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Source: *Zeitschrift der Deutschen Morgenländischen Gesellschaft*, 1966, Vol. 116, No. 1 (1966), pp. 118-159

Published by: Harrassowitz Verlag

Stable URL: <https://www.jstor.org/stable/43369896>

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# The Contribution of Mru to Sino-Tibetan Linguistics<sup>1</sup>

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The Mru form a small hill tribe in the hill tracts of East Bengal and Arakan (approx. 20000 souls). Their language diverges strongly from the languages of the surrounding populations. In his paper "The Linguistic Relationship of Mru" Robert SHAFER (1941) distinguished three strata of Mru stems: a Kukish, a lost Tibeto-Burmish, and an original Mru stratum of possibly non-Tibeto-Burman origin. SHAFER based his analysis on the small vocabularies collected by PHAYRE (1841), CAMPBELL (1874), GRIERSON (1904), and U BA MYAING (1934)<sup>2</sup>, rather insufficiently recorded and totalling less than 200 words. KONOW, judging from his material collected for the Linguistic Survey of India (GRIERSON 1904), classed Mru tentatively along with Burmese, but SHAFER found no evidence to support KONOW's view. To him, in its vocabulary, Mru seemed much closer to Kukish (especially Southern Chin), and also phonetically it seemed to agree rather with Kukish than with Burmese. But since the Mru lived in close contact with Southern Chin (especially Khami), SHAFER suggested that the lexical similarities might be borrowed from these neighbours. The Burmese parallels were explained as either late borrowings or part of the middle stratum which shows parallels all over the Sino-Tibetan area (including again Kukish). The reason for believing that this stratum was also borrowed (from a now extinct stock) was a number of words, very common in all Sino-Tibetan languages, but differing in Mru.

Although of considerable interest because of the problems it raised, Mru was judged by SHAFER to be of no great importance for comparative purposes. Contrary to this judgment, SHAFER himself stated that Mru forms were more archaic in some respects than written Burmese. In his "Classification of Sino-Tibetan Languages" SHAFER (1955) set up a

<sup>1</sup> For helpful comments on a preliminary draft of this paper I am indebted to ROBERT SHAFER<sup>1</sup> and BERNHARD KARLGRN. SHAFER disagrees with the procedure followed by me in the second part, but KARLGRN suggested that "in point of principle it might be risky to establish such equivalences with total disregard of the *Tibetan* group, but I think that in spite of this the attempt you have made is worth risking". I have not tried to reconcile the diverging views of the two authorities, but relying on the evidence of my material I was led to results which draw heavily on both.

<sup>2</sup> He could have added the vocabulary of LEWIN (1869), next in quality to PHAYRE.

separate Mruish Section (with only Mru in it) belonging together with Burmish, Kukish, Nungish, Kachinish, and others to the Burmic Division of the Sino-Tibetan family.

This was the sum of our knowledge, when I did field-work among the Mru<sup>3</sup> and collected a vocabulary of about 2000 words. In the light of this new material I re-examined the linguistic position of Mru, and the comparative data and results shall be shown here.

### I. Mru, Kukish, and Burmese

In determining the Protokukish vowels, SHAFER (1950) relied mainly on Lushei, not only because it was the best recorded of all Kukish languages but also because it clearly distinguished between long and short vowels which seemed to be untouched by phonetic shifts. Like SHAFER I use the dictionary of LORRAIN and SAVIDGE (1898), retaining the transcription with the exception of *c* for *ch*, *ch* for *chh*, *ô* for *aw*, and *ou* for final *o* (which is actually a diphthong as I could ascertain in my conversations with Lushais).

For the Burmese words I have used JUDSON'S dictionary (1953), transliterating the fifth vowel of the alphabet by *ä*, and the seventh vowel by *ü*. On the transcription of Mru no comment will be necessary; *ö* and *ü* represent two unrounded back vowels (the *o barbu* and *u barbu* of Indochinese transcriptions)<sup>4</sup>. Since I could not find any special relations for the tones, tonal marks have been omitted for the present purpose.<sup>5</sup> The vowels given at the head of each table represent the modern Mru vowels, not proto-forms.

#### 1. Medial -a-

English	Mru	Lushei	Burmese
crack open	ak		ak
arm-pit	yak	zak	
zebu	rat	hrat <sup>6</sup>	
surround	ram		rañ
rupee piece	lap	tla <sup>7</sup>	kyap

<sup>3</sup> The German Chittagong Hills Expedition (1955—57) sponsored by the Deutsche Forschungsgemeinschaft was led by H. E. KAUFFMANN.

<sup>4</sup> The transcription recommended by the "Arrêté du 2 décembre 1935" (Journal officiel de l'Indochine, 7 décembre 1936, p. 4008—09) uses *ö* and *ü* as well.

<sup>5</sup> A description of the tonal system may be found in LÖFFLER 1960, p. 519—521.

<sup>6</sup> Rangkhöl and Kom.

<sup>7</sup> Khami.

dry up	kang	kang	
pool	kan		kan
male	klang	tlang	
endure	kham		kham
related, group	cap		cap
heart, life	chak		sak
hot, sun	chat	shat	
new	char	thar	
fortification	tap		tap
hearth	tap	tap	
to smell	nam	nam	nam
rope	nam	hnam	
deaf	pang	pang	pang
read	phat	pha(k)	phat
wall	bang	bang	pang <sup>8</sup>
dream	mang	mang	mak <sup>9</sup>
remember	mat		hmat
fan	yap	zâp	yap
unnatural death	char	sâr	
fasten to a pole	tar	târ	
leprosy	par	phâr	
cotton tree	pang	pâng	
to go	pak	vâk <sup>10</sup>	
to hook	bat	bât	
	-a-	-a-, -â-	-a-

## 1a. Medial -ia- and -ai-

English	Mru	Lushei	Burmese
cut up	phiak (lw.)		phyak
very large	phiang (lw.)		phyang
diamond	miak (lw.)		myak
hardship	kraing (lw.)		kram
boots	phanaik (lw.)		phinap
world	kiaing (lw.)		krañ
betel	kuaing (lw.)		kwam
	-ia-		-ya + K
	-ai-		-a + P/T/C

<sup>8</sup> The *b:b:p*-correlation is regular, v. i.<sup>9</sup> Occlusive instead of nasal is found repeatedly in Burmese.<sup>10</sup> The *p:v*-correlation seems to be regular, v. i.

The Mru words of table 1a were taken over from local Arakanese (Marma), the last two being used in songs only. Original Mru *-ia-* und *-ai-* are lacking. Loan words from Arakanese in *-aK*<sup>11</sup> are not recognizable as such, because Mru pronunciation restores (not: preserves!) the finals lost in Arakanese colloquial.

1 b. Medial *-ua-*

English	Mru	Lushei	Burmese
Bengali	kuar	kor	
throw away	kuak	wak <sup>12</sup>	kwa
spot	kuak		kwak
sky	kuang		kong-
water place, groove	kuam	kuam	
to enter	chuang		swang
to consider	tuak	tua'	twak
to translate	phuang		phwang
	<hr/> -ua-	<hr/> -ua- (-o-)	<hr/> -ua- (-o-)

The last three words of table 1b were probably taken over from Arakanese, so that original *-ua-* can be found in Mru words after *k-* only. Excepting the first word of the table, these *k-* may originally represent prefixe, cf. Mru *kuam* (water hole): Mru *wam* (pit), Mru *kuak* (throw away): Khami *wak* (throw away), Mru *kuang* (heaven): Mru *wang* (rain; sky and rain designated by the same stem also in Khami), and also Mru *chuang* (Burmese *swang*, to enter): Mru *wang* (to come, Burmese *wang*, to enter),<sup>13</sup> i.e., prefixe which were dropped before other consonants (especially *k-*, cf. p. 136) were retained before *w-*.

2. Medial *-e-*

English	Mru	Lushei	Burmese
to widen	er	er	
to screw	rek		rać
broad	reng		hrań
continuity affix	reng	reng	
torn, divided	ret	tet	
laugh, smile	ren	then	rań, ray
to wave	lek	lek	
cut to pieces	lep	hlep	
twist together	ker	kher'	

<sup>11</sup> i.e. *-ak* and *-ang*.<sup>12</sup> Khami (Rengmitca).<sup>13</sup> Perhaps we may add here Lushei *puan*: Mru *wan* (cloth).

look after, care	kren		krań
fold up	klep	thlep', lep	
to pinch	cen		cań
cleanse	chet		sać
country	pren <sup>14</sup>		prań
clean up	cher	thiar	
small, short	nem	hniam	
to stroll, go wooing	leng	lêng	hlań
star, meteorite	krek	țêk	(kray)
over, more	klen	hlên	
decay, be eaten	nget	ngêt	
slender stick	chek	fêk	
stay behind	phen	phên	
	-e-	-e-, -ia-, -ê-	-a + C

Written Burmese shows no medial *-e-*, and from the evidence of the above table it may be gained that *e* + nasal has been changed to *-ań*, *e* + occlusive to *-ać*. In his "Vocalism of Sino-Tibetan" SHAFER (1940) suggested that *-e-* had become *-i-* in Burmese, but of his six examples (Vocalism T. 11) two show *-ań* as well, so that the other equations may seem doubtful.

### 3. Medial *-i-*

English	Mru	Lushei	Burmese
to sleep	ip	ip <sup>15</sup>	ip
bag	im	ip	ip
rotate	wir	vir	
lonely	rim		ngrim
sow, plant	ling	ling	
tortoise	lip	lip <sup>16</sup>	lip
to do stealthily	lim	thlim	
house	kim	in	im
time	khin		khyin
together	cin	fin	
green	ching	hring	
put to sleep	chim		sip
tiny	chin		sin
to fall	tim		tim
die out	mit	mit	hmit

<sup>14</sup> Should read *pre* if it had been loaned from modern Arakanese.

<sup>15</sup> Khami etc.

<sup>16</sup> Khami.

pheasant	rik	-hrit	rać
tree	ching	thing	sać
year	ning		hnać
name	ming	hming	-mań
ripen	min	hmin	(hmań) <sup>17</sup>
eye	mik	mit	(myak)
mind	eik (lw.)		cit
opium	bing (lw.)		b'ín
marrow	kling	thling	
clear (eater)	eim	fím	
double	phir, pir	phîr	
	-i-	-i-	-i + P/T, -a + C
	-i-	-î-	

This table (in accordance with SHAFER'S Vocalism T. 14) illustrates that Mru and Lushei *-iK* are rendered by written Burmese *-aC*. Mru *-iK* for Burmese *-iP* or *-iT* indicates that the word was borrowed from Arakanese. Burmese *\*-k* for Mru and Lushei (and Sino-Tibetan) *-ng* seems especially frequent in this *i*-series, but is not restricted to it (cf. note 9). Lushei *-t* and *-n* for Mru (and Sino-Tibetan) *-k* and *-m* may indicate that the original vowel was *-yi-*, not *-i-* (except behind some initials, *-yi-* is preserved in Tibetan).

#### 4. Medial -o-

English	Mru	Lushei	Burmese
wear round the neck	or	or	
sufficient	lok		lok
boat	long	long	long
roar	hok		hok
horse	kor	kor <sup>18</sup>	
take a part	kok		kok
to cover	cong		cong
shoal	chong		song
cook by steam	pong		pong
burst	pok	pok	pok
to covet	ot	ot	
to be, become	om, kom	om	
loose, let out	lot, lon	thlon	lwat

<sup>17</sup> Suggests an *-e*-stem.

