

A COMPARISON OF ARAKANESE AND BURMESE BASED ON PHONOLOGICAL FORMULAE

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INTRODUCTORY

In 'Prosodic Analysis, and Phonological Formulae, in Tibeto-Burman Linguistic Comparison' (pp. 79-108) I stated my belief that lexical-item phonological formulae, arrived at by applying to each language or dialect the techniques of prosodic analysis, would provide the most satisfactory forms for the linguistic comparison of Tibeto-Burman languages (p. 79); in this paper I attempt to prove my contention by using Arakanese and Burmese lexical-item phonological formulae as a basis for constructing formulae for Arakanese-Burmese (A.-B.), a first step towards formulae for what Shafer has termed the Southern Unit of the Burmese Branch, comprising Burmese, Arakanese, Tavoyan, Taungyo, Intha, Danu, and Yaw, of which only Burmese is now a written language.¹

Since Verbs are less susceptible to borrowing than Nouns, I have restricted myself to Arakanese and Burmese Verbs, with a further restriction to monosyllabic Verbs.² My material comprises 1,002 Burmese, and 667 Arakanese, phonologically distinct Verbs; the former are a complete inventory of such Verbs for one speaker.³ The corpus of Arakanese examples is much smaller than the Burmese because, having elicited an example of a Verb with an aspirate initial, I did not always inquire for an otherwise phonetically identical Verb with an unaspirated initial, and vice versa.

For a very few of the Arakanese Verbs no regular correspondence can be shown with a Spoken-Burmese Verb, e.g. *reit* throw a shadow, *prēt* shiver, *θeĩ* string [a necklace].⁴

MAJOR PROSODIC SYSTEMS

There are four major prosodic systems in terms of which Arakanese and Burmese monosyllabic Verbs can be classified: Tone, Quality, Voice Quality, Labialization.

In both Arakanese (A.) and Burmese (B.) Verb Words (comprising a Verb Syllable only) and Verb-and-Particle Words (comprising a Verb Syllable and one or more Particle Syllables) can be classified in accordance with differences

¹ Robert Shafer, 'Classification of the Sino-Tibetan Languages', *Word*, 11, 1955, p. 103.

² When used as formally established phonological or grammatical terms, Verb, Word, Syllable, etc., are distinguished by a capital letter.

³ My informant for the Burmese material was U Tin Maung, an Upper Burman, from Sagaing, and for the Arakanese Saw Hla Pru, an aircraft-engineering student, from Akyab.

⁴ Verbs are cited in the phonetic form appropriate to junction with the Particle Syllable *re/te* (A.) or *te/ḍe* (B., *sañ*).

in pitch behaviour as Tone-1 or Tone-2 Words, e.g. (r symbolizes a fricative, i.e. the *r* of the I.P.A.):

Tone 1 (ˈ-, etc.): A. pòre thaïre lootte ; B. pòðe thaïnde lootðe ;
Tone 2 (-ˌ, etc.): A. pore thaïre ; B. podè thaïnde

(*pui'saṇ* sends ; *thuiṇsaṇ* is damp ; *lupsaṇ* works ; *puisaṇ* exceeds ; *thuiṇsaṇ* sits).¹

Those monosyllabic Verbs which can be exemplified only in Tone-1 Words are therefore classified as Tone-Word-1, or Tone-1, Verbs, while those which can be exemplified only in Tone-2 Words are, correspondingly, classified as Tone-Word-2, or Tone-2, Verbs. On the basis of identity, or close similarity, of translation-meaning of particular Arakanese and Burmese lexical items, supported by regular correspondences between the components of their phonological formulae, the Tone components of Arakanese and Burmese can be shown to correspond to 1 and 2 respectively of Burmese, whence *1 and *2 can be established for A.-B., with 1 as the reflex of *1 in either language, and 2 of *2.

The Quality systems of both Arakanese and Burmese are three-term : z, m, k.² The exponents of these three terms are drawn from features of both the Verb Syllable and the following (Particle) Syllable, e.g. (f = Fast Tempo ; s = Slow)

	(i)	(ii)		(i)	(ii)	
z :	A. prə:re	pʁu:re:	B.	{ pɰə:ðe pɰu:ðe	{ pɰu:ðe: pɰu:re:	(f)
m :	A. sǎõ:re	khoõ:re:	B.	{ sǎõ:nde sǎõ:nne	{ khoõ:nde: khoõ:nne:	(f)
k :	A. kɾaotte	tshootte	B.	{ tɕhaotte tɕhaotðe	{ tɕhootte tɕhootðe	(s)

(*prosaṇ* speaks ; *phrūsaṇ* is white ; *con'saṇ* waits ; *khunsaṇ* jumps ; *khroksaṇ* fears ; *khyupsaṇ* sews).

The exponents of z, m, and k are stated in full in my other paper (pp. 87-100). The above examples are enough to show that they comprise syntagmatically related features of the Verb Syllable (vowel quality, nasality *versus* non-nasality, presence *versus* absence of final stop) and Syllable-initial features of the following Syllable (plosion *versus* flap or friction, nasality *v.* non-nasality, voice *v.* voicelessness).

Verbs are classified as z-Piece (or z), m-Piece (or m), or k-Piece (or k) according to the exponent of the quality they are exemplified in the z, the m, or the k, disyllabic Piece ('Prosodic Analysis', p. 89).

¹ For Words in which the Verb is disyllabic, see 'Junction in Spoken Burmese', *Studies in Linguistic Analysis*, Oxford, 1957.

² 'Prosodic Analysis,' pp. 85-8.

There is a regular correspondence of each of the terms *z*, *m*, and *k* of the Burmese system to *z*, *m*, and *k* respectively of the Arakanese, whence **z*, **m*, **k* can be established for A.-B., with reflexes *z*, *m*, and *k* respectively in either language.

A *z* or an *m* Verb can be either Tone-1 or Tone-2 in either language, but a *k* Verb must also be Tone-1. In phonological formulae the component *k* therefore implies the component 1; and an economy can be achieved in the Arakanese and Burmese, and in the A.-B., formulae, through a convention whereby *k* does duty for the component 1 (in A.-B., *1).

The third major prosodic system is two-term: *g* (from glottal-trill), *ḡ*. A *g* Syllable is invariably characterized by glottal-trill (or 'creaky') voice quality, a *ḡ* almost invariably by clear voice quality,¹ e.g.:

g: A. *z* 'pó; *m* 'práō; B. *z* 'pó; *m* 'pjáōn;
ḡ: A. *z* 'pō; *m* 'praō; *k* paot; B. *z* 'pō; *m* 'pjaōn; *k* paot

(*po*' is light; *phron*' is straight. *po* is plentiful; *pron*s moves; *pok* is pierced).

There is a regular correspondence of *g* and *ḡ* in Burmese with *g* and *ḡ* respectively in Arakanese, whence **g* and **ḡ* can be established for A.-B., with reflexes *g* and *ḡ* respectively in either language.²

All Tone-2-Word Verbs are also *ḡ*, and so also are all Tone-1-Word *k* Verbs (1*k*); since, therefore, the components 2 and *k* imply *ḡ*, the component *ḡ* can be omitted from any formula containing either of them. Indeed, it is possible to achieve further economies in symbolization: since every Tone-1 *z* or *m* Verb (1*z*, 1*m*) must also be further classified as either *g* or *ḡ* (1*zg*, 1*zḡ*; 1*mg*, 1*mḡ*), a similar convention to that whereby the component *k* does duty for the Tone component 1 in both Arakanese and Burmese, and in A.-B., formulae, can also be adopted for *g* and *ḡ*, and the component 1 omitted from any formula containing either of them.

Thus far, there has been a term-for-term correspondence between the terms of Arakanese and Burmese systems (Tone, Quality, Voice Quality); in the case of the fourth major prosodic system to be considered, the Labialization, this identity in number of terms as between the two languages breaks down. The Burmese Labialization system comprises the five terms *s* (from spread), *c* (from centralized), *ə*, *f* (from fronting), and *b* (from back); the Arakanese comprises the four terms *s*, *ə*, *f*, and *b*.³ Since all Burmese *b* monosyllabic Verbs regularly correspond to Arakanese *b* monosyllabic Verbs, and vice versa, whence A.-B. **b*, *b*-Syllable correspondences are considered first.

¹ 'Prosodic Analysis,' p. 97, above.

² The only non-correspondence to be noted was of Arakanese *ḡ* in 'ḡōō, is overcast, with Burmese *g*, 'ḡōōn *um*'.

³ 'Prosodic Analysis', p. 96.

b SYLLABLE

Burmese b Syllables can be distinguished from Burmese s, f, c, and ə Syllables and Arakanese b Syllables from Arakanese s, f, and ə Syllables, by the following among other features : (i), complete or partial rounding of vowel (u o ə oo ; a and (ii), rounding of initial consonant if non-palatal (except Syllables in a e.g. A., *ghoõ* jumps, *jõ* is reduced ; B., *khaot* folds *khok*, *ñõon* bows *ñum*', except for one sub-category of ə Syllable, in either language, that is characterized, in the b Syllable, by rounding of vowel, e.g. B., *wot* wears *wat*, *thon* harrow *thwa* A., *wõ* overflow, *kwot* is spotted ; from this sub-category of ə Syllable the Syllable is distinguished in either language by potential initial glottal plosion e.g. A., *'u* lays an egg, *'aõ* passes (an examination) ; B., *'oon* swarms round *un*, *'aot* is musty *ok* (*'o- is not a possible Burmese, or *'n- a possible Arakanese sequence).

Burmese

Burmese b Syllables can be further classified in terms of three prosodic systems: Juncture, Aspiration, Palatalization.

The fourteen-term Juncture system (p, m, t, n, c, l, w, k, ŋ, j, ɲ, y, s, v) and the two-term Aspiration system (h, ĥ) are set up in order to be able to associate initial localization and posture features of the Verb Syllable (labiality and plosivity, labiality and nasality, dentality and friction, etc.) with the corresponding features of Syllables preceding them in Intraverbal Junction, i.e. within the same Word, e.g. -k'g- and -ŋg- in the two k-Juncture Piece examples *sokkoñ* (θaok'g' *soklim'mañ* he may well drink, *koñ:koñ* (kaonggaõ) well, and -t'th- in the t-Juncture Piece *lakthok* (lɛ(t')thao') *charā* assistant.¹

The two-term Aspiration system (h, ĥ) is also set up in order to associate voicelessness or voicelessness as a feature of the vowel of the Verb Syllable (V ; ʋ, or h), or, in the case of non-occlusive-initial Syllables, as a feature of the initial consonant (m versus ɱ, l v. ɭ, etc.), with the corresponding features of a preceding Syllable in Intraverbal Junction, e.g. h, -V(t')th- ; ĥ, -k'g- ; as in lɛ(t')thao' and θaok'g' respectively in the immediately preceding paragraph.²

Each b Verb is then classified as e.g. p, m, or s, or as h or ĥ, according to which type of Juncture Piece or Aspiration Piece it can be exemplified in (as second Syllable of the Piece) except that no b Syllables can be classified as w (p. 113).³

The two-term Palatalization system (y, ȳ) needs to be stated in order to account for syntagmatically related features of the initial consonant or consonants of b Syllables and the vowel : in y Syllables initial palatality (j ɲ pɲ, etc.) is associated with Syllable-initial lip-spreading, with relative frontness of vowel (u ɤ ao, etc.)

