

**Conditioning factors for morphophonemic alternations of manner
in Meiteiron**

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1. In this paper, we discuss the conditioning factors for morphophonemic changes in the manner of the initials of successive Meiteiron syllables in close syntactic juncture. In particular, we shall examine the morphophonemic effect of aspirated initials on the following syllables in tightly-knit verb phrases.¹

Some affixes only show a two-way alternation between voiced and voiceless unaspirated stops, according to the voicing or voicelessness of the preceding segment. Such affixes include *-bə ~ -pə* 'infinitive', *-de ~ -te* 'negative', *-ge ~ -ke* 'intention', and *-jə ~ -cə* 'respect':

phu.bə 'beating'	phu.de 'not beat'	phu.ge 'beat (intend)'	phu.jə.ge 'beat (intend+respect)'
ca.bə 'eating'	ca.de 'not eat'	ca.ge 'eat (intend)'	ca.jə.ge 'eat (intend+respect)'
cəy.bə 'rebuking'	cəy.de 'not rebuke'	cəy.ge 'rebuke (intend)'	cəy.jə.ge 'rebuke (intend+respect)'
kaw.bə 'kicking'	kaw.de 'not kick'	kaw.ge 'kick (intend)'	kaw.jə.ge 'kick (intend+respect)'
kan.bə 'stepping over'	kan.de 'not step over'	kan.ge 'step over (int.)'	kan.jə.ge 'step over (int.+respect)'
cət.pə 'going'	cət.te 'not go'	cət.ke 'go (intend)'	cət.cə.ge 'go (intend+respect)'
kət.pə 'offering'	kət.te 'not offer'	kət.ke 'offer (intend)'	kət.cə.ge 'offer (intend+respect)'

¹ Aspiration here stands for the aspirated stops at the bilabial, alveolar, palatal, and velar points of articulation, as well as the glottal fricative *h*.

lak.pə	lak.te	lak.ke	lak.cə.ge
'coming'	'not come'	'come (intend)'	'come (intend+respect)'
nəp.pə	nəp.te	nəp.ke	nəp.cə.ge
'sticking'	'not sticky'	'stick (intend)'	'stick (intend+respect)'

In the above illustrations the variations $-pə \sim -bə$, $-tə \sim -də$, $-cə \sim -jə$, and $-ke \sim -ge$ are allomorphic, since they are in complementary distribution. They are phonologically conditioned allomorphic variants according to the sequence pointed out earlier, i.e. voiced finals followed by voiced initials and voiceless finals followed by voiceless initials.

2. Although the sound system of Meiteiron is not fully specified the following set of consonantal phonemes is presented, to allow access to the phonemic system of the language:

Inherited

	Bilabial	Alveolar	Palatal	Velar	Glottal
	p	t	c	k	
Stops	ph	th	ch ²	kh	
	b	d	j	g	
Nasals	m	n		ŋ	
Liquid		l ³			
Fricative					h
Semivowels	w		y		

Borrowed

Stops	bh	dh	jh	gh
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The four borrowed phonemes are found in loan-words only. Further, these four phonemes have nothing to do with the present analysis.

2. Voiced/voiceless and aspirated/unaspirated phonemes are contrasted below:

p/ph	-	/pabə/ 'reading':	/phabə/ 'dishevelling':	/əpabə/ 'reader':	/əphabə/ 'something dishevelled'
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² Phonetically /ch/ is [ʃ], but for convenience it is represented as ch.

³ /l/ has one allophone, a trilled r.