<sup>18</sup> Mru *kor-nga*, Lushei *sa-kor*.

bear on shoulder	kot	kot	
bind	kom	kom <sup>19</sup>	kwap
bear	tom <sup>20</sup>	vom	wam
plough	thon		thwan
neck	ngong	hngông	
hole	kor	kôr, khuar	
brain	klok	thluak	hlok
(cavity of) drum	khong	khuang	khong
beat	pok	vuak <sup>21</sup>	pok
wrap, bind	tom	tuam	
to chew	mom	hmuam	
to clap, shoot	kop, kap	kâp	
eat up anything	lon	tlân	
snout	nor	hnâr <sup>22</sup>	
arm	bong	bâng <sup>23</sup>	
son-in-law	mok	mâk	mak
	-o-	-o-, -ô-, -ua-	-o + K, -wa +
	-o-	-â-	-a- ? P/T

The Kukish distinction between *-o-*, *-ô-* and *-ua-* is found neither in Mru nor in Burmese. Although written Burmese shows *-wa-* before K in some cases, none of these enter the table, where the differentiation into *-o-* and *-wa-* depends on the finals. In the last group of words of table 4, Lushei *-â-* corresponds to Mru *-o-*, whereas in table 1 it corresponds to Mru *-a-*. Apparently this differentiation cannot be due to an influence of certain initial or final consonants, and it is improbable that one of these groups has been borrowed from Kukish, because in the *a-â-* equations Mru then should have *phar* (leprosy) and *wak* (to go) instead of *par* and *pak*, and in the *o-â-* group, Southern Kukish has borrowed *mok* (son-in-law) from Mru and not vice versa. In one case, Mru *-a-* corresponds to Kukish *-o-*, viz. Mru *pak* (pig): Lushei *vok*: Burmese *wak*: Tibetan *phak*, but this exception may be due to an unusual initial (cf. Khami *ok*). On the other hand, interchange of *a* and *o* is found in Kukish itself (e.g., *hnâr/nor*, snout), in Mru (e.g., *kap/kop*, to press between, clap), and also in some Tibetan verbs. Moreover, similar parallel stems in *i/e*, *e/a*, and *o/u* do occur in several instances (cf. e.g. notes 17 and 24).

<sup>19</sup> Khami; regarding the Burmese final cf. note 9.

<sup>20</sup> *t-* is probably a prefix. Tibetan *dom*.

<sup>21</sup> cf. note 10.

<sup>22</sup> Mru: mouth, Lushei: nose.

<sup>23</sup> cf. also Burmese *pong*, thigh.

## 5. Medial -u-

English	Mru	Lushei	Burmese
monkey	yuk	(zong) <sup>24</sup>	myok
grunt	nguk	nguk	
six	taruk	paruk	khrok
shut up	klung	thlung	hlong
lower arm	muk		mong
coconut	un		un
keep in mouth	um	um <sup>25</sup>	um
tear down	run		run
tuck in	rup		rup
work	lup		lup
ball, round	lum	hlum	luṃ
enter	kup		kup
garden	krum		krum
double, complete	cum		cuṃ
mortar	chum	sum	chuṃ
three	chum	thum	sum
play an instrument	tum	tum	
pour out	thut		thut
betel box	kruk (lw.)		krut
picture	pung (lw.)		puṃ
world, universe	phung (lw.)		b'uṃ
sour	chur	thûr	
to store	pum	vûm	puṃ
bud	mum	mûm	muṃ
	-u-	-u-, -û-	-o + K, -u + P/T

Burmese \*-uK has shifted to -oK; further evidence may be gained from SHAFER's Vocalism T. 16. But the equations furnished by SHAFER indicate that Lushei -uK may also correspond to Burmese -üK (written -uṃK). Unfortunately, there are no Mru equations for those examples, but in several other cases Mru has -öK for Burmese -üK, cf. the following table.

<sup>24</sup> from \*tʔ-yong, may be related, since there are other instances of o:u-parallels.

<sup>25</sup> Khumi and Lakher (to cover, to hide, to keep), cf. also Mru *um*, Lushei *öm*, Burmese *uṃ* (female breast, protuberance).

## 6. Medial -ö-

English	Mru	Lushei	Burmese
to belch	ör	ir'	
to fell	köt	kit	
be smaller than others	chöm		sim
to covet	öt	ît	
to scrape	röt	ri(t)	rit
ant	löng	hling <sup>26</sup>	kyañ
to die	köng	kin <sup>27</sup>	
precipice	cöng	fiŋg <sup>28</sup>	
shake	chök	thing	
stand, erect	döng, töng	ding	tañ, tüng
cause to stay	tön		tañ
every	töng	tin <sup>27</sup>	tüng
appeal to court	töng		tüng
be able	nöng		nüng
pond, depth	öng	ông	üng
administer, care of	pöng	von(g)	püng
begin	wön	abyon (Tib.)	
shirt	kör-	kor-	
believe	öm	um <sup>29</sup>	yum
to plant (set up)	cök	fuk	cük
(white) ant	-bör	sbur- (Tib.)	
to fly	phör	aphur- (Tib.)	
face	mör	hmûr	
kindle	tök	dugs- (Tib.)	tok
to burden	kuön		wan
flag	tang-khuön		tañ-khwan
	-ö-	-i-, -î-	-i + T/P, -a + C
	-ö-	-o-, -ô-	-ü + K
	-ö-	-u-, -û-	-ü + K, yu + P
	-uö(n)		-wa(n)

The number of possible equations seems rather puzzling, the more so if we recollect that there are i:i:i, o:o:o, and u:u:u, too. Burmese has *-ü + K*, but there is no *-ü + T/P*-series so that either *-aC* or *-uT/P* may have taken its place, if there was such a series at all. The question is still

<sup>26</sup> Khami and Khyang *maling*.

<sup>27</sup> Cf. table 3 (Lu \*yiK > iT), Khami has *töng*.

<sup>28</sup> *fiŋg* or *ciŋg* (mountain) was reconstructed by SHAFER for Naga-Kukish.

<sup>29</sup> Sizang *um*, Lakher *zo* < \**yim*, Khumi *üm*.

more complicated by the fact that for the equations of Mru -*ö*K : Burmese -*ü*K the possibility that these words have been taken over from Burmese cannot be excluded, although they do not belong to the class of actual loans from Arakanese (which have -*oi-* for Burmese -*ü-* pronounced -*oi-* in Arakanese).

The situation may be best illustrated by the last word of the table. If it had been borrowed from local Arakanese, it should have become “*taing-khuaiing*”. Mru, but not Burmese, has *khuön*, hang up, fasten, which apparently forms part of the word for flag. We find the same word again in Archaic Chinese *g<sup>i</sup>wan* (*\*gwian*), showing that Mru has the regular phoneme (Arch. C. -*ia-* : Mru -*ö-*, cf. tables IV and XI), again more archaic than written Burmese. Nevertheless, it seems highly probable that Mru has borrowed the word from an old Burmish dialect, and since there is no evidence that the Mru came into contact with Burmese before the first centuries of our millenium, we must infer that the Arakanese of that time had preserved a pronunciation more archaic than Burmese about 1000, probably including distinct finals after -*e-* (cf. note 14).

Lushei -*in* for Mru -*öng* may, in parallel to the phoneme suggested for Lushei -*in* : Mru (and ST) -*ing*, indicate a former diphthong, e.g. \*-*ye-*. Similarly, \*-*yo-* might be suggested for Lushei -*o-*, Mru -*ö-*, cf. also Tib. *abyon* : Mru *wön* (to arrive, to begin)<sup>30</sup>. Tib. *byur* : Mru *wür* (mishap, to worry) seems to exclude a similar explanation for the *ö:u:ü*-series, although Mru *öm* : Burmese *yum* may stand in favour of it. Adding the problem of a rather frequent change in the vowels of the root (*a:ö:o:u*) a final decision based on this limited material seems unwarranted, cf. also tables 12—14.

#### 7. Medial -*ü-*

English	Mru	Lushei	Burmese
press down	nüm		hnim
soft	nüm	hnip	
to close, shut	büng	bing <sup>31</sup>	
take off	klüp	hlíp	
bile	müt	mît	
to cover	lüp	klup (Tib.)	khyum
to die, perish	chüm		chum
finger-ring	büt	bun	

<sup>30</sup> Cf. also Mru *wö'* : Tibetan *abyeba* (to open), related to Lushei *vi(t)* (to pierce).

<sup>31</sup> Southern Khyang *m-bing*; Lushei *pin(g)* (to close up) perhaps nearer to Burmese (and Mru) *pit* (to close up).

many	büm	äbum (Tib.)	püm
to pierce	pük	sbug (Tib.)	phok
to die	dük	dük <sup>32</sup>	
	-ü-	-i-, -î-	-i(m)
	-ü-	-u-	-u(m), -o(k)

Evidence is scanty for Mru *-ü-*: Burmese *-i-* and Mru *-ü-*: Lushei *-u-* but in the last case Tibetan *-u-* corresponds to Lushei *-u-* (cf. SHAFER Vocalism T. 16 and 18). Southern Kukish distinguishes, like Mru, between *-u-* and *-ü-*, but examples are too few to decide whether it has also *-ü-* for Mru *-ü-* (Lushei *-u-*) or whether the words in question have been borrowed. We are thus faced with the problem of two *-ö-* and two *-ü-* groups of Mru which remain unexplained by the vocalism of Kukish and Burmish. A probable solution will be suggested in connection with the comparisons with Archaic Chinese.

#### 8. Final -a

English	Mru	Lushei	Burmese
moon	la	thla	la
to hire	nga		hnga
five	tanga	panga	nga
eat	ca	fa'	ca
child	ca	fa	sa
gently	cha		cha
vein	cha	tha	
nose	na-	hna	hna
hard	ma		ma
far	la(k)	hla	
bitter	kha(k)	kha	kha
rice	ca	fak	ca-
fall, let fall	kla(k)	tlâ(k)	kya
to crow	ka(k)	kâk	
	-a	-a	-a
	-a(k)	-a, -â(k)	-a

The number of equations for his table could have been considerably extended, but the above examples seemed sufficient to demonstrate the obvious correlation.

<sup>32</sup> Southern Khyang and Khami (*dü'*); possibly related to Burmese *tok* (poisoned).

## 9. Final -e

English	Mru	Lushei	Burmese
spear	re	-re <sup>33</sup>	
claw	ke	ke	
disperse	kre	ʔe'	krä
sand	che		chä
to go to visit	che	fe'	
temporary hut	te		tä
break, squeeze	pe	pe'	
bean	be	be	pä
defecate	e	ê(k)	
give	pe	pê(k)	(pe)
full	pre (lw.)		prañ
	-e	-e, -ê(k)	-ä

## 10. Final -i

English	Mru	Lushei	Burmese
blood	wi	thi	swe
wind	li	thli	le
four	tali	pali	le
complete	ki	ki	
copper	kri		kre
grandmother	pi	pi	
sun	ni	ni	ne
great	kri (lw.)		kri
umbrella	thi (lw.)		thi
	-i	-i	-e

Loan words from Arakanese are recognizable in the special cases indicated in tables 9 and 10, but written Burmese *-a*, *-ä*, and *-e* are pronounced *-a*, *-e*, and *-i* in local Arakanese, i.e. corresponding to the Mru (and Sino-Tibetan) vowels, so that it is impossible to decide whether words with these finals have been borrowed or not. (An exception is provided by written Burmese *-e* with falling tone which is pronounced *-ui* in local Arakanese, cf. table 17).

<sup>33</sup> SHAFER has reconstructed Naga-Kukish *M-Gre* (iron), but Mru may have borrowed the word from Lushei *hrei*.

## 11. Final -o

English	Mru	Lushei	Burmese
withered	ro	rou	ro
small basket	kho	khou	kho
throat, gullet	kro		kro
cup	no	nou	
also	po	pou	
river	o	va	
make up, produce	pho	phua	pho
	-o	-ou, -ua	-o

## 12. Final -u

English	Mru	Lushei	Burmese
whine (dog)	u	u	
beer	yu	zu	
rat	yu	zu	
bathe	lu	lu	khyü
head	lu	lu	
thorn	cu		cü
putrid	chu		chü
pot, basket	pu, puk		pü
grandfather	pu	pu	b'ü
Mru	mru		mrü
kill, cut	tu(k)	tu(k)	thü
ask for, beg	lu(k)	lû(t)	lü
steal	ku(k)	rû(k) <sup>34</sup>	khü
busy	pu (lw.)		pu
similar	tu (lw.)		tu
	-u	-u	-ü
	-u(k)	-u(k), -û(k)	-ü

## 13. Final -ö

English	Mru	Lushei	Burmese
person	lö		lu
sound, melody	klö	glu (Tib.)	kyu
o!	ö	ô	ü
bake, roast	rö	rô'	hrü, kro
body	kö	kô	küy

<sup>34</sup> Tibetan has *rku-ba*; Kukish forms from *\*m-r-gug*?

pot	ö (lw.)	ü
silk	pö (lw.)	pü
town	mrö (lw.)	mrü
	-ö	?
	-ö	-ô
		-u
		-ü

The examples are too few to decide whether there are really two sets of correlations for Mru *-ö*, especially since the words of the second series are probably loaned from Arakanese.

## 14. Final -ü

English	Mru	Lushei	Burmese
o!	ü		ü
ask	lü		lü
breath	hü	hu	
smoke	khü	khu	khü
see	mü	hmu	
	-ü	-u	-ü

In loan words, Mru has *-ö* for Burmese *-ü*. Hence we have the problem of Lushei *-u* and Burmese *-ü* corresponding 1) to Mru *-u* and 2) to Mru *-ü*. The same differentiation appears in Southern Kukish, and traces of a vowel other than *-u* in the word for smoke (Mru *khü*) are recognizable in some languages of the Naga branches of Kukish<sup>35</sup>.

