SOME IRREGULAR REFLEXES OF PROTO-MALAYO-POLYNESIAN VOWELS IN THE REJANG LANGUAGE OF SUMATRA*

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ABSTRACT

At issue is the role of dialect evidence to explain certain irregular reflexes of Proto-Malayo-Polynesian vowels in Rejang. According to Blust (1984), the Musi dialect of Rejang seems to exemplify two types of sound change, one conditioned solely by phonological factors and the other by nonphonological (semantic or grammatical) factors; thus PMP *a irregularly failed to diphthongize in kin terms, and word-final *a, *i and *u irregularly failed to diphthongize in the pronouns. On the contrary, the paper suggests `Neogrammarian' regularity for all reflexes of PMP vowels in kin terms and pronouns in Rejang. In order to account for the apparent irregularities, it has been necessary to broaden the data base by revisiting the PMP consonantal reconstructions and the role of the accent, and above all by incorporating evidence from other dialects of the Rejang group (Kebanagung, Pesisir). The possibility of eventual union between historical phonology and dialect geography is discussed. Two errors of method in the previous literature on Rejang are pointed out.**

0. Introduction. In a pioneering study of Rejang historical phonology, Blust (1984) derived a large set of contemporary Rejang wordbases from reconstructed Proto-Malayo-Polynesian (PMP) etyma via a set of postulated regular sound changes, while at the same time demonstrating that a greater number of vocalic splits have occurred in Rejang than in any other known language of the Austronesian family. Among them, no fewer than nine splits of PMP *a were recorded together with

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**Rejang is spoken by around 200,000 people living in the Barisan Highlands in the provinces of Bengkulu and South Sumatra, Indonesia. There are four main dialect areas: Musi, Lebong,

Kebanagung, and Pesisir (McGinn 1982). The two dialects reported in Blust (1984) as `Lebong' and `Rejang-Rejang' are actually subdialects of Musi. Another (virtually identical) subdialect of Musi is presented in this paper. (For a sample of Lebong see Jaspan (1984).)

a few recurring but sporadic reflexes (irregularities). The present paper examines four irregular reflexes of PMP *a in light of the evidence from three Rejang dialects: Musi, Pesisir, and Kebanagung. Upon closer examination, the irregularities seem to arise from an insufficient data base and an apparent willingness to posit cognitive (semantic) determinants alongside strictly phonological determinants in the theory of sound change. The theoretical importance of such possibilities notwithstanding, the new evidence dissolves the irregularities and thus confirms the so-called `Neogrammarian' position with respect to the theory of sound change.

1.1 Contemporary Word-Final Laryngeals

Every known Rejang dialect has a single laryngeal, namely /h/ or /ʔ/ (glottal stop). Historically, these laryngeals derive from PMP *R, *r, *D, *j, *k and *q. See Blust (1984) and section § 6.

The first claim to be developed is that certain contemporary Rejang laryngeals in word-final position regularly reflect PMP voiceless velar stops, namely, *-k and *-q. (PMP *q is a back velar stop in Blust (1990:233).) Some evidence for this claim is shown in Table 1.

	PMP	Musi	Pesisir	Kebanagung	Gloss
A	*dilaq	dilea?	dilea?	dileah	tongue
	*Rumaq	umea?	umea?	umeah	house
	*um-utaq	mutəa?	mutəa?	mutəah	vomit
B	*anak	ana?	ana?	anak	child
	*pəndak	penda?	penda?	pedak	short
	*əsak	k-esa?	k-esa?	k-esak	cook

Table 1: Reflexes of PMP Word-Final *-k and *-q

The informal rules shown in (1) can be posited to explain the relevant correspondence sets in Table 1.

(1)

	PMP		Musi	Pesisir	Kebanagung
a.	*-q	>	ʔ	ʔ	h
b.	*-k	>	ʔ	ʔ	k

To complete the story, a synchronic rule is needed to derive phonetic glottal stops from /k/ in Kebanagung, which lacks phonemic glottal stop. (See Appendix A: Phonological Systems.)

(2)

Allophonic rules: /k/ > [ʔ] /_# (Kebanagung)
/g/ > [k] /_# (Kebanagung)

PMP	Musi	Pesisir	Keban.	Gloss
*anak	anaʔ [ʔ]	anaʔ [ʔ]	anak [ʔ]	child
*lalej	dalek [k]	dalek [k]	daleg [k]	housefly

There is no dialect variation in the pronunciation of the examples in (2); the variation is in the phonemic representations. What is significant is the fact that Kebanagung lacks glottal stop as a phoneme, whereas the other dialects lack /h/. See Appendix A.

1.2 Rejang kinship terms.

The first of irregularities to be discussed is limited to the set of Rejang kin terms in Table 2.

PMP	Musi	Pesisir	Kebanagung	Gloss
*bapa-q	bapaʔ	bapaʔ	bapak	father
*mama-q	mamaʔ	n.c.	mamak	uncle
*kaka-q	kakaʔ	kakaʔ	n.c.	elder sibling

Table 2: An Irregular Vocalic Outcome in the Musi Dialect

According to Blust (1984), the sequence /aʔ/ irregularly reflects PMP *-aq (expected /eaʔ/)

in three Rejang Musi kin terms. The irregularity can be observed by comparing the outcomes in Table 2 with set A of Table 1. However, there is an indeterminacy in the Musi evidence, since word-final glottal stops can reflect either *-q or *-k in Musi. Evidence from the Kebanagung dialect is useful in resolving the ambiguity, and in fact leaves little room for doubt that the kin terms ended with *-k at an earlier stage in Rejang's history. Let us call this inferred early language pre-Rejang. The point is clear in Tables 1 and 2. In particular, Kebanagung word-final /k/ corresponds to PMP *q. This fact supports reconstructing pre-Rejang *mamak, *kakak, *bapak; and the apparent irregularity in the vowels disappears. The nature of the problem shifts therefore to the word-final consonants, namely, the source of pre-Rejang *-k in the kin terms, and a previously unrecognized irregularity is thereby introduced, namely, word-final *-k from *-q. The same irregularity is known to have occurred in the histories of Malay and Javanese; see Verhaar (1978) and Blust (1979) for discussion. The most likely explanation for the Rejang data is borrowing from Malay.

2. Partial Merger of *a and *e as /e/.

Other reported irregularities concern the partial merger of *a and *e as /e/ (schwa) before word-final nonvelars: *tangan > tangen "hand" but *anak > anak "child". This change, which is illustrated in Table 3, has been recorded in all known dialects of Rejang.

	PMP	Musi	Pesisir	Keban.	Gloss
A	*Sasap	asep	asep	asep	smoke
	*panas	panes	panes	panes	hot
	*tangan	tangen	tangen	tangen	hand
	*quZan	ujen	ujen	ujen	rain
	Also (38), (46), (67), (83), (175), (197) in Appendix 2				
B	*anak	ana?	ana?	anak	child
	*Sawak	awa?	awa?	awak	body

	*panzang	panjang	panjang	panjang	long
	*Sisang	isang	isang	isang	gills
	*təbang	tebang	n.d.	n.d.	fell (tree)
	Also (15), (91), (148), (160), (173), (204), (212)				
C.	*daRaq	dalea?	dalea?	daleah	blood
	*dilaq	dilea?	dilea?	dileah	tongue
	*ma-iRaq	milea?	milea?	n.c.	red
	*Rumaq	umea?	umea?	umeah	house
	Also (18), (34), (102), (112), (113), (114), (126), (147), (153), (202)				
D	*iSekan	kan	kan	kan	fish
	*daqan	dan	dan	dan	branch
	*hepat	pat	pat	pat	four
	*qayam	yam	yam	yam	toy
E.	*tebang	tebang	n.d.	n.d.	fell (tree)
	*takebas	tebas	tebas	tebas	clear-cut
	*tuqelaN	telan	telan	telan	bone

Table 3: Partial Merger of PMP *a and *e as /e/

The data in set A illustrate the change. Sets B and C repeat data from Table 1 and illustrate that the change did not occur when the word-final consonant reflected a PMP velar. Recall that PMP *q was a voiceless back velar stop (Blust 1990); hence the forms in set C were excluded--instead the vowel diphthongized. Sets D and E of Table 3, however, contain irregular outcomes since these words end with non-velars. The expected outcomes (ken den, pet, yem, tebes, telen) are unattested.

From the strictly formal point of view, all of the data can be accounted for by re-formulating the rule as shown in (3).

(3)

a. Blust's rule: *a > e /__C# :unless final C = velar

b. Revised rule: *a > e /VC__C# :unless final C = velar

[-stress]

What remains is to argue that the revised rule constitutes a plausible solution. The revised rule is motivated by the pre-Rejang accentual pattern, which I assume was `Malay-type' when (3b) applied: that is, the stress was on the penult when the penult was a `full' vowel (*i, *u, *a); when the penult was schwa *e the pattern was `oxytone' with the stress upon the ultima. Later the pattern changed; in contemporary Rejang the stress falls uniformly upon the ultima. Thus, the data in set E of Table 3 were already stressed on the ultima in pre-Rejang; therefore rule (3b) did not apply. As for set D, note that the outcomes are monosyllables. Since stress is by definition relative among the set of vowels contained in a word, a monosyllable has no stress pattern at all. The exclusion of sets D and E thus follows naturally from the reformulated rule (3b). All Rejang outcomes in Table 3 can now be counted as regular. Note that tebang falls in two sets: B by virtue of the final consonant and E by virtue of the penult vowel.

Several auxillary assumptions support rule (3b) as formulated. First, syllable-reduction rules producing monosyllables (e.g. dan from *daqan) and derived oxytones (e.g. telan from *tuqelaN) must be ordered before the merger of *a and *e as /e/. This part of the argument will not be developed in this paper. Second, rule (3b) was complemented by several other rules, notably, the vowel assimilation process that produced *qutek > otok "brain"; this process was restricted to words ending with reflexes of PMP velars *k and *j according to the available data. The details of this argument are developed in section 5.3. Thus phonological conditions (rather than relative chronology) explains why forms like bulet from *bulat, ending in a coronal consonant, failed to `harmonize' (becoming unattested bolot) after undergoing rule (3b). The analysis explains why Kebanagung umeah "house" developed from PMP *Rumaq instead of becoming Rumeq, omoh, parallel to *qutek > otok "brain". A third and final assumption is that, unlike rule (3b), the vast majority of changes in Rejang occurred after the stress shifted to the final syllable. This assumption provides natural motivation for a great number of vocalic changes.

Consider the derivations in Table 4. (Rejang outcomes, which are underlined and show contemporary word-final stress, are taken from the Kebanagung dialect).

