

CHAPTER 3

SYLLABLE STRUCTURE

3.0 Introduction

This chapter demonstrates Falam syllable structure including internal constituents and the template. Also this chapter presents syllable and word structure, segmental distributions in a syllable, and processes conditioned by syllable structure.

3.1 Internal constituents and template

To present the internal structure of a syllable, Hyman (1975:188) asserts that “the syllable consists of three phonetic parts: (1) the onset, (2) the peak or nucleus, and (3) the coda”. Following this rule Falam monosyllabic words can be displayed as in Figure 6.

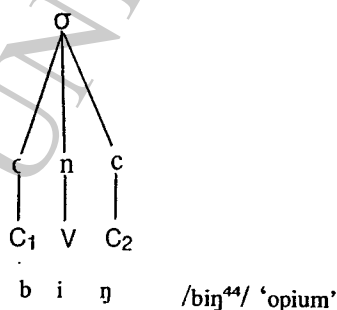


Figure 6. A syllable with coda

For phonological purposes, however, a further sub-grouping is relevant, namely (1) the onset, C₁, and (2) the core or rhyme, consisting the phonetic peak and coda combined, V₁C₂. Besides the CVC template, Burquest (2001:150) states that “every language has a CV syllable which is considered to be universal but since a number of languages do not have a CVC syllable type, the coda position must be a

subordinated syllable position. This, along with some other facts, has given rise to the notion of a syllable rhyme as an intermediate node in syllable structure". In line with this structure the typical Falam monosyllabic word can be analyzed as in Figure 7.

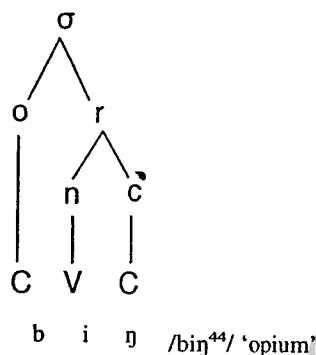


Figure 7. A syllable with rhyme

Based on the syllable structures discussed by the two linguists above, there are a total of nine syllable templates possible in Falam as displayed in Table 5.

Lexeme	Gloss	Syllable Type
/um ⁴⁴ /	'to exist'	VCT
/uam ²³ /	'to ferment'	VVCT
/aa ⁴⁴ /	'to be mad'	VVT
/a ²¹ /	'his/her,its'	VT
/ka ²¹ /	'my'	CVT
/kua ²¹ /	'hole'	CVVT
/kiaŋ ⁴⁴ /	'to give way'	CVVCT
/kut ²¹ /	'hand'	CVCT
/dɔŋ ²¹ /	'to swallow'	CVCCT

Table 5. Falam syllable templates

As seen in Table 5, Falam has an obligatory syllable type of V₁, and an optional second vowel after an obligatory vowel V₁(V₂)¹⁹, and can have up to one optional final consonant accompanied with an optional glottal stop (C₁)V₁(V₂)(C₂)(C₃). The syllable pattern V₁(V₂) can be either long vowel (analysed as two identical vowels) or diphthong as will be seen in Section 3.3.3. The T in Table 5 represents any tone that can occur in a syllable. There are four tones which will be discussed later in Section 4.1. Assuming a (C₁)V₁(V₂)(C₂)(C₃) maximal template, the discussion of syllables will be divided into two types consisting of live syllables and dead syllables.

3.1.1 Live syllable

A live (or “smooth” according to Chen 2002) syllable is defined as any syllable ending with a vowel or a sonorant consonant /m, n, ŋ, l, r, w, j/. Live syllables ending with a vowel can have all four contrastive tones. Mostly, vowel finals in live syllables are usually long as provided in (9), except in connected speech when they often shorten.

(9) /kua ²¹ / ‘hole’	/tuu ²¹ / ‘sheep’
/jaa ⁴⁴ / ‘to be far’	/aa ⁴⁴ / ‘to be mad’
/raa ²³ / ‘to come’	/k ^h aa ⁵² / ‘to be bitter’

As an exception, the three syllables (possessive morphemes or subject agreement markers) /a/ ‘her, his, it (or s/he,it)’, /na/ ‘your (or you)’, and /ka/ ‘my (or I)’, which are always attached to following possessed nouns or verbs, have short vowels as already shown in Table 5.

