THE POSITION OF THE REJANG LANGUAGE OF SUMATRA IN RELATION TO MALAY AND THE `ABLAUT' LANGUAGES OF NORTHWEST BORNEO*

0. Introduction

This paper suggests that certain findings with respect to the historical phonology of Rejang can shed light on similar developments in the histories of Malay and the `ablaut' languages of Northwest Borneo. The argument begins with a top-down analysis of sound changes in Rejang, with special attention to the role of prosodic structure, especially word-level stress. In McGinn (1997) it was claimed that Rejang underwent not just one but two prosodic changes (stress shifts), one paralleled by (and conceivably shared with) Malay, and a second placing the stress uniformly on the final syllable of the word. If accepted, this claim raises at least the following questions.

(1) (i) How many languages besides Rejang underwent the FIRST stress shift parallel to (or possibly together with) Malay?

(ii) Are there any related languages besides Rejang showing evidence of multiple prosodic changes?

(iii) Is there any other (segmental) evidence supporting a lower-order subgroup for Rejang?

This paper begins to address questions (i)-(ii) and explores some possible implications with respect to (iii). As an example of the latter, strict adherence to the "family tree" model of linguistic differentiation precludes any close relationship

between Rejang, Malay, and the languages of Borneo, despite numerous similarities in their historical developments. In particular, identical changes that might possibly support a hypothesis linking Rejang with Malay in a lower-order subgroup are undermined by independent changes in Rejang that cannot be reconciled with any subgrouping hypothesis. See especially changes A-(1)-(4) in Appendix A. Similar remarks apply to a chain of languages and dialects in Northwest Borneo reported in Robert Blust (1997). Thus, both the fact of Rejang's geographical isolation and the family tree theory applied strictly to the comparative data converge to suggest that Rejang developed independently in highland Southwest Sumatra, and, although surrounded by Malay dialects and penetrated to the bone by the national language (Indonesian-Malay), and although sharing many features with certain Borneo languages, Rejang nonetheless belongs to no linguistic subgroup lower than Malayo-Polynesian. What makes this conclusion more interesting than it might otherwise be is the range of parallel developments (parallel drifts[2]) in Rejang, Malay, and the `ablaut' languages of Northwest Borneo in modern-day Sarawak, Malaysia. Careful documentation of parallel drifts contributes to the typological study of sound change.

1.0 Methodological Preliminaries

In both phonology and morpho-syntax, Rejang displays some Malay-like and some `un-Malay' historical drifts. The first set is reviewed in the next subsection below; the second (much larger) set is discussed beginning with section 2.1.

1.1 Four Malay-like Morpho-syntactic Drifts

Many if not all of the Malay-like tendencies are older than the non-Malay drifts, and were conditioned (in part) by the FIRST STRESS SHIFT. This statement seems valid for morpho-syntax as well as for phonology, given the obvious proviso that certain similarities are due to common inheritance from PAN/PMP. Consider the following four candidates.

(2) a. Word Order Change from VS to SV (cf. Blust 1997:16)
b. Loss of PAN `focus' suffixes *-en and *-an[3]
c. Re-analysis of PAN `perfective' infix *-in- as the passive marker
d. Loss of PAN "focus" prefix affix *Si-

Rejang, Malay, and the ablaut languages of Sarawak all presumably underwent similar grammatical changes whereby the PAN four-focus voice system (Philippine-type) became a morphologically simpler active-passive voice system (Dahl 1976; Blust 1997:17). Although the correct theoretical characterization of either system is far from settled, the morphological changes (2c-d) are correlated with the word order change (2a) and (ex hypothesi) the FIRST STRESS SHIFT (to penult stress) put forth in McGinn (1997) and this paper (see next section). Finally, the reanalysis change (2c) was clearly `compensatory' in relation to the loss of suffixes (2b): the passive-like functions of *-en and *-an were re-assigned to the perfective infix *-in-, and the perfective function became secondary or disappeared categorically. This explains why reflexes of PAN/PMP *-in- serve as the passive marker in all three languages compared in this paper. Consider the display in (3).

(3) Contemporary Reflexes of PAN/PMP *ni- ~ *-in-

Malay	di-	(di-tembak `be shot')[4]
Rejang	ne- ~ n- ~ -en-	(t-en-iᾱma' `be shot')
Mukah Melanau	ne- ~ n- ~ -en- ~ -i-	(bibed `be tied')

In the next sub-section, I will present four hypotheses relating to prosodic change.

1.2 Hypothesis: Two Prosodic Changes, Two Typologies

My major claims can be stated in the form of four hypotheses relating to Rejang, Malay, and the `ablaut' languages of coastal Sarawak. First, I assume that all these languages underwent the same (or very similar) prosodic change, conceivably as a shared innovation but more likely as parallel development, whereby the word-level accent (hereafter, simply the stress) shifted to the penult in a Malay-type pattern[5]. See Appendix C for the Rejang evidence. (In the Malay-type pattern the stress falls on the ultimate when the penult is schwa; otherwise on the penult.) Second, Rejang and the ablaut languages of Sarawak, but not Malay, underwent a Second Stress Shift whereby the stress was placed uniformly on the final syllable of the (phonological) word. See section 2.1. Third, between these two prosodic changes, when all these languages had the Malay-type stress pattern, the stress pattern conditioned the morphosyntactic changes mentioned in (2) above. Fourth, and most significantly, in phonology the Maay-type stress pattern conditioned the reduction of certain trisyllables to disyllables. This last included no fewer than five segmental innovations, all of which occurred in the same chronological order in the affected languages, as follows.

