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Nchane Orthography Guide

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Abbreviations

1s first person singular
2s second person singular
1p first person plural

2p second person plural
3p third person plural
AM associative marker

COP copula
LOC locative
n noun
PAST past
pl plural
POT potential
PROG progressive

QM question marker

v verb

 σ syllable \emptyset zero affix

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1 Introduction

This paper proposes an orthography for Nchane, an Eastern Beboid Language spoken by about 22,000 people in the Misaje Subdivision, Donga-Mantung Division, North-West Province, Republic of Cameroon. Dieu and Renaud (1983) in the Atlas Linquistique du Cameroun (ALCAM) list the language as: Ncane [873]. The *Ethnologue* (Gordon 2005) lists the following language names as variations: Ncane, Nchanti, Ntshanti, Cane. The ISO 639-3 code is [ncr]. The language area comprises five principle villages: Nkanchi, Chunghe, Nfume, Kibbo and Bem, each of which have their own fon. It is reported that Kibbo and Bem have slight dialectal variations from the other villages.

A phonology sketch of Nchane was done by Russell Richards (1991) mainly from a wordlist collection. Jean-Marie Hombert (1980) studied the noun classes of the Beboid languages, of which Nchane was included. Other linguistic work has apparently been done by KIMBI Nathan; however, the authors have not seen any of his linguistic research, only a proposed alphabet and primer, neither of which has been formally accepted by the community. Outside of this research, the authors are not aware of any other linguistic research that has been performed in Nchane.

This particular document was prepared with the assistance of several language informants, notably Shey Tamfu Ephriam from Nfume and Emmanuel Chambang from Bem.

The data utilised in this document comes from a 1700 wordlist collected by Richard Boutwell in 2007. The wordlist provides all example words, while example sentences come from data collected between 2005 to 2008.

2 Alphabet

The Nchane segmental alphabet is made up of 18 consonants and 7 vowels. They are represented below in upper and lower cases:

A a, B b, Ch ch, D d, E e, ε ε, F f, G g, I i, J j, K k, L l, M m, N n, Ny ny, Ŋ ŋ, O o, O ɔ, S s, Sh sh, T t, U u, W w, V v, Y y.

2.1 Consonants

The consonant phonemes, their allophones and graphemes are presented in the table below. The chart also shows their occurrence in various positions in the word.

Phoneme	Allophones	Grapheme	Initial position	Medial position	Final
					position
/b/	[b]	Вb	bede	bubi	_
			to cry	bundle	
/t/	[t ^h]	T t	ta	kite	
			to kick	wood	
/d/	[d]	D d	da	budε	
			testicle	bridge	
	[d]~[f] 1		_	fεdε	_
				to winnow	
/k/	[k ^h]	K k	ki	bikε	_
			to love	pockets	
/g/	[g]	G g	ga	chuge	_
			to divide	to bathe	
/tʃ/	[tʃ]	Ch ch	cho	bachii	_
			to hollow out (log)	fathers	
/d3/	[dʒ]	Jј	jí	kijine	
			hoes	mat	
/f/	[f]	F f	fi	fufe	
			to help	to satisfy	
/s/	[s]	Ss	sa	mase	_
			to judge	to admire	
/ʃ/	[ʃ]	Sh sh	shi	kɔshε	_
			chicken	knot	
/v/	[v] ²	V v	_	kibvune	
				dust	
/m/	[m]	M m	mase	bami	
			to admire	persons	
/n/	[n]	N n	na	kunama	_
			cow	scorpion	

Phoneme	Allophones	Grapheme	Initial position	Medial position	Final
					position
/n/	[ɲ]	Ny ny	nya	banye	_
			to give	to pack	
/ŋ/	[ŋ]	ŋŋ	ŋanɛ	пуапє	faŋ
			to crawl	to feed (animals)	to deny
	$[\tilde{V}_{\mathtt{J}}]^3$		_	_	yaŋ
					to suck
/1/	[1]	L1	lu	bvulε	_
			to abstain	lion	
/w/	[w]	W w	wεŋε	chiwo	_
			to tickle	villages	
/j/	[j]~[ʒ] ⁴	Yу	уε	bayε	_
			to see	to pluck (chicken)	

2.1.1 Prenasalised Consonants⁵

One kind of consonant cluster found in Nchane consists of a non-nasal consonant preceded by a nasal consonant. With the exception of the consonant **1**, both consonants of the cluster are produced at the same place of articulation.⁶ Most consonants may be preceded by such homorganic nasal consonants (symbolised by "N" below), as shown in the following chart.