## 15. Final -au

English	Mru	Lushei	Burmese
sharpened bamboo	cau		cu
fat	chau	thau	chu
young	nau	nau	nu
swelling	bau	bau	pu
bamboo	mau	mau	
	-au	-au	-u

<sup>35</sup> Sema (Zumomi) and Ao (Chungli and Mongsen) have Kukish *\*-u* = *-u*, but "smoke" is *khü* in Zumomi and *kho* in Chungli and Mongsen. Kwoireng, where Kukish *\*-u* became *-au*, has *khæ*. Ukhrul has added a final *-i* (*khut*), but *\*-ut* would have given *-et* in Mongsen, *-u* in Zumomi, and *-ut* in Kwoireng. (Examples taken from SHAFER's Naga branches, 1950).

## 16. Final -ai

English	Mru	Lushei	Burmese
left (side)	wai	vei	wä, b'ay
pour out	klai	lei'	lä, hlay
sword	chai	fei (= spear)	
dao, bush-knife	charai	hrei (= axe)	
fog	mai	mei	
fire	mai	mei	mi
tail	mai	mei	mri <sup>36</sup>
language, call	lai	lei	
tongue	dai <sup>37</sup>	lei	hlya
navel	dai <sup>37</sup>	lai	
husk	wai	vai	phwä
a species of rice	rai	ṭai	
to be	khai		khä
elephant	-chai	-sai	
juice	nai	hnai	hnä
duck	-pai		b'ä
bee	kuai	khuai	kwä
	-ai	-ei	-i, (-ä, -ya)
	-ai	-ai	-ä

The differentiation of *\*-ei* and *\*-ai* has been lost in Mru. Burmese should have *-i* for Lushei *-ei* (cf. SHAFER's Vocalism T. 5), the problem of the exceptions may be related to that of Burmese *-wä* and *-we* for Kukish *-oi* (cf. table 18 and Vocalism T. 21). Mru cannot contribute to the question.

## 17. Final -ui and -üi

English	Mru	Lushei	Burmese
rotate	ui		we
rope	ruï	hrui	
select	ruï		rwe
dog	kui	ui	khwe
water, liquid	tui	tui	thwe
egg	dui	tui	

<sup>36</sup> According to SHAFER (1940:327) by metathesis from *\*rmi*, Kukish *\*k'-r-mei*.

<sup>37</sup> Cf. Mikir *de* (tongue), Tibetan *lce* (tongue) and *lte* (naval).

flute	prui		prwe
to coil	kui	(koi)	kwe
gold	ruī (lw.)		hrwe
table	pui-tang (lw.)		pwä-tang
write	ruī (lw.)		re <sup>38</sup>
bamboo rat	büi	bui	pwe
ear of grain	püi	vui	
sleep	müi		mwe
	-ui	-ui	-we
	(P)üi	-ui	-we

My Mru vocabulary shows no words in *-ui* after labials. For the words in *-üi* with initial consonants other than labials no equations are available, but since Kukish has *-u* for Mru *-ü*, we may infer that it has also *-ui* for Mru *-üi*.

18. Final *-oi* and *öi*

English	Mru	Lushei	Burmese
broken	koi		kwä
accompany	toi	(tel)	tway (= cling to)
feast	poi		pwä
to feed	moi		mwe
debt	löi	lei	
to hang	chöi	(fual)	(chwä)
	-oi	- ?	-wä
	-öi	-ei ?	?

Although Mru is rather rich in words ending in *-oi* and *-öi*, the comparative material proves extremely scanty. There are some Lushei words in *-l* which look similar to the Mru words of same significance, but, as may be seen from the following tables, Lushei *-l* does not correspond to Mru *-i*. In some cases Mru *-i* in diphthongs developed from former *\*-s* which was dropped in Kukish (leaving a glottal stop) and probably also in Burmese (cf. SHAFER's Vocalism T. 24). The problem will be taken up again in connection with Archaic Chinese comparisons.

<sup>38</sup> Written Burmese *-e* (Old Burmese *-i*) is generally *-i* in Marma, but in the falling tone its pronunciation changes to *-ui*. The stem corresponding to Burmese *re* (pronounced *ruī* in Marma) is Mru *pri* (to scratch).

## 19. Final -ia

English	Mru	Lushei	Burmese
bowels	ria	ril	
to wash	chia	sil	che
hail	ria	rial	
cattle (gayal)	cia	shial	
cup	bia	bêl	
circle	wia	val	
kidney	kia	kal	
arrow	chia	thal	
make war	hia	râl <sup>39</sup>	
earthworm	tia	tâl, til <sup>40</sup>	ti (*tai)
charcoal	wia	hol (*s-wal)	swe
child	ngia		ngay, ngi
	-ia	-il, -ial, -êl, -al, -âl	-e, -ay, -i

## 20. Final -üa and -ua

English	Mru	Lushei	Burmese
soon	lûa	hlol	
stick	mûa	hml	
twisted	rûa	hrual	
snake	rua	rûl	mrwe
womb	thua	chul	
drunk	pua		pwe
hole	kua	kua	
together	kua		kwa'
village	kua	khua	rwa
separation	khua		khwa
give birth	phua		b'wa
	-üa	-ol, -ual	
	-ua	-ul, -ûl	-we
	-ua	-ua	-wa

The table shows that not every final *-ua* can be derived from *\*-ul*. Similarly, there may be original *-ia*, e.g. the last word of table 19.

No sure equations are available for Mru *-iu*, *-eu*, *-ou*, and *-öu*. For *-iu* one might compare Mru *chiu*: Lushei *fu* (sugar-cane). Mru *-eu* probably

<sup>39</sup> Perhaps from *\*r-hâl*, cf. note 34, also p. 136.

<sup>40</sup> Maring *tâl*, Meithei *til*; Lushei *tâl* "to wriggle".

represents a diphthongization of *-o'*, cf. Mru *reu* (let become dry in the sun) Lushei *rop* (dry up), Mru *preu* (of mixed colour) : Burmese *prok* (idem).

Regarding final consonants, no major differences exist between Mru, Kukish, and Burmese. Mru differs from Kukish only in that final *\*-l* was replaced by *-a* (retained in Lushei, *-i* in Khami, *-a* in Khyang), whereas *\*-s* became *-i* in Mru and was replaced by a glottal stop in Kukish. Burmish has preserved neither *-l*, nor *-s*, nor *-r*; the other finals underwent modification after *\*-e-* and (partly) *\*-i-*.

Regarding initial consonants, nasals and liquids are the same in Mru, Lushei and Burmese, but Mru has dropped the aspiration. Initial *y-* and *w-* have become *z-* and *v-* in Lushei, but Lushei *v-* also corresponds to Mru and Burmese *p-*. There seem to be four major groups of initial labials: 1) *b:b:p*, 2) *p:v:p*, 3) *p:p:b'*, 4) *ph:ph:ph*. Mru *b* or *ph* for Burmese *b'* indicate loan words. The corresponding Tibetan labials are 1) *b*, 2) *p*, 3) *ph*, 4) *ph* (Tib. *sb-* : Burm. *ph-*, but Mru *b-*). Tib. *by-* stands also for Mru and Burmese *w-*. An exception is provided by the word for pig: Mru *pak*, Lushei *vok*, Khami *ok*, Burmese *wak*, Tib. *phag*.<sup>41</sup>

The dental series must be analysed in connection with that of the sibilants and affricates. Parallels for Mru words in *d-* are remarkably few, and it may be questioned if there is a *d:d:t*-series, especially since Tib. *d-* does not correspond to Mru *d-* but to Mru *t-*. Mru *t-* : Lushei *t-* seem to correspond both to Burmese *t-* and *th-*; and finally there is a *th:th:th*-series. Like in the labial series, Burmese, but not Mru, shows the aspirating effect of former *s*-prefix, cf. Tib. *sta-* (axe) : Bu. *tha* (knife), but Tib. *star-* : Mru *tar* (fasten to), Tib. *sdom-* : Mru *tom* (to bind). Lushei *th-* also corresponds to Mru *ch-*, and reversely we find Lushei *ch-* : Mru *th-* (but no sure examples of Mru *ch-* : Lushei *ch-*). In the latter case, no parallels from Burmese are available, but probably Burmese has *th-*, too (cf. SHAFER'S Vocalism T. 14:24a). Also Khumi (Southern Chin) shows *th-* for Lushei *ch-* in several instances (cf. Khumi *thu* : Lushei *chu*, vagina, which is probably related to Mru *thua* : Lushei *chul*, womb). The rules existing for prefixes exclude the assumption of former *S-th-* or *T-ch-*, and the only suggestion I can offer is an original affricate. In this case one might expect also several *t-c*-correspondences, but there are only few examples: Mru *ting* : Lushei *cing* (barren), Mru *tim* : Lushei *cim* : Burmese *tim* (to collapse), Mru *ta* : Kukish *\*c'a* (to hear; the

<sup>41</sup> The third group (*p:p:b':ph*) may result from a prefixed *p-* adherent to a vocalic root, cf. *pu:pu:b'ü* (grandfather) < *\*p-u* (*u* = elder relative, Bom *u* father's father, Sak *a'u* grandfather), *phua* :—*b'wa* (give birth to) < *\*p-ua* (Mru *ua* let out of a hole, Burmese *awa* an opening); similarly one might suggest *\*p-wak* > Lushei *vok*, Khami *ok*. We have also Mru and Lushei *pi* (grandmother) against Khami *pa-i*, Sak *a'i* (grandmother), but a similar solution seems inappropriate for *pa:pa* : *b'a:pha* (father).

question-mark indicating that the initial consonant cannot have been *ts-*), Mru *tai* : Kukish \**c?ei* (elder brother). Like the aspirated form, Lushei *c-* does not seem to correspond to Mru *c-*. The remaining correspondences are: 1) *c:f:c*, 2) *ch:f:ch*, 3) *ch:th:ch*, 4) *ch:th:s*, 5) *ch:s:ch*, but this number is probably incomplete, since Lushei has also *sh-*, and there still remain several "exceptions". A correlation of this series with Tibetan sibilants and affricates proves very difficult, and it is only tentatively that I suggest 1) *dz* and *ts*, 2) *dz'*, 3) *ts'*, 4 and 5) *ś* and *s*, leaving open the question for the remainder of the Tibetan series.

The guttural series is less complicated. Initial *g-* lacking, we find 1) *k:k:k* and 2) *kh:kh:kh*, corresponding to Tib. *g* or *k*, and *kh* respectively. A third series may be indicated by the following examples: *kim:in:im:khyim*, *kap:ap:ap:khap*, i.e. *k:0:0:kh*, but there is also *kui:ui:khwi:khwi*. SHAFER (1950) has reconstructed *ɣ-* for the Kukish words in question. In combination with *r* this *ɣ* gave rise to a special development, cf. \**r-ɣuk* (to steal): Mru *ku(k)*, Lushei *ru(k)*, Burmese *khü*, Tibetan *rku*. The following is a suggestion: \**ɣrut* (hand): Mru *rut*, Lushei *kut*; \**ɣre* (iron implement): Mru *re* (spear), Khami *ke* (knife).

Similar to \**r-ɣ-* > *k-* in Mru, > *r-* in Lushei, I suggest \**r-h-* > *h-* in Mru, > *r-* in Lushei, cf. Mru *hi* : Lushei *ri* (border-line), Mru *hia* : Lushei *räl* (warrior, war), Mru *ha* : Lushei *ra* (ten), and perhaps also Mru *hut* : Lushei *ru'* (bone). Mru (*au*)-*yüa* : Lushei *rual* (friend) < \**r-yual* remains problematic, since the reconstruction, though corroborated by the Archaic Chinese form (cf. table X, *gyü*g), runs contrary to Lushei *za* < \**r-ya* (100, but Tib. *br-g-ya*). For the \**rh-* words, the aspiration which has been dropped in Lushei seems preserved in Ukhrul (South-eastern Naga) after prefixes, cf. *thari* (border) and *thara* (ten). Because of insufficient evidence SHAFER (1950b) did not try to explain the double series of Ukhrul prefixes, but I think that the aspirated forms are due to an original aspiration of the stem or a contraction of prefixes, whereas the *k-*, *c-*, and *p-* forms correspond to the original Kukish *k-*, *t-*, and *p-* prefixes; cf. *khäna* < \**k-hna* (ear), *khärü* < \**k-hrui* (creeper), *khäni* < \**k-hni* (two) but *käthum* < \**k-sum* (three); *thärük* < \**t-hryük* (pheasant) but *ciko* < \**t-ko* (nine); *khämei* < \**k-r-mei* (tail). This suggestion will help to explain the development of prefixes in Mru.

