Old Burmese:
Toward the History of Burmese**

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古 ビルマ語
——ビルマ語史へ向けて——

西義郎

This paper aims to examine the various interpretations of the phonological system of Old Burmese (of Burma, now Myanmar) so far made and propose a conceivable framework of the history of Burmese in the light of our recent knowledge of Burmish languages and the regional dialects of Burmese, as well as orthographic variations in, and orthographic changes since, Old Burmese, from the standpoint that Present-day Standard Burmese is a later changed form of Old Burmese.

本論文は、現在の標準ビルマ語（ミャンマー語）が主として仮文に記録された古ビルマ語の後代の形式であるとする立場に立ち、古ビルマ語における音変及およびそれ以前の数字の変更に加え、ビルマ語系諸言語と現代ビルマ語諸方言に関する最近の知見を照して、古ビルマ語の音韻体系に関するこれまでの諸説を検討するとともに、考えられるビルマ語史の枠組みについて考察したものである。

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** The present paper was originally written as a chapter of my lectures on Burmese and Proto-Burmish, delivered at the Central University for Nationalities, Beijing, China, from April to July, 1998. As I did not have all my data and OB materials at hand, what is written here is based on (Luce 1981) and my papers (1974; 1975b; 1976). Since no inscrptional data were available, I used MTA forms for MWB. The glosses attached to examples above are mostly taken from (Luce 1981).

Key Words: Burmese (Myanmar), phonological history, Old Burmese, Written Burmese

キーワード：ビルマ語（ミャンマー語）、音韻史、古ビルマ語、ビルマ文語
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In (Nishi 1997), I showed that there have been several reforms in the writing system of Burmese since its first standardization, which is generally assumed to have taken place sometime after the enthronement of Narapatisithu in AD 1174. The attempt of the Burmans to graphize their language seems to have already started probably a century earlier. The earliest dated Burmese inscription is the Myazedi inscription. It is so called because it was first discovered in the precincts of the Myazedi pagoda, but, as a matter of fact it was a misnomer. It came to be known later that the inscription was first placed in a small pagoda, called Guppyaukkyi pagoda, next to the Myazedi pagoda. This small pagoda was founded by Prince Yazakuma, a son of King Kyanzittha, in AD 1112, and completed just before the death of his father. This inscription is best known among all Burmese inscriptions, not only because it is the earliest dated inscription, but also because it is a quadrilingual inscription. On each of its four faces is written the same inscription in one of the four different languages, Burmese, Pali, Mon (=Talaing) and Pyu, and it was the discovery of this inscription which gave C.O. Blagden the opportunity to decipher the language of the lost people Pyu. The language of the Pyu is considered to be a Tibeto-Burman language though its linguistic position among Tibeto-Burman (TB) languages is still open to question. (Another stone pillar which has the same inscriptions on its four faces only with slight differences in spellings was found later. Thus, these two pillars are distinguished as Pillars A and B. Since Pillar B is considerably damaged, we usually use the Burmese inscription on Pillar A as the text.) The number of Burmese inscriptions before the reign of Narapatisithu discovered so far is very small, probably less than twenty.

The orthographic correspondences between Standard Modern Written
Burmese (Mod. WB) and Standard Old Written Burmese (OWB) is still quite regular.

1 THE WRITING SYSTEM OF STANDARD OLD WRITTEN BURMESE

1.1 Written Syllable Cannon
(C = consonant letter or symbol, V = vowel letter or symbol, T = tone mark)
\[ C^1(C^2(C^3(C^4)))V^1(V^2)(C^5)(T) \]

1.2 Initial Consonant Letters (C1)

The Burmese letters are classified and arranged in the traditional order which is indeed the order of Indic scripts. So, the letters in the first to fifth rows from the first to fourth columns are stops/affricates while those in the fifth column are nasals. They are grouped according to their original place of articulation: 1) for velars, 2) for palatals, 3) for retroflexes, 4) for dentals, and 5) bilabials. The rest (6/7) are those of different manners of articulation: liquids (r/l), semi-vowels (y/w) and fricatives (s/h). All these letters have been and are still used to write Pāli words, but only those of the first, second and fourth columns in the first, second, fourth and fifth rows, and the letters y, w, r, l, s and h from the sixth and seventh rows are in principle used in writing native Burmese words. However, some native Burmese words are customarily spelled with letters of the third and fourth columns, but the letters in the third row are never used for native Burmese words.

\[ k \ kh \ g \ gh \ n \]
\[ c \ ch \ j \ jh \ n \]
\[ t \ th \ d \ dh \ n \]
\[ t \ th \ d \ dh \ n \]
\[ p \ ph \ b \ bh \ m \]
\[ y \ r \ l \ w \]
\[ s \ h \ l \ ' \]

1.3 Initial Consonant Clusters

The consonant symbol -h is used only with sonorants [nasals (m/n/ŋ/ŋ), liquids (r/l) and semivowels (y/w)], and shows that they are voiceless. -h with C- below is considered to represent a unit phoneme, either a voiceless or an aspirated sonorant as in Standard Burmese (SB), and not a cluster, while all others, -r, -l, -y, -w and their combinations with C- are real clusters, and we call the latter four medials.

(1) Cy: ky khy py phy my ry ly sy
1.4 Final Consonant Letters (C5)

-h/-h, later disused in OWB, and -' do not represent segmental elements, but tonal features. The anusvāra -m is counted as a vowel letter in the traditional Burmese spelling books, but it has been used only as a variant form of -m since the Old Burmese (OB) period. The finals -m and -m were interchangeable in OB and Middle Burmese (MB) inscriptions, but in Mod.WB their usage came to be fixed, and thus some words are always spelled with -m, while others with -m.

-k -ń
-c -ń
-t -ń
-p -m/-m
-y -w
(-h/-h) -'

1.5 Vowel Letters and Symbols

It should be noted that -a is the inherent vowel in each letter. Graphically ai and au are not digraphs, but o may be considered as another (discontinuous) digraph (e.ā).

Letters: ’a ’i ’ī ’u ’ū ’e ’o
Symbols: -ā -i -ī -u -ū (-e) -ai -o -au -ui(digraph)

1.6 Written Rhymes (Finals)

The rhymes enclosed in ( ) are rare in use or restricted to a small number of morphemes. X (~Y) or X/Y shows that X and Y are used interchangeably.
There have been some attempts to represent tonal features in OB inscriptions, for which see (Nishi 1997). However, we are not yet sure what exactly the nature of the features is, except for the fact that tone 4 /ʔ/ in SB corresponds to the written stop finals, -p, -t, -c, and -k in OB. The tones of SB indeed consist of not only pitch registers or contours but also various other features like length, intensity, voice register (/quality), and the glottal stop. Not all such features were represented in the Standard OB writing system. We find attempts to graphize suprasegmental features, such as the sporadic use of -h and -h mostly for the words with tone 2 in SB, in the early OB inscriptions, especially in the non-mainstream writing system of the {Ajawlat} inscription, which were later disused in OWB, but the latter, the visarga, later revived in Late Standard Middle Written Burmese (MWB) (16C), and is now called /šéka pauʔ/ {rhe3-ka pok} or /wiʔsa [hnaloun] pauʔ/ (vacca [nhac-lum2] pok).

The use of the devoweled letter ’(a) was more consistent throughout OB times, the tradition of which has been retained even in Standard Modern Written Burmese though its shape was changed three times, and finally became a small lowered dot (or circle) called /auʔmyiʔ/ {'ok-mrac} in Late MWB (16C). It is interesting to speculate about the nature of OB tones in the context of the Burmish languages as a whole, for which see (Nishi 1997: 993–994, note 15), and more will be written on this topic in 4.3.

<table>
<thead>
<tr>
<th>SB</th>
<th>OWB</th>
</tr>
</thead>
<tbody>
<tr>
<td>/Ø/</td>
<td>-a, -i, -u, -ay, -iy, -uy, -uiw, -aw, -VN</td>
</tr>
<tr>
<td>/'/'</td>
<td>(as above)</td>
</tr>
<tr>
<td>/ʔ/</td>
<td>-VS(S=stop)</td>
</tr>
</tbody>
</table>

As -h/-h was no longer used in the assumed OWB, and thus the rhymes with the tones corresponding to tones 1 and 2 in SB were no longer graphically distinguished and dealt with as if they had the same tone, thus the open rhymes with tones 1 and 2 are indicated by long vowel symbols, -a, -i, and -u.
However, the rhymes with tone 3 were still represented either by the use of short vowel symbols (-a [inherent], -i and -u) or letters, or by adding the devoweled letter ' (a) under the last letter of the non-open rhymes, -ay, -iy, -uy, -uiw, -aw and -VN (N= nasal). Thus, in OWB tones are represented as shown in the above table.

2 ORTHOGRAPHIC CHANGES FROM STANDARD OLD TO MODERN WRITTEN BURMESE

As I mentioned in (Nishi 1997), we may assume that there have been official orthographic reforms repeated several times since the first standardization of Written Burmese (WB). All the reforms are considered to reflect the changes which occurred earlier in the spoken form of Burmese. On the other hand, variations or interchanges of spellings for the same words or morphemes we find in OB and MB inscriptions as well as in the Miandian yishu (緬甸譯書) (MTB) can be regarded in many, but not all, cases as indicating that changes were ongoing.

2.1 Initials

2.1.1 Medials

The most conspicuous feature of OWB initials is that there was a medial letter -l- in addition to -r-, -y-, -w- of MWB to Mod.WB. It is generally observed that the medial -l- was replaced by -y- after velar letters and by -r- after bilabial letters later in MWB, though there are some exceptions when we compare the spellings of some OB forms with those of the corresponding WB forms registered in modern Burmese dictionaries. This is partly due to the fact that -r- and -y-, which represented distinct medials in MB, merged into -y- sometime in Standard Early Modern Written Burmese (EMod.WB). Therefore, some Modern Burmese dictionaries register alternative spellings for some words with Cr~Cy- clusters, for which see the examples given in (Nishi 1976). Another notable orthographic reform is that k- and kh- before -i(C) came to be spelled as ky- and khy- some time in EMod.WB. This suggests, I think, that Ky- as a whole changed to Tš- (alveolo-palatal affricate). All exceptions found in Modern dictionaries were probably re-introduced into Burmese after the vocalic change of -i- to -e or -ei-. We find a fair number of such examples in the Myanmar-English dictionary (1993), but they are all loans from Pāli or English but WB kin² (SB /kein/) 'v (of holy object) enshrine; (of holy person) live, dwell' (OB kin 'v rest, sleep'), which can alternate with the palatalized form kyin² (SB /cein/) 'v (of holy object) reside, lie; (of holy person) sleep'.

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2.1.2 OB ry-

In OB we find a number of native Burmese words spelled with ry-. This cluster was lost in Standard Middle Written Burmese (MWB) and became a simple initial r-. However, as I mentioned in (Nishi 1976), of the two homonymous words MWB rā 'hundred' and rā 'dryfield', the latter came to be spelled as yā in the Konbaung period. The following list may not exhaust all the examples of native words with ry-. (MTA = the Miandianguan zazi)²

<table>
<thead>
<tr>
<th>OB</th>
<th>MTA</th>
<th>Mod.WB (SB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ryā</td>
<td>rā (ya/)</td>
<td>'hundred'</td>
</tr>
<tr>
<td>2. ryā</td>
<td>rā (ya/)</td>
<td>'ploughland, dryfield'</td>
</tr>
<tr>
<td>3. ryak (ryāk/ryek/rik/rik/rak)</td>
<td>rak (ya/)</td>
<td>'day (24hours)'</td>
</tr>
<tr>
<td>4. ryap</td>
<td>rap (ya/)</td>
<td>'to stand up'</td>
</tr>
</tbody>
</table>

There occur several other words with this cluster in OB inscriptions, whose provenance is not clear. The following list is not exhaustive.

<table>
<thead>
<tr>
<th>OB</th>
<th>Mod.WB (SB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ryā (ra)</td>
<td>'fitting, proper, should, must'</td>
</tr>
<tr>
<td>2. si-ryak (si-ryāk)</td>
<td>sa-ryak (tayc/)</td>
</tr>
<tr>
<td>3. 'o-ryat (u-ret/u-rec/u-ryac)</td>
<td>'u-shyac (ou?i?)</td>
</tr>
</tbody>
</table>

2.1.3 OB rh-~h-~hy-~sy-

Some OB forms are spelled with h-/yh-/sy-/shy-/rh- before OB -i(C)/-e(C)/-y. However, the corresponding Mod.WB forms have rh- or rarely shy-.