	Accent Shift	Vowel Changes in Unstressed Penult	Vowel Changes in Stressed Ultima	Gloss
	I	II	III	
1.	*qute:k	> *ote:k	> oto:k	brain
2.	*ipe:n	> *épé:n	> épé:n	tooth
3.	*manu:k	> *monu:k	> mono:k	chicken
4.	*laŋi:t	> *léŋi:t	> léŋé:t	sky
5.	*teka:	> teko:		come
6.	*lima > lema:	> lemo:		five
7.	*tane:q	> tane:ah		soil
8.	*Deŋe:R	> teŋo:a		hear
9.	*sapu:	> *supu:	> supe:w	broom
10.	*tali:	> *tili:	> tile:y	rope
11.	*aku	> uku		1s pronoun
12.	*kami	> *kimi	> kémé	1pl pronoun

TABLE 4: Pre-Rejang Harmonic Changes After Accent Shift

Table 4 illustrates several patterns of change that are best understood as occurring after the accent had shifted from `Malay-type' to word-final. In Column II, certain newly unstressed (de-stressed) penult vowels assimilated backness or height (or both) from the stressed ultimate vowel. This set involved regressive assimilation. Next, as shown in column III, newly stressed (ultimate) vowels underwent either progressive height assimilation (when the penult was a mid-vowel) or diphthongization (elsewhere before word-boundary or word-final laryngeal). These changes (among others) altered the phonemic system, adding two mid-vowel phonemes (/é/ and /o/) and a number of diphthongs. (PMP had four simple vowels (*a, *i, *u, *e) and five diphthongs (*aw, *ay *ey, *iw, *uy).)

3. Three-Way Split of PMP Word-Final *-a

Another set of reported irregularities concerns the three-way split of PMP word-final *-a before word boundary noted in Blust (1984).

(4)

	PMP	Rejang (Musi)	Gloss
a.	*ita	ite	1pl incl pronoun
b.	*teka	teko	come
c.	*mata	matey	eye

A related problem is that example (4c) is paralleled by the correspondences shown in (5a) and (5b).

(5)

	PMP	Musi	Pesisir	Keban	Gloss
a.	*qulu	ulew	ulaw	ulew	head
b.	*hisi	isey	isay	isey	contents
c.	*mata	matey	matay	matey	eye

To see more clearly how (5c) is a problem, let us observe the naturalness of the rules needed to derive the Musi outcomes shown in (5a) and (5b).

(6)

	PMP	Musi	Example
a.	*-u >	ew	*qulu > ulew
b.	*-i >	ey	*hisi > isey

Given that PMP word-final high vowels diphthongized regularly in Musi, it is unclear how to fit examples like *mata > <u>matey</u> into the generalization. Not only is the correspondence sporadic, one wonders why *-a should have become /ey/ instead of, say, /ew/ in Musi. Barring the assumption of sporadic change, several possible approaches can be suggested: (i) revision of the reconstructions; (ii) borrowing; (iii) lexical diffusion theory (Wang 1969); (iv) regular phonological change under conditons yet to be described. Below we argue that (iv) is the most

promising approach. The crucial observation is taken from the Kebanagung dialect, where there is a four-way split of PMP *-a. Consider the display in (7) below.

(7)

	PMP	Musi	Pesisir	Keban.	No. of examples in Appendix B	
a.	*-a >	e	e	e	2	(see § 3.2, 3.4)
b.	*-a >	o	o	o	6	(see § 3.1)
c.	*-a >	ey	ay	i	3	(see § 3.3)
d.	*-a >	ey	ay	ey	4	(see § 3.3, 3.4)

The data in (8) illustrate the point made in (7).

(8)

PMP	Musi	Pesisir	Keban.	Gloss
*(k)ita	ite	ite	ite	1pl(incl)
*teka	teko	teko	teko	come
*buŋa	buŋey	buŋay	buŋi	flower
*mata	matey	matay	matey	eye

Kebanagung outcomes like bungi "flower" are especially noteworthy. In fact, /i/ regularly reflects PMP *-a when the penult is /u/: cf. also *DuSa > dui "two"; *tuqah > tui "old". The obvious hypothesis is that *-i was the regular reflex of *-a in the ancestor of Kebanagung, and that this vowel failed to diphthongize under the stated phonological conditon (i.e. when the penult was *u). The implication is that pre-Rejang *-i reflecting *-a must have occurred in the history of Kebanagung matey "eye". The argument is readily extended to the other dialects; we thus assume that *-i underlies Musi /ey/ from PMP *-a. Further, the ordering assumption is that the multiple split was relatively recent, developing after Accent Shift. The derivations shown in Table 4 illustrate the claim that the changes must have developed in the suggested order. Thus the regressive assimilations shown in Column II affected unstressed vowels, whereas the progressive (`harmonic') assimilations and diphthongization rules shown in Column III affected stressed vowels. A summary of the major claims made so far in the paper is presented in (9).

(9)

Pre-Rej	R-3b	ACCENT SHIFT	UNSTR V ASSIM	*e: RAISING	CHANGES IN STRESSED V		
					Musi	Pesisir	Keban.
*bu:lat	bu:let	bule:t	--		bulet	bulet	bulet
*ma:ta	ma:te	mate:	--	mati:	matey	matay	matey
*ta:li	--	tali:	tili:		tiley	tilay	tiley
*ba:tu	--	batu:	butu:		butew	butaw	butew
*ma:nuk	--	manu:k	monu:k		monoʔ	monoʔ	monok
*la:ŋit	--	laŋi:t	léngi:t		léŋét	léŋét	léŋét

My hypothesis explaining the split of PMP *-a is (10).
(10)

Before the accent shifted, unstressed *-a changed to *-e (schwa) before spliting into the attested reflexes. Derived *-e from *a was retained in the pronouns; elsewhere *-e from *-a raised to *-i and became /ey/, under stateable conditions as described below.

The hypothesis (10) is consistent with the derivations in (11).

(11)

	PMP		Step 1				PMP	Keban.	Gloss
a.	*a	>	e				*ita	ite	1pi pronoun
b.	*a	>	e	>	i:		*buŋa	buŋi:	flower
c.	*a	>	e	>	i:	> e:y	*mata	mate:y	eye
d.	*a	>		>	o:		*teka	teko:	come
e.	*a	>			o:		*Rimba	imo:	jungle

Arguments supporting the hypothesis are developed in the next few subsections.

3.1 The Split to /o/

The dialects agree when PMP word-final *-a is reflected as stressed /o/ [o:]. Two environments are correlated with this particular outcome.

(12)

*a: > o: /VCC__# :where CC = homorganic cluster (nasal + stop)

Examples are:

PMP	Accent Shift	Musi	Pesisir	Kebanagung	Gloss
	riṁa:	iṁo	iṁo	hiṁo	jungle
*tanda	taña:	taño	taño	taño	sign, mark
*timba	tiṁa:	tiṁo	n.d.	n.d.	pail

(13)

pre-Rejang *a: > o: / eC_#

PMP	pre-Rejang	Musi	Pesisir	Kebanagung	Gloss
*kena	> *kena: >	keno	keno	keno	strike
*lima	> *lema: >	lemo	lemo	lemo	five
*teka	> *teka: >	teko	teko	teko	come

As explained by rule (12), Rejang /o/ [o:] regularly reflects PMP *-a after `barred nasals' (< PMP homorganic nasal + stop cluster)[1]. Similarly, according to rule (13), Rejang /o/ [o:] regularly reflects PMP *-a in open final syllables in oxytone stems.

The two environments shown in (12) and (13) have been distinguished solely for the sake of the presentation; the pair can and should be interpreted as a single change (simply *-a: > /o/ [o:]) ordered after the accent shifted to the Rejang pattern.

3.2 Raising of PMP *-a to Schwa: The Primary Change

Elsewhere, and before the accent shifted, unstressed *-a underwent the series of changes outlined in (11c). Consider Step 1 of (11). This step changed unstressed *a to schwa, as is

[1] Coady and McGinn (1982) present a synchronic analysis of the barred nasals.

directly attested in two of the inherited pronouns (*ita > ite and *ni-a > ne). From the strictly formal point of view, the schwas in these pronouns can be derived by a straightforward generalization of rule (3b). The revised rule is shown in (14).

(14)

*a > e /VC__(C)# :unless final C = velar
[-stress]

Rule (14) accounts for Step 1 of (11). Rule (14) is thus a generalization of (3b), and differs from it only in that the word-final consonantal determinant is optional. The claim is that PMP second-syllable *a became schwa in open as well as closed final syllables; thus forms like bulet (< PMP *bulat) "round" and *ma:te (> matey) from PMP *mata "eye" underwent the change, as did the pronouns: *ita > ite "1pi" and *ni-a > *nie (> ne) "3s".

3.3 Prelude to Diphthongization: Kebanagung /i/

The question that remains concerns the mechanism by which contemporary outcomes like matey "eye" were derived from intermediate reconstructions like *ma:te from PMP *mata "eye". The hypothesis (10) and the derivation in (11c) answer this question by saying that after unstressed *-a raised to schwa, the accent shifted, and the derived stressed schwas raised to *-i and then diphthongized. This claim is represented by rule (15)

(15)

*e > *i /VC__# (all dialects)
[+stress]

Rule (15) posits intermediate *mati [mati:] from PMP *mata "eye". Ordering (15) before

diphthongization (6b) explains why PMP *-a became /ey/ (instead of, say, /ew/) in forms like matey "eye".

3.4 Relative Conservatism of the Pronouns

One consequence of the analysis is that the Rejang pronouns underwent all relevant changes affecting unstressed vowels, and none that affected stressed vowels. The stress feature in rule (15) accounts for the failure of the rule to apply in pronouns and other inherited function words. Such forms are clitics that did not bear the full weight of the word-level accent rules. Their historical behavior is consistent with the suggestion they lack an inherently stressed vowel. Thus, after unstressed *a changed to /e/ or /i/ or /u/, the pronouns stabalized, e.g. ite, uku, kumu, except *kimi, which developed into kémé. See Table 4.

There is some independent support for the analysis in the canonical shape of Rejang function words other than pronouns. Consider the evidence in Table 5.