Consonant	Allophones	Grapheme	Initial position	Medial position	Final position
Cluster					
/Nb/	[mb]	Mb mb	mbele	fimbi	_
			bracelet	cola nut	
/Nt/	[nt]	Nt nt	ntoŋ	anteŋe	_
			cutting grass	inside	
/Nd/	[nd]	Nd nd	nduŋ	kindəŋ	_
			hawk	neck	
/Nk/	[ŋk]	Ŋk ŋk	ŋka	kiŋku	_
			salt	flood (n)	
/Ng/	[ŋg]	Ŋg ŋg	ŋgu	kiŋgaŋ	_
			fire	island	

Consonant	Allophones	Grapheme	Initial position	Medial position	Final position
Cluster					
/Nt∫/	[nt∫]	Nch nch	nchiŋ	kinche	_
			heel	inhabitant, resident	
/Ndʒ/	[ndʒ]	Nj nj	njese	munjege	_
			blessing	smoke	
/Nf/	[mf]~[mf]	Nf nf	nfu	kinfaŋ	
	~[nf] ⁷		ladle	molar tooth	
/Ns/	[ns]	Ns ns	nsaŋ	jɔnsε	_
			friend	man (male)	
/Nʃ/	[nʃ]	Nsh nsh	nshaŋ	finsho	_
	_		ground, land	mud wasp	
/Nl/	[ŋl]	Ŋl ŋl	ŋlo	kiŋla	_
			poison (n)	kingfisher	

2.1.2 Palatalised Consonants

Another type of consonant cluster is where the second consonant is the palatal glide [j], which is written in Nchane as **i** when preceded by a consonant and followed by a vowel. There is a relatively small number of words containing palatalized consonants, as seen in the following three instances.

Phoneme	Allophone	Grapheme	Initial position	Medial position	Final position
/bj/	[bj]	Bi bi	bia	fimbieŋ	
			regime (of bananas)	bow (hunting)	
/fj/	[fj]	Fi fi	fiε		
			mouse		
/mj/	[mj]	Mi mi	mio		
			to squeeze		

2.1.3 Labialised Consonants

A third consonant cluster is where the second consonant is the labiovelar glide [w], which is always written in Nchane as w. The glide follows the majority of the consonants, as seen in the table below.

Phoneme	Allophones	Grapheme	Initial position	Medial position	Final position
/bw/	[bw]	Bw bw	bwa		
			mother		
/dw/	[dw]	Dw dw	dwε		
			beak, bill		
/kw/	[kw]	Kw kw	kwi	kikwe	
			moon	head	
/gw/	[gw]	Gw gw	gwε	kigwede	
			to fall	crest (of bird)	
/t∫w/	[t∫w]	Chw chw	chwε		
			witch (female)		
/dʒw/	[dʒw]	Jw jw	jwεlε	kijwi	
			edge	boundary (of field)	
/fw/	[fw]	Fw fw	fwε	safwe	
			to be pregnant	to lead	
/∫w/	[ʃw]	Shw shw	shwayε		
			to husk (corn)		
/mw/	[mw]	Mw mw	mwa		
			child		
/ŋw/	[ŋw]	Ŋw ŋw	ŋwaŋ	ŋwaŋwa	
			granary	sugar cane	

2.1.4 Labio-dental Offglides

Nchane exhibits a small number of consonants followed by a labio-dental offglide. This modification occurs only with the consonants \mathbf{b} , \mathbf{k} , and \mathbf{g} . When these consonants are labialised before the vowel \mathbf{u} , the labialisation is realised as a \mathbf{v} , in the case of the consonants \mathbf{b} and \mathbf{g} , and as an \mathbf{f} , in the case of the consonant \mathbf{k} . Note that the consonant \mathbf{v} only occurs in the context of the labio-dental offglide and therefore does not represent a full phoneme in the language. The chart below shows the occurrence of the labio-dental offglides in various positions in the word.