<table>
<thead>
<tr>
<th>OB</th>
<th>Mod.WB (SB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. hiy* (hiy)</td>
<td>rhi (si/)</td>
</tr>
<tr>
<td>2. ('a-)hin</td>
<td>('a-)rhi (a)sin/</td>
</tr>
<tr>
<td>3. yhan (hyan)</td>
<td>rhan (sin/)</td>
</tr>
<tr>
<td>4. ('a-)syān<del>shyān</del>rhan</td>
<td>('a-)shyan (a)sin/</td>
</tr>
<tr>
<td>5. yhat (het/yyat)</td>
<td>rhac~rhec</td>
</tr>
<tr>
<td>6. syā</td>
<td>rhā² (sà/)</td>
</tr>
<tr>
<td>7. yhum</td>
<td>rhum² (sōun/)</td>
</tr>
</tbody>
</table>

2.1.4 OB ŋ(h)-~n(h)-

We frequently find a similar alternation between ŋ(h)- and n(h)- before -i(C)/-e(C)/-y in OB inscriptions, which corresponds to Mod.WB ŋ(h)-.
OB	MTA	Mod.WB (SB)
1.  ni/ni
   ni (/ni/) `to accord'
2.  (`ac-) ni (/ni/niy/niy)
   ni (/ni/) `younger brother'
3.  ni-ma (/ni-ma) ~ ni-ma
   ( /nim-ma) ni-ma (/nimá/) `younger sister'
4.  nhí
   nhí (/ñí/) `to kindle, ignite; to smooth'
5.  nhán (/ñhyan) ~ nhén
   nhán2 (/ñhín/) `reed, organ'
6.  nhán-chay ~ nhyan-chay
   nhán-chay2 (/ñhín(zè)/) `to hurt, injure, oppress'

2.2 Rhymes

2.1.1 Open Rhymes

The most notable changes are OWB -iy and -uy to MWB -e and -we, which appear to have been completed toward the end of 15C. They apparently reflect sound changes that occurred in between OB and MB. All other orthographic changes of vocalic rhymes, which include those in -y and -w, were simply to eliminate variant spellings in OWB through MWB to EMod.WB, such as -uiw~-ui > Mod.WB -ui and -o (w) ~ -aw~-au > Mod.WB -o, but -ay~-ai interchange is retained to date, the use of the former being restricted to rhymes with tone 1, while the latter, to rhymes with either tone 2 or tone 3. It should be noted, however, that their distinct use was established only recently. The details of these orthographic changes are mentioned in (Nishi 1997). For the variant spellings of OWB -iy, see Luce’s comment in (Nishi 1997: 984). I remarked: ‘the varied spellings of the standard -iy regularly converged into -e in contrast to -i’ in (Nishi 1997: 990), but in SB and Arakanese there occurred sporadic and extensive mergers of OB -iy (Mod.WB -e) with OB /Mod.WB -i (Bradley 1985; Okell 1995). The same merger is also sporadically observed in other dialects. In the Tavoyan dialect OB -uy (> -wyi) generally changed to -wi. It is apparent that OB -iy has followed a different course of development in spoken Burmese.

Examples: 1. OWB -iy: Mod.WB -e,
   2. OWB-uy: Mod.WB -we

<table>
<thead>
<tr>
<th>1. OWB</th>
<th>Mod.WB</th>
<th>SB</th>
</tr>
</thead>
<tbody>
<tr>
<td>kiy</td>
<td>kye²</td>
<td>/cè/</td>
</tr>
<tr>
<td>kriy</td>
<td>kre²</td>
<td>/cè/</td>
</tr>
<tr>
<td>khliy</td>
<td>khye²</td>
<td>/chi/</td>
</tr>
<tr>
<td>ciy’</td>
<td>ce³</td>
<td>/sè/</td>
</tr>
<tr>
<td>niy’</td>
<td>ne³</td>
<td>/né/</td>
</tr>
<tr>
<td>ply</td>
<td>pe²</td>
<td>/pè/</td>
</tr>
<tr>
<td>ply</td>
<td>pre²</td>
<td>/pyè/</td>
</tr>
</tbody>
</table>
The most puzzling vowel in OB is -e, which is attested in five native Burmese words: -'e' (~-ye'/y_) {-'i'} (SB /-i/) (OB) genitive noun suffix; verbal expletive, 'e' (-kham) {'e^n3(-sa^n)} (SB /e(d^e)/) ‘stranger, guest’, -te(h/h) (~-ta^n) {-ta^n2} [SB /-di/] ‘only (after numerals), no more than’, -nhe(h) {-na^n2} [SB /-ni/] ?, question mark final’, and -le(h/h) ~-la^n (~-le^n) {-la^n2} (SB /-li/) ‘also (suffix)’. Though Duroiselle transliterates ’e as {'i3} (a), which is now generally followed, we should perhaps transliterate it as {'e3}, as its logograph still clearly retains the shape of the vowel letter {'e} (a). Interestingly, an archaic spelling of the logograph is {'e^n3}, and hence all the four words have later WB forms in -a^n/-e^n, and, as far as {-ta^n2} and {-la^n2} are concerned, they were already spelled as -ta^n and -la^n as well in OB though -ta^n is not, and -la^n is rarely, found in the pre-Standard period. We should also note that the corresponding spoken forms in SB all seem to have /-e/, thus, {'e^3}: /-ye/ (~/-ke/~/?_), {-ta^n2}: /-th^e/, {-na^n2}: /be(h) ne/, and {-la^n2}: /-le/. For the diglossic situation in SB, see (Nishi 1997: 981). The corresponding vowel symbol -e was also used as an alternative vowel of -a- or -ya- in native Burmese words as well as in Pali and Sanskrit loans in OB.

Examples:

phae~phlec {phyac} ‘to become’
phac~phyek {phyak} ‘to destroy’
tae~tee {tie} {tae~ta~} ‘one’
{('a)nhac} {(a)nhec} ‘year’
khya~khet {kyac} ‘to love’
khya~khyak {khyak} ‘to cook’
rhec~het~yhet {rhac} ‘eight’
{na^n3} {na^n} ‘night’
kyaa~kye~en {kyan} ‘to practice’
kyaa~khyak~khe~en ‘companion’
lhae~lhae lhen ‘verily, indeed’
Conversely, two commonly used words, now spelled in -e had the rhyme -(w)an in OB: klañ-jo (klañ-co) {kye²-jü²} [SB /cēzu/] ‘grace; favour; gratitude’ and kl (w)an. {kye²} [SB /cwe/] ‘feed; serve guests; minister to’. Though we do not know the provenance of {kye²-jü²} yet, it is found in the Myazedi inscription. This change in spelling of the rhyme is yet inexplicable.

2.2.3 OB -yat, -yan

As I wrote in (Nishi 1997), the under-differentiated rhyme -an was perplexing to most TB scholars until the early 1970’s. The distinctive use of -â (‘small’ â) for the nasal rhyme, which may be rarely found in OB inscriptions, would not have helped them to solve the problem, but seems to have brought about more confusion. While the purpose of my paper (1974) was to explain the Proto-Lolo (Yi/Yipho)-Burmese (PLB) source of OB -(y) at, I also mentioned a parallel development of PLB *(y) an, which phonologically never merged with the vocalic finals represented by -â. However, they orthographically merged toward the end of the OB period and remained so until recently, though the simultaneous use of a distinctive written rhyme -â for this rhyme began probably as early as Late OB.

1. OB -(y) at (-ec/-ac): Mod.WB -ac (SB /iʔ/)

   OB
   1. mryat~mrac (‘a-) mrac (/a myʔ/) ‘root, origin’
   2. cat cac (/siʔ/) ‘to sift; sieve’
   3. āhat āhac (/hniʔ/) ‘to squeeze’
   4. tan-kyat~tan-kyac tan-kyac (/dajʔ/) ‘pattern (woven or painted’
   5. khyat (/khet) khyac (/chʔ/) ‘to love’
   6. hyat~het~yah~rhac~rhec rhac (/sʔ/) ‘eight’

2. OB -(y) an (/en): Mod.WB ân (SB /iʔ/)

   OB
   1. pyan~pyân~pyen pyañ (/pyin/) ‘plank, slab, flat surface’
   2. (kriy) phyan (kre² phyañana (/cë phyin/) ‘large pot, caldron’
   3. myak-can myak-cañ² (/myësîn/) ‘eye-salve’
   4. can cañ³ (/sîn/) ‘glaze, glazed’
   5. ‘a-can (-can) ’a-cañ² (/sîn/) ‘in a row, in succession’
   6. ānan~ān ānañ³ (/ān/) ‘night’
   7. nhyan-chay~nhyan-chay ān˜hæn²-chai (/hñizë/) ‘to hurt, injure, oppress’
   8. kryañ krañ (/cëni/) ‘to shun, avoid’
   9. khyan khyañ (/chëni/) ‘sour’
   10. yan yan (/yin/) ‘tamed; tame’
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11. yhan—hyan  \( \text{rhan}^2 (/\text{sin}/) \) 'yoke (of cattle); yoked with'

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In (Nishi 1976) I concluded: ‘[W]e cannot but continue to use \( \text{WrB} = \text{WB} \) forms for our researches related to Burmese, as only a limited number of \( \text{OB} \) forms are and will be available. But one thing clear is that caution must be taken against our having easy recourse to modern dictionary forms as \( \text{WrB} \) forms’.

One of the questions I had about Burmese when I wrote that paper was: What do \( \text{WB} \) forms represent? \([\text{Mod.}]\text{WB} \) forms registered in modern Burmese dictionaries, above all in Judson’s Burmese-English dictionary, or more precisely, their transliterated forms, had already been used for comparative studies with other \( \text{TB}/\text{ST} \) languages for years. In such studies, the transliterated forms are usually used as if they were phonemic transcriptions based on an earlier form of Burmese though some scholars arbitrarily added some modifications to Duroiselle’s transliterations. Thus, Wolfenden and Benedict transliterated \( \text{WB} \) c, ch as ts, tsh.

Scholars had already noticed for years, for instance, that some \( \text{OB} \) inscrip- tional forms had l’s where the corresponding \( \text{WB} \) forms had r’s or y’s. Many problems about the relationships between \( \text{OB} \) and \( \text{WB} \) forms, and the reconstruction of Proto-Burmese, were discussed by a number of scholars until the 1970’s. However, interest in Burmese and Proto-Burmese seems to have receded in the 1980’s. This may be due to the fact that the higher-level reconstructions of \( \text{PLB} \), though based on limited data, were successfully done by such scholars as Matisoff (1970; 1972; 1991), Bradley (1979), and Thurgood (1977).

An attempt to reconstruct \( \text{PLB} \) had already been made by Burling (1967) before the 1970’s, based on the comparison of three Burmish and three Loloish languages. However, his \( \text{PLB} \) was severely criticized by others (esp. Miller and Matisoff), and was indeed a failure. The first and foremost reason for his failure was, as rightly pointed out by the reviewers, that he used modern Standard Burmese forms for comparison, dismissing \( \text{WB} \) or \( \text{OB} \) forms, insisting: ‘it has been assumed with little evidence that the orthography reflects earlier characteristics’ of Burmese. Miller’s comment (1970: 148) on this remark of Burling is certainly right, but perhaps a little too harsh as usual. Miller blamed him for dismissing inscriptive and documentary data for earlier Burmese forms and all the published works on them, which were available to him at the time. Indeed, evidence of all kinds, comparative, diaectal, documentary and inscriptive, had shown that the \( \text{OB} \) and \( \text{WB} \) forms, or rather those modern dictionary forms transliterated in the Roman alphabet in accordance with Duroiselle’s method, could generally be taken as the earlier forms of Burmese,

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Table 1. Ideational Scheme of the Development of WB and CB (Nishi 1997; 1976)

(In (Nishi 1976) WB is distinguished from OB. Now, the writing systems of all periods are called WB. SWB = Standard WB.)

<table>
<thead>
<tr>
<th>Dynasties</th>
<th>11C</th>
<th>12C</th>
<th>13C</th>
<th>14C</th>
<th>15C</th>
<th>16C</th>
<th>17C</th>
<th>18C</th>
<th>19C</th>
<th>20C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pagan</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>Myin.*</td>
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<td></td>
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<td>Ava</td>
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<td>Toungoo</td>
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<tr>
<td>Konbaung</td>
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<td></td>
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<tr>
<td>(British)</td>
<td></td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>Pinya</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sagain</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

[SWB] [OWB] [MWB] [EMod.WB] [Mod.WB]
written form (High Variety)

[CB] [Pre-OB] [OB] [MB] [EMod.B] [SB (CB)]
spoken form (Low Variety)

stable
stable
stable
stable

[Branching of dialects]

Taungyo Tavoyan Yaw Arakanese
Intha
? Danu (*Myin. for Myinsaing.)

though it was not as solid as Miller claimed that it was. Much of the reliable evidence on OB and WB forms was in fact yet to be provided in and after the 1970's, through more careful analyses of OB inscriptive data and Chinese phonetic transliterations of MTA and MTB, and with more extensive dialectal data supplied, as well as by the reconstructions of PLB made by the aforementioned scholars, where WB forms, with occasional references to OB forms, were made proper use of to represent Burmese.