¹ For Intraverbal and Intervocal Junction see 'Prosodic Analysis', pp. 90-1, and for Juncture system, *ibid.*, pp. 91-5.

² *ibid.*, pp. 91 ff.

³ *ibid.*, p. 96.

and with relative lack of rounding (əu əo əoo, etc.) ; in \bar{y} Syllables initial non-palatality (ʼph θ, etc.) is associated with initial lip-rounding (except in əo Syllables) and with relative backness of vowel (u o əoo, etc.) :

y :	pj pj mj mj tɛ(h) j ɛ n ɲ	əu əo ə ʔəo əo	
\bar{y} :	p(h) m ɲ t(h) n ɲ s(h) l l̥ k(h) ɲ θ ʼ h	u o ə oo əo, e.g.	
y :	pj̥ <i>pru</i> does ;	jaot <i>rok</i> arrives ;	mj̥ <i>myo</i> floats ;
\bar{y} :	pu <i>pū</i> is hot ;	ʼəon <i>on</i> matures ;	mə <i>mo</i> is tired. ¹

Since, however, the j, p, and y Juncture components correlate with the Palatalization component y, while the Juncture components t, n, c, l, k, ɲ, s, and v correlate with the Palatalization component \bar{y} , either \bar{y} or y is invariably implied by one or other of these more specific components, and can without ambiguity be omitted from a phonological formula containing any of them (but not from formulae containing p or m).

The Syllable-initial features of b Verbs as classified in terms of the Juncture, Palatalization, and Aspiration systems, are as follows, when Word-initial :

Juncture :	p	m	t	n	c	l	k	ɲ
Palatalization :	\bar{y}	y	\bar{y}	y	(\bar{y})	(\bar{y})	(\bar{y})	(\bar{y})
Aspiration :	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}
	p ph	pj pj̥	m ɲ	mj mj̥	t th	n ɲ	s sh	l l̥ k kh ɲ -

Juncture :	j	ɲ	y	s	v
Palatalization :	(y)	(y)	(y)	(\bar{y})	(\bar{y})
Aspiration :	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}		\bar{h} \bar{h}
	tɛ tɛh	ɲ ɲ̥	j ɛ	θ	ʼ h

(from this figure it will be seen that the Aspiration system does not apply to the (disyllabic) s Piece).

There being no further prosodic systems in terms of which the b type of Syllable can be classified, it remains only to state the b-Syllable phonematic systems, of which there are two. Both are V systems (there are no C systems in Burmese). A three-term V system (U, O, Ω) is stated for those b Syllables which are also classifiable as z by reference to the Quality system (p. 110), zb Syllables, and a two-term (U, O) for those which are also classified as m or as k (mb and mk Syllables). The phonetic exponents of these terms are :

z		m, k	
U : closeness	u ;	U : half-closeness	oo ;
O : half-closeness	o ;	O : openness	ao ;
Ω : half-openness	o ²		

¹ *ibid.*, pp. 97-8.

² *ibid.*, p. 98.

Examples of Burmese b-Syllable lexical-item phonological formulae are given on p. 116 below. The component b can be omitted from formulae containing U, O, or Ω : they are restricted to, and therefore imply, the b Syllable. On the other grounds z (of the Quality system) can be omitted from formulae containing the z-Verb phonematic component Ω .

Arakanese

Arakanese b Syllables can also be classified in terms of four further systems: Juncture, Rhotacization, Aspiration, and Palatalization, two of which, Aspiration (h, \bar{h}) and Palatalization (y, \bar{y}), are identical in number of terms with the Burmese system. The Arakanese Juncture system, on the other hand, comprises not fourteen but fifteen terms, to which the same names have been given as for the Burmese (p, t, etc.) but with the addition of r¹; and the Arakanese b Syllables can be classified as p, m, n, etc., by reference to this system, but not as w (there are no such sequences as *wu, *wa \bar{o} , *woot).

The Arakanese Rhotacization system comprises two terms (r, \bar{r}). This system serves to associate alveolar friction with labiality and velarity in initial-consonant sequences (pr mr nr, etc.), but not with alveolarity, dentality, or palatality, as in the example (e.g. t n s).²

The exponents of these terms are, then :

r : labiality/velarity and alveolar friction pr p \bar{r} mr m \bar{r} kr k \bar{r} nr

\bar{r} : labiality, velarity, etc. and no alveolar

friction, e.g. p(j) m(j) kh θ '.

e.g.

r : pru is white ; k \bar{r} aot terrifies ; nro resents ;

\bar{r} : pu is hot ; mjo floats ; raot arrives.

As in Burmese, h and \bar{h} both correlate with every Juncture component except s ; the Juncture components j, n, and y, correlate with the Palatalization component y, while t, n, c, l, r, k, η , s, and v correlate with \bar{y} , and so does the Rhotacization component r (as in Burmese, y and \bar{y} therefore need to be explicitly formulated only in bp and bm Syllables) ; only the Juncture components p, m, k, and c correlate with the Rhotacization component r ; but all fourteen Juncture components correlate with \bar{r} (and the ten components t, n, c, l, r, j, n, y, s, and v exclusively with \bar{r}).

¹ The time available for the Arakanese research was short, and the number of Arakanese examples that require the setting up of the Juncture system, e.g. the p Piece pamb \bar{e} (re), is tiny ; with labiality and plosion as its phonetic exponents (-mb-), and the t Piece tatte, climbs, with alveolarity and occlusion followed by plosion (-tt-), is consequently small ; but no examples have been noted that are inconsistent with the stating of this system.

² r has been used to symbolize an Arakanese alveolar fricative (I.P.A. \mathfrak{r}) as being more convenient typographically.

The Syllable-initial phonetic features of each type of Arakanese b Verb classified prosodically in terms of the Juncture, Palatalization, Rhotacization, and Aspiration systems are, in Inter-verb Junction (i.e. when Word-initial), as follows :

Junc. :	p m t n c y s									
Pal./Rhot. :	$\bar{y}\bar{r}$	$y(\bar{r})$	$r(\bar{y})$	$\bar{y}\bar{r}$	$y(\bar{r})$	$r(\bar{y})$	$(\bar{y}\bar{r})$	$(\bar{y}\bar{r})$	$(\bar{y}\bar{r})$	$y(\bar{r})$ $(\bar{y}\bar{r})$
Asp. :	$\bar{h} \bar{h}$	$\bar{h} \bar{h}$	$\bar{h} \bar{h}$	$\bar{h} \bar{h}$	$\bar{h} \bar{h}$	$\bar{h} \bar{h}$	$\bar{h} \bar{h}$	$\bar{h} \bar{h}$	$\bar{h} \bar{h}$	$\bar{h} \bar{h}$
	p	ph	pj	pj	pr	pr	m	m	mj	mj
	mr	mr	t	th	n	n	s	sh	j	ε θ

Junc. :	l r k ŋ j ɲ v									
Pal./Rhot. :	$(\bar{y}\bar{r})$	$(\bar{y}\bar{r})$	$\bar{r}(\bar{y})$	$r(\bar{y})$	$\bar{r}(\bar{y})$	$r(\bar{y})$	$y(\bar{r})$	$y(\bar{r})$	$(\bar{y}\bar{r})$	
Asp. :	$\bar{h} \bar{h}$	$\bar{h} \bar{h}$	$\bar{h} \bar{h}$	$\bar{h} \bar{h}$	$\bar{h} \bar{h}$	$\bar{h} \bar{h}$	$\bar{h} \bar{h}$	$\bar{h} \bar{h}$	$\bar{h} \bar{h}$	
	l	l	r	r	k	kh	kr	kr	ŋ	-
	ɲ	-	ɲ	-	ts	teh	ɲ	ɲ	'	h

The phonematic systems statable for Arakanese b Verbs, and the corresponding components, are the same in number of terms and in exponency as for Burmese (p. 113) : z, U u, O o, Ω ɔ ; m/k, U oo, O ao.

A.-B. : *b CORRESPONDENCES

Regular correspondences can be established between the Burmese and the Arakanese Aspiration components h and \bar{h} , whence *h and * \bar{h} , with h and \bar{h} as their respective reflexes in either language.

Regular correspondences can also be established between the Burmese and the Arakanese Juncture components, in combination with the Palatalization and Rhotacization components, as follows :

A.	p $\bar{y}\bar{r}$	py(\bar{r})	pr(\bar{y})	m $\bar{y}\bar{r}$	my(\bar{r})	mr(\bar{y})	t($\bar{y}\bar{r}$)	n($\bar{y}\bar{r}$)	c($\bar{y}\bar{r}$)
B.	p \bar{y}	py	py	m \bar{y}	my	my	t(\bar{y})	n(\bar{y})	c(\bar{y})
A.-B.	*p \bar{y}	*py	*pr	*m \bar{y}	*my	*mr	*t(\bar{y})	*n(\bar{y})	*c(\bar{y})

A.	l($\bar{y}\bar{r}$)	r($\bar{y}\bar{r}$)	k($\bar{y}\bar{r}$)	k(\bar{y})r	ŋ($\bar{y}\bar{r}$)	ŋ(\bar{y})r	j($\bar{y}\bar{r}$)	p($\bar{y}\bar{r}$)
B.	l(\bar{y})	y(y)	k(\bar{y})	j(y)	ŋ(\bar{y})	p(y)	j(y)	p(y)
A.-B.	*l(\bar{y})	*r	*k \bar{y}	*kr	*ŋ \bar{y}	*ŋr	*j(y)	*p(y)

A.	y($\bar{y}\bar{r}$)	s($\bar{y}\bar{r}$)	v($\bar{y}\bar{r}$)
B.	y(y)	s(\bar{y})	v(\bar{y})
A.-B.	*y(y)	*s(\bar{y})	*v(\bar{y})

From the above correspondences it will be seen that (i), the Arakanese Palatalization component y(\bar{r}) regularly corresponds to the Burmese Palatalization component y, whence *y ; (ii), Burmese \bar{y} regularly corresponds to Arakanese $\bar{y}\bar{r}$, whence * \bar{y} ; and (iii), Arakanese r(\bar{y}) corresponds to Burmese y, whence *r.