	PMP	Pre-Rej	Musi	Gloss
A			ba	emphatic particle
			ipe	how
			ige	again
			kete	all
	*anu		unu	hesitation particle
B	*kamu		kumu	you (honorific)
	*aku		uku	I
	*kaSu	*kau	ko	you (sg)
	*si-ia		si	s/he
	*ita		ite	we (inclusive)
	*kami	*kimi	kémé	we (exclusive)
			udi	you (pl)
	*si-iDa		si	they

Table 5: Some Rejang (Musi) Function Words

If monosyllabic ba derives from PMP *ba, which is likely, the lack of change is predicted; as a monosyllable, it was excluded from *a > e and hence from the sequence of changes shown in (11c). Thus ba is explained beside kan and dan. A parallel argument, which might conceivably explain the immunity to diphthongization of the monosyllabic pronouns (ko, si) and pronouns with monosyllabic short-forms (ite, te; uku, ku), is undermined by the fact that two inherited pronouns lacking short-forms likewise failed to undergo diphthongization: kumu and kémé. The only sustainable historical generalization, it seems, is that the pronouns failed to undergo the rules for stressed vowels. The simplest hypothesis is that the pronouns and other function words regularly did not bear the full weight of the word-final stress. If this argument is accepted, then even kémé < *kimi < PMP *kami is not necessarily irregular, even though the outcome is unique. Among the function words there are no other canons (CiCi or CéCé) to compare with intermediate *kimi and attested kémé; and among the content words irregular kékéa "foot" can be compared with kémé (unattested kikey would be expected if derived from *kaki (cf. Malay kaki "foot")). Thus, while kékéa can be discounted as a late borrowing, *kimi > kémé was probably regular, and schema (6) can be revised as (6').

		PMP	Pre-Rej	Musi	Gloss
(6')	*i: > ey	*hisi	*isi:	ise:y	contents
	*u: > ew	*qulu	*ulu:	ule:w	head
		*kamu	*kumu	kumu	you (honorific)
		*kami	*kimi	kémé	we (excludive)
	*a: > ey	*mata	*mati:	mate:y	eye

The analysis is consistent with the striking synchronic fact that Rejang function words and content words differ in canonical shape. With few exceptions (notably /o/), content words almost always end with a diphthong if not a consonant, whereas function words almost always end with simple vowels[2]; and only function words have been observed ending with schwa[3]. Thus,

[2] Exceptions include the negator coa "not" and the verb magea "approach (someone)" when used as a

although unfortunately the historical origin of most Rejang function words is unknown, the synchronic generalization is consistent with the claim of regularity.

If the neogrammarian prediction is to be upheld here, one part of the Rejang story will be concluded as follows. The contemporary Rejang function words, of which the pronouns constitute a sub-set, developed regularly; and so (in all likelihood) did the content words. Although their histories diverged, the divergence had a phonetic basis, and in particular, all reflexes of PMP vowels in the pronouns are regular.

4. Implications for the Comparative-Historical Method

Most if not all of the Rejang data presented in this paper are consistent with the doctrine which holds that sound change is phonologically conditioned (and only phonologically conditioned), and exceptionless. This doctrine remains controversial, however. In his recent book, Labov (1994:473) commented that:

> The picture that we have inherited from the earliest days of the controversy is that the procedures of historical and comparative grammar support, or even demand, the Neogrammarian position, while the facts of dialect geography are irrefutably against it.

Labov has long argued, however, that upon deeper analysis dialect evidence in fact typically yields to neogrammarian predictions (1994:501). If he is right, then one might expect eventual union between dialect geography and the comparative-historical method, the vehicle of union being the regularity facts and an accompanying theory to explain them.

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dative preposition. See McGinn (1982).

[3] The only known exception is Kebanagung skise "spider".

4.1 The Role of Dialect Evidence in This Paper

The Rejang evidence presented in the paper is compatible with the possibility of eventual union between comparative-historical phonology and dialect geography. At one and the same time, however, it must be acknowledged that a systematic dialect survey of the Rejang area has not been conducted; this is a task still waiting to be accomplished. In general, our knowledge of the Rejang dialects remains extremely sketchy. Furthermore, the data subjected to analysis in this article, displayed in Appendix B, is limited in another way: hundreds of potential problems were laid

to one side as presumed borrowings (from Malay dialects, including Indonesian). Correspondingly, the methodology remains an exercise in historical-comparative linguistics, not dialect geography. The research question narrowed the range of relevant data even further: I was seeking language-particular evidence (any evidence) possibly relevant to explain the problem at hand, namely, the irregular vocalic developments in the Rejang kin terms and pronouns. The need for more and better data was satisfied with the discovery of the Kebanagung dialect forms listed in Appendex B. My field work was conducted whenever the opportunity presented itself on short field trips, and never strayed very far from the wordlists published in Blust (1984). Not surprisingly, each dialect was found to exhibit numerous sub-varieties. The subdialect of Kebanagung selected for this paper, spoken by Irlan Caya, lacks /ʔ/ (glottal stop) as a phoneme. However, all varieties of Kebanagung tested displayed -i corresponding to Musi ey in the words for "two" (dui), "old" (tui) and "flower" (bungi). What follows summarizes the importance of the Kebanagung evidence.

Kebanagung is the only known dialect of Rejang in which word-final [ʔ] = /k/ < pre-Rejang *-k; in the other dialects, the same phonetic element is historically ambiguous (< *-q or *-k). The Kebanagung facts resolved the discrepancy in the kin terms; the desired `certain result' was obtained when Kebanagung word-final glottal stop was found to instantiate the

phoneme /k/ from *-k unambiguously. By reconstructing *-k at the level of pre-Rejang[4], it followed that the contemporary vowels (namely /a/) adjacent to *-k in the kin term data were the expected ones, since diphthongization was barred by a following velar. The residual comparative problem now attaches to Malay. In Malay, the regular reflex of *-q is /h/; yet *-q is irregularly reflected as /k/ in several Malay kin terms. See Blust (1979) and Verhaar (1978) for discussion.

The other irregularities analyzed above were likewise explained by reconstructing pre-Rejang segments based on Kebanagung evidence, and formulating regular phonologically conditioned rules based on the new reconstructions. The most important observation was Kebanagung word-final /i/ reflecting PMP *-a. This witness supported the idea of reconstructing pre-Rejang *-i in the derivation of *-a for all dialects.

(16)

Semi-regular correspondence:	*-a = ey	(Musi)
Proposed derivation (partial):	*-a > *-i > ey	(Musi)

Taken only this far, however, the proposed derivation does not reduce the irregularity; moreover, it still contains a development (namely, *-a > *-i) which is unlikely to have occurred as a single sound change. Both problems were solved by positing yet another intermediate segment in the derivation, namely *-e (schwa) from *-a via rule (14)[5].

(17)

Revised derivation:	*-a > *-e > *-i > ey	(Keban. & Musi)

[4] The Lebong dialect also provides convincing evidence since /o/ regularly reflects *a in the environment before *-k in Lebong. Thus *anak > ano? parallels *bapak > bapo?, contrasting with *dilaq > dilea?. Jaspan (1984) is a dictionary of Lebong.

[5] Another possible step in the derivation of *a > *e > *i > /ey/, namely mid-front *é, might be supported by some comparisons between Rejang and Malay, e.g. Ml. ada = Rej. adé `have'; Ml. tanya = Rej. tanyé `ask'. However, there is not enough data of this kind to support a hypothesis.

Presumably Pesisir /ay/ corresponding to /ey/ in the other dialects was a later development after (17). Considering only Kebanagung and Musi data for the sake of simplicity, note that each step in (17) is `small enough' to be natural. Most importantly, however, three classes of derivations are identified as being partially unified at a very early period in the history, i.e. before the accent shifted: *tangan > tangen "hand"; *ita > ite "1p(incl)"); *mata > *mate (> mati > matey) "eye".

Table 6 summarizes the intermediate segments reconstructed during the course of the analysis.

	Diachronic Correspondences		EXAMPLES		Intermediate Reconstructions	GLOSS
	PMP	Musi	PMP	Musi		
a.	*-a	əy	*mata	matəy	*-ə:,*-i:	eye
b.	*-aq	-a/	*bapa-q	bapaʔ	*-ak (borr.)	father
c.	*CVqVC	CVC	*daqan	dan	*dan	branch
d.	*-aCu	-uCəw	*sapu	supəw	*supu:	broom
e.	*-aCi	-iCəy	*tali	tiləy	*tili:	rope
f.	*-aCuC	-oCoC	*daRum	dolom	*doRu:m	needle
g.	*-aCiC	-eCeC	*Rakit	ékét	*Réki:t	raft

Table 6: A Sampling of Intermediate Reconstructions in Relation to the Musi Dialect

A final heuristic note: the idea of positing intermediate *-e from *-a in the derivation of matey was conceived only after the discovery of Kebanagung *-i from *-a in bungi, tui and dui. In retrospect, perhaps a good historical linguist would not need such `clinching evidence' given that /ey/ reflects *-i and *-a in Musi. Nevertheless, given the complexity of the data, the discovery of Kebanagung /i/ from *-a appeared to me like a beacon in a very dark place.

4.2 The `Exception that Proved the Rule'

The fact that contemporary monosyllables failed to reflect the regular change of *a > /e/ before word-final non-velars can be viewed as a textbook-perfect example of an `exception proving the rule'. The exceptional monosyllables raised the possibility that the rule raising *a to schwa was sensitive to the accentual pattern at the word level. Since stress is relative, by definition a monosyllable cannot have a word-level accentual pattern. This idea proved fruitful; it not only explained the conservative monosyllables, it helped explain the irregular `oxytones' such as

tebas, telan (set E of Table 3); and teko, lemo (rule 13). These oxytones presumably had the stress on the *a in early pre-Rejang if not in PMP, and therefore resisted the neutralization rule like the monosyllables. This generalization supported the hypothesis that accent played a role in the evolution of the contemporary Rejang vowels and diphthongs.

4.3 Errors of Method in the Literature on Rejang

The analysis just presented reveals two possible errors of method to be identified in the literature dealing with Rejang historical phonology.

First, because the evidence from Musi kin terms is ambiguous (recall that Musi /-ʔ/ derives from *-q or *-k), the claim that the kin terms might possibly count as a semantically-defined exception to the regularity hypothesis is unwarranted; there is insufficient justification in the Musi data to conclude (a) that /-ʔ/ reflects PMP *-q directly in the kin terms; and (b) that therefore the development of the adjacent vowel (/a/ from *a) was irregular.

Second, given the vast amount of evidence supporting the regularity hypothesis in other language families, and considering the numerous reported irregularities affecting both the vowels and consonants in Rejang (see next section for further examples), it would be an error of method to select out, as Blust (1984) did, from amongst so many unsolved problems, two subsets of words defined by grammatical and/or semantic notions (pronouns, kin terms) for independent analysis.

