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Proto-Ersuic

by

Dominic Yu

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Professor James A. Matisoff, Chair

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Proto-Ersuic
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Abstract

Proto-Ersuic

by

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Doctor of Philosophy in Linguistics

University of California, Berkeley

Professor James A. Matisoff, Chair

This is a reconstruction of Proto-Ersuic, the ancestor language of Lizu, Tosu, and Ersu, three closely related languages spoken in southwestern Sichuan which are generally considered to be part of the Qiangic branch of Tibeto-Burman. To date, no in-depth historical work has been carried out on these languages. Approximately 800 lexical items are reconstructed based primarily on data from six sources: Mianning Lizu (data collected by the author in Mianning County, Sichuan, in 2008 and 2010), two sources for Kala Lizu (Muli County, one modern and one older source), Naiqu Lizu (Jiulong County), and two varieties of Ersu (Zeluo and Qingshui, both in Ganluo County).

Chapter 1 provides a general introduction to Lizu, Tosu, and Ersu, along with basic information for each source to help the reader properly interpret the phonetic transcriptions and parse the individual forms for each language.

Chapter 2 presents the Proto-Ersuic syllable canon, providing the skeleton upon which the individual reconstructions are built.

Chapters 3 and 4 lay out the complete inventory of Proto-Ersuic initials and rhymes. All reconstructed consonants and vowels are supported by comprehensive cognate sets demonstrating regular sound correspondences across the languages, with exceptions carefully noted.

Chapter 5 offers a reconstruction of the lexical tones of Proto-Ersuic, with a general unmarked tone assigned to most words and a second, marked, tone of unclear origin specified on a minority of the lexicon.

Chapter 6 presents an outline of shared morphosyntax that can be reconstructed to the Proto-Ersuic level, specifically morphosyntax related to nouns, verbs, and numerals/classifiers.

Chapter 7 brings together all the sound changes that yielded the regular correspondences presented in Chapters 3 and 4, organizing them by language, and ordering them chronologically. From these sound changes emerges a picture of the internal structure (i.e. subgrouping) of Ersuic.

Chapter 8 takes a top-down approach, examining the sound changes from Proto-Tibeto-Burman to Proto-Ersuic and attempting to find regular patterns in the development of Proto-Tibeto-Burman rhymes, initials, and prefixes. Comparisons with other languages and branches of Tibeto-Burman are made as well in an attempt to uncover new roots.

The final chapter (Chapter 9) addresses the place of Proto-Ersuic in Tibeto-Burman, summarizing current views on the matter and offering some speculations on how the results of the present study might help us decide how Proto-Ersuic fits in the larger Tibeto-Burman family tree.

For Grandma, who should be pleased there is now a *kokoro* 博士 in the family.

In memory of Sarah Berson, friend, colleague, and fellow traveler.

Preface

This is a modest work reconstructing the ancestor language of three closely related languages with approximately 20,000 total speakers. However, that does not mean the content is uninteresting, or that the work was easy.

This dissertation is organized in such a way as to make it useful and convenient for those wishing to build upon it, either by improving the reconstructions with new data, or by using the reconstructions to try to go further up the family tree. (At least, that is the intention!) It is my hope, however, that readers from a larger audience will also find the content here of interest.

For the phonetician/phonologist or general historical linguist interested in sound changes, Chapter 7 is a whirlwind tour of all the interesting sound changes that happened in Ersuic. In particular, there are a great many developments related to rhotic vowels and retroflex consonants. The vowel space is also notable for having a rather large number high vowels, demonstrated by robust contrasts of acoustically quite similar vowels and diphthongs. Palatalization, retroflexion, and apicalization all interact in complex ways in the history of these languages.

For the Tibeto-Burmanist comparativist, Chapters 8 and 9 should give you a good idea of how Ersuic fits with everything else. Anyone who has worked on a Tibeto-Burman language will probably also have fun identifying cognates to words they know in Chapters 3 and 4.

For the general (non-linguistics) reader, I hope you will at least find the maps, charts, and diagrams of interest. A list of figures has been provided for the reader's convenience.

Finally, historical linguists will understand if I take a brief moment to geek out.

The comparative method really works! There is nothing quite like seeing a $dz:dz:dz$ correspondence, reconstructing $*d$ because it only appears before $[i]$ and $*dʒ$ was already taken, and then discovering that an old travelogue that someone wrote *actually has a "d-"*! And there is nothing quite like seeing a $ʃ:x$ correspondence, reconstructing something random-looking like $*ʃ$ (because both $*ʃ$ and $*x$ were already taken), then having all your facebook friends tell you that *that exact change happened in Spanish!*, and then finding out that your solution explains some forms that looked irregular and matches up with external evidence besides, and feeling like you've done something that you've only read about before in books.

No, I suppose there really isn't anything exactly like that.

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Finally, I thank my family for their unwavering support.

Symbols and Abbreviations

A ≈ B	A and B are allofams (see p. 17)
HPTB	Matisoff 2003, <i>Handbook of Proto-Tibeto-Burman</i>
Kl.	Kala Lizu
MC	Middle Chinese (in Baxter and Sagart 2011)
Mn.	Mianning Lizu
Nq.	Naiqu Lizu
PEr	Proto-Ersuic
PKC	Proto-Kuki-Chin
PL	Proto-Loloish (in Bradley 1979)
PLB	Proto-Lolo-Burmese
PNa	Proto-Naish
PTB	Proto-Tibeto-Burman
Qš.	Qingshui Ersu
TBL	Kala Lizu as recorded in Dài and Huáng 1992, <i>A Tibeto-Burman Lexicon</i>
WB	Written Burmese
WT	Written Tibetan
Zl.	Zeluo Ersu
GLOSS	gloss of a PTB/PLB protoform
‘gloss’	all other glosses

Chapter 1

The Ersuic Languages

Here I introduce the Ersuic¹ languages, list the sources for the data used in the reconstruction of Proto-Ersuic presented below, and describe the basic phonology and morphology of each variety where descriptions are available.

1.1 Background

The Ersuic languages, consisting of Lizu, Tosu, and Ersu, are spoken in southwestern Sichuan, with Lizu in the west, Tosu in the middle, and Ersu in the east of the Ersuic-speaking region. Sūn (1982b:241) gives the population of all Ersuic speakers as about 20,000, with approximately 13,000 Ersu speakers, 3,000 Tosu speakers, and 4,000 Lizu speakers. Speakers of Ersuic languages are officially classified as Tibetan by the government. Chirkova's (2008) language consultants estimate the population of Lizu speakers to be about 7,000, while there are almost no Tosu speakers remaining (Meier, p.c.). Thus the Ersu are the most numerous and, apparently, are more likely to identify themselves as distinct from the “Tibetan nationality”.²

¹With three different languages in this group, why call it Ersuic, rather than Lizuic or Tosuic (or even Losuic, since some varieties of Ersu have not undergone the **lo** > **ɤ** change)? The reasons are twofold: conventional and disambiguatory. First, this set of languages has been referred to as “Ersu” in work published in Chinese (e.g. Sūn 1982b and later articles, the edited volume Lǐ and Liú 2007 entitled *Ersu Tibetan Studies*, etc.); it is advantageous to refer to the group by this name for the sake of scholarly continuity. Second, calling the entire group by the name of “Lizu” would be potentially confusing, given that another Tibeto-Burman language by the name of Lisu is much more well-known. This problem would be compounded in Chinese translation, since Mandarin has no [z] sound (in pinyin orthography “z” represents [ts]). On the other hand, the name “Ersu” seems to be unique and therefore unambiguous.

²See, for example, the web site <<http://www.ersuren.com/>>, which promotes Ersu language, culture, and texts written in a unique script (see Liú et al. 1981 and Sūn 1982a for an overview of this writing system). This situation is reminiscent of that of the Moso, who are classified as “Naxi” but in Yunnan have a special sub-designation of “摩梭人 Mósuōrén” (Moso People), although the Ersu have no special government recognition. It should also be noted that the Moso are Na speakers, and that some Na speakers in Sichuan are classified as “Mongolian”.

Sūn (1982b) describes the three varieties as *topolects* (方言 *fāngyán*) of a single language “Ersu” since they have clear lexical and grammatical similarities; however, they should not be considered *dialects*, since they are mutually unintelligible (Nishida and Sūn 1990:15). Given the lexical similarities, it seems that speakers of one variety might, with difficulty, understand speakers of another (e.g. a Lizu speaker will recognize items from an Ersu wordlist when given the form and the gloss); however to my knowledge no formal tests of mutual intelligibility have been performed, and I have not heard any informal accounts since the Lizu and Ersu have historically occupied non-overlapping territories,³ and there are practically no Tosu speakers left.

Due to various factors, including geographic variation and the imprecise nature of transcribing proper names in Chinese characters, the Ersuic languages are referred to with a large number of different names in the literature. Lizu, for example, has been referred to variously as 栗苏 *Lìsū* (Sūn 1982b)⁴, 吕苏 *Lǚsū* (Huáng and Rénzēng 1991), 里汝 *Lǐrǔ* (Lǐ and Liú 2007) (this is because Mandarin “r” [ʒ] is pronounced [z] in some dialects), *Lyuzu* (Ikeda 2009), and *Lizu* (Chirkova 2008).

The name for Tosu (and the Chinese name 多续) comes from their autonym as transcribed in Volume 6 of the Sino-Xenic Vocabularies, the 華夷譯語 *Huá-Yí Yìyǔ* from the Qiánlóng period of the Qīng dynasty (Nishida 1973 analyzes this text and also reproduces the data therein). “Tosu” is derived from the Tibetan-script transcription (ཐོག་སུ་ tog-su), and 多續 *Duōxù* is the Chinese-script transcription. Sūn (1982b) records the autonym as **doꞑɕuꞑ**.

The name for Ersu (Mandarin 尔苏 *Ērsū*) is much more straightforward, since there is only one obvious way of transcribing this autonym into Mandarin Chinese, but note that there are dialects of Ersu where the autonym is **loꞑsuꞑ** (Liú 1983), and this is sometimes transcribed as 鲁苏 *Lǚsū*.

1.1.1 Context

See Figures 1.1 and 1.2 for maps illustrating the Ersuic-speaking area.

The region inhabited by the Lizu, Tosu, and Ersu lies in the mountain ranges at the eastern edge of the Tibetan plateau, and the Tibetan influence in this area is obvious. Harrell (2001:67), speaking of the inhabitants of the western Liangshan area, notes that “by the nineteenth century, many... were adherents of one or another sect of Tibetan Buddhism, and many had picked up other Tibetan customs such as drinking yak-butter tea and barley beer. The influence of Tibetan civilization in this area, while rather late historically, is thus nevertheless profound.”

In addition to Tibetan influence from the west and Chinese from the east (southwest Mandarin is spoken in this area), there is also sizable Nuosu (Yi) influence.⁵ For example, the Liángshān Yi

³In fact, when mentioning the term “Ersu”, speakers of Lizu (in Mianning, at least) will most likely think of their neighboring Namuyi speakers, whom they refer to as [ə¹³³su⁵⁵], rather than the Ersu of Shimian, Ganluo, etc., whose autonym is [ə¹⁵⁵su⁵⁵].

⁴Not to be confused with 傈傈 *Lìsù*, a Central Loloish language.

⁵*Nuosu* is pronounced [no³³su³³]. (The spelling “-uo” is Nuosu pinyin for [-ɔ].)

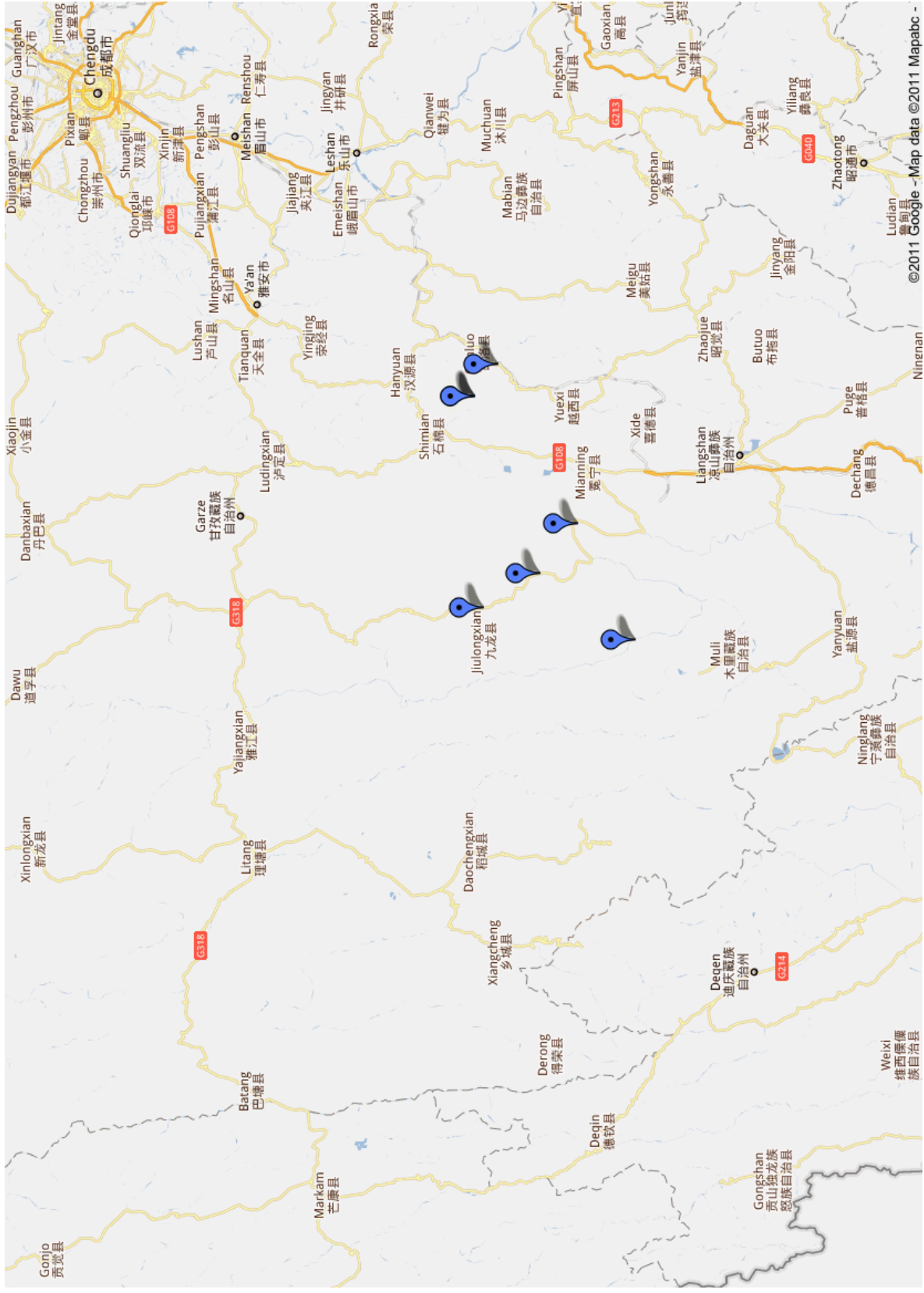


Figure 1.1: Map of Southwest China (Chengdu at top right, Burma at bottom left)