The Arakanese phonematic components U, O, and Ω correspond each to a Burmese homograph, whence *U, *O, and * Ω .

The following are examples of b-Syllable correspondences (implied, therefore omissible, components are enclosed in parentheses) :

A.-B.	A.		B.	
(b1)gpŷhOz	(b1ŷ)gpŷhOz	`pó	(b1)gpŷhOz	`pó <i>pui'</i>
(b1)gmyh Ω (z)	(b1ŷ)gmyh Ω (z)	`mjə	(b1)gmyh Ω (z)	`mjə <i>myo</i>
(b1ŷ)gthUz	(b1ŷ)gthUz	`thu	(b1ŷ)gthUz	`thu <i>thū:</i>
(b1ŷ)gñhOz	(b1ŷ)gñhOz	`no	(b1ŷ)gñhOz	`no <i>nui:</i>
(bgŷ)2chOm	(bgŷ)2chOm	_shaō	(bgŷ)2chOm	_shaon <i>choñ</i>
(bgŷ)21hUz	(bgŷ)21hUz	_lu	(bgŷ)21hUz	_lu <i>lhū</i>
(b1ŷ)grhUm	(b1ŷ)grhUm	`róō	(b1ŷ)gyhUm	`róon <i>rhum</i>
(b1g)krhOk	(b1g)krhOk	`kraot	(b1g)jhOk	`tshaot <i>khro</i>
(b1)gñrhOz	(b1ŷ)gñrhOz	`ŋro	(b1ŷ)gñhOz	`ŋo <i>ñru:</i>
(b1g)jyhUk	(b1g)jyhUk	`tchoot	(b1g)jyhUk	`tchoot <i>khya</i>
(b1ŷ)gñhOm	(b1ŷ)gñhOm	`naō	(b1ŷ)gñhOm	`naon <i>ñon:</i>
(b1ŷ)gyh Ω (z)	(b1ŷ)gyh Ω (z)	`śó	(b1ŷ)gyh Ω (z)	`śó <i>lhyo</i>
(b1ŷ)gsUm	(b1ŷ)gsUm	`θoō	(b1ŷ)gsUm	`θoon <i>sum:</i>
(bgŷ)2vhOm	(bgŷ)2vhOm	_`aō	(bgŷ)2vhOm	_`aon <i>on</i>

(sends, floats, is different, wakes, carries, offers, shrinks, terrifies, resents, sews, exhausted, loosens, uses, passes [examination]).

s SYLLABLE

Burmese and Arakanese s Syllables (B. -i, -eun, -eut ; A. -i, -eī, -eut ; so named from spreading) are distinguished from Burmese and Arakanese ə and f prosodies by types of Syllable by the fact, among other criteria, that in neither language initial velarity (**k kh ŋ**) immediately precede the syllabic vowel, and there are therefore no sequences ***kV** or ***ŋV**. In fact, in Burmese, initial velarity is not a feature of s Syllables at all¹ ; but in Arakanese, velarity is a feature of the initial sequences **kr** and **ŋr**, and, though only in Nouns, **kwi**, e.g. **kri**, **ŋrē**, **kwi** (B. *tai krī:*, *neun nī* *kwe khwe:*), but does not immediately precede the vowel.

Arakanese s Syllables are further distinguished phonetically from b, ə, and f Syllables by the initial combination of features labiality, plosion, and velarity, e.g. **bri** be finished, run.

Burmese

Burmese s are distinguished from c Syllables (-ut, so named from centralization) by the fact that while, in s Syllables, initial labiality is either (i), non-palatal

¹ U Tin Maung volunteered two exceptions : **keun** *kyin:/kin:* sleep [of monks, buddhists] and **khi** [obscene], only the former of which appears in *Judson's Burmese-English Dictionary* (Rangoon, 1953) ; **keun** is a learned alternative to the more usual **tseun**.

(p m), in sm or sk Syllables (s Syllables that are also classifiable as m or as k by reference to the Quality system), e.g. *pəit*, *pit* shut, *m̥eɪn mhin̥* shut [eyes], or (ii), palatalized or non-palatalized equally (pj mj ; p m), in sz Syllables, e.g. *pji phre* untie, *mji mrañ̥*, *pi prĩ̥* finish, in c Syllables, on the other hand, initial labiality must be palatalized, e.g. *pjət pac* throw, *mjət mrac* obstruct.

s Syllables can be classified, like the b (p. 113), in terms of the Aspiration, Juncture, and Palatalization systems, but with the difference that no s Syllables can also be classified as k or ŋ (Juncture), a difference that reflects the absence of velarity (k ŋ) from the permitted initial phonetic features of the s Syllable, and that the Palatalization system associates initial palatality (tɕ n j ɕ, and, in sz Syllables, pj mj) with relative closeness of vowel (i ɛ), through the y term, and non-palatality (e.g. p n θ s) with relative openness, through the ̄y term. In s Syllables that are also classifiable, by reference to the Quality system, as m or k, sm and sk Syllables, the Juncture components p and m correlate with ̄y (there are no sequences *pjɛt and *mjɛt).

The Syllable-initial features of Burmese s Syllables as classified in terms of the Juncture, Palatalization, and Aspiration systems, are, in Interverbal Juncture :

(i) sm and sk Syllable (-ɛɪn, -ɛɪt)

Junc.	p	m	t	n	c	l	j	ɲ	y	s	v
Pal.	(̄y)	(̄y)	(̄y)	(̄y)	(̄y)	(̄y)	(y)	(y)	(y)	(̄y)	(̄y)
Asp.	h̄ h̄	h̄ h̄	h̄ h̄	h̄ h̄	h̄ h̄	h̄ h̄	h̄ h̄	h̄ h̄	h̄ h̄		h̄ h̄
	p ph	m m̥	t th	n ɲ	s sh	l ɭ	tɕ tɕh	ɲ ɲ̄	j ɕ	θ	' h

(ii) sz Syllable (-i)

Junc.	p	m	t	n	c	l	j	ɲ	y	s	v
Pal.	(̄y)	(̄y)	(̄y)	(̄y)	(̄y)	(̄y)	(y)	(y)	(y)	(̄y)	(̄y)
Asp.	h̄ h̄	h̄ h̄	h̄ h̄	h̄ h̄	h̄ h̄	h̄ h̄	h̄ h̄	h̄ h̄	h̄ h̄	h̄ h̄	h̄ h̄
	p ph	pj pj̄	m m̥	mj -	t th	n ɲ	s sh	l ɭ	tɕ tɕh	ɲ ɲ̄	j ɕ
										θ	' -

Only one possible vowel is appropriate to the s Syllable, whether sz, sm, or sk : sz, i ; sm/sk, ɛɪ. It is not, therefore, possible to set up a V commutation system ; and the appropriate vowels are, accordingly, adequately formulated by the prosodic component s, qualified by the Quality components z, m, and k.

Examples of s-Syllable formulae are given on pp. 120-1 below.

Arakanese

Arakanese s Syllables can be further classified by reference to the Aspiration, Rhotacization, Palatalization, and Juncture systems on the same grounds, in general, as the b Syllable, but with certain differences as regards the Juncture and Palatalization systems.

sz Syllables can be classified in terms of the Juncture system not only as b, also p, m, t, n, c, l, r, k, ŋ, j, ɲ, y, s, or v, like the b Syllable, but also as w, wi, is distant. This additional Juncture component correlates with the Palatalization component \bar{y} and the Rhotacization component \bar{r} (there is no in sequence *wr).

The Palatalization system (y, \bar{y}) not only discharges the same sort of syntagmatic function in the Arakanese sz Syllable as in the Burmese (p. 117) but in the sw Syllables (below), it associates initial palatality (te) with labio-palatality through its y term, but, through its \bar{y} term, non-palatality (e.g. t, ɲ, m) with labio-velarity (w), e.g.

y : teɲi feeds ;

\bar{y} : twi finds ; ɲw̄i warms.

Of the Juncture components only j, ɲ, and y correlate with the Palatalization component y.

Two further prosodic systems, Nasalization and Labio-velarization, need to be stated for Arakanese sz Syllables (-i/i) but not for sm or sk (-eī, -ett).

The Nasalization system comprises the two terms n and \bar{n} , and is designed to account for the syntagmatic association of nasality of vowel, in conjunction with a relatively open vowel quality (i), with nasality as an initial-consonant feature (m m̄w̄ n ɲ n̄w̄ ɲw̄ ɲ j̄ ɲr̄), through the n term, and non-nasality of vowel together with relative closeness, with non-nasality as an initial feature, through the \bar{n} term, e.g.:

n : m̄i asks ; ɲw̄i warms ; ɲr̄i grumbles (B. meṣ, nhweṣ, ɲr̄iṣ)

\bar{n} : pi gives ; kri is big ; θwi gets dry (B. peṣ, kriṣ, swe').

The n term correlates exclusively with the m, n, ɲ, and ŋ Juncture components and the \bar{n} with the remaining Juncture components (p, k, s, etc.), with the result that for the present purpose there is no need to formulate them independently of the Juncture components.

The two-term Labiovelarization system (w, \bar{w}) deals with syntagmatically related labial features : the w term relates a non-syllabic rounded vowel (w) to lip-rounding as an initial-consonant feature, e.g. θ, m, t, and to relative retraction of vowel (i) ; the \bar{w} term relates absence of a rounded non-syllabic vowel features the reverse of those, to lip-spreading and to a relatively advanced type of i vowel, e.g.:

w : ɲw̄i warms ; wi is far ; teɲi feeds (B. nhweṣ, weṣ, krwe)

\bar{w} : ɭi slices ; pi gives ; θi dies (B. lhī, peṣ, se)

All the Juncture components except w correlate with the Labiovelarization component \bar{w} ; all of them except l, ɲ, and v also correlate with w ; it is therefore, from formulae containing l, ɲ, or v that \bar{w} can be omitted without giving rise to lexical ambiguity.