(4) "Blust's Law" (BL):

I. Prepenultimate *a Neutralization (PN *a)
II. Prepenultimate *#e- Deletion (PD *e)
III. Schwa syncope (SS)
IV. Intervocalic -CC- Reduction (CR)
V. Prepenultimate *i, *u Neutralization (PN *i,*u)

This set shall be referred to in this paper as "Blust's Law" (BL).

First, a caveat: Schwa Syncope (SS) is extremely widespread in Western Austronesian languages, and of itself may have little subgrouping value; what is significant is the interaction of SS with PN and CR. Originally discovered in the historical phonology of Malay (Blust 1982), the same rules (in the same order) were reported for the `ablaut' languages of Sarawak (Blust 1997). Thus: *"There is some evidence that the first prepenultimate vowel to merge with schwa was *a, followed by *u and lastly *i"* in the Mukah Melanau language of Sarawak (1997:21). This statement characterizes the effect of BL and explains the retention of prepenultimate PMP *i as /i/ and *u as /u/ (or /o/) in original trisyllables. Compare PMP *timeRaq > *timRaq > *timaq > Rejang timea' = Malay timah `tin'); PMP *tuqelang > Malay and Mukah /tulang/ (but Rejang /telan/ `bone' owing to the effect of rule A-(1) of Appendix A).

Blust's Law interacted with other changes causing losses of whole prepenultimate syllables. Thus loss of *q- (Rejang change A-(2) in Appendix A) interacted with loss of *a through PN and PD, causing loss of initial sequence *qa-, e.g. *qapeju > pegew `gall'. Compare this effect with the following statement by Blust: *"All 40 or more languages of Borneo have lost initial *a, or *a preceded by *q or *S (which disappeared) in prepenultimate position, thereby reducing a number of*

original trisyllables to disyllables. A similar change has taken place in Malay and some other western MP languages." (Blust 1990b:240). Such changes contributed to what Blust (1990:244) has characterized as "the widespread disyllabic canonical target of Austronesian languages". This statement is obviously valid for Rejang as well. See Appendix A.

In morphology, notice that the FIRST STRESS SHIFT entails that the stress never fell on affixes[6]. Blust hints at a similar idea in the following remark: "It is possible that (the) drift-like tendency to lose pretonic vocalic distinctions initiated the transformation of the Proto-Austronesian `focus' system in western Indonesia through eliminating the instrumental marker *Si-." (Blust 1990b:240). To account for the other morpho-syntactic changes in (2), equally powerful drifts must be recognized; and they, too, seem to be motivated (in part at least) in terms of the stress pattern.

1.3. Syllable-Reduction Schemata Interpreted By the Family Tree Model

It appears that the *earliest* segmental changes in Rejang's independent history, especially B-(1) but also B-(2)-(4) in Appendix B, were chronologically *prior* to the BL set shown in (4) above (cf. B-(5)-(9) in Appendix B). In particular, change B-(1) was, apparently, unique to Rejang, which then `fed' B-(2)-(4). This sequence suffices to undermine any subgrouping arguments within the family tree theory. (See Section 6 for an alternative interpretation of the facts.)

2.1 Extensions of "Blust's Law" Across Morpheme Boundaries

The remaining comparisons involve relatively recent changes in Rejang and

Mukah Melanau, and differ from the above in that Malay fades into the background. The evidence suggests that Rejang is typologically closer to the Sarawakan languages than to Malay. This claim is consistent with my hypothesis that Rejang and the Sarawakan languages underwent a SECOND STRESS SHIFT independently, whereby the stress fell on the ultimate. The hypothesis accounts directly for the fact that in each of the contemporary languages under consideration here, excepting of course Malay, the stress falls upon the final syllable of the (phonological) word. It also accounts for numerous parallel developments unattested in Malay and linking Rejang typologically with the coastal Sarawak group.

2.1 Mukah Melanau Simple Ablaut

In Rejang and the Sarawakan languages (but not Malay), "Blust's Law" applied across morhpeme boundaries, with morphological consequences. In Borneo simple ablaut arose via straightforward historical extension of SS and CR before PN (*i,*u) across morpheme boundaries. By contrast, over in Sumatra the re-application of BL changes PN (*i, *u) and SS was *in reverse order* in (infixed) words, resulting in word-medial consonant clusters. Consider the comparisons in Table 1.

