

A PROVISIONAL PHONEMIC ANALYSIS OF KISI

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INTRODUCTION

During the academic year 1949-50 I had an opportunity to spend about one hundred hours working with a native speaker of the Kisi language of West Africa who happened to be in Berkeley for the year. I collected a considerable vocabulary and notes on some aspects of Kisi morphology and most of this data was checked by questioning the informant during the process of analysis. The present paper presents my information on Kisi phonemic structure. (1)

My informant was Moses Davis (whose Kisi name is Tamba gandù), an undergraduate student at the University of California on a scholarship from the Liberian government. He was born in the town of Kpukulo but lived in Sardu; both these towns are in the western province of Liberia. Before coming to the United States he had studied at a mission school and at a public high school in Liberia. As all his schooling took him away from home, it had been a long time since he was with his own people. He spoke Kisi well, but sometimes had difficulty remembering certain words.

The Kisi language is spoken in parts of Liberia, Sierra Leone and French Guinea with an estimated total of from 335,000 to 350,000 native speakers. About 150,000 Kisi speakers live in Liberia where they represent some 7.9% of the total population of 1,900,000. Very few Liberian Kisi speakers are classed as literate. Another 150,000 live in French Guinea, representing 7.3% of a total population of 2,050,000. The Kisi population in Sierra Leone is estimated at 35,000 by North and at 50,000 by MacDougald; the latter figure represents 2.5% of the total population of 2,000,000. The Kisi speakers are located in Koinadugu District (North Province) and in Konno and Pendeby (Central Provinces). Kisi is a language of instruction in both Sierra Leone and French Guinea. (2)

My informant spoke a Liberian dialect of Kisi. He indicated the existence of considerable local differences in the language by saying that it was possible to tell where a man lived from the way he spoke. The dialect differences are apparently small between Liberia and Sierra Leone, but greater between Liberia and French Guinea. Davis said that the Kisi speakers from French Guinea had a different "accent" and that the speech of a remote dialect was even difficult to understand. He knew one word of a French Guinea dialect: /takala:/ 'match, box of matches'.

The Liberian Kisi have had some contact with English since some of them go to the coast for seasonal employment, but Davis would make no comment on the prestige of English among the Kisi.

In his new classification of African languages, Greenberg places Kisi (Kissi in his orthography) in a group with Bulom and Mampa, forming a subdivision of the West Atlantic sub-family of the Niger-Congo Family. Delafosse, in 1924, listed Kisi (Kissi or Gihi) as the twentyfourth and final language of his Groupe S n galo-guin en, XVI. Bulom (Boulom, Bullom, Sherbro, Mampwa) is listed as the twentysecond language of the same group. According to Delafosse's map, Kisi is separated from the other languages of its group and surrounded by languages of Groupe XIV, Nig ro-s n galais. (3)

Both the sounds and the sound patterns of Kisi are fairly complex and the analysis presented below represents no little labor and careful revision. I am reasonably certain of my treatment of the consonants and vowels but less confident of the reliability of my tone analysis. Under other circumstances I would expect to do more work on the unfinished aspects of this study, but it is unlikely that I will have any further opportunity to work on Kisi in the near future and it seems wiser to put my present conclusions on record in the hope that they will prove helpful to other investigators.

THE PHONEMIC STRUCTURE OF KISI

The phonemes of Kisi consist of consonants, vowels, tones, and juncture features.

1. Description of the Phonemes

1a. The Consonant Phonemes

		LABIAL	APICAL	FRONTAL	DORSAL
STOPS AND AFFRICATES	voiceless, egressive	p	t	c	k
	voiced, egressive	b	d	j	g
	voiced, ingressive	b'	d'		gb'
NASALS		m	n	ɲ	ŋ
FRICATIVES		f	s		h
LATERAL AND SEMI-VOWEL			l	y r w	

Allophones are not indicated in the chart but are discussed in the following paragraphs.

Stops and Affricates. These phonemes differ from the corresponding English ones in that the voiceless ones are less strongly aspirated in Kisi and that there is in Kisi a series of ingressive stops. The symbols /c, j/ represent the affricates [t̪[̥], d̪[̥]]. The diagraph /gb'/ represents a coarticulated phone.

/p/	pàa:	'bone'
/t/	tùnd <u>o</u>	'dog'
/c/	cá <u>p</u> o	'plenty'
/k/	kàa:	'dye'
/b/	bàa:	'hand'
/d/	dèngùltaŋ	'live coals'
/j/	jègemèy <u>o</u>	'Jamaican banana'
/g/	gandù	(a certain personal name)
/b'/	b'ella	'rats'
/d'/	d'ò:sùno:	'hunter'
/gb'/	gb'àndia:	'Gbàndi people'

The affricates /c, j/ are interpreted as unit phonemes rather than as /ty, dy/ because there is no substantial pattern of consonant plus /y/ on which to base the interpretation. The phoneme /y/ when in a consonant cluster follows only /s/: syána: 'red.'