The Syllable-initial features of s Verbs classified in terms of the Juncture, Palatalization, Rhotacization, Labiovelarization, and Aspiration systems, are, in Interwordal Junction :

(i) sm/sk Syllable (-ēī, -ett)

Junc. :	p(ȳ)	m(ȳ)	t(ȳ)	n(ȳ)	c(ȳ)	l(ȳ)	r(ȳ)
Rhot.:	\bar{r}	r	\bar{r}	r	(\bar{r})	(\bar{r})	(\bar{r})
Asp.:	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}
	p ph	- pr	m m	mr -	t th	n n	s sh l l r -

Junc.:	k(ȳ)	ŋ(ȳ)	j(y)	ɲ(y)	y(y)	s(ȳ)	v(ȳ)
Rhot.:	(r)	(r)	(\bar{r})	(\bar{r})	(\bar{r})	(\bar{r})	(\bar{r})
Asp.:	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}
	kr -	ŋr -	ts tɛh	ɲ -	j ɛ	θ	- h

(ii) sz Syllable (-i/i)

Junc.:	p(ȳ)	m(ȳ)	t(ȳ)
Rhot.:	\bar{r}	r	\bar{r}
Lab.:	\bar{w} w	\bar{w} w	\bar{w} w
Asp.:	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}
	p - ⁻¹	br pr	- - m - mw mɰw ⁻¹ - ⁻¹ - t th tw tɰ

Junc.:	n(ȳ)	c(ȳ)	l(ȳ)	r(ȳ)	k(ȳ)
Rhot.:	(\bar{r})	(\bar{r})	(\bar{r})	(\bar{r})	(\bar{r}) r
Lab. :	\bar{w} w	\bar{w} w	(\bar{w})	\bar{w} w	(w) \bar{w} w
Asp.:	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}
	n n nw nɰw s sh - sw	l l	r - ² rw rɰw - kw ¹ kr - krw -		

Junc.:	ŋ(ȳ)	j(y)	ɲ(y)	y(y)	w(ȳ)	s(ȳ)	v(ȳ)
Rhot.:	\bar{r} r	(\bar{r})	(\bar{r})	(\bar{r})	(\bar{r})	(\bar{r})	(\bar{r})
Lab.:	(w) (\bar{w})	\bar{w} w	(\bar{w})	(\bar{w})	(w) \bar{w} w	(\bar{w})	(\bar{w})
Asp.:	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}	\bar{h} \bar{h}
	- - ŋr -	ts tɛh tɛɰ ⁻¹	ɲ ɲ	- ɛ ²	w -	θ θw ⁻²	

Since, like Burmese (p. 117), there is only one possible vowel in an Arakanese s Syllable (sz : i/i; sm/k : eu), there are no V systems, and no phonematic components.

Examples of Arakanese s-Syllable formulae are given at pp. 120-1 below.

¹ There are, however, Noun examples : pŋwŋ pwi ringworm, mrwŋ mŋi earth, mrwŋ mŋwi snake, (w)kŋh kwi dog, jwh tɛŋi sweat.

² ɛi, be, the only Verb example in his dialect, Saw Hla Pru considered to be a Burmese loanword (rhi), for which the correct Arakanese form was ɲi in Akyab but hi in the country districts. Cf. also the Noun example ɲi [personal name].

In the $pr\bar{w}\bar{h}$ Syllable, and in this type of Syllable alone, *voice* is a Syllable initial feature, even in Interpersonal Junction, e.g. *bri*, finish, run (B. *prī*s and respectively).

A.-B. : *s CORRESPONDENCES

Burmese s Syllables regularly correspond to Arakanese s Syllables (but converse does not hold : some Arakanese s Syllables, including all sw Syllables, correspond to Burmese ə Syllables ; p. 124) ; an A.-B. category *s can therefore be established, with reflexes s in either language.

The same correspondences of Palatalization, Rhotacization, and Aspiration components can be established as for the *b :

A.	h	\bar{h}	y(\bar{r})	r	$\bar{y}\bar{r}$
B.	h	\bar{h}	y	y	\bar{y}
A.-B.	*h	* \bar{h} ¹	*y	*r	* \bar{y}

The Juncture components correspond as follows :

(i) sm and sk Syllable

A.	$p\bar{r}$	pr	$m\bar{r}$	mr	t	n	c	l	r	k(r)	$\eta(r)$	j	n
B.	p	— ²	m	m	t	n	c	l	y	j	η	j	n
A.-B.	* $p\bar{y}$		* $m\bar{y}$	*mr	*t	*n	*c	*l	*r	*k	* η	*j	*n
A.	y	s	v										
B.	y	s	v										
A.-B.	*y	*s	*v, e.g.:										

A.-B.	A.			B.		
*(\bar{g})2sp $\bar{r}\bar{h}m$	(\bar{g})2sp $\bar{r}\bar{h}m$	$\bar{p}e\bar{t}$	(\bar{g})2sp $\bar{h}m$	$\bar{p}e\bar{t}$	<i>pin</i>	is thin
*(\bar{g})2sm $\bar{r}\bar{h}m$	(\bar{g})2sm $\bar{r}\bar{h}m$	$\bar{m}e\bar{t}$	(\bar{g})2sm $\bar{h}m$	$\bar{m}e\bar{t}$	<i>mhin</i>	is dim
*(\bar{g})2sm $\bar{r}\bar{h}m$	(\bar{g})2sm $\bar{r}\bar{h}m$	$\bar{m}re\bar{t}$	(\bar{g})2sm $\bar{h}m$	$\bar{m}e\bar{t}$	<i>mrin</i>	enjoys
*(\bar{g})st $\bar{h}k$	(\bar{g})st $\bar{h}k$	$\bar{t}e\bar{t}$	(\bar{g})st $\bar{h}k$	$\bar{t}e\bar{t}$	<i>tit</i>	is quiet
*(\bar{g})sr $\bar{h}k$	(\bar{g})sr $\bar{h}k$	$\bar{r}e\bar{t}$	(\bar{g})sy $\bar{h}k$	$\bar{r}e\bar{t}$	<i>rit</i>	reaps
*(\bar{g})gsk $\bar{h}m$	(\bar{g})gsk $\bar{h}m$	$\bar{k}re\bar{t}$	(\bar{g})gs $\bar{h}m$	$\bar{t}se\bar{t}$	<i>krim</i>	frightens
*(\bar{g})2s $\eta\bar{h}m$	(\bar{g})2s $\eta\bar{h}m$	$\bar{n}re\bar{t}$	(\bar{g})2sp $\bar{h}m$	$\bar{p}e\bar{t}$	<i>nrim</i>	is quiet
*(\bar{g})sj $\bar{h}k$	(\bar{g})sj $\bar{h}k$	$\bar{t}che\bar{t}$	(\bar{g})sj $\bar{h}k$	$\bar{t}che\bar{t}$	<i>khyit</i>	hooks
*(\bar{g})sp $\bar{h}k$	(\bar{g})sp $\bar{h}k$	$\bar{n}e\bar{t}$	(\bar{g})sp $\bar{h}k$	$\bar{n}e\bar{t}$	<i>nīt</i>	nods
*(\bar{g})2sy $\bar{h}m$	(\bar{g})2sy $\bar{h}m$	$\bar{e}e\bar{t}$	(\bar{g})2sy $\bar{h}m$	$\bar{e}e\bar{t}$	<i>rhin</i>	is hot

(ii) sz Syllable

A.	$pr\bar{w}$	$m\bar{r}\bar{w}$	$t\bar{w}$	$n\bar{w}$	$c\bar{w}$	l	k(r) \bar{w}	$\eta(r)\bar{w}$	$j\bar{w}$	p	y ¹	s \bar{w}
B.	py	$m\bar{y}$	t	n	c	l	j	η	j	p	y	s
A.-B.	*pr	* $m\bar{y}$	*t	*n	*c	*l	*k	* η	*j	*p	*y	*s

¹ One exception has been noted : A. h, *phet* shut ; B. \bar{h} , *pet* pit.

² The sole Arakanese example of pr, *prē*, shiver, has no corresponding Burmese form ; but compare *phin'phin'* (*phēumbē*) *tunsañ*, it trembles.

e.g.:

A.-B.	A.	B.	
*(ġ)2sprh̄z	(ġñ)2sprw̄h̄z	ṗṛi	(ġ)2spyh̄z ṗji <i>phre</i> ² unties
*(1)gsm̄ȳh̄z	(1n)gsm̄r̄w̄h̄z	ṁi	(1)gsm̄ȳh̄z ṁi <i>mi</i> catches
*(ġ)2sn̄h̄z	(ġn)sn̄w̄h̄z	n̄i	(ġ)2sn̄h̄z n̄i <i>nī</i> is red
*(1)ḡsk̄h̄z	(1ñ)ḡskr̄w̄h̄z	ṁkri	(1)ḡsj̄h̄z ṁtei <i>krī</i> is big
*(1)ḡsñ̄h̄z	(1n)ḡsñr̄w̄h̄z	ñi	(1)ḡsñ̄h̄z ṁji <i>ñrī</i> grumbles
*(ġ)2sj̄h̄z	(ġñ)2sj̄w̄h̄z	ṁtehi	(ġ)2sj̄h̄z ṁtehi <i>khyī</i> lifts
*(ġ)2sp̄h̄z	(ġn)2sp̄h̄z	ñi	(ġ)2sp̄h̄z ṁji <i>ñhī</i> stinks
*(1)gsȳh̄z	(1ñ)gsȳh̄z	ei ¹	(1)gsȳh̄z ei <i>rhi</i> is

There are six Burmese s Syllables that correspond not to Arakanese s Syllables but to ə Syllables in the V term H (Gk. *ēta*) :

tei	<i>krañ</i>	looks	(A. krè) ;	tei	<i>krañ</i>	is clear	(A. kre)
ji	<i>ray</i>	laughs	(A. re) ;	mji	<i>mrañ</i>	tastes	(A. mre)
mji	<i>mrañ</i>	neighs	(A. mre) ;	si	<i>cañ</i>	abounds	(A. se)

On the other hand there are a number of Arakanese s Syllables, including all Arakanese sw Syllables, that correspond to Burmese ə Syllables, in the V term E. The next stage must therefore be to give an account of the Burmese and the Arakanese ə Syllable.

ə SYLLABLE

In order first to dispose of the correspondence of Arakanese s to Burmese ə Syllables (-e, -ε, -a ; -un, -an, -on ; -et, -at, -ot) mentioned in the preceding paragraph it is convenient to consider first those ə Syllables which are also classifiable in terms of the Quality system as z, əz Syllables (-e, -ε, -a) ; for these outstanding correspondences are all correspondences involving z Syllables (A. sz, B. əz) ; the əm and the ək Syllable are dealt with subsequently (pp. 126-30).