The only valid way to challenge the regularity hypothesis based on the behavior of non-phonologically defined sets would be to discover them as residues of an otherwise satisfying and, above all, complete, analysis.

As demonstrated in this paper, however, the two sub-sets isolated by Blust do not, in fact, require special treatment after all; they can be either explained by the mechanism of phonologically defined sound change (the pronouns), or safely discounted as borrowings (the kin terms). On the other hand, Blust was surely correct to have directed attention to these two subsets, for in order to account for them I found it necessary to expand the data base considerably to include (a) the role of the accent, and (b) new dialect evidence.

In the next section of this paper several more irregularities reported for the Musi dialect of Rejang are accounted for. The purpose is to demonstrate the force of the methodological argument just presented. Given the expanded data base needed to account for the reflexes of PMP *a in Rejang, a number of other, quite unrelated developments of PMP consonants and vowels, all reported as irregular, are found to be derivable within a coherent set of phonologically conditioned rules. If successful, the analysis will explain several reportedly sporadic changes, and eliminate the arbitrary distinction between "assimilating" and "non-assimilating" stems proposed by (Blust 1984:428, 433f) to account for the evolution of PMP vowels in this language. For example, PMP *puket > puket `fishnet' and *libeR > libea `wide' failed to undergo vowel harmonization rules alongside *qutek > oto? `brain' and *ipen > épén `tooth'. Methodologically speaking, any irreguarity offers a challenge to the regularity hypothesis, and when irregularities are numerous their implications become correspondingly more problematic. But by the same token a potential source of error can easily arise. When studying massive irregularity, it should never be justifiable to isolate a non-phonologically defined set while leaving a large residue to one side. As emphasized by Saussure and supported by numerous studies in many language families, language change involves two distinct and separate `components', namely semantics and phonetics. The evidence suggests that there is not, and ex hypothesi there cannot be, any

interaction between the two kinds of linguistic evolution; what often makes it appear otherwise is due entirely to other factors, such as borrowing or synchronic influences (such as analogy) which must be distinguished when studying the natural evolution of sounds in a language.

5.0 Parallel Changes Affecting PMP Vowels Other Than *a

Indirect arguments are still needed to support rule (14) owing to the complexity of the conditioning. The argument developed in this section is that rule (14) was closely paralleled by other rules, a number of which exemplify a pattern connecting penult vowels and word-final velars (or *R). This last confirms (with Rejang evidence) that velars and *R constituted a natural class in PMP, which is implicit in the standard assumption that PMP *R was a velar fricative or uvular trill (Blust 1990:235).

5.1 *u-Lowering

Consider first rule (18), called *u-LOWERING.

(18)

*u > o /iC__C[+dorsal]# (where [+dorsal] = reflexes of PMP velars and *R)
|
[-stress]

Consider the evidence presented in Table 7.

	PMP	pre-Rej	Musi	Pesisir	Keban.	Gloss
A		*i:nduk	iño?	iño?	iñok	mother
	*biluk	*bi:luk	ilo?	ilo?	n.c.	turn, veer
	*niuR	*ni:uR	nioa	nioa	nioa	coconut
	*tiduR	*ti:duR	tidoa	--[6]	--[7]	sleep

[6] Pesisir tidua (expected tidoa) may be a loanword; see n. 9.

B	*buRuk	*bu:Ruk	buʔuʔ	buʔuʔ	n.c.	decayed
	*beRuk	*bəRu:k	bəʔuʔ	bəʔuʔ	bəhuk	ape
	*dapuR	*da:puR	dopoa	dopoa	dopoa	hearth
C	*quDip	*idu:p	idup	idup	idup	alive
	*tirus		tiʔus	tiʔus	tihus	tapering
	*Siup	*t-iu:p	tiup	tiup	tiup	blow
	*silun		selon	selon	selon	claw
D	*qitung	*itu:ŋ	ituŋ	ituŋ	ituŋ	count

Table 7: Evidence for *u-Lowering

Rule (18) was presumably an early rule which, like (14), preceded Accent Shift. According to rule (18), unstressed ultimate *u was lowered to /o/ when preceded by high front *i and followed by a velar or *R and word boundary. The change involved a degree of `action at a distance' since *u was affected only when the (stressed) penult was *i. Set A illustrates the change; sets B and C were excluded. One excluded form, namely dopoa, developed independently parallel to *manuk > monok (see Table 4). It is no surprise that *silun > selon developed /e/ (schwa) in the penult[8]; however, the /o/ from *u in selon is unexplained beside PMP *lesung > lesung. Finally, itung is irregular. Being part of the vocabulary of trade, it was likely borrowed from Malay hitung "count".

5.2 *e Dissimilation

The next rule presumably applied after Accent Shift, changing PMP (stressed) ultimate *e to /o/ when the penult was *e.

(19)

[7] Kebanagung tiduh (expected tidoa) `sleep' is probably a loan from Palembang-Malay tiduʔ `sleep'.

[8] Penult *i > /e/ when adjacent to *l is probably regular. Cf. *silun > selon "claw"; *gilap > gilep > gelep "flash"; *lima > lemo "five".

*e > o /eC__C[+dorsal]# :where [+dorsal] = reflexes
| of PMP velars and *R
[+stress]

The evidence for (19) is displayed in Table 8.

	PMP	Pre-Rej	R-19	Musi	Pesisir	Keban.	Gloss
A	*deŋeR		deŋoR	teŋoa	teŋoa	teŋoa	hear
	*pegeŋ		pəgoŋ	goŋ	goŋ	goŋ	hold
	*tektek	*tətək	tetok	teto?	teto?	tetok	chop, hack
	*waSiR	*wəyər	weyoR	bioa	bioa	bioa	water
B	*peRes			pe?es	n.c.	n.c.	squeeze
	*genep			genep	genep	genep	complete
	*gilap	*gələp[9]		gelep	gelep	gelep	flash

Table 8: Evidence for *e Dissimilation

Rule (19) affected PMP disyllables containing two schwas (*CeCeC) by changing the ultimate (and presumably stressed) schwa to /o/ when the syllable was closed by a velar or *R. The consonantal conditioning, represented by the feature [+dorsal], explains the forms in set B. The fate of PMP *tebang is interesting in this context. Contemporary tebang resisted *a > /e/ (rule (3b)=(14)) because the etymon ended with a velar; therefore tebang was not a candidate for rule (19) either (i.e. /tebong/ is unattested). Put in another way, tebang provides no evidence of relative chronology (rule order) since (14) and (19) were mutually exclusive. A similar point is made in the next section.

5.3 Mid-Vowel `Harmony'

Finally, consider the patterns of mid-vowel `harmony' introduced as examples #1 and #2

[9] See n. 8.

of Table 4. These changes were closely paralleled by (14), (18) and (19). The pattern can be accounted for by the pair of rule schemata (20i) and (20ii).

(See the derivations in Table 4 for a more detailed analysis of the same data.)

(20) i. -uCe[C, + dorsal] > -oCo[C, + dorsal]
ii. -iCe[C,-dorsal] > -éCé[C,-dorsal]

:where [+ dorsal] = reflexes of PMP velars and *R

Consider the evidence in Table 9.

	PMP	R-14	Musi	Pesisir	Keban.	Gloss
A	*ipen		épén	épén	épén	tooth
	*isep		ésép	ésép	ésép	suck
	*Siket		ékét	ékét	ékét	raft
	*um-inem		méném	méném	méném	drink
B	*libeR		libea	libea	libeh	wide
	*gilap	gilep > gelep	gelep	gelep	gelep	flash
C	*pusej		posok	posok	posog	navel
	*qulej		olok	olok	olog	maggot
	*qutek		oto?	oto?	otok	brain
D	*puket		puket	n.c.	n.c.	dragnet
	*bulat	bulet	bulet	bulet	bulet	round
	*quZan	quZən	ujen	ujen	ujen	rain
E	*buSek		bu?	bu?	buk	head hair
F	*pinzem		inj̄em	iɲ̄j̄em	iɲ̄j̄em	borrow
	*tuŋked		tokot	tokot	tokot	staff,cane
G	*kiZep		se-kijəp	kijəp	kendərijep	blink
	*tikam	tikəm	tikem	tikem	tujeah	to stab

Table 9: Evidence for Schemata (20(i-ii))

The data in sets A and C of Table 9 illustrate the pattern of harmonic change: when the PMP penult was high (*i, *u) and the ultimate was schwa (*e), the vowel-pairs had mutual effects on one another, assimilating the backness of the penult and height (=mid) of the ultima. However, consonants were also part of the environment, apparently: this is evidenced by the pattern of

resistence to the harmonic changes evidenced by the data in sets B, D, F, and G. The crucial evidence is shown in sets B and D. As for set B, *libeR failed to harmonize because it ended with *R (= [+dorsal]); thus schema (20ii) did not apply. Next, consider set D of Table 9; since these data end with a coronal consonant, schema (20i) regularly did not apply to them. Set E is straightforward given the assumption that *-S- disappeared unconditionally (Blust 1984) in early pre-Rejang; thus *buSek was reduced to buk before the harmonization schema could apply (otherwise the outcome would be /bok/ which is unattested). As for set F, vowel harmonization was blocked by an intervening consonant cluster: thus, iem < PMP *p-inzem did not change. The same must therefore be said for PMP *tungked; in this case, however, the outcome tokot poses a problem beside puket < *puket, bulet < *bulat, and ujen < *quZan. The explanation for tokot is early borrowing from Malay tongkat which regularized to tokot via a pair of contemporary synchronic rules (internal consonant cluster reduction (*tongkat > *tokat) and progressive mid-vowel harmonization (tokot). Likewise, the Rejang data in set G cannot be attributed to sound change directly; the word for "blink" was obviously affected by morphology (although the exact mechanism is unclear); and the word for "stab", which is shared by Musi and Pesisir, is a regularized loanword from Malay tikam; whereas the corresponding Kebanagung word, which is not even cognate, is of unknown origin. Finally, consider set H. This outcome offers an interesting test of the analysis. It is simplest to assume that PMP *gilap underwent rule (3b)=(14), becoming *gilep alongside *bulat > bulet. Thus the ultimate schwa in gelep is accounted for. To account for the change of *i to schwa in the penult, see n. 8. Strict ordering of penult *i > /e/ after (3b) and Accent Shift, but before (20ii), suffices to prevent intermediate *gilep (and thus unattested gélép via (20ii)). Therefore, gelep is regular.

When rule (14) is added to the six patterns of vocalic change accounted for by rules (18), (19), and schemata (20)(i-ii), we find a high degree of complementation. This observation supports rule (14) as formulated. Rule (14) is the primary change hypothesized in this paper, and the basis of our proposed explanation for the three-way split of PMP *-a in the Musi dialect. As

consequence, rule (14) bears the major weight of the claim that PMP vowels developed regularly in Rejang pronouns.