	Mukah seput `blowpipe'	Rejang tengoa `hear'
PMP	*s-um-eput, *s-in-eput	*d-um-engeR, *d-in-engeR
SS	CumCVC	CinCVC
CR	CuCVC	CiCVC
PN(*i,*u)	CemeCVC	CeneCVC
SS	CemCVC	CenCVC

Outcome	suput	siput	temngoa	tenngoa

Table 1: Infixation of CeCVC Bases

From the display in Table 1 we can derive an explanation for why certain Rejang and Mukah affixed verbs are disyllables (and others remain trisyllables). In both languages, a selection from the set of BL changes re-applied affected infixed verbs across morpheme boundaries. The affected bases were `oxytone' (CeCVC)[7].

Despite the differences in morphological outcomes, it is important to bear in mind that Rejang *bases* underwent the BL changes *in the same chronological order* as Malay and Mukah Melanau bases. See rules A-(5)-(9) in Appendix A and Blust (1982, 1997).

2.2 Mukah Melanau "Compound Ablaut"

Vowel-initial bases increased their frequency in both Rejang and Mukah Melanau owing to the loss of base-initial *p- and *b- in transitive verbs. Although the mechanisms differed in detail, this parallel is perhaps the most striking of all. In Mukah the effect was what Blust calls compound ablaut. Like simple ablaut, compound ablaut involves infixed bases of the shape CeCVC[8]; what distinguishes the latter is that the initial C- is labial (*p or *b)[9]. In other words, in Mukah CeCVC bases lost the labial as part of the historical process that gave rise to compound ablaut. Schematically:

(5)	BASE	WORD	PMP
Mukah compound ablaut:	*bebed	mubed	< *b-um-ebed (active)
Mukah simple ablaut::	*bebed	bibed	< *b-in-ebed (passive)

Compound ablaut is relevant for active voice. To account for it, Blust offers an ordered set of changes that began with Infix Metathesis (IM) followed by the familiar BL changes.

(6) *b-um-ebed > mu-bebed (IM) > mubbed (SS) > mubed (CR).
*p-um-epek > mu-pepek (IM) > muppek (SS) > mupek (CR)

2.3 Loss of *p... and *b... in Rejang Transitive Verbs

The Rejang changes paralleling the development of compound ablaut in Mukah were less radical morphologically, but more far-reaching in terms of the impact on the lexicon. Consider the following Rejang data.

(7)

BASE	WORD	PMP	Gloss
onoa'	monoa'	*b-um-unuq	`kill'
onoa'	nonoa'	*b-in-unuq	`be killed'
gong	megong [m.gong]	*p-um-egeng	`hold'
gong	negong [n.gong]	*p-in-egeng	'be held'

In Rejang, prepenultimate infix vowels became schwa by extension of BL), and then word-initial *pe... and *be... simply disappeared[10]. The effect was an increase in the frequency of vowel-initial bases, and therefore of single-phoneme alternants /m-, n-, k- and p-/, giving rise to morphologically complex disyllables like m-onoa', negong, me-lié; ne-lié `give; be given' (< PMP *beRay `give') and m-uka'; n-uka' `open; be opened' (< PMP *buká' `open' (Zorc 1995:1114)).

2.4 Morphological Motivation for Compound Ablaut?

Blust (1997) does not attempt to explain the historical pressures which led to the rise of Infix Metathesis (hence compound ablaut) in Mukah Melanau. **(Note to self: My error--Yes he does in Blust 1997:25 where he evoks Consonant Harmony, which precludes sequences *bum..., pem...* etc.)** It might be useful to consider the situation in Rejang, where some bit of morphological motivation can be adduced to explain why *p- and *b- disappeared in transitive verbs. Consider the contemporary Rejang word /be-m-onoa'/ which contains the de-transitivizing prefix /be-/ affixed to the active (transitive) verb /monoa'/ `kill'. Before the loss of *pe... and *be... this word would certainly have been ambiguous: the phonological strings *pem..., *pen..., *bem... and *ben... could have arisen by infixation (transitivization); they could also have arisen via prefixation with *be- (de-transitivization) or *pe- (nominalization)[11]. After the analogical change in question (i.e. loss of the potentially ambiguous phoneme sequence *be... in infixed verbs), the independent prefix /be-/ was free to cooccur with any stem, as evidenced by detransitivized /be-m-onoa'/ `to die off mysteriously, be killed off unnaturally or without known cause' (predicated of failed crops)'.

3.0 Further Morphological Parallels Between Rejang and Mukah Melanau

Another typological feature that separates Rejang from Malay, and associates Rejang with geographically distant Bornean languages, is the existence of infixes. Consider again the following Rejang and Mukah alternations.

(8)	Rejang	Mukah Melanau
Active:	me- ~ m- ~ -em-	me- ~ m- ~ -em- ~ u (ablaut)
Passive:	ne- ~ n- ~ -en-	ne- ~ n- ~ -en- ~ i (ablaut)

The fact that parallel alternations are found in Sumatra and Borneo would be astonishing if caused entirely by `drift' (see section (6)). Fortunately, a simpler hypothesis is available: the alternations derive in large part directly from PAN/PMP. Observing comparable alternations to be widely distributed in contemporary Austronesian languages, including Atayal (Formosa) and Borneo, Dahl (1976:119) assigned doublets *mu- ~ *-um- and *ni- ~ *-in- to PAN. Both Rejang and Mukah developed a third set (m-, n-) for reflexes of *mu- and *ni- (> *me-, *ne-) when added to vowel-initial bases, motivated by a phonotactic constraint (not found in Malay) disallowing VV sequences when the first V is schwa; and Mukah developed a fourth type alternant (ablaut) as previously discussed.