əz Syllable

To distinguish the Burmese əz Syllable from the two remaining prosodic types of Syllable, the f (from fronting) and the c (from centralized), it is only necessary to point out that f Syllables can also be classified, in terms of the Quality system, as m or as k, and c Syllables as k, but neither as z ; cf. əz, *pe pe*, *we way*, *θwa swā* ; fm, *thau thuiñ*, fk, *lat luik* ; c(k), *pjūt pac*. The Arakanese əz Syllable

¹ Page 119, note 2. The Akyab form ṛi and the rural Arakanese hi would give correspondences :

*(1)gsrh̄z	(1ñ)gsr̄w̄h̄z	ṛi	(1)gsȳh̄z	ei	<i>rhi</i>
*(1)gsvh̄z	(1ñ)gsv̄h̄z	hi	„	„	„

² Arakanese ṁbri, is finished, an example of the Rhotacization component r, corresponds not to a Burmese y Syllable (*pji) but, irregularly, to a ȳ Syllable, ṁpi *pri* ; but the Burmese reading-style pronunciation ṗji would give a regular correspondence *(1)ḡspr̄h̄z.

is similarly distinguished from the sole remaining Arakanese prosodic type, the *f* Syllable, by the fact that the latter can be also classified as *m* or as *k* but as *z*; cf. *əz*, *la goes*, *swe pulls*; *fm*, *thaĩ sits*; *fk*, *laʉ follows*, *paʉ throws*.

Burmese

Burmese *əz* Syllables can, like the *b* and the *s*, be classified in terms of Aspiration (*h*, *h̃*) and the Palatalization (*y*, *ȳ*) systems; but, unlike the *b* and *s* Syllable, they can also be classified by reference to a two-term Labiovelarization system (*w*, *ṽ*).

The Burmese Labiovelarization system is set up on the same grounds as Arakanese (p. 118): to associate a non-syllabic rounded vowel (*w ʊ*) with initial lip-rounding (except in *y* Syllables, which have initial palatality: *j ɛ ɲ tɛ*) and a relatively back vowel quality (*ə ɛ ɑ*) in *w* Syllables, but to associate consonantal and vocalic features the reverse of these with absence of labiovelarity or labiovelarity in *ṽ* Syllables; e.g.:

w: *wɛ weː*; *tɛŋ tɛ khyway'*; *θwa swāː*;
ṽ: *jɛ reː*; *ɲɛ n̄ay*; *já ra*

All the Juncture components except *w* correlate with *ṽ*; all the Juncture components except *ɲ* and *v* correlate with the Labiovelarization component *w*.

This new system, Labiovelarization, affects the statements of exponence of the *y* and *ȳ* terms of the Burmese Palatalization system in much the same way as it affected the Arakanese (p. 118): in *ṽ* Syllables the *y* term associates initial palatality (*pj mj lj tɛ j ɛ ɲ*) with lip-spreading and relative frontness of vowel (*ɛ*) while in *w* Syllables its role is to associate initial palatality (*tɛ j ɛ*) with labiovelarity (*ɲ*); in the *ṽ* Syllable the *ȳ* term associates non-palatality (e.g. *p m n*) with relative backness of vowel (*ə ɛ ɑ*), and in *w* Syllables it associates non-palatality (e.g. *p m s*, but not *ʔ*) with labiovelarity (*w*), e.g.:

y: (*ṽ*) *pjǎ pra*; *jǎ ra*; (*w*) *tɛqǎ krwa*; *jqa rwā*;
ȳ: *pǎ pā*; *thǎ tha*; *pwa phwāː*; *θwa swāː*;

but because of their correlation with the Juncture components, *y* and *ȳ* need to be formulated independently of them only in formulae containing the Juncture components *p* and *m* (cf. the *b* Syllable, p. 113).

Classified prosodically in terms of the Juncture, Palatalization, Labiovelarization, and Aspiration systems the Syllable-initial features of *əz* Syllables, as they appear in Interpersonal Juncture, are as follows:

Junc.:	<i>p</i>						<i>m</i>						<i>t(ȳ)</i>		
Pal./Lab.:	<i>ȳṽ</i>		<i>y(ṽ)</i>		<i>w(ȳ)</i>		<i>ȳṽ</i>		<i>y(ṽ)</i>		<i>w(ȳ)</i>		<i>ṽ</i>		<i>w</i>
Asp.:	<i>h̃ h̃</i>	<i>h̃ h̃</i>	<i>h̃ h̃</i>	<i>h̃ h̃</i>	<i>h̃ h̃</i>	<i>h̃ h̃</i>	<i>h̃ h̃</i>	<i>h̃ h̃</i>	<i>h̃ h̃</i>	<i>h̃ h̃</i>	<i>h̃ h̃</i>	<i>h̃ h̃</i>	<i>h̃ h̃</i>	<i>h̃ h̃</i>	<i>h̃ h̃</i>
	<i>p ph</i>	<i>pj p̃j</i>	<i>pw p̃w</i>	<i>p̃w p̃w</i>	<i>m m̃</i>	<i>mj m̃j</i>	<i>m̃w m̃w</i>	<i>t th</i>	<i>th̃ th̃</i>	<i>tw t̃w</i>					

Junc.:	n(ȳ)	c(ȳ)	l	k(ȳ)	ŋ(ȳ)
Pal./Lab.:	\bar{w} w	\bar{w} w	$\bar{y}\bar{w}$ y(\bar{w}) (\bar{y})w	\bar{w} w	\bar{w} w
Asp.:	\bar{h} h \bar{h} h	\bar{h} h \bar{h} h	\bar{h} h \bar{h} h \bar{h} h	\bar{h} h \bar{h} h \bar{h} h	\bar{h} h \bar{h} h
	n ɲ nw ɲw	s sh sw sɰ	l ɭ lj - lw ɭw	k kh kw kɰ	ŋ ɳ ɲw -

Junc.:	j(y)	ɲ(y)	y(y)	w(ȳ)	s(ȳ)	v(ȳw)
Pal./Lab.:	\bar{w} w	(\bar{w})	\bar{w} w	(w)	\bar{w} w	(ȳw)
Asp.:	\bar{h} h \bar{h} h	\bar{h} h	\bar{h} h \bar{h} h	\bar{h} h	\bar{h} h	\bar{h} h
	tɛ tɛh tɛɰ tɛɰ̃	ɲ ɲ̃	j ɛ jɰ ɛɰ	w -	θ θw	' h

A phonematic system, a three-term V system (E, H, A), is statable for əz Syllables, the exponents of each term being :

E : half-closeness (ɛ ɛ ɛ) ; H : half-openness (ɛ ɛ ɛ) ; A : openness (a a a).

The prosodic components ə (Labialization) and z (Quality) can be omitted from a formula containing any of the (more specific) phonematic components.

Examples of Burmese əz formulae are given at pp. 124-6.

Arakanese

Arakanese əz Syllables (-e, -a) are also further classifiable, like sz Syllables, in terms of the five prosodic systems Aspiration (h, \bar{h}), Palatalization (y, \bar{y}), Rhotacization (r, \bar{r}), Labiovelarization (w, \bar{w}), and Juncture, but differ from them phonetically in having the following Syllable initials : **pj mj ɲj lw ɭw k kh jɰ** and **ɛɰ**, and in not having voice and plosion (**br**) as an initial feature. The phonological differences reflected in these phonetic differences are too great for the prosodically classified list of sz Syllable initials (p. 119) to stand for the əz Syllable, even with modifications ; and the following əz list is therefore given, in which the Juncture components p and m correlate with y as well as with \bar{y} (**pj mj ɲj**), l and y with w as well as with \bar{w} (**lw ɭw jɰ ɛɰ**), and k with \bar{w} as well as with w (**k kh**) :

Junc.:	p	m
Rhot.:	\bar{r} r($\bar{y}\bar{w}$)	\bar{r} r($\bar{y}\bar{w}$)
Pal./Lab.:	$\bar{y}\bar{w}$ y(\bar{w}) (\bar{y})w	$\bar{y}\bar{w}$ y(\bar{w}) (\bar{y})w
Asp.:	\bar{h} h \bar{h} h \bar{h} h	\bar{h} h \bar{h} h \bar{h} h
	- ph pj - pw pɰ pr pɣ	m ɲ mj ɲj mw ɲw mr -

Junc.:	t($\bar{r}\bar{y}$)	n($\bar{r}\bar{y}$)	c($\bar{r}\bar{y}$)	l($\bar{r}\bar{y}$)	r($\bar{r}\bar{y}$)
Lab.:	\bar{w} w	\bar{w} w	\bar{w} w	\bar{w} w	\bar{w} w
Asp.:	\bar{h} h \bar{h} h	\bar{h} h \bar{h} h	\bar{h} h \bar{h} h	\bar{h} h \bar{h} h	\bar{h} h \bar{h} h
	t th tw tw	n - ¹ nw -	s sh sw sɰ	l ɭ lw ɭw	r ɣ rw -

Junc.:	k(ȳ)				ŋ(ȳ)				j(ȳy)
Rhot.:	r̄				r̄				
Lab.:	w̄ w		w̄ w		w̄ w		(w̄)	w̄ w	
Asp.:	h̄ h	h̄ h	h̄ h	h̄ h	h̄ h	h̄ h	h̄ h	h̄ h	h̄ h
	k kh	kw kw̄	kr - krw	kr̄w	ŋ ŋ̄	-¹ -	ŋr -	tē	tēh tēq tēŋ

Junc.:	p(ȳy)	y(ȳy)	w(ȳȳ)	s(ȳȳ)	v(ȳȳ)
Lab.:	(w̄)	w̄ w	(w)	w̄ w	(w̄)
Asp.:	h̄ h	h̄ h	h̄ h	h̄ h	h̄ h
	p̄ p̄	j̄ ɛ̄	j̄u ɛ̄u	w̄ w̄	θ̄ θ̄w

A two-term phonematic V system (H, A) is established for Arakanese Syllables, the exponents of which are :

H : half-closeness (ē ē ē) ; A : openness (ā ā ā)

Since the corresponding phonematic components H and A imply both ə and these two prosodic components can be omitted from formulae containing H or

A.-B. : ARAKANESE-S-SYLLABLE AND BURMESE-ə-SYLLABLE CORRESPONDENCES (

Arakanese sw(z) Syllables (pp. 117-8) regularly correspond to Burmese Syllables in E, whence *(ə)wE(z), with s as the Arakanese reflex of *E, and (as the Burmese ; some Arakanese s̄w(z) Syllables, other than those considered on pp. 120-1, correspond to Burmese (ə)w̄E(z) Syllables, whence *w̄E.

The correspondences of the Aspiration (h, h̄), Palatalization (y, ȳ), Rhotacization (r, r̄) components are as stated for the *s correspondences (p. 12) the Arakanese Labiovelarization components w and w̄ correspond to the Burmese w and w̄ respectively, giving *w and *w̄.² The Juncture components too do differ significantly in their correspondences from those stated for the *s correspondences : there are no examples of *ŋ (A. ŋr, B. p), *p̄ (A. p, B. p), or (A. y, B. y) ; but there are in addition *r (A. r, B. y) and *w (A. w, B. w) ; e.g.