¹⁹ Parentheses indicates an optional. In the syllable template (C₁)V₁(V₂)(C₂)(C₃), C₁ can be any consonant except glottal stop, V₁ and V₂ can be any vowel, C₂ can be an unreleased stop or sonorant, and C₃ can only be a glottal stop which is very limitedly possible after a sonorant (w, j, l, and r).

Live syllables closed with sonorant finals²⁰ can also occur with any tone and can have either long or short nuclei as in (10):

- | | |
|--|--------------------------------------|
| (10) /baaŋ ²¹ / 'to be tired' | /kum ²¹ / 'year' |
| /tʰaan ⁴⁴ / 'to run' | /law ⁴⁴ / 'field' |
| /taar ²³ / 'to hang up' | /haj ²³ / 'to be needed' |
| /kaan ⁵² / 'to jump over' | /rɔl ⁵² / 'to live alone' |

3.1.2 Dead syllable

A dead (or “checked” according to Chen 2002) syllable is any syllable closed with an oral stop, including a glottal stop. All of the four contrastive tones may occur with dead syllables but have different occurrence of their nuclei as in (11)-(15).

Dead syllables with low tone always have short nuclei as in (11):²¹

- (11) /tap²¹/ 'to cry'
/tsak²¹/ 'to be strong'
/t^hat²¹/ 'to kill'

Like oral stops, a syllable closed by a glottal stop is also analyzed as a dead syllable. This is because the occurrence of the glottal stop in syllable final positions functions similar to oral stops with low tone that does not allow long nucleus. It can have a diphthong but not a long vowel as in (12):

- (12) /tsiaŋ²¹/ 'to soak, to dip'
/fɛŋ²¹/ 'to go'
/dɔŋ²¹/ 'to swallow'

²⁰ Among sonorant finals the two glides, /w/ and /j/ are analysed as consonants in this study (see Section 2.1).

²¹ Osborne (1975) found dead syllables with low tone and long nuclei in her Zahao study as in /vaak²¹/ 'to crawl', /ŋaak²¹/ 'to wait', /nook²¹/ 'to burn, to set a fire', but these do not occur in Falam.

Dead syllables with high tone always have long nuclei as in (13):

- (13) /dɔɔp⁴⁴/ ‘to jump down’
/bɛɛk⁴⁴/ ‘to be muddy’
/kaak⁴⁴/ ‘to separate’

Dead syllables with rising tone also have long nuclei as in (14):

- (14) /k^haat²³/ ‘to be rare, to be bare’
/dɔɔk²³/ ‘to drink, to suck’
/siip²³/ ‘to go back, to withdraw’

Dead syllables with falling tone also have long nuclei as in (15):

- (15) /kaap⁵²/ ‘to shoot’
/kɔɔk⁵²/ ‘to scold’
/suut⁵²/ ‘to ask’

Dead syllables with falling tone can have diphthongs as in (16):

- (16) /tsuap⁵²/ ‘lung’
/fiak⁵²/ ‘to be narrow’
/ruat⁵²/ ‘to think’

3.2 Syllable and word structure

In terms of the Falam word structure, it is observed that Falam permits more than one syllable, including disyllables, trisyllables, and quatrissyllables. There is, sometimes, an ambiguity in making syllable boundaries, because of the difficulty in identifying word breaks. Falam is primarily monosyllabic like other Chin languages so there is an almost perfect one-to-one correspondence between the syllable and the morpheme. However, not all words are totally monosyllabic. Sometimes there is a highly complex word structure based on grammatical and semantic considerations. For example, in translating the conjunction word ‘or’

like word in Falam that contains four syllables, i.e., /a²¹.si⁴⁴.law²¹.lɛɛ⁵²/ which means ‘if it is not’. This can make people confused whether they are separate words or a word as each syllable has its own meaning. In this case, the meaning is more than a composite of the parts and thus it may be regarded as an independent word. This study demonstrates up to quatrissyllabic words though Falam may have more multi-syllabic words with affixation. The following are examples of word structures taken from the Mainland South East Asia 436 wordlists (MSEA 2002).