In the remainder of this section are listed a number of morphological features of Rejang that are either (virtual) retentions from PAN/PMP, or are derived from PAN/PMP by the application of one or a chain of rules beginning with the set labeled "Blust's Law" (BL). For data displays below, the following symbols have been adopted from Blust (1997) to facilitate comparison with Mukah: (B = Base; S = Stem; A = Active; P = Passive; N = Nominal; NS = Nasal Substitution).

1. Rejang has two (or possibly three) active-voice prefixes which distinguish degree of transitivity: the alternating prefix/infix me- ~ m- ~ -em-;

and the doublet meng- ~ nge- that triggers `Nasal Substitution'.

(9) B: tebas
A: t-em-bas `to clear-cut'
A: menebas `clear-cutting' meng-t... > men-t > men-
A: nebas `clear-cutting' nge-t... > n-t > n-
P: t-en-bas `be clear-cut'

2. Owing to phonologically conditioned complementation among affixes, the phoneme /n/ is free to serve as an active or a passive prefix, depending on the lexical nature of the verb. Compare /nebas/ (active) above and /nonoa'/ (passive) below.

(10) B: onoa'
A: monoa' `kill'
P: nonoa'

3. The prefix meng- surfaces as /meng/- before bases that begin with a vowel, but another prefix ke- is sometimes added to bases that begin with /l/-.

(11)	B:	léa'	`see'	
	S:	ke-léa'	'see'	(imperative)
	A:	k-em-léa'	`see'	
	A:	mengeléa'	`observe'	(meng + ke + léa')
	P:	k-en-kéa'	`be seen'	

An exception is me-leket `stick, adhere' (not **mengeleket). Rejang me-leket derives from PMP *mang + deket.

4. A morphophonemic extension of Schwa Syncope is a synchronic rule affecting infixed bases that begin with a consonant followed by schwa. (See change III of Blust's Law; Table 1 above; and rule B-(7) of Appendix B.)

(12) B: teko `come'
A: t-em-eko > temko `cause to come; arrange to bring s.o. in'
P: t-en-eko > tenko `be caused to come'

5. Historically, base-initial labial consonants (/p/-, /b/-, /m/-) disappeared in transitive verbs.

(13)

PAN	B	A	P	GLOSS
*balik	bélék	--	---	return (intr)
*b-um-unuq	qonoa'	m-onoa'	n-onoa'	kill
*p-um-injem	iñjem	m-iñjem	n-iñjem	borrow
*p-um-egeng	gong	me-gong	ne-gong	hold

As mentioned in section 2.2 above, the conditions closely resemble the conditions for compound ablaut in Mukah Melanau as described by Blust (1997:15).

6. Also paralleled in Mukah Melanau (cf. Blust (1997:22) is a strong tendency to develop vowel-initial verb bases by analogical back-formation based on the affixational pattern resulting from the above change.

(14) B: ékér
N: pékér `thought' (Arabic fikir `think' (Malay pikir))
A: mékér `think'
P: nékér `be thought',`thought s/he' (in narratives)

(15) B: teret
N: pe-teret `photograph' (English: portrait)
A: t-em-ret `take (picture)'
P: t-en-ret `(picture) be taken'

Given that m(e)-, n(e)-, p(e)- exist as prefixes, analogical back-formation tends to

convert borrowed initial labials /p..., b..., m.../ into prefixes whenever the semantics allows[12].

4.0 Phonological Changes Associated With Second Stress Shift

Rejang and Mukah Melanau underwent at least two changes typical of languages with word-final stress: diphthongization of final high vowels, and weakening or loss of intervocalic consonant clusters. As illustrated in Appendix B, stressed *-i and *-u
diphthongized In Rejang.

(16)	*is:i > ise:y	`contents'
	*ulu: > ule:w	`head'

According to Blust, "In other languages which diphthongize *-i and *-u the stress pattern is oxytone: Chamic, Mukah, and other Melanau dialects of coastal Sarawak." (personal communication, April 1995). Second, compare PMP Nasal Cluster Reduction in Rejang and Mukah. In Rejang two classes of phonemes developed from intervocalic sequences of (homorganic) nasal + obstruent.

(17)	*sempit > sepit [spit]	`narrow'
	*tungked > tokot [to.ko:t]	`staff, cane'
	*timbak > tim̄a' [ti.m^{b}a:']	`shoot'
	*induk > iñ̄o' [i.n^{d}o:']	`mother (of animals)'

In Rejang, the nasal was dropped when the stop was voiceless (*mp > p, *nt > t, etc.); but when the stop was voiced the sequence coalesced into a `barred nasal'

(*mb > , *nt > , etc.)[13]. In Mukah the nasal was simply dropped (Blust 1997:20). Thus in both languages all PMP homorganic nasal clusters became single phonemes.

