

CONSONANT CLUSTERS AND SYLLABIC STRUCTURES OF MEITEI

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Introduction¹

One of the most striking features of Meitei word morphology is the number and nature of medial consonant clusters; up to three consonants are permitted medially. Word initially, a maximum number of two consonants is allowed, while word finally no consonant clusters occur. Meitei is also rich in its variety of syllables as well as length of syllable sequences in a word; up to seven syllables are allowed in a word. The present paper is an attempt to look into the consonant clusters and syllabic structures of Meitei keeping in mind the universals proposed by Greenberg (1978). It is to be noted that since the article by Greenberg refers only to initial and final clusters, we could not make use of it for the medials. The paper is divided into two parts. In part one, we have dealt with the pattern and sequence of consonant clusters. In the second part, the syllabic structure of Meitei is considered. It is to be noted that semivowels are being treated as consonants for functional reasons.

0.1 Clusters

As mentioned earlier, Meitei has only initial and medial consonant clusters. Meitei has 24 consonant phonemes all occurring in initial position. They are:

/p/	/t/	/c/	/k/	
/ph/	/th/		/kh/	
/b/	/d/	/j/	/g/	
/bh/	/dh/	/jh/	/gh/	
	/s/			/h/
/m/	/n/		/ɲ/	
		/y/	/w/	
	/l/			
	/r/			

The list also includes phonemes occurring in borrowed words.

1.1 Initial clusters

Meitei clusters do not allow more than two consonants initially in a word. The second member of the cluster is always a liquid or a semivowel (i.e., y, w, r, l). For this reason these themselves cannot be the first member of the

¹ The data for this paper was collected from the spoken language of approximately forty native speakers of all ages, sex, and professions living in Imphal, the capital of Manipur, India. Interviews, questionnaires, narratives, songs, and dialogues were used.

We are thankful to all our Meitei informants for patiently bearing with us.

consonant cluster. Other consonants which can be the first member of an initial cluster are /m, n, bh, th, jh, gh/. The following table will explicate the situation.

Table 1 : Initial two consonant clusters

First Members	Second Members			
	y	w	r	l
p				*
b			*	
ph			*	
t			*	
d		*	*	
dh	*		*	
c			*	
j		*		
k	*	*	*	*
kh	*	*	*	
g	*		*	*
h	*			
ḡ	*		*	
s		*		*

The occurrence of /p, d, dh/ and /g/ as the first member is found only in borrowed words. As voiced aspirates in the language occur in borrowed items only, the absence of voiced aspirates + consonant is easily explainable. Consider the following examples:

1. Stop + liquid or semivowels

pl-	[plet]	'plate'
br-	[brujə]	'brush', [brij] 'semen'
phr-	[phrəŋ]	'jumping of fish when taken out of the water'
tr-	[treta]	'an age'
dw-	[dwarkə]	'name of a sacred place'
dr-	[drəm]	'drum'
dhy-	[dhyan]	'meditation'
dhr-	[dhrubə]	'pole star'
cr-	[crəp]	'sound of cutting cloth'
jw-	[jwal]	'yoke'
jr-	[jro]	'sound of water fall'
ky-	[dyəmgəy]	'name of a village'
kw-	[kwak]	'crow'
kr-	[krisnə]	'Lord Krishna'; [krok] 'attachment'
kl-	[klas]	'class'
khy-	[khyaw]	'quickly'
khw-	[khwəŋ]	'waist'
chr-	[khrisṭə]	'Christ'
gy-	[gyan]	'consciousness'
gr-	[gram]	'metric gram'
gl-	[glas]	'glass'

2. Fricative + liquid/semivowel

hy-	[hyagɛŋ]	'August'
sw-	[swamji]	'preceptor'
sɬ-	[sɬet]	'(writing) slate'

3. Nasal + liquid/semivowel

ŋy-	[ŋyaw]	'mewing'
ŋr-	[ŋraŋ]	'yesterday'

Interestingly, almost all the clusters with initial voiced stops seem to have been borrowed in the language at one time or another, with the result that many patterns have only one or two examples each and these are restricted to borrowed or onomatopoeic words.

Let us now look into some of the relevant universals suggested by Greenberg and see how far examples from Meitei to substantiate the arguments.