Phoneme	Allophones	Grapheme	Initial position	Medial position	Final position
/bw/	[bv]	Bv bv	bvu	kibvune	_
			dog	dust	
/kw/	[kf]	Kf kf	kfusε	kikfune	_
			cotton	rat	
/gw/	[gv]	Gv gv	gvuna	kiŋgvu	_
			to respect	duck	

2.1.5 Consonant Orthography Rules

Various rules regarding which consonants can occur in which positions or which can occur before and after other consonants are important to learn. Here is a partial list of consonant orthography rules:

- 1. Never write **h** without a **c** or **s** in front of it, except in the case of certain borrowed words.
- 2. The only consonant that can be word-final is η .
- 3. If you hear a nasal before **b**, always write **m**.
- 4. If you hear a nasal before **t**, **d** and **f**, always write **n**.
- 5. If you hear a nasal before **k** or **g** always write **ŋ**. The only exception is in writing the village name of **Nkanchi** due to the historical precedent established.
- 6. Never write a **v** without a **b** or **g** in front of it.

2.2 Vowels

The Nchane language has seven vowel phonemes, presented with their allophones and proposed graphemes in the table below. The chart also shows their occurrence in various positions in the word.

Phoneme	Allophones	Grapheme	Initial position	Medial position	Final position
/i/	[i]	Li	ikodo	kite	bubi
			to be sharp	tree	bundle
/u/	[u]	U u	utemo	butu	ju
			to be hard	honey	sun
/e/	[1]	E e		legε	
				to run away from	
	$[I] \sim [i]^9$				je
					hide (an animal)

Phoneme	Allophones	Grapheme	Initial position	Medial position	Final position
/0/	[o]	Оо		kogo	jo
				to (be) fat	water
/٤/	[ε] ¹⁰	3 3		lεmε	jε
				to farm	word
	[ə]			kweŋ	mbonε
				firewood	sweet potato
/ɔ/	[c]	Эo		gənɛ	kikə
				to look for	to trap (animal)
/a/	[a]	A a	abeŋ	kanε	ja
			today	to tie	to stand

2.2.1 Nasalised Vowels

Nasalised vowels are contrastive with oral vowels in Nchane in a few instances and all occur word finally. In writing Nchane, the nasal $\boldsymbol{\eta}$ should be added at the end of the word to signify that the preceding vowel is nasalised.³

Phonemic	Phonetic	Orthographic	Gloss
/ʃi/	[ʃi]	shi	to (be) seated
/ʃĩ/	[ʃĩ]	shiŋ	to (be) silent
/fɛ/	[fɛ]	fε	to prepare (food to cook)
/f̃̃E/	[fɛ̃]	fεŋ	to (be) blind
/ja/	[ja] ~ [ʒa]	ya	to conquer, defeat
/jã/	[jã] ~ [ʒã]	yaŋ	to suck
/gu/	[gu]	gu	to buy
/gũ/	[gũ]	guŋ	to play (child)
/ju/	[ju] ~ [ʒu]	yu	to kill, murder
/jũ/	[jũ] ~ [ʒũ]	yuŋ	thatch
/ko/	[kho]	ko	to catch (object in air)
/kõ/	[k ^h õ]	koŋ	to touch, feel (active)
/tɔ/	[t ^h ɔ]	tə	to have sexual intercourse
/tɔ̃/	[t ^h ɔ̃]	təŋ	to blow (horn)

2.2.2 Vowel Length

Nchane has both short and long vowels. The long vowels are written as a sequence of two vowels. Long vowels are only observed in five of the seven vowels. Examples of these vowels and the contrasting short vowels are given below.

fii	breath	fi	kidney
fεε	to blow nose	fε	to prepare (food to cook)
wɔɔ	village	cw	you (2s)
soogε	soldier	soŋo	oil palm
kinchaa	marsh	kinsa	comb (n)

2.2.3 Vowel Orthography Rules

The various rules regarding which vowels can occur in which positions is important to learn. Here is a partial list of vowel orthography rules:

- 1. If two different vowels occur together, the first one must be i (see palatalised consonants in section 2.1.2).
- 2. If a vowel is long, the same vowel should be written twice.