- p/b - /ipok/ '(my) white hair': /ibok/ '(my) grandmother'
- ph/b - /layphaw/ 'predestined': /laybaw/ 'herald'
- t/th - /tabə/ 'falling': /thabə/ 'plantation'; /ətumbə/ 'something round': /əthumbə/ 'something sweet'
- t/d - /ləytənə/ 'not living there': /ləydənə/ 'only the flowers'
- th/d - /ləythəbə/ 'turning down/decrease': /ləydəbə/ 'not purchasing'
- c/ch - /cabə/ 'exposing': /chabə/ 'hot': /əcəwbə/ 'something big': /əchəwbə/ 'something boiled'
- c/j - /tukəcəbə/ 'hatred': /hakəjəbə/ 'itching'
- ch/j - /cachinbə/ 'eating (in)': /chajinbə/ 'constructing (in)': /ichəy/ 'song/music': /lijəy/ 'narrating story'
- k/kh - /kabə/ 'climbing': /khabə/ 'bitterness': /əkabə/ 'climber': /əkhəbə/ 'something bitter'
- k/g - /ləykən/ 'hard surface': /ləygen(bə)/ 'habitual buyer'
- kh/g - /kaŋkhoŋ/ 'wheel': /(tiŋgoŋ)-kaŋgoŋ/ 'a kind of bird'

Regarding the borrowed phonemes, they are only used in loan words, and so contrast is not easily available.

3. There are three series of stop phonemes in Meiteiron. They are: voiceless unaspirated, voiceless aspirated, and voiced unaspirated (in the inherited group of phonemes). Each series has one phoneme each at the bilabial, alveolar, palatal, and velar points of articulation. Thus, there are a total of twelve stop phonemes—three phonemes each at the four points of articulation, i.e. bilabials /p, ph, b/, alveolars /t, th, d/, palatals /c, ch, j/, and velars /k, kh, g/. The purpose of this paper, then, is to show the factors which condition the alternation of the three phonemes at each point of articulation, thereby constituting single morphophonemes.

The most common variational pattern in bound morphemes is between voiceless and voiced unaspirated stops in medial position (see

section 1, above). In a few cases, however, allomorphs with voiceless aspirated initials also occur, as in the following examples: ⁴

phut+tok+pə 'boiling (out)'	phu+dok+pə 'striking (out)'	pat+thok+pə 'expansion (ulcer, etc.)'
phak+tok+pə 'opening (out)'	phəm+dok+pə 'sitting (out)'	pak+thok+pə 'widening (out)'
phək+tok+pə 'tearing off'	phan+dok+pə 'shaving (out)'	pom+thok+pə 'swelling (out)'
thap+tok+pə 'far away'	phəŋ+dok+pə 'clearing (away)'	pən+thok+pə 'spending overnight (away)'
thək+tok+pə 'drinking (away)'	phəw+dok+pə 'drying (out)'	paŋ+thok+pə 'carrying out'
thit+tok+pə 'mixing (out)'	phəy+dok+pə 'bending (out)'	paw+thok+pə 'decrying (out)'
chup+tok+pə 'covering (out)'	tha+dok+pə 'set free'	pay+thok+pə 'flying out'
chət+tok+pə 'taking out'	thom+dok+pə 'hitting out'	pi+thok+pə 'gave out'
chat+tok+pə 'blooming (out)'	thin+dok+pə 'escorting (out)'	pe+thok+pə 'blowing out (one side)'
chik+tok+pə 'scratching (out)'	thaŋ+dok+pə 'lifting (out)'	pa+thok+pə 'evaporating'
khəp+tok+pə 'winnowing (out)'	thəw+dok+pə 'driving out'	pu+thok+pə 'taking out'
khət+tok+pə 'left out'	thəy+dok+pə 'shifting away'	təp+thok+pə 'extending out'
khik+tok+pə 'sprinkling (out)'	chu+dok+pə 'washing (out)'	tak+thok+pə 'disclosing'

⁴ The meanings given in illustrations are approximate.