1.2 Phonological Universals and Meitei

Universal 20. Two successive voiced sonants are always followed by a vowel in initial systems and preceded by a vowel in final systems. Meitei offers only one example to support this thesis: /ŋraŋ/ 'yesterday'.

Universal 29. In initial systems the existence of at least one sequence of voiced obstruent + semivowel implies the existence of at least one sequence of unvoiced obstruent + semivowel. Meitei does offer parallel examples. Consider:

/gyan/ : /kyamgəy/
/dhyān/ : /khyaw/, /khwaŋ/, /kwak/

Universal 33. In initial systems, the existence of at least one cluster consisting of nasal + liquid implies the existence of at least one cluster consisting of obstruent + liquid. Consider the following example from Meitei in support of the universal:

/ŋraŋ/ : /krisnə/, /klas/, /glas/, etc.

Universal 37. In initial systems the existence of at least one cluster consisting of obstruent + nasal implies the existence of at least one cluster consisting of obstruent + liquid... The remainder, except for SANTEE, have obstruent + liquid while obstruent + nasal combinations are lacking. Meitei also allows obstruent + liquid but not obstruent + nasal. Consider: /klas/, /glas/, /plet/, /phrəŋ/, etc.

Universal 39. Every language with initial clusters contains at least one cluster with an initial consonant in the dental-alveolar region. Though examples for universal 39 are few yet they need mentioning here.

/treta/, /dwarkə/, /dhrubə/, etc.

All these words are borrowings from neighbouring Indo-Aryan languages.

The above analysis indicates that trill /r/ is most common sound to occupy the second member position of initial consonant clusters in Meitei.

2.1 Medial clusters

Unlike initial consonant clusters, there is a wide variety of medial consonant clusters in Meitei. Consider Table 2 for the various combinatory possibilities of medial consonant clusters of two. The table includes the geminates also. As can be seen in the case of two-consonant clusters, the first member position can be occupied by a large number of voiceless consonants. Exceptions are /h/ and /c/, the latter occurs only as a geminate unit. No aspirates can occur as the first member.² Voiceless aspirates occur only as second members of the cluster. Voiced aspirates do not occur in clusters at all is suggestive of the fact that all the words with medial clusters are native words.

2.2 What follows are the examples of each -CC- structure of Meitei.

Voiceless stop + consonant

-pc-	thupcinb	'to fold'
-pph-	əpphəba	'good'
-pkh-	cəpkhətpə	'to question'
-pm-	kupmalle	'tiny'
-ps-	kapsinbə	'to shoot inside'
-ph-	luphənbə	'to cause to sink or drown'
-tp-	əpətpa	'rotten'
-tc-	khutcəppi	'pinch'
-tph-	yotphal	'anvil'
-tth-	kəttthokpə	'sacrifice'
-tl-	khutlinba	'to organise a party'
-tr-	sətrəŋ	'chess'
-tm-	ʔsitmən	'selling price'
-tn-	cətnəbi	'custom'
-ts-	khutsa	'finger'
-ty-	sətyə	'catch'
-kp-	pəkpa	'suitable, appropriate'
-kc-	cəkca	'process of eating'
-kph-	lakphəm	'venue'
-kkh-	lukkha	'left over (edible)'
-kl-	likli	'bottle'
-km-	lakminnəbə	'companion'
-kn-	muknə	'wrestling'
-ks-	təksi	'regret'
-khr-	pakhrə	'widower'

Voiced stop + trill

-br-	kəbrəŋ	'silk'
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² The only exception we could find is /kh/ in /pakhrə/ 'widower'.

Table 2: Medial two consonant clusters

First Members	Second Members																			
	p	t	c	k	b	d	j	g	ph	th	kh	l	r	m	n	ŋ	s	w	y	h
p	*		*						*		*			*			*			*
t	*	*	*						*	*		*	*	*	*		*		*	
k	*		*	*					*		*	*		*	*	*	*			
b													*							
d													*							
g													*							
c			*																	
m	*		*	*	*	*	*		*	*		*		*	*		*	*		
n		*	*		*	*	*	*	*	*	*			*	*		*		*	*
ŋ	*	*	*	*	*	*	*	*	*	*	*	*		*		*	*		*	*
r		*			*					*										
l					*							*								
s		*		*								*								
w						*				*								*		
y					*										*		*		*	
kh													*							

-dr-	səmuɖrə	'sea'
-gr-	khugraŋ	'sandal'

Nasal + Consonant

Bilabial, dental and velar nasals occur with all kinds of consonants medially in -CC- structure. These are the most common types.