3 Tone

3.1 Historical Perspective

There is much discussion regarding the best way to write orthographic tone. In writing tone in Cameroonian national languages, there has been a historical tendency toward either surface tone marking or deep tone marking. Over the years, linguists have begun to recognise the importance of a balance between these two approaches (see for example, Lux & Lux 1996).

Among the Beboid languages, Nooni began writing tone markings on every syllable (with mid-tone represented as unmarked). In recent years, Nooni orthographic tone has undergone extensive research to determine the best way to represent tone such that people can read and write most easily (Lux & Lux 1996; Andrus & Lux 2006). The goal in revising the Nooni tone orthography was "to reduce the number of diacritic marks on a printed page to the largest extent possible, while still adequately representing [the tone's] functions in the language. What resulted was a system in which the former tone diacritics [`,´,ˆ,, ¸,] no

longer carry the sense of spoken tone, but instead perform grammatical and lexical disambiguating functions" (Andrus & Lux 2006:18). The revised Nooni tone orthography underwent field testing and is now being utilised by the Nooni Literacy Committee.

In further refining the Nchane tone orthography guide, the authors propose to research and implement a system similar to that found in Nooni. The authors suggest using minimal marking of tone in the early stages of orthography implementation and continuing on-going research in conjunction with the Nchane Language Committee to determine the best tone orthography for the Nchane language. The remainder of this section presents a discussion of basic phonological tone in Nchane as well as certain discritics used in marking distinctions in grammatical meaning.

3.2 Basic Nchane Tone

Seven tone melodies have been identified in Nchane. There are three level tones: high (H), mid (M) and low (L); and four contour tones: high-mid (HM), mid-low (ML), mid-high (MH) and low-mid (LM).

		Tone	Notation	Phonetic
				Representation
Level		High	Н	,
		Mid	M	-
		Low	L	•
Contour	Falling	High-Mid	HM	7
		Mid-Low	ML	ſ
	Rising	Mid-High	MH	٧
		Low-Mid	LM	_

Out of a corpus of 1215 words, approximately 250 belong to minimal tone pairs. All tones are well represented in the minimal pairs with the exception of rising tones, which are comparatively rare. Some examples are given in the chart below.

Tone	Phonetic	Gloss
Н	[dʒí]	paths, roads
M	[dʒī]	to eat
L	[dʒì]	path, road
HM	[gwố]	bamboo
ML	[sà]	mask
MH	[t∫wἕ]	witch
LM	[áíjɛ̃]	no

3.3 Lexical Tone Contrasts

Tone in Nchane is contrastive and performs a lexical function by differentiating between two or more words that are otherwise identical. At this point, no proposal is being offered for representing lexical tone orthographically. The following tone minimal pairings illustrate the presence of lexical tone:

Phonetic	Gloss
[bāŋ]	shine
[bàŋ]	fold (v)
[dʒí]	harvest, collect (honey from hive)
[dʒī]	curse (v)
[dʒì]	hoe (n)
[dʒì]	пате

3.4 Grammatical Tone Contrasts

Nchane tone also performs grammatical functions. This section describes only one of these functions, singular versus plural forms of gender 9/10 nouns, and also offers a proposal for representing it orthographically.

There are eight genders in Nchane. The singular-plural distinction for gender 9/10 is based only on tone. Class 9 is the singular form of the noun and Class 10 is the plural. The distinction between the two classes is a relatively higher tone for Class 10.¹¹ Examples of different phonetic tone for gender 9/10 nouns in Nchane are shown below.