A.-B.	A.		B.		
*(1)ḡpȳw̄hE	(1ȳ)ḡspr̄w̄h(z)	`pi	(1ə)ḡpȳw̄hE(z)	`pe	pe: gives
*(1)ḡpr̄w̄hE	(1ȳ)ḡspr̄w̄h(z)	`bri	(1əw̄)ḡpyhE(z)	`pje	pre: runs
*(ḡ)2mȳwhE	(ḡȳ)2sm̄r̄wh(z)	`m̄w̄i	(ḡəȳ)2mwhE(z)	`m̄we	mhwe stirs
*(1)ḡcwhE	(1ȳ)ḡsc̄wh(z)	`sw̄i	(1əȳ)ḡcwhE(z)	`sw̄e	chwe rots
*(1)ḡr̄w̄hE	(1ȳ)ḡsr̄w̄h(z)	`ri	(1əȳ)ḡȳw̄hE(z)	`je	re: writes

¹ There are Noun examples ; (1əȳ)ḡn̄w̄hH(z) `ne whistle ; (ḡəȳ)2ḡw̄hH(z) ḡwe silver.

² In Arakanese m̄w̄i, snake, the Rhotacization component r̄ corresponds not to the Burmese r̄ but to the Burmese Palatalization component y (in *mj̄e) but, irregularly, to ȳ : m̄we mr̄we.

A.-B.	A.		B.			
*(1)grwhE	(1r̄y)gsrwh(z)	₁ r̄wi	(l̄əy)gywhE(z)	₁ əwé	<i>rhwe'</i>	moves
*(ḡ)2k̄w̄hE	(ḡr̄y)2sk̄w̄h(z)	₁ kri	(ḡəy)2j̄w̄hE(z)	₁ t̄ee	<i>kre</i>	is crushed
*(ḡ)2j̄w̄hE	(ḡr̄y)2sj̄w̄h(z)	₁ t̄ei	„	„	<i>kye</i>	gets even
*(ḡ)2w̄hE	(ḡr̄w)2sw̄h(z)	₁ wi	(ḡəȳw)2w̄hE(z)	₁ we	<i>we</i>	distributes

The regularity of the *E type of correspondence rests on twenty-eight examples in the corpus of material, to which more could certainly be added (p. 109); the following six examples, in which a Burmese (ə)E Syllable (-e) corresponds not to an Arakanese s Syllable (-i) but to an Arakanese ə Syllable in H (-e), are therefore taken to be irregular :

<i>ne</i>	<i>nes</i>	gapes at	(A. <i>ne</i>) ;	<i>æe</i>	<i>rhañ</i>	is long	(A. <i>re</i>) ;
<i>pjé</i>	<i>prañ</i>	is filled	(A. <i>pré</i>) ;	<i>pjé</i>	<i>phrañ</i>	fills	(A. <i>pré</i>) ;
<i>pje</i>	<i>phre</i>	answers	(A. <i>pje</i>) ;	<i>kwé</i>	<i>whe'</i>	butts	(A. <i>wé</i>)

One would have expected Arakanese (ə)H Syllables like these six to correspond to Burmese (ə)H Syllables (pp. 125-6 ; -ε).

There are also in the Arakanese material six (ə)H Syllables, like those in the preceding paragraph (-e), that correspond, irregularly, not to Burmese (ə)H Syllables (-ε) but to s Syllables (-i) :

₁ mre	tastes	(B. ₁ mji <i>mrañs</i>) ;	₁ mre	neighs	(B. ₁ mji <i>mrañ</i>) ;
₁ se	abounds	(B. ₁ si <i>cañ</i>) ;	₁ re	laughs	(B. ₁ ji <i>ray</i>) ;
₁ kré	looks	(B. ₁ t̄ei <i>krañ</i>) ;	₁ kre	is clear	(B. ₁ t̄ei <i>krañ</i>)

The fact that nine of the twelve exceptional examples given in the last two paragraphs are, in Burmese, y Syllables may well be significant ; it is also noteworthy that eight of them have final *ñ* in the orthography : Burmese forms in -*ñ* are notoriously inconsistent, as these eight examples show, and variable (*prañ* and *prañ*, for example, are pronounced with *e* by some speakers and with *i* by others). The Arakanese pronunciation of the corresponding forms seems to be remarkably uniform (-e).

A.-B. : *(ə)H(z) AND *(ə)A(z) CORRESPONDENCES

Apart from the exceptions considered in the last three paragraphs Arakanese əz Syllables in H and A (-e, -a) correspond respectively to Burmese əz Syllables in H and A (-ε, -a), whence *H and *A.

The correspondences stated for the terms of the Aspiration, Palatalization, Rhotacization, Labiovelarization, and Juncture components above (*E, p. 124) hold good for comparisons of Arakanese and Burmese (ə)H and (ə)A Syllables too ; these last also afford examples of the correspondences lacking in the *E type : *η (A. η, B. η), *ɲ (A. ɲ, B. ɲ), *y (A. y, B. y) ; e.g.

A.-B.	A.		B.	
*(1)gp̄ȳwhH	(1ə)gp̄r̄ȳwhH(z)	‘phé	(1ə)p̄ȳwhH(z)	‘phé <i>phai’</i>
*(1)gp̄ȳwhA	(1əṛȳ)gp̄whA(z)	‘pwá	(1əȳ)gp̄whA(z)	‘pwá <i>pwa</i>
*(1)gpr̄hA	(1əȳw̄)gpr̄hA(z)	‘prá	(1əw̄)gpȳhA(z)	‘pjá <i>pra</i>
*(1)ḡm̄ȳwhH	(1əṛȳ)ḡm̄whH(z)	‘mwe	(1əȳ)ḡm̄whH(z)	‘mwe <i>mwai</i>
*(1)ḡmȳhA	(1əṛw̄)ḡmȳhA(z)	‘mja	(1əw̄)ḡmȳhA(z)	‘mja <i>myā:</i>
*(ḡ)2lwhA	(ḡəṛȳ)2lwhA(z)	‘lwa	(ḡəȳ)2lwhA(z)	‘lwa <i>llwā</i> ¹
*(ḡ)2rw̄hH	(ḡəṛȳ)2rw̄hH(z)	‘rwe	(ḡəȳ)2yw̄hH(z)	‘jwé <i>rway</i>
*(ḡ)2k̄rw̄hA	(ḡəȳ)2k̄rw̄hA(z)	‘kwa	(ḡəȳ)2kwhA(z)	‘kwa <i>khwā</i>
*(1)gkr̄whA	(1əȳ)gkr̄whA(z)	‘krwá	(1əȳ)gj̄whA(z)	‘təqá <i>krwa</i>
*(1)ḡñr̄whA	(1əȳ)ḡñr̄whA(z)	‘ṇa	(1əȳ)ḡñw̄hA(z)	‘ṇa <i>ñhā:</i>
*(1)ḡñr̄whA	(1əȳ)ḡñr̄whA(z)	‘ṇra	(1əȳw̄)ḡñhA(z)	‘ṇa <i>ñrā:</i>
*(1)gj̄whH	(1əṛȳ)gj̄whH(z)	‘tché	(1əȳ)gj̄whH(z)	‘tché <i>khyaí</i>
*(ḡ)2phA	(ḡəṛȳw̄)2phA(z)	‘ṇa	(ḡəȳw̄)2phA(z)	‘ṇa <i>ñhā</i>
*(1)gyw̄hH	(1əṛȳ)gyw̄hH(z)	‘jwé	(1əȳ)gyw̄hH(z)	‘jwé <i>ywaí</i>

(breaks off, is swollen, shows, is bankrupt, are a lot of, slices, intends, separates, proceeds, borrows, marries, widens, is considerate, is distorted).

əm and ək Syllable

The criterion used to distinguish Arakanese and Burmese əz Syllables from Burmese and Arakanese f (from fronting) Syllables and from Burmese c (from centralized) Syllables (pp. 121–2) is not valid for Burmese and Arakanese əm Syllables (A. -ē, -ā, -ū ; B. -un, -an, -on) and Burmese and Arakanese ək Syllables (A. -ut, -ot ; B. -et, -at, -ot), for all f Syllables are also either m (A. -aī ; B. -aun) or k (A./B. -aut), and c Syllables can only be also k (B. -ut). Burmese əm and ək Syllables can, however, be immediately distinguished from c(k) : initial velarization (k̄ ṇ̄) is a potential feature of the ə Syllable but not of the c (there are no such sequences as *k̄ut or *ṇ̄ut)² ; but Burmese and Arakanese əm and ək Syllables are less easily distinguished from fm and fk Syllables. In fact no one single criterion suffices to distinguish these ə Syllables from the f ; but three separate criteria have to be stated, each for a sub-class of ə Syllable. The stating of these criteria is therefore postponed until after the relevant prosodic sub-categories have been distinguished and illustrated (p. 130).

For both Burmese and Arakanese əm and ək Syllables a further prosodic system needs to be stated, the two-term Front-Back system (ṇ, ṇ̄), the terms of which are so named from the letter ṇ of Burmese orthography (but in

¹ There is an Arakanese Noun example of ly : ‘lja, length (B. ṇ̄lja *alyā:*) ; I have no example of any corresponding Arakanese form to the Burmese lyh Verb ljā *lya* (is flimsy), which is in any case somewhat literary.

² The sole exception, Burmese k̄ut, pinch, is assumed to be a recent loan, perhaps from Mon, it does not appear in *Judson's*.

typographically more convenient form 'ŋ') ; for *ñ* symbolizes some of the inter-related vocalic and consonantal features concerned.

The function of this additional prosodic system is to associate close and half-open front vowels (A. -*ē*, -*et* ; B. -*ɪn*/-*ɪən*, -*et*) with initial-consonant sequences comprising consonant and non-syllabic rounded vowel (**Cw/Cɥ**, i.e. **pw rw mju ɕu**) on the one hand, and, on the other, to associate open vowels and back vowels (A. -*ā*, -*at* ; -*ō*, -*ot* ; B. -*an*/-*ən*, -*at* ; -*on*, -*ot*) with the impossibility of any such **Cw/Cɥ** sequence.

There are advantages in formulation in stating as the exponents of Burmese *ŋ* the same type of phonetic feature as is stated for Arakanese *ñ*, and vice versa. Arakanese *ŋ* and Arakanese *ñ* phonetic features are, thus, the reverse of Burmese *ŋ* and *ñ* phonetic features respectively :

<i>ŋ</i>	[A. no potential Cw/Cɥ sequence, backness of vowel (a ɒ)
	[B. potential Cw/Cɥ sequence, frontness of vowel (ɪ ɛ)]
<i>ñ</i>	[A. " " " " " " (ɛ)]
	[B. no potential Cw/Cɥ sequence, backness/openness of vowel (a ɒ ɔ)]

e.g.:

ŋ : A. *mṛā*, B. *mjun mrañ* sees. A. *prət*, B. *pwet prwak* swells.
ñ : A. *mṛē*, B. *mjan mran* speeds. A. *prwet*, B. *pjot prwat* clusters.