-mp-	lɔmpak	'meadow, lawn'
-mb-	thəmbal	'lotus'
-mc-	thəmcet	'the fruit of lotus'
-mj-	ləmjen	'race'
-mk-	yumkəy	'premises'
-mph-	təmpħa	'a jewel'
-mth-	inthəmtħa	'winter'
-ml-	kumla	'orange'
-mn-	kərəmnə	'how'
-ms-	yumnsəkəysə	'Wednesday'
-my-	kəmya	'lower part of the belly near the joint'
-md-	khomdon	'youngest son'
-nt-	təɖəntə	'investigation'
-nd-	təndən	'fire fly'
-nc-	yencəŋ	'curry'
-nj-	tanjə	'chance'
-nb-	cinba	'busy'
-nph-	sinphəmtħ	'profession'
-nth-	ipanthə	'rainy season'
-nkh-	tinkħa	'bile'
-nm-	kənmənbə	'too hard'
-ns-	punsi	'life'
-ny-	konyay	'press (iron)'
-nh-	kənhənbə	'to strengthen'
-ŋp-	khonpək	'sole'
-ŋb-	khonbəl	'drainage'
-ŋph-	thunphəmtħ	'destination'
-ŋt-	khəntəp	'middle'
-ŋd-	phonɖokpə	'to express'
-ŋth-	upəntħa	'a kind of tree'
-ŋc-	khəntset	'dhoti (used in the court language)'
-ŋj-	khonjəw	'a large foot'
-ŋk-	həŋkok	'an animal'
-ŋq-	thəŋgəl	'sickle'
-ŋkh-	yəŋktħəy	'fifty'
-ŋgh-	jinghə	'tin roof'
-ŋl-	pəŋləbə	'fool'
-ŋm-	laŋməlləbə	'noisy'
-ŋs-	noŋsə	'lion'
-ŋy-	thəŋyə	'edge of sword'
-ŋh-	kaŋħu	'a small plant'

Continuant + Consonant

-rt-	kortan	'cymbal'
-rb-	korbak	'slate'
-rph-	korphal	'a utensil'
-st-	dəsta	'zinc'
-sn-	krisnə	'Lord Krishna'
-sk-	iskul	'school'
-wd-	həwdon	'cat'
-wth-	wawthannəba	'brown'
-yb-	məruoybə	'important'
-ys-	yumsəkəysə	'Wednesday'
-yn-	kaynərəsi	'good bye'

2.3 Geminates

A geminate is a cluster of two identical consonants. In Meitei only the voiceless unaspirated stops, the laterals, the semivowels and the nasals form geminates. Geminates occur only in medial position.

-pp-	cippa	'to bite; to ache'
-tt-	phəttəba	'bad'
-cc-	kəccəba	'offering made to god'
-kk-	phukke	'will pluck'
-mm-	thəmmoy	'heart'
-nn-	khənnəba	'to discuss'
-ŋŋ-	kaŋŋə	'swan'
-ww-	lowway	'village'
-yy-	cəyyol	'week'
-ll-	thəbəlle	'night queen'

3.1 Three consonant clusters

A small number of three consonant clusters occur in the medial position. The first member is either a voiceless stop or a nasal. The second member in a -CCC- structure is usually a stop. The third member is always a trill /r/. The following table will clarify the situation.