Mru has preserved *k-*, *p-*, and *m-* before *r*; *k-* and *p-* before *l*; and *k-* (and *s-?*) before *w* and vowels. But these prefixes were dropped whenever they combined with *h*. Therefore, although we find *mrwe* in Burmese and *mrul* in Bom (Central Chin), Mru has *rua* (snake) while Ukhrul has *phärü* and Mikir has *phürul* (the aspiration may be due to former *s-*, cf. Tib. *sbrul*). In the same way we find Mru *la* : Mikir *phëlo*, Khami \**pähla* (cotton), Mru *rui* : Ukhrul *khärü* (creeper), Mru *mai* : Ukhrul

*khāmei* (tail). Similarly, *t*-prefixes were dropped before *h* (cf. *rik* < \**t-hryik*, pheasant, *hi* < \**t-r-hi*, border, *la* < \**t-hla*, spleen), but it is uncertain to what extent prefixed *t*- was preserved in other cases: there are several verbs in Mru with *t*-prefix, but they all imply mutual or reflexive action and seem to be of secondary nature (cf. *taria*, to quarrel: *ria*, separation; *talop*, to make palaver : Khami *lop*, to speak; *taklung*, to hide : *klung*, to shut up). The remainder includes words as *taku* (nine), *taruk* (six), and *tom* (bear, < \**t-r?-om*, also Tib. *dom*).

A special problem is provided by the initial clusters in *-l-* and *-r-*. They can be distinguished from similar combinations formed by prefixes in that they appear in Lushei as *t(h)l* or *ʔ(h)* while prefixes were dropped in this language. But in Mru, at least insofar as we are concerned with verbs, the morphemic value of what has been called “prefixes” and “clusters” in the Kukish languages seems reversed, since *k-* and *p-*, corresponding to the *t-* of the Lushei cluster, are used to form derivations of the same stem in *l-* or *r-* (e.g., *ring*, *kring*, *pring* : *ting*, colours). Thus we find Mru *l-* or *kl-* : Lushei *tl-* or *hl-* : Burmese *ky-*, etc.

But, starting with the Burmese differentiation, there seems to exist a stable correlation between Burmese *hl-* : Lushei *thl-* : Mru *kl-*, and Burmese *l-* : Lushei *thl-* : Mru *l-* (or *-r-* respectively). Comparative material is too insufficient to venture conclusive reconstructions of the clusters in question (cf. the word for “moon”: Mru and Burmese *la*, Lushei *thla*, Ukhrul *ka*, Sak *sāda*, Tib. *zla*).

A note may be added here on T-sounds after *l-*. In Mru, they were changed to *d-* and the *l* was dropped, cf. Mru *dai* : Lushei *lai* : Tib. *lte* (navel), Mru *dai* : Lushei *lei* : Tib. *lśe* (tongue), Mru *di* : Lushei *li* : Tib. *lśi* (heavy).

There are only a few prefixed *ch-* (< \**s*?) in Mru (before *r*, *l*, and *n*): *charüt* (comb, Arch. Ch. *tsyēt*), *charai* (dao, Lushei *hrei* < *srei*, Tib. *sta-re*), *chaling-chalap* (butterfly, Lushei *-phe-hlep*, Tib. *phye-ma-leb*, Burm. *lip-pra*), *charam* (indigo, Tib. *rams*), *chanat* (snail, no parallel) etc. In *chalik* (idle) the *cha-* is probably a separate word, cf. Khami *thalik*, Khumi *thō-che*, Lushei *chia-tha*. Whether *-r-* has been dropped behind *ch-* as in *ching* (life, Lushei *hring* < \**sring*) remains uncertain, since the *-r-* cannot be confirmed by comparative material (cf. also p. 156).

Prefixed *ng-* is found in Mru *ngapok* (gun) and *ngarai* (poor). The latter may be related to Mru *ngare* (hardship) which was borrowed from Arakanese *ngarā* (hell). In other cases Mru has dropped the *ng-*, cf. Mru *rim* : Burm. *ngrim* (lonely), Mru *yak* : Kukish \**ng-ya* (night), and similarly Mru *yuk* : Burmese *myok* : Arch. Ch. *ngyu* (monkey). Mru *mar* : Lushei *hngār* (wild cat) seems enigmatic. Prefixed *r-* has generally

been dropped in Mru. The only exceptions are the numerals for seven and eight, *ranit* and *riat* < *rayat*. In the latter case, medial *-ia-* is unknown in Mru and the stem *yat* may also be seen from Khami *tayat*, *kayat*, *yat*. But the *r-* has been preserved in the other Kukish languages where it has become part of the stem, as also in Burmese *hraç* < *\*h-ret*. The preservation of the *r-* in Mru may have resulted from its protection by several other prefixes (cf. Tib. *b-r-g-yad*). The same explanation may be valid for the *r-* in *ranit* < *\*k-š-r-nic*? (Chin has dropped the *-n-*, cf. *sari(t)* : *sini'*), but it should be remembered that inconsistencies in the phonetic development of the words for numbers are fairly common in all Sino-Tibetan languages.

Trying to summarize the position of Mru in relation to Kukish, in general I find no indications of large-scale borrowings, and with special regard to Khami and Khumi my studies have led me to the reverse conclusion, i.e., that it was not Mru which was influenced by Southern Chin, but Southern Chin which was influenced by Mru in its vocabulary and in its phonetic development in various well defined degrees (cf. Löffler 1960).

Nevertheless, there are two possibilities to infer that Mru also borrowed from Kukish. The first is by comparison with Archaic Chinese in cases when the rules for phonetical shifts differ for Mru and Kukish and Mru shows the Kukish shift (v.i.); the second, less reliable, is by statistical comparison: Summarizing the number of equations of the tables, Burmese and Lushei show approximately the equal number of 200 parallels with Mru, which will amount to more than 250 if the words not listed here were added. Not even 100 words are common to all three languages. Mru phonemes clearly indicate several loan words from local Arakanese (of recent character and partly used in songs only). Moreover, I inferred that Mru borrowed from Arakanese when the phonemes of the latter still preserved forms more archaic than written Burmese. Since the basic vocalism of Mru is not nearer to Kukish than to (written) Burmese, we may conclude that the surplus of Kukish parallels (in comparison with the remaining Burmese parallels) was borrowed not only by, but also from, Kukish.

On the other hand, there are equally more than 200 parallels with Archaic Chinese, whereby borrowings are excluded. Even if several of the equations may be erroneous (there are not even 100 parallels with Tibetan), the number of sure equations seems large enough to keep the percentage of words which must be accepted as borrowed from Kukish rather low. To be sure, there is a common stratum for Mru and Kukish, but the equations point back to a proto-Kukish-Burmish stock, where amongst others the equivalents for Mru *-ö-* and *-ü-* were still present.

Since Kukish and Burmish have *-i-*, *-o-* or *-u-* for the back-vowels of Mru, Mru may have separated from the hypothetical common stock before the definite separation of Kukish and Burmish.

## II. Mru and Archaic Chinese

In search for a solution of the problems encountered by the comparison of Mru, Kukish (esp. Lushei), and Burmese, I had to look for a Sino-Tibetan language with a relatively high degree of vowel differentiation. B. KARLGREN'S reconstructions of Ancient Chinese seemed to work most promisingly in this respect, but, at the same time, they gave rise to new complications. In several aspects a reconciliation could be achieved by recurring to the Archaic Chinese forms (KARLGREN 1957). Little by little I perceived their value, until I finally decided to enter the Archaic Chinese forms into every table. Scholars reluctant to accept KARLGREN'S Archaic Chinese (Arch. C.) may rely on the column where I entered the (generally accepted) Ancient Chinese forms (A.C.).

The combinations of phonetic symbols used by KARLGREN for Arch. C. should not be regarded as words of an ever spoken language. There are, e.g., more than thirty vowel combinations between two gutturals: since each combination developed in a different way, we must interpret it as a phonemic (rather than phonetic) symbol, including hitherto unknown initial or final combinations of consonants. Drawing more and more upon Arch. C., I gradually succeeded in "deciphering" some of these symbols, especially in cases of "irregular" development from Arch. C. to A.C. In looking for comparisons with Mru, I therefore did not try to find words which appeared phonetically very similar, but I paid heed to that every word compared fitted in with the total system and the rules which could be derived from it. I have ventured to give a synopsis of the vocalic system in table XI and shall discuss it below.

For the sake of illustration of certain rules, in some cases (when a very common Sino-Tibetan stem is lacking or has been borrowed and phonetically changed in Mru) Kukish parallels (marked K) have been added. I have restricted the comparisons to those words which show approximately the same significance in Arch.C. and Mru, adding the different meaning of Mru in brackets only in special cases when the equation could be inferred in other respects.<sup>42</sup> We must keep in mind that many changes of significance occurred within the 2500 years of development

<sup>42</sup> There are, e.g., two words for "rhinoceros" in Arch. C. which phonetically correspond exactly to the two related but different words for "gayal" in Mru and Lushei, viz.: Arch. C. *dz̄yər*: Mru *cia*, Arch. C. *siər*: Lushei *shial*.

from Archaic to modern Chinese. Hence still more changes will have occurred in a language which may have separated from a common source with Chinese more than 3—4000 years ago. On the other hand, several perchance parallels may have been erroneously accepted by me as equations. But I do not think that they can substantially invalidate my conclusions. Nevertheless, there can be no doubt that the reliability of the equations given in the following tables cannot compete with that of the Mru-Lushei-Burmese tables. Special reservation must be admitted for words with initial occlusives, since it is impossible to affirm correlations without established rules for initials and prefixes in comparative Sino-Tibetan material.

## I. Medial -a-

English	Mru	A. C.	Arch. C.
1) night	yak	ya	zyăg (*S-yăg)
2) armpit	yak	yăk	zyăk (*S-yăk)
3) hair	cham	şam	sam
4) eldest brother	rak (K:prak)	pŕk	păk (*prăk)
5) eld. brother (uncle)	tarang	mŕng	măng (*mrăng)
6) to leek, ooze	yat	yăi	zyad
7) leaf, card (fan)	yap	yăp	dyap (*T-yap)
8) indigo	charam	lâm	glâm (*K-ram)
9) dry	kan	kân	kân
10) cruel (bad)	ngak	ngăk	ngăk
11) do, make	cang (K:ca)	tsăk	tsăk
12) be valid	tang	tâng	tâng
13) alligator	tam	d'ân, d'â	d'ân (*dam ?)
14) side, place	pang	pywang	pywang (*pang)
15) box, sacrifice	pang	pywang	pywang (*pang)
16) go away	mang	mywang	mywang (*mang)
17) turn	plan	pywon	pywăn (*plan)
18) unite	khap	g'âp, g'âp	g'êp, g'âp
19) chin	kam	g'âm	g'êm
20) box, open vessel	kham (T:sgam)	k'âm	k'êm
21) take in mouth, suffer	kham	g'âm	g'êm
22) bear, sustain	kham	k'âm	k'êm
23) bring in, give	nap	nâp	nêp
	-a-		*-ă-, *-a-
	-a-		-əP

The Arch. C. forms with asterisks in brackets result from the application of the aforementioned rules for which details will be given in the discussion of table XI. Table XI will also be useful for the evidence that Arch. C. has two kinds of *-a-* (written differently by KARLGRÉN according to their environment). The question whether these different *-a-* are originally Sino-Tibetan or evolved secondarily in Chinese cannot be answered from the material used for these comparisons, but they apparently do not correspond to Lushei *-a-* and *-ä-* (as suggested by SHAFER 1941, p. 30). The problem of examples 18—23 will be considered in a later context (v. p. 156).