Apart from the Front-Back system the other prosodic systems in terms of which Arakanese and Burmese *əm* and *ək* Syllables can be classified are those familiar from the previous section (əz, pp. 122-124) ; but there is one important feature that distinguishes the Burmese *əm* and *ək* from the *əz*, and indeed from all other prosodic types of Syllable : in their formulae alone is the *w* Labio-velarization component combined with the *y* Palatalization component and one of the Juncture components *p*, *m*, or *n*, e.g. *n(y)w, ñot ñhwat* bend ; *pyw, pjən prwam* mix together ; *myw, mjuet mrwak* utter. In Arakanese, similarly, it is only in the *əm* and the *ək* Syllable that the *w* Labiovelarity component correlates with the Juncture component *n*, e.g. *nwet* bend ; *ñwē* bend.

In the Arakanese and the Burmese *əm* and *ək* Syllable the *y* term of the Palatalization system again associates initial palatality (*pj mj tɕ n j ɕ*) with relative frontness of vowel (A. *ē et ā at* ; B. *ɪn et ən at ɔn ɔt*) except in Arakanese *wñ* and Burmese *wŋ* Syllables (A. *ē et* ; B. *ɪn et*), in which it associates initial palatality (*tɕ n ɕ*, and *j* too for Burmese) with labiopalatality (*ɥ*) ; further, in Burmese *əm* Syllables, *y* associates initial palatality with pureness of vowel (*ɪn ɔn*). *ȳ*, on the other hand, associates non-palatality (e.g. *k m ʈ*) with the reverse of those features : (i) relative backness of the phonetically corresponding type of vowel (A. *ē et ā at ō ɒt* ; B. *ɪ(ə)n et ən at ɔ(ə)n ɔt*), except in Arakanese *wñ* and Burmese *wŋ* Syllables, in which the associated feature is labiovelarity (*w*), and (ii), in Burmese *əm* Syllables, potential diphthongization (*ɪə ɔə*).

In the əm and the ək Syllable the w term of the Labiovelarization system associates rounding of consonant (except palatals), e.g. θ k l, with either (i), front-vowel Syllables (A. ṽ : ē ēt ; B. ṽ : ɪ(ə)n ēt), a non-syllabic rounded vowel (w ɥ) and a degree of retraction (A. ɛ ɛt ; B. ɪ(ə)n ɛt), or, (ii), in open- or back-vowel Syllables (A. ṽ : ā at, ū ut ; B. ṽ : ʌn/ʌn at, ʊ(ə)n ʊt), rounding of syllabic vowel (A. ʋ ; B. ʊ) ; the w̄ term associates non-rounding of initial consonant, e.g. θ k l, with absence of rounding as a vowel feature (syllabic or non-syllabic) and, in Arakanese ṽ and Burmese ṽ Syllables, with absence of retraction (compared with the w Syllable) (A. ē/ē ɛt/ɛt, ā at ; B. ɪ(ə)n/ɪn ɛt/ɛt, ʌn/ʌn at).¹

Arakanese əṽm and əṽk Syllables and Burmese əṽm and əṽk Syllables (A. ē ēt, B. ɪ(ə)n ɛt) do not differ from the respective əz Syllables as regards classification in terms of the Juncture system ; indeed they differ from the əz Syllable in Syllable-initial features only to the extent that the Burmese əṽm and əṽk Syllable do without examples of ṽ, lɿ, sw, and ṽw, but have the advantage over the əz Syllable in one respect, in the additional initial mɿɥ (mɿɥet *mrwak* utter), while for Arakanese əṽm and əṽk Syllables no initials ṽr, ṽ, ɾ, mɿ, mɿ, ṽ, p, kɾw, kɾ, lɿw, or ɿɥ have been noted, in comparison with Arakanese əz Syllables, though the additional initials ṽ, ɾw, lɿ, lɿ, ɾw, and ɿɥ and ṽɥ and ṽɥ have ; but the list of Arakanese Verbs is admittedly incomplete (p. 109). Since the only important respect in which these Arakanese and Burmese Syllables differ from the əz is the Arakanese ɿɥ and ṽɥ, there would seem to be little point in giving a separate list. The əz lists (B., pp. 122–123; A., pp. 123–4), as modified by the comparison in this paragraph, can therefore stand for both.

Like the Burmese and the Arakanese əw̄z Syllable (B. -e, -ɛ, -a ; A. -e, -a), no Burmese (ə)w̄ṽm (B. -an/ʌn) or (ə)w̄ṽk (-at) Syllable, and no Arakanese (ə)w̄ṽm (-ā) or (ə)w̄ṽk (-at) Syllable, can be classified in terms of the Juncture system as w̄ (there are no sequences (B.) *w̄an, *wat ; (A.) *w̄ā, *wat ; and in their Syllable-initial features too these sub-classes of the Burmese and the Arakanese əm and ək Syllable do not differ significantly from Burmese, or from Arakanese, əm and ək Syllables : the Burmese (ə)w̄ṽm Syllable, for example, has no ṽ-, mɿ-, or lɿ-initials and has in addition lɿ- ; but the differences are not sufficiently great for it to be worth while to list the Syllable-initial features of the Burmese (ə)w̄ṽm or (ə)w̄ṽk Syllable, or the Arakanese (ə)w̄ṽm or (ə)w̄ṽk Syllable, independently of the preceding paragraph (B., pp. 122–3; A., pp. 123–4).

The remaining sub-class of Burmese əm and ək Syllables, the (ə)w̄ṽm (-ə(ə)) and (ə)w̄ṽk (-ə(ə)), unlike the w̄ Syllables of the preceding paragraph, do contain Verb Syllables that can be classified in terms of the Juncture system as w, e.g. wot *wat*, w̄on *wam*, but none, on the other hand, that can be classified as v (there are no sequences *ʷə, *hə), or, it so happens, as ṽ (*ṽə, *ṽə) ; but, apart from

¹ The sole exception, Burmese lɿw̄an *lhwanz*, should perhaps be treated as a reading-syllable pronunciation, appropriate to this literary word.

prosodically significant absence of initial ʔ- and h- (and the fortuitous absence of n-, ŋ-, ŋ̃-, l-, p̃j-, l̃j-, m̃j-, and m̃j̃-), and apart from the prosodically significant potential presence of initial w-, the Burmese (ə)w̃j̃m and (ə)w̃j̃k Syllables do not differ from the initials listed for əz (pp. 122-3) as w̃ ; and this difference is not great enough to warrant a separate list of (ə)w̃j̃m/k initials.

With Arakanese (ə)w̃j̃m (-ñ) and (ə)w̃j̃k (-nt) Syllables, on the other hand, the position is quite different : they are distinguished from all other Arakanese Syllables by the fact that in terms of the Palatalization system they are all ȳ ; and there are therefore no examples of such sequences as *p̃j̃n, *m̃j̃n, *t̃e(h)n, *j̃n, *j̃n, *ɕn. Consequently, it is clear that no Arakanese Syllables of this type can be classified, in terms of the Juncture system, as j, n, or y. On account of these individual features Arakanese (ə)w̃j̃ Syllable initials are listed separately, as follows :

(əȳ)w̃j̃(m/k), -ñ -nt

Junc.:	p	m	t(ṛ)	c(ṛ)	l(ṛ)	r(ṛ)	k	w(ṛ)	s(ṛ)
Rhot.:	ṛ	r	ṛ	r			ṛ	r	
Asp.:	h h	h h	h h	h h	h h	h h	h h	h h	h h
	p ph	pr -	- -	mr -	t th	s -	- l̃	r ṛ	k - kr kṛ w w̃ ʈ

There is never more than one vowel in each sub-category of Arakanese or Burmese əm or ək Syllable :

A. w̃j̃ : a ;	ṇ̃j̃ : ε ;	w̃j̃ : ñ ;
B. ṇ̃m : ɪ(ə) ; ṇ̃k : ε ;	w̃ṇ̃m : a/a ; w̃ṇ̃k : a ;	w̃ṇ̃ : ɔ ;

no V commutation system can therefore be stated, the requisite vowel being adequately indicated by the appropriate term of the Labiovelarization (w, w̃) and the Back-Front (ṇ, ṇ̃) systems, and, for Burmese, the Quality system (m, k) too.

A.-B. : əm AND ək CORRESPONDENCES

All Arakanese əm and ək Syllables regularly correspond to Burmese əm and ək Syllables respectively (the converse is not true : some Burmese əm Syllables correspond to Arakanese f Syllables ; p. 131) ; an A.-B. *ə category, with reflexes ə(m/k), can therefore be established.

On the basis of a regular correspondence of Burmese ṇ and ṇ̃ to Arakanese ṇ and ṇ̃ respectively, *ṇ and *ṇ̃ can also be established.

The correspondences stated for the other prosodic components, Aspiration, Palatalization, Rhotacization, Labiovelarization, and Juncture, in previous sections (pp. 120, 124, 125) can stand equally for the present section (ə) ; and to them can be added :

*wh (A. wh ; B. pwh)

A single exception to the *r correspondence (A. r ; B. y) has been noted. Arakanese *prnt* (prw), swell, corresponds not to a Burmese form **pjɛt*, but irregularly, to *pwet* (p̄y) *prwak/pwak* (but cf. Burmese *mjɛt* below).