hip+tok+pə 'lying (out)'	cha+dok+pə 'making out'	təm+thok+pə 'relaying news'
hat+tok+pə 'killing (out)'	chem+dok+pə 'mending out'	tan+thok+pə 'driving out'
hek+tok+pə 'plucking out'	chan+dok+pə 'letting out'	təŋ+thok+pə 'tasting (out)'
	cheŋ+dok+pə 'cleaning away'	təw+thok+pə 'digging out'
	chew+dok+pə 'melting away'	ta+thok+pə 'hearing out'
	khū+dok+pə 'coughing (out)'	təy+thok+pə 'drying out wet things'
	khən+dok+pə 'singling out'	cət+thok+pə 'going out'
	khəŋ+dok+pə 'knowing (out)'	cam+thok+pə 'washing out'
	khaw+dok+pə 'harvesting (out)'	ciŋ+thok+pə 'dragging out'
	khoy+dok+pə 'ploughing (out)'	coŋ+thok+pə 'leaping away'
	ha+dok+pə 'gushing out'	ca+k+thok+pə 'burning out'
	hum+dok+pə 'blowing out'	kət+thok+pə 'offering (out)'
	hən+dok+pə 'retreating (out)'	kap+thok+pə 'shooting (out)'
	hoŋ+dok+pə 'changing position'	kən+thok+pə 'wiping out'

həw+dok+pə 'waking up'	kam+thok+pə 'blowing out'
həy+dok+pə 'spilling out'	ləy+thok+pə 'turning away'
	lit+thok+pə 'passing out through'
	ləŋ+thok+pə 'moving out'
	loŋ+thok+pə 'spread out sideways'
	maŋ+thok+pə 'vanishing away'
	mən+thok+pə 'sorting out'
	met+thok+pə 'pressing (out)'
	ut+thok+pə 'shown'
	yəy+thok+pə 'striking out'
	ŋəw+thok+pə 'frying (out)'

From the above illustrations it may be seen that *-tok-*, *-dok-*, and *-thok-*, which share the sense of 'out/away/expose', cannot occur in the same set of environments; thus they are in complementary distribution. They occur in the following environments:

- (i) *-tok-* preceding morpheme begins with aspiration and ends with a stop
- (ii) *-dok-* preceding morpheme begins with aspiration and ends with a voiced sound (vowels, consonants including semivowels)

(iii) -thok- elsewhere

This exceptional pattern is not restricted to -tok- ~ -dok- ~ -thok-; there are other morphemes where it may be observed. They are: -tət- ~ -dət- ~ -thət- 'progressive', -cin- ~ -jin- ~ -chin- 'inward motion', -kət- ~ -gət- ~ -khət- 'upward motion', and -kay- ~ -gay- ~ -khay- 'motion off'.

The same conditions for occurrence apply to all these morphemes. For example:

phuk+tət+pə 'uprooting'	phu+dət+pə 'beating'	kək+thət+pə 'cutting'
hek+tət+pə 'plucking'	thə+dət+pə 'breaking'	mu+thət+pə 'erasing'
khət+tət+pə 'scratching'	thom+dət+pə 'hitting'	ləy+thət+pə 'squeezing'
hək+cin+bə 'carving (in)'	hoy+jin+bə 'driving in (cattle)'	ləy+chin+bə 'tightening'
thək+cin+bə 'drinking (in)'	tha+jin+bə 'sent in'	koy+chin+bə 'encircling (in)'
thak+kət+pə 'rearing up'	tha+gət+pə 'sending up'	in+khət+pə 'pushing up'
thək+kət+pə 'thrilling'	tha+gət+pə 'lifting up'	pu+khət+pə 'taking up'
phək+kay+bə 'tearing off'	ho+gay+bə 'making hole'	pok+khay+bə 'blasting (off)'

From the above illustrations it can be seen that the same morphophonemic rule governs all exceptions. This allows us to consider the phonemes /t, d, th/, /c, j, ch/, and /k, g, kh/ (stops at the same point of articulation) as constituting a single morphophoneme.

4. *Conclusion.* The conditioning of the occurrence of the stop phonemes given above is considered here as the result of the aspirated sounds which occur in initial position in the previous morpheme. Hence, this phenomenon has been termed aspiration conditioning.