II. Medial *-e-* and *-i-*

English	Mru	A. C.	Arch. C.
1) tweezers	kep	kăp	kăp
2) to watch	kren	g'ăn	g'ăn (*grěn ?)
3) to knot, twist	ker	kiet	kiet
4) solid (to fix)	khet (khen)	kien	kien
5) sacrificial tripod	teng	tieng	tieng
6) set forth, present	then	d'ien	d'ien
7) respectful	ring	kyong	kyěng (*kring)
8) life	ching	syäng	syěng
9) name	ming	myäng	myěng
10) examine	kir	k'yět	k'yět
11) day, sun	ni	ńzyět	ńyět
12) shut, close	pit	pji	pyěd
13) guest	pin	pyěn	pyěn
14) skin	pik	b'jię	b'ia (*b'yěg)
15) drink	im (K)	.yəm	.yəm
16) [now], house	kim	kyəm	kyəm
17) fear	krim (B)	lyəm	blyəm (*P-rim ?)
18) weep (twinkle)	klip	k'yəp	k'lyəp
19) lie down to sleep	chim	ts'yəm	ts'yəm
20) turtle	lip	lyäp	lyap
21) morning	cin = ?	zyěn	d'yən
22) extinguish	mit	miet, myät	miat, myat
	-e-		-ăP/T, -ie-
	-i-		-yěK/T, -yəP

In examples 3 and 10 I have entered Mru words in *-r*. More examples of this kind will be found in the following tables. Although the corresponding words may not represent the same stem, they are undoubtedly derived from the same root. Several Chinese hie-sheng derivatives (phonetic

compounds) are formed on this basis. „Irregular” are examples 11 and 14, both words are very common in Sino-Tibetan languages and generally the final consonant is missing. But even in these examples the vocalism complies to very strict rules: A. C. *-jiɛ* < Arch. C. *-ia* or *-yɛg* (\**-ig*), and Arch. C. \**-ig*: Mru *-ia* (cf. T.V.), i.e. Mru and Arch. C. *-ia*:*-ik*, but *-i*:*-it*. The graph of no. 16 actually means “now”, but it depicts a roof and in composition with “earth” (⊕ ) it means earth + house = “pit”.

The last three words of the table apparently have been borrowed from Kukish or Burmish, since the Mru vowels corresponding to the Arch. C. phonemes are *-ö-* or *-ü-* (cf. T. IV), for which Kukish and Burmish have *-i-* in several instances. I cannot decide whether no. 21 really corresponds to the Arch. C. word; Lushei has a similar but probably unrelated word, *fɛng*, which should have given *cing* in Mru.

### III. Medial -oK, -uK, -üK, -ök

English	Mru	Burmese	A.C.	Arch. C.
1) earthen jar	kong		kǎng	kǔng
2) wooden drum	khong	khong	kʼǎng	kʼǔng
3) neck	ngong	hngông (K)	gʼǎng	gʼǔng
4) pair	chong		ʃǎng	sǔng
5) happiness		pyok	pyuk	pyük
6) net	lok		luk	luk
7) onion	chong	btsong (T)	tsʼung	tsʼung
8) boy		dong (K)	dʼung	dʼung
9) to beat	pok	pok	pʼuk	pʼuk
10) citymoat(pond)	öng	üng	.ywang	.yung
11) fief (administer)	pöng	püng	pywong	pyung
12) rule, norm	thung		tʼuong	tʼông
13) poison		dug (T)	dʼuok	dʼög
14) shame	ruk		lyuk	lyök (*rök)
15) six	taruk	khrok	lyuk	lyök (*rök)
16) temple		kyong	kyung	kyông
17) belly		pük	pyuk	pyök
18) to see	mü		myuk	myök
19) play violently	khöng		kəng	kəng
20) be able	nöng	nüng	nəng	nəng
21) put up	töng	tüng	təng	təng
22) to plant	cök	cük = ?	zyək	dʼyök (*dʼək ?)
23) a fly	wing, üng <sup>43</sup>	yang	yəng	dyəng (*T-yəng)

<sup>43</sup> Mru *wing* corresponds more closely to A.C. *ywäng*, Arch. C. *gywǝng*, to hum, to buzz as flies.

24) breathe (life)		sak	syək	syək
25) beginning	cük		sí	śyək
26) ginger		khyang	kyang	kyang
27) to place, put	tö(k)		t'yak	tyak
28) steep	cöng	fing (K)	tšyang	t'yang
29) hill side	klöng		kyong	klyäng
30) go upstream	chök		suo	sâg (R:t'yäk)
31) lift, rise	krüng		g'yöng	g'yëng (*g'ryëng)
32) shut (the door)	büng	bing (K)	b'ieŋ	b'ieŋ, pyëng
	-oK	-oK		-üK, -uK
	-öK	-üK		-yuK
	-uK	-oK < *-uK		-ôK
	-üK	-üK		-yôK
	-öK	-üK		-əK
	-üK ?	-aK ?		-yəK
	-öK	-yaK ?, -aC ?		-yaK, -yăK
	-üK	*-iK		-yëK

In this table I have added some Burmese parallels to illustrate the rôle of Burmese *-üK* (cf. table 6 and SHAFER's Vocalism T. 16). It appears that the value of Arch. C. *-u-* and *-o-* should be inverted to receive the ST vowels. This suggestion is corroborated by further examples collected by SHAFER (Vocalism T. 16—18) and implicitly by the hie-sheng derivatives of KARLGRÉN'S GRS 131 and 132 where A.C. *yəu* < Arch. C. *yóg* (\**yug*) has the same phonetic as A.C. *yu* < Arch. C. *yu*. Most probably proto-Chinese *\*-yoK* and *\*-yuK* correspond to Mru *-öK* and *-üK*, Kukish *-oK* and *-uK*, and Burmese *-üK* (provided that the words in *-yoK* can be explained as later borrowings).

Evidence for the Arch.C. *-yə*-series is meagre and contradictory. More examples and a discussion of the problem will be given in table V. The rules for Arch.C. *-yaK* and *-yăK* are the same as those for Arch.C. *-yaT/P* and *-yăT/P* (cf. table IV), and the comparative material for the latter series (not listed here) suggests that Kukish has *-e-* (*-ia-*) and *-i-* for Arch.C. *-ya-* and *-yă-* respectively. The affirmation of Burmese parallels is difficult, since *-e-* has been lost in written Burmese. There are examples where it has *-i-* (cf. table II 20 and 22), but *-(y)a-* appears in others, and the situation seems cognate to the problem of *-üK* and *-yoK* mentioned above.

A comparison with the examples of table I (1, 2, 6, 7) shows that Arch. C. *ya* corresponds to Mru *-ö-* only in medial position. When an initial consonant or stop is lacking Mru has *ya-*, too.<sup>44</sup> This demonstrates

<sup>44</sup> Table X (5—8) suggests a similar relation between Mru *-ü-* and *yu-*.

that the initial unaspirated media added by KARLGRÉN according to hie-sheng correlations cannot belong to the stem but must be regarded as prefixes.

## IV. Medial -oT/P, -uT/P, -üT/P, -öT/P

English	Mru	A.C.	Arch. C.
1) wipe	mot	muât	mwât
2) outside	wat	ngwâi	ngwâd
3) excavate	wat	wat	wat
4) scrape clear	chot	şwat	swat
5) all, many	kom	g'âm	g'ëm
6) rope, to tie	kom	kâm	këm
7) pitfall	wam (kuam)	g'âm	g'ëm
8) bear	tom (K:wom)	gyung	gyum (*r-om)
9) bone	hut	kuæt	kwæt
10) grandson	cu = ?	suæn	swæn
11) hold in the mouth	um	.âm	.ëm
12) three	chum	sâm	sëm
13) to hate	ün	.yuæn	.ywæn
14) to ask	lün	myuæn	mywæn (*mlyun)
15) talented	cür	tsyuën	tsywæn
16) tremble	cür	tš'yuën	t'rywæn
17) obey, follow	chün	dž'yuën	d'rywæn
18) manure, filth	prün	pyuæn	pywæn (*pryun ?)
19) louse	chür	şyet	siet (şyet ?)
20) comb	charüt	tşyet	tşyët (tsryët ?)
21) forest	rüm	lyäm	glyäm (*K-ryäm)
22) soft	nüm	ńzyäm	ńyäm
23) to polish	röt	lyäi	lyad
24) thread	chön	syän	syän
25) fly about	phör	p'yan	p'yan
26) face	mör	myän	myän
27) origin	wön = ?	ngywön	ngywän
28) hang up	khuön	g'iwen	g'iwän (g'wian)
	-o-, wa-		-wâT, -waT, -εP
	-u-		-wêT, -əP
	-ü-		-ywêT, -yêT/P
	-ö-		-yaT

The correlation of final *-r* and *-t* has been mentioned in connection with table II. Further examples of *-r:-n* parallels can be found in SHAFER'S Vocalism T. 23 and several hie-sheng derivatives of KARLGRÉN'S

GSR. The correctness of no. 10, Mru<sup>0</sup> : Arch. C. *-n*, may be doubted (cf. also X 13), but there are several instances of *n*-suffix in the Tibetan kinship terminology; Kukish and Mru use derivations in *\*-l*. The reconstructions in no. 19 and 20 are admittedly based on the evidence of the Mru vowel in correlation with table XI. They seem possible since KARLGRÉN uses only *şyet* and *syat* and neither *şyat* nor *syet*, whereas he derives both *şyět* and *şyet* from A.C. *şyět* (*şiet* of no. 19, GSR 506, may be a misprint for *şiet*, here rendered by *şyet*).

Examples 13—18, showing that Arch. *\*-yu-* before dentals corresponds to *-ü-* in Mru, reinforce the meagre evidence of table III for Arch. C. *\*-yu-* before gutturals. The reconstruction of initial *ml-* in no. 14 was based on the assumption that also the phonetic, “gate” (Arch. C. *\*mlun*, GSR 441), is cognate to the Mru word (*plon*). In no. 21 Lushei has *ram* and in no. 22 Burmese has *nyam* (though the latter may also be related to Arch. C. *nyam*, GSR 623, Lushei *nem*), and there is also A.C. *zyam*, Arch. C. *dzyam*, to search, Mru *cam* (taken over from Kukish?). A similar *ü:a:(ya)* correlation was indicated by the Arch. C. *-yək-* examples of table III.<sup>45</sup>

No. 28 has been mentioned in connection with table 6; since there are no *wya* or *ywa* in Kukish and Burmese, *wa* may have taken its place, as indicated by Burmese *-kwan*. The problem of Arch. C. *-yvä-* behind gutturals will be taken up later (cf. p. 155), and Mru *war* (night) : Arch. C. *ngyväit* (moon, cf. Mru *ni*, day : Arch. C. *nyět*, sun) should be mentioned in this context.

#### V. Final -a, -ia, -ua

English	Mru	A.C.	Arch. C.
1) bitter	kha	k'uo	k'o
2) door	kha (K)	g'uo	g'o
3) five	tanga	nguo	ngo
4) disobey, bad	nga(k)	nguo	ngo
5) slave	nar	nuo	no
6) write	ca	şywo	şyo (*šo)
7) millet, paddy	ca	şywo	şyo (*šo)
8) slowly, lazy	cha, cha-	şywo	şyo (*šo)
9) man	pa	pyu	pywo (*po)
10) father	pa	b'yu	b'ywo (*bo)

<sup>45</sup> I hesitate to add another example to this group, viz. the word for “smoke”: Mru *khü*, A. C. *k'ygi*, Arch. C. *k'yad*. Mru *-ü-*: Arch. C. *-yə-* is consistent with the rules, and Ukhrul *khut* shows the corresponding final, but there is no further corroboration of Arch. C. *-yəT*: Kukish *-uT*; cf. also table VIII, no. 13.

11) flower	par (K)	b'yu	b'ywo (*bo)
12) not	ma (K)	myu	mywo (*mo)
13) go, walk	pak (B:swa)	b'uo	b'o (*bâ ?)
14) radish	-la	lâ	lâ
15) salt	-cha	dz'â	dz'â
16) place	ra	lji	lyæg
17) time	kha, khü	g'ji	g'yæg
18) eat	ca	zi	dzyæg
19) child	ca	tsi	tsyæg
20) think	ca	si	syæg
21) send, envoy	cha	ʃi	slyæg (syæg)
22) ear	na (K)	ńzi	ńyæg
23) fish	ng(y)a (K)	ngywo	ngyo
24) oath	chia (K)	tsywo	tsywo
25) (wild) pig	tia = ?	t'ywo	tyo
26) ewer	yia	yɛ	dia (*yia)
27) separate from	ria	ljeɛ	lia
28) child	ngia	ńzyɛ	ńyɛg (*ngyɛg)
29) easy	ya	iě	dyɛg (*d-yɛg)
30) hole	kua, khuar	k'uâ	k'wâ
31) tread, stamp	thua	tuâ	twâ
	-a		-o (ś + yo, P + ywo)
	-a		-â, -yæg
	-ia (cf. also VI)		-yo, -ia, -yɛg
	-ua (cf. also X)		-wâ

This table contains many very common Sino-Tibetan words. It shows that the difference between Arch. C. *\*-â-* and *\*-a-* is also found in open syllables. *â* became *-o* (with the obligatory *-yw-* behind labials) and *a* was written *-â* by KARLGRÉN. Since there is not a single *Pâ* in KARLGRÉN's Arch. C., it may be that *\*Pâ* became *Po* (only two examples in the GSR), explaining no. 13, although original *\*Prâ* must be taken into consideration, too. Preceding *y* (*i*) or *w* (*u*) does not seem to have influenced the different development of the two types of *a*. The *-yɛg:-ia* correlation has been mentioned in connection with table II.