The above diagram shows my view on the development of Burmese and WB from OB to Mod.B times. In this tentative scheme the writing systems of all periods are called WB. The common usage of this term refers to modern dictionary forms. However, when speaking of the language of WB, or the phonemic system of WB, some scholars actually alludes to OB. For instance, see (Pulleyblank 1963). This usage is also acceptable. It is clear that the transliterated forms of modern dictionary forms, or what is usually referred to as WB, still retain many of the features of the phonemic system of OB in spite of such orthographic changes which actually reflect later phonemic changes, as K- > Ky-(-/i(C))/[EMod.WB], ry- > r-[MWB], -l- > r/-y-[MWB], -iy- > e[MWB], -uy- > -we[MWB], -(y)at- > -ac[MWB], -(y)an- > -an[t[MWB] > -an, though many phonemic changes are concealed in WB which took place after MB because of the nature of the alphabet and orthography of Burmese. The basic letters of this alphabet are syllabic, and the writing system of Burmese (orthography) is so contrived as to represent initials and rhymes as separate units. As long as correspondences between spellings and pronunciations somehow remain regular, the writing system as a whole is left untouched*. The phonemic system which might have been closest to what WB (= Mod.WB)
Nishi Old Burmese

represents would be that of MB, which can be inferred on the basis of MWB and Chinese phonetic transcriptions of MTA, though many ambiguities remain as to the rhymes of MB, but they are not the same. We should thus bear in mind when we cite modern dictionary forms as WB for comparative studies that what they represent is the amalgamated system of those of different periods from OB through MB to EMod.B.

4 OLD BURMESE

Evidence from all sources, inscriptive, documentary, dialectal and comparative, suggests that the consonantal system of OB is very close to what we can guess at through its Roman transliteration devised by Duroiselle on the basis of the Pāli system of writing, with those letters and combinations of letters associated with non-native Burmese forms excluded. So, for instance, the palatal series of letters, of which only c (ɔ), ch (ɔ) were generally used for native Burmese words in OWB, represented palatal, probably alveolo-palatal sounds. It can be inferred that Proto-Burmish (PBsh) *palatal and *alveolar affricates (*c, *ʔc, *j and *ts, *ʔts, *dz) merged into alveolo-palatal affricates (*j/*ʔdz > tc and *c/*ʔc/*ts/*ʔts > tch, transliterated as c and ch) some time during the OB period, for which see (Nishi 1974: 015–016; 1997: 991–992, fn.6). They seem to have remained as such probably until the middle of the eighteenth century, which is suggested by phonetic transliterations using Chinese characters in MTA and MTB. On the basis of some contemporaneous records by Europeans (documentary evidence), Bradley suggests that the changes ts, tsh, dz (Central Burmese = CB) and tc, tch, dz (Arakanese) to s, sh, z occurred in both Burmese, Arakanese, and other dialects after 1798, while s > θ took place in CB around 1780 and Arakanese after 1798 (Bradley 1985: 197–198). Indeed, Marma, a branch of Arakanese, still retains tc, tch, dz. Bradley contends that Burmese seemingly had alveolar, not alveolo-papatal affricates, but as I have just shown above, Burmese must have had alveolo-palatal affricates. Up to Middle Burmese, the Burmese consonantal system seems to have remained almost intact except for the change of -l- to -r- or -y-. The Great Consonantal Shift in Burmese, which eventually yields SB, through a series of consonantal changes took place probably between early or mid 18C and early 19C. It includes the changes, (1) tc, tch > ts, tsh, (2) ts, tsh > s, sh, (3) s > θ, (4) Cr- > Cy-, (5) Ky-, (which includes K- (/i(C)) > Ky-) > Tc-, (6) r- > y-. This series of consonantal changes resulted in the restructuring of the consonantal system of Middle Burmese. It is clear that some of these changes must have been ordered changes, thus, (3) must have been prior to (2), (1) to (5), and the like. Besides, it is probably during this period that the voiced series of obstruents and the first voicing rule (voiceless unaspirates > voiced/ V-V, for which see (Nishi 1998)), may have been introduced in SB. However, it
must also be borne in mind that the ongoing changes may not have been as neat as the above scheme shows. It is, for instance, seen in some dialects that changes seem to affect aspirates prior to non-aspirates. Thus, tsh- > sh- may have preceded ts- > s-, and the like. The medial -r- must have changed to -y- before the change of r- to y-. In the following, I will examine what has been known or maintained about the phonemic system of OB in some detail.

4.1 Initials
4.1.1 Voiced Stops and Affricates
In OB all the letters for voiced stops (and affricates) [hereafter voiced letters] were found to be adopted for spelling words of Sanskrit or Pāli origin, inclusive of their hybrid forms, whether they were loanwords or learned words. Some of the voiced letters, such as g-, dh-, b-, and bh-, were also used for writing native Burmese words throughout OB times though only sporadically. Thus, this, when combined with the fact that voiced stop (and affricate) initials of some native Burmese words in SB correspond to those in regional dialects like Arakanese and Tavoyan may lead us to suspect that voiced stops and affricates were contrastive in OB. However, this may not be the case, since the use of voiced letters for native Burmese words is never consistent in OB, except for the case which I mentioned in (1998: 1980, note 8) and decreases to almost zero in MWB. Above all, the fact that Intha, Major and Minor Taungyo have no voiced stops and affricates in their phoneme inventory definitely suggest that OB did not have voiced stops and affricates. Further, as is shown in the following table (Table 2), Burmese words, with voiced initials in SB, both native and old loan words, have the corresponding voiceless initials in Intha, Taungyo and Yaw, though Yaw seems to have replaced some of the original forms with their SB cognates with voiced initials. Here the evidence afforded by Yaw is more important, since it appears to have branched off later than OB times on linguistic evidence, while the other dialects may have separated from Burmese before OB times (= Pre-OB times).

4.1.2 Medials
The main aim of (Nishi 1976) was to show that we could establish regular correspondences between OB, WB and CB (= SB) medials. I maintained there that variations in OB spellings may be considered as subphonemic variations, reflecting sound changes, or as dialectal variations of the time, while variations in WB spellings found in MTB and modern dictionary forms could be scribes’ errors, brought about by confusion due to the merger of the medials -r- and -y- in the [Early] Modern Burmese period. On the other hand, no such confusion is seen in MTA, which, I think, I rightly assumed to represent the Standard Written Burmese of the time, MWB. Indeed, it had already been known that Arakanese retains the earlier r- and -r-, while Tavoyan preserves the earlier -l-,
Table 2. Correspondences of SB Voiced Initials among Burmese Dialects  
(Abbreviations: ARA = Arakanese, TAV = Tavoyan, INT = Intha, TAU = Taungyo)

<table>
<thead>
<tr>
<th>WB</th>
<th>SB</th>
<th>YAW</th>
<th>ARA</th>
<th>TAV</th>
<th>INT</th>
<th>TAU</th>
</tr>
</thead>
<tbody>
<tr>
<td>head</td>
<td>khon²</td>
<td>/gau/</td>
<td>/khaw/</td>
<td>/gaun/</td>
<td>/khin/</td>
<td>/khin/</td>
</tr>
<tr>
<td>stone</td>
<td>khai</td>
<td>/kt/</td>
<td>/kh/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>horn</td>
<td>khy/rui</td>
<td>/jo/</td>
<td>/kho/</td>
<td>/go/</td>
<td></td>
<td>/tachv/</td>
</tr>
<tr>
<td>hook</td>
<td>khyit</td>
<td>/jei/</td>
<td>/chai/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>excrement</td>
<td>khye²</td>
<td>/ji/</td>
<td></td>
<td>/khie/</td>
<td>/khie/</td>
<td></td>
</tr>
<tr>
<td>ginger</td>
<td>khyan¹</td>
<td>/jim/</td>
<td></td>
<td>/jin/</td>
<td>/khlezin/</td>
<td></td>
</tr>
<tr>
<td>pot-hole</td>
<td>khyuin¹</td>
<td>/jian/</td>
<td></td>
<td>/chien/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>peacock</td>
<td>don²</td>
<td>/dau/</td>
<td></td>
<td>/thin/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>knife</td>
<td>dha²</td>
<td>/da/</td>
<td>/tha/</td>
<td>/da/</td>
<td>/tha/</td>
<td>/tha/</td>
</tr>
<tr>
<td>wild plum</td>
<td>chi²-si²</td>
<td>/zi/</td>
<td>/shie/</td>
<td>/zhe²</td>
<td>/shi²</td>
<td>/shi²</td>
</tr>
<tr>
<td>gourd</td>
<td>bu²-si²</td>
<td>/budi/</td>
<td>/bod/</td>
<td>/phu/</td>
<td>/phu²/</td>
<td></td>
</tr>
<tr>
<td>belly</td>
<td>(wum²-buik)</td>
<td>/bai²/</td>
<td>/winphai²/</td>
<td>/pha²/</td>
<td>/khlepha²/</td>
<td></td>
</tr>
<tr>
<td>opium</td>
<td>bhin²</td>
<td>/bein/</td>
<td>/bein/</td>
<td>/puinpa/</td>
<td>/puinpa/</td>
<td></td>
</tr>
<tr>
<td>wheel</td>
<td>bhi²</td>
<td>/bein/</td>
<td></td>
<td>/pui²/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>market</td>
<td>jhe²</td>
<td>/ze²</td>
<td>/zi²</td>
<td>/she²</td>
<td>/she²</td>
<td>/she²</td>
</tr>
<tr>
<td>what</td>
<td>bha</td>
<td>/ba/</td>
<td>/pha/</td>
<td>—</td>
<td>/pya/</td>
<td>—</td>
</tr>
<tr>
<td>which, where</td>
<td>bhay</td>
<td>/be/</td>
<td>/phe/-/pha/-</td>
<td>—</td>
<td>/phe²/</td>
<td>/phe²/</td>
</tr>
<tr>
<td>trousers</td>
<td>bon²-bi</td>
<td>/baunbi/</td>
<td>/penphi²/</td>
<td>/penphi²/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>stick of wood</td>
<td>tut</td>
<td>/dou²/</td>
<td>/dou²/</td>
<td>/tou²/</td>
<td>/twi²/</td>
<td></td>
</tr>
<tr>
<td>duck</td>
<td>bhai—toom²-pai</td>
<td>/ba/tée/</td>
<td>/be/</td>
<td>/phé²/</td>
<td>/phé²/</td>
<td></td>
</tr>
<tr>
<td>knee</td>
<td>du²</td>
<td>/da/</td>
<td>/da/</td>
<td>/tú/</td>
<td>/tukhu²/</td>
<td></td>
</tr>
<tr>
<td>this</td>
<td>[sa]</td>
<td>/di/</td>
<td>/tè~túa/</td>
<td>/de/</td>
<td>/te/</td>
<td>—</td>
</tr>
<tr>
<td>between</td>
<td>kra²</td>
<td>/já/</td>
<td>/já/</td>
<td>/já/</td>
<td>/ták/</td>
<td></td>
</tr>
</tbody>
</table>

though data on these dialects were by no means sufficient at the time. We now have more data on these dialects, along with more reliable data on two other interesting dialects, Intha and Taungyo. It should be noted, however, that the ongoing changes in regional dialects are quite often disturbed by the interference of the dominant standard variety, yielding variant forms. Even changed forms are quite often replaced by the corresponding forms of the standard variety.

Further, hypercorrection⁸ often makes the picture more complicated (Okell 1971; 1995).

This is what actually occurred or is occurring in all the regional dialects of Burmese. As a result, some correspondences among dialects may appear quite irregular. Besides, there are always some residues which cannot be easily explained⁹).

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Table 3. Correspondences of OB Velar and Bilabial Clusters with those of WB, SB, Arakanese, Tavoyan, Intha and Minor Taungyo.
(P and M represent bilabial stops (p/ph) and nasals (m/hm), respectively.)