Table 3 : Medial three consonant clusters

First Members	Second Members						
	tr	kh	br	pr	thr	dr	gr
p	*	*					
t	*						
k	*	*					
m			*	*		*	
n	*				*	*	
ŋ		*	*		*	*	*

3.2 Here are some of the Meitei examples.

-ptr-	kəptrəbə	'not crying'
-pkhr-	məpkhrəbə	'too dim'
-ttr-	pətttrəbə	'not rotten'
-ktr-	məktrəbə	'bright'
-kkhr-	pikkhrəbə	'tiny'
-mbr-	cumbrəy	'a kind of fruit'
-mpr-	cəmpɾa	'lemon'
-ntr-	cantruk	'a kind of vegetable'
-nthr-	kunthra	'thirty'
-ndr-	əndro	'name of a village'
-ŋthr-	laŋthrəy	'a kind of plant'
-ŋkhr-	maŋkhre	'lost'
-ŋbr-	səŋbrəy	'a kind of flower'
-ŋgr-	məŋgra	'sweet potatoe'
-ŋdr-	khəŋdriba	'undiscovered, unknown'
-mdr-	khəmdriba	'unfinished'

4.1 Syllables

A syllable is a sequence of phonemes with one peak of sonority. It may be divided into three parts. The first part or the opening segment is the 'onset' (syllable initial), the middle part the 'peak' (nucleus) and the last part or closing segment 'coda' (syllable final); the term margins of can be used to refer to the opening and closing segments of a syllable. Syllables do not necessarily have all three parts; they may consist of just the peak (as in ú 'tree'), just the onset and peak (as in cá 'tea'), or all three (as in khom 'breast'). Thus, a Meitei syllable consists of a nucleus with or without an onset and with or without a coda. The nucleus or peak is always a vowel. Meitei roots are generally monosyllabic. Root patterns are of the following types:

1.	V	í	'blood'
2.	VC	ìn	'fishing net'
3.	CV	ka	'room'
4.	CVC	kok	'head'
5.	CVV ³	kwa	'betel nut'
6.	VṼ	əy	'I (first person sg. pronoun)'
7.	ṼV	wa	'bamboo'
8.	VVC	yum	'house'
9.	CVṼ	koy	'moustache or beard'
10.	CVVC	kwak	'crow'
11.	CVṼṼ	khway	'name of a place'

4.2 In addition to the basic syllabic patterns given above, other patterns also occur:

Disyllabic words: (Semivowels written as C for convenience)

³ Ṽ = Semi-vowel.

Open second syllable - C²VC³V

VCV	upi	'firewood, fuel'
VCCV	oyna	'left'
CVCV	təra	'ten'
CVCCV	pakhrə	'widower'
CCVCV	brujə	'brush'
CVCCCV	cəmpɾa	'lemon'

Second syllable is closed - C²VC³VC

VCVC	ucan	'pine tree'
CVVC	mion	'nature (of a man)'
CVCVC	miron	'generation'
CVCCVC	laŋgon	'plough'
CCVCVC	snajin	'name of a hill'
CVCCVC	mondrɔŋ	'day dream'

Trisyllabic words:

Third syllable is open - C²VC³VC⁴V

VVCV	ɔubə	'eye witness'
VCVCV	ɔmubə	'black'
VVCCV	ɔoybə	'real'
VCVCCV	ɔsɔŋbə	'green'
VCCVCV	ɔpphəbə	'good'
CVCVCV	hadəbə	'calm'
VCCVCCV	inthəmtha	'winter'
CVCVCCV	məɾəmdi	'because'
CVCCVCV	tulləbə	'humble'
CCVCVCV	prithibi	'earth'
CVCCCVVCV	khəmbdriba	'unfinished'
CVCCVCCV	tinsitpa	'to spit'

Third syllable is closed: C¹VC²VC³VC¹

VCVCVC	ɔməsun	'and'
CVCVCVC	numidaŋ	'night'
VCVCCVC	ibembok	'my great grandmother'
CVCCVCVC	pikthənbə	'full'
CVCVCCVC	səgolsen	'Thursday'

Tetrasyllabic words:

Fourth syllable is open: C¹VC²VC³VC⁴V

VCVCVCV	ɔnisubə	'second'
CVVCVCV	yauməma	'a mouthful of'
VCVCCVCV	ɔhumsubə	'third'
CVCVCVCV	tɔraməri	'fourteen'
CVCCVCVCV	humputɔra	'seventy'

CVCVCCVVCV	təruksubə	'sixth'
CVCCVVCVCCV	ləypapokpa	'brown'
CVCCCVVCVVCV	kunthraməna	'thirty five'