Arch. C. *-yæg*: Mru, Kukish etc. *-a* provide a new problem. There are Arch. C. *-âg* from A.C. *-uo*, and Arch. C. *-ăg* from A.C. *-a*, so that *-yæg* can take neither place. Since Arch. C. *-yɔ-* of tables III and IV seems to correspond to Kukish *-a-* and Mru *-ü-*, Kukish *-a* for Arch. C. *-yæg* is reasonable. For Mru, on the other hand, we might expect *-ü* (like in no. 17, *khü* being the word used in songs) but, generally, also Mru has *-a*.

And it is highly improbable that Mru borrowed such common words as *ca* (child, eat, rice) and *ra* (place) from Kukish. Whether the examples of table VII, 12—15, should be added to this group remains undeterminable, since *-yər* may stand for *-i*, and *\*-al* became *-i* in A.C. or earlier.

VI. Final *-e* and *-i*

English	Mru	A.C.	Arch. C.
1) sand	che	ʃa	sa
2) lip	we <sup>46</sup>	k'wai	*k'wäg
3) cut meat from bones	kwe(k)	kwa	kwa
4) to finish	ki	kjei	kyəd
5) deer	-ki	g'ji	g'yəg
6) market	ci	zi	d'yəg
7) ancestress	pi	pji	pyər
8) kind of leopard	pri	b'ji	b'yər (*br- ?)
9) ritual	ri	liei	liər
10) younger brother	di	d'iei	d'iər
11) wife	machi	ts'iei	ts'iər
12) rice	mi	miei	miər
	-e		-a, -äg
	-i		-yə-, -iər

Further evidence for the equation Arch. C. *-a* : Mru (and probably ST) *-e* is provided by the hie-sheng derivatives of GSR 18 and 879 where A.C. *-ai* < Arch. C. *-äg* interchanges with A.C. *-a* < Arch. C. *\*-ě*. The result of the equations 4—8 (Arch. C. *-yə-* : Mru *-i*) is complicated by the fact that in tables III and IV Mru has *-ü-* for Arch. C. *-yə-*, and that Arch. C. *-yəg* corresponds to Mru and Kukish *-a*, and Arch. C. *-yər* to Mru and Kukish *\*-al* (cf. tables V and VII). Judging from table II we should expect *-yě-*, but probably also Arch. C. had final *-i*, although KARLGBEN has replaced it by other symbols.

Examples 9—12 must be considered in connection with the following table (VII, 9—11), where I suggest that Arch. C. *-iər* may also correspond to Mru *-ai*. The three equations of table VII do not seem too convincing but they are backed by SHAFER's equation (Vocalism T. 8) A.C. *-iei* : ST *-ai*, since Arch. C. *-iər* > A.C. *-iei* and ST *-ai* > Mru *-ai*. Nevertheless, I hesitate to suggest a differentiation of Arch. C. *-iər* into *-ier* (not represented in the GSR) and *-iər*, in order to explain the twofold correlation of this symbol with the Mru vowels.

<sup>46</sup> Cf. Burmese *khwä* (lip) and Chairel *du-khwi* (mouth); in order to be dropped in Mru, *kh-* should be regarded as an aspirated prefix (cf. p. 136).

## VII. Final -ai and -ia

English	Mru	A.C.	Arch. C.
1) together with	hai = ?	g'ji	g'yəd
2) hunger	krai	kji	kyer
3) insect (bee)	kuai	kjwi	kywər
4) calf of leg	phai (K)	b'jwəi	b'ywər (b'ər)
5) tail	mai	mjwəi	mywər (mər)
6) burn (fire)	mai	hwəi	hmywər (hmər)
7) spleen	pai	b'jiɛ	b'yɛg
8) tongue	dai	dž'yät	d'yät
9) navel	dai	dž'iei	dž'ier
10) plaster	nai = ?	niei	niər
11) wash (clean)	chai	siei	sier, sər
12) clear off weeds	cia	zi	dzyər
13) rhino (gayal)	cia	zi	dzyər
14) elder sister	cia	tsi	tšyər
15) arrow	chia	ši	šyər
	-ai		-yɛ-, -ər, -ier
	-ia < *-al		-yər

The equation of Arch. C. -ər : Mru -ai (:Kukish -ei) is especially proven by no. 6 (hie-sheng derivate of no. 5), since its aspiration is retained sporadically in Kukish and actually in Siamese (*hmai*). Arch. C. -əK corresponds to Mru -ōK (cf. table III), -ai is its equivalent in open syllables as shown by Arch. C. *kyer* : Mru *krai* (hunger), hie-sheng derivate of Arch. C. *kyer* : Mru *krök* (small table), ST values probably \**kriäs/kriäg* (cf. table XI) because of Tib. *kres/khri*. The correlation between Mru -ō- and -ai is equally found in no. 8 (the Arch. C. form corresponding to Mru *Döt*, probably from ST \*ld'yad, cf. Burmese *hlya*, Tib. *lśe*).

No. 7 has been added here to put the question whether Arch. C. -yɛg, besides corresponding to Mru -ia (cf. table V), could also account for Mru -ai, since there is no Arch. C. form with final guttural corresponding to Arch. C. -yǎT and -yǎr (\*-yě-). Arch. C. -yǎr corresponds to Lushei -ai (cf. Arch. C. *nyǎr* : Lushei *nai*, near), so that Arch. C. -yɛg, if also derived from ST \*-yɛg (besides from ST -ig), could correspond to -ai as well. On the other hand, Arch. C. -ia corresponds to Kukish -ei, so that, because of the interchange of Arch. -ia and -yɛg (cf. table V), the Mru word of VII 7 may be borrowed from Kukish. A similar reservation may be asked for VII 9 and 10 in comparison with VI 9—12 (cf. above).

## VIII. Final \*-ol, -oi, -öi, -ui, üi

English	Mru	A. C.	Arch. C.
1) ashes, charcoal	hol (K)	huâi	hwæg
2) stick	hmol (K)	muâi	mwær
3) to escort	toi = ?	t'wi	tywær
4) stomach	yoi	jwɛi	gywəd
5) ear of grain	chöi, chüi	zwi	dzywəd
6) to be	wöi, wai	jwiɛ, jwi	gwia, dywær
7) reed, rush	wöi, wai	jwɛi	gywær
8) to go	köi (K: kal)	kjwɛi	kywær
9) encircle	ui (K: wal)	jwɛi	gywær
10) creeper	rui	ljwi	lywær
11) water (blood)	tui (*swi)	swi	sywær
12) dog	kui	k'iwen	k'iwen <sup>47</sup>
13) to sleep	müi = ?	mji	myəd
	-ol (> -üa)		-wæg, -wær
	-öi		-ywəd, -ywær
	-ui		-ywær

KARLGREN'S *-ywær* represents two different values. The first, *-ui*, is medially written *-iwə-*, the second, *-o-*, is medially written *-wa-*, cf. *-yər* : *-i* or *-al* according to tables VI and VII. But if the final had been *-wal* or *-ol* in ST, Mru should have *-wia* or *-üa*; Mru *-i* was derived from ST *\*-s*. Similarly, ST final *-s* became *-i* in A.C. (cf. SHAFER, Vocalism T. 24), so that it is included in what has been written by KARLGREN *-ər* (or *-əd*) and *-yər* (or *-yəd* etc.) in Arch. C.

In Mru, *-ya-* became *-ö-*, before *-s* changed to *-i*, cf. ST *\*-wyas* : Mru *\*wös* > *wöi*, Khami *wet*, Modern Chinese *wei*. No. 8 was probably derived from ST *\*kwyas* or *\*kyos*, provided that Arch. C. *\*-yas* did not change to *\*-yos* (parallel to *\*ya* > *yo*) before *\*-s* > *-i*, and provided that the Mru and the Arch. C. forms are actually comparable: similar looking words for "to go" are as numerous as those for "to coil" etc. (No. 10).

There remains the question why some of the Arch. C. words in *-l* or *-s* were placed in the *-d* (or even *-g*) class while others were not. There

<sup>47</sup> Either the ST final has been lost in the other languages but Chinese (cf. SHAFER Vocalism p. 335) or Chinese has an affix. There are only few examples for Arch. C. medial *-iwə(T)*, ST *\*-ui-*, and Mru parallels are missing. The primary question to be answered is whether ST had medial *-ui-* or not; here again the initial *k-* may be nothing but an old prefix (cf. p. 121, p. 155).

actually are a few cases where Kukish has *-t* for Mru *\*-s*, although generally *\*-s > -<sup>0</sup>* in Kukish (cf. Mru *wöi* : Khami *wet*, Mru *müi* : Lushei *mu(t)*, and reversely Mru *hut* : Lushei *ru'*). But the assumption that Arch. C. had *-d* upon exception for ST *-s* does not work, since, e.g., ST *\*g-yos* (Mru *yoi*, stomach) should have resulted in Arch. C. *\*g-yod > gywäd*, instead of *gywäd*, if the equation be possible. The only reasonable solution seems an assumption of original finals in *-ts*, and perhaps also *-ks* and *-ls*. One might go even farther and suggest that at least Arch. C. *-we-* before *-t* and *-n* indicate a former final *-s* (*\*ons > on' > wen*). Still, the comparative material is too small to back these suggestions. Moreover all conclusions regarding Chinese roots in final dentals are extremely difficult, since the *-iT/-uT* series is very complex in itself.

IX. Final *-o*, *-au*, *-ou*, *-eu*

English	Mru	A.C.	Arch. C.
1) treat sickness	ro(k)	lyäu	lyog
2) hollow	kho	hyäu, k'äk	hyog, k'ük
3) sprouts in field	mo = ?	myäu	myog
4) white	ko	kâu	kôg, kog
5) weak, young	nau = ?	ńzyak	ńyok
6) to pray	tau	tâu	tôg (tog ?)
7) bamboo	kau	kâu	kog
8) fat, corpulent	kau	kâu	kog
9) wash	chau	tsâu	tsog
10) fat, grease	chau	sau	sog
11) to cover	hau	ha	hâ
12) flower	pau	pa	pâ
13) tooth (tusk)	hngou (K)	nga	ngâ
14) ladle; to select	kou; klou = ?	t'ieu	t'iog
15) to select	klou	lieu	?
16) cowry	preu	pwâi	pwâd (*prod)
17) mince food	leu	kwâi	kwâd (*klod)
	-o		-yog
	-au		-og, -â
	-ou		-iog ?
	-eu		-wâd

Mru *-ou* is probably not the exact equivalent for Arch. C. *-iog*: we should expect *-öu* (or *-ö'*). For no. 15 Arch. C. has also *d'ök < \*dlök*

(GSR 1124g).<sup>48</sup> Reversely we find Mru *röu* < \**riau* < \**riö* (foot fetters) for Arch. C. *kög* < \**krög* (GSR 1166i) and Mru *klö'* < \**klüög* (melody, sound of music) for Arch. C. *nglök* (GSR 1125a, music, cf. Burmese *kyu* < \**kl(y)au*).