A. Monosyllabic word

Most of Falam words are monosyllabic (see also Figure 7) as in (17):

- (17) /kum²¹/ ‘year’
 /m̥ul⁴⁴/ ‘feather’
 /jiinj²³/ ‘morning’
 /puuk⁵²/ ‘cave’

B. Disyllabic word

Disyllabic words are also found commonly as in Figure 8.

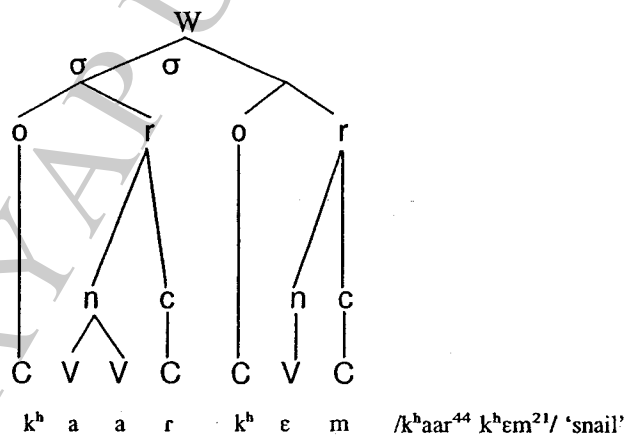


Figure 8. Disyllabic word pattern

More examples are provided in (18):

(18) /boʔ²¹.luŋ⁴⁴/ ‘how many’

/wut²¹.jaam²³/ ‘ashes’

/tuk²¹.wirʔ²¹/ ‘window’

C. Trisyllabic word

The trisyllabic word pattern is rarely found in normal words, but it is common to find trisyllables in names of people; /wan²¹.nej²¹.tʰaŋ²³/, for example. The Falam trisyllabic word pattern can be seen as in Figure 9:

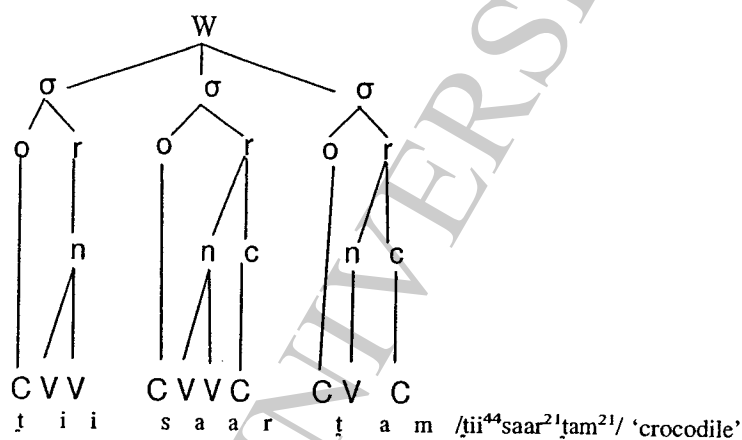


Figure 9. Trisyllabic word pattern

More examples are provided in (19):

(19) /ni⁴⁴.suaʔ²¹.lam⁴⁴/ ‘east’

/ni⁴⁴.tʰaak⁵².lam⁴⁴/ ‘west’

/tʰaŋ²³.kaaj²¹.kuaŋ²³/ ‘scorpion’

D. Quatrisyllabic word

Only a few quatrisyllabic words are found as in Figure 10:

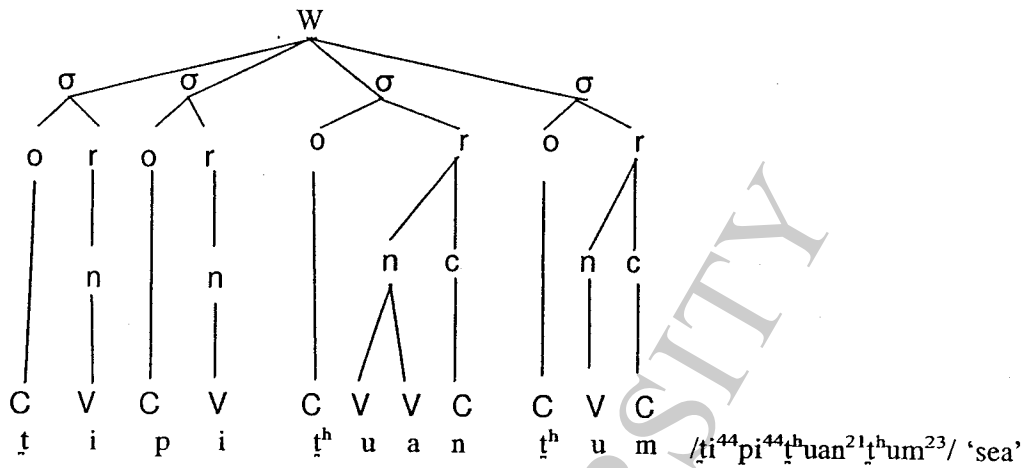


Figure 10. Quatrisyllabic word pattern

More examples are provided in (20):

(20) /tsuu²¹.tsik⁴⁴.k^haar⁴⁴.boɔk²¹/ 'insect'

/in⁴⁴juat⁵²sum²¹nam⁴⁴/ 'livestock'

3.3 Segmental distributions in syllable

According to the inventory of consonant and vowel phonemes proposed in Section 2.1 and 2.2 Falam has 29 consonants and 5 vowel phonemes. This section describes segmental distribution patterns of consonant-vowel sequences, ambiguous segments and sequences, vowel-vowel sequences, vowel length distributions, monophthong distribution, and diphthong distribution.

3.3.1 Ambiguous consonant determinations

The phonemes such as /ts/, /tʃ/, and /tʰ/ are interpreted as occupying a single consonant position. This single consonant interpretation is called for because the only unambiguous word-initial onsets in Falam are single consonants. There are no unambiguous clusters like /st/, /kr/, and /pl/ for which an interpretation as a cluster is justified. Therefore, they can best be analyzed as affricates because this keeps the syllable template simpler.

There are very limited consonant final clusters with the following phonemes: /l/, /r/, /w/ or /j/ followed by /ʔ/ as shown in (21):

(21) /dɔlʔ²¹/ 'to swallow'

 /tʃirʔ²¹/ 'to sprinkle'

 /jawʔ²¹/ 'to look'

 /ajʔ²¹/ 'to celebrate'

No other consonant clusters are permitted.

3.3.2 Consonant-vowel distributions

There is no heavy restriction on the co-occurrence of initial consonants with vowels. Almost all consonant phonemes can appear in a syllable initial position with monophthongs as well as with diphthongs except the glottal stop /ʔ/. All syllables which begin with vowels are realized to be preceded by glottal stops but this glottal insertion in word initial positions is not significant and is not treated as phonemic. In syllable final position the unreleased allophones [p̚, t̚, k̚] of stops /p, t, k/, voiced nasals /m, n, ŋ/, voiced lateral approximants /l, r/, glides /w, j/, and glottal stop /ʔ/ occur as displayed in Table 6.

	Labial	Alveolar	Velar	Palatal	Glottal
Glottal stop					ʔ
Voiced Nasals	m	n	ŋ		
Voiced Flap		r			
Voiced Lateral Approximant		l			
Glides	w			j	

Table 6. Final consonant phonemes

3.3.3 Vowel-vowel sequences

Falam vowel sequences are displayed in Table 7. Long vowels will be interpreted as a sequence of two identical vowels in this analysis because a single syllable structure template can accommodate both long vowels and diphthongs while keeping the phoneme inventory simple.

	i	ɛ	a	u	ɔ
i	+		+		
ɛ		+			
a			+		
u			+	+	
ɔ					+

Table 7. Vowel sequences

3.3.4 Vowel length distributions

In Falam, open syllables always have vowel length phonetically, but this is never contrastive, while vowel length is contrastive in closed syllables. Below is evidence for vowel length contrasts in Falam.