Voiced stops with homorganic nasal onsets are interpreted as consonant clusters. This interpretation

simplifies the morphological description: tùndo 'dog,'
tùn nu: 'my dog;' siámndo 'guinea fowl,' siám nu: 'my
guinea fowl.'

The glottal stop is not considered phonemic. It always occurs before word-initial vowels, [ʔo pè:lo] o pè:lo 'to the river-side.' The contrast between [ʔmm] mm 'yes' and [ʔmʔm] mm̄ 'no' is not considered significant, for these are interjections and may be expected to show some phonemic peculiarities. The contrast appears to lie in the tonal difference and the tone mark serves to distinguish the two words in writing. No other contrast such as this one was obtained.

Fricatives. Both /f/ [f] and [v], the latter an allophone of /w/, are distinctive from the labiodental fricatives of English. In their articulation the lips are rounded rather than stretched horizontally, fòlo: 'a certain small, scaly, spotted fish.' The phoneme /s/ is always [s], for example in sò: 'chicken.' One exception to this statement should be noted. When the word [siána:] 'to be a permanent red' is used as an attributive, it has the form [syána:] 'red,' as in [kòngilla syána:] 'red roosters.' This [syána:] is often contracted to [sána] without any difference of meaning. I have only this one example of such a contraction. /h/ [h] is included in the dorsal column only to simplify the chart. It is, of course, a voiceless glottal fricative, hòle: 'mushroom.'

Nasals. The nasal consonants are similar to those in English except that in Kisi there is in addition /n̄/, a frontal nasal: /m/---kàmàa: 'elephant,' /n/---nàa: 'sickness,' /n̄/---nèe:ñe 'anything,' /ŋ/---ŋo:ŋo:ndo 'bull-frog.'

Lateral Consonant and Semi-Vowels. /w/ The allophones of /w/ are [v], which fluctuates freely with [w] intervocally in open and close juncture, and [w], which occurs elsewhere: [kòlà vileyo] kòlà wileyo 'long cloth,' [ya:va:ŋ] ya:wa:ŋ 'onions,' wò:leŋ 'dry season.'

/l/ [l] kìallo 'deer'

/r/ [ɹ] rànde 'mountain.' This is the only occurrence of the phoneme. It seems to be a foreign element in the dialect of my informant. This word is rare in the speech of his area, he told me. The more common pronunciation was lòànde. Further data might reveal some pattern of change regarding /lo/ and /r/ between his and some other dialect.

/y/ [y] yòmnde 'dry woods, green trees'

1b. The Vowel Phonemes

		FRONT		CENTRAL		BACK	
		Short	Long	Short	Long	Short	Long
HIGH		i	i:			u	u:
MID	HIGHER	<u>e</u>	<u>e</u> :			<u>o</u>	<u>o</u> :
	LOWER	e	e:			o	o:
LOW				a	a:		

The vowel phonemes are given in the above chart. Only the phonemes /a, e, e:/ have allophones.

The allophones of /a/ are [ε] or [a^] and [a]. Allophones [ε] and [a^] fluctuate freely with [a] in word-final position, [tũde] tũda 'dogs;' [a] occurs elsewhere, bàa; 'hand.'

The allophones of /e/ are [I], lower-high front and [e], higher-mid front unrounded vowels: [e] occurs before /y/ and /i/ and [I] occurs elsewhere: [yàwI] yàwe 'belts,' [kàley] kèley 'ring.'

The allophones of /e:/ are [e:] and [æ:]. The allophone [e:] fluctuates freely with [æ:] only in the following words: ñè:i 'your (plural)' and nde:i 'their,' e.g., kòlì ñe:i 'your (pl) kola nuts,' kòlì nde:i 'their kola nuts.'

The following is a contrasting list of words in which short and long vowels occur.