Finally, Rejang probably represents the extreme for an Austronesian language in terms of the number of vocalic changes in its phonological history (Blust 1984), including harmonization of base vowels, e.g. *langit > léngét `sky'; *qutek > oto' `brain', *sapu (> *supu) > supew `broom'; *tali > (*tili) > tiley `rope'. See Appendix C rules (1)-(2).

5. Summary

McGinn (1997) argued that two prosodic changes conditioned most of the regular segmental shifts in Rejang's historical phonology. In this paper, it has been suggested that comparable prosodic changes may have occurred in the `ablaut' languages of Northwest Borneo as described by Blust (1997). The FIRST STRESS SHIFT, defined in terms of prosodic change to a Malay-type stress pattern, may account for the fact that the stress is never assigned initially to an affix in Rejang, Malay, and the ablaut languages of Northwest Borneo. An unusually strong historical tendency to develop binary (disyllabic) BASES has been linked (ex hypothesi) to this aspect of the stress pattern and to a set of five syllable-reduction rules labled "Blust's Law" (BL). A subset of the affected languages, exemplified by Malay, retains the older stress pattern; furthermore, contemporary Malay favors trisyllabic (and above) affixed words, and the stress alternates under conditions of suffixation[14]. The second (newer) stress pattern is represented by Rejang and the Bornean languages. This subset underwent a second prosodic change whereby the stress came to fall uniformly on the final syllable of the word; medial consonalt

clusters were simplified; and final high vowels were diphthongized. Moreover, the set of changes labeled "Blust's Law" applied across morpheme boundaries, causing the phonological reduction of certain affixed verbs to disyllables. In this way, the preference for binaryness extended beyond wordbases and invaded the domain of the PHONOLOGICAL WORD. In Mukah this preference was implemented by ablaut ($C^{u}_{i}CVC$); in Rejang by $Ce^{m}_{n}CVC$ formations. In Rejang at least, the pattern is found only in morphologically complex verbs (never in simple bases)[15]. There are no suffixes in Rejang, and as a direct consequence alternating base-stress is an alien concept.

6. Theoretical Conclusions

It is always a mistake to use Sapir's singulary term `drift' to refer to a plurality of parallel developments in daughter speech communities following dialect- or language-split. There is no singulary theory of `drift', but only theories of linguistic change; and linguistic change can be implemented within the family tree model or the wave model. By contrast, the phrase `parallel drift(s)' can represent a valid concept when used as a near-synonym for `parallel changes' or ‘parallel developments’; the metaphor of ‘drift’ adds to these the expectation that linguistic changes are never totally isolated events, but always in some sense ‘directional’ vis-a vis other changes. Furthermore, one subset of linguistic changes, namely sound changes, tend toward absolute regularity under conditions of reconstruction; and yet they cannot be predicted in real time. It follows that after language split, daughter languages should (and apparently always do) develop individually, yet in many parallel ways; unpredictably, yet vaguely in the same direction, as determined by earlier changes.

The family tree model applied strictly to the comparative data indicates that the earliest changes affecting Rejang as an independent language (with the possible exception of FIRST STRESS SHIFT) must be ordered after split. These are the earliest changes, namely, A-(1)-(4) in Appendix A. If so, then as mentioned in section 1.3, the similarities noted in this paper cannot be interpreted as shared innovations but must be either retentions from the protolanguage or parallel developments (=parallel drifts).

There is another interpretation that might be given, however, and it is provided by the wave model. Suppose contemporary Rejang, Malay and the ablaut languages of Borneo, all began as slightly divergent dialects of a single language occupying a single geographic area (such as Northwest Borneo), and that there was considerable areal influence, before one of the dialects migrated to southern Sumatra. Within this scenario, each language would be expected to show one or more unique changes while sharing others that had spread throughout the entire homeland area as shared innovations. The BL changes offer the most obvious candidates for a set of shared innovations; and Rejang changes (1)-(4) in Appendix A are candidates for pre-split changes that failed to spread to other dialects. Finally, the wave theory offers the possibility of adding Rejang changes A-(9)-(15) of Appendix A, and the SECOND STRESS SHIFT, to the set of pre-split changes which spread to some dialects but not others (certainly not to pre-Malay). Be that as it may, there is no doubt that the pre-Rejang dialect group migrated from its point of origin, wherever it was. If it was indeed coastal Sarawak, then the outgroup would have had a relatively easy sail along the west coast of Borneo and across a hundred miles of open sea to Sumatra, and thence to Rejang country, passing either by way of Bangka Island and up the Musi and Rawas rivers to the fertile foothills of the Barisan mountains and the contemporary Lebong-Rawas

dialect area in present-day South Sumatra, or by way of the Sunda strait and along the west coast of Sumatra to the contemporary Pasisir dialect area in present-day Bengkulu.

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APPENDIX A: First Stress Shift and Syllable Reduction Changes in Rejang

Rejang data is provided for three dialects: Musi, Lebong, and Kebanagung. Tables A-1, A-2 and Rules (1)-(15) of this Appendix illustrate the claim that *all* syllable-reduction changes in Rejang involved the loss of unstressed schwas within the reconstructed pre-Rejang Malay-type stress pattern[16]. (PN = prepenultimate vowel neutralization; DEL = loss of a syllable.)