Fourth syllable is closed: C¹VC²VC³VC⁴VC¹

VCVCCVVCV	ucekmətu	'feather'
CVCVVCVVC	təratəruk	'sixteen'
CVCVVCVCCVC	tərahumdoy	'thirteen'
CVCCVVCVVC	phəmnəbɔphan	'bench'
CVCVCCVVCV	thəwanmicak	'star'
CVCCCVVCVVC	kunthranipan	'thirty eight'
CVCCCVVCVCCVC	kunthrahumdoy	'thirty three'

Pentasyllabic words:

Fifth syllable is open: C¹VC²VC³VC⁴VC⁵V

CVCVVCVVCV	məriphutəra	'ninety'
VCVVCVCCVVC	ənirəksub	'2nd time'
CVCVVCVCCV	khəmenəsinba	'tomato'
VCVCCVVCVCCV	əranbəŋaŋbə	'to tell a lie'
CVCCVVCVVCV	nugsitəsabə	'hot weather'
CVCVVCVCCVVC	məŋarəksubə	'5th time'
CVCCVVCVCCVVC	puŋmapəntabi	'pink'
CVCVCCVCCVVCV	tərukləksubə	'6th time'

Fifth syllable is closed: C¹VC¹VC¹VC¹VC²VC¹

VCVVCVVCVC	əsabənumit	'hot day'
CVCVVCVVCVC	məriphutəret	'eighty seven'
CVCVVCVCCVC	məriphuhumdoy	'eighty three'

Hexasyllabic words:

Sixth syllable is open: C¹VC²VC¹VC¹VC¹VC¹V

humphutəraməri 'seventy four'

Sixth syllable is closed: C¹VC²VC¹VC¹VC¹VC²VC¹

CVCCVVCVVCVCCVC	humphuutərahumdoy	'seventy three'
CVCCVVCVVCVVC	humphutəranithoy	'seventy two'

Heptasyllabic words:

Seventh syllable is open: C¹VC¹VC¹VC¹VC¹VC¹VC¹V

məriphutəraməŋa 'ninety five'

Seventh syllable is closed: c{vc{vc{vc{vc{vc{vc{vc{vc{

CVCVCVCVCVCVCVCVC	məriphutəranipan	'ninety eight'
CVCVCVCVCVCVCVCVC	məriphutərahumdoy	'ninety three'

4.3 Syllable Initials

If we include the fully accepted borrowed words, all the twenty consonantal phonemes can begin a word-initial syllable and serve as margins.

/p/	pabə	'father'
/t/	tábə	'to fall'
/c/	cábə	'to eat'
/k/	kábə	'burnt'
/ph/	phabə	'to catch'
/th/	thabə	'thickness'
/kh/	khabə	'bitterness'
/s/	sabə	'to make'
/h/	habə	'choking'
/m/	mabə	'feeling'
/n/	nabə	'illness'
/ŋ/	ŋabə	'to lean against'
/l/	labə	'male'
/w/	wabə	'fatigue'
/y/	yabə	'to approve, to agree'
/b/	bor	'bridegroom'
/d/	dut	'messenger'
/j/	jagə	'place'
/g/	gun	'quality'
/r/	rəthə	'chariot'

Syllable finals:

Only the voiceless unaspirated stops (except /c/), nasals and semivowels occur in syllable final position as margins. However, lateral /l/ can occur in place of /n/.

/p/	nəp	'mucus'
	nəp -pə ⁴	'to paste'
/t/	kot	'bar', 'tin'
	cət -pə	'to go'
/k/	muk	'ink'
	nək-pə	'near'
/m/	kum	'year'
	nəm-bə	'to press'
/n/	pun	'pitcher'
	pun-bə	'to gather'
/ŋ/	məŋ	'dream'
	nəŋ-bə	'poor'
/w/	məw	'married woman'
	təw-bə	'to do'

⁴ x -x, the dash stands for syllable division.

/y/	huy	'dog'
	kay-bə	'broken'

If borrowed words are excluded, it is observed that /b d j g/ do not occur in the initial syllable of a word as syllable margin. However, these can occur as syllable margin in a non-initial syllable.

/b/	thəm-bal	'lotus'
	khon-bal	'drain'
/d/	həw-don	'cat'
/j/	ləm-jen	'race'
/g/	ca-gən-bə	'voracious eater'

Syllable Nuclei:

Any of the six vocalic phonemes /i e o u ə a/ can occur as nucleus of a syllable.

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