ILLUSTRATIONS OF THE IPA

Burmese

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Burmese is the official language of Burma. (In English, 'Burmese' and 'Burma' are also known as 'Myanmar', and 'Rangoon' as 'Yangon'.) It is the major language of the Burmic branch of Tibeto-Burman, and is spoken natively by upwards of 30 million people in the lower valleys of the Irrawaddy and Chindwin rivers, the central plain of Burma and the Irrawaddy Delta, and non-natively by up to another 10 million speakers of other languages in Burma.

The consultant on whose speech this study is based is a 30-year-old man from Rangoon. He read the passage in a somewhat slow and deliberate style. The Burmese translation of the fable of the North Wind and the Sun is taken from Armstrong & Pe Maung Tin (1925: 36–37).

Consonants

	Bilabial	Dental	Alveolar	Postalveolar	Palatal	Velar	Glottal
Plosive/ Affricate	p pʰ b		t tʰ d	tʃ tʃʰ dʒ		k kʰ g	ʔ
Nasal	m̥ m		n̥ n		ɲ̊ ɲ	ŋ̊ ŋ	
Fricative		θ ð	s sʰ z	ʃ			h
Approximant	ʍ w		ɹ		j		
Lateral Approximant			ɬ l				

p	pa	'to include'	t	ta	'to measure'	k	ka	'to block'
pʰ	pʰa	'to mend'	tʰ	tʰu	'thick'	kʰ	kʰa	'partridge'
b	ba	'what?'	d	da	'that'	g	gatʰa	'verse' (Pali)
			s	sa	'writing'	tʃ	tʃa	'lotus'
			sʰ	sʰa	'to be hungry'	tʃʰ	tʃʰa	'be inferior'
			z	za	'lace'	dʒ	dʒanɛ	'journal'
m	ma	'hard'	n	na	'to be ill'	ŋ	ŋa	'I'
m̥	m̥a	'to order'	n̥	n̥a	'nose'	ŋ̊	ŋ̊a	'to borrow'
			j	ja	'farmland'	ɲ	ɲa	'right-hand side'
			ʃ	ʃa	'to seek'	ɲ̥	ɲ̥a	'be considerate'
w	wa	'cotton'	l	la	'to come'	ʔ	ʔa	'to gape'
ʍ	ʍɛʔ	'to hide'	ɬ	ɬe	'boat'	h	ha	'thing'
			ɹ	əməɹapuɹa	Amarapura (a town)			

/θ ð/ are commonly realised as dental affricates [t͡θ d͡ð]. /ɹ/ is an optional variant of /j/ in some loanwords, usually of Pali origin. The voiceless sonorants /m̥ n̥ ɲ̥ ŋ̊ ɬ ʍ/ are typically partly voiced [m̥m n̥n ɲ̥ɲ ŋ̊ŋ ɬl ʍw] (see also Ladefoged & Maddieson 1996: 111–113). Consonant clusters with /j/ or /w/ in second position may be realised as secondary labialisation or palatalisation of the first position consonant respectively, thus /θwá/ 'go' > [θʷaː˦] and /mjá/ > 'many' [mʲáː˦], although the cluster /jw/ remains [jw] and not [ɥw].

Juncture in Burmese may bring about the voicing of compound-internal voiceless obstruents, unaspirated and aspirated alike. Close juncture in which the first syllable is reduced may additionally entail the voicing of the initial stop of the first syllable in a compound if it is reduced (for further details see Sprigg 1957). The following compound involves reduction and voicing of both kinds (example from Okell 1969):

/pa/ + /saʔ/ > /bəzaʔ/
[páː˦] + [sa̰ʔ˧˩] > [bə̆ˈza̰ʔ˧˩]
'cheek' + 'join' > 'mouth'

Vowels

Subset 1 vowels

i	mi	'to be in time'
e	me	(term of endearment)
ɛ	mɛ	'mother'
a	ma	'hard'
ɔ	mɔ	'to be tired'
o	mo	'heaped'
u	mu	'principle'
ə	ʔəma	'wound'
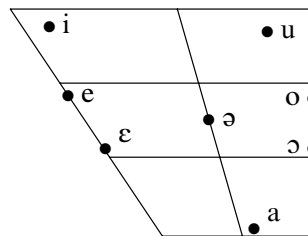
Subset 2 vowels

ɪ	mjɪʔ	'root'	ĩ	mĩ	'be fond of'
ɛ	mɛʔ	'dream'	ã	mã	'plaster'
a	maʔ	'vertical'	ũ	mũ	'Mon'
ʊ	mʊʔ	'smooth'	eĩ	meĩ	'relish'
eɪ	meɪʔ	'friend'	aĩ	maĩ	'mile'
aɪ	maɪʔ	'stupid'	aũ	maũ	'younger brother'
aʊ	maʊʔ	'haughty'	oũ	moũ	'storm'
oʊ	moʊʔ	'pearl'			
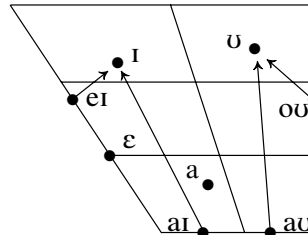
It is possible to account for the entire vowel system using only nine vocalic contrasts (Wheatley 1987), though such an analysis entails a diachronic perspective and omits much phonetic detail, attributing it instead to tonally or prosodically conditioned allophony. The present treatment divides the Burmese vowel system into two complementarily distributed subsets. Broadly speaking, the first occurs non-nasalised and in open syllables only. The second occurs either nasalised or in syllables closed by a glottal stop, both of which are syllable types derived from syllables with final stops or nasals in Proto Lolo-Burmese (Thurgood 1981: 3). The two subsets overlap slightly, however (see Watkins 2000: 146). Note that /a/ occurs in both subsets, the subset 2 variant being slightly more fronted and centralised. The vowel /ɛ/ appears in both subsets also, though not in nasalised syllables.