Tone for 9 vs. Tone for 10	Class 9 (singular)	Class 10 (plural)	Gloss	
Low – High	[ʃì]	[ʃí]	chicken	
Mid – High	[bī]	[bí]	goat	
Falling HM – High	[mbi]	[mbí]	grasshopper	
Falling ML – High	[dʒô]	[dʒó]	tear	
Low – Mid	[dʒì]	[dʒī]	hoe	
Low – Falling ML	[dʒɛ̂]	[dʒɛ̂]	voice	

In writing orthographic tone for these classes, the researchers propose to only mark Class 10 with a high tone and allow Class 9 to remain unmarked, as is done in Nooni. In polysyllabic words, the high tone is marked only on the first syllable of class 10 words. Here are some examples written orthographically:

Class 9	<u>Gloss</u>	Class 10	<u>Gloss</u>
shi	chicken	shí	chickens
bi	goat	bí	goats
mbi	grasshopper	mbí	grasshoppers
jo	tear	jó	tears
ji	hoe	jí	hoes
jε	voice	jέ	voices
chane	headpan	chánε	headpans
choma	locust	chóma	locusts

4 Word Division

This section addresses noun class prefixation as it pertains to word division. Nchane word division will be examined further at some later point in time. It will be especially important to develop appropriate criteria for distinguishing compound nouns from associative noun phrases.

In writing nouns, all noun class prefixes will be written as part of the nouns as shown below. (Note that gender 9/10 is discussed in section 3.4.1 above.)

Class	Singular	Example	Gloss	Class	Plural	Example	Gloss
	Marking				Marking		
1	Ø-	na	cow	2	ba-	bana	cows
3	Cw	gwo	bamboo	4	С	go	bamboos
5	Ø-	ju	day	6	a-	aju	days
7	ki-	kigi	tooth	8	bi-	bigi	teeth
9	σ	ji	hoe	10	σ	jí	hoes
14	bu-	budε	bridge	25	maN-	mandε	bridges
19	fi-	finyi	bird	26	mu-	munyi	birds
3/5	Ø-	sa	mask	27	chi-	chisa	masks

5 Punctuation and Capitalisation

The punctuation marks and rules that govern the Nchane language are similar to those for English. The punctuation marks used for Nchane are as follows:

- 1. Full stop (.)
- 2. Question mark (?)
- 3. Exclamation point (!)
- 4. Comma (,)
- 5. Colon (:)
- 6. Quotation marks ("...") and ('...')

5.1 Full Stop

The full stop (.) in Nchane marks the end of a declarative sentence.

Bon jenyi chule.babies walk-PROG fine
'The babies are walking fine.'

John gule nyán fo kidan le.

John buy-PROG meat(pl) LOC slab LOC

'John is buying meat at the slab.'

5.2 Question Mark

The question mark (?) indicates the end of an interrogative sentence.

```
Chi jɔŋ le fanɛ?

father your COP QM(where)

'Where is your father?'

Kfu le nɛ?

family COP QM(how)
```

'How is your family?'

Note that yes-no questions differ from their declarative counterparts only by the presence of a falling tone on the final syllable. Although there is no question marker (QM) in these sentences, the presence of the question mark is sufficient to inform the reader regarding proper pronunciation.

```
2s eat papaya 'Are you eating papaya?'

A ji belekan.
2s eat papaya 'You are eating papaya.'
```

belekan?

5.3 Exclamation Mark

Α

ji

The exclamation mark (!) is written at the end of a command or following exclamatory words and phrases. It functions to express forceful comments and commands, interjections, surprise, and excitement.

```
Lege!
run
'Run!'
```

To chege!

come quickly!'

Gene lo!

go-PROG ??

'Go!'

5.4 Comma

Commas are used to separate clauses or parallel words within a clause, as below:

Taŋ mε gε chi lε byɛŋ, mε gε mbi lanyε wusi. when 1s POT drag ?? fish 1s POT 1s-PAST happy very 'When I caught a fish, I was very happy.'

Jo ji, nyo, ηka bε fintaŋ.

take hoe cutlass basket and seed

'Take the hoe, the cutlass, the basket and the seeds.'