- /i/ /i:/ kàwì nì: 'my pipe'
nda hìnì nì 'They are the ones who lay down.'
cìó: 'town'
cìi:yò 'bush-cow'
- /e/ /e:/ pèngò 'house-fly'
pè:ngò: 'flower of the "cotton tree".'
pèlò: 'a certain vegetable used for greens'
ò pè:lò 'to the river-side'
kéá man 'Give (me) these!'
kè:a (the name of a certain river)
- /e/ /e:/ péy 'Beg!'
pé:y 'day before yesterday'
- /a/ /a:/ sià 'name for the first daughter'
siya: 'raining'
a 'you (singular)'
a: 'they'
- /u/ /u:/ kàwun mun 'these beans'
mu:η 'two (in counting)'
èn lòe nun 'Let us enter of our own accord.'
kawun nu:η 'my beans'
- /o/ /o:/ ò cò ya: cò 'It is on me.'
cùndo: 'owl'
cunndó 'smell'
cúndó 'dust'

/o/ /o:/ kólí (a personal name, male)
kò:lì 'behind'

Note: The description of the vowel phonemes will not be complete until the clusters are analyzed. The outstanding problem is that of determining the relation between the front vowels and /y/ in clusters of front vowels and the back vowels and /w/ in clusters of back vowels.

1c. The Pitch Phonemes (Tonemes)

There are three register tonemes in Kisi, indicated by the symbols /` / for low tone, /' / for high tone, and the absence of a mark for mid tone. Contrasting pairs of words are here given:

High tone contrasting with mid tone: pwé:ŋ kón 'Forget that!' and pwe:ŋ kón 'that rat (a certain kind).'

High tone contrasting with low tone: ló:lá béndolan 'big markets,' lò:là béndolan 'big drum sticks,' síállen 'orange,' siállen 'rainy season.'

Low tone with mid tone: bo:leŋ 'feather,' bò:leŋ 'felt hat, mushroom,' ciè: nèn 'in the farm,' ciè: nèn 'in the house.'

1d. Juncture

The phoneme of external open juncture in the form of a pause is indicated by a space between words. Pairs of words in which the contrast is clear are here given:

cìi:yò 'bush-cow'

è cí: yó: 'I'm finished, yeah.'

nàà: ndòo: 'his sickness'

nàà:ndo: (the name of a certain month of the year)

2. Distribution of the Phonemes

I have had time enough to describe the distribution of the consonant phonemes only. Even this description is incomplete; it does not indicate the nature and distribution of consonant clusters of three members. The distribution is made on the basis of position in words.

2a. Initial Position

Single consonants. All consonants occur in initial position, but /j, g, ŋ/ are not frequently found in this position. /r/ occurs in only one word: /p/ ---pèwo 'hog,' pwè:ndo 'a certain striped rat,' piò: 'river,' /t/ ---tàmbillò 'leopard,' tùndo 'dog,' tàgb'àa: 'chest,' /c/ ---cìi:yo 'bush-cow (buffalo),' cówwó 'possum,' cùillo 'porcupine,' /k/ ---kònnò 'catfish,' Kèe:ndo 'squirrel,' kíallo 'deer,' /b/ ---bàa: 'hand,' bùmbò: 'pig,' bò:leŋ 'felt hat, mushroom,' /d/ ---dùmbullaŋ 'oranges,' dèngùltaŋ 'live coals,' dìò: 'doorway,' jàwa: (personal name, male), jègemèyo 'Jamaican banana,' /g/ ---gandù (personal name, male), gánga: 'very large mat made from raffia-palm branches,' /b'/ ---b'ella 'rats,' b'andiò: 'boundary,' b'ùlo: 'cave,' /d'/ ---d'ò:sùno: 'hunter,' d'èmbò: 'abdomen,' d'ò:màa: 'garment, gown, shirt,' /gb'/ ---gb'à:sàleŋ 'okra (singular),' gb'ukùò 'mumps (singular),' gb'àndia: 'Gbandi people,' /f/ ---fòlo: 'a certain small, scaly, spotted fish,' fòlo: 'valley,'

/s/--sòkòno: 'medicine man,' sòo: 'chicken,' sàsàa: 'fence,'
 /h/--humbù 'white,' ho 'this,' hòle: 'mushroom,' /m/--
 mènndo 'nose,' mé:leŋ 'breast,' mósillo 'hat,' /n/--nándé:
 'this season,' nán d'è 'We have eaten,' nàa: 'sickness,'
 /ñ/--ñèe:ñe 'anything,' cìõñ ña:ŋ 'your (plural) farms,'
 /ŋ/--ŋo:ŋo:ndo 'bull-frog,' /l/--lòlo: 'thigh,' lòànde
 'mountain,' lòmnden 'tail,' /y/--yì:nden 'fire,' /ya/ 'I,
 me,' yòmnde 'dry woods, green trees,' yáwwó 'paper, leather,
 skin,' /r/--rànde 'mountain,' /w/--wesa: 'dry,' wò:leŋ
 'dry season,' wà:lan 'planting season.'

Clusters of Consonants. The clusters /pl, kl, ŋg/ occur
 rarely in initial position. /pl/--bal na: pla 'our own
 spears,' plàndèn 'bamboo stock,' /kl/--klama:leŋ '(a certain)
 musical instrument,' /mb/--mbìli:yo 'bass drum,' mbòiya:
 'soup,' /nd/--nde 'mother,' nda 'there,' pètan ndaŋ 'these
 eggs,' /ŋg/--ŋga: 'three (in counting).'