ə correspondences include :

A.-B.	A.		B.	
*(1ə)prwḥṇk	(lḡəȳ)prwḥṇk	`prwet ¹	(lḡə)pywḥṇk	`pjot <i>prwat</i>
*(1ə)whṇk	(lḡəȳw)whṇk	`wnt	(lḡə)p̄yḥṇk	`pwet <i>whak</i>
*(1ə)mrwḥṇk	(lḡəȳ)mrwḥṇk	`mrnt	(lḡə)mywḥṇk	`mjɛt <i>mrwak</i>
*(1ə)ḡlwhṇm	(lḡȳ)ḡlwhṇm	`lwē	(lḡȳ)ḡlwhṇm	`lɔ(ə)n <i>lwam:</i>
*(ḡə)2rwhṇm	(ḡəȳ)2rwhṇm	`rḥ	(ḡəy)2ywhṇm	`suɲ <i>rhwañ</i>
*(1ə)rḥṇk	(lḡəȳ)rḥṇk	`ret	(lḡəy)yḥṇk	`jat <i>rap</i>
*(1ə)ḡkrwhṇm	(lḡȳ)ḡkrwhṇm	`krḥ	(lḡy)ḡjwhṇm	`teɲɲ <i>khrrwañ:</i>
*(1ə)jhṇk	(lḡəȳw)jhṇk	`təhat	(lḡəy)jḥṇk	`təhet <i>khyak</i>
*(1ə)jwhṇk	(lḡəȳ)jwhṇk	`jɛt	(lḡəy)jwhṇk	`jɔt <i>jhwat</i>
*(ḡə)2yḥṇm	(ḡəȳ)2yḥṇm	`eḡ	(ḡəy)2yḥṇm	`san <i>rham</i>

(clusters, hides, utters, regrets, rejoices, stands, leaves, cooks, bends, passes over)

Those Burmese əm Verbs which do not correspond to Arakanese əm Verbs correspond to f Verbs ; the next stage must therefore be to define the f Syllable.

f SYLLABLE

The criteria by which, in Arakanese and Burmese alike, the f Syllable (A. -*at* ; B. -*aun*, -*at*) is distinguished from the əm and the ək Syllable vary according to the following three sub-categories : (i), Burmese əṇ (-*un*, -*et*), Arakanese (-*ē*, -*et*) ; (ii), Burmese əwṇ (-*an/un*, -*at*), Arakanese əwṇ (-*ā*, -*at*) ; (iii), Burmese əwṇ (-*on*, *ot-*), Arakanese əwṇ (-*ḥ*, -*ot*). The first of these three sub-categories is distinguished from the f Syllable by a potential initial sequence comprising a consonant and rounded non-syllabic vowel (*Cw-*, *Cy-*) (**Cwa* is an impossible sequence), the second by the impossibility of having an initial labiovelar sequence vowel (*w*) (**wan/wan* and **wat* are not possible sequences ; but cf. *wau*, *wa*) and the third by the impossibility of having a glottal initial (ʔ) (*ʔon and *ʔot are impossible sequences ; but cf. ʔaun, ʔat).

From the Burmese c Syllable (-*ut*), the f Syllable is distinguished, among other criteria, by potential initial velarity (*k ṇ*) (**kut* and **ṇut* are impossible sequences but cf. *khaut*, *ṇat*).²

The Burmese and the Arakanese f Syllable closely resembles the b Syllable. Palatalization systems (y, ȳ) need to be stated for both Arakanese and Burmese Syllable, and a Rhotacization system (r, r̄) for the Arakanese ; but it differs from the b Syllable in having initial labiovelarity (*w*) as a potentiality, a phonetic difference that is reflected in the need to set up a Labiovelarization prosody.

¹ Also *p̄rɛt*.

² But see p. 126, n. 2.

system (w, \bar{w}) that is not needed for the b Syllable. As an additional difference, there are f Syllables that can be classified as w in terms of the Juncture system, e.g. B. *waun*, A. *wat*.

The exponents of the terms of the Labiovelarization system are :

w : initial labiovelarity, relative retraction of vowel **wat**
 \bar{w} : initial non-labiovelarity, a relatively advanced vowel **pai jat**, etc.

e.g.:

w : A. *waĩ*, B. *waun wuiñs* ; A./B. *wat wuik*
 \bar{w} : A./B. *pai puik* ; A. *rat*, B. *jat ruik*.

Since, apart from the prosodically significant labiovelarity feature (**w**), the Burmese f-Verb Syllable is distinguished from the b only by the fortuitous absence of initial **θ**, **ph**, **ɲ**, and **ʃ**, and the Arakanese, similarly, by the absence from the available material of **ɾ**, **ɲ**, **mp**, and **kr**, there is no need to list the f-Syllable initial features : the b Syllable list (p. 113) will serve, subject to the modifications just stated.

A.-B. : BURMESE əm AND ARAKANESSE f CORRESPONDENCES

The Arakanese material provides only eight examples of this type of correspondence, of Burmese əm Syllables (-**un**) to Arakanese fm (-**aĩ**). Six of the eight Burmese Verbs, and the corresponding Arakanese f Verbs, can be classified by reference to the Palatalization system as y Verbs : **pjun pyañ**, **ʔjun pyañs**, **pjun phyañ**, **teun kyañ**, **tehun khyañ**, **jun yañ** (**ñ** = *ña-ka-ləː sat*) ; the remaining two are **ȳ** : **sun cañ**, **ʔsun cañs**. This correspondence is termed the *cm because it is phonetically parallel to the *ck correspondence stated below (p. 132), a parallel that enjoys orthographic support : *c is represented in the orthography by **ñ** and **c**.

The following are examples of the *cm correspondence :

A.-B.	A.	B.
*(g̃)2c py h̄m	(g̃r̄w̄)2f py h̄m pjaĩ	(g̃əw̄)2 py h̄ŋm pjun pyañ
*(g̃)2c j h̄m	(g̃r̄ȳw̄)2f j h̄m tshaĩ	(g̃əȳ)2 jw̄ h̄ŋm tehun khyañ
*(g̃)2c y h̄m	(g̃r̄ȳw̄)2f y h̄m jaĩ	(g̃əȳ)2 yw̄ h̄ŋm jun yañ
*(l) g̃c ch̄m	(l̄r̄ȳw̄) g̃f ch̄m saĩ	(l̄əȳ) g̃c w̄h̄ŋm ʔsun sañs

(is levelled, is sour, is tame, minces).

c SYLLABLE

The (Burmese) c Syllable (-**ut**) resembles the Burmese s (from spreading) more closely than any other, and especially the sk Syllable (-**eut**) ; for all c Syllables are also classifiable as k by reference to the Quality system.

The only prosodic respect in which the c(k) Syllable differs from the sk is that in the c Syllable initial labiality must be palatalized (**pj pj mj** ; there can

be no sequences **p̄ut*, **m̄ut*), while in the sk Syllable, initial labiality cannot palatalized (*p̄ ph m̄* ; there are no sequences **p̄jet*, **m̄jet*). The only other Syllable initial differences between the c and sk or sm Syllables are fortuitous : except that the c Syllable has no *ɛ* initial in a Verb Syllable (but cf. the Noun *ɛʹ r̄h* eight), the list of sm and sk initials (p. 117) will serve for the c Syllable.

In the c Syllable the Palatalization term *y* associates initial palatality (*m̄j t̄ɛ n̄*) with relative frontness (*ɪ*) ; *ȳ* associates non-palatality (*t̄ s̄ n̄ l̄ θ̄ ʹ h̄*) with relative backness of vowel (*ɪ*). Thus, the Juncture components *p*, *m*, *j*, *n*, and *ɛ* correlate with *y*, and *t*, *c*, *n*, *l*, *s*, and *v* with *ȳ*.

A.-B. : BURMESE c AND ARAKANESSE f CORRESPONDENCES

Burmese c(k) Syllables regularly correspond to Arakanese f̄k Syllables ; and this correspondence can be associated, as **ck*, with the **cm* correspondence of the previous section (p. 131).

The Aspiration components correspond as before, to give **h* and **h̄* : the Palatalization components and the Arakanese Rhotacization components give three sets of correspondences :

(i) **y* (A. *y* ; B. *y*) ; (ii) **r* (A. *r* ; B. *y*) ; **ȳ* (A. *r̄ȳ* ; B. *y*) ; e.g.:

A.-B.	A.	B.			
* <i>(l̄g)cp̄ȳh̄k</i>	<i>(l̄g)p̄r̄ȳh̄k</i>	<i>ʹpaut</i>	<i>(l̄gȳ)cp̄h̄(k)</i>	<i>ʹpjut</i>	<i>pac</i> throw ; <i>pya</i> is th
* <i>(l̄g)cprhk</i>	<i>(l̄gȳ)fprhk</i>	<i>ʹpraat</i>	<i>(l̄gȳ)cph(k)</i>	<i>ʹpjut</i>	<i>phrac</i> becomes
* <i>(l̄g)cpyhk</i>	<i>(l̄gȳ)fpyhk</i>	<i>ʹpiaat</i>	„	„	<i>phyac</i> massages
* <i>(l̄g)cjhk</i>	<i>(l̄gȳ)fjhk</i>	<i>ʹtehaat</i>	<i>(l̄gȳ)cjh(k)</i>	<i>ʹtehut</i>	<i>kyac</i> loves
* <i>(l̄g)cr̄hk</i>	<i>(l̄gȳȳ)fr̄hk</i>	<i>ʹraat</i>	<i>(l̄gȳ)cyh̄(k)</i>	<i>ʹjut</i>	<i>rac</i> winds round
* <i>(l̄g)cyh̄k</i>	<i>(l̄gȳȳ)fyh̄k</i>	<i>ʹjaat</i>	„	„	<i>yac</i> gets drunk

A.-B. : f CORRESPONDENCES

The remaining Arakanese f̄ Syllables (-*aĩ*, -*aut*), those which do not correspond to Burmese *əŋm* (-*un*) or c (-*ut*) Syllables, regularly correspond to Burmese f̄ Syllables, whence **f*. The prosodic correspondences are the same as those of f̄ b Syllables (p. 115), but with the addition of the Juncture correspondence of Arakanese to Burmese *w*, whence **w*, and the correspondence of the Labialization components, whence **w̄*, **w̄̄* ; e.g.:

A.-B.	A.	B.			
* <i>(l̄)ḡfw̄m</i>	<i>(l̄r̄ȳwh̄)ḡfw̄m</i>	<i>ʹwaĩ</i>	<i>(l̄ȳwh̄)ḡfw̄m</i>	<i>ʹwaun</i>	<i>wuĩn̄s</i> does jointl
* <i>(l̄)fw̄k</i>	<i>(l̄ḡr̄ȳwh̄)fw̄k</i>	<i>ʹwaat</i>	<i>(l̄ḡwh̄)fw̄k</i>	<i>ʹwaat</i>	<i>wuik</i> curves rou
* <i>(l̄)gf̄kr̄k</i>	<i>(l̄ḡȳȳ)fk̄rk</i>	<i>ʹkraat</i>	<i>(l̄ḡȳȳ)f̄jh̄k</i>	<i>ʹteat</i>	<i>kruik</i> loves
* <i>(l̄)gf̄pȳhm̄</i>	<i>(l̄ḡȳȳ)fp̄r̄ȳȳhm̄</i>	<i>ʹpaĩ</i>	<i>(l̄ȳȳ)ḡfp̄ȳȳhm̄</i>	<i>ʹpaūn</i>	<i>puĩn̄s</i> cuts
* <i>(l̄)gf̄r̄hk</i>	<i>(l̄ḡr̄ȳȳ)fr̄hk</i>	<i>ʹraat</i>	<i>(l̄ḡȳȳ)fȳh̄k</i>	<i>ʹjaat</i>	<i>ruik</i> hits.