	Pre-Rej	PN	DEL	Musi	Lebong	Keban.	Gloss
A							
	*ba:qeru	beqeRu:	beRu	belew	belaw	blew	new
	*baRa:ni	beRa:ni	bani	biney	binay	biney	brave
	*ka-wa:nan	kewa:nan	kanan	kanen	kanen	kanen	right
	*qasi:Ra		siRa	siley	silay	siley	salt
	*qapeju:		peju	pegew	n.d.	n.d.	gall
	*qatelu:R		teluR	tenoa	tenoa	tenoa	egg
	*qalimeta:q		litaq	litea'	litea'	n.d.	leech
	*ma-i:Raq	me-i:Raq	miRaq	milea'	milea'	n.c.	red
	*ma-a:ñud	me-a:ñud	mañut	monot	monot	monot	drift
	*um-u:taq	em-u:taq	mutaq	mutea'	mutea'	mutah	vomit
	*in-u:taq	en-u:taq	nutaq	nutea'	nutea'	nutah	(passive)
B							
	*beReqa:t		beRet	be'et	n.c.	behet	heavy
	*bi:nehiq		biniq	bénéa'	n.d.	n.d.	seed
	*biti:qis	beteqi:s	betis	betis	n.d.	n.d.	leg
	*ma-Ruqa:nay		meReqa:nay		manay[17]	-manié	-maney
		-maneé	male				
	*pala:qepaq	peleqepa:q	pelpaq	pelpea'	n.d.	n.d.	palm
	*ti:meRaq		timaq	timea'	timea'	n.d.	tin
	*tu:qelaN	teqela:N	telaN	telan	telan	telan	bone
C							
	*da:qan		dan	dan	n.d.	n.d.	branch
	*emi:s		mis	mis	mis	mis	sweet
	*epa:t		pat	pat	pat	pat	four
	*na:hik		naik	né'	né'	nék	climb

*pa:qit	pait	pét	pét	pét	bitter
D.					
*lem		lem	lem	lem	inside
*la:ud		laut	laut	laut	sea
*la:in		leyen	luyen	leyen	other

Table A-1: Illustrative Derivations

Table A-2 below illustrates the claim that only prepenultimate vowels underwent rule (1); disyllabic bases were unaffected.

PMP	pre-Rej	Musi	Lebong	Keban.	Gloss
*daqan	da:qan	dan	dan	dan	branch
*taqun	ta:qun	taun	taun	taun	year
*puqun	pu:qun	pun	pun	pun	tree
*tuqa	tu:a	tuey	tuay	tui	old
*kahu	kahu	ko	ko	ko	2s (sub/obj)
*ni-hu	nihu	nu	nu	nu	2s (poss)
*laud	la:ud	laut	laut	laut	sea
*dahun	da:hun	dawen	dawen	dawen	leaf
*buhek	bu:hek	bu'	bu'	buk	hair
*Duha	Du:ha	duey	duay	dui	two

Table A-2: Disyllables Were Unaffected by Rule (1)

APPENDIX B: Syllable Reduction Changes

(1) Prepenultimate vowels to the left of intervocalic *-q- (but not *-h- from *S) neutralized as schwa, causing the stress to shift to the ultimate in the Malay-type pattern. See Table A-2 above, and consider the contrast between Rejang and Malay in set A below.

	Pre-Rejang	(1)	Rejang (Musi)	Malay	GLOSS	
A.	*ba:qeRu	beqeRu:	belew	baru	new	
	*tu:qelaN	teqela:N	telan	tulang	bone	
	*biti:qis	beteqi:s	betis	betis	calf of leg	
	*tina:qi	teneqi:	tenei > teney		n.c.	stomach
B.	*bi:nehiq		bénéa'	benih	seed	
	*ti:meRaq		timea'	timah	tin	
	*tu:pelak		tula'	tolak	push	

(2) *q and *h (from PAN *S) disappeared, with the exception that word-final *-q was retained as glottal stop.

*qasi:Ra	> *asi:Ra	(siley)	salt
*hekan	> *ekan	(kan)	fish
*beteqi:s	> *betei:s	(betis)	calf of leg
*bi:nehiq	> *bi:neiq	(bénéa')	seed for planting
*bu:hek	> *bu:ek	(bu')	head hair
*Ru:maq	> *Ru:maq	(ume:a')	house

(3) (Reanalysis) Derived sequence *-ei# became diphthong *-ey > Rejang-Musi ié

(*tina:qi > teneqi: > tenei: > tene:y) > teni:é `stomach'.

(4) Other schwas in derived VV clusters disappeared.