## X. Final -u, -ua, -ö

English	Mru	A. C.	Arch. C.
1) skull (head)	lu	ləu	glu
2) to steal	ku	k'əu	k'u
3) monkey	yuk	ngyu, yəu	ngyu, zyôg
4) dark	iu	.yəu, .ieu	.yôg, *iôg
5) wine (beer)	yu	yəu	zyôg
6) weasel	yu	yəu	dyôg
7) that, yonder	yu	yəu	syôg
8) doe (sambar)	hiu (K:yuk)	.yəu	.yôg
9) pigeon	ku (K:khru)	kyəu	kyôg
10) to wash	cu	şyəu	şyôg (şôg ?)
11) grandchild	cu (K:tu)	d'yəu	d'yôg (d'ôg ?)
12) foul, putrid	chu	tş'yəu	t'yôg (tş'ôg ?)
13) float, flow	pru	{ pyəu lyəu	pyôg (prôg) lyôg (rôg)
14) wife's father	khul (K)	k'yəu	k'yôg
15) collect	kua	kyəu	kyôg (kyüŋ ?)
16) friend	yüa (K:rual)	jyəu	gyüŋ
17) village	kua (K:khua)	k'yəu	k'yüŋ
18) nine	taku (K:kua)	kyəu	kyüŋ
19) colocasia	ru	jyu	gywo (r-wo)
20) rain	rua (K)	jyu	gywo (r-wo)
21) dried meat	rö	hâi	hæg (*hræg)
22) thereupon	nö	nâi	næg
23) to open	wö	jwɛi, kiwet	gwia, kiwat
24) basket	{ khö kho	g'jwi k'wai	g'ywed k'wed
	-u		-u, -(y)ôg
	-ua, -u		-yüŋ, -(y)wo
	-ö		-æg, -ia(d)

<sup>48</sup> The reconstruction of *-l-* is possible because Arch. C. *-ö-* indicates former *-l-* or *-r-* in several cases, and the phonetic GSR 1124, *d'iook* (pheasant), can probably be equated with Kukish \**t-hryik* (< p. C. \**t'riök* ?, cf. \**-iäK* > Kukish *-iK*; but in Shī 1, 4, 3 the word rhymes with *-yëk* < \**-iëk*), for same no. *e* & *f* *t'iook* < \**t'riök* (to jump), Mru has the exact equation *rök* (lift both feet, to rise).

In the previous table (IX) two examples have been given where Arch. C. *-ôg* may correspond to Mru *-au*. Similar equations may be set up for Burmese *-u* < *\*-au* and Kukish *-au*, but these are mostly very common words with double forms (o:u) in either Arch. C. or Kukish and Mru. Moreover, A.C. has *-âu* for both Arch. C. *-og* (i.e. *au*) and *-ôg* (i.e. *u*), and since there are cases where *-og* and *ôg* have been provided with the same phonetic, KARLGRÉN'S reconstructions cannot give absolute security of the correct value.

A certain influence of the initial must also be taken into consideration: like *-ôg* (instead of *-yog*) indicates former *-l-* or *-r-*, Arch. C. *-ôg* indicates former *-l-*, cf. (besides GSR 1015) GSR 1167 f-1 *kôg* < *\*klôg* (teach, instruct): GSR 1038a *g'ôg* < *\*g'lôg* (school, learn): GSR 1069s *klôg* (school). The latter means also "to glue" and "frost", for which Mru has *klu* (clotted) and *nang-klu* (snow, ice). GSR 1069 is especially instructive, since it shows the equations *lôg* : *klôg* and *lyôg* : *klyôg*, i.e., the differentiation of A.C. *-âu* and *-au* is due to former *-l-* (and *-r-*), so that the Arch. C. forms could have been written *klôg* and *klyôg* (instead of *klôg* and *klyôg*).

For *klyôg* one might suggest (because of *klôg* < ST *\*klug*) ST *\*klyug*, but equations show that we should read ST *\*krug* (thus: Arch. C. *lôg* < *\*lug*, Arch. C. *kôg* < *\*klug*, Arch. C. *lyôg* < *\*rug*, and Arch. C. *kyog* < *\*krug*). The *-r-* is indicated by no. k of the same series (GSR 1069), *t'lyôg/lyôg* (to get cured), related to GSR 1151f *lyog*, Mru *rok/tarok* (to cure), and no. g, h *klyôg* (twist etc.) equal to GSR 1046a, b by 1046a—d parallel to the *krog*-series of GSR 1166f, k. A further example is shown by table X 13, and finally there is Arch. C. *lyôg* : Mru *taruk* (six). As shown by GSR 1069 k the shortening of the vowel symbol by *-r-* is not experienced after *t-* (there are no *-yôg* after dentals), and the double parallel of Mru *-ruk* (six, shame) may be found again in GSR 1076: a *\*t'ruk* (cyclical character, another sign for six?), g *\*nruk* (to knot, cf 1069g, h and 1064a, b cited), h-j *\*sruk* (shame), k *\*nruk* (ashamed).<sup>49</sup>

Although Arch. C. *-yô-* may be the correct equation for *\*-u-* after *r-*, table X shows more examples of Arch. C. *-yô-* for Mru *-u* after other initial consonants. Nos. 10—12 may be regular, since Arch. C. *-y-* after affricates sometimes belongs to the initial and not to the vowel, cf. V 6—8. The remaining Mru words may have been taken over from Kukish (which has *-u-* for ST *\*-yu-*, Mru *-ü-*) or the Arch. C. form may show a variant of the same stem.

<sup>49</sup> A second interpretation for *ôg* may be indicated by GSR 1113 b & f *pôg/b'ôg* (womb/gourd) by comparison with Mru *bur* (menstruation), Lushei *bur* (gourd), similar to GSR 1159c *môg*: Mru *mar* (wild cat).

A final possibility is suggested by the special evolution of the ST word for "nine". Arch. C. *-ü-* explains perfectly the difference between Lushei *-ua* and Mru (etc.) *-u*, if we assume that Arch. C. *-ü-* represents ST *\*-wo-* (cf. Arch. C. *süŋ* > M.C. *shuang*), whereby final *\*-wo* > Mru (and Burmese, Tibetan, M.C.) *-u*, but Kukish *-ua*. Regarding the *-y-* of the Arch.C. form, it cannot be corroborated by any word of the other TB languages, and its special character is shown by that it did not take part in the vowel shift from Arch.C. to A.C. (cf. A.C. *-əu* < Arch. C. *-üŋ*, but A.C. *-yəu* < Arch. C. *-yôŋ*) and therefore apparently belongs to the initial *k-*. Since there are no other indications of *\*k'* in ST, A.C. *ky-* must have developed from two consonants, and since comparisons show that the other consonant cannot have followed *k-*, it must have been a prefix. All TB languages show *\*t-* before *k-* in the word for "nine", and we may assume proto-Chinese *\*t-kwog*, though prefixed *s-* seems to have had the same affricating effect on *k-*, cf. GSR 122g A.C. *k'yu* < Arch. C. *k'yu*, Tib. *sku*, body. A.C. *-əu* < Arch. C. *-üŋ* or *-ug* suggests also A.C. *ky-əu* < Arch. C. *ky-üŋ* or *ky-ug*, which would explain the double correlation of Lushei *-ua* : Mru *-ua/|-u*, Burmese *-wa/|-ü*.<sup>50</sup>

The equations 19 and 20 of table X require a special comment. The initial *r-* in Lushei and Burmese *rua*, rain, is probably a prefix (cf. Khami *khua* and related Mru *wang*), and prefix *r-* seems to have become *gy-* in Arch. C., cf. X 16 in comparison with the Lushei word, and IV 8 which must be read *\*r-om* (a second prefix behind *t-* is suggested also by the Central Naga forms). Further examples will be indicated below. Also X 19 had a combined prefix, cf. Burmese *mrok* (JUDSON writes *myok*, but the *-r-* is pronounced in Arakanese) < ST *\*m?-r-wa-k* (showing that *\*-wa*, like *\*-wo*, became *-u* in Mru); cf. also Lushei *hra*, though we should expect *hrua* by comparison with X 20.

<sup>50</sup> On condition that the Mru words which show *-ua* for Lushei *-ua* (Arch. C. *-yüŋ*) can be explained as borrowed from Kukish or derived from *-ul* (difficult for *kua/khua*, village), there remains a second possibility to explain Arch. C. *-yü-* by the assumption that every P. C. *\*kwog* > Arch. C. *\*küŋ* > A. C. *kyəu*, but this would upset KARLGRÉN's differentiation between Arch. C. *-üŋ* and *-ug* and *-yüK* and *-üK*.

In favour of prefix *s-* (or dental) are two other considerations: 1) *kyüŋ* appears together with *kywəŋ* and *kwəŋ* which show final *-i* in A.C. and probably had final or suffix *-s* (cf. table VIII). It seems plausible that words like *\*kogs* and *\*skog* were provided with the same phonetic sign. 2) *-yüŋ* appears only after gutturals and labials but not after dentals and sibilants.

## XI. Correspondences

Arch. C.	Mru	Arch. C.	Mru	Arch. C.	Mru	Arch. C.	Mru	P. C.
-yər	-i	-yěK	-i-, -ia	-yěT	-i-, -i	-yəP	-i-	i, yi
-ywər	-ui	-iwəK		-iwəT	-ui			ui
		-ywěK		-ywěT				wi
-a	-e	-ěK	-e-	-ăT	-e-	-ăP	-e-	ě
-wa	-we	-wěK	we-	-wăT				uě
-yăr		-yěK	-ü-, -ai ?	-yăT	-ü- ?	-yăP		-iě, ye ?
-iər	-i, -ai ?	-ieK	-e-, -ai	-ieT	-e-	-iaP		e
		-iweK		-iweT				we
-â	-a	-ăK	-a-	-aT	-a-	-əP ?	-a-	ă
-wâ	-ua	-wăK		-waT	wa-			uă
-ia	-ia	-yăK	-ö-, ya-	-iaT	-ö-, ya-			iă
-o	-a	-âK	-a-	-âT	-a-	-âP, -aP ?	-a-	a
-wo	-u ?	-wâK		-wâT				wa
-yo	-ia ?	-yaK	-ö-, ya-	-yaT	-ö-, ya-	-yaP		ya
-â	-au ?	-yoK, -ôK	-o-, -ou ?	-waT	-o-	-εP	-o-	ö
-yâ		-ioK	-ö-, -öu ?	-ywăT				iö
		-oK	-au					aö
-wâ		-uK	-o-, -ua	-wâT	-o-, -eu	-uP	-o-	o
-ywo ?	-ö ?	-yuK	-ö-	-ywaT				yo
		-ûK	-o-, -u			-ÛP		wo, ũ ?
-u	-u	-ôK, -ôK	-u-, -u	-wəT	-u-	-əP	-u-	u
-yu		-yôK	-ü-, yu-	-ywəT	-ü-	-yəP	-ü-	yu
		-iôK	-iu					iu
-er	-ai ?	-εK		-εT		-εP ?		
-wer		-wəK		-wεT	-o			
-yer	-ai			-yεT	-ü- ?			
-ywər	-uai ?			-ywεT	-ö			
-ər	-ai	-əK	-ö-, -ö	-əT		-əP ?		(ə)
-wər	-oi	-wəK	-o	-wəT				(wə)
-yər	(-ia)	-yəK	-ü-, -a	-yəT	-ü ?	-yəP ?		(yə)
-ywər	-öi	-ywəK		-ywəT	-ö			

Table XI tries to summarize the conclusions. I have entered finals in *-r* and open syllables into one column, since there is no sure indication that Arch. C. lacked final *-i*, *-e*, *-ai*, etc. Whether *-s* had become *-i* already in Arch. C. is difficult to decide. The influence of final *-l* on the preceding vowel seems the more complicated since combined finals must probably be taken into consideration. My material furnishes no means to discuss the problem in detail.

I have entered no triphthongs in *-a-* (except before *-T = -yoT*), although KARLGREN has *-ywa-*, *-iwa-*, and *-yvä-* before *-K* and *-r*, because I think that no original triphthongs existed in proto-Chinese. *W-* in initial position may be regarded as a consonant, the rules for *wia* etc. are the same as those for *kia*, *tia*, etc. The *K-* appearing before *w-* are generally prefixes, especially in the case of words in Arch. C. *-iwaT* (cf. GSR 312 *kiwat* = *k-wiat* because of Lushei *vit*, Mru *wö'*, and 312j *.iwat* = *wiat*). There are no words in *TywaK*; those in *KywaK* (GSR 739) will be considered in connection with the *PywaK/T* series.

The words in *KyväT* provide a special problem, because they are not derived from *K-wyät*, but from *K-?-wät* (or *K-?-wät?*), cf. GSR 306 *ngyvä*, moon, which rhymes with *t'ät* and *\*pät* (> *pyvä*, v.i.) in Shī 1, 8, 4, and *d'ät* and *k'-?-wät* > *k'yvä* in 1, 7, 17, and also GSR 256f, *gywän*, far, which rhymes with *d'yan* and *\*plän* or *\*prän* (> *pywän/pwan*) in Shī 1, 7, 15. For 306 Mru has *war*, and for 256a (same reading as f) Mru has *wan*, Lushei *puan* (cloth). A solution may be provided by the fact that Arch. C. *gy-* (256) forms a single unit for prefix *r-* (v.s.), leaving the stem *-wan*, confirmed by derivatives 257h—p, *g'wan*, turn round, encircle, Lushei *wal*.