5.5 Colon

Colons are used to separate a clause which refers to a concept in general terms from a clause or phrase which makes the concept more specific. It represents a pause in speech that could be replaced by the words "that is " or "as follows" in English.

Bi ki banchi besa ba ngwa: Mun chi to bε kifo.

1p know laws our AM meeting person all come with cap

'We know the laws of our meeting: Everybody should come with a cap.'

5.6 Quotation Marks

Quotation marks ("..." or '...') occur at the beginning and end of direct speech, as below:

```
Muŋ wu nyεyε dulε, "Bɔŋ chi bε dwe." person who teach say 2p stop with noise 'The teacher said, "You all be quiet."
```

Note: In English and Nchane, other punctuation marks always precede closing quotation marks when they occur next to each other.

5.7 Capitalisation

Capital letters are used at the beginning of sentences (see sections 5.1 to 5.6 above), following a colon (see section 5.5 above), the beginning of direct speech in quotation marks (see section 5.6 above), and for proper nouns (illustrated below).

```
Ŋgɔŋ bε Chε le bɔŋ bɔ amaŋ.
Ŋgɔŋ and Chε COP children 3p twins
'Ŋgɔŋ and Chε are twins.'
```

6 Need for Further Testing of the Orthography

The suitability of several proposals in this orthography guide needs to be assessed further. In particular, an alternative to what is set out in this paper for writing prenasalisation would be to use \mathbf{m} before \mathbf{b} and \mathbf{f} , with all other consonants preceded by \mathbf{n} . While this choice would reduce the number of nasal graphemes utilised in writing prenasalised consonants, it would further increase the utilisation of non-homorganic NC clusters in the orthography. The choice of \mathbf{y} instead of \mathbf{i} for palatalisation would render a more uniform system, matching the choice of \mathbf{w} for labialisation. Finally, the use of \mathbf{v} could be eliminated if the underlying form of /gw/ and /bw/ were utilised for representation.

Any new orthography needs people to use it for a time before potential problems reveal themselves. It is our hope that this proposal will be a significant first step in allowing people to start reading and writing the Nchane language.

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Endnotes

¹ The [d] and [c] are in free variation word medially between identical vowels, [d] elsewhere.

² The consonant **v** is a special case which is addressed in Section 2.1.4.

³ The choice of $[\eta]$ at the end of a word for signifying a nasalised vowel stems from speakers' inituition and work that has been done in the surrounding languages. There is no contrast between words ending in nasalized vowels and words ending in $[\eta]$. Also $[\eta]$ is the only consonant that appears in the word-final position.

⁴ The [j] and [ʒ] are in free variation in all environments, although there appears to be some preference as to when it is [j] and when it is [ʒ]. The speakers themselves tend to perceive the phoneme as /j/.

⁵ Word initially, the nasal of prenasalised consonants is syllabic (tone-bearing) but not contrastive, whereas word medially the tone shifts to the preceding vowel of the homorganic NC sequence.

 $^{^6}$ The velar nasal /ŋ/ seems to be the underlying form of the nasal found in Nchane. The authors theorise that the liquid consonant /l/ represents a weaker consonant thus precluding nasal assimilation.

⁷ The [m], [m] and [n] occur in free variation before [f].

⁸ This labio-dental offglide is also seen in Nooni, but occurs with a greater variety of consonants (Andrus & Lux 2006). The offglide varieties may be considered as allophones of the labialised consonants /bw/, /kw/ and /gw/ where before the back high vowel, [u], the [w] becomes a [v] or an [f] depending on the voicing of the preceding consonant.

⁹ The vowels [1] and [i] are in free variation. The high central vowel only occurs word finally.

¹⁰ Most often [ϵ] becomes [θ] before or after a velar consonant; however, it is noted that [ϵ] occurs word final after a velar and exceptions are evident. It is suspected that these phones are to some extent in free variation and/or there are speaker variations.

¹¹ This general distinction of relative difference in tone has also been observed by Hombert (1980:91). He states that "tone differences are found on the stem with relatively lower tones associated with the singular form [Class 9]."