<table>
<thead>
<tr>
<th></th>
<th>SB</th>
<th>OB</th>
<th>WB</th>
<th>ARA</th>
<th>TAV</th>
<th>INT*</th>
<th>TAU**</th>
</tr>
</thead>
<tbody>
<tr>
<td>c-</td>
<td>kr-</td>
<td>kr-</td>
<td>kr-</td>
<td>c-</td>
<td>c-</td>
<td>c-~kl- (rare)</td>
<td></td>
</tr>
<tr>
<td>ky-</td>
<td>ky-</td>
<td>c-</td>
<td>c-</td>
<td>c-</td>
<td>c-</td>
<td>k1-~c- (rare)</td>
<td></td>
</tr>
<tr>
<td>k-/i_ (C)</td>
<td>k1-</td>
<td>k1-</td>
<td>k1-</td>
<td>k1-</td>
<td>k1-</td>
<td>k1-~c- (rare)</td>
<td></td>
</tr>
<tr>
<td>ch-</td>
<td>khr-</td>
<td>khr-</td>
<td>khr-</td>
<td>ch-</td>
<td>s-~ch-</td>
<td>ch-~khl- (rare)</td>
<td></td>
</tr>
<tr>
<td>khy</td>
<td>khy-</td>
<td>s-</td>
<td>s-</td>
<td>s-</td>
<td>s-</td>
<td>s-~ch-</td>
<td></td>
</tr>
<tr>
<td>kh-/i_ (C)</td>
<td>ch-~s-</td>
<td>kh-~ch-</td>
<td>kh-~ch-</td>
<td>ch-~s-</td>
<td>kh-~ch-</td>
<td>kh-~s-~ch-</td>
<td></td>
</tr>
<tr>
<td>Py-</td>
<td>Pr-/Mr-</td>
<td>Pr-/Mr-</td>
<td>Pr-/Mr-</td>
<td>Py-/My-</td>
<td>Py-/My-~by-</td>
<td>Py-/Mr-</td>
<td>Py-/My-</td>
</tr>
<tr>
<td>Pl-/M1-</td>
<td>Pl-/M1-</td>
<td>Pl-/M1-</td>
<td>Pl-/M1-</td>
<td>Pl-/M1-</td>
<td>Pl-/M1-</td>
<td>Pl-/M1-</td>
<td></td>
</tr>
</tbody>
</table>

* Though the examples of /r-/ are rare, /r-/ and /l-/ are contrastive in Intha. However, /-l-/ and /-r-/ freely alternate, though Okell transcribes them with /-l-/.** Similarly, /ml-/ has variants [ml-] and [mr-] in Taungyo.*** There are one or two examples with ch-, alternating with khl-, in the Taungyo forms whose initial corresponds to either OB khy- or khl-.

4.1.3 OB ry-

There is no evidence left for the opposition between OB Ry- (= ry-/rhy-) and R- (= r-/rh-) in their reflexes among Burmese dialects, and the former seems to have merged with the latter. However, as I pointed out in (Nishi 1975b), the Loloish initials corresponding to the former show a very neat and ‘unique’ pattern, as mentioned by Thurgood (1977).

When we add the corresponding Burmish initials to them, it becomes clear

Table 4. Correspondences of OB ry- among some LB Languages
(ACH = Achang, XIA = Xiandao, ZAI = Zaiwa, LEQ = Leqi, LAN = Langsu, BOL = Bola)

<table>
<thead>
<tr>
<th></th>
<th>OB</th>
<th>ACH</th>
<th>XIA</th>
<th>ZAI</th>
<th>LEQ</th>
<th>LAN</th>
<th>BOL</th>
<th>HANI</th>
<th>LAHU</th>
<th>LISU</th>
<th>SANI</th>
</tr>
</thead>
<tbody>
<tr>
<td>hundred</td>
<td>ryä</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(paddy) fields</td>
<td>ryä</td>
<td>z035</td>
<td>j052</td>
<td>j051</td>
<td>fo31</td>
<td>jo31</td>
<td>jo31</td>
<td>j051</td>
<td>j051</td>
<td>j051</td>
<td>j051</td>
</tr>
<tr>
<td>day, night</td>
<td>ryak</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>to stand</td>
<td>rhyap</td>
<td>z035</td>
<td>j035</td>
<td>j035</td>
<td>j035</td>
<td>fa33</td>
<td>fa33</td>
<td>fa33</td>
<td>fa33</td>
<td>fa33</td>
<td>fa33</td>
</tr>
<tr>
<td>eight</td>
<td>rhyat</td>
<td>z035</td>
<td>z035</td>
<td>z035</td>
<td>z035</td>
<td>j035</td>
<td>j035</td>
<td>j035</td>
<td>j035</td>
<td>j035</td>
<td>j035</td>
</tr>
<tr>
<td>cf.</td>
<td>get, gain</td>
<td>ra zb35</td>
<td>z035</td>
<td>vo35</td>
<td>—</td>
<td>ya31</td>
<td>ya31</td>
<td>ya31</td>
<td>ya31</td>
<td>ya31</td>
<td>ya31</td>
</tr>
<tr>
<td>search</td>
<td>rha</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>
| right | ya | z035 | z035 | j035 | j035 | j035 | j035 | j035 | j035 | j035 | j035 | 674
that Rh- merged with Y- rather than R- in other Lolo-Burmese languages. On this evidence we may reconstruct PBsh *ry- and *Try- as the sources of OB ry- and rhy-.

4.1.4 OB rh-~h-~yh~sy-

From the orthographic interchanges of ‘eight’ we may infer an OB variable (rh-), probably with variants [j]~[c]~[c]. Since PBsh *s- and *?-merged into *s- in OB, the only other possible source of [c] (orthographic sy- and hy-) in OB could be PBsh *ry-. However, I have not yet found any cognates whose initial derives from PBsh *ry-. So, there is no way to know whether the WB initials rh- in WB rhañ ‘yoke’ for OB yhan and WB sya ‘scarce, few’ for OB sya are not etymological, or ‘due to respelling of some words’ with the initial ‘[c] in Burmese with rh’, as suggested by Bradley (1985: 197) for ‘eight’. Similarly, in spite of MTA (MB) rhi and Benedict’s equation of it with WT srid-, we cannot ascertain the claim that OB hiy’ (/hiy) ~hi (/hi’) ‘be’ is the result of respelling, supposing that the Arakanese variant [ii] represents ‘a [non-etymological] spelling-influenced’ pronunciation (Bradley 1985: 186). The same holds true of OB (’a-)hin ‘heat, power’. However, we should also note that both [c] and [c] were included within the assumed range of the variable (rh-). I tentatively suggest to posit OB /hya2/ {OWB sya}, /hyag/ {hyan}, /hyum2/ {yhum}, /hi’/ {hí} ~ /hiy’/ {hiy} and / (a) hin/ { (’a)hin}.

4.1.5 OB ñ-~ñ-

The orthographic variations ñ-~ñ- and ñh~ñh- indicate that there was no contrast between the velar and alveolo-palatal nasals in front of -i and -y in OB. All the examples given in 2.1.4 are spelled with the alveolo-palatal initials ñ- and ñh-. It is clear that /g-/ or /g-/ are not contrastive before /i/ and /y/, which share palatality, and, generally, /i/ and /yi/ are not contrastive in OB as well as in PBsh. Therefore, we may posit either /g-/ (/i) and /gy-/ (otherwise) or /ñ-/ for all the examples given there. It appears that /i/ and /yi/ remained non-contrastive in MB, hence MTA nin-ma ‘wife of father’s younger brother’ (MTA 213) (cf. OB ñi-ma~ñi-ma~ñim-ma: WB ñi-ma: CB /ñimá/ ‘a woman’s younger sister’) and MTA ñi ‘younger brother’ (MTA 204) (cf. OB ñi~ñi: WBñi: CB /ñi/ ‘a man’s younger brother’). For -n in ñin (-ma), cf. -n in WB min~(-ma) (OB mi-ma~mim~(-ma): CB /mèin (má) / ‘woman’ < PBsh *mif ’female’).

4.2 Rhymes

OB rhymes have been inferred or reconstructed by several ST/TB scholars up to the 1970’s mostly on graphic, distributional and comparative evidence. Though Jones attributes to Pre-OB times the system of vowels and final consonants (=rhymes) he inferred, it is actually based on the data provided by the
Lokhahteikpan ink writings, and thus belongs to what I call Early OB or the pre-Standard OB, while the system of rhymes reconstructed by Nishida (1972) is that of the Myazedi inscription. Both Pulleyblank and Gong take into account the Myazedi inscription, but generally base their inference on OWB.

They all rely more on the correspondences between OB and SB(CB) rhymes, noting the parallel developments observed between OB -iy (: WB -e: SB /-e/) and -uy (: WB -we: SB /-we/), -iy and -uiw (: WB -ui: SB /-o/), and -ay~-ai (: WB -ay~-ai: SB /-e/) and -aw~-au~-o (: WB -o: SB /a/), and give consideration to correspondences between OB and Written Tibetan rhymes, and Pulleyblank, between OB and Chinese (Middle Chinese) as well. All of them but Nishida are concerned with setting up the phonemic system of OB rhymes. Nishida\(^{12}\) neither distinguished segmental from suprasegmental (here tonal) elements, length marking (-a, -i and -u), and *", of letters, nor paid any attention to the fact that some variant spellings are graphically in complementary distribution. Thus, he inferred slightly different values for each of the sets of variant spellings (hereafter, a set of variant spellings being referred to as a [graphic variable], -iw~eiw~uiw (= -u), -i'~ei' (= -u), and -ei'~ui' (= -u). However, it is clear that the first variable occurs with tone 1 (and tone 2), while the second and third variables, sharing the same graphic variant -i', as a whole occur with tone 3 (= *"), that is, the former variable is in complementary distribution with the latter, and hence his ui, ui and u must be interpreted to be allophones of the same phoneme /u/.. Similarly, his [e] (= -e') and [äñ] (= -eh) are graphically complementarily distributed, and hence allophones of the same phoneme /a/.. Another feature of his method of inference, which is distinct from the others, is that he took into consideration the languages of MTA and MTB, representing the intermediate stages of the development of Burmese, MB and EMod.B. However, I think that his interpretation of the Chinese phonetic transcriptions of MTA and MTB as a whole needs careful reexamination.

Jones, disregarding previous studies done by others, esp. Shafer and Benedict, made a serious mistake by interpreting -uij and -uiik as /-ij/ and /-ik/ to fill distributional gaps in the system of OB rhymes. As rightly inferred by the other scholars, these gaps resulted from the changes *-in, *-iñ > OB -an and *-ik > OB -ac. As I explained in (Nishi 1997:983-984), the TB provenance of the written rhymes, -uij and -uiik has long been suspected to occur only in loans, and, for this reason, Gong preferred to leave them out of consideration. Indeed, one of the most disputed problems of OB is the interpretation of OB -ui-, which is found with many variant spellings in the pre-Standard period.

In the comparative table, I add what could be Benedict's interpretation of the system of OB rhymes. All but a few scattered remarks of Benedict on Burmese in STC refer to WB. Though I am not sure that he really understood the nature of WB, most of these remarks on phonemic interpretations of
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| Table 5. Comparative List of OB Rhymes inferred/reconstructed so far |
‘Burmese’ would apply, in my opinion, to OB rather than WB. Thus, we can
guess the system of OB rhymes he might have had in mind on the basis of his
particular remarks on inscriptional Burmese and Burmese13) by placing OB in
between his PTB and WB.

As I mentioned in (Nishi 1997), variations in spelling OB rhymes we en-
counter, such as -i~-iy, -uo~-o~-u, -i(C)~-u(C)~-ei(C)~-ui(C), -(y)
eC~-yaC, and -(w)o(C)~-wa(C), are gradually unified into OWB -iy, -u,
-ui(C), -ya(C) and -wa(C). It may be significant to note that apart from the
Lokahteikpan ink writings and Maung Khitsa votive tablets (plaques), whose
dates are not known, such variations are rather consistently and sometimes
quite regularly found only in the Myazedi, Thetso Taung (undated, but pre-
sumed to be the earliest on some grounds) and Ngatilattin (dated 1120 AD) in-
scriptions, and are sporadically and less frequently found onlY in the Myazedi,
The most of these variations may be considered to have reflected overdifferentiation,
or underdifferentiation of phonemes. Therefore, the orthographic standardization of OB may probably be regarded
as an attempt at the overall 'phonemicization' of the writing system of the time
through the reanalysis of such variations.

Apart from that inferred by Nishida, the systems of OB rhymes postited by
the others share much in common. The latter all place more emphasis on
distributional symmetry or pattern congruity of their system. Benedict seems
to have assumed -wiy for OB -uy. This interpretation results in asymmetry in the
distribution of u, which can be solved by analysing it as wi as is done by
Pulleyblank. In this connection, it is interesting to note that a number of ex-
amples is found where -uy is spelled as -wiy or -uiy in some inscriptions of the
transitory period from OB to MB. Thus, if OB alone is considered, without
regard to its relationships with Written Tibetan or the higher-level proto-
languages, we may assume a series of changes OB -uy > -wiy > MB -we. This inter-
pretation conforms better to my assumption of OWB as the overall
'phonemicization' of the writing system of the time. If we accept Benedict’s
reconstruction of PTB *-wiy (= *-way), this would be an unlikely change. Or
could we reconstruct PTB *-uy for Benedict’s *-wiy? As for Pulleyblank’s
analysis of OB u as a whole as wi, it does not seem to have any merit except for
reducing the number of phonemes. This kind of analysis was once in vogue in
the prime of structural linguistics. As an afterthought, however, whether we in-
terprete u as such or as wi is only a difference in the level of analysis and
economy. It is usually the case that economy in inventory brings about less
economy in other parts of the system. Anyway, I do not think that the latter
analysis would yield more explanatory power for the later history of Burmese.