*betei:s > beti:s	`calf of leg'
*bu:ek > bu'	`head hair'

Note: Rules (5)-(9) constitute the set I have labeled "Blust's Law"

(5) Prepenultimate *a Neutralization (PN *a)

*baRa:ni	> *beRa:ni (> ba:ni > bine:y)	brave

*ta:kebas	> *tekeba:s (> tekba:s > teba:s)		clear-cut
*pa:lepaq	> *pelepa:q (> pelpa:q > pelpe:a')		frond
*ka-wa:nan	> *kewa:nan (> ka:nen > kane:n)		right
*(q)asi:Ra	> *esi:Ra (> si:la > sile:y)		salt
*(q)epeju:	> peju: (> pege:w)		gall

(6) Prepenultimate *#e Deletion (PD *e)

*esi:Ra	> si:Ra	> si:la	(> siley)	salt
*epeju:	> peju:		(> pegew)	gall[18]

(7) Schwa Syncope (SS)

*ti:meRaq	> *ti:mRaq	tin
*tu:pelak	> *tu:plak	push
*tekeba:s	> *tekba:s	clear-cut

(8) CC Reduction: -CC- > C (except -*l*C-) (CR)

		Morphological effects:
*ti:mRaq	> *ti:maq	-CC- remained unreduced
*tu:plak	> *tu:lak	at morpheme boundaries
*tekba:s	> teba:s	(t-em-ney, t-en-mew, etc.)
*pelpa:q	> pelpe:a'	

(9) Prepenultimate *i, *u neutralization (PN *i, *u)

*binatang	> benatang	animal
*um-inem	> *em-inem (> méném)	drink
*t-um-imbak	> t-em-ima̅’	shoot
*t-in-imbak	> t-en-ima̿’	be shot

(10) Derived sequence -ew- disappeared:

*kewa:nan	> ka:nan	(> kane:n)
*beR-munuq	> be-munuq (> bemonoa')	

(11) Derived sequence -eR- disappeared:

*beRa:ni	> ba:ni	(> bine:y)
*beR-anak[19]	> b-anak	

(12) All word-initial schwas disappeared (cf. (6).

*eminem	> méném	drink
*emi:s	> mis	sweet
*epa:t	> pat	four
*eka:n	> kan	fish
*ene:m	> num	six[20]

(13) Adjacent sequences of like vowels coalesced into a single vowel

*da:qan	> *da:an	> dan	branch
*pu:qun	> *pu:un	> pun	tree

(14) Derived -ai- clusters collapsed to [é], and one derived -au- cluster collapsed to [o] in a pronoun.

*pa:qit	> *pa:it	> pét	bitter
*na:hik	> *na:ik	> nék	climb
*kahu	> *kau	> ko	you(2s)

(15) The sequence #niV# reduced to nV (affecting two pronouns).

PMP	*h > ø	*a > e/V(C)_#[21] [-stress]	*i > ø	Gloss
*ni-a	nie	ne		3s poss.
*ni-hu	*niu	nu		2s poss.

This completes the (partially) ordered list of changes resulting in the loss of a syllable in Rejang historical phonology.

APPENDIX C: Rejang Changes Associated with the Second Stress Shift

As reported in McGinn (1997), Rejang underwent a SECOND STRESS SHIFT whereby the stress shifted to the final syllable of the base. This change initiated a battery of segmental changes illustrated in (1)-(6) below. Outcomes are shown in the Musi dialect.

(1) Unstressed *a underwent four harmonization patterns:

*tali:	> tili:	> tiley	(open final syllable)
*sapu:	> supu:	> supew	"
*manu:k	> monu:k	> mono'	(closed final syllable)
*langi:t	> léngi:t	> léngét	"

(2) Stressed schwa (*e:) underwent two harmonizations:

*qute:k	> oto:'	brain
*puse:j	> posok	navel
*ipe:n	> épén	tooth
*mine:m	> méném	drink

(3) Stressed *-i and *-u diphthongized:

*is:i	> ise:y	contents
*ulu:	> ule:w	`head'

(4) (Derived) stressed *-e: (schwa) raised to *-i: and diphthongized following the pattern of (3) above:

*bunge:	> bungi:	> bunge:y	flower
*tue:	> tui:	> tue:y	old

(5) Stressed vowels also diphthongized before liquids and glottal stop (then final liquids disappeared):

*Rumaq	> ume:a'	house
*tawaD	> tawe:a	haggle
*kawil	> kéwé:a	fishhook
*dengeR	> tengo:a	hear

(6) Single phonemes developed from intervocalic sequences of

(homorganic) nasal + obstruent:

*sempit	> sepit [spit]	narrow
*tungked	> tokot [to.ko:t]	staff, cane
*timbak	> tim̄a' [ti.m^{b}a:']	shoot
*induk	> iñ̄o' [i.n^{d}o:']	mother (of animals)

APPENDIX D: Evidence for Reconstructing a Malay-Type Stress Pattern for Pre-Rejang

Two arguments are presented here to justify reconstructing a Malay-type stress pattern[22] for pre-Rejang. (For more see McGinn 1997). First, the reconstruction is necessary to capture the regularity of a number of sound changes, the most important of which is (1) below.

(1) *a > e /-V(C)__(C)# :where -C = [-velar]
|
[-stress]

This rule says that unstressed *a changed to schwa in disyllables except when followed by a velar (*-k, *-q, *-ng). Rule (1) must be ordered after the set of syllable-reduction changes shown in Appendix A. Consider the following evidence.