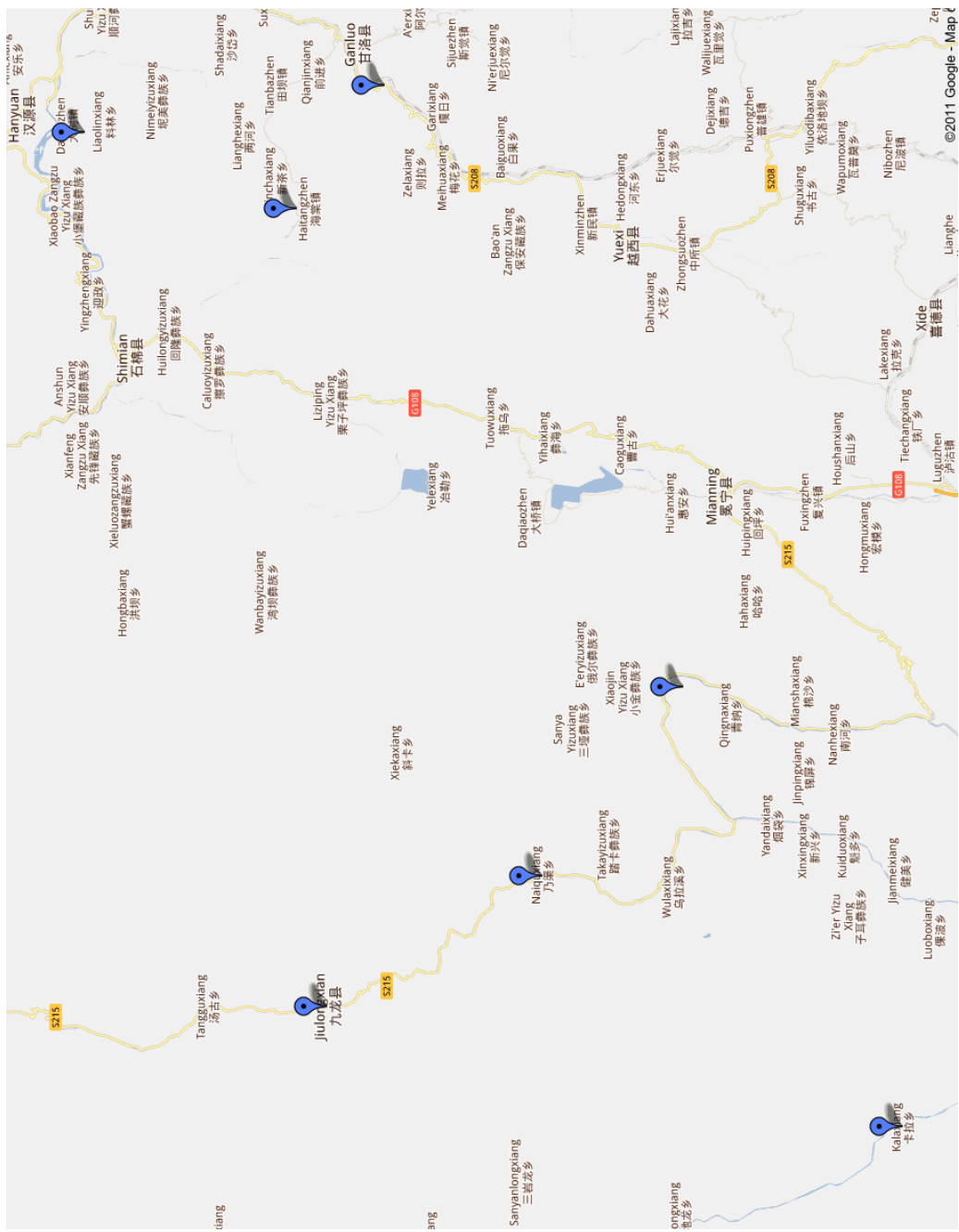


Figure 1.2: Map of Ersuic-speaking area. Center, Mianning Town (Tosu speakers). To the west, various Lisu-speaking locations (listed from north to south): Jiulong Town (=Gura), Naiqu, Lagusa (in He'ai Township, Mianning County), and Kala (in Muli County). To the east, some Ersu-speaking locations: Hanyuan, Qingshui (Haitang District), and Zelu (Yutian District).

Autonomous Prefecture alone has an estimated 1.3 million Yi, far outnumbering any Qiangic-speaking populations in the area.⁶

Harrell (2001) provides an anthropological perspective on ethnicity and ethnic relations in the greater Liangshan area; readers who are curious about what life is like in this region will find it of great interest.

1.1.2 Genetic affiliation

Sūn (2001) places Ersuic under the Qiangic branch of Tibeto-Burman. The Qiangic branch is characterized by the existence of directional verb prefixes, complex consonant systems, and the loss of all PTB final consonants. According to Sūn, Ersuic falls under the Southern branch of Qiangic and is most closely related to Namuyi and Shixing. (See p. 210 for Sūn's full Qiangic family tree.) However, this grouping is based on geography and impressionistic similarity, rather than on shared innovations. In the Chinese linguistic tradition, subgroupings such as this one are arrived at through examining the languages involved with respect to the following three attributes: phonology, lexicon, and syntax. (For a lucid discussion (in Chinese) of TB subgrouping within this framework, see Dài et al. 1994.) Chirkova (2006), reviewing the *New found minority languages in China* series, describes the methodology as follows:

Discussion of linguistic affiliation... is mainly based on lexicostatistical methods (counting the percentage of corresponding cognate sets) and is typically structured as follows. The authors first identify languages to which the language in question is supposedly related and subsequently carry out detailed phonological comparisons (separate for initials, main vowels, and codas) between these languages based on the Swadesh lists of basic vocabulary. Then follow lexical and syntactic comparisons and, as a conclusion, an assessment of the degree of similarity between the languages and a tentative subgrouping of the relative language group. Unfortunately, the authors never provide either the reconstructed forms (and, at times, even no sound correspondences) or a description of the features of the parent language. Rather, they organize and classify the amassed data in lengthy comparative tables, letting the tables speak for themselves.

With regard to Sūn's hypothesis of a subgroup within Qiangic encompassing Ersuic, Namuyi, and Shixing, Chirkova (2008) has looked at the question of whether these languages have an especially close historical relationship, and so far has not found evidence in favor of such a subgrouping.

The place of Proto-Ersuic within Tibeto-Burman will be discussed in Chapter 9, along with an overview of current views on which languages constitute Qiangic.

⁶In earlier times, the Nuosu would raid the villages of neighboring ethnic groups, pillaging and plundering and taking people away as slaves, so historically the Nuosu have been generally disliked by their neighbors.

1.2 Sources

The data for this reconstruction of Proto-Ersuic comes mainly from the following sources:

- Lizu

1. Mianning Lizu. Spoken in Lagusa 拉姑萨 Village (Lizu name `wontɕ^{hi} `lomba), He'ai (“Hoŋai”) 和爱 Township, Mianning 冕宁 County, Liangshan 凉山 Prefecture. Data collected by the author in Mianning County in 2008 and 2010.
2. Kala Lizu. Spoken in Kala 卡拉 Township, Muli 木里 County, Liangshan Prefecture. Data from Chirkova (2008).
3. Another, older variety of Kala Lizu, described in Huáng and Rénzēng (1991), with additional lexical items from Dài and Huáng (1992) (“TBL”).
4. Naiqu Lizu. Spoken in Naiqu 乃渠 Village, Naiqu Township, Jiulong 九龙 County, Garzê དཀར་མཚོ་སྐོར་ (Gānzī 甘孜) Prefecture. Data from Ikeda (2009).

- Ersu

1. Zeluo Ersu. Spoken in Zeluo 则洛 Township (?) of the former Yutian District 玉田区, Ganluo 甘洛 County, Liangshan Prefecture. Described in Sūn (1982b), with additional data from Sūn et al. (1991).
2. Qingshui Ersu. Spoken in Qingshui 清水 Village, Liaoping 廖坪 Township (?) of the former Haitang District 海棠区, Ganluo County, Liangshan Prefecture. Described in Liú (1983).

Sūn Hóngkāi has conducted fieldwork on all three Ersuic languages, although most of his published data is on Ersu. There are a small number of Tosu forms in Sūn (1982b), and a small number of Lizu and Tosu forms in Nishida and Sūn (1990:15-17). These lexical items are provided for reference in Appendix A.

Finally, there are some Ersu lexical items in a wordlist in Baber (1882).

1.3 Phonology

Below are brief summaries of the phonological inventories and transcription systems of each of the dialects used in this study. The main differences among these varieties are that Kala has a set of uvular initials, and the two Ersu dialects have a set of alveopalatal initials.

1.3.1 Mianning Lizu

The consonants of Mianning Lizu are as follows:

	bilabial	dental	palatal	retroflex	velar	glottal
stop	b p p ^h mb mp ^h	d t t ^h nd nt ^h			g k k ^h ŋg ŋk ^h	
affricate		dz ts ts ^h ndz nts ^h	dʒ tɕ tɕ ^h ndʒ ntɕ ^h	dʒ̣ tʂ tʂ ^h ndʒ̣ ntʂ ^h		
nasal	m	n	ɲ		ŋ	
approximant	w	l ɭ	j			
fricative	f v	s z	ç ʒ	ʂ ʐ	x ɣ	[h]
clusters	hp	ʃt ʒd	ɕtɕ	ʂtʂ	xk	

In native words, **f-** and **v-** only appear before **-u**; **h-** is the allophone of **x-** before nasalized vowels.

Notice that prenasalized consonants only come in two varieties: voiced and voiceless aspirated.

All of the consonant clusters in the last row above, with the exception of **ʒd-**, consist of a voiceless fricative followed by a voiceless unaspirated stop. The fricative can only be of one type, and thus is predictable based on the stop. For this reason one can think of these as pre-aspirated stops. In fact, there is variation among speakers with respect to the place of articulation of the fricative portion, and the **h** in **hp** clusters assimilates to the following vowel, e.g. **hpje** ‘medicine’ is realized as [çpje⁵⁵] (sometimes with lip rounding on the [ç] in anticipation of the bilabial closure).

The clusters are conservative; the other dialects of Lizu presented here have lost these clusters, but Mianning Lizu along with Ersu have preserved them.

In addition to the preaspirated clusters, there are also clusters of bilabial stops + fricatives: retroflex clusters /**(m)bz-**, **pʂ-**, **(m)p^hʂ-**/, palatal clusters /**(m)bz-**, **pɕ-**, **(m)p^hɕ-**/ (which are phonologically bilabial + high front glides or vowels /-j-, -i/), and dental fricative clusters /**bz-**, **ps-**, **mps^h-**/ (these are rarer and thus there are no prenasalized voiced or non-prenasalized voiceless aspirated initials of this type).

The vowels are shown below, with nasalized vowels in the second chart:



In addition, there are two rhotic vowels, **-ə^r** and **-æ^r**, the first of which is also found after **h-** and thus can be nasalized as well.

Syllable shape is (C)(G)V, with C and V as specified above, and **-j-** and **-w-** as possible medial glides.

The high vowels can potentially be collapsed into a simple two-way distinction (front unrounded /i/ vs. back rounded /u/), since **-y** only appears after palatals, and **-i** (I use this symbol for the

apical vowels [-ɿ, -ʝ]) only appears after dental and retroflex fricatives.⁷ To keep the transcriptions closer to the surface forms I have maintained the four-way distinction as shown in the vowel chart.

-u is pronounced with frication after velar stops (i.e. [ɣ] with lip rounding), and with lip vibration after dental stops (i.e. [β]). After dental fricatives, **-u** is like [-ʊ] (the rounded counterpart of [-ɿ]).

-u is an allophone of **-ʉ** after velars.

After dental stops and affricates, there is variation between **-e** and **-ʉ**.

ũ appears only in Tibetan and Chinese loans, and **æ̃** appears only in the question word **hæ̃ne ~ æ̃ne** ‘what’ and in Chinese loans.

On monosyllables, there are two tones. The high tone is transcribed with a preceding grave accent **˘**/, and the low/rising tone is unmarked.

1.3.2 Kala Lizu

The transcription used here for Kala is the phonetic transcription used in Chirkova (2008), with the tone marks modified to match that for Mianning, above.

Kala consonants are largely similar to Mianning, with the addition of a set of uvular stops (plain and prenasalized) and a uvular fricative. The development of these is secondary, and in some cases was conditioned by the presence of a rhotic element in the rhyme. (See section 3.8.)

	bilabial	dental	retroflex	palatal	velar	uvular	glottal
stop	b p p ^h nb np ^h	d t t ^h nd nt ^h			g k k ^h ng nk ^h	q q ^h nq ^ʁ nq ^h	
affricate		dz ts ts ^h ndz nts ^h	dẓ ṭʂ ṭʂ ^h ndẓ nṭʂ ^h	dʒ tɕ tɕ ^h ndʒ ntɕ ^h			
nasal	m	n		ɲ	ŋ		
approximant	w	r l ɭ		j			
fricative	f	s z	ʂ ʐ	ç ʒ	x ɣ	ʁ	h ɦ

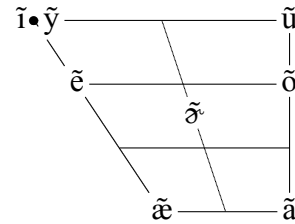
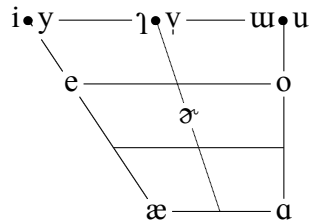
In addition, Kala has clusters transcribed as **/bẓ-, pẓ-, p^hẓ- ~ pɕ-, br-, pr-, p^hr- ~ pɕ-/**. These correspond to (and indeed are probably phonetically similar or identical to) the Mianning clusters **/bẓ-, pɕ-, p^hɕ-, bẓ-, pɕ-, p^hɕ-/** described above, which phonologically derive from medials **/-j-, -r-/**.

The Kala clusters **/mr-, fr-/**, on the other hand, are not found in Mianning.

Note that for Kala, as well as Lüsū and Ersu below, prenasalized stops are all transcribed using **n-** regardless of the place of articulation.

The oral and nasal vowels in Kala are listed below:

⁷Following Matisoff (2003:27), I use the term *fricative* as a convenient cover term for fricatives and affricates.



All of these vowels can constitute the rhyme of the syllable, as can the diphthongs /-je, -jæ, -rae, -wæ, -wa/, and syllabic nasal /ŋ/.

Note that Chirkova analyses [u] as the allophone of /e/ after velars, i.e. /ke/ -> [ku].

-ɣ tends to be trilled after bilabial and dental stops and realized close to [ʙ].⁸ After dental fricatives, -u is fronted to [ʊ].

Chirkova analyzes Kala Lizu as having two tones, high and unmarked (low/rising).

1.3.3 Lūsū = Kala Lizu (TBL)

Lūsū is another variety of Lizu from Kala. It shares a similar consonant inventory to Mianning, but has more rhotic vowels.

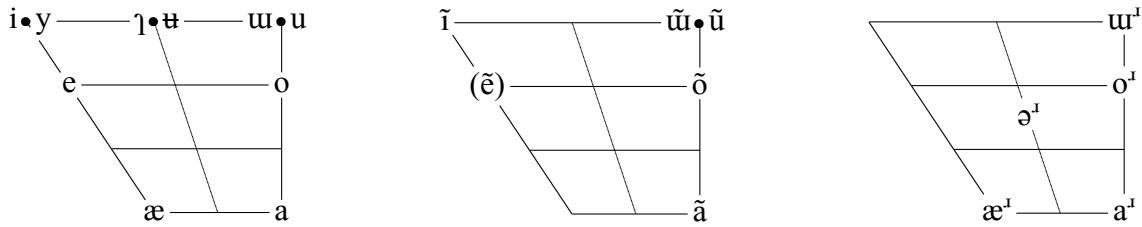
Transcriptions for Lūsū and Ersu are unmodified from their sources. The consonants of Lūsū are as follows:

	bilabial	dental	retroflex	palatal	velar	glottal
stop	b p ph nb np	d t th nd nth			g k kh ng nk	
affricate		dz ts tsh ndz ntsh	dẓ ṭʂ ṭʂh ndẓ nṭʂh	dʒ tɕ tɕh ndʒ		
nasal	m	n		ɲ	ŋ	
approximant	w	l ɭ		j		
fricative	f v	s z	ʂ ẓ	ç ʒ	x ɣ	h fi
clusters	bʒ pʒ phʒ	ptsh	nbẓ (n)phẓ		sk	

⁸This seems to be an areal phenomenon. Huáng and Réncēng (1991:156) reports this for Namuyi, and Lidz (2010) reports that bilabial stops are realized as trills before all high back vowels in Na (/u, u, ɣ/). In Nuosu as well, bilabial stops before /u/ “with vibrating lips” as documented by Fù (1997:48) and more informally by Baber (1882:72), who makes the following comments:

The speech of the Independent Lolos is harsh, abounding in gutturals and strange vibrating consonants. The Welsh aspirated *l* frequently occurs, as in *hlopo* (moon), but it is not so easy to aspirate an *n* as in *hnabé* (nose). There is a labial sound which might be written *bwrbwru*, pronounced as if the speaker were shivering with cold, and which is not difficult to imitate; but when the same process of shuddering has to be applied to a lingual, as in the word for *iron*, which I have despairingly written *shu-thdhru*, an English tongue is dumb-founded. Happily for strangers these odd vocables are freely modified into much simpler sounds without danger of misapprehension.