6. Consonantal Change

So far this paper has focused attention on the reflexes of PMP vowels in Rejang with the aim of demonstrating that all vocalic developments in the contemporary pronouns and kinship terms were regular. In the concluding section of the paper, I shall depart from this goal in order to demonstrate that the overall system developed thus far has some interesting and unexpected consequences.

6.1 Irregular Split of PMP Intervocalic *R

A recurring factor in the evolution of PMP vowels in Rejang is the importance of morpheme structure conditions in the description of vocalic change. Thus CaCuC canons harmonized differently than CaCu (e.g. *manuk > monok vs *sapu > *supu (> supew); CVCuC canons underwent *u-LOWERING only when the penult was *i and the final consonant reflected a PMP velar or *R (*biluk > ilok and *niuR > nioa but *beRuk > behuk (behok is unattested); *tirus > tihus (tihos is unattested); *Siup > t-iup (t-iop is unattested). As discussed, a majority of the vocalic changes involved a degree of `action at a distance' which, until recognized, presents an appearance of massive irregularity. On the other hand, given the importance of morpheme structure in the evolution of the contemporary vowels and diphthongs, it should not be surprising to find parallels in the evolution of the Rejang consonants. This section explores a likely candidate.

At issue is the split of PMP *-R- into /-l-/ and /-ʔ-/ (glottal stop) in the Musi dialect.

According to Blust (1984:427), the split is unpredictable. Furthermore, PMP *R

> ... has long been a source of comparative problems. Some languages have a single reflex, but many others exhibit two or more reflexes without clear conditions (Blust 1990:257).

Blust's analysis of the reflexes of intervocalic *R in Musi is well motivated, and at the same illustrates the extent of the problem. Given that PMP *R disappeared initially and word-finally in the Musi dialect, he assumes that *R disappeared between vowels as well, followed by epenthetic glottal stop insertion as compensatory change. At one and the same time, however, although this approach accounts for the preservation of disyllabic structure in examples like pe?es < PMP *peRes "squeeze", it leaves as residue the larger set of data in which intervocalic /l/ reflects *R: e.g. *waRi > biley "day". See Table 11.

In the next few paragraphs, I offer an alternative analysis based on dialect evidence not available to previous investigators.

Let us begin by considering the correspondences in Table 10.

Corr	PMP	Outcome	Dialect	EXAMPLES		GLOSS
1a	*-j-	-ʔ-	Musi and Pesisir	*qajeŋ >	aʔaŋ	
b	-h-		Kebanagung		ahaŋ	charcoal
2a	*-r-	-ʔ-	Musi and Pesisir	*zari >	jiʔey = jiʔay	
b	-h-		Kebanagung		jihey	finger
3a	*-R-	-ʔ-	Musi and Pesisir	*keRiŋ >	keʔiŋ	
b	-h-		Kebanagung		kehiŋ	dry
4	*-R-	-ʔ-	all dialects	*waRet >	balet	root

Table 10: Reflexes of PMP Intervocalic *R, *r and *j

The dialects agree in all four correspondences. The last two illustrate the comparative problem: sometimes PMP *-R- is reflected as /l/ and sometimes as a laryngeal (glottal stop or /h/ depending on dialect). In fact, Kebanagung /h/ occurs in all three positions: word-finally, /h/

reflects the partial merger of *q, *r, *R and *D (see sections 1 and 6 of this paper); between vowels /h/ reflects the partial merger of PMP *R, *r and *j; and initially /h/ reflects the partial merger of *R and *r (see Table 10 and outcomes like hotos from *Ratus "hundred"). The correspondences justify reconstructing pre-Rejang *h in all three positions. The data in Table 11 illustrate the split.

	PMP	pre-Rej	Musi	Pesisir	Keban.	Gloss
A	*keRiŋ	*kehiŋ	keʔiŋ	keʔiŋ	kehiŋ	dry
	*peRes	*pehes	peʔes	peʔes	pehes	squeeze
	*beRuk	*behuk	beʔuʔ	beʔuʔ	behuk	ape
	*buRuk	*buhuk	buʔuʔ	buʔuʔ	n.c.	decayed
	*beReqat	*behet	beʔet	beʔet	behet	heavy
B	*waRet	*walet	balet	balet	n.c.	root
	*waRi	*wili	biley	bilay	biley	day
	*baqeRu	*belu	belew	belaw	belew	new
	*daRaq	*dalaq	dalea?	dalea?	daleah	blood
	*ZaRum	*dalum	dolom	dolom	dolom	needle
	*laRiw > *laRi	*lili	liley	lilay	n.d.	run
	*beRey	*beley	lie	ley	leé	give
	*ma-iRaq	*milaq	milea?	milea?	n.c.	red
	*qasiRa	*sili	siley	silay	siley	salt

Table 11: Split of PMP *-R-

The first part of my proposal is to reconstruct a pre-Rejang laryngeal, specifically *h, as the immediate ancestor of Kebanagung /h/ and Musi and Pesisir intervocalic glottal stops (see Table 3 (set C) and Tables 10 and 11). The second part of my proposal is to explain the split in terms of a conditioned change of *R > /l/ between vowels unless precluded by a condition of "consonant compatibility" inherent in the etyma and preserved in the outcomes. The proposed rule is (21).

(21) PMP intervocalic *R became /l/ except in the following two environments:

(a) *-R- disappeared in trisyllables
(b) *-R- > *-h- in the environment $C_1V\_{}_2VC_3$ when the initial consonant was a noncoronal obstruent

(*p-, *b-, *k-, (?)*g-)

The rule states that CVCVC canons developed a noncoronal reflex for (noncoronal) *-R- between vowels, namely the laryngeal *h (= Kebanagung /h/) when the initial consonant was a noncoronal obstruent and the final syllable was closed. Elsewhere *-R- became a coronal liquid, namely, /l/ (all dialects). The `elsewhere' environment includes the remaining CVCVC morphs and CVCV morphs, including two especially interesting cases: PMP *beRey "give" > *(b)eley > *ley > lié and PMP *baqeRu "new" > *belu > belew [blew]. Here *-R- became /l/ as expected. To complete the argument, some well-motivated, if moderately intricate, ordering assumptions are needed. Thus, in order to explain outcomes like *waRet > balet "root" (all dialects), rule 21 must be ordered before the change of PMP *w- > /b/. To explain the outcome for belew "new" from *baqeRu, an intermediate pre-Rejang form *beRu must be reconstructed; this intermediate form follows naturally, however, from two necessary changes if they are ordered prior to rule (21), namely: (a) PMP prepenultimate *a became /e/ (schwa); and PMP non-final *q disappeared together with penult schwa, collapsing the etyma into a dysyllabic *beRu, as required.

Returning to rule (21), complex conditioning and a certain degree of `action at a distance' are involved, and induce regularity over an interesting range of data previously reported as irregular.

Perhaps some further clarification is needed to establish the proposed rule. First, consider the exclusion of PMP trisyllables in the environment of rule (21). Two forms in the data provide evidence: *timeRaq > *timaq > timeah "tin" and *baRani > *bani > biney "brave"; in other PMP trisyllables *-R- is reflected as /l/ or a laryngeal. The explanation is based on the observation that the other relevant etyma contained nonfinal *q. As just mentioned, nonfinal *q disappeared before *R changed; thus, not only contemporary belew but behet and siley were presumably disyllabic (pre-Rejang *beRat, *siRa) at the time *-R- changed. Another ordering

assumption mentioned above is that that prepenultimate *a disappeared before *R changed; this explains not only the penult schwa of belew but also helps explain the penult /i/ in milea? "red" from PMP affixed form *ma-iRaq; the outcome follows naturally from intermediate *miRah given the loss of the morpheme boundary and of the prepenultimate schwa from *a before a root vowel. Furthermore, according to Blust (1982), prepenultimate *a neutralization affected the common ancestor of Malay and Rejang (excluding Sundanese and Javanese).

One especially interesting intermediate reconstruction is *siRa from *qasiRa "salt". The contemporary dialect outcomes follow from intermediate *siRa and several well-motivated processes: *a > *e; Accent Shift *siRe [siRe:]; *-e: > *-i: (*siRi [siRi:]); rule (21) (*siRi > *sili [sili:]; and diphthongization (*sili > siley [sile:y] (Musi and Kebanagung) = Pesisir silay [sila:y]).

6.2 Split of PMP Final *R in Kebanagung

If the analysis just presented above removes one problem it introduces another. That is, Kebanagung shows a split of PMP word-final *-R into zero and /h/, whereas *-R is always zero in the other dialects. Consider the data in Table 12.

	PMP	Pre-Rej	Musi	Pesisir	Keban.	Gloss
A.	*dapuR	dopoa	dopoa	dopoa	dopoa	hearth
	*ikuR		ikoa	ikoa	ikoa	tail
	*niuR		nioa	nioa	nioa	coconut
	*deŋeR		teŋoa	teŋoa	teŋoa	hear
	*waSiR	*wəyəR	bioa	bioa	bioa	water
	*qateluR	*təluR	tenoa	tenoa	tenoa	egg
B.	*qiliR		éléa	lot	ilih	downstream
	*libeR		libea	libea	libeh	wide
	*SuluR		oloa	ulua	uluh	to lower
C.	*tiDuR		tidoa	tidua	tiduh	sleep
	*qapuR		opoa	upua	--	chalk, lime

Table 12: Split of PMP *-R in Kebanagung

As shown in Table 12, PMP *-R is reflected as zero after the contemporary diphthong /oa/ in all three dialects. Moreover, the fate of *-R in Musi and Pesisir is straighforward: it disappeared after the vowels diphthongized. Furthermore, the conditions are relatively clear for the Kebanagung split: *-R disappeared when immediately preceded by the derived diphthong /oa/; elsewhere *-R became /h/, and the adjacent vowels did not diphthongize. The conditioning prevented the merger of *-R with /h/ from *q; thus the final of monoah < *bunuq "kill" contrasts with that dopoa < *dapuR "hearth". It is noteworthy that sets A and B of Table 12 contrast in at least two more ways: first, set A but not set B developed /o/ via a vocalic change described earlier in this paper: either rule (18) (*u > *o before *-R); rule (19) (*e > *o before *-R); or the harmonic schema (-aCuC > -oCoC). Second, set B but not set A contains the phoneme /l/, an observation that is strengthened by the unique (and otherwise mysterious) change of *l to /n/ in the word for "egg", causing it to yield a set A outcome. Finally, the Kebanagung data in set C are presumed to be Malay borrowings.