As for -ui- in OWB, the simplest interpretation from the point of view of
the symmetry of the system is that of Benedict, which regards it as representing
a conditioned variant of -u (`mid unrounded'). Gong suggests the earlier value of this digraph in the Myazedi inscription as /-ui/ (>/*-uw/), considering its correspondences with Old Chinese -ug and WT -u as well as its parallel development to SB /o/ with OB /-iy/>SB /e/. Referring to the same parallelism, Pulleyblank proposes to interpret this ui as /iw/, but he concedes that its development to [aiʔ] and [aiŋ] requires some separate explanation. Indeed, as Duroiselle himself admits, the digraph can be transliterated as either ui or iu. Bradley, based on its ‘universal realization of [o] in all Burmese dialects and the early Chinese representations with ‘u’ and ‘ou’, he suggests that the likely value of this digraph ui in early Burmese was something like [o], which was exactly parallel to WB e. To support this, he further refers to the parallel reconstructions of PTB *uw (= *aw) and *iy (= *ay) by Benedict as well as Proto-Loloish *o and *e by himself (1985: 189). He even claims: ‘The uik and uin rhymes are pronounced in nearly all dialects of Burmese as [aiʔ] and [aiŋ]; Arakanese is no exception. It is probably a mistake to connect ui, formerly written uiw, to these rhymes; the similarity may be simply an orthographic convention’. (1985: 193) It is now found that ui is not universally realized as [o] in all Burmese dialects. Taungyo is an exception, which has /s/ for WB ui, though this would not afford any hindrance to his claim. We can now add the corresponding reflexes of other Burmish languages as further data to be taken into consideration here.

<table>
<thead>
<tr>
<th>OB</th>
<th>Achang</th>
<th>Xiandao</th>
<th>Zaiwa</th>
<th>Leqi</th>
<th>Langsu</th>
<th>Bola</th>
</tr>
</thead>
<tbody>
<tr>
<td>-uiw</td>
<td>-au</td>
<td>-au</td>
<td>-ui( /j, *r/ ) ~ au</td>
<td>-ou(nouns) ~ au</td>
<td>-uk</td>
<td>u( /j, *r/ ) ~ au</td>
</tr>
<tr>
<td></td>
<td>/-au(verbs, adjectives)</td>
<td>~ au</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-iy</td>
<td>i</td>
<td>-ai( /l, n_ ) ~ -i</td>
<td>-ai( /l, n_ ) ~ -i</td>
<td>-i( ? ) ~ -ai( ? ) ~ ak( / *r/ )</td>
<td>-a( /l, n_ ) ~ -ak</td>
<td>-ai/ i/ ui(m, l,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>~ -e/ /ei</td>
<td>/-ak( / *r/ ) ~ -i k</td>
<td>*r/ *r/</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Conditions of splits of some variants are not very clear yet.)

Such a parallel development as we note in that of OB -uiw and -iy to SB /-o/ and /-e/ is also found in most of these languages. Unfortunately, however, I have not found any sure cognate set for OB forms in -uik and -uin yet. All in all, though the question remains why- ui-( /w/k/ni) was retained even after the first standardization, it appears to me that the best interpretation is Benedict’s.

In 2.2.2, I noted five instances of OB -e, which later orthographically merged with -aŋ ~ -ei. Unfortunately, only Nishida and Jones seem to have paid serious attention to the use of this vowel in Early OB. In OWB, at least two of the examples, -te( h) and -le( h) were already spelled with -aŋ. Of the rest, -e' and -he seem to have been spelled as such throughout OB times, and since the occurrence of 'e' (-kham) is rare, we cannot say anything definite
about this morpheme. Though it may be thus precarious to set up a hypothesis on such meager evidence, I would suggest that this graphic e in fact represented a mid front vowel /e/ ([e]) in Early OB, but was later orthographically integrated into -aŋ, which had already become /e/ at the time of the first orthographic standardization. In parallel with -aŋ, -ac also already became /et/, but its spelling was untouched in the standardization. On the other hand, -e-( [e]) ~ ya-interchange may be interpreted to reflect the range of variation at the time, but the standardization preferred spelling this variable as -ya-. If we can accept this interpretation, we may further infer that OB had /o/ ([ɔ]) (spelled as -o~ow~aw) from the earliest stage. But, for some unknown reasons, OWB preferred using -aw (~au). Later -o came to be restored in the second standardization in MB, but two grammatical morphemes, -lo (WB {-lo}) 'interrogative suffix' and -so (sū~su) (WB {-so}) 'suffix (adjectival, participial, numeral)', which, as with several other grammatical morphemes, seem to have retained their archaic spellings throughout the OB period. By setting up such hypotheses, we can explain some of the interchanges of written rhymes in OB as well as the merger of -e and -aŋ, but the system of OB rhymes becomes less symmetric than those proposed by Pulleyblank, Benedict and Gong.

4.3 Tones

In (Nishi 1997: 986–989 and 993, n. 15), I argued about OB tone marks and the possible interpretation of the use of the finals -h and -h, and -’ in OB. I tentatively proposed the following hypotheses. First, -h and -h represented the phonation type of the preceding vowel, not the segmental -h. Second, the contrast between tones 1 and 2 must have been phonatory at the stage of Pre-OB, which was later transphonologized to pitch contrast in OB, but with some time lag between open and other non-stop rhymes. Since breathy voice in principle lowers the pitch of the vowel, the pitch of this tone was lower than tone 1 with clear or normal voice when the distinction of tones 1 and 2 shifted to pitch contrast in OB. Then, as a corollary to the second hypothesis, I suggested that there occurred a tonal flip-flop in the later history of Burmese.

As for -’ or short (written) vowels represented the glottal stop in OB, which was later weakened to the creaky phonation of the preceding vowel. Further evidence for this interpretation has been offered by Pulleyblank from its Mon usage. Thus, he says:

“One can possibly explain the spelling convention in terms of Mon usage, in which the short vowels were always accompanied by a final glottal stop when not followed by any other final consonant and the final long vowel signs were used only for open syllables in foreign loan words. In Old Burmese a small a was used as a marker for final glottal stop (=creaky tone).” (1963: 215)
On the basis of the tonal or phonatory system thus inferred for pre-OB and, possibly for Early OB as well, I tentatively reconstruct the same phonatory features: modal voice, breathy voice and the glottal stop at the PBsh stage, as there are phonetically plausible correlations between them and Burmish tones.

From the above correspondences we can conclude that the voicing of initials had only secondary effects on the emergence of Burmish tones, and this is also true of stop rhymes.

All stop rhymes in Burmese, Achang (Long-chuan dialect), and Xiandao have one and the same tone, while those in the rest split into high tone (55) if their initials were PBsh *voiceless or *voiceless preglottalized, and low tone (21/31) if otherwise. Therefore, the stop rhymes had no distinctive tones at the stage of PBsh. However, we should also note that there are yet some residues in each Burmish language. Some of them may be misprints, while others may require further consideration.

Notes
1) The method of transliteration adopted here (in Text) is practically identical to Duroiselle's. The only differences are the numbering of tone marks, the use of * for vowel letters, the use of 'e' for his 'i, and -a*<OB -(y) an and -ã<OB -ã for his -ã. The order of tones follows that of Cornyn/McDavid. It is not necessary to mark the tone number for each rhyme since a par-
ticular tone is in many cases assigned to a particular written rhyme. Thus, short open rhymes are always with tone 3, and written stop rhymes always correspond to tone 4 (/ʔ/). The consonant phonemes of SB are transcribed as /p ph b t d th d o ch j k kh g s sh z s h m hm n ii hn hm g hg I hl (r) y w hw/ and the vowel phonemes as /i e a o u; ei ai ou au/, of which diphthongs occur either as nasalized vowels: /ein, ain, oun, aun/ or with the glottal stop or tone 4: /eiʔ, aiʔ, ouʔ, auʔ/. The vowel of atonic syllables is always /a/. There are four distinctive tones. Tone 1 is unmarked, tones 2 and 3 being marked as /`/ and /'/, all of which occur with both open and nasalized rhymes, while tone 4 is the abrupt tone, ending in /ʔ/.

2) There are two Sino-Burmese vocabularies. The earlier one, the Mientienkuan tsatzu (缅甸馆雚宇) [=Mianchianguan zazhi] is supposed to have been compiled sometime between the end of 15C and the beginning of 16C, while the latter one, the Mientien ishu (缅甸譯書) [=Mian- dian yishu], at mid 18C. A detailed study of these two vocabularies was made by Nishida (1972), who distinguished the respective language they represent as the Mientien languages A (MTA) and B (MTB). Nishida reconstructed the phonemic forms of vocabulary entries of both on the basis of the Burmese orthographic forms and the attached Chinese phonetic transcriptions. MTB aside, what was disputable of the phonemic system of MTA, reconstructed by him, was that it could not be an earlier form of SB. It is now clear that we should rely more on Burmese orthographic evidence of MTA than he did. It should be reminded that the Burmese alphabet was originally more phonemic or phonetic, unlike Chinese characters, and remained so in many respects even though the consonantal and vocalic changes that took place in the course of time may often be concealed by the nature of it. (After all, it is not as phonetic as the Roman alphabet.)

3) Though 'u-shyac [s+h+y-] is registered in the Myanmar-English dictionary (1993), 'up-rhac is also found in Mod.WB. We would also expect *'u-rhyat as the OWB form though it is not attested in OB inscriptions.

4) Along with OB hiy'—hi 'be; be alive, have' above, another word with a high frequency of occurrence in OB inscriptions that shows the alternation -iy----i is OB 'iy (/'iy/) ~ 'i (/i/): WB 'i (SB /i/) 'this'. The variant of hiy' seems to occur in equal frequency, while that of the 'iy more frequently at least in earlier OB inscriptions. As for the former, all the dialectal forms show that their rhyme corresponds to OB-i though the Arkanese -i can be derived from either OB -i or OB -iy. However, the Tavoyan rural variant he points to a variant with -iy. I give suspect reflexes or cognates of OB 'iy (?>Arakanese and Danu) ~ 'i (?>Intha) below. However, correspondences between the OB forms and them are irregular either as to their initial or tone both.

<table>
<thead>
<tr>
<th>OB</th>
<th>WB</th>
<th>Yaw</th>
<th>Arakanese</th>
<th>Tavoyan</th>
<th>Intha</th>
<th>Taungyo</th>
<th>Danu</th>
</tr>
</thead>
<tbody>
<tr>
<td>'iy—'i</td>
<td>'i</td>
<td>—</td>
<td>'i</td>
<td>'i</td>
<td>—</td>
<td>?hei</td>
<td></td>
</tr>
<tr>
<td>hiy'—hi</td>
<td>rhi</td>
<td>shi</td>
<td>hi—hèin—sí</td>
<td>fi—hè</td>
<td>fè (=SB) shí</td>
<td>shè</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(rural)</td>
<td></td>
<td></td>
<td>('=SB)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cf. riy 'water' re yei ri ye</td>
<td>ye (=SB)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>rhy' 'front' rhe³ shéi hří fè (=SB) ché</td>
<td>shèi</td>
<td>(?=SB)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I have not yet found any sure cognate to OB 'iy—'i among TB languages. Benedict compares WB rhi with WT srid-pa 'be, exists' <PTB *s-ri (STC 264). The reconstruction of the rhyme of this root is based on that of the WB cognate (WT i: WB i = PTB 'i). If, however, the rhyme of the Burmese form were not -i but -iy, we would have to reconstruct *'s-ry for this root (WT i: OB 'iy/WB e = PTB 'iy). Thus, it is hard to draw any definite conclusion on the -iy----i alternation in OB from these two examples.

5) The idealational scheme also shows how regional dialects of Burmese have branched off from the main course of the development of CB. Each of the dialects must have been generally separated from SB and all other dialects for some time enough to develop their own features in their history, or retains a number of earlier features which all or some of the dialects have lost already. Further, some dialects are found to share innovative features, hence, constituting a
Nishi Old Burmese

subgroup of dialects. Thus, Taungyo and Intha may turn out to be such dialects in the future. So, studying the dialects, we expect that features of OB or of the earliest form of Burmese, which was already lost in OB, may be still preserved in them. As OB is the language which is attested only in inscriptive writings, dialectal forms are expected to corroborate it. We also know the history of Burmese in general, not just that of SB, through dialect studies, and if not all of their features are derivable from OB, we will be able to reconstruct the earliest form of Burmese on the basis of comparison of all dialects, inclusive of SB, as well as OB with additional data supplied by WB.