Lǔsū rhymes are listed below. Rhymes found only in loanwords are listed in parentheses.



The diphthongs are /**(ie), iu, iæ, iũ, iǣ, uæ, uo, ua, (uã), (ei), (uei), (ai)**/; the nasal-final rhymes are /**(uŋ), (oŋ), (aŋ)**/.

-ʮ appears after velars and retroflexes as syllabic [ʮ], and after dental stops as [ʮ̣].

-o only appears after bilabials, and contrasts with **-uo** and **-u**; everywhere else, the closest final to **-o** appears to be **-uo**.

[əʷ] and [zə] are in free variation.

The final **-iu** appears only after **l-**, and varies with **-i**.

There are four surface tones transcribed for Lǔsū; however, just as for the two dialects of Lizu described above, there are only two contrastive tones: high, transcribed as /⁵³/ or /⁵⁵/, and low/rising, transcribed as /³⁵/. The mid level tone /³³/ appears in multisyllabic words and phrases, approximately where one would expect the low/rising tone (the details are not immediately obvious; see Chirkova 2008 for further discussion). Finally, the low tone /³¹/ appears in phrase-final position and in obvious Chinese loanwords.

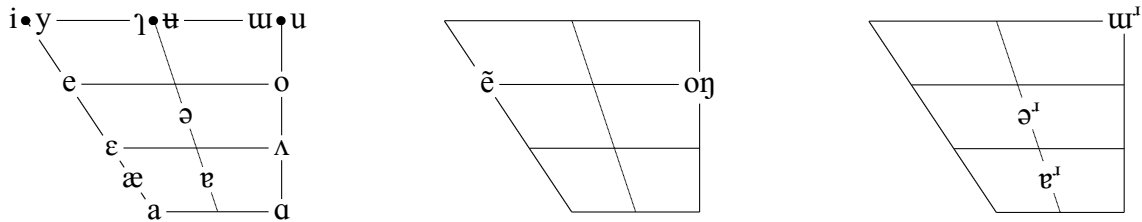
1.3.4 Naiqu Lizu

Unfortunately, Ikeda (2009) does not provide a phonological analysis or a phonetic description (all items transcribed use narrow phonetic transcription). However, judging from the transcriptions of the lexical items, the structure of this variety of Lizu seems quite similar to the Lizu varieties described above. The following chart, which consists of all the initial consonants which happen to show up in Ikeda’s transcription, gives a rough idea of the consonant inventory (though certainly there are gaps).

	bilabial	dental	palatal	retroflex	velar	uvular	glottal
stop	b p p ^h mb mp ^h	d t t ^h nd			g k k ^h ng nk ^h	q ^h	
affricate		dz ts ts ^h ndz nts ^h	dʒ tɕ tɕ ^h ndʒ	dʒ tʂ tʂ ^h ndʒ			
nasal	m m̥	n	ɲ		ŋ		
approximant	w	r l ɭ	j				
fricative		s z	ɕ ʒ	ʂ ʐ	x ɣ		[h]
clusters		hts ^h	htɕ				

Note that some of these consonants only appear once in Ikeda’s 200-item list. For example, the uvular initial appears only in **mbe³³qha⁵⁵** ‘horse’, and there is no way to know if uvulars are contrastive.

Unfortunately, the result of attempting this same maneuver with the rhymes is not quite as pleasing, and it becomes quite apparent the transcription is not phonemic (for example, it is possible that there is only one rhotic vowel which has been transcribed in three different ways):



There is also a diphthong variously transcribed as “ue”, “we”, and “wi”.

The tones appear to be similar to the other Lizu dialects as well, and Naiqu can probably be analyzed as having a two-tone system like the others.

1.3.5 Zeluo Ersu

Ersu consonants are listed below:

	bilabial	dental	retroflex	alveopalatal	palatal	velar	glottal
stop	b p ph nb np	d t th nd nth				g k kh ng nk	
affricate		dz ts tsh ndz ntsh	dʒ tʂ tʂh ndʒ ntʂh	dʒ tʃ tʃh ndʒ ntʃh	dʒ tɕ tɕh ndʒ ntɕh		
nasal	m	n			ɲ	ŋ	
approximant	w	l ɭ r			j		
fricative	f v	s z	ʂ ʐ	ʃ ʒ	ç ʒ	x	h
clusters	hp hps bz ps phs nbz np	ht hts	htʂ bz ʒʂ phʂ nbʒ npʂ	htʃ	htɕ	hk	

According to Sūn (1982b), the retroflex affricates have a relatively prominent stop component, and are close to [d̠, t̠, t̠ʰ].

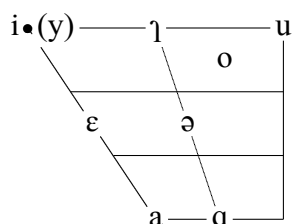
The dental fricatives and the alveopalatal fricatives are in variation when followed by **-u**.

r- and **ʒ-** are in free variation in certain words.

w- is sometimes pronounced with frication, as [ɣ^w-].

Syllabic **ŋ** is pronounced with rounding.

Ersu vowels are as follows:



The nasal vowels, /ĩ, ÿ, ũ, ẽ, ã, ã̃/, are found mostly in Chinese loanwords.

There are two rhotic vowels, **a^r** and **ə^r**.

Diphthongs are /iɛ, iɑ, io, iã, iã̃, ui, uɛ, ua ~ ɔ, ua^r, uẽ, uã, uã̃, ye, (yã), ei, ɛi, ai, əu, ou, au, (iəu), uai, (iaɯ)/.

-u after bilabials is pronounced with vibration of the lips (i.e. as [ɸ]); after velars, it is pronounced close to [ɥ]; after other consonants it is close to [ʉ].

In connected speech, the vowels in the syllables **mu**, **ɲu**, and **ni** are often dropped.

-ə is pronounced close to [ʉ] in isolation.

There are two tones, high level (⁵⁵) and mid level (³³); mid level is often realized as mid rising.

1.3.6 Qingshui Ersu

The initials and rhymes of Qingshui Ersu are essentially the same as for Zeluo. The reader should note that Liu uses /æ/ and /A/ where Sūn (for Zeluo Ersu) uses /a/ and /ɑ/, respectively.

Similarly, Qingshui Ersu is described as having five tones: ⁵⁵ (ᵇ), ⁴² (ᵇ), ⁵³ (ᵇ), ²¹ (ᵇ), ³¹⁴ (ᵇ). The last one only occurs with the -Aᵇ suffix, marking perfective aspect.

Given that all the varieties described so far have two tones, it seems unlikely that Qingshui Ersu would have four tones. Tones are transcribed inconsistently throughout this source; for example, two variants for ‘thick’ are given as **jaᵇbiᵇ** and **jaᵇbuᵇ**, with different tones; but since **ja-** is the Ersu adjective prefix, we would expect the tones to be identical (this is the case with the adjective prefix **ja-** in Zl. Ersu and **pæ-** in Mn. Lizu).⁹

Although Liu gives putative minimal sets for the tones, it seems that ⁵⁵ often appears as the first syllable of disyllables where the second syllable has a ⁵³ tone. Thus, on monosyllables ⁵⁵ and ⁵³ could both be considered as representing a single High tone; in fact, this exact variation is described for Zeluo Ersu. The ⁴² tone is relatively rare, showing up in only 20 of 250 cognate sets presented below; given the unreliability of the tonal transcriptions, it probably represents either

⁹The surface tone of the second syllable is not relevant here. Generally speaking, all the Ersuic languages can be understood to have two word tones, high/high-falling and low/low-rising (see Chapter 5). The tone category of a multisyllabic word can be determined by looking at the surface tone of the first syllable; the word tone is high if the first syllable has a high tone, and the word tone is low if the first syllable has a low/mid tone.

high or low tone, depending on the surrounding tonal context. In sum, there is little reason to believe that there are more than two lexical tones in Qingshui Ersu.

1.4 Morphology

Although a thorough morphosyntactic treatment would be impractical here, basic knowledge of the directional prefixes in Ersuic will be important in parsing the forms that follow. The directional prefixes can attach to almost any verb (verbs of existence seem to be the exception), including e.g. color terms, and are obligatory in the perfective aspect. Below is a chart comparing the directional prefixes in each of the languages used in this study:

	TBL	Kl	Nq	Mn	Zl	Qš
up	de-	de-	də-	de-	dɛ-	dɛ-
down	ne-	ne-	nə-	ne-	nɛ-	nɛ-
inward/upstream	khe-	khe-	khə-	khe-	khɛ-	khɛ-
outward/downstream	ŋe-				ŋɛ-	ŋɛ-
away	the-	the-	thə-			(thɛ-)
uphill/left					khua ^t -	
downhill/right					ŋua ^t -	
backwards/returning					ɲu-	

Figure 1.3: Ersuic directional prefixes

TBL and Qingshui seem to have the most “complete” sets; Kala, Naiqu, and Mianning appear to have lost the **ŋe-** ‘outward/downstream’ prefix (presumably Kala and Naiqu use the **t^he-** prefix to cover that space, and Mianning uses **k^he-** to mean ‘across (in any direction)’). Zeluo is unique in having three extra prefixes for uphill/downhill/returning, though the first two seem derivable from the upstream/downstream prefixes.

The vowel in these prefixes tends to be greatly reduced, and in some transcriptions (especially in the TBL data) the vowel is sometimes completely assimilated to the following vowel.

Chapter 2

The Proto-Ersuic Syllable Canon

(P) (C) (G₁) (G₂) (N)
V

The Proto-Ersuic syllable consists of an initial consonant (C), possibly with preaspiration or prenasalization (indicated by the “prefixal” slot P), followed by a glide (G—sometimes there are two of these) and a nuclear vowel (V) with possible nasalization (N). Tone is not included as part of the syllable, but rather specified on lexical items (that is, Proto-Ersuic has word-tone, not syllable-tone).

2.1 Prefixes

The “prefix” slot in the syllable canon includes **h-**, **N-**, **s-**, and **r-**. **h-** and **N-** can also be understood as preaspiration and prenasalization, respectively. **s-** can perhaps be understood as a convenient notational variant of **h-** (see section 3.2.4), and in fact both **h-** and **s-** descend from PTB ***s-**. **r-** is relatively rare and can be thought of as voiced preaspiration, but I have chosen this symbol both because in some cases it seems to descend from PTB ***r-** and also for reasons of notational convenience (**fi-** is a bit unwieldy and visually too similar to **h-**).

2.2 Initials

Proto-Ersuic is reconstructed with a three-way VOT contrast on stops and affricates: voiceless aspirated, voiceless unaspirated, and voiced. To these, prenasalization or preaspiration can be added. Only the voiceless aspirated and voiced series can be prenasalized (e.g. [mp^h] and [mb],

but no unaspirated [mp]).¹ Preaspirated initials, on the other hand, cannot be aspirated,² and for the most part are limited specifically to the voiceless unaspirated initials, although we will see some examples of reconstructions with preaspirated voiced initials below.

The reconstructed consonant inventory for Proto-Ersuic is as follows:

	bilabial	dental	retroflex	alveopalatal	palatal	velar	glottal
stop	b p p ^h mb mph hp	d t t ^h nd nth ht rd				g k k ^h ŋg ŋk ^h hk rg	
affricate		dz ts tsh ndz ntsh hts	dẓ ṭʂ ṭʂh ndẓ nṭʂh hṭʂ	dʒ tʃ tʃh ndʒ ntʃ htʃ	dʒ̟ tɕ tɕh ndʒ̟ ntɕh htɕ		
nasal	m	n				ŋ	
approximant	w	l ɭ	r		j		
fricative		s z	ʂ ʐ	ʃ ʒ	ç ʒ̥	x y	h

Figure 2.1: Proto-Ersuic consonants

2.3 Medials

The Proto-Ersuic medials are **-j-**, **-w-**, and **-r-**. In rare cases **-r-** can combine with one of the glides, in which case they are written as **-rj-** and **-rw-**.

2.4 Rhymes

The Proto-Ersuic rhyme is very simple, often just a vowel or glide + vowel. A small number of roots are reconstructed with nasalized vowels.

The rhymes of Proto-Ersuic are presented below, with r-medial and nasalized rhymes in separate diagrams:

¹This is reminiscent of Written Tibetan, where the prefixes མ- (**m-**) and ཁ- (**h-**) only precede voiceless aspirated and voiced consonants. However, the aspiration contrast in WT is marginal (see Hill 2007 for an exhaustive list of exceptional non-prefixed unaspirated voiceless consonants in Old Tibetan Inscriptions), whereas in Proto-Ersuic the three-way VOT contrast is already quite robust, as demonstrated in the cognate sets below.

²This is similar to, e.g., English consonant clusters where consonants following [s] are unaspirated, or Icelandic preaspirated stops which are always unaspirated.

i	iu	ui	u
je		wE	wo
e	ew		o
(w)æ	ja		(w)ɑ

ri	riu	ru
re		ro
ræ		ra

ĩ	ũ
jě	wõ
ẽ	õ
	ã

Figure 2.2: Proto-Ersuic rhymes

2.5 Tones

As noted above, tones are not part of the Proto-Ersuic syllable proper; a brief overview is included here to complete the schema for the reconstructions presented below.

Two tones are reconstructed for Proto-Ersuic, and they are marked with superscript ¹ and ² where it is possible to make an educated guess at the proto-tone; the remaining forms are left unmarked for tone. Chapter 5 describes the process used to try to determine the tonal categories of the reconstructed words.

Chapter 3

Initials

The following cognate sets are arranged by place of articulation. For an overview of the manners of articulation, see section 2.2.

Before diving into the cognate sets, a few notes on formatting are in order. First, note that the cognate sets are arranged such that similar rhymes appear next to each other.

Due to space constraints, the column labeled “Ersu” combines forms from both Qingshui (“Qš.”)¹ and Zeluo (“Zl.”) Ersu (these two dialects are in fact quite similar). The reader will be able to tell these two apart by the tone marks employed: Qingshui uses IPA tone letters, whereas Zeluo uses superscript numerals.

Similarly, the column labeled “Kl./Nq.” combines forms from Kala and Naiqu Lizu; for the most part this does not present a problem because these sources have relatively few forms. Again, the reader will be able to tell these two apart by the tone marks employed, with Kala using a grave accent to mark high tone (low tone is unmarked), and Naiqu using tone numbers.

A list of the sound changes posited for each language, along with relative chronologies, can be found in Chapter 7.

For discussion of the PTB roots referenced below, along with their sources, see Chapter 8. These roots, for the sake of clarity, will exclude obviously irrelevant allofams. E.g. though SON is reconstructed as ***za** ~ ***tša**, since all the modern Ersuic reflexes start with **z-**, the ***tša** allofam is omitted.² Reconstructions from lower-level TB groups, such as Proto-Lolo-Burmese (PLB) or Proto-Qiangic, are given where the root has not been reconstructed to the PTB level.

Note that a cognate set may appear more than once if it is relevant to more than one section. For example, the disyllabic form Mn. **ṽp^hoŋgo** ‘thing’ will show up under *Bilabials* as well as under *Velars*. In cases where it may be unclear which syllables are under discussion, or where syllable

¹The “š” (with circumflex) is a valid (though rare) pinyin abbreviation for “sh”.