2b. Medial Position

Single consonants. It is noteworthy that except for /g/
 in one word which may be borrowed, the voiced egressive stops
 do not occur in word medial position apart from a homorganic
 nasal onset. No examples of word-medial /b'/ have yet been
 found, and /d'/ occurs rarely. /p/--còpio: 'tree squirrel,'
 cápo 'plenty,' /t/--gb'àtùe:yo 'imported machete,' pètèn
 'egg,' /c/--cólcol 'last night,' có:có: 'up,' /k/--sòkòno:
 'medicine man,' takala: 'match, box of matches,' còkañcò:
 'toad,' /g/--jègemèyo 'Jamaican banana,' /d'/--b'id'i:ŋ

'twenty,' /gb' /---tà:gb'aa: 'chest,' cèlègb'o: 'baby,' kángb'o: 'pigeon,' /ʔ /---kófo: 'trunk,' fófóló: 'empty shell,' /s /---pìsultan 'playing,' d'ò:mà b'á:sio: 'brown gown,' /m /---klama:leŋ '(certain) musical instrument,' to:ma: 'a (certain) society,' /n /---ye:ne 'what?' téna 'aunt,' /ñ /---kéña 'uncle,' báfián 'oil made from palm kernels,' /ŋ /---tìni 'black,' ɲo:ɲo:ndɔ 'bull-frog,' /l /--- be:lòàn 'upper section of town,' pè:lan 'rivers,' mbìli:yò 'bass drum,' /w /---pèwo 'hog,' màluŋ kùwo: 'harvesting rice,' làm sùwo 'fish soup,' /y /---gb'éngb'éyó 'stool,' gb'àtùe:yò 'imported machete,' kaya: 'basket used by women when fishing.'

Clusters of consonants. Word-medial clusters are made up in every case of a sonorant (nasal, lateral, or semi-vowel) plus some other consonant. The clusters are of such irregular pattern that it is evident that further analysis and investigation is necessary. Clusters other than those which occur in word initial position are separated by syllable division. /mb /---bùmbò: 'pig,' tambàa: 'a (certain) musical instrument,' kàmba: 'a certain basket,' /mn /---lùmndɔ 'deepest part of river,' sùmno: 'blacksmith,' /nd /---piàndɔ: 'male,' tìnda: 'walking stick,' /nt /---e ló nente 'I am not sleeping,' /nn /---cùnndɔ 'smell,' kòndɔ 'catfish,' /ñc /--- còkañcò: 'toad,' wàñce:a 'people,' /ñj /---màñjàa: 'a chief's farm,' gb'èñjɔ: 'festivity,' gb'afija: 'potato greens (singular),' /ww /---kàwwòŋ 'beans,' /lc /---cólcol 'last night,' /lt /---pìsultan 'playing,' hòltɛŋ 'eye,' /ll /---wallo

'work,' kiallo 'deer,' /ns/---sún_u 'right now, very soon,'
 /ng/--- bèngò: 'foot,' fàngàa: 'crowd,' pànga: 'temporary
 farm house,' /ngb' /---gb' éngb' éyó 'stool.' sángb'á: 'cer-
 tain upright drum.'

2c. Final Position

Only the sonorants and no clusters appear in word-final
 position: /m/---yóm 'Break (it)!' tùm pà:ndo: 'old dog,'
 làm sùwo 'fish soup,' /n/---hún 'Come!' tùn lùseyo 'heavy
 dog,' mà:lun d'ìù: 'The rice (is) ripe,' /ñ/---tùñ ña:
 'your (plural) dog,' (This is the only case of word-final
 /ñ/. Its occurrence is the result of regressive assimi-
 lation.) /ŋ/---plànden 'bamboo,' lòmnden 'tail,' fùnden
 'cotton,' /l/---cùil bèndo: 'big porcupine,' kòngìl syàna:
 'red rooster,' kìa**l** béndo: 'big deer,' /w/---ców bendo:
 'big possum,' pèw bèndo: 'big hog,' /y/---péy 'Beg!' téy
 'Spread (it out)!'

FOOTNOTES

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 advice and encouragement.
- (2) MacDougald, 1924, p. 31 (Liberia); p. 25 (French Guinea);
 p. 37 (Sierra Leone); North, 1933, p. 194 (Sierra
 Leone).
- (3) Greenberg, 1949, p. 87; Delafosse, 1924, under Groupe
 XVI. See also Delafosse, 1914, and Homburger, 1941,
 pp. 51-52.

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