In this scheme, both Taungyo and Intha are considered to have diverged before OB (Pre-OB) because it seems to me that the later development of their medials would be inexplicable if they had taken the same course of development as the others. See also (Nishi 1998) and 4.1.1 of the text for voicing among Burmese dialects. Yaw and Arakanese underwent parallel changes of their rhymes except for WB(MB) -i, -e(-/we), -ac, -aʊ, -uik and -uin. In Arakanese, WB(MB) -i and -e merged into /-i/-/-ein/ (generally after a nasal), and WB -ac and -uik, and -aʊ and -uin changed parallelly into /-ai'/ and /-ain/ respectively, while in Yaw, WB -i and -e remain distinctive, and WB -ac and -aʊ, and -uik and -uin separately developed into /-i/ and /-ai'/, and /-ain/ and /-aɪə/, as in SB.

(Sources: Yaw from (Yabu 1980); Arakanese from (Okell 1995))

<table>
<thead>
<tr>
<th>Mod.WB&lt;OWB</th>
<th>SB</th>
<th>Yaw</th>
<th>Arakanese</th>
</tr>
</thead>
<tbody>
<tr>
<td>i/i</td>
<td>i/i</td>
<td>i</td>
<td>i<del>e</del>i</td>
</tr>
<tr>
<td>e/iy</td>
<td>e/i</td>
<td>ei</td>
<td>i<del>e</del>i</td>
</tr>
<tr>
<td>we/uy</td>
<td>we</td>
<td>wei</td>
<td>wi~wein</td>
</tr>
<tr>
<td>ai/ay</td>
<td>e</td>
<td>e</td>
<td>e</td>
</tr>
<tr>
<td>wai/way</td>
<td>we</td>
<td>we</td>
<td>we</td>
</tr>
<tr>
<td>aʊ&lt;aʊ/e</td>
<td>i<del>e</del>e</td>
<td>e</td>
<td>e</td>
</tr>
<tr>
<td>a/ā</td>
<td>a</td>
<td>a</td>
<td>a</td>
</tr>
<tr>
<td>wa/wā</td>
<td>wa</td>
<td>wa</td>
<td>(w)ɔ~wa</td>
</tr>
<tr>
<td>o&lt;aw~o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>u/uw</td>
<td>o</td>
<td>ou</td>
<td>o</td>
</tr>
<tr>
<td>u/u</td>
<td>u</td>
<td>u</td>
<td>u~oun</td>
</tr>
<tr>
<td>in</td>
<td>ein</td>
<td>ein</td>
<td>ein</td>
</tr>
<tr>
<td>am/am</td>
<td>en</td>
<td>en</td>
<td>en</td>
</tr>
<tr>
<td>wam/wam</td>
<td>un/win</td>
<td>wen</td>
<td>wen</td>
</tr>
<tr>
<td>an</td>
<td>en</td>
<td>en</td>
<td>en</td>
</tr>
<tr>
<td>wan</td>
<td>un/win</td>
<td>wen</td>
<td>wen</td>
</tr>
<tr>
<td>aʊɪ&lt;(&lt;y)aʊ</td>
<td>in</td>
<td>in</td>
<td>aɪn</td>
</tr>
<tr>
<td>aʊ</td>
<td>in</td>
<td>an</td>
<td>ɔn</td>
</tr>
<tr>
<td>wan</td>
<td>win</td>
<td>wan</td>
<td>ɔn</td>
</tr>
<tr>
<td>um</td>
<td>oun</td>
<td>oun</td>
<td>oun</td>
</tr>
<tr>
<td>un</td>
<td>oun</td>
<td>oun</td>
<td>oun</td>
</tr>
<tr>
<td>uin</td>
<td>aɪn</td>
<td>aɪn</td>
<td>aɪn</td>
</tr>
<tr>
<td>on</td>
<td>aʊn</td>
<td>aʊn</td>
<td>aʊn</td>
</tr>
<tr>
<td>ip</td>
<td>ei?</td>
<td>ei?</td>
<td>ei'</td>
</tr>
<tr>
<td>it</td>
<td>ei?</td>
<td>ei?</td>
<td>ei'</td>
</tr>
<tr>
<td>ap</td>
<td>a'?</td>
<td>e'?</td>
<td>e'</td>
</tr>
<tr>
<td>wap</td>
<td>u'/wi'?</td>
<td>[?we']</td>
<td>[?we']</td>
</tr>
<tr>
<td>at</td>
<td>a'?</td>
<td>e'?</td>
<td>e'</td>
</tr>
<tr>
<td>wat</td>
<td>u'/wi'?</td>
<td>we'?</td>
<td>we'</td>
</tr>
<tr>
<td>ac&lt;ac/&lt;(y)at</td>
<td>i'?</td>
<td>i'?</td>
<td>a'u</td>
</tr>
<tr>
<td>ak</td>
<td>e'?</td>
<td>a'?</td>
<td>ɔ'</td>
</tr>
<tr>
<td>wak</td>
<td>we'?</td>
<td>wa'?</td>
<td>wo'</td>
</tr>
<tr>
<td>up</td>
<td>ou'?</td>
<td>ou'?</td>
<td>ou'</td>
</tr>
<tr>
<td>ut</td>
<td>ou'?</td>
<td>ou'?</td>
<td>ou'</td>
</tr>
</tbody>
</table>
In spite of this we cannot consider them to form a subgroup, since Arakanese shares the voicing of initials with SB, while Yaw does not, for which see 4.1.1. Danu is problematical. Non-linguistic evidence generally suggests that it was separated from CB much earlier than most other dialects. However, except for the lack of voicing sandhi and the peculiar grammatical /functional morphemes, the general development of its phonology seems to parallel that of CB. For Merguisse, we need more data to say anything more about its position among the Burmese dialects.

6) As we have seen, both OB -I- and -r- eventually changed to -y-, palatalizing the preceding consonants, and velar initial clusters (Ky-) and finally yielding alveolo-palatals in SB. Velars before the high front vowel -i- follow the same change. This last change is reflected in the Burmese orthography. However, a secondary palatalization of bilabials, which occurred in parallel with this series of changes, is not registered in it. This palatalization may be stated in terms of the orthography as follows: Bilabials (stop/nasal) are palatalized before -ac (SB /-i2/) or -an (SB /-in/). Examples are, however, found mostly in Pali loans. The following are all the examples found in the Myanmar-English dictionary (1993):

<table>
<thead>
<tr>
<th>WB</th>
<th>SB</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>pac</td>
<td>/pyʔ/</td>
<td>‘to throw, shoot’</td>
</tr>
<tr>
<td>paccan</td>
<td>/pyʔsin/</td>
<td>‘firestep’</td>
</tr>
<tr>
<td>paccayā</td>
<td>/pyʔsaya/</td>
<td>‘(of pagoda) terrace’ &lt;Pālī paccayā</td>
</tr>
<tr>
<td>paccu</td>
<td>/pyʔzu/</td>
<td>‘royal white umbrella; white garment’ &lt;Hindi</td>
</tr>
<tr>
<td>paccukabuddhā</td>
<td>/pyʔsekā bōuʔda/</td>
<td>‘lesser Buddha’ &lt;P. paccukabuddhā</td>
</tr>
<tr>
<td>paccakkha</td>
<td>/pyʔsekāhā/</td>
<td>‘the present’ &lt;P. paccakkha</td>
</tr>
<tr>
<td>paccanī</td>
<td>/pyʔthi/</td>
<td>‘commodity, goods’ &lt;P. paccaya</td>
</tr>
<tr>
<td>paccudderā</td>
<td>/pyʔsuʔdeýa/</td>
<td>‘act of discarding; untidily’ &lt;P. paccuddāra</td>
</tr>
<tr>
<td>paccantarac</td>
<td>/pyʔsandariʔ/</td>
<td>‘outlying areas of a kingdom’ &lt;P. paccantaratha</td>
</tr>
<tr>
<td>paccuppan</td>
<td>/pyʔsuʔpan/</td>
<td>‘the present’ &lt;P. paccuppana</td>
</tr>
<tr>
<td>paijun</td>
<td>/pyʔzouʔn/</td>
<td>‘god of rain; rain’ &lt;P. paijunna</td>
</tr>
<tr>
<td>paṅča</td>
<td>/pyʔnzūṃa/</td>
<td>‘five’ &lt;P. paṅcama</td>
</tr>
<tr>
<td>paṅčakānī</td>
<td>/pyʔnsakani/</td>
<td>‘oak gall from the Quercus infectoria tree’ &lt;H. majakane</td>
</tr>
<tr>
<td>paṅ ‘caṇṭūriya’</td>
<td>/pyʔsins turiya/</td>
<td>‘five classes of Burmese instruments’ &lt;P. paṅcaṇa + turiya</td>
</tr>
<tr>
<td>paṅ2</td>
<td>/pyʔ/</td>
<td>‘(archaic) many; plenty’</td>
</tr>
<tr>
<td>majjhīma</td>
<td>/pyʔzimā/</td>
<td>‘middle; moderate’ &lt;P. majjhīma</td>
</tr>
<tr>
<td>mañ(1)</td>
<td>/myi/</td>
<td>‘be named’</td>
</tr>
<tr>
<td>mañ(2)</td>
<td>/myi/</td>
<td>‘who, which’</td>
</tr>
<tr>
<td>mañ(3)</td>
<td>/myi/-/me/ (spoken)</td>
<td>‘a clause-final particle’</td>
</tr>
<tr>
<td>mañ(4)</td>
<td>/myi/-/me/ (spoken)</td>
<td>‘a classifier’</td>
</tr>
</tbody>
</table>

There is a number of examples to which the rule does not apply. Among them are found WB mañcaṇī: SB /mezze/ ‘a kind of tree’, mañ2: /mē/ ‘black; dark’, mañ3: /hmē/ ‘be ripe’, and mañ3: /hmē/-/ ‘to name’, which is the causative form of mañ ‘be named’ above. These residues clearly indicate that WB -añ had already split into two reflexes, -/I/ and -/e/, when the palatalization rule was introduced. It should also be noted that though graphically differentiated, Pālī loans in -et probably merged with -ac in Late OB, and followed the same course of development with the latter, hence SB /-iʔ/. However, khet (< Pālī khetta) ‘extent, age, period’ did not palatalize its initial (hence SB /khiʔ/), while mettā (< Pālī mettā) ‘love, friendship’ did, (hence SB /myiʔ/). This suggests that the palatalization of velars probably occurred prior to that of bilabials as well as the change of -/eʔ/ (WB -et) > /-iʔ/.
7) It is not possible with the available data on Burmish languages to describe the phonetic details of Proto-Burmish *c, *ž, and *j. They may have been *alveolo-palatals as in Burmese, Achang and Xiandao (Burmic), or *palato-alveolars as in other Burmish languages (Maruic).

8) In Intha, there has been a change of the initial clusters corresponding to WB khr- and khy- from /ch/- to /s/- again. However, this change is being disturbed by the influence of SB, and now is reversed to /ch/- again. The liquid initials or initial clusters that correspond to WB hy-, hr- and hly- have undergone a change, merging into /s/- again. However, it is now found that the same reversal of change is ongoing for these initials which did not derive from original velar initials, e.g. (Those forms in bold are hypercorrect forms.) For the further detail, see (Okell 1995).

WB ṭyaṅ: INT /sin/ ‘to compare’
OB ḍry’: WB ṭre: INT /sé/ ‘to be scarce’
WB lyo: INT /sé/ ~ /chá/ ‘to reduce’
WB ḍra: INT /chá/ ‘to graze’
WB lyo: INT /chá/ ‘to slide’

Thus, Intha speakers have overdone or are overdoing the correction of their pronunciation to conform it to the prestigious variety, i.e. SB. This kind of overcorrection is called ‘hypercorrection’ in (socio) linguistics and quite commonly observed in many languages.

9) The following cognate sets include irregular correspondences (in bold) of initials that have not been explained yet.