/i/ : /ii/

CIE #486 /kir⁴⁴/ 'to be curled'

#278 /kiir⁴⁴/ 'to return'

CNE #246 /sim²³/ 'to tell'

#498 /siim⁴⁴/ 'late at night, to invade'

CNE #487 /sin⁵²/ 'to apply (blanket)'

#499 /siin²¹/ 'to cover'

/e/ : /εε/

CIE #500 /sem²¹/ 'to distribute'

#240 /sεem²¹/ 'to blow'

CNE #502 /beI⁴⁴/ 'a piece of'

#205 /bεeI²³/ 'cooking pot'

CNE #501 /deŋ⁵²/ 'at the bottom of'

#282 /dεeŋ²³/ 'to throw'

/a/ : /aa/

CIE #372 /baŋ²¹/ 'to be the same'

#393 /baaŋ²¹/ 'to be tired'

CIE #505 /jaŋ⁴⁴/ 'penis'

#504 /jaaŋ⁴⁴/ 'to run'

CIE #369 /ta^r23/ 'to be old'

#503 /taa^r23/ 'to hang'

/u/ : /uu/

CIE #298 /sun²¹/ 'to stab'

#13 /suun²¹/ 'noon, day'

CIE #510 /suŋ⁴⁴/ 'to fail'

#511 /suuŋ⁴⁴/ 'to pour'

CIE #522 /fuŋ⁴⁴/ 'stick'

#390 /fuuŋ⁴⁴/ 'to be slow'

/ɔ/ : /ɔɔ/

CNE #513 /dɔk²¹/ 'to run, to leak'

#241 /dɔɔk²³/ 'to suck, to drink'

CNE #492 /tɔŋ²³/ 'to meet'

#441 /tɔɔŋ²¹/ 'to confront'

CNE #514 /sɔm⁵²/ 'to hold up'

#496 /sɔɔm²³/ 'to invite'

3.3.5 Vowel length constraint

This section discusses vowel length constraint in a syllable. As stated already in Section 3.3.4, Falam has length contrasts in closed syllables, but there is a constraint against long vowels closed with a glottal stop. Long vowels or two identical vowels cannot occur in a glottal final syllables (see also Section 3.3.1) as in (22):

- (22) /duʔ²¹/ 'to want, to love'
/ruʔ²¹/ 'bone'
/kulʔ²¹/ 'to surround, to fence'

But diphthongs can occur with a glottal stop final as in (23):

- (23) /kuaʔ²¹/ 'to hug'
/tsiaʔ²¹/ 'to soak'
/ruaʔ²¹/ 'rain'

Also vowel length is affected by consonant alternation and verb stem alternation as will be seen in Section 5.5.2.1. A syllable that has a long vowel becomes short when the syllable final is glottalized in secondary stem as in Section 5.2.1.3 or when an oral stop final is alternated to the glottal stop as in Section 5.2.1.2. However, verb stems that have a diphthong with the glottal final can survive without changing their vowel qualities in secondary stems.

3.3.6 Monophthong distributions

Monophthongs can occur word initially, word medially, and word finally.

3.3.7 Diphthong distributions

This analysis proposes that Falam has two diphthongs, /ia/ and /ua/. They can occur word initially, word medially, and word finally like monophthongs. In live syllables, both open and closed, diphthongs occur with the four contrastive tones as in (24).

(24)

/jia ²¹ / 'habit'	/tuan ²¹ / 'to be early'
/hua ⁴⁴ / 'to hate'	/liam ⁴⁴ / 'to overflow'
/rua ²³ / 'bamboo'	/biar ²³ / 'loincloth'
/sia ⁵² / 'to be bad'	/jiaŋ ⁵² / 'what'

Diphthong distribution in dead syllables permits only falling tones as shown in (25).

(25)

/ruak ⁵² / 'corpse'	/riak ⁵² / 'to stay overnight'
/tsuap ⁵² / 'lung'	/tsiap ⁵² / 'to be wet'
/kuat ⁵² / 'to send'	/siat ⁵² / 'to destroy, to be ruined'