Although there is plainly more to be explained concerning the distribution of vowels and diphthongs in Table 12, there is little reason to doubt regularity in the reflexes of *-R.

6.3 PMP *R/*r and *D/*d: The Rejang Evidence

The reconstructed PAN/PMP system of four vowels and five diphthongs is relatively uncontroversial compared to the consonants, some of which are constantly under attack in the comparative Austronesian literature (e.g. Wolff 1974, 1988). The arguments often reduce to claims of borrowing from Malay (sometimes via Javanese or vice versa). This is a convenient argument if one wishes to question the contrast between *d and *D, for example, given that (a)

the Malay evidence supports the standard reconstructions, and (b) Malay was (and is) a trade language used over a wide geographical area. In contrast, Malay provides no evidence for the contrast between *r and *R. See Adelaar (1992). Details to one side, any Austronesian language providing evidence for *r (as opposed to *R) and *d (as opposed to *D) in the protolanguage should be welcome. In the next few paragraphs, I will present some Rejang evidence for the standard reconstructions presented in (e.g.) Blust (1984).

6.3.1 *R and *r

The Rejang outcomes for "finger" and "day" argue for distinguishing PMP *r and *R between vowels.

PMP	Musi	Pesisir	Keban.	Gloss
*zari	ji?ey	ji?ay	jihey	finger
*waRi	biley	bilay	biley	day

These outcomes each underwent no fewer than four regular changes (five for Pesisir if /ay/ < *ey). Thus Kebanagung jihey derives from: *z > /j/ initially; *r > /h/ between vowels; the `harmonization' pattern *-aCi > *-iCi; and *-i > /ey/ word-finally. On the other hand, any proposal to collapse intervocalic *r and *R as *R in the proto- language would generate *zaRi as etymon, from which unattested /jiley/ would be wrongly predicted for Kebanagung by rule (21) of this paper. A similar argument applies to the following pre-Rejang forms in Appendix 2: (5),(57),(58),(115),(148),(166),(175),(199).

Next, consider the Rejang dialect outcomes for "true" and "hear", which argue for distinguishing *r and *R in word-final position.

PMP	pre-Rej	Musi	Pesisir	Keban.	Gloss

A	*bener		benea	benea	beneh	true
B	*deŋeR		teŋoa	teŋoa	teŋoa	hear
	*waSiR	*weyer	bioa	bioa	bioa	water
C	*tektek		teto?	teto?	tetok	chop, hack
	*pegeŋ		goŋ	goŋ	goŋ	hold

The four outcomes in sets B and C show regular dissimilation of *CeCeC to CeCoC when the final consonant was [+dorsal] (velar or *R); see rule (19) of this paper. The outcomes in set A happily did not undergo the change, and this evidence supports the standard reconstruction with word-final (apical) *r in PMP *bener. On the other hand, any proposal to collapse word-final *r and *R as *R in the protolanguage would produce *beneR as etymon, from which unattested /benoa/ would be wrongly predicted for all three Rejang dialects by rule (19).

6.3.2 *d and *D

The Rejang dialect outcomes for "haggle" and "drift" argue for distinguishing *d and *D word-finally in the protolanguage.

	PMP	pre-Rej	Musi	Pesisir	Keban.	Gloss
A	*tawaD	*taweD	tawea	tawea	taweh	haggle
B	*bukid		bukit	n.c.	n.c.	hill
	*lahud		laut	laut	laut	sea
	*ma-añud		monot	monot	monot	drift
	*tuŋked		tokot	tokot	tokot	cane,staff

Kebanagung taweh from *tawaD underwent two regular changes: second-syllable *a > /e/ (=rule (14) of this paper) and partial merger of word-final *q, *R, *r and *D as /h/. On the other

hand, the proposal to collapse word-final *d and *D as *d in the protolanguage would produce *tawad as etymon, from which unattested /tawet/ would be wrongly predicted in all three dialects by the regular rule of de-voicing final stops. Contrariwise, the proposal to collapse PMP *d and *D as *D would produce e.g. *ma-añuD as the etymon for `drift', wrongly predicting unattested monoh (or monoa) for Kebanagung and unattested mono (or monoa) for Musi and Pesisir.

7. On Testing the Regularity Hypothesis

To the extent that comparative problems typically arise as by-products (residues) of the historical-comparative method applied to sets of distantly related languages, the regularity hypothesis is interesting because prima facie it is false. It is commonplace for irregularities to multiply as more languages are included in a comparison, even while the degree of confidence increases in the validity of the reconstructed protolanguage. And the reason is no paradox: irregularities--especially the interesting ones--are dialect-specific. Thus, standard practice requires a refinement of method--a more `vertical' (some would say more `historical') approach, in order to deal with irregularities. In the vertical approach, individual or closely-related dialects are explored, and intermediate-level reconstructions may be posited. The methodological point is that every fact about a particular dialect is potentially relevant in the search for intermediate hypotheses (reconstructions): its entire known history; written records (if any); morphology; and contemporary dialect variation. For instance, three classic works in comparative-historical linguistics--Verner's analysis of the Germanic First Sound Shift, Saussure's Mémoire, and the first volume of Wackernagel's Altindische Grammatik--utilized dialect-specific data from the domain of morphology to solve comparative problems (Hoenigswald 1991:188). Each proposed reconstructions that revealed previously hidden regularities, and in the process generated new information about the history of the dialect in question. Karl Verner's famous article exploited

details of morphophonemic alternation in contemporary German. Although in this paper I have posited intermediate-level reconstructions based on the evidence of closely-related Rejang dialects (rather than morphophonemic alternations) the methodological point is the same. New language-particular evidence has been brought into play which reveals new pathways between the reconstructed protoforms (which are dramatically confirmed) and the apparently irregular Rejang reflexes. Probably Verner's most important methodological discovery was that:

> An attempt to find an etymological rule ...[10] by means of a juxtaposition of the Germanic word stock with the comparable word stock of the other Indo-European languages cannot lead to any certain result (Verner 1876:139).

"Any certain result" is the key expression here. After Verner, the field adopted stricter empirical standards, and required unambiguous results. To obtain them, it demanded (among other things) that closer attention be paid to dialect facts than had been thought necessary or expedient by pioneers like Rask and Grimm; and it `guaranteed' that by paying close attention to such data one would discover that every dialect develops lawfully sui generis by elaborating, over time, a system of regular (and only regular) sound changes.

[10] ... for the differentiation of the Proto-Germanic voiceless fricative into voiceles fricative and voiced stop ...

APPENDIX 1: PHONOLOGICAL SYSTEMS OF THREE REJANG DIALECTS

Consonants

	Musi and Pesisir					Kebanagung				
Stops & Affri-	p	t	c	k	ʔ	p	t	c	k	
cates	b	d	j	g		b	d	j	g	
Fricatives		s						s		h
Plain Nasals	m	n	ny	ŋ		m	n	ny	ŋ	
Barred Nasals	m̄	n̄	nj̄	ŋ		m̄	n̄	nj̄	ŋ̄	
Liquid		l					l			
Semivowels		y		w			y		w	

Simple Vowels (all dialects)

i		u
é	e	o
	a	

Diphthongs

	Musi	Pesisir	Kebanagung	Musi Example	Gloss
1.	eé~ié	ey	eé	atié	liver
2.	eo~uo	ew	ea	pisuo	knife
3.	oé	oé	oé	opoé	fire
4.	ey	ay	ey	matey	eye
5.	ew	aw	ew	abew	ash
6.	éa	ia	éa	putéaʔ	white
7.	oa	ua	oa	monoaʔ	kill
8.	éa	éa	éa	bénéaʔ	seed for planting
9.	oa	oa	oa	ikoa	tail
10.	ea	ea	ea	umeaʔ	house

Word-Level Stress (Accent) falls on the final syllable of the word. The accent never alternates since there are no suffixes. Prefixes and infixes are often a single consonant (m-onoaʔ "kill") or consonant and schwa be-teney "ask" (used in quoted speech); t-en-ney "be asked" (passive of t-em-ney).

Secondary Phonemes occur in loanwords (usually from Malay); they are discounted in historical

analysis. For instance, the morpheme sergap "attack" displays /r/ and a sequence of two consonants; neither is native to Rejang (cf. Malay sergap "attack").

APPENDIX 2: PMP AND REJANG WORDLISTS

*Note: PMP vocabulary is taken from Blust (1984) except *anu, *balik, *bener, *beRey, *kena, *tanda, *tebang (from Dempwolff 1934-38) and *takebas, *tupelak (from Blust 1982). In addition, a few pre-Rejang forms have been posited.*

No.	PMP	pre-Rej.	Musi	Pesisir	Keban.	GLOSS
1.	*anay	*aney-aney	anié	aney-aney	aneé-aneé	termite
2.	*aŋin		angin	angin	angin	wind
3.	*anak		anaʔ	anaʔ	anak	child
4.	*qajeŋ		aʔaŋ	aʔaŋ	ahaŋ	charcoal
5.	*arep		aʔep	aʔep	ahep	hope
6.	*Sasaq		aseaʔ	aseaʔ	aseah	sharpen
7.	*Sasap		asep	asep	asep	smoke
8.	*qatep		atep	atep	atep	roof
9.	*qatey		atié	atey	ateé	live
10.	*Sawak		awaʔ	awaʔ	awak	body
11.	*baSu		baew	baaw	baew	odor
12.	*bales		bales	bales	bales	repay
13.	*waRet		balet	balet	balet	root
14.	*bapa-q	*bapak	bapaʔ	bapaʔ	bapak	father
15.	*bataŋ		bataŋ	pun	pun	tree trunk
16.	*bibiR		bébéa	bibia	mus	mouth
17.	*baniŋ		bénéŋ	bénéŋ	bénéŋ	tortoise
18.	*babaq		beaʔ	beaʔ	beah	below
19.	*balik		béléʔ	n.d.	n.d.	return
20.	*baqeRu	*beRu	blew	blaw	blew	new
21.	*bineSiq	*biniq	bénéaʔ	binia?	bénéah	seed
22.	*bener		benea	benea	beneh	true
23.	*benaqi	*beney	benié	beney	beneé	sand
24.	*beReqat	*beRat	beʔet	beʔet	behet	heavy
25.	*beRuk		beʔuʔ	beʔuʔ	behuk	monkey,ape
26.	*bitiqis		betis	betis	betis	calf of leg
27.		*betul	betoa	betoa	betoa	true,correct
28.	*bahi	*bey	bié	bey	beé	female
29.	*waRi		biley	bilay	biley	day
30.	*biluk		iloʔ	k-iloʔ	licok	turn
31.	*baRani	*bani	biney	binay	biney	brave
32.	*waSiR	*weyeR	bioa	bioa	bioa	water
33.			bitaŋ	bitaŋ	bitaŋ	star
34.	*buaq		boaʔ	buaʔ	boah	fruit
35.	*bunuq		m-onoaʔ	m-unuaʔ	m-onoah	kill
36.	*buqaya		buayo	buay	buaey	crocodile