<table>
<thead>
<tr>
<th>OWB</th>
<th>Mod.WB</th>
<th>SB</th>
<th>ARA</th>
<th>TAV</th>
<th>INT</th>
<th>TAU</th>
</tr>
</thead>
<tbody>
<tr>
<td>big</td>
<td>kri</td>
<td>kri</td>
<td>ci</td>
<td>kri</td>
<td>ci</td>
<td>kwi</td>
</tr>
<tr>
<td>to look at, look for</td>
<td>kraŋ’</td>
<td>kraŋ</td>
<td>ci</td>
<td>kře</td>
<td>kě</td>
<td>kě</td>
</tr>
<tr>
<td>to grind</td>
<td>krit</td>
<td>krit</td>
<td>ci</td>
<td>kři</td>
<td>kři</td>
<td>kai’</td>
</tr>
<tr>
<td>between; interval; pass</td>
<td>(‘a)kra</td>
<td>(‘a)kra</td>
<td>(a)ca</td>
<td>krą</td>
<td>kła</td>
<td>kła</td>
</tr>
<tr>
<td>thread</td>
<td>krau</td>
<td>kra</td>
<td>ci</td>
<td>kře</td>
<td>kče</td>
<td>kře</td>
</tr>
<tr>
<td>foot</td>
<td>khruy</td>
<td>khrę</td>
<td>che</td>
<td>kři</td>
<td>kři</td>
<td>kře</td>
</tr>
<tr>
<td>sweat</td>
<td>khrwe</td>
<td>khrwe</td>
<td>kři</td>
<td>kře</td>
<td>kře</td>
<td>kře</td>
</tr>
<tr>
<td>buffalo</td>
<td>ktwai</td>
<td>ktwai</td>
<td>kře</td>
<td>kře</td>
<td>kře</td>
<td>kře</td>
</tr>
<tr>
<td>to be saved</td>
<td>kwat</td>
<td>kwat</td>
<td>křu</td>
<td>kře</td>
<td>kře</td>
<td>kře</td>
</tr>
<tr>
<td>take off</td>
<td>khwat</td>
<td>khwat</td>
<td>křu</td>
<td>cwe</td>
<td>klu’</td>
<td>klu’</td>
</tr>
</tbody>
</table>

10) In Proto-Burmish, the voiceless, voiceless preglottalized and voiced stops and affricates, and the voiced preglottalized and voiced sonorants, can be reconstructed. They developed in the following ways among the Burmish languages.

1. stops/affricates

<table>
<thead>
<tr>
<th>PBsh</th>
<th>Burmic</th>
<th>Maruic</th>
</tr>
</thead>
<tbody>
<tr>
<td>*voiced  &gt;</td>
<td>voiceless unaspirated</td>
<td>voiceless unaspirated</td>
</tr>
<tr>
<td>*voiceless &gt;</td>
<td>voiceless aspirated</td>
<td>voiceless aspirated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>with laryngealized vowels</td>
</tr>
</tbody>
</table>

2. sonorants

<table>
<thead>
<tr>
<th>PBsh</th>
<th>Burmic</th>
<th>Maruic</th>
</tr>
</thead>
<tbody>
<tr>
<td>*voiced  &gt;</td>
<td>voiced</td>
<td>voiced</td>
</tr>
<tr>
<td>*voiced  &gt;</td>
<td>voiceless</td>
<td>voiceless with laryngealized vowels</td>
</tr>
</tbody>
</table>

Examples: (Sources: ZYC; Dai and Cui 1985; Dai et al. 1991; Xu and Xu 1984)

Those forms whose initial, rhyme, or tone is irregular in correspondence are printed in bold.
<table>
<thead>
<tr>
<th>Meaning</th>
<th>WB</th>
<th>Chang</th>
<th>Xiandao</th>
<th>Zaiwa</th>
<th>Leqi</th>
<th>Langsu</th>
<th>Bola</th>
</tr>
</thead>
<tbody>
<tr>
<td>insect, worm</td>
<td>pui</td>
<td>pau</td>
<td>pau</td>
<td>pau</td>
<td>pou</td>
<td>pau</td>
<td>pau</td>
</tr>
<tr>
<td>nine</td>
<td>kui</td>
<td>kau</td>
<td>kau</td>
<td>kau</td>
<td>kou</td>
<td>kou</td>
<td>kau</td>
</tr>
<tr>
<td>pair</td>
<td>-cum</td>
<td>tcm</td>
<td>cum</td>
<td>tsum</td>
<td>tsam</td>
<td>tsam</td>
<td>tsam</td>
</tr>
<tr>
<td>chop, hew (bones)</td>
<td>-ten</td>
<td>ten</td>
<td>tsan</td>
<td>tsan</td>
<td>tsan</td>
<td>tsan</td>
<td>tsan</td>
</tr>
<tr>
<td>saw</td>
<td>-tsen</td>
<td>t'sen</td>
<td>t'sen</td>
<td>t'sen</td>
<td>t'sen</td>
<td>t'sen</td>
<td>t'sen</td>
</tr>
<tr>
<td>government officials</td>
<td>cui</td>
<td>tsau</td>
<td>tsa2</td>
<td>tsa2</td>
<td>tsa2</td>
<td>tsa2</td>
<td>tsa2</td>
</tr>
<tr>
<td>rinse (mouth)</td>
<td>-tui</td>
<td>tsu</td>
<td>tsu?</td>
<td>tsu?</td>
<td>tsu?</td>
<td>tsu?</td>
<td>tsu?</td>
</tr>
</tbody>
</table>

2. PBsh *voiceless >

<table>
<thead>
<tr>
<th>Meaning</th>
<th>WB</th>
<th>Chang</th>
<th>Xiandao</th>
<th>Zaiwa</th>
<th>Leqi</th>
<th>Langsu</th>
<th>Bola</th>
</tr>
</thead>
<tbody>
<tr>
<td>open (gate)</td>
<td>phwan</td>
<td>pho</td>
<td>pho</td>
<td>pho</td>
<td>pho</td>
<td>pho</td>
<td>pho</td>
</tr>
<tr>
<td>firewood</td>
<td>thanq</td>
<td>thanq</td>
<td>thanq</td>
<td>thanq</td>
<td>thanq</td>
<td>thanq</td>
<td>thanq</td>
</tr>
<tr>
<td>bitter, salty</td>
<td>kha</td>
<td>x3</td>
<td>x3?</td>
<td>kho?</td>
<td>kho?</td>
<td>kho?</td>
<td>kho?</td>
</tr>
<tr>
<td>elephant</td>
<td>chaj</td>
<td>tchaj</td>
<td>tchaj</td>
<td>tchaj</td>
<td>tchaj</td>
<td>tchaj</td>
<td>tchaj</td>
</tr>
<tr>
<td>fat (of pigs)</td>
<td>chu</td>
<td>t'ho</td>
<td>t'ho?</td>
<td>t'shu</td>
<td>t'shu</td>
<td>t'shu</td>
<td>t'shu</td>
</tr>
<tr>
<td>ten</td>
<td>chay</td>
<td>t'he</td>
<td>t'shi</td>
<td>t'shi</td>
<td>t'shi</td>
<td>t'shi</td>
<td>t'shi</td>
</tr>
<tr>
<td>mortar</td>
<td>chum</td>
<td>t'ham</td>
<td>t'ham?</td>
<td>t'sham</td>
<td>t'sham</td>
<td>t'sham</td>
<td>t'sham</td>
</tr>
<tr>
<td>to dye</td>
<td>chui2</td>
<td>t'shu</td>
<td>t'shu?</td>
<td>t'shu?</td>
<td>t'shu</td>
<td>t'shu</td>
<td>t'shu</td>
</tr>
<tr>
<td>rice</td>
<td>chan</td>
<td>t'shen</td>
<td>t'shen</td>
<td>t'shen</td>
<td>t'shen</td>
<td>t'shen</td>
<td>t'shen</td>
</tr>
<tr>
<td>follow</td>
<td>—</td>
<td>t'shan</td>
<td>t'shan</td>
<td>t'shan</td>
<td>t'shan</td>
<td>t'shan</td>
<td>t'shan</td>
</tr>
</tbody>
</table>

3. PBsh *voiceless preglottalized >

<table>
<thead>
<tr>
<th>Meaning</th>
<th>WB</th>
<th>Chang</th>
<th>Xiandao</th>
<th>Zaiwa</th>
<th>Leqi</th>
<th>Langsu</th>
<th>Bola</th>
</tr>
</thead>
<tbody>
<tr>
<td>porcupine</td>
<td>phi</td>
<td>phzo</td>
<td>phzo</td>
<td>phzo</td>
<td>phzo</td>
<td>phzo</td>
<td>phzo</td>
</tr>
<tr>
<td>paste, stick</td>
<td>thap</td>
<td>thap</td>
<td>thap</td>
<td>thap</td>
<td>thap</td>
<td>thap</td>
<td>thap</td>
</tr>
<tr>
<td>to fill; put in</td>
<td>khat</td>
<td>xat</td>
<td>xat?</td>
<td>xat?</td>
<td>xat?</td>
<td>xat?</td>
<td>xat?</td>
</tr>
<tr>
<td>to cough</td>
<td>chu2</td>
<td>t'shu</td>
<td>t'shu?</td>
<td>t'shu?</td>
<td>t'shu</td>
<td>t'shu</td>
<td>t'shu</td>
</tr>
<tr>
<td>bell</td>
<td>kh'yu-</td>
<td>t'hu</td>
<td>t'hu?</td>
<td>t'hu?</td>
<td>t'hu</td>
<td>t'hu</td>
<td>t'hu</td>
</tr>
<tr>
<td>wet</td>
<td>ewat</td>
<td>co?</td>
<td>co?</td>
<td>co?</td>
<td>co?</td>
<td>co?</td>
<td>co?</td>
</tr>
<tr>
<td>to catch, hold</td>
<td>chup</td>
<td>t'shu</td>
<td>t'shu?</td>
<td>t'shu?</td>
<td>t'shu</td>
<td>t'shu</td>
<td>t'shu</td>
</tr>
</tbody>
</table>

2. Sonorants:

1. PBsh *voiced >

<table>
<thead>
<tr>
<th>Meaning</th>
<th>WB</th>
<th>Chang</th>
<th>Xiandao</th>
<th>Zaiwa</th>
<th>Leqi</th>
<th>Langsu</th>
<th>Bola</th>
</tr>
</thead>
<tbody>
<tr>
<td>sky, rain</td>
<td>mui2</td>
<td>m au</td>
<td>m au</td>
<td>m au</td>
<td>m au</td>
<td>m au</td>
<td>m au</td>
</tr>
<tr>
<td>to be ill</td>
<td>na</td>
<td>n?</td>
<td>n?</td>
<td>n?</td>
<td>n?</td>
<td>n?</td>
<td>n?</td>
</tr>
<tr>
<td>green, brown, blue</td>
<td>au</td>
<td>n’au</td>
<td>n’au</td>
<td>n’au</td>
<td>n’au</td>
<td>n’au</td>
<td>n’au</td>
</tr>
<tr>
<td>I (1sg. nom.)</td>
<td>n’i</td>
<td>n’o</td>
<td>n’o?</td>
<td>n’o?</td>
<td>n’o?</td>
<td>n’o?</td>
<td>n’o?</td>
</tr>
<tr>
<td>weave, knit</td>
<td>rak</td>
<td>r’au</td>
<td>r’au?</td>
<td>r’au?</td>
<td>r’au</td>
<td>r’au</td>
<td>r’au</td>
</tr>
<tr>
<td>bamboo</td>
<td>wa</td>
<td>o?</td>
<td>o?</td>
<td>o?</td>
<td>o?</td>
<td>o?</td>
<td>o?</td>
</tr>
<tr>
<td>right</td>
<td>y’i</td>
<td>-y’i</td>
<td>-y’i?</td>
<td>-y’i?</td>
<td>-y’i</td>
<td>-y’i</td>
<td>-y’i</td>
</tr>
</tbody>
</table>

2. PBsh *voiced preglottalized >

<table>
<thead>
<tr>
<th>Meaning</th>
<th>WB</th>
<th>Chang</th>
<th>Xiandao</th>
<th>Zaiwa</th>
<th>Leqi</th>
<th>Langsu</th>
<th>Bola</th>
</tr>
</thead>
<tbody>
<tr>
<td>bury</td>
<td>mhrup</td>
<td>m’rup</td>
<td>m’rup</td>
<td>m’rup</td>
<td>m’rup</td>
<td>m’rup</td>
<td>m’rup</td>
</tr>
<tr>
<td>ear, spike</td>
<td>-nham</td>
<td>-nham</td>
<td>-nham</td>
<td>-nham</td>
<td>-nham</td>
<td>-nham</td>
<td>-nham</td>
</tr>
<tr>
<td>mouth, snot</td>
<td>nhut</td>
<td>nhut</td>
<td>nhut</td>
<td>nhut</td>
<td>nhut</td>
<td>nhut</td>
<td>nhut</td>
</tr>
<tr>
<td>to wither</td>
<td>thui2</td>
<td>th’ui</td>
<td>th’ui?</td>
<td>th’ui?</td>
<td>th’ui</td>
<td>th’ui</td>
<td>th’ui</td>
</tr>
</tbody>
</table>
As mentioned above, I have not found any set of correspondences which can be regarded as reflecting PBsh \*\textgamma-, which is expected on the basis of the symmetry of the system of PBsh initials.