²*Allofams* are members of a word family. For example, TBL **æ³³phu⁵³** ~ **æ³³pu⁵³** ‘grandfather’ are allofams in a single language showing variation in the aspiration of the initial consonants. Mn. **ṽṽṽ** and TBL **la³³la⁵³** ‘roll’ are a pair of allofams from two different dialects showing voicing variation in the initial consonants. See Matisoff (1978b) and Matisoff (2003) for discussion of allofamic variation across Tibeto-Burman.

boundaries may not be immediately obvious to readers unaccustomed to large initial consonant complexes, the relevant syllables have been bolded.³

3.1 Bilabials

3.1.1 Plain stops

A three-way contrast for plain stops is supported by the following sets:

Aspirated *p^h-:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*p ^h i ¹	phsɿ ⁵⁵		p^hci , `nep ^h ci-æ	ŋe ³³ phi -æ ⁵³ , ŋe ³³ phz -æ ⁵³		lose / mislay, throw away
*mp ^h i ²	p ^h sɿ; nphsɿ ⁵⁵	phi ⁵³	`mp ^h ci	nphi ⁵³ , nphzi ⁵³	*m-pat	vomit, spit
*lip ^h i/læp ^h i ¹			lip ^h ci	læ ³³ phi ⁵³ 'pot, jar'?		winnowing tray/basket
*p ^h æ ¹	p ^h A		(ne)p ^h æ ¹	phæ ³³ læ ⁵³		used / old
*p ^h æ ¹	-p ^h A		p ^h æ	phæ ³⁵		can, be able
*p ^h a	-p ^h A		-p ^h a			classif. sheet/small object
*nep ^h a ¹	p ^h A; pha ⁵⁵		nep ^h a	na ³³ pha ⁵³		break open, broken
*p ^h wo	-phɛ ⁵⁵		-p ^h o	-phu	Lahu phô < *paŋ	side, direction ⁴
*p ^h wo			-p ^h o	(te ³³) phu ³¹		classif. one of pair (hand, eye)
*t ^h ep ^h o ¹		tha ³³ pho ⁵³	k ^h ep ^h o	tha ³³ ph-a ⁵³ 'die out'		extinguish, put out fire
*p ^h o ¹	phu ⁵⁵	pho ³³ ji ⁵³	`nep ^h o-a	pho ³⁵	*ploŋ ?	run away / escape ⁵
*(p ^h e)ŋgwo ²	nga ³³ ngu ⁵⁵		`p ^h oŋgo	phe ³³ ngu ⁵³		thing, tool
*p ^h ulje ¹			p ^h ele, p ^h uli	phu ³³ li ⁵³		dust
*lep ^h ew ¹	le ³³ phɛ ⁵⁵	le ³³ phu ⁵³ 'arm'	lep ^h e	le ³³ phu ⁵³ 'arm'		hand
*p ^h ek ^h wæ ¹	phɛ ⁵⁵ khua ⁵⁵		p ^h uk ^h wa	phɛ ³¹ khua ⁵³	*pəw PRICE	expensive ⁶

³Hint: in almost all cases any consonant symbol you see will belong to the initial.

⁴Cf. the Mn. forms `nap^ho 'back, behind', sap^ho 'front', k^hup^ho 'inside', kop^ho 'this side, here', gap^ho 'on top of, up there', jap^ho 'below, down there', ŋap^ho 'that side, across the way, downstream'. The classifier for 'one of a pair' is clearly the same morpheme. Note that PL *pa² (PL 460) does not fit here since Lahu -ɔ < *-aŋ or *-əw.

⁵The forms listed here may not be a regular development from PTB *ploŋ since apparently the cluster *pl- > Proto-Ersuic l-; see section 3.2.6 below.

⁶The second syllable means 'big'. Cf. the Mn. forms ts^huk^hwa 'adult' and dek^hwa 'grow (up)'. Perhaps this syl-

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*p ^h ui ¹	p ^h ʃɿ ^l ; p ^h ʃɿ ⁵⁵		p ^h wehō (~ lg.)	phu ⁵³	WT bod	Tibetan
*k ^h ep ^h ui ¹		khə ³³ phu ⁵⁵	p ^h we	khe ³³ phu ⁵³	cf. Lahu phe	tether (a cow)
*p ^h uk ^h æ ²			ʔ ^h uk ^h jæ	phu ⁵³ khæ ⁵³		fortune / luck
*ŋep ^h wo ¹	phu ⁵⁵			ŋe ³³ phu ⁵³	*m-pup	flip over, reverse
*æp ^h u ¹			a ^h u	æ ³³ phu ⁵³	*pəw	grandfather

Note that there is an aspirated/unaspirated doublet for ‘grandfather’ (see TBL æ³³phu⁵³ above and æ³³pu⁵³ below). The unaspirated variant may have had aspiration suppressed by the presence of the PTB glottal kinship prefix (see Matisoff 2003:14, and also PLB *ʔ-bəw² GRANDFATHER). If this is the case, then the unaspirated variant has had two successive layers of kinship prefixes, with the first layer disappearing after suppressing aspiration, and the second evident in the first syllable (a/æ-).

Unaspirated *p-:

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*pa	pa ^l ; pa ⁵⁵		-pa	(te ³³) pa ³¹		peck, unit of dry measure for grain (= 1 decaliter)
*pætɕe ¹			pætɕe	ne ³³ pæ ⁵³ tɕi ³¹		cut (paper, cloth)
*pwEpwE ²	pɛ ³³ pɛ ⁵⁵	(gə ³³ mo ⁵⁵) pu ³³	ʔ ^h puta ‘patch (v.)’	pe ⁵³ pe ⁵³	*p ^w a, PLB *ba ¹ ?	patch (clothing)
*pwEki/pwEtɕi			ʔ ^h uki	the ³³ pe ⁵³ tɕi ³¹		send/dispatch (a person)
*pi ²	psɿ ⁵⁵		ʔ ^h tipi	næ ⁵³ pi ⁵³		chip (the rim)
*pimæ ¹	pzɿ ^l ma ^l ba ^l ka ^l ; psɿ ⁵⁵ ma ⁵⁵ ŋi ⁵⁵ za ⁵⁵		pimæ	pi ³³ mæ ⁵³	*s-bal	frog, toad
*dzepi/dzop ^h i ¹	dze ⁵⁵ psɿ ⁵⁵		dzop ^h ɕi			hoe
*pjembje	pi ^l npi ^l ; pi ⁵⁵ mbi ⁵⁵	pi ³³ nbi ⁵³		pi ⁵³ nbi ⁵³		knee
*sēpu ¹	si ^l bu ^l ; si ⁵⁵ pu ⁵⁵	sepv; sə ³³ pu ⁵³	sipu	se ³³ pu ³¹ , se ³³ pu ⁵³		tree
*æpu	A ^l pu ^l ; a ³³ pu ⁵⁵			æ ³³ pu ⁵³	*pəw	grandfather
*pu	-pu ^l , -bu ^l ; pu ⁵⁵	-pv	-pu	(te ³³) pu ³¹	PLB *baŋ ¹	classif. trees/flat obj.
*piu ¹	pɛ ⁵⁵ rɛ ⁵⁵	pu ⁵³	pø	pu ³⁵	*m-blen	pus
*pwondzɔŋgæ ²			ʔ ^h pondzɔŋgæ	pu ⁵³ dzũ ⁵³ ngæ ³¹		window

Note that the aspiration does not match for the second syllables of ‘hoe’ above.

lable can be related to PLB *kak^H ‘expensive/intense/at its peak’ (see (Matisoff 1972)); however, note the form for ‘branch’, PTB *s-ka:k > e.g. TBL se³³ka⁵³li³¹, where the protoform (similar in phonological shape to PLB *kak^H) does not develop a labiovelar glide.

Voiced *b-:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ba ²	dA\ bæ\ ; ba ³³ wa ⁵⁵		\`debalo	ba ³³ laŋ ⁵³ laŋ ³¹	PLB *m-ba ³	bright ⁷
*batši/batše	ba ³³ tʃe ⁵⁵		batši			basket (for straining)
*æbæ ²	A\ bA; a ⁵⁵ ba ⁵⁵	\`æpæ	\`æbæ	æ ⁵³ ba ⁵³		father
*bædzje ¹	ba ⁵⁵ dʒe ⁵⁵	ba ³³ dʒl ⁵⁵	bædzɪ	bæ ³³ dʒl ⁵³		money ⁸
*bæni ¹	ba\ ni\ , ba ³³ ni\ ; ba ³³ ni ⁵⁵ , be ³³ ni ⁵⁵	be ³³ ni ⁵³	bæni	bæ ³³ ni ⁵³	*r/g-na	listen
*debæ ¹	ba ⁵⁵		debæ	de ³³ bæ ⁵³	*ba ?	carry on the back
*bebe ¹	bɛ ⁵⁵ bɛ ⁵⁵	\`bebe	bøpø, bøbø	be ³³ bɛ ⁵³		crawl, climb
*bedi ¹	bɛ ³³ dʒl ⁵⁵	bə ³³ di ⁵³	bødzi	be ³³ dʒi ⁵³	*bəw, *zril > PLB *di ¹	insect / worm
*bugi ¹			bugje	be ³³ gi ⁵³		bury
*behē/behī			\`behē	be ³³ hi ⁵³		fly (n.)
*belæ ¹			belæ	be ³³ læ ⁵³		work / labor
*bibi ¹			debibi	de ³³ bi ³³ bi ³¹	PKC *buay	busy
*bje ¹	ja\ bi\		pæbi	bi ³³ bi ⁵³		coarse, rough, wide (in diameter)
*bi ²	bʒl\ ; bʒl ³³	bi ³³ ja ⁵³	\`bi	bi ³⁵	*bya	bee, honey
*bje	bi ⁵⁵	\`bje	labje	(te ⁵³) bi ⁵³		heap (e.g. of dung)
*bi ¹	bʒl ³³ bʒl ⁵⁵	bi ³³ bi ⁵³	pæbi, `bibi	bi ⁵³ bi ⁵³	*ba	thin
*bo ¹	bo\ 'have livestock', bu\ 'have N (be age N)'; bo ⁵⁵	bo	bo	bo ³¹		have, exist (money)
*debwo ¹			(ji) debo	(ji ³⁵)de ⁵³ pu ³¹		want (to go)
*lo(bwo) ¹	ə\ k ^h uA\ ; ə\ ⁵⁵ khua ⁵⁵	lo ³³ pu ⁵³ , lo ³³ bu ⁵³		luo ³³ bo ⁵³ , luo ⁵³ bu ⁵³	*r-lung, *k-luk	stone, rock
*berA/burA	ʃe ³³ bɛ ⁵⁵ ra ⁵⁵	bu ³³ ra ⁵⁵		bu ³³ ə ⁵³	*g/p-rwak	ant
*bulo	bɛ ³³ ə ⁵⁵		bulo		*s-luk/ŋ	maggot
*bu ¹	bə\ 'wild ox buffalo' ?		buk ^h wa	bu ³³ khui ⁵³		yak (male)
*bu ¹	bu ⁵⁵			ka ³³ bu ⁵³	*m-bup ROT / SPOTTED / WRITE	multicolored / pat- terned (cloth)

⁷The fact that these forms for 'bright' have not undergone "brightening" (i.e. **ba** > **bi**) suggests that they are loans from Loloish.

⁸This word is possibly ultimately from an Indo-Aryan source; cf. WB **puik-cham**/Burmese **pai²-hsā** 'pice', which Judson (1893:655) identifies as a loan from Bengali.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*biususu ¹	bɛ ⁵⁵ su ⁵⁵ su ⁵⁵		bøsusu	bu ³³ su ⁵³ su ³¹		bladder
*butsh ^h a ¹	vu ⁵⁵ tshua ⁵⁵	`nbutsh ^h æ	butsh ^h a	bu ³³ tsha ⁵³	*r-p ^w a	axe
*batʂa/butʂa	pA ¹ tʂA ¹ ; ba ³³ tʂa ⁵⁵		butʂa			knife
*beri ²	bɛɹɹə ¹ ; bɛ ³³ rɹ ⁵⁵	`bəɹ; bu ³³ rə ⁵³	`bə ¹	bu ³³ γu ³⁵	*s-b-ru:l	snake

The Ersu and Kl. forms for ‘axe’ are irregular, Ersu having a [v-] initial and Kl. having a prenasalized stop. This may have to do with the PTB *r- prefix; for another example of PTB prefixal *r- with seemingly irregular developments in Proto-Ersuic, see ‘eight’ (section 3.3.5) and perhaps ‘rain’ (section 3.7.3). However, in other cases, the combination of PTB *r- prefix + oral stop seems to have developed into simple prenasalization in Proto-Ersuic, as in ‘steal’ (section 3.1.3) and ‘leech’ (see prenasalized [bilabial] stops below).

The voiceless [p] in TBL ‘want (to go)’ may be a transcription error.

3.1.2 Stops with high front glides

Collected here are all examples of bilabial initial + palatal glides; these turn out to have interesting developments. In TBL, Mn., and Kl., phonemic palatal glides (and even the high front vowel /-i/, though this is more obvious if the stop is aspirated) are pronounced with salient frication. In Nq. these sequences have become palatal affricates; and in Ersu they have undergone a further change to dental affricates (except before [-o]). Note that even in TBL, Huáng and Rénzēng (1991:135) report that, e.g., [pʂ-] is sometimes pronounced [ptʂ-].

In Mn. it seems that the palatal glide here has become a dental fricative before [-e], as in ‘run’ and ‘fly’; indeed, there are no Mn. forms consisting of labial stop + palatal fricative (e.g. [bʂe]).⁹

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*mp ^h jo	ja ¹ ntɕ ^h o ¹ ; ja ³³ ntɕho ⁵⁵		mp ^h ɕo	phiu ⁵³ nphiu ⁵³		beautiful
*p ^h jo			-p ^h ɕo	(te ³³) phiu ³¹		bolt (of cloth)
*p ^h jo	-tɕ ^h o ¹	-tɕ ^h o	-p ^h ɕo	phzuo ⁵³	<WT phyogs	direction / orientation
*mp ^h jo ²	ntɕho ^{33/55}		mp ^h ɕo ‘slap’	te ⁵³ nphzu ³³ nphzu ³¹		strike (the table)
*pjo			`pɕowa, `pɕowə ¹ ‘agate’	pzu ³³ wu ⁵³ , ptɕu ³³ wu ⁵³		coral
*p ^h ja	-ts ^h A ¹ ; tsha ⁵⁵		-p ^h ɕa	(te ³³) phzæ ³¹		classif. garments
*lep ^h ja ¹		le ³³ tɕhə ⁵³	lep ^h ɕa			palm

⁹However, note that there *is* a Mn. form `bzibza ‘soft’, forming a near-minimal pair with pɕa ‘hang’. I have not found this form in other Ersuic languages, but if this word is reconstructible to Proto-Ersuic we will need an explanation for its development of a dental fricative in Mn.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*sēp ^h ja ¹	si ⁵⁵ tsha ⁵⁵	sæ ³³ tche ⁵³	sip ^h ɕa	se ³³ phzæ ⁵³	*r-pak	leaf
*-p ^h ja		li ³³ tchə ⁵³	`ts ^h ip ^h ɕa	tʂhu ³³ phia ⁵³		thigh
*p ^h ja		`pɕæ		ŋe ³³ phzæ ⁵³	*py(w)ak	sweep
*p ^h jap ^h ja ¹		de ³³ tchuw ⁵⁵ tchuw ³³		ne ³³ phia ⁵³ phia ³¹		wipe (the table)
*p ^h ja ² mu			`p ^h ɕa mu	phzæ ⁵³ /(n)phia ⁵³ mu ⁵³		kowtow, make obeisance to
*pja ¹	tsa ⁵⁵	pzæ	pɕa	de ³³ pzæ ⁵³		hang
*pja ¹		depzæ		pzæ ³⁵		catch (in mouth)
*pjē		tɕi ⁵⁵	`pse	pze ³⁵	*b-ləy, PLB	run
*bjēbjē ¹		dze ³³ dze ⁵³ , dzi ³³ dzi ⁵³	bzibze	bze ³⁵	*p-re *byam	fly (v.)

The Kl. form for ‘direction’ does not have a bilabial initial, but this is probably because it is a loan from Tibetan (cf. Khams (Batang) **choɽ**⁵³).

Note that the transcription for Kl. **pɕæ** ‘sweep’ represents an aspirated initial (the unaspirated version is written pɕ-).