(2)

A.	CVCVC Disyllables	*bu:lat	> *bu:let	
		*pa:nas	> *pa:nes	
		*ta:ngan	> *ta:ngen	
		*qu:Zan	> *u:jen	
B.	CVCVC Oxytones	*ta:kebas	> teba:s	(not tebes*)
		*tu:qelaN	> tela:n	(not telen*)
		*teba:ng	> teba:ng	(not tebeng*
C.	CVC Monosyllables	*heka:n	> kan	(not ken*)

*qa:yam	> yam	(not yem*)
*epa:t	> pat	(not pet*)

Notice that *a in monosyllables (set C) and the second syllable of `oxytone' disyllables (set B) were unaffected by rule (1), as predicted, because rule (1) affected unstressed vowels. The reconstructed Malay-type stress pattern accounts for these data and establishes their regularity in relation to the rule (sound change).

Second, consider the following generalizations that can be adduced from the Rejang changes illustrated in Appendix B and especially the harmonization rules in Appendix C.

(3) a) PMP *a was less stable than *e (schwa) in Rejang[23].
b) The changes affecting PMP simple vowels caused the lexicon to split based on the vocalic feature [low]:

System A [-low]			System B [+low]
i		u	e
é	e	o	a

At first glance (3a) seems `unnatural'; if the low central vowel [a] represents the ideal (=most sonorous) vowel on the sonority hierarchy, and if schwa is the least sonorous, then all things being equal [a] should be a more stable vowel than schwa. The reconstructed stress pattern resolves the paradox: all unstable *a's and stable schwas were in unstressed positions. Unstressed *a changed (harmonized) in conformity with System A; and unstressed *e (schwa) resisted change only in the penult position of disyllables, in words that conformed with Systems A and B. In contrast, unstressed penult schwas were maximally

unstable in trisyllables (they disappeared); and stressed schwas underwent

harmonization (see rule (2) of Appendix C).

[1] Rejang assistants were Dr. Zainubi Arbi and Arma Zuazla (Musi dialect), Irlan Caya (Kebanagung) and Sabidin Ishak (Lebong). Invaluable help was given by Amran Halim and Zainab Bakir. Helpful comments and suggestions provided by Robert Blust and two anonymous reviewers. All are hereby gratefully acknowledged.

[2]The singulary term `drift' means little more than `regular sound changes' plus the further suggestion that these tend to be directional. See section 6 for discussion.

[3]As for Malay's multi-purpose derivational suffix -an, it is uncertain whether -an is a retention from PAN or an innovation similar to -kan.

[4]The Malay passive prefix /di-/ presumably derives from PAN variant *ni- via denasalization. See Teeuw (1959) for extensive discussion.

[5]What it shifted from remains unknown; but that the stress pattern of PAN/PMP was not Malay-type is taken for granted here. See Ross (1992), Wolff (1991) and Zorc (1978) for arguments and discussion.

[6]The exception is found in in Malay suffixes -kan and -i, which can receive the stress under the influence of enclitic pronoun /nya/: bicára > bicará-kan > bicara-kán-nya. See Cohn and McCarthy (1994:MS).

[7] Presumably these had stress on the ultimate in the Malay-type pattern; thus: CeCV:C.

[8] CeCVC shapes are oxytone (CeCV:C) in the Malay-type stress system.

[9] Although rare to nonexistent in PMP, conceivably *m- initial CeCVC bases should also be included here.

[10] i.e. the chage affected CVCVC bases as well as CeCVC bases.

[11]/be-/ likely derives from PAN/PMP *maR-, and /pe-/ from PAN/PMP *paR-. (See Teeuw 1959:141 and Wolff 1981:84 for discussion of comparable Malay affixes).

[12]Compare Malay (tidak) peduli `(don't) care' = Rejang peduley `concern' (noun), which yields a base that can be infixed:
d-em-uley `show concern'.

[13]See Coady and McGinn (1982) for a synchronic description of the barred nasals.

[14]In other words, penult stress extends beyond the base to encompass the phonological word in Malay.

[15]The exception is that Rejang tolerates intervocalic consonant clusters when the second element is /l/ in bases and complex formations: kemelbea' `very; extremely' (based on -em-, ke- and lebea' `more', cf. Malay /lebih/); /pelpea'/ `midrib of coconut frond' (< PMP *palaqpaq).

[16]See Appendix C.

[17]Here *-eq- and *-eR- delete iteratively, i.e. the first application produces an intermediate trisyllable: *meRanay.

[18]The outcome for `gall' indicates that loss of *qa- in trisyllables must have preceded SS and CR; otherwise *qapeju should have become unattested **ugew in Rejang-Musi, via **qapju > **aju > **agu > **ugu > **ugew (cf. *sapu > supew `broom').

[19]I assume pre-Rejang *beR- derives from PAN *maR- (Teeuw 1959:141; Wolff 1981:84).

[20]Note: *e > /u/ in /num/ is unexplained.

[21]This is a special application of rule C-(1) in Appendix C.

[22]In a Malay-type pattern the stress is on the ultimate when the penult is schwa; otherwise on the penult.

[23]According to Blust (1984) and McGinn (1997), PMP *e split into seven phonemes in Rejang and PMP *a split into nine.