	<i>n.</i> guineafowl.	guineafowl
168	sh'á	ʃá	<i>v.tr.</i> desire something.	desire
169	sh'áán	ʃá:n	<i>n.</i> large-sized hoe.	hoe
170	sh'äng	ʃäj [ʃáj]	<i>v.tr.</i> hunt for animals (also for money, food), carried out by a single hunter or small groups of hunters. <i>n.</i> hunting, hunt.	hunt
171	sh'é	ʃé	<i>n.</i> foot, leg.	foot/leg
172	sh'è	ʃè	<i>v.tr.</i> 1) learn. 2) teach.	learn/teach
173	sh'él	ʃál	<i>n.</i> wound, sore.	wound
174	sh'ì	ʃì	<i>v.tr.</i> deny something, refuse to acknowledge something.	deny
175	sh'ím	ʃím	<i>n.</i> iguana.	iguana
176	sh'íng	ʃíŋ	<i>v.tr.</i> mix liquid porridge (i.e. before the flour is added to it).	mix
177	sh'óón	ʃó:n	<i>n.</i> fingernail, toenail, claw, hoof.	nail

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178	sh'óól	ʃó:l	<i>n.</i> type of big locust, grasshopper.	locust
179	sh'òesh'áng	ʃəjʌŋ	<i>adv.</i> pleasant, enjoyable.	nice
180	táb'à	tʰábà	<i>v.tr.</i> have ever / never done.	have ever/never done
181	tàl	tʰāl	<i>v.tr.</i> 1) ask. 2) greet. <i>n.</i> greeting.	ask
182	tāng	tʰāŋ [tʰāŋ]	<i>v.tr.</i> search, look for something.	search
183	táráp	tʰáráp	<i>v.tr.pl.</i> 1) snap something (bones, sticks). 2) break out, burst into. <i>v.intr.pl.</i> snap.	snap
184	tàu	tʰàu	<i>n.</i> bow.	bow
185	tél	tʰól	<i>v.intr.</i> become deep. <i>n.</i> depth.	deep
186	tép	tʰóp	<i>v.tr.</i> make black. <i>v.intr.</i> become black. <i>n.</i> blackness.	black
187	tínì	tʰinĩ	<i>n.</i> palm (of hand), sole (of foot).	palm
188	típ	tʰíp	<i>v.tr.</i> 1) press something down. 2) press on something.	press
189	tó	tʰó	<i>interj.</i> okay.	okay
190	tók	tʰók	<i>v.tr.</i> practice traditional religion.	practice
191	tóe	tʰó	<i>part.</i> emphasis.	emphasis
192	tù	tʰù	<i>v.tr.sg.</i> 1) kill. 2) inflict on someone. <i>n.sg.</i> killing, murdering.	kill
193	tùl	tʰùl	<i>n.</i> limpet.	limpet
194	t'á	tá	<i>v.intr.sg.</i> fall. <i>n.sg.</i> falling.	fall
195	t'áán	tá:n	<i>v.intr.</i> fall (of rain).	fall
196	t'áng	táj	<i>n.</i> bat.	bat
197	t'éi	téi	<i>adv.</i> (not) yet.	yet
198	t'éng	téŋ	<i>n.</i> tree, forest.	tree
199	t'èp	tèp	<i>v.tr.</i> be next in line to someone.	next
200	t'íl	tíl	<i>v.intr.</i> go begging for food, show greed.	greed
201	t'íngìlít	tíŋgìlít	<i>n.</i> hornbill.	bird
202	t'ít	tít	<i>v.tr.</i> sprinkle something (somewhere).	sprinkle
203	t'ó	tó	<i>v.intr.sg.</i> lie.	lie (SG)
204	t'óng	tóŋ	<i>v.intr.sg.</i> sit. <i>v.intr.</i> 1) remain, be permanently in a location. 2) be plentiful. 3) fit well into something.	sit
205	t'óegái	tógái	<i>n.</i> middle-sized calabash.	middle-sized calabash
206	t'óerép	tórép	<i>v.intr.pl.</i> lie.	lie (PL)

No.	Orthography	IPA	Part of speech. Gloss.	Abbreviated gloss (used in text)
207	t'ú	tú	<i>n.</i> bottle, bottle-shaped calabash.	bottle
208	t'úng	túŋ	<i>v.tr.</i> 1) fry. 2) stir.	fry
209	t'úún	tú:n	<i>n.</i> hole.	hole
210	várám	várám	<i>n.</i> type of grass.	grass
211	vèlú	vèlú	<i>n.</i> type of grass.	grass
212	víling	víliŋ	<i>v.tr.</i> circle or fly around something. <i>v.intr.</i> fly around.	circle
213	vòòm	vò:m	<i>v.tr.</i> blind someone, close eyes. <i>v.intr.</i> become blind.	blind
214	vú	vú	<i>n.</i> type of edible tuber.	tuber
215	wáng	wáŋ	<i>n.</i> clay pot.	pot
216	wén	wén	<i>v.tr.</i> search, look for something.	search
217	wò	wò	<i>n.</i> snake.	snake
218	wùm	wùm	<i>v.tr.</i> bury something or someone, plant seeds. <i>v.intr.</i> get buried, sink.	bury
219	wún	wún	<i>v.tr.</i> make someone sweat. <i>v.intr.</i> sweat. <i>n.</i> sweating.	sweat
220	yà	jà	<i>v.tr.</i> 1) catch, get a hold of. 2) make, cause someone to do something. <i>v.intr.</i> arrive, reach.	catch
221	yáng	jáŋ	<i>n.</i> stalk.	stalk
222	yén	jén	<i>v.tr.</i> increase something. <i>v.intr.</i> become plentiful. <i>n.</i> plenty, honor.	plenty
223	yí	jí	<i>n.</i> year.	year
224	yìn	jìn	<i>part.</i> say (introduces reported speech).	say
225	yó	jó	<i>v.tr.sg.</i> rise as someone. <i>v.intr.sg.</i> rise, fly off, start.	rise
226	yõe	jě [jǎ]	<i>pron.</i> you (2SGF.subject, independent).	you
227	zàng	zàŋ	<i>n.</i> barrenness.	barren
228	zèm nyè	zəm n'è	<i>v.tr.</i> like, agree or accept something.	like
229	zòòm	zò:m	<i>v.tr.</i> make something cold. <i>v.intr.</i> become cold. <i>n.</i> coldness.	cold

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