Tones

Burmese syllables which are not reduced have one of four tones, each of which has a complex of phonetic correlates, including pitch, phonation type and length (see Bradley 1982 for a fuller description). Three of the tones, LOW, HIGH and CREAKY, may be described in terms of modifications of vowel features alone. Canonical pronunciations of the four tones in isolation are as follows:

LOW	/ma/	[maː ˧]	'hard'
HIGH	/má/	[maː ˥]	'towering'
CREAKY	/ma̰/	[ma̰ ˥˩]	'female'
KILLED	/ma̰ʔ/	[ma̰ʔ ˥˩]	'March'

The KILLED tone includes a syllable-final glottal stop in isolation form. In connected speech or within compounds, an assimilatory process akin to the RADDOPPIAMENTO SINTATTICO observed in Italian (Kenstowicz 1994: 303) may replace the glottal stop with a lengthened variant of the following consonant.

/lɛʔ/	+	/sʰaũ/	>	/lɛʔsʰaũ/
[lɛʔ ˥˩]	+	[sʰaːʊ̃ ˧]	>	[lɛsːʰãːõ ˥˩]
'hand'	+	'carry along'	>	'gift'

Reduced syllables, the product of juncture processes (see Sprigg 1957), are unstressed and tonally non-contrastive, and may contain only the vowel /ə/, which is always short [ə̆]. All the tones are subject to complex sandhi effects described in part by Sprigg (1977). One such effect is the lowering of the creaky and killed tones before a high tone.

Stress

Stress is subordinate to tone in Burmese, though it seems that function words are less stressed than non-function words.

Conventions

It will be seen from the above notes that vowel quality, tone and stress are closely and inextricably connected in Burmese. A transcription which attempted to represent all contrastive features in detail would be impossibly convoluted, and so the passage which follows is transcribed broadly. Relative pitch, phonation type and length may all be inferred from the single diacritic (or the absence of one) used to indicate each tone. Diacritics augmenting the second element of the digraph representing a diphthong apply to the whole of the diphthong, not just the second element. Consonants voiced through juncture are transcribed voiced. Since /ʔ/ is the only consonant which may appear in a syllable coda, and all other syllables have the shape /CV/, syllabification is predictable and so left unmarked. Spaces separate intonational phrases.

Transcription of recorded passage

<center>mjaʊʔlemĩ̃n̥ neːmĩ́</center>

mjaʊʔlemĩ̃n̥ nemĩ́ | θu̥dɛʔn̥a ʔátʃídelo̥ | ɲĩ́kʰoṹnedʒḁdoʊ̃́ | ʔeĩ́dʒitʰudu wʊʔladɛ̥ kʰəjíðɛtəjaʊʔko mjĩ̃dɔ̰ga | θu̥go ʔeĩ́dʒitʃʰʊʔʔaʊ̃ taʔn̥aĩðuga̰ | θaʔátʃídelo̥ m̥aʔjujã̰ | gədḭ tʰádʒa̰dɛ ‖ lemĩ́ga̰ | taʔn̥aĩðəlaʊʔ taiʔtɔ̰ | tʃaʔtʃaʔ taɪʔle kʰəjíðɛ ʔəwʊʔ kom̥a θakaʔle ‖ ʔətãtʃadɔ̰ | lemĩ́ga̰ mətaʔn̥aĩlo̰ jaʔja̰dɛ ‖ didɔ̰ nemĩ́ga̰ nebu pja̰ja | kʰəjíðɛ ʔaɪʔlo̰ ʔəwʊʔ tʃʰʊʔja̰dɔ̰ | lemĩ́ga̰ nemĩ́ha θu̥dɛʔ θababedelo̥ wṹkʰã̰ja̰ledɛ ‖

Orthographic version

<center>မြောက်လေမင်းနဲ့ နေမင်း</center>

မြောက်လေမင်းနဲ့ နေမင်း သူထက်ငါ အားကြီးတယ်လို့ ငြင်းခုံနေကြတုန်း အင်္ကျီထူထူဝတ်လာတဲ့ ခရီးသည် တစ်ယောက်ကို မြင်တော့ကာ သူ့ကို အင်္ကျီချွတ်အောင် တတ်နိုင်သူက သာအားကြီးတယ်လို့ မှတ်ယူရန် ကတိထားကြတယ်။ လေမင်းက တတ်နိုင်သလောက် တိုက်တော့ ကြပ်ကြပ်တိုက်လေ ခရီးသည် အဝတ် ကိုယ်မှာ သာကပ်လေ။ အတန်ကြာတော့ လေမင်းက မတတ်နိုင်လို့ ရပ်ရတယ်။

ဒီတော့ နေမင်းက နေပူပြရာ ခဏကလေးနဲ့ ခရီးသည်အိုက်လို့ အဝတ်ချွတ်ရတော့ လေမင်းက နေမင်းဟာ သူ့ထက် သာပါပေတယ်လို့ ဝန်ခံရလေတယ်။

Acknowledgements

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