In the above list, we will note that the Achang and Xiandao reflexes complicate the correspondences of Burmish affricates. Many of the correspondence sets for affricates are defective and attested by only one or two cognate sets. Thus, though some of them may be found to be in complementary distribution, it will be yet hard to afford phonetically plausible explanations for their variations. Therefore, I give the examples of varied correspondences of affricates as they are. Nor the Achang (reflexes for PBsh *\textgamma- (m- and y-) is inexplicable yet, but its reflex in the Lianghe dialect is always \(\theta\). (Dai and Cai 1985). Similarly, the palatalization of the Achang (Longchuan) reflex for PBsh *\textalpha- cannot be explained, but here too, the Lianghe dialect shows the regular reflex \(\theta\). (Note that another dialect of Achang, Luxi has merged voiced and voiceless sonorants.) Anyway, Achang, especially, the Longchuan dialect, offers many problems, but we should not consider each of its varied reflexes to have derived from a distinct PBsh initial. The initial of Xiandao -lai\(^1\) probably became voiced due to its medial position. The full form for ‘flea’ is fu31‘ai31, whose first morpheme is apparently the weakened form of fui31 ‘dog’ < PBsh *kuy\(\textgamma\). For all other irregular forms, several of which could be misprints, we have to assume distinct but related PBsh initials or rhymes. Although I cannot explain the reason yet, the originally laryngealized vowels with primary (PBsh) and secondary (derived) voiceless fricatives generally seem to have lost its laryngealization except in Leqi. However, there are a number of exceptions, and the stop rhymes with PBsh *\textalpha-\(\theta\)s appear to retain laryngealization better.

Primarily on the basis of the distinct development of the preglottalized initials, I classify the Burmish languages into two subgroups. The Burmic subgroup consists of Burmese, Achang and Xiandao, while the Maruic includes Zaiwa, Leqi, Langsu and Bola. Hpon and Nusu are not taken into account here.

We have to reconstruct a PBsh variant *\textgamma\textalpha\textgamma for ‘hundred’ to explain the reflexes of initials of the Zaiwa and Leqi forms. Leqi preserves vocalic laryngealization after *\textgamma\textalpha- and *\textgamma\textbeta-, while the rest of the Maruic languages lost it.

We also have cases where his identification or gloss is doubtful, e.g.

1. M. -liken’: WB lhuin ‘to be numerous’. The problem is that though it is likely that this suffix corresponds to WB -Ihyan ‘if’, and, as Shafer (1943) pointed out, M, -e- corresponds to -ya- in the later OB inscriptions (= OWB), the M form differs from the WB form both in meaning and tone. However, since OB Ihyan’ is also found in a later inscription in the phrase, thuiw-suiw’ lyak-lhyan’ ‘even so’, it would be better to identify it with WB Ihyan, and regard -‘ as its emphatic use (Nishi 1997: 017). As Henderson (Luce 1981: ii) mentions, Luce attributed -‘ of this suffix to its emotional use (Nishi 1997). However, it is clear that it cannot be related to WB lhuin.
2. M ta-mü-leh: ?WB ta-mü-lañ 'nominative affix'. There is no such affix in WB, and this may be analyzed as ta-mü + leh, as was done by Duroiselle (1919), with the former corresponding to WB ta-mü 'one, a certain (archaic)' and the latter, to WB-lañ 'also'.

3. M nhap: WB nhap 'to bring to proper consistence'. Duroiselle (1919) assumed the meaning of this verb as 'to approach' by collating it with the corresponding part of the Pali face of the Myazedi inscription. This interpretation is generally accepted.

4. Nishida interpreted four instances of M -teh out of five as a 'suffix to designate an object', but this interpretation seems to apply only one instance (1.9) of the four.

Besides, he left out two finals -ip (M 'a-nhip 'a-chak: WB nhip-chak 'to oppress') and -in (M. min': WB min' 'to declare, command'), and failed to identify M su-ro'2 'occasion, time when' with WB sa-ro2 'word indicating a time or period', which is the only example with the rhyme corresponding to WB -o.

13) The following remarks of Benedict on Burmese pertinent here are found in STC.

'TB medial *w, found only before a and i, is well preserved in Burmese and Lushei...' (49)

'Burmese appears to have diphthongized final *-o to -au (Modern -a), ...; also final *-e to -ai (Modern -e), though the evidence for the latter shift is less substantial (the retention of *-e in Lushei) ...' (59)

'Most reconstruction in final *-o or *-e ... must be regarded as provisional.' (59)

'Burmese ... has both -u and -ui < *-uw, -i and -e < *-iy, all of which correspond to high vowels elsewhere. The earlier Burmese vowel system, as represented in the inscriptions, forms a symmetrical phonemic system of three vowels and the semi-vowels w and y:

<table>
<thead>
<tr>
<th>-u</th>
<th>-a</th>
<th>-i</th>
</tr>
</thead>
<tbody>
<tr>
<td>-uw (-ui)</td>
<td>-aw (-au)</td>
<td>—</td>
</tr>
<tr>
<td>—</td>
<td>-ay (-ai)</td>
<td>-iy</td>
</tr>
</tbody>
</table>

Both -u and -i are written with symbols for long vowels, while -a in -uw is written 'ui' to indicate the special phonetic value (probably mid-unrounded) of this phoneme before the labial (-w) as well as before velars (-k, -q). (59-60)

'Burmese appears to have merged *-oy with *wiw in the final -we ... ' (67)

'Burmese, which lacks both these medial vowels (o, e), has merged medial *o with short medial *u in medial au before velars (-auk, -aug) but with a before other finals (-at, -an; -ap, -am) ...' (73)

'TB medial *e before final velars and dentals has fallen together with *i in Burmese -ats and -asi, and before labials in Burmese -ip and -im ...' (74)

'Burmese maintains high vowels, long or short, before labials, and when long before velars (no examples of long *i here) and dentals, but short *u before velars, and short *i before velars and dental nasal (but not stop) show the development of diphthongs:

TB *-uk, *-ug > B -a.uk, -a ug but *-uk, and *-ug > B -uk /-uk/, -uig /-ug/.

TB *-ik, *-ig > B -ats /-ait/, -a nh /-ain/.

TB *-in > B -a.n g /-ain/ (but *-it > B -it).

As noted above, B ui here is simply a positional variant (allophone) of the phoneme u before -k, -q, -w. TB long medial *u has developed in the same manner as final *u (w), while short medial *u has fallen together with medial *o in the diphthong au (see above).' (75-76)

'B-ats (<TB *-ik) and -a nh (<TB *-ig) can phonemically written /-ait/ and /-ain/, thus paralleling B -a.uk < TB *-uk and *-a ug < TB *-ug.' (78)
Nishi Old Burmese

'Burmese retains final *-it, final *-ip and final *-im. Final *-in, however, is represented by *-aŋ, as in B əsāŋ 'liver' <TB *m-sin; B hmaii^-hmii, L hmin 'ripe' <TB *s-min.' (79)

'TB long medial *i: is rare, especially before final velars, but can be established for a few roots, including *(s)diik 'scorpion' (above). Burmese, which has *-aŋ for TB *-in (see above), has -in for TB *-in.' (79)

14) Pulleybank's interpretation of OB u as /wi/ is chiefly based on distribution and the parallel development of OB iy (> WB e) and uy (> WB we). Since WB wi is limited to Pāli loans and a few marginal words, it is therefore in complementary distribution to wa. Though the distribution of u, and, for that matter, i as well, are more limited than wa (only the latter occurring before velar and palatal finals). In addition, the vowel letter for 'i and an alternative vowel letter for 'u are both surmounted by the vowel symbols, i and i, which are not attested in Mon script.

15) Though Benedict does not mention anywhere that WB -we corresponds to OB (inscriptional Burmese) -uy, it is obvious that he knew it. It was probably because he did not think it necessary to mention it because it is clearly simpler to explain the development of WB-we directly from PTB *-wiy rather than by setting out OB -uy at an intermediate stage.

16) Leqi has two reflexes, -a:u and -ou where WB has -ui. They are not phonetically conditioned variants, as is seen in the examples below. (Sources: ZYC)

<table>
<thead>
<tr>
<th>Meaning</th>
<th>WB</th>
<th>ACH</th>
<th>XIA</th>
<th>ZAI</th>
<th>LEQ</th>
<th>LAN</th>
<th>BOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>smoke</td>
<td>-hu i</td>
<td>-xau i</td>
<td>-xau i</td>
<td>-khu a i</td>
<td>-khu5</td>
<td>-khu5</td>
<td>—</td>
</tr>
<tr>
<td>to smoke, fumigate</td>
<td>—</td>
<td>-xau i</td>
<td></td>
<td>—</td>
<td></td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>thief</td>
<td>-hu i</td>
<td>-xau i</td>
<td>—</td>
<td>-khu a i</td>
<td>-khu5</td>
<td>-khu5</td>
<td>-kha  i</td>
</tr>
<tr>
<td>to steal</td>
<td>kui i</td>
<td>xau i</td>
<td>xau i</td>
<td>xau i</td>
<td>-kha i</td>
<td>-kha i</td>
<td>-kha i</td>
</tr>
<tr>
<td>bone</td>
<td>-ru i</td>
<td>-zau i</td>
<td>-zau i</td>
<td>-vi i</td>
<td>-jou i</td>
<td>-yuk5</td>
<td>-yuk5</td>
</tr>
<tr>
<td>difficult</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>-vi i</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

These examples show that they are grammatically conditioned variants, -a:u generally occurring only with verbs and adjectives, used predicatively, and -ou only with nouns, but after the negative prefix /a31/- and in the first syllable of reduplicated adjectives only the latter rhyme appears. In (Dai et al. 1991) these are distinguished as the long and short (vowel) alternants of the same morpheme. This alternation seems to be paralleled in most, if not all, other rhymes, and it involves not only distinction in vocalic length, but also difference in vocalic quality. Thus, the corresponding alternation between -u:m for verbs and adjectives, and -3m for nouns, shows -u—-3 variation, as in the following pair of examples.

<table>
<thead>
<tr>
<th>Meaning</th>
<th>WB</th>
<th>ACH</th>
<th>XIA</th>
<th>ZAI</th>
<th>LEQ</th>
<th>LAN</th>
<th>BOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>mountain</td>
<td>pum</td>
<td>pum5</td>
<td>pum5</td>
<td>pum5</td>
<td>pum5</td>
<td>pam5</td>
<td>pam5</td>
</tr>
<tr>
<td>to heap, stack</td>
<td>pum</td>
<td>—</td>
<td>—</td>
<td>pum5</td>
<td>pam5</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

It is an irregularity that must be explained as an innovative feature in Leqi, since the short alternant seems to represent the base form from which the corresponding long alternant derives. We probably do not need to reconstruct distinct proto-rhymes for each member of the alternative pairs. These alternations are quite regular, but are not easily susceptible to the application of internal reconstruction, since they do not seem to be phonologically conditioned alternations.

17) However, Benedict gives cognate forms in these rhymes in other TB languages in STC: e.g.

1. WB -uin
1. (STC 359) PTB *kuŋ 'tree; branch; stem' > B(urmese) akhuiŋ 'stalk,branch' [WB 'akhuiŋ], also akuiŋ 'large branch, bough' [WB 'akuŋ], Lepcha kuŋ 'tree', akuiŋ 'bush', L

2. WB -uik
4. (STC 360) PTB *dzu[k] ‘erect; plant’ > B tsuik ‘erect, set upright, plant’ [WB cuik, SB /sai1/1, T ‘dzug-pa~zu ‘prick or stick into; plant; erect’, L fuk ‘to erect, be erect’.

Some of forms given in the above cognate sets cannot be regarded as sure cognates. We would expect more cognate sets for WB -uik., but since PTB *um shows a parallel development with PTB *u:k in most languages as in Burmese (CB), the reconstruction of the former is supported by that of the latter.

In (Nishi 1975a), I suggested the following two as possible cognate sets in LB for WB forms in -uik.
1. ‘to be scorched; to scorch’ WB mruik < OB mluik, WB mhruik: Akha myo (Lewis) ‘for a fire to scorch something’.
2. ‘to bite’ WB kuik: Akha kɔ( Lewis): Hani kɔj (Hu-Dai): Lisu hkwə(Fraser): Lahu həʔ (Matisoff): Sani q’un (Ma): Ahí (Yuan) ts’o: Nasu ts’u (Gao).

However, as irregularities are observed in both sets of cognates, these cannot be sure cognate sets. It is yet notable that no Burmish cognates are found even in these sets.

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