No.	PMP	pre-Rej.	Musi	Pesisir	Keban.	GLOSS
37.	*bukid		bukit	tebo	tebo	hill
38.	*bulat		bulet	bulet	bulet	round
39.	*bulu		bulew	bulaw	bulew	feather
40.	*buŋa		buŋey	buŋay	buŋi	flower
41.	*buSek		buʔ	buʔ	buk	head hair
42.	*buRuk		buʔuʔ	buʔuʔ	kidék	decayed
43.	*batu		butew	butaw	butew	stone
44.	*(d)aRaq		dalea?	dalea?	daleah	blood
45.	*lalej		dalek	dalek	daleg	housefly
46.	*Zalan		dalen	dalen	dalen	path, road
47.	*daqan		dan	dan	dan	branch
48.	*Danaw		danew	danew	danao	danaw
49.	*daSun		dawen	dawen	dawen	leaf
50.	*dilaq		dilea?	dilea?	dileah	tongue
51.		*debu	ŋebu	debu	debew	dust
52.	*ZaRum		dolom	dolom	dolom	needle
53.	*dapuR		dopoa	dopoa	dopoa	hearth
54.	*DuSa		duey	duay	dui	two
55.	*dukut		dukut	dukut	sekuit	grass
56.			das	n.d.	das	(on) top
57.		*daret	da?et	n.d.	dahet	inland
58.		*deres	de?es	n.d.	dehes	flood
59.	*Siket		ékét	ékét	ékét	to tie
60.	*Rakit		ékét	ékét	hékét	raft
61.	*qiliR		éléa	lot	-ilih	downstream
62.	*ipen		épén	épén	épén	tooth
63.	*isep		ésép	ésép	ésép	suck
64.	*embun		mun	mun	aban	cloud
65.	*enem		num	num	num	six
66.	*gatel		gata	gata	gata	itch
67.	*gilap		gelep	gelep	gelep	flash
68.	*genep		genep	genep	genep	complete
69.	*quDip	*idup	idup	idup	idup	alive
70.	*ikuR		ikoa	ikoa	ikoa	tail
71.			oa?	n.d.	hoah	far
72.		*rimba	imbo	imbo	himbo	forest
73.		*induk	indo?	indo?	indok	mother
74.	*Sisaŋ		isaŋ	isaŋ	isaŋ	gills
75.	*hisi		isey	isay	isey	contents
76.	*ita		ite	ite	ite	1pl.incl
77.	*qituŋ		ituŋ	ituŋ	ituŋ	count
78.			Jaŋ	Jaŋ	Hejaŋ	Rejang
79.	*zari		ji?ey	ji?ay	jihey	finger
80.	*kabut		kabut	kabut	kabut	fog

No.	PMP	pre-Rej.	Musi	Pesisir	Keban.	GLOSS
81.	*kaka-q	*kakak	kaka?	kaka?	udo	eld.sibling
82.	*iSekan		kan	kan	kan	fish
83.	*ka-wanan		kanen	kanen	kanen	rightside
84.	*kasaw		kasuo	kasew	kasea	rafter
85.	*kami		kémé	kémé	kémé	1pl.excl
86.	*kawil		kéwéa	kéwéa	kéwéa	fishhook
87.	*kawit		kéwét	kéwét	kait	hook
88.	*kutkut	*kekut	gaut	gahut	gahut	scratch
89.	*kempu		kepew	kepaw	kepew	grandchild
90.	*keRiŋ		ke?iŋ	ke?iŋ	kehiŋ	dry
91.	*esak		k-esa?	k-esa?	k-esak	cook
92.	*tawa		tawey	taway	tawey	laugh
93.	*kilat		kilat	gelep	smitoa	lightning
94.	*kaSiw	*kiSaw	kiuo	kiew	kiea	wood
95.	*kaSu		ko	ko	ko	2sg.
96.	*kamu		kumu	kumu	udi	2honorif.
97.	*kena		keno	keno	keno	strike
98.	*kutu		gutew	gutaw	gutew	louse
99.			kuyu?	kuyu?	kuyuk	dog
100.	*laŋaw		laŋuo	laŋew	laŋea	horsefly
101.	*lahud		laut	laut	laut	sea
102.	*lawaq		lawea?	lawea?	skise	spider
103.	*laŋit		léŋét	léŋét	léŋét	sky
104.	*lain	*leyn	leyen	luyen	beteé	other
105.	*lebiq		lebéa?	lebia?	lebéah	excess
106.	*lem		lem	lem	lem	inside
107.	*lima		lemo	lemo	lemo	five
108.	*lesuŋ		lesuŋ	suŋ	lesuŋ	mortar
109.	*libeR		libea	libea	libeh	wide
110.	*laRiw	*laRi	liley	lilay	liley	run
111.	*beRey		lié	ley	leé	give
112.	*lecaq		lecea?	n.d.	leceah	wet
113.	*qali-metaq	*lintaq	litea?	litea?	liteah	leech
114.		*luaq	loa?	n.d.	loah	comand
115.		*lurus	lu?us	n.d.	luhus	straight
116.	*mama-q	*mamak	mama?	tamaŋ	mamak	Mo.Bro.
117	*mata		matey	matay	matey	eye
118.	*matey		matié	matey	mateé	die
119.	*embun		mem	n.d.	mem	burn
120.	*um-inem	*minem	méném	méném	méném	drink
121.	*ma-iRaq	*miRaq	milea?	milea?	abaŋ	red
122.	*mi-Sepi	*mipi	mipey	mipay	mipey	dream
123.	*emis		mis	mis	mis	sweet

No.	PMP	pre-Rej.	Musi	Pesisir	Keban.	GLOSS
124.	*manuk		mono?	mono?	monok	chicken
125.	*ma-a~nud		monot	monot	monot	drift
126.	*um-utaq	*mutaq	mutea?	mutea?	muteah	vomit
127.		*nak	na?	na?	nak	at
128.	*naSik		né?	né?	nék	climb
129.	*ni-a		ne	ne	ne	3sg.poss
130.	*niuR		nioa	nioa	nioa	coconut
131.	*nipis		mipis	mipis	mipis	narrow
132.	*ni-Su		nu	nu	nu	2sg.poss
133.	*ñawa		nyabey	nyabay	nyabey	breathe
134.	*ñamuk		nyomo?	nyomo?	nyomok	mosquito
135.	*SuluR		oloa	ulua	uluh	to lower
136.	*qulej		olok	olok	olog	maggot
137.	*qapuR		opoa	upua	kapur	chalk,lime
138.	*Sapuy		opoé	opoé	opoé	fire
139.	*qutek		oto?	oto?	otok	brain
140.	*Ratus		otos	otos	hotos	hundred
141.		*padaq	padea?	padea?	padeah	say
142.	*pajey		paé	paé	paé	riceplant
143.	*panas		panes	panes	panes	hot(heat)
No.	PMP	pre-Rej.	Musi	Pesisir	Keban.	GLOSS
144.	*panaw		panuo	panew	panea	walk
145.	*panzaŋ		paŋ̄jaŋ	paŋ̄jaŋ	paŋ̄jaŋ	long
146.	*hepat		pat	pat	pat	four
147.	*pataq	*patiq	patéa?	patia?	patéah	break
148.		*parak	pa?a?	n.d.	pahak	near
149.	*piliq		éléa?	ilia?	éléah	choose
150.	*paqit		pét	pét	pit	bitter
151.	*qapeju		pegew	pegaw	labew	gall
152.	*pegeŋ		goŋ	goŋ	goŋ	hold
153.	*palaqepaq		pelpea?	pelpea?	pelpeah	palm frond
154.	*penuq		penoa?	penua?	penoah	full
155.	*peRes		pe?es	nemes	heah	squeeze
156.	*p-inzem		iŋ̄jem	iŋ̄jem	iŋ̄jem	borrow
157.	*pisaw		pisuo	pisew	pisea	knife
158.	*puluq		poloa?	pulua?	poloah	ten
159	*punay	*panuy	ponoé	ponoé	ponoé	dove
160.	*pandak	*pendak	pena?	pena?	pedak	short
161.	*pusej		posok	posok	posog	navel
162.	*puket		puket	jilay	mesap	dragnet
163.	*pulut		pulut	pulut	pulut	birdlime
164	*puqun		pun	pun	pun	tree
165.	*putiq		putéa?	putia?	putéah	white

No.	PMP	pre-Rej.	Musi	Pesisir	Keban.	GLOSS
166.		*sarep	saʔep	saʔep	sahep	rubbish
167.	*kiZep		se-kijep	kijep	kenderijep	blink
168.	*silun		selon	selon	selon	fingernail
No.	PMP	pre-Rej.	Musi	Pesisir	Keban.	GLOSS
169.	*ma-Ruqanay	*manié	-manié	-maney	sebоŋ	male
170.	*sempit		spit	spit	spit	narrow
171.	*silu		silew	silaw	betok	rheumatic pain
172.	*qasiRa		siley	silay	siley	salt
173.	*sintak		sitaʔ	te-kanyet	kejut	jerk
174.	*sabuŋ		soboŋ	soboŋ	soboŋ	cockfight
175.		*surat	suʔet	n.d.	suhet	write
176.	*sapu		supew	supaw	supew	broom
177.	*susu		susew	susaw	susew	breast
178.	*tazem		tajem	tajem	tajem	sharp
179.	*tales		tales	tales	tales	taro
180.	*taneq		tanea?	tanea?	taneah	earth
181.	*tanem		tanem	tanem	tanem	to plant
182.	*taŋan		taŋen	taŋen	taŋen	hand
183.	*taqun		taun	taun	taun	year
184.	*tawaD		tawea	tawea	taweh	haggle
185.	*teka		teko	teko	teko	come
186.	*tuqelaN	*telaN	telan	telan	telan	bone
187.	*telu		telew	telaw	telew	three
188.	*tinaqi	*teney	tenié	teney	teneé	stomach
189.	*qateluR	*tenuR	tenoa	tenoa	tenoa	egg
190.	*deŋeR		teŋoa	teŋoa	teŋoa	hear
191.	*tanda		tano	tano	tano	mark,sign
192.	*takebas	*tebas	tebas	tebas	tebas	clear-cut
193.	*tebaŋ		tebaŋ	n.d.	n.d.	fell (tree)
194.	*tektek		teto?	teto?	tetok	chop,hack
195.	*tiDuR		tidoa	tidua	tiduh	sleep
196.	*taqi	*tey	tié	tey	teé	feces
197.	*tikam		tikem	tikem	tujeah	to stab
198.		*tiruk	ti?u?	ti?u?	tihuk	ear
199.	*tirus		ti?us	ti?us	tihus	tapering
200.	*talih	*tali	tiley	tilay	tiley	rope
201.	*timba		timo	n.d.	n.d.	pail
202.	*timeRaq	*timaq	timea?	timea?	timeah	tin
203.		*timbak	tia?	tia?	tiak	to shoot
204.	*tupelak	*tulak	tula?	tula?	tulak	push
205.	*Siup	*t-iup	tiup	tiup	tiup	blow
206.	*tuZuq		tojoa?	tujua?	tojoah	seven
207.	*tuŋked		tokot	tokot	tokot	cane,staff