3.1.3 Stops with -r- medials

The following items are reconstructed with bilabial + [r] clusters. In certain environments, the effect of [-r-] on the initial consonant is similar to that of the palatal glide, encouraging a change from a labial to a coronal place of articulation. Note the variation between bilabial and retroflex place of articulation in the forms for ‘steal’ and ‘steam(er)’; this variation is also noted in Huáng and Rénzēng (1991:135), which states that e.g. **nphzɽ**³⁵ ‘steal’ varies with **nphɕsu**³⁵. The second syllable of Mn. ‘face’ also shows this variation. The transcriptions for bilabial + retroflex clusters as opposed to retroflex affricates may look startlingly different on the page (compare, e.g., Kl. ‘young lad’ **p^hrezæ** with Nq. ‘steal’ **tʂhə³³su**⁵³), but it would appear that the two are acoustically quite similar, especially when the consonants are aspirated. In Nq. and TBL, this change into retroflex affricates only applied to aspirated initials (see also chapter 7).

In the Mn. forms, we see clusters apparently descended from *Pru, *Præ, *Pro, and *Pre (where P stands for any kind of bilabial stop). As for the remaining vowels, the rhymes *-ri and *-ra seem to become the r-colored vowels [ɚ¹] and [æ¹], respectively (though notice the variation in the form for ‘call out/loud’).

In TBL, [-r-] > retroflex fricative after aspirated stops, although note that all of these examples also have high vowels. After unaspirated stops and before high vowels, [-r-] seems to disappear completely (‘flock’, ‘dragon’ < Tibetan **hbrug**). The other examples seem to have rhotacization on the vowel, except for ‘arrive’ and ‘tall’. However, rhotacization is not consistently transcribed in TBL; for example, ‘lip’ is listed **ku⁵³pe⁵³ nga³³pi³¹**, where the second element means ‘skin’

and is transcribed elsewhere as **nga**¹³³**pi**⁵³ or **n-gə**¹³⁵. Similarly, some of the forms where Mn. has the rhyme [-æ¹] are transcribed without rhotacization in TBL.

In Nq. the non-aspirated forms have lost any trace of -r-, except in the rhyme [-ɐɪ] < *-ræ.

In Kl., *-ro, *-re > [-ɔ̄], and *-ru > [-o]. *-ra and *-ræ merge to [ræ].

In Ersu, all -r-'s drop except next to the low vowel [a], where it colors the vowel.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*p ^h ru				ɣæ ⁵⁵ phzɯ ⁵³	PLB *ʔ-blu ¹	porcupine
*mp ^h rozæ ¹	pho ⁵⁵ za ⁵⁵ 'husband'	p ^h rezæ	mpɣ ^h ozæ	nphzɯ ³³ zæ ⁵³	PL *m-larj/plarj ¹ 'husband' (PL 217)	young lad / chap
*mp ^h ru ¹	npho ⁵⁵	tɣhə ³³ su ⁵³	`mpɣ ^h u	nphzɯ ³⁵ , ntɣhu ³⁵	*r-kəw	steal
*mp ^h ru ¹			ntɣ ^h u	nphzɯ ³⁵		steam (v.)
*mp ^h ru			`mpɣ ^h u	ntɣhu ³³ tɣæ ⁵³		bamboo steamer
*p ^h ru			`mjapɣ ^h u, `mjatɣ ^h u		PLB *p(l/y)u:ŋ ² (MLBM 62)	face ¹⁰
*præ ¹	pa ⁵⁵ dua ⁵⁵	`depraē	depɣæ	pæ ⁵³ læ ⁵³		arrive
*debræ ¹	bə ¹ ɿ	`debræ; de ³³ bə ⁵³	bzæ	de ³³ bæ ⁵³	*b(w)ar ɰ *p(w)ar	burn
*mbro	ja ¹ bo ¹ ; ja ³³ nbo ⁵⁵	nbə ¹ nbə ¹ ; bo ³³ mbo ⁵³	pæmbzɔ, mbzɿmbzɔ	bo ⁵³ nbo ⁵³	*m-raŋ	high / tall
*debro ¹			debzɔ ɣɣ	de ³³ boɿ ⁵³	PKC *puar	feel bloated (stomach)
*bru ²	dzu ³³ ??		`bzɯ			tendon
*bru	bu ¹ ɿ; bu ³³	-bo	-bzɯ	(te ³³) bu ³¹		flock (of sheep)
*(ji)mbru ²	bzɿ ¹		`ɣqjimbzɯ	ji ⁵³ nbu ⁵³	*m-bruŋ ɰ *m-bruk; < WT ḥbrug?	dragon
*nebre ¹	bə ¹ ɿni ¹ ; ba ⁵⁵ ni ⁵³ 'rest'	nebə	nebzɛ	ŋe ³³ buɿ ⁵³		tired, fatigued
*m(b)ro ²	bo ¹ ɿ; nbo ³³	`nbə; mbe ³³ qhA ⁵⁵	`mbzɔ	nbo ³⁵	*k-m-raŋ	horse
*pri	-pe ¹ ɿ; pa ⁵⁵	`pə 'grain'; nu ³³ pi ⁵³ 'peas'	-pə ¹	(te ³³) pu ³¹		classif. small round obj.
*p ^h ra ²			`p ^h æ ¹ , dzæp ^h æ ¹	pha ⁵³	*pwa:y	chaff / bran
*bra ¹	pzɿ ¹ ?	`bræ	bæ ¹ , bæ ¹ jo	ba ³⁵		rope / string
*bra ¹			nts ^h abæ ¹	tshɿ ³³ ba ⁵³		cane / vine
*debra ¹	bə ¹ ɿ; da ³³ ba ⁵⁵	de ³³ bəɿ ⁵³	debæ ¹	de ³³ ba ⁵³	*bliŋ	full

¹⁰This binome appears in Loloish as well; the first syllable is < EYE. Cf. Lahu **mɛ̄ʔ-phũ**. See Matisoff 1978a ("MLBM") #62.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*mbra ¹	bə ¹ ; nba ⁵⁵	nbeɾ ⁵⁵	ᵛmbæ ¹	nba ³⁵		urine
*mbra ¹	bə ¹		mbombæ ¹ , mbzɪmbzæ	de ³³ nba ⁵³	Lahu bù < *mbwa	loud

The Ersu form for ‘tendon’ above may not be cognate to the Mn. form because it has a retroflex, rather than the expected bilabial initial.

There are some Mn. palatals that correspond to TBL retroflexes. These are reconstructed with a medial palatal glide *-j-. The retroflexes then become palatals in Mn. under influence of the high front glide. See also ‘money’ on p. 53 for a retroflex initial with the *-je rhyme. (Interestingly, this would be the opposite of the change posited in section 3.4.1, where palatals become retroflexes under the influence of a high back vowel.)

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*tsip ^h rjo/ ts ^h ip ^h rjo ²	ts ^h ɿ ¹ p ^h o ¹ ; tsɿ ⁵⁵ pho ⁵⁵		ᵛts ^h ip ^h ɕo	tshe ⁵³ phzɿ ⁵³		age
*mp ^h rjo ¹	ntshe ⁵⁵		mp ^h ɕo (xko)	ntshuo ⁵³		measles
*tsjēp ^h rje ¹	tsi ¹ p ^h ɿ ¹ ; tsi ⁵⁵ phɿ ⁵⁵		tɕe p ^h ɕip ^h ɕi	tɕe ³³ phzɿ ⁵³	*pran/t	braid / plait

3.1.4 Prenasalized Stops

For the voiceless (aspirated) series, Kl. and Nq. have lost all prenasalization, except for Nq. ‘hide’. Ersu, Mn., and TBL retain prenasalization, except for Ersu ‘husband’.¹¹

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*khemp ^h e	p ^h i ¹	khe ³³ nphe ⁵³	ᵛmp ^h e	khe ³³ nphe ⁵³	*s-p ^w ak	hide oneself
*demp ^h je ¹	np ^h i ¹ ; nphi ⁵⁵	de ³³ phi ⁵³	demp ^h je	de ³³ nphi ⁵³		cold (weather, water)
*mp ^h je ¹	mphi ⁵⁵	ᵛp ^h je	ᵛmp ^h jeka	(n)phi ³⁵	*s-p ^w al ?	ice
*mp ^h i ²	p ^h ɿ ¹ ; nphɿ ⁵⁵	phi ⁵³	ᵛmp ^h ɕi	nphi ⁵³ , nphzɿ ⁵³	*m-pat	vomit, spit
*mp ^h jo	ja ¹ ntɕ ^h o ¹ ; ja ³³ ntɕho ⁵⁵		mp ^h ɕo	phiu ⁵³ nphiu ⁵³		beautiful
*mp ^h womp ^h wo			mp ^h o gɾ, mp ^h omp ^h o	(n)phu ⁵³ nphu ⁵³		industrious / hardworking
*mp ^h ru ¹			ntɕ ^h ɿ	nphzɿ ³⁵		steam (v.)
*mp ^h ru			ᵛmp ^h ɿ	ntshu ³³ tɕæ ⁵³		bamboo steamer
*mp ^h rozæ ¹	pho ⁵⁵ za ⁵⁵ ‘husband’	p ^h rezæ	mp ^h ozæ	nphzɿ ³³ zæ ⁵³	PL *m-lan/play ¹ ‘husband’ (PL 217)	young lad / chap

¹¹Nonetheless, this Ersu form seems the most likely cognate for the Lizu forms for ‘young man’, although another possibility would be the second syllable of Ersu **tsho⁵⁵pha⁵⁵** ‘young man’ (the first syllable means ‘person’). A comparison might also be made to Lahu **phâ** ‘young man’.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*mp ^h ru ¹	npho ⁵⁵	tʂhə ³³ su ⁵³	ᵛmpʂ ^h u	nphzu ³⁵ , ntʂhu ³⁵	*r-kəw	steal
*mp ^h jo ²	ntcho ^{33/55}		mp ^h ço ‘slap’	te ⁵³ nphzu ³³ nphzu ³¹		strike (the table)
*mp ^h rjo ¹	ntshə ⁵⁵		mp ^h ço (xko)	ntʂhuo ⁵³		measles
*mp ^h ri ¹	su ¹ mo ¹ ᵛnp ^h a ¹ ᵛ ‘cremate’		mp ^h ə ¹			burn, singe
*mps ^h u ¹	ntshu ⁵⁵		mps ^h u, nts ^h u	ntshu ⁵³		hail

There is a single form, ‘hail’, which seems to be reconstructible with a *mps- cluster, based on the Mn. form. There is also a form in Huáng and Rénzēng (1991) **te⁵⁵ptshae⁵⁵** ‘to taste’ which, were we to find appropriate cognates, might also reconstruct to a *ps- cluster.

Unlike its voiceless counterpart, prenasalized [mb-] is retained in all dialects. Some forms are missing their prenasalization, but this may be due to transcriber error (e.g. ‘tall’, ‘shy’).

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*mumbæ ¹		mu ³³ nba ⁵³		mu ³³ nba ⁵³ mu ³¹		hunt
	htçɪ ³³ nba ⁵⁵ su ⁵⁵			pi ⁵³ nba ⁵³ mu ³³ su ³³		doctor
*rbæ	rbæ ¹		ᵛə ¹ mbæ			kind, type
*mbra ¹	bə ¹ ᵛ; nba ¹⁵⁵	nbe ¹⁵⁵	ᵛmbæ ¹	nba ¹³⁵		urine
*mbra ¹	bə ¹ ᵛ		mbombæ ¹ , mbzɪmbzæ	de ³³ nba ¹⁵³	Lahu bù < *mbwa	loud ¹²
*mbere ²	mbɛ ³³ rɛ ⁵⁵			na ⁵³ nba ¹⁵³	*ba-y	cheek
*mbje	nbi ³³ ʂa ⁵⁵	mbi ³⁵ , mbi ³³ mbi ⁵³		nbi ³³ ʂua ⁵³ ʂua ³¹		cool (pleasantly)
*mbje ¹	bi ¹ ; nbi ⁵⁵	mbe ⁵³	mbivə	nbi ³⁵		hill / mountain
*pjembje	pi ¹ ᵛnpi ¹ ; pi ⁵⁵ mbi ⁵⁵	pi ³³ nbi ⁵³		pi ⁵³ nbi ⁵³		knee
*mbi	mbzɪ ¹ ᵛ/ᵛ; nbzɪ ⁵⁵		ᵛmbi ‘step across’	(te ³³) nbi ³¹		step / stride
*mbi ¹			mbi	nbi ³⁵	*k-r-p ^w at	leech
*mbimbi ²	nbzɪ ³³ nbzɪ ⁵⁵		mbimbi	nbi ⁵³ nbi ⁵³	Lahu pè < *bya	divide / share (things)
*mbiulje ²	nbe ³³ li ⁵⁵	mbə ⁵⁵	ᵛmbøli	nbo ³³ ly ⁵³		kidney
*mboto		ᵛnbuto		nbo ³³ tuo ⁵³	PL *taŋ ³ (PL 257)	knife
*mbro	ja ¹ ᵛbo ¹ ; ja ³³ nbo ⁵⁵	nbə ¹ nba ¹ ; bo ³³ mbo ⁵³	pəmbzɔ, mbzɪmbzɔ	bo ⁵³ nbo ⁵³	*m-raŋ	high / tall
*mbo ¹	bu ¹ ; nbu ³³	nbo	mbo, mbojo	nbo ³⁵ , nbo ⁵³ ju ⁵³		hat
*nembo			ᵛnembo	ne ³³ nbo ⁵³	*m-baŋ	deaf
*nambo ²	na ³³ nbo ⁵⁵		ᵛæ ¹ na mbo	na ³³ nbo ³⁵	*m-baŋ	deaf person

¹²The voiced initial in Lahu points to an earlier prenasalized stop.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*m(b)ro ²	bo˩; nbo ³³	`nbə; mbe ³³ qha ⁵⁵	`mbzɔ	nbo ³⁵	*k-m-raŋ	horse
*mbroza	nbo ⁵⁵ za ⁵⁵		`mbzɔza			saddle
*mbro ¹	nbo ⁵⁵ si ⁵⁵			nbo ³³ wu ⁵³		willow
*mbwo ²	nbo ³³ ntsho ⁵⁵		`mbo	nbu ⁵³ '100,000'	WT ɰbum '100,000'	ten thousand
*mbwo		nbə ⁵³	`mbo	nbu ³⁵ , nbo ³⁵		dig / scoop out / excavate
*mbu ¹			mbu 'roast'	ne ³³ nbu ⁵³		scald / burn
*mbuŋew		bu ³³ ʒu ⁵⁵	`dembuŋɛ	nbu ³³ ʒu ⁵³		shy / bashful
*(ji)mbru ²	bʒɪ˩		`ɣqjimbʒɪ	ji ⁵³ nbu ⁵³	*m-bruŋ ɰ *m-bruk; < WT ɰbrug?	dragon
*mbre ¹	nba ⁵⁵	se ³³ mbe ⁵³		se ³³ nbu ⁵³		root

3.1.5 Preaspirated Stops

All dialects except for Mn. and Ersu have lost the preaspiration. (This is consistent with the fate of preaspiration for other places of articulation; see the relevant sections below.)

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*hpje ²		`pje; pi ⁵³ , pe ⁵³	`hpje	pi ⁵³	*s-man	medicine
	htɕi ³³ nba ⁵⁵ su ⁵⁵			pi ⁵³ nbə ⁵³ mu ³³ su ³³		doctor
*hpwo ²	hpo ⁵⁵		`hpo	pu ⁵³		incense (bark of cypress? tree)

The nasalization in Nq. 'medicine' is unexplained.

The Ersu form **ni⁵⁵htɕi⁵⁵** for 'medicine' does not appear to be cognate to the Lizu forms, since bilabial initials do not palatalize before high front vowel. It is more likely that this form is < PTB ***r-tsəy** MEDICINE / JUICE / PAINT. To complicate matters, Sūn (1982b) glosses **htɕi⁵⁵** as 'to treat', and the word for 'medicine' as an object-verb compound, literally "illness-treat".

3.1.6 Nasals

For the most part, these forms are [m] all the way across, except for Ersu 'do' and 'mortar', which have syllabic [ɲ]. The conditioning environment for this change is unclear but seems to involve a back rounded vowel. A related change may be found in Ersu 'cat' and 'brother', with syllabic [m].