Whenever syllables with initial occlusives and initial liquids were provided with the same phonetic, KARLGREN infixed the *l* behind the occlusive and prefixed the media corresponding to the occlusive before the *l*. Whenever such correspondences were lacking, a similar reconstruction was impossible, so that also in cases where no *-l-* appears in KARLGREN'S Arch. C. the possibility of original *-r-* or *-l-* must be taken into consideration. In some cases it is possible to infer former *-r-* by different phonetic developments of the stems (cf. comment to table X). The influence of initial labials on medial and final *a* has been mentioned in connection with tables I and V. Comparisons show that the development differed according to whether *P-* was followed by *-r-* or not, whereas *-l-* did not influence the shift. The development may be seen from the following table.

ST *PaK > Arch. C. PywaK	ST *PaT > Arch. C. PyväT
ST *PraK > Arch. C. Päk	ST *PraT > Arch. C. PwaT
ST *PäK > Arch. C. Pwäk	ST *Pät > Arch. C. Pwät
ST *Präk > Arch. C. Päk (A.C. Päk)	ST *Prät > Arch. C. PaT
ST *PyaK > Arch. C. Pyäk (A.C. PywK)	
ST *PryaK > Arch. C. Pyäk (A.C. Pyäk)	
ST *Piäk > Arch. C. Päk (A.C. PëK)	

These rules do not exclude that Arch. C. *Pwäk*, *Pwät*, *PwaT* stand also for ST *\*PwaK*, *\*PwaT*, *\*PoT* etc. Some resulting comparisons may be shown here:

- GSR 195b—d *p'ywǎn* < ST \**p'lan*, to turn, Mru *plan, lan*  
 GSR 195s *pywǎn* < ST \**paln*?, fence, Lushei *pal* (Mru *pam*)  
 GSR 178o *plyan* < ST \**plyan*, to turn, change, Siamese *plien*  
 GSR 178p *mlwan* < ST \**mran*, Southern barbarians, Burmese *mran*  
 GSR 220a/d *b'yan/p'ywan* < ST \**byan/p'an*, to fly, Mru *phör*, Tibet. *bar*  
 GSR 742a *mywang* < ST \**mang*, disappear, Mru *mang* (go away)  
 GSR 739a—h *gywang* < ST \**r-wang* or *rmang*?, king, Burmese *mang*  
 GSR 778d *kywak* < ST \**k-wyak* or *kpak*?, walk, Khami *ngawö*, Mru *pak*  
 GSR 781i *pāk* < ST \**prāk*, elder brother, Khami *prak*  
 GSR 781a—e *pāk* < P.C. \**prāk*, hundred, Tib. *br-g-ya*, Burm. *tara*.

The interpretation of the only word in \*P-ět, GSR 281, *pwät* < \**pět* or \**prět*?, eight, is uncertain. Siamese has *pet*, but Tibetan *brgyat*, Lushei *riat*. The *-r-* is a prefix and may have dropped already in proto-Chinese, but also in GSR 825 A.C. *PywoK* irregular from Arch. C. *PyěK* the *-w-* is probably due to a former *-r-*, since *-r-* caused a similar vowel lowering effect in *-i-* vowels after K- and S-. Cf.

- GSR 813a A.C. *kyong* irr. < Arch. C. *kyěng*/\**kryěng*, respectful, Mru *ring*  
 GSR 813k A.C. *g'ymng* irr. < Arch. C. *g'yěng*/\**g'ryěng*, to lift, Mru *krüng*  
 GSR 812a—g A.C. *şmng* irr. < Arch. C. *sěng*/\**sryěng*, a: live, Lushei *hring*, g: sister's child, Tibetan *sring* (sister, m.s.), but there is also s: A.C. *syäng* reg. < Arch. C. *syěng*, life, Mru *ching*.

No influence of *-r-* is experienced in words ending in a dental, cf. GSR 291/292 *lyat/pyat* < \**pryat*, to divide, Mru (from Kukish) *ret*.

No definite solution can be offered for the final labial series. In table I Mru *-aP* was held to correspond to Arch. C. *-aP*, *-ǎP*, and *-əP*, but in table IV *-əP* had to be equated with Mru *-uP* as well. Both Arch. C. *-əP* and *-aP* became *-aT* in modern Chinese. There can be little doubt that ST *-uP* is represented by Arch. C. *-əP*. If we regard the words in *-əP* of table I as examples of later borrowings (from Burmese or Kukish) there remains the problem whether they are again borrowed from Chinese after *-əP* had become *-aP*, or whether there was a Sino-Tibetan *-ə-* which became *-a-* in Burmese, Tibetan etc. Lastly KARLGRÉN's differentiation into Arch. C. *-ǎP* and *-aP* may be explained by differential influence of initial consonants, so that Arch. C. *-əP* may take the place of *-ǎP* in table XI.

A comparison of table XI with SHAFER's "Vocalism" shows that in some cases SHAFER's conclusions had to be differentiated. Contrary evidence was found for Vocalism T. 1—3. No correlation could be found for long and short vowels in proto-Chinese and Lushei. Also medial diphthongs in Lushei differ from those in Arch. C. and must be of younger origin. In different ways Burmese and Mru are much closer to the Arch. C. vocalism than Kukish.

The degree of preservation of an archaic stage in various phonemes can yield no key for the classification (e. g., Laker, though differing totally in vowels and finals from Lushei, cannot have separated from Lushei, its closest neighbour, more than a few hundred years ago). But shifts which are characteristic for a whole linguistic group may well be said to exclude close relationship to a language which does not possess these characteristics. I conclude, therefore, that Mru is neither a member of Kukish nor of Burmish. Another objection against the classification with both these groups is provided by the syntax. The order of words is subject-verb-object in Mru (and Bodo), but subject-object-verb in Kukish and Burmish.

SHAFER suggested a possible non-Tibeto-Burman origin of Mru. His suggestion was based on a number of words common to most TB languages, which were not found in Mru, whereas the Mru equivalents were untraceable in these other languages. Although some of the examples collected by SHAFER must be excluded from the list, others may be added. Judging from the limited material which I have consulted, there are also no equations for most of these words in the neighbouring Austroasiatic languages. Since Mru is Tibeto-Burman in its main vocabulary and undoubtedly Sino-Tibetan in its vocalism, the Mru words for which no equation can be found should be called Sino-Tibetan, too. Although one might suggest that Mru absorbed these words from a now extinct pre-Tibeto-Burman population (TB numerals can be found in Papuan languages), there is no guarantee that the isolated Mru words in question may not show up in one of the numerous insufficiently recorded Tibeto-Burman languages.

The special position of Mru becomes plausible when we keep in mind that the ancestors of the Mru reached their present home probably long before Kukish and Burmish groups arrived in this region. We do not know who the neighbours of the Mru were in the Koladan region (Arakan) before 1000. There is a number of parallels with Karenish languages, but these words may also be borrowed by single Karen groups from Mru and Southern Kukish, as can be shown for several kinship terms. We have no idea of the way by which the Mru reached the Koladan, and of the people they met. There are a few doubtful Austroasiatic parallels (cf. Mru *lök* : Palaung *leh*, one), but their number does not surpass that of similar parallels between Kukish and Austroasiatic. There are equations with Bodish (Barish), Himalayish, and Tibetan, which are lacking for Burmese and Kukish, but the number of possible equations with Tibetan is smaller than that with Archaic Chinese.

Like the question of final classification, many other questions had to remain open. They may help to promote further studies and should be

regarded as valuable part of the contribution of Mru to comparative Sino-Tibetan linguistics.

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## I.

- 1) 夜 2) 亦 3) 𠂔 4) 伯 5) 孟 6) 泄 7) 業 8) 藍  
 9) 乾 10) 𠂔 11) 作 12) 當 13) 𠂔 14) 方 15) 𠂔 16) 亡  
 17) 反 18) 合, 盍 19) 頷 20) 𠂔 21) 含 22) 堪 23) 納

## II.

- 1) 來 2) 𠂔 3) 結 4) 𠂔 5) 鼎 6) 奠 7) 敬 8) 性  
 9) 名 10) 詰 11) 日 12) 𠂔 13) 賓 14) 皮 15) 音 16) 今  
 17) 懷 18) 泣 19) 寢 20) 𠂔 21) 晨 22) 蔑, 滅

## III.

- |       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|
| 1) 缸  | 2) 控  | 3) 項  | 4) 雙  | 5) 福  | 6) 罷  | 7) 蔥  | 8) 童  |
| 9) 撲  | 10) 邕 | 11) 封 | 12) 統 | 13) 毒 | 14) 儂 | 15) 六 | 16) 宮 |
| 17) 腹 | 18) 目 | 19) 紉 | 20) 能 | 21) 登 | 22) 殖 | 23) 蠅 | 24) 息 |
| 25) 始 | 26) 蕘 | 27) 著 | 28) 嶂 | 29) 京 | 30) 溯 | 31) 擎 | 32) 屏 |

## IV.

- |       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|
| 1) 抹  | 2) 外  | 3) 窳  | 4) 刷  | 5) 咸  | 6) 絨  | 7) 名  | 8) 熊  |
| 9) 骨  | 10) 孫 | 11) 唵 | 12) 三 | 13) 慍 | 14) 問 | 15) 俊 | 16) 遂 |
| 17) 遵 | 18) 糞 | 19) 虱 | 20) 櫛 | 21) 林 | 22) 荏 | 23) 厲 | 24) 線 |
| 25) 翩 | 26) 面 | 27) 原 | 28) 縣 |       |       |       |       |

## V.

- |       |       |       |          |       |          |       |       |
|-------|-------|-------|----------|-------|----------|-------|-------|
| 1) 苦  | 2) 戶  | 3) 五  | 4) 忤     | 5) 奴  | 6) 書     | 7) 黍  | 8) 舒  |
| 9) 夫  | 10) 爻 | 11) 芙 | 12) 無, 无 | 13) 步 | 14) 蘿    | 15) 鱻 | 16) 里 |
| 17) 期 | 18) 食 | 19) 子 | 20) 思    | 21) 使 | 22) 耳    | 23) 魚 | 24) 詛 |
| 25) 豬 | 26) 匣 | 27) 離 | 28) 兒    | 29) 易 | 30) 科, 窠 | 31) 蹠 |       |

## VI.

- |      |       |       |       |      |      |      |      |
|------|-------|-------|-------|------|------|------|------|
| 1) 沙 | 2) 過  | 3) 丹  | 4) 既  | 5) 麒 | 6) 市 | 7) 七 | 8) 貌 |
| 9) 禮 | 10) 弟 | 11) 妻 | 12) 米 |      |      |      |      |

## VII.

- |      |       |       |       |       |       |       |      |
|------|-------|-------|-------|-------|-------|-------|------|
| 1) 暨 | 2) 飢  | 3) 螻  | 4) 腓  | 5) 尾  | 6) 焜  | 7) 脾  | 8) 舌 |
| 9) 臍 | 10) 泥 | 11) 洗 | 12) 薙 | 13) 咒 | 14) 姨 | 15) 矢 |      |

## VIII.

- |      |       |       |       |       |         |      |      |
|------|-------|-------|-------|-------|---------|------|------|
| 1) 灰 | 2) 枚  | 3) 追  | 4) 胃  | 5) 穗  | 6) 爲, 維 | 7) 章 | 8) 歸 |
| 9) 圍 | 10) 藟 | 11) 水 | 12) 犬 | 13) 寐 |         |      |      |

## IX.

- |       |         |       |       |       |               |       |       |      |
|-------|---------|-------|-------|-------|---------------|-------|-------|------|
| 1) 療  | 2) 枵, 殼 | 3) 苗  | 4) 皓  | 5) 弱  | 6) 禱          | 7) 篙  | 8) 膏  | 9) 澡 |
| 10) 臊 | 11) 西   | 12) 芭 | 13) 牙 | 14) 挑 | 15) GSR 1245d | 16) 貝 | 17) 膾 |      |

## X.

- |       |                |          |         |       |          |       |
|-------|----------------|----------|---------|-------|----------|-------|
| 1) 體  | 2) 寇           | 3) 猶, 禹  | 4) 幽, 杳 | 5) 酉  | 6) 黝     | 7) 攸  |
| 8) 塵  | 9) 鳩           | 10) 漱    | 11) 佻   | 12) 臭 | 13) 滌, 流 | 14) 舅 |
| 15) 掾 | 16) 友          | 17) 丘    | 18) 九   | 19) 芋 | 20) 雨    | 21) 醢 |
| 22) 乃 | 23) GSR 27f, 決 | 24) 曳, 簣 |         |       |          |       |