No.	PMP	pre-Rej.	Musi	Pesisir	Keban.	GLOSS
208.	*tuqah		tuey	tuay	tui	old
209.	*tutup		tutup	tutup	tutup	to close
210.	*TukTuk		tutuʔ	tutuʔ	tutuk	pound rice
211.	*qubi		ubey	ubay	ubey	yam
212.	*quDaŋ		udaŋ	udaŋ	udaŋ	shrimp
213.	*quZan		ujen	ujen	ujen	rain
214.	*aku		uku	uku	iku	1s pronoun
215.	*qulu		ulew	ulaw	ulew	head
216.	*Rumaq		umeaʔ	umeaʔ	umeah	house
217.	*busuk		usuʔ	usuʔ	busuk	putrid
218.	*qayam		yam	yam-yam	yam	toy

APPENDIX 3 - SOME NOTEWORTHY RULE INTERACTIONS

(numbers carry over from the text)

A. Rules (1a,b) and Kebanagung Allophonic Rule /k/ > [ʔ]

(1)	PMP	Musi	Pesisir	Kebanagung	GLOSS
a.	*-q >	ʔ	ʔ	h	
b.	*-k >	ʔ	ʔ	k	
Examples:	*Rumaq	umeaʔ	umeaʔ	umeah	house
	*anak	anaʔ	anaʔ	anak [anaʔ]	child

B. Accent Shift and Rule (3b)

(9) (modified)

Early Accent	R-3b	pre-Rejang Accent	Musi	Pesisir	Keban.	Gloss
*bu:lat	bu:let	*bule:t	bule:t	bule:t	bule:t	round
*ti:kam	ti:kem	*tike:m	tike:m	tike:m	tike:m	stab

C. Rule (3b) and First Harmonic Schema (20)

Schema (20) added the mid-vowels /é/ and /o/ to the pre-Rejang inventory of phonemes. Rule conditions (rather than relative chronology) explain why derived *bulet, *tikem did not become bolot, tékém; why *puket, *libeR did not become pokot, lébéa; and why *Rumaq, *Sisang did not become first Rumeq, iseng by rule (3b) and then omoaq, éséng by schema (20).

(3b) *a > e /VC__C# :unless final C = velar
[-stress]

PMP	(3b)	Musi & Pas	Kebanagung	Gloss
*bulat	bulet	bulet	bulet	round
*tikam	tikem	tikem	n.c.	stab
*Sisang	--	isang	isang	gills
*Rumaq	--	umeaʔ	umeah	house

(20) i. -uCe[C, + dorsal] > -oCo[C, + dorsal]
ii. -iCe[C,-dorsal] > -éCé[C,-dorsal]

:where [+dorsal] = reflexes of PMP velars and *R

Examples:		PMP	Keban.	Gloss
	i.	*qutek	> otok	brain
cf.		*puket	> puket	fishnet
	ii.	*ipen	> épén	tooth
cf.		*libeR	> libea	wide

D. Accent Shift and Second Harmonic Schema
(See Table 4.)

Early Accent	Rejang Accent	Unstr. *a Assim.	Stressed V Assim.	Musi	Pesisir	Keban	Gloss
*ta:li	tali:	tili:	--	tile:y	tila:y	tile:y	rope
*ba:tu	batu:	butu:	--	bute:w	buta:w	bute:w	stone
*ma:nuk	manu:k	monu:k	mono:k	mono:ʔ	mono:ʔ	mono:k	chicken
*la:ŋit	laŋi:t	léŋi:t	léŋé:t	léŋé:t	léŋé:t	léŋé:t	sky

E. *-a > *-e and *-a > /o/

Rule (14), which is a generalized version of (3b), optionally ignores the final (velar) consonant.

		PMP	pre-Rej	Gloss
(3b) (see **C.** and **G.**)		*bulat	bulet	round
(14) *a > e /VC__#	Examples:	*ita	ite	1pI Incl pronoun
|		*ni-a	ne	3sPoss pronoun
[-stress]		*mata	*ma:te	eye

The conditioning in (14) suffices to preclude *-a > *-e in the two environments defined by rules (12) and (13). It is convenient to order (12) and (13) after Accent Shift (hence after (14)); then they can be collapsed into a simple change, namely, stressed *-a [a:] > /o/ [o:]; thus the complex conditioning environments shown in the text are actually redundant. (They have been kept for the light they throw upon rule (14).)

(12)

*a: > o: /VCC__# :where CC = homorganic

cluster (nasal + stop)

PMP	Accent Shift	Musi	Pesisir	Kebanagung	Gloss
	rimba:	imo:	imo:	himo:	jungle
*tanda	tanda:	tano:	tano:	tano:	sign, mark
*timba	timba:	timo:	n.d.	n.d.	pail

(13)

pre-Rejang *a: > o: / eC_#

PMP	pre-Rejang	Musi	Pesisir	Kebanagung	Gloss
*kena	*kena:	keno:	keno:	keno:	strike
*lima	*lema:[11]	lemo:	lemo:	lemo:	five
*teka	*teka:	teko:	teko:	teko:	come

Recall that the above `oxytone' forms forms escaped the effects of (14) because the ultima was already stressed even before Accent Shift. Thus, in the `Malay-type' accent attributed to early pre-Rejang, the accent fell on the ultimate when the penult was schwa; otherwise on the penult.

F. Diphthongization of *-a and *-i as /ey/ (Musi and Kebanagung)

PMP	Early Accent	R-14	Rejang Accent	*e<*a Raising	Dphthzn	Gloss
*mata >	ma:ta >	ma:te >	mate:	mati:	mate:y	eye
*qisi >	i:si	--	isi:	--	ise:y	contents

Crucially, derived (stressed) final schwas underwent raising and fronting, as shown in (15),

(15)

*e > *i /VC__# E.g. *mate: > *mati: "eye"

[+stress]

and the output (*i) diphthongized with original *i, and parallel to original *u.

Pre-Rej	Musi & Keban.	Pesisir	Gloss

[11] /e/ from *i in lemo [ʔelmo] "five" (< PMP *lima) is probably regular given the potential for a phonetic clustering of consonants. Cf. also *silun > selon [slon] "claw"; *gilap > gilep > gelep [glep] "flash".

(6')	*-i: > e:y	*mati:	mate:y	mata:y	eye
	*-u: > e:w	*ulu:	ule:w	ula:w	head

In Kebanagung, pre-Rejang *-i: became /ey/ only when the penult was not *u. For example, PMP *bunga remained bungi "flower" in Kebanagung corresponding to bungey (Musi) = bungay (Pesisir).

G. Indirect Support for Rule (3b)

The three changes shown below were conditioned `locally' by a dorsal feature associated with the final consonant, and `at a distance' by the presence of a (specified or unspecified) penult vowel.

(3b) e.g. *bulat > bulet and *anak > anak

*a > e /VC__C# :unless final C = velar
|
[-stress]

*u-LOWERING e.g. *ikuR > *ikoR > ikoa "tail"

(18)
*u > o /iC__C[+dorsal]# :where [+dorsal] = reflexes of PMP velars and *R
|
[-stress]

*e-BACKING e.g. *pegeŋ > *pegoŋ (> goŋ) "hold"

(19)

*e > o /eC__C[+dorsal]# :where [+dorsal] = reflexes of PMP velars and *R
|
[+stress]

Note that rule (19) was also closely paralleled by (13) (e.g. *kena [kena:] > keno [keno:] "strike" and *teka teko "come".

H. Consonantal Reconstructions Revisited (Re-confirmed)

H.1 Split of PMP Intervocalic *R in Rejang (all dialects)

(21) PMP intervocalic *R became /l/, e.g.

*Zarum > dolom "needle"

*waRi > biley "day"

except in two environments:

(a) *-R- disappeared in trisyllables: *baRani > *bani > biney

(b) *-R- > *-h- in the environment $C_1V\_{2}VC_3$ when the initial consonant was a noncoronal obstruent (*p-, *b-, *k-, (?)*g-): *keRing > kehing "dry"

H.2 Split of PMP Final *R in Kebanagung Dialect

Musi and Pesisir Rule:

PMP *-R > zero: *dapuR > *dopoaR > dopoa "hearth"
*libeR > *libeaR > libea "wide"

Kebanagung Rule:

PMP *-R > zero when immediately preceded by the derived diphthong /oa/; elsewhere *-R became /h/

PMP *-R > zero:	*dapuR > *dopoaR > dopoa	"hearth
> -h	*libeR > libeh	"wide"

H.3 Evidence that *R and *r Were Distinct Phonemes in PMP

PMP	Musi	Pesisir	Keban.	Gloss
*zari	ji?ey	ji?ay	jihey	finger
*waRi	biley	bilay	biley	day

The outcomes are the expected ones based on the proposed rules and the standard reconstructions. Therefore ji?ey = jihey are not exceptions to rule (21), but they would be if the reconstruction for "finger" were revised as *zaRi.

H.4 Evidence that *d and *D Were Distinct Phonemes in PMP

	PMP	pre-Rej	Musi	Pesisir	Keban.	Gloss
A	*tawaD	*taweD	tawea	tawea	taweh	haggle
B	*bukid		bukit	n.c.	n.c.	hill
	*lahud		laut	laut	laut	sea
	*ma-añud		monot	monot	monot	drift

*tungked	tokot	tokot	tokot	cane,staff

The contrast in form between tawea = taweh in A and the outcomes in set B support the standard reconstruction of a contrast between *-D and *-d in PMP.