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*æmæ ¹	A\lma\,A\lma\; a ⁵⁵ ma ⁵⁵	`æmæ	æmæ	a ³³ ma ⁵³	*ma	mother
*mæt ^h u			`mæt ^h u	ma ³³ thu ⁵³		lazy
*mamo	mA\mo\` 'mom'	mæmo	mamo 'wife'	ma ⁵³ mo ⁵³		old lady
*mra ¹	ma ⁵⁵	ma ⁵⁵ , me ³³ ɣ ⁵³	`mæ ¹	ma ³⁵	*m-la-y	bow / arrow
*me ¹			me	me ³⁵	< WT mar ?	butter
*me ¹	me\; me ⁵⁵	mə ⁵³ , sa ³³ mə ⁵³	`me	me ³⁵	*mey	fire
*t ^h eme ²	t ^h ε\me\`nuA\; the ³³ me ⁵⁵	thə ³³ mə ⁵³	`k ^h eme	the ³³ me ⁵³	*ma-t	forget
*mwEdzæ ¹			mudzæ	me ³³ dzæ ⁵³		barley
*meli/mele ²	me ⁵⁵ ə ⁵⁵	melje; mə ⁵⁵	`mele	me ⁵⁵ le ⁵³	*g-ləy	wind ¹³
*melje	me ³³ li ⁵⁵		mele		*m-ley ≠ *m-ləy	earth, ground
*mjalo ¹	miə ⁵⁵ lo ⁵⁵		`mjalo	mi ³³ luo ⁵³		mirror
*miso			`misuə ¹	mi ³³ suo ⁵³		three days from now
*metɕo			`metɕo	mi ³³ tɕu ⁵³		flower ¹⁴
*mi	mi\; mi ³³	mi ³³ jə ⁵³		mi ³⁵	PLB *myuk ^L , *s-myuk ^H	monkey
*mi ¹	mi\; mi ⁵⁵	mi ³⁵ mi ⁵³	mi	mi ³⁵	*r/s-miŋ	name
*mi ¹	mi ⁵⁵		mi		PLB *s/?-mi ¹	catch
*nemi ¹	mi ⁵⁵		`nemi	ne ³³ mi ⁵³		swallow
*amja/amjo/æmi			amjo, amja	æ ⁵³ mi ⁵³		now
*mja ¹	miə ⁵⁵		mja	miə ³³ ku ⁵³ 'blind'	*s-mik ≠ *s-myak	eye
*mjare ¹			mjaə ¹	miə ³³ ə ⁵³		tears ("eye-water")
*mja ²	miə\; vu ³³ miə ⁵⁵		`mjapɣ ^h u, `mjatɣ ^h u	miə ³⁵	cf. EYE	face
*mje/mja	ja ³³ mi ⁵⁵	mjemje	mimja	miə ⁵³ miə ⁵³	*mra, PLB *C-mya ²	many / much
*mo ¹		`mo	ə'mo	mo ³⁵	< MC muH 墓 ?	tomb ¹⁵
*mo	me ⁵⁵	`mo	`mo		*d-mak	soldier, army
*t ^h emo/momo ¹	mo\lmo\; mo ⁵⁵ mo ⁵⁵	the ³³ mo ⁵³	k ^h emo-a	tho ³³ mo ⁵³	*maŋ	old / elderly
*mopæ ²	mo ³³ pa ⁵⁵			mo ⁵³ pa ⁵³	*s-mak	son-in-law

¹³First syllable is SKY.

¹⁴The form listed here is either a native Ersuic word or an earlier loan from WT; note the recent loan WT **me-tog** > Mn. **meto**, TBL **mi³³tu⁵³**.

¹⁵The Middle Chinese form **muH** (ASCII-friendly transcription from Baxter and Sagart 2011) is not to be confused with Klingon **muH** 'execute, put to death'.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*mop ^h æ ¹	mu ⁵⁵ ;		mop ^h æ			brother
*ment ^h o ²	mɛ ⁵⁵ nt ^h ɛ ⁵⁵ ; mɛ ³³ nt ^h ɛ ⁵⁵	`ment ^h o			*r-may ✕ *r-mey ✕ *r-mi	tail
*mukr(w)V ¹		mu ³³ kə ⁵³	mukwə ¹	mu ³³ kə ⁵³	*r-may ✕ *r-mey ✕ *r-mi	tail
*mumbæ ¹		mu ³³ nba ⁵³		mu ³³ nba ⁵³ mu ³¹		hunt
*mutsi ¹	m ³³ tsɿ ⁵⁵		mutsi	mu ³³ tsɿ ⁵³		cat
*mu ¹	ŋuə ⁵⁵ ; ŋ ⁵⁵	`mu	mə	mu ³⁵	*mow	do / make
*tsumu/tsumo ²	tsu ³³ ŋ ⁵⁵		`tsəmo	tsuo ⁵³ mo ⁵³	*tsum ?	mortar
*mui ²	mi ⁵⁵ lma ⁵⁵ ; ma ⁵⁵	`mv; mu ⁵³	`mwe, `mə ¹	mu ⁵³	*s-mul	feather, hair (of body)
*muimui ¹	ma ⁵⁵ ma ⁵⁵ (‘close eye’)		jiba `deməmwe	ne ³³ mu ⁵³ mu ³¹	*s-mi:t	close (the mouth)
*demwo ¹	ma ⁵⁵ ?	de ³³ ma ⁵³ ?	mo	te ⁵³ mu ⁵³	*s-mut	blow (away)
*me/mo		`me		muo ³⁵	*r-məw	sky
*mjari/meri ¹	miə ⁵⁵ ɿ ⁵⁵		mə ¹	mu ³³ fiu ³⁵	*r-ma + *ri GLEET	sore / boil
*mri ¹	ja ³³ ma ⁵⁵	mræ	mə ¹	mu ³³ mu ³⁵		tasty / delicious

There are two items where [m-] corresponds with [n-] before [-i] in Mn. Perhaps these can be reconstructed as *my-. It seems unlikely that these terms are loanwords, since ‘throat’ is a body part and there is a separate, higher-register term for ‘rabbit’, `juŋ; however I will note in passing the similarities with Khams Tibetan (Sdedge) **ni⁵⁵pa⁵³** ‘throat’; and also WB **jun²** ‘rabbit’.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*myihkwo ¹	mi ⁵⁵ hku ⁵⁵		`nipwe-kota	mi ³³ ku ⁵³	*mit, *l-ko(k)	throat
*myidzi ²	xi ⁵⁵ dze ⁵⁵ ?; mi ³³ dzɿ ⁵⁵		`nidzi	mi ³³ tsɿ ⁵³		rabbit

3.2 Dental stops and sonorants

There are relatively few roots with dental initials, most of which seem to be followed by some sort of back vowel, suggesting that in an earlier stage of the language, there did indeed exist dentals which have changed to other segments in non-back-vowel environments.

One peculiarity is that Ersu dental stops have become bilabials before the rhyme /-u/.¹⁶ This seems to be due to influence of the /u/ vowel, which, for example, in Mn. is realized as a bilabial trill after dental stops. Note that the Ersu form for ‘thousand’ exhibits variation between [htu] and [hpu]. As noted on page 9, footnote 8, this is an areal feature found in Nuosu, Namuyi, and Na (at least), and documented at least since the 1880s.

3.2.1 Plain stops

Again we have a three-way contrast in the plain stops, starting with voiceless aspirated:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
Voiceless aspirated						
*lit ^h o/lot ^h o ¹		lo ³³ tho ⁵³	lit ^h o	luo ³³ thuo ⁵³	*b-ləy	grandchild
*mæt ^h u			ṁmæt ^h u	ma ³³ thu ⁵³		lazy
*t ^h wa ¹			t ^h a	thua ³⁵		fit, can hold
*t ^h æ ¹	thæ ⁵⁵	ṁt ^h æ	ṁt ^h æ	thæ ³³	*ta	neg. imp.
*t ^h e ¹	t ^h εṁ; the ⁵⁵	ṁt ^h e	t ^h e	the ⁵³		s/he
Voiceless unaspirated						
*ljeṁje ¹	pu ⁵⁵ li ⁵⁵ li ⁵⁵	ta ³³ li ⁵³	tali, talili	ta ³³ li ⁵⁵ li ³¹		circular (spherical)
*ta ¹			deta ‘accurate’	ta ³³ ma ⁵³		true
*tæniu ¹	tAṁnoṁ; ta/ta ⁵⁵ no ⁵⁵		tæni	tæ ³³ nu ⁵³		today ¹⁷
*taso ¹			taso ‘just now’	ta ³³ suo ⁵³	PLB *C-sok	morning
*t(w)ah(w)ā ¹	tua ⁵⁵ xua ⁵⁵		tahā	ta ³³ xa ⁵³	*s-r(y)ak 24-HOURS	tonight
*ta	tAṁ (perf.)		ṁneta	də ³³ ta ⁵³ ‘open (an umbrella)’		close
*te ¹	tεṁ; te ⁵⁵	ṁte; tə ⁵³	ṁte	te ³¹		one
*tupri ¹		tu ³³ pi ⁵³		tu ³³ pu ⁵³		bean / soybean / pea
*tu ¹			k ^h etū	ŋe ³³ tu ⁵³		infect
*detwa ¹	tua ⁵⁵		ṁdetṁta	de ³³ tua ⁵³		hug / embrace

¹⁶That is, the rhyme consisting solely of the nuclear vowel /-u/, not rhymes which happen to contain the glide [-w-] (sometimes transcribed as /-u-/).

¹⁷The first syllable in ‘today’, ‘tonight’, and ‘(this) morning’ may be related to the word for ‘one’.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*tosi mæni			tosi `mæni	tuo ⁵³ ɣ ⁵³ mæ ³³ ŋ ⁵³		no problems, leisurely
*mboto		`nbuto		nbo ³³ tu ⁵³	PL *taŋ ³ (PL 257)	knife
Voiced						
*dada ²			pæda, `deda	da ⁵³ da ⁵³		short
*de ¹	dɛ ⁵⁵	de ³⁵	dɤ	de ³¹	*dak	weave / knit
*dede ¹		də ³³ də ⁵³		de ³³ de ⁵³		heavy
*dībæ		`dībæ 'stupid'		di ³³ nbæ ⁵³		honest / well-behaved
*du(liu) ¹	bu ¹ ɬɛ ⁵⁵ ; bu ⁵⁵ ɬɛ ⁵⁵	`dv 'plumage'; du ³³ ru ⁵³	døləmæ	du ³³ ly ⁵³	*duŋ	wing
*dedulæ ²			`dedulæ	te ⁵³ du ⁵³ læ ³³ sæ ³¹		consult / discuss
*du ¹	bu ⁵⁵		`du	du ³⁵		plow (n.)
*k ^h edu ¹			k ^h edü 'com- plete'	khe ³³ du ⁵³		right / correct
*zjudu ²	zɔ ³³ bu ⁵⁵			zu ⁵³ du ⁵³		square / rectangular
*dwa ¹	du ¹ ʌ ⁵⁵ ; ŋɛ ⁵⁵ dua ⁵⁵ 'pass by'	dæ	da	dua ³⁵ , ŋɛ ³³ dua ³⁵		go / leave (past)
*ado(ri) ¹			ado (incl.)	a ³³ do ³⁵		we

3.2.2 Palatalized/affricated stops

In addition, there are a few forms where the Nq. and/or Ersu reflexes suggest a dental stop in the protolanguage: 'rich' and 'slow' have palatal affricate initials, which are unexpected since the regular reflex of *palatal affricates in Ersu are dental affricates (see section 3.4.1, "Palatal fricatives"), and in fact Baber (1882:77) records the Ersu word for 'slow' as *Di-wa*; the remaining forms have stops in Nq. and/or Ersu (in Ersu these have become /b-/ under the influence of the rhyme) where the other dialects seem to have palatalized the initial consonant.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*djemo ¹	dzi ⁵⁵ mo ⁵⁵			dze ³³ mo ⁵³		rich ¹⁸
*diwæ ¹	dzi ⁵⁵ vɑ ⁵⁵		dzyæ ¹	dzi ³³ wæ ⁵³		slow / clumsy
*bedi ¹	bɛ ³³ dzi ⁵⁵	bə ³³ di ⁵³	bødzi	be ³³ dzi ⁵³	*bəw, *zril > PLB *di ¹	insect / worm
*didi			`dzidzi	dzi ³³ dzi ⁵³		spacious

¹⁸These forms are glossed simply as 富 'rich' in their respective sources, but it seems likely that they mean 'rich man' because of the suffix *mo* < PTB *maŋ OLD. Cf. Ersu *ndzo*³³*mo*⁵⁵, TBL *ndzuo*⁵³*mu*⁵³ 'official'; and TBL *tshuo*⁵³*mo*⁵³ 'old man'.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*rdi ¹	zɿ; ʒɿ ⁵⁵		dzi	dzi ³⁵	*b-r-gyat ʌ *b-g-ryat	eight
*diup ^{hæ} ¹	bu ⁵⁵ pha ⁵⁵ , ji ³³ pha ⁵⁵	`tɕup ^{hæ} ; di ³³ pe ⁵³	dzyphæ 'stomach'	dzi ³³ pha ⁵³		belly
*diutsh ^e ¹	bu ⁵⁵ tshɛ ⁵⁵	ti ⁵⁵ tchɛ ⁵³	dzitsh ^{hɣ}	(te ³³)dzu ³³ tshu ³¹ , dzu ⁵³ tshu ³¹		year

The vowel in Mn. 'slow' may be rounded due to coarticulation with the original [w] of the following syllable (i.e. *dʒiwæ¹ > **dzywæ¹ > dzyæ¹).

Ersu 'eight' has a fricative initial where Lizu has an affricate, perhaps pointing to a complex (possibly voiced preaspirated) cluster in the protolanguage.

3.2.3 Prenasalized stops

The prenasalized series are straightforward as well. As with the bilabial prenasalized stops, Kl. and Nq. lose the nasal component in word-initial position for the voiceless series:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*nth ^e ¹		`thent ^h e	nent ^{hɣ} 'stumble, fall'	nth ^e ³⁵		jump
*nth ^{wa} ¹	ja ^h nt ^h ua ^h ; nthua ⁵⁵	th ^h ~ ³³ nth ^h ~ ⁵³	nth ^h a gɣ	thua ⁵³ nthua ⁵³	PLB *tak ^h	sharp, pointed
*nth ^{wa}	nt ^h o ^h ; nthua ⁵⁵		-nt ^h a	(te ⁵⁵) nthua ⁵³		drop (of oil)
*nth ^{ont} ^h o ¹			nt ^h o, nt ^h on- t ^h o	nthuo ³³ nthuo ⁵³	PLB *tok TSR #15	peck at (of a chicken)

Prenasalization is retained across the board for the voiced series, assuming the TBL forms are inconsistently transcribed:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*wra ¹	k ^h ɛ ^h lvə ^h ɿ; nda ⁵⁵ va ¹ ⁵³		`ndæ ^h wæ ¹	da ³³ wu ⁵³		guest
*mende	mɛ ³³ nde ⁵⁵	nde		mɛ ³³ de ⁵³		clear (weather) / sunny
*k ^h endo ¹	ndo ⁵⁵	thɛ ³³ ndo ⁵³	k ^h endo	kho ³³ nduo ⁵³		see
*ndojo ¹			ndojo	nduo ³³ ju ⁵³		calf (yak)

3.2.4 Preaspirated stops

There seem to be two sets of preaspirated dentals: one that corresponds to [t-, d-] in most languages, and another that corresponds to [k-]. The first set is very well supported by

correspondences between Ersu and Mn. All other languages have lost the preaspiration; while data is lacking for Nq., the likeliest looking cognates have aspirated affricates.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*htje	hte ⁵⁵		ʃti		*r-tsyəy	count
*htæ ¹	thua ⁵⁵ ??		ʃtæ	tæ ⁵³		mule
*ht(w)arA ²	htua ³³ ra ⁵⁵		ʃtæ ¹	ta ⁵³ ə ⁵³	*m-liŋ	neck
*htahta ²	hta ³³ hta ⁵⁵	ta ³³ tsha ⁵³ ??	ʃtɤʃta	na ³³ ta ⁵³ ta ³³		chew
*hto/htæ	-xtol; hto ⁵⁵		ʃtæ, ʃtɤʃtæ		PQc *N/s-tsak	jump
*hte ¹	xtɕiŋ ??		ʃtɤ	de ³³ te ⁵³		hold (a pen)
*ht(s)ipi ²	htɕ ³³ psɿ ⁵⁵	ɕi ³³ pa ⁵³ ???	ʃti	ti ⁵³ pi ⁵³	*s-l(y)a	tongue
*sini/htimi ¹	ɕɿŋiŋ; ɕɿ ⁵⁵ ni ⁵⁵	ɕu ³³ mbu ⁵³ ???	ʃtimi	ti ⁵³ mi ⁵³	*s-ni-ŋ	heart
*hti(u) 'nose'			ʃtintɕ ^h i	ti ³³ nkhæ ⁵³		snout
*hto		ʔto; khe ³³ htsho ⁵³	ʃto	tu ⁵³		watch, look
*htü ²	tuŋ, tuŋ; hpu ⁵⁵ (htu ⁵⁵)		ʃtū	tu ⁵³	*s-ton	thousand; ten cents

The Ersu form for ‘mule’ may be a mistranscription, and it would fit better if it was indeed **htua**⁵⁵. Ersu ‘heart’, with no preaspirated stop, seems to be unrelated, since we expect initial [ht-] in Ersu; however, perhaps the first and second syllables of this form come from the PTB prefix and root, respectively. This would make it very similar in form and diachronic development to the Ersu word ʃɿ⁵⁵ni⁵⁵ ‘seven’ (below), especially considering the fact that Ersu /ni/ can allophonically be realized as syllabic [ŋ].

The second set of preaspirated stops has [k-] in most of the Lizu dialects. The apparent Ersu cognates have plain sibilants here. The forms for ‘seven’ are the most aberrant: TBL **skɿ**⁵³ is the only syllable with that shape in that language, the Kl. form shows variation between [t-] and [k-] initials, and the Ersu form has an alveopalatal fricative initial.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*stiupe ¹		ku ³³ pe ⁵⁵	ʃtɤpe	ku ³³ pe ⁵³		mouth
*stiumui ²	su ⁵⁵ ma ⁵⁵		ʃtimwe	ku ⁵³ mu ⁵³		beard / moustache
*sini/stē ²	ɕɿŋ; ʃɿ ⁵⁵ ni ⁵⁵	ʔtɿ~ʔkɿ; ki ⁵³	ʃtɿ	skɿ ⁵³	*s-nis	seven
*stim(b)u ¹	suŋmbuŋ; ɕɿ ⁵⁵ nbu ⁵⁵	kɿræ ‘snout’; ki ³³ mɤ ⁵³	ʃtimbu	ki ³³ mu ⁵³	*s-na	nose
*stiu(d)zære ¹	su ⁵⁵ zɑ ⁵⁵ ɤ ⁵⁵ re ⁵⁵ , su ⁵⁵ zɑ ⁵⁵ re ⁵⁵	kɿræ	ʃtedzæ ¹		*s-nap + *rəy	snout (liquid)

Given the similarity of the PTB roots which these two sets of words with preaspirated initials descend from (mostly *s- + n/l), it seems quite possible that there was some environment which conditioned a split into [t-] vs. [k-] initials in Lizu, and [ht-] vs. [s-] initials in Ersu. Note, for

example, that in this second set TBL and/or Kl. have the rhymes [-u] or [-ŋ]. (‘thousand’ in the first set, above, also has an [-u] rhyme, but it may be a loan from Tibetan.) However, since there is no clear conditioning environment, I will reconstruct the initials which yield **k-** in Kl., Nq., and TBL with initial ***st-**, distinguishing them from the items above where ***ht-** > **t-**.

Mn. [ʒd-] corresponds with [d-] in all the other languages, except for [nd-] in TBL ‘eye’. This is one case where there is clear evidence for a voiced preaspirated series. For a more tentative example, see ‘rain’ in section 3.7.3 below.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*rdose ¹	do ⁵⁵ se ⁵⁵ ja ⁵⁵ dzɛ ⁵⁵ ‘pupil’	do ³³ su ⁵⁵	ʒdo, ʒdosi ‘eyeball’	nduo ³³ se ⁵³		eye ¹⁹
*rdumo ²	k ^h ɛ ⁵⁵ ɿbu ⁵⁵ ; bu ³³ mo ⁵⁵		ʒdomo, ʒdusu	du ⁵³ mo ⁵³	*ru	crazy person, lunatic
*rdurdu	ja ⁵⁵ ɿbi ⁵⁵ ; ja ³³ bu ⁵⁵ ; ja ³³ bu ⁵⁵	dy ³³ dy ⁵³	ʒduʒdu		*t/dow-n, *tu:k	thick

3.2.5 Nasals

All of the following forms descend from Proto-Ersuic ***n**:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*na			ə'na	na ⁵⁵ na ⁵³ tʃhu ³³ tʃhu ⁵³		stable, steady
*na ²	na ⁵⁵ ku ⁵⁵	na ³³ pu ⁵⁵	ə'napi	na ⁵³ pi ⁵³	*r/g-na	ear
*na-			nami	næ ⁵³ pu ⁵³		host / master
*ne/no ²	nɛ ⁵⁵ ; nɛ ⁵⁵	ne	no, ne	ne ⁵³	*naŋ	you
*neri	nɛ ⁵⁵ ɿrə ⁵⁵ ; nɛ ⁵⁵ ɿr ⁵⁵			næ ⁵³		you (pl.)
*ne ¹	nɛ ⁵⁵ ; nɛ ⁵⁵	ne; nɔ ⁵³	ne, nɛ	ne ³⁵	*g/s-nis	two
*nwo ¹	nɔ ⁵⁵ ; nɔ ⁵⁵ ??	no ³³ pa ⁵³	ə'no	nu ⁵³	*s-nuk	brains
*denwa ¹	dɛ ⁵⁵ ɿnuɛ ⁵⁵ ; nuɛ ⁵⁵	dɛ ³³ nɛ ⁵³	dena	dɛ ³³ nua ⁵³	*s-nak	black ²⁰
*nene	ja ³³ nɛ ⁵⁵			nu ⁵³ nu ⁵³	*s-nak	deep
*nopri ¹		nu ³³ pi ⁵³	nopə ¹ ‘soy- bean’		*s-nuk BEAN	beans/peas

While ‘black’ and ‘deep’ ultimately descend from the same PTB root, they appear to have already differentiated by the Proto-Ersuic stage.

¹⁹This root is separate from the one which descends from PTB ***myak** EYE under “Bilabials” above. The second syllable is < PTB ***sey** FRUIT / ROUND OBJECT; see also ‘fruit’ in section 3.3.4.

²⁰The similarity of **nuɛ⁵⁵** ‘black’ to French *noir* **nwaɾ** ‘black’ is accidental.

3.2.6 Laterals

Both voiced and voiceless laterals appear in all Ersuic varieties.

*l- remains [l-] in all Lizu dialects, with the one exception of Kl. ‘donkey’. In Ersu, there is a set of forms where *li/liu/lu/lo > [ə^l], though there are some exceptional forms: ‘wait’, ‘tael’, ‘mirror’, and the penultimate syllable of ‘dove’ descend from *lo, but do not become ə^l in Ersu.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*sjelje	si ⁵⁵ li ⁵⁵				*d/s-ləy	bow (weapon)
*ljeje ¹	pu ⁵⁵ li ⁵⁵ li ⁵⁵	ta ³³ li ⁵³	tali, talili	ta ³³ li ⁵⁵ li ³¹		circular (spherical)
*melje	me ³³ li ⁵⁵		mele		*m-lej ɤ *m-ləy	earth, ground
*mbiulje ²	nbe ³³ li ⁵⁵	mbə ⁵⁵	`mbøli	nbo ³³ ly ⁵³		kidney
*səla ¹			sela	se ³³ la ⁵³		forest
*la ²	laʋ; la ³³ phə ⁵⁵ ; la ³³ ma ⁵⁵		`la	la ³³ mə ⁵³ , la ³³ nphə ⁵³	WT glaba ‘musk deer’	deer (river)
*la ¹	laʋ ‘plant (v.)’; la ⁵⁵		la	la ³⁵		plow / till (v.)
*la ¹	laʋ; la ⁵⁵		la	la ³⁵		dung, manure
*lamo	la ⁵⁵ mo ⁵⁵			la ⁵³ mu ⁵³		stutterer
*læ ¹	laʋ		= læ	læ ³⁵		and
*læ ¹	laʋ; la ⁵⁵		læ	læ ³¹ , læ ³⁵	*la-y	come
*belæ ¹			belæ	be ³³ læ ⁵³		work / labor
*læ			-læ ‘pint, 1/10 peck’	(te ³³) læ ³¹ , læ ³⁵		liter, container (measuring, 1-liter-volume)
*læ ¹	laʋ; la ⁵⁵		læp ^h æ, læ	læ ³³ phə ⁵³	PLB *k-la ²	tiger
*p ^h ælæ ¹	p ^h aləʋ		(ne)p ^h ælæ	phə ³³ læ ⁵³		used / old
*p ^h ulje ¹			p ^h ele, p ^h uli	phu ³³ li ⁵³		dust
*lekrwa ²	le ³³ kua ⁵⁵ tʃhu ³³		`lakwə ^l ts ^h u (v.)			elbow
*le(pje)		le ⁵³		le ³³ pi ⁵³	*g-lak	hand
*lep ^h ew ¹	le ³³ phə ⁵⁵	le ³³ phu ⁵³ ‘arm’	lep ^h e	le ³³ phu ⁵³ ‘arm’		hand
*legija ¹			ligjæja, ligija	le ³³ gi ⁵³ jæ ³¹		armpit
*leji ¹	leʋjiʋ; li ⁵⁵	le ³³ ji ⁵⁵ pu ³³	`lejo ‘right’?	le ³³ ji ⁵³		left (side)
*letçu ¹	leʋtsuʋ; le ⁵⁵ tʃu ⁵⁵ ke ³³	le ³³ tçi ⁵⁵ pu ³³	`letçy ‘left’	le ³³ tçy ⁵³		right (side)
*lemæ			`lømæ	le ³³ mæ ⁵³		daughter-in-law
*lemæ ¹	le ³³ ma ⁵⁵		lømæ	le ³³ mæ ⁵³		thumb
*lesē	le ³³ su ⁵⁵	le ³³ se ⁵⁵		le ³³ se ⁵³		finger

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ledzi/letsa ²	le ³³ dzɿ ⁵⁵		`lidza ‘claw’	le ³³ tɕa ⁵³	*m-tsyen	nail
*letsu ¹	le ³³ tɕu ⁵⁵		lutɕu	le ³³ tɕu ⁵³	MC draewk 鑷, Mand. zhuó	bracelet
*leŋgui ²	le ³³ ŋgua ⁴⁵⁵		`lingwe	le ³³ ŋgu ⁵³		ring
*t ^h ele ¹			lɾ	the ³³ le ⁵³	*g-lwat	release / set free
*ŋeleɕi ¹			neleɕi ‘face downhill’	ŋe ³³ le ⁵³ ɕi ³¹		turn around
*le ¹	le ⁵⁵	le			PLB *ʔ-li ¹	old
*lirV ¹			liə ¹	li ³³ ə ¹³⁵	<MC lij 梨 ?	pear
*lje ¹	ja ^h li ^h ; ja ³³ li ⁵⁵	lje	lje	li ³³ li ⁵³	*l(y)ak	good
*(rV)li ¹			ə ^h li	li ³⁵		dance (n.)
*liu	-liu ^h ; lio ⁵⁵		-li	(te ⁵⁵) liu ⁵³	*lam ?	fathom
*lu			`delu	khe ³³ lu ³¹		dilute / add water
*lu			`lu ‘mat-tress; felt’	lu ³⁵		pad
*lwo		(mbe ³³) lo ⁵³		(nbi ³³) lu ⁵³		climb (a mountain)
*k ^h elo ¹	lo ⁵⁵	khelo	`lo	kho ³³ luo ⁵³	*l(y)aŋ	wait
*lo	-lo ^h ; lo ⁵⁵		-lo	(to ³³) luo ³¹	<MC ljangX 兩 ?	tael (= 50 grams)
*lo			loxo	dzuo ³³ luo ⁵³ ku ³¹		ditch / gully ("water-ditch"?)
*lak ^h a/lok ^h a ¹			lak ^h a k ^h eæ ¹ ‘get hurt’	luo ³³ khua ⁵³ ə ¹ ³¹ ‘get hurt’		wound
*-ŋgra ²	tsu ³³ ndzɛ ⁵⁵		`laŋgæ ¹	luo ³³ ŋga ⁵³		pestle
*lo ¹	ə ¹ ŋk ^h ua ^h ; ə ¹⁵⁵ khua ⁵⁵		lomæ	luo ³³ mæ ⁵³	*r-lung *k-luk	stone
*lo(bwo) ¹	ə ¹ ŋk ^h ua ^h ; ə ¹⁵⁵ khua ⁵⁵	lo ³³ pu ⁵³ , lo ³³ bu ⁵³		luo ³³ bo ⁵³ , luo ⁵³ bu ⁵³	*r-lung, *k-luk	stone, rock
*lodzu ¹			lodzy	luo ³³ dzu ⁵³		wall (stone)
*lit ^h o/lot ^h o ¹		lo ³³ tho ⁵³	lit ^h o	luo ³³ thuo ⁵³	*b-ləy	grandchild
*lolu ²	ndza ³³ lo ⁵⁵ ə ¹⁵⁵ ‘pigeon’	lo ³³ lu ⁵³		luo ³³ lu ⁵³		dove
*lolo/lulu ¹	ə ¹⁵⁵	`lulu	lulɬ	luo ³⁵	*s-loŋ	bark (of dog)
*liu ¹	ə ¹⁵⁵	ly	lɔ, lɔlɔ	ly ³⁵ , the ³³ ly ⁵³		rob / loot
*meli/mele ²	mɛ ⁵⁵ ə ¹⁵⁵	melje; mə ⁵⁵	`mele	mɛ ⁵⁵ le ⁵³	*g-ləy	wind
*bulo	bɛ ³³ ə ¹⁵⁵		bulo		*s-luk/ŋ	maggot
*li/le ¹	ə ¹⁵⁵		`mele lɾ	mɛ ³³ le ⁵³ læ ³³ ?		blow (wind)

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*lip ^h ew ¹	rə ¹ p ^h ɛ ¹ ; ə ¹⁵⁵ phɛ ⁵⁵	li ³³ phu ⁵³		li ³³ phia ⁵³		foot
*lingje/lenge ²	ə ³³ ndzi ⁵⁵ , ə ³³ ndzi ⁵⁵		ˈlɛŋgɻ			foot, leg
*li ¹	ə ¹ ɿ; ə ¹⁵⁵	li	li		*pla, PLB *C-la ¹	ashes ²¹
*deliu ¹	dɛ ¹ ə ¹ ɿ; ə ¹⁵⁵	lju; dɛ ³³ lu ⁵³	ˈdɛlɔ	dɛ ³³ lu ⁵³	*plu	white
*ku(liu) ¹	ku ⁵⁵ ə ¹⁵⁵	kurə	kuli	ku ³³ liu ⁵³	< MC ljo 驢 ?	donkey ²²

The voiceless laterals are also straightforward, for the most part. It appears that in Mn., voiceless laterals become plain [l] in intervocalic position (unless it is preceded by a “weak” syllable, i.e. a reduplicated syllable or a directional prefix).

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*gɔlæ ²	gu ³³ ɬa ⁵⁵		ˈxɔlæ	guo ³³ ɬa ⁵³	*m/s-la:y	middle
*lala ¹	la ⁵⁵ la ⁵⁵	ˈlælæ	dɛɬa, dɛɬɻla	la ³³ la ⁵³		roll
*ɬa ¹			dɛɬa, dɛɬɻla	ɬa ³³ hū ⁵³		roll, turn (cause to)
*ɬa ¹	ɬa ⁵⁵		ɬa	ɬa ⁵³ , ɬa ⁵⁵	*glinj	flute
*ɬæp ^h e ¹	ɬa ‘month’; ɬa ⁵⁵ phɛ ⁵⁵	ˈɬæphe; ɬe ⁵⁵	ˈɬæp ^h ɔ	ɬæ ³³ phɛ ⁵³	*s/g-la	moon
*ɬæwo			ɬæwo	ɬæ ⁵³ ɻuo ⁵³		temple
*nts ^h oɬiu ¹	ntsho ⁵⁵ ɬo ⁵⁵	ɬe ⁵³	ˈnts ^h uli	ɬe ³³	*s-ləy	flea
*nts ^h eɬiu			ˈnts ^h ili	tshe ³³ ɬe ⁵³		gift / present
*nelje/netje ¹	li ⁵⁵		neɬe, neɬɻ	ne ³³ i ³¹	*s/m-grəy	melt, dissolve
*ɬjeki ¹	ɬi ⁵⁵ tsɿ ⁵⁵	ˈɬetɕi		ɬi ³³ ki ⁵³	*s-lay ɰ *s-ley	ladder
*ɬje ¹	phɛ ⁵⁵ ɬi ⁵⁵			ne ³³ i ⁵³ i ³¹		winnow
*ɬæ	ɬaɿ; ɬa ³³		ɬæ		*m-hla / WT lha	spirit, deity

The voicing alternation in ‘roll’ vs. ‘cause to turn’ seems to be the result of a causative prefix in the protolanguage; see the section on initial consonant alternations for more examples.

Similarly, the voiced, as opposed to voiceless, lateral in Ersu ‘melt’ may reflect the simplex alternative of a causative/simplex pair (note the variation between causative *s- and stative *m- in the PTB reconstruction as well).

²¹The forms for ‘ashes’ and ‘white’ seem to indicate that PTB *pl- initials simplified to *l- by the Proto-Ersuic stage.

²²The MC word for donkey (驢, Mand. *lú*) is not listed in the OC reconstruction of Baxter and Sagart (2011), but the homophonous (in MC) word 蘆 ‘madder (plant)’ is.

3.3 Dental fricatives

3.3.1 Plain

A three-way contrast for the affricates can be reconstructed based on these sets:

Voiceless aspirated:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ts ^h o	ntʃho ⁵⁵ ???			me ³³ tshuo ⁵³		dawn (the day)
*ts ^h awa ¹			ts ^h awa	tsha ³³ wa ⁵³		gruel / porridge
*k ^h ets ^h a ¹			k ^h ets ^h a	khe ³³ tsha ⁵³		block (the wind)
*buts ^h a ¹	vu ⁵⁵ tshua ⁵⁵	`nbutsh ^h æ	buts ^h a	bu ³³ tsha ⁵³	*r-p ^w a	axe
*t ^h ets ^h æ ¹			k ^h ets ^h æ	the ³³ tshæ ⁵³		finish
*ts ^h æ ²	tsha ⁵⁵	tshe ³³ tshe ⁵⁵	`dets ^h æ	tshæ ⁵³ tshæ ⁵³	*tsa-t	hot
*ts ^h ehi ¹	tshi ⁵⁵ xi ⁵⁵	ts ^h ehē	ts ^h ehī	tshe ³³ hi ⁵³	*s-nij	this year
*ts ^h ē ¹	tshi ⁵⁵		ts ^h e	tshe ³⁵	*tsi:t	goat
*dets ^h e ²	tshe ⁵⁵	`ts ^h e; də ³³ tshu ⁵⁵	`dets ^h i; ts ^h i	tshe ⁵³	PLB *ʔ-dzəy ²	cough
*ts ^h e ²	ts ^h ε; tshε ³³	nents ^h e, `ts ^h e; ne ³³ tshu ⁵³	`ts ^h i	ne ³³ tshe ⁵³	PLB *tsəy ²	wash (clothes)
*tsip ^h rjo/ ts ^h ip ^h rjo ²	ts ^h l ^h l ^h o; ts ^h l ^h pho ⁵⁵		`ts ^h ip ^h ço	tshe ⁵³ phz ^h u ⁵³		age
*ts ^h i ¹	tsh ^h l ^h 'shoulder blade'	tsh ^h l ^h ts ^h l ^h 53	ts ^h its ^h i	tsh ^h l ^h ts ^h l ^h 53- ta ³³ ta ³³	*tsik	joint
*ts ^h i ²	ts ^h l ^h ; tsh ^h l ^h 33	tsh ^h l ^h 53	`ts ^h i	tsh ^h l ^h 53	*tsa	salt
*nets ^h i ¹	nε\ts ^h l ^h ; nε ⁵⁵ tsh ^h l ^h 55	nə ³³ tsh ^h l ^h 53	`nɣts ^h i	ne ³³ tsh ^h l ^h 53		twenty ²³
*ts ^h uts ^h u ¹			ts ^h u, ts ^h ut- s ^h u	tshu ³³ tshu ⁵³		knock / strike
*dets ^h u ¹		dets ^h v; de ³³ tshu ⁵³	dets ^h u	de ³³ tshu ⁵³	*tsow	fat
*ts ^h u			ts ^h ipə ¹	tshu ⁵³		Sichuan pepper
*ts ^h wa			-ts ^h a	(te ³³) tshua ⁵³		classif. rooms
*ts ^h o ¹	ts ^h u\		nets ^h o	ŋo ³³ tshuo ⁵³		extract / take out
*ts ^h o ¹	tsho ⁵⁵ pha ⁵⁵ 'young man'	tsho ⁵³ , tçho ⁵³ ?	ts ^h o	tshuo ⁵³	PLB *tsaŋ ¹	human being, person
*ts ^h ok ^h wæ			ts ^h uk ^h wa	tshuo ⁵³ khua ⁵³		adult

²³The second syllable descends from some allofam of PTB *ts(y)i/əy/ay TEN, but is distinct from the word for 'ten' (cf. Mn. tç^hetç^he 'ten').

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ts ^h omo		`ts ^h omo	ts ^h umo	tshuo ⁵³ mo ⁵³		old man ²⁴
*ts ^h wo ¹			ts ^h w-a	ma ³³ tshu ⁵³ 'forbid'		allow
*ts ^h ek ^h a ¹	tshε ⁵⁵ ka ⁵⁵		ts ^h ik ^h a	(n)tsh ¹ ⁵³ kha ⁵³	*ka:k	sputum, phlegm

The lack of aspiration on Ersu 'age' is unexplained.

Voiceless unaspirated:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*tso	tso ¹ xto ¹		ə'li tso	li ³³ tsuo ⁵³		dance
*mutsi ¹	m ³³ ts ¹ ⁵⁵		mutsi	mu ³³ ts ¹ ⁵³		cat
*tsa ¹	tsa ⁵⁵	khe ³³ tsa ⁵³ le ³¹	tsitsa, tsa	khe ³³ tsa ⁵³ le ³¹		tie up, bind
*tsexwo ¹	tsa ³³ xα ⁵⁵		tsixo	tse ³³ hu ⁵³		pheasant (short-tailed)
*tse			`tsi	tse ³³ tɕe ⁵³ ji ³¹		welcome, receive s.b.
*tse ²	tse ⁵⁵		`tsi	tse ⁵³		hemp
*tsē			tsɤ	tse ⁵³	*dzyut ?	pull up (weeds)
*tsē			tsɤ 'rip, tear'	the ⁵³ tse ⁵³		snap (thread)
*detsu ¹			mbo tsu	do ³³ tsu ⁵³		wear (a hat)
*tsuk ^h æ			`tsuk ^h jæ	tsu ³³ khæ ⁵³		stove (cooking) / range (kitchen)
*detsu ¹	tsu ¹ ; tsu ⁵⁵		`detsu æ	de ³³ tsu ⁵³	*tsyow	boil (of water)
*k ^h etsu	tse ³³ tse ⁵⁵			khe ³³ tsu ⁵³	*tsyap or PLB *ʔ-dzak ^L ?	connect / join
*detsu ¹	dε ¹ tsu ¹ ; tsu ⁵⁵			de ³³ tsu ⁵³		dye
*tswa			`tsa	ne ³³ tsua ⁵³		filter / strain
*tsumu/tsumo ²	tsu ³³ ŋ ⁵⁵		`tsu ³³ mo	tsuo ⁵³ mo ⁵³	*tsum ?	mortar
*tsi ¹	ts ¹ ⁵⁵		tsi		*s-dzya	feed

Voiced:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ledzi/letsa ²	le ³³ dz ¹ ⁵⁵	`ledzj; le ³³ tsa ⁵³	`lidza 'claw'	le ³³ tsa ⁵³	*m-tsyen	nail
*dzidzi/dzadza ¹ dz ¹ ⁵⁵	dz ¹ ⁵⁵	`ledzj; dza ³³ dza ⁵³	`lidza	dza ³³ dza ³³	*m-tsyen	claw / talon
*dzæp ^h æ ¹	dza ⁵⁵ pha ⁵⁵		`dzæp ^h æ	dza ³³ pha ⁵³		pillar / column
*nedzje/nedza ¹	nε ¹ dz ¹ ¹		nedza	ne ³³ dza ⁵³		you two

²⁴This same binome is found in Lolo-Burmese; cf. Lahu **chə-mô**.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*dzæbu ¹			-bu, dzæbu	dzæ ³³ bu ⁵³		straw (rice)
*dzæpu ¹			dzapɸ	dzæ ³³ pu ⁵³		food
*dzæ ¹	dzaɿ; dza ⁵⁵		dzæ-	dzæ ³⁵		rice (paddy), seedling (rice) ²⁵
*dzæ	te\`dza\`		-dzæ	(te ³³)dzæ ⁵³		meal
*dzē ¹			dzidzɣ, dzɣ	dze ³⁵	*ts(y)ap	chop / hew
*dzē	dziɿ		dzɣ			enough
*dzi ¹	dzɿ ⁵⁵			de ³³ dzɿ ⁵³		give birth to (e.g. piglets)
*dzi ²	dzɿ\` ; dzɿ ³³	dzɿ; dzɿ ⁵³	dzi	dzɿ ⁵³	*dzya	eat
*(d)zi ²	ja\`fi\` ??; ja ³³ zɿ ⁵⁵ ?		\`dzidzi	dzɿ ⁵³ dzɿ ⁵³		wide / broad
*(d)zibu ¹	zo\`bu\`; zɿ ⁵⁵ bu ⁵⁵ 'stick'		dzibu			walking stick
*dzepi/dzop ^{h1}	dze ⁵⁵ psɿ ⁵⁵		dzop ^h ci			hoe
*(n)dza ¹ ?	dzaɿ; ndza ⁵⁵	ndza	dza	dzaɿ ³⁵		drum
*adzje/adza ¹	A\`dzi\`; a ⁵⁵ dzi ⁵⁵		adza	a ³³ dza ⁵³		we (dual)

The roots for ‘nail’ and ‘claw’ appear to be the same for all the languages except Nq. and TBL, which have voiceless variants.

The Ersu forms for ‘wide’ and ‘walking stick’ have fricatives where we expect affricates.

3.3.2 Prenasalized

Nq. has lost prenasalization in word-initial position. Note that TBL transcribes prenasalization inconsistently; for example, the form for ‘liver’ is transcribed without it in Dài and Huáng (1992), but Huáng and Rénzēng (1991) (presumably from the same data, collected by the same fieldworkers) transcribes it *with* prenasalization.

Voiceless aspirated:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*nts ^h æ ¹	ntsha ⁵⁵		nts ^h æ			make, fix, repair
*nts ^h ɑ ¹	ntsha ⁵⁵	tsha ³⁵	nts ^h ɑ	tsha ³⁵	*m-sin	liver

²⁵Unlike in Lolo-Burmese, the words for ‘paddy’ and ‘eat’ are not minimal tonal pairs, although they do share the same initial. Compare with Naish, which also has a vowel alternation (see Jacques and Michaud 2011): PNa ***dza** ‘wheat’ and ***ndzi** ‘eat’. Jacques and Michaud surmise that this vowel alternation “can only be a trace of morphology,” with the *-i rhyme of the verb ‘eat’ “the result of the fusion of the root with a suffix.” In the case of Proto-Ersuic, ***dzi** ‘eat’ is clearly the regular reflex of PTB ***dzya** EAT (see chapter 8), and some other explanation must be found for the *-æ rime in the related words ‘paddy’ and ‘meal’.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*dents ^h u ¹	ntsha ⁵⁵	`dents ^h æ	nts ^h ints ^h u	ntsha ³⁵ , de ³³ ntsha ⁵³	Lahu ʃɛ < *sin	pull / drag / lead (a cow) along ²⁶
*bra ¹			nts ^h abæ ¹	tsh ¹ ba ⁵³		cane / vine
*nts ^h æ	ntsha ⁵⁵			ntshæ ⁵³		mark / sign / boundary line
*k ^h ents ^h æ	kha ³³ ntsha ⁵⁵			khe ³³ ntshæ ⁵³		remember
*nts ^h eliu			`nts ^h ili	tshe ³³ le ⁵³		gift / present
*nts ^h e ²	nts ^h ɛ; ntshɛ ⁵⁵		`nents ^h i	ntshe ⁵³	*m-tsak DRIP	leak
*nts ^h i ¹	ntsh ¹ ⁵⁵		`(de)nts ^h i	de ³³ ntsh ¹ ⁵³		choose / pick
*dents ^h u ¹		tshū ³³ ntshu ⁵³	dents ^h u	de ³³ ntshu ⁵³		alive
*nts ^h u ²	tshu ⁵⁵	bu ³³ tshu ⁵⁵	`nts ^h ip ^h we, `nts ^h ip ^h ə ¹	ntshu ⁵³	*tsut	lung
*nts ^h ew		(dze ³³ nu ⁵⁵) tshe ³³	nts ^h ɣ ‘milk; squeeze’	ntshu ⁵³	*m-dzu/ip SUCK	squeeze (for milk)
*nts ^h o ¹	ntshu ⁵⁵		dents ^h o	kho ³³ ntshuo ⁵³		light (a fire, a light)

For ‘lung’, both the Ersu and Nq. forms lack prenasalization where we expect it (i.e. prenasalization should be preserved intervocalically in Nq.; and the other Ersu forms in this set all have prenasalization recorded).

Voiced:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ndza ²	dza\; ndza ⁵⁵	`ndza	`ndza	dzæ ⁵³ , dza ³³		Chinese (Han)
*ndza ¹	ndza ⁵⁵		`bi ndza	ndza ³⁵		sting (of wasps)
*ndzæ ¹	ndza ⁵⁵		ndzæ	ndzæ ⁵³		stir-fry
*ndzẽ ¹	ndzi ⁵⁵			ndze ³⁵	*N-dzyam	wedge
*ndze ¹	dɛ\ndza\ (perf.); ndzɛ ⁵⁵		ndzi	dze ⁵³	*dzyi	ride (a horse)
*ndzi ¹	ndz ¹ ³³ nu ⁵⁵		ndzi	dz ¹ ³³ mu ⁵³	*g-zik	leopard / panther
*ndzu			ntʃ ^h i dendzɹ	(tʃh ¹ ⁵³) khe ⁵³ ndzu ³¹	*tsow THORN	pricked (on a thorn)
*ndzew ¹	ndzɹ ⁵⁵ ndzɹ ⁵⁵		ndzɹ	ndzu ³⁵		friend
*ndzewbjẽ ²			`ndzibze	ndzu ⁵³ bzɛ ⁵³		friend / amiable
*ndzew ¹	ndzɹ ⁵⁵ ji ⁵⁵		ndze	ndzu ³³ ji ⁵³		other person(s)
*t ^h endzo			jo k ^h endzo ‘spoil-child’	tho ⁵³ ndzuo ⁵³		accustomed to, in the habit of
*ndzomo ²	ndzɹ ³³ mo ⁵⁵			ndzuo ⁵³ mu ⁵³	PLB *m-dzəw ²	official (government)

²⁶This root is not found in HPTB or Bradley (1979), but note the similarity between the words for ‘liver’ and ‘pull/lead (a cow)’ in both Ersuic and e.g. Lahu; in Ersuic they are homophonous, and in Lahu ʃ-ʃɛ ‘liver’ and ʃɛ ‘lead’ differ only in tone.

Ersu ‘friend’ and ‘other’ (these seem to be the same morpheme) have a palatal where Lizu has a dental affricate.

3.3.3 Preaspirated

Lizu does not have preaspirated dental affricates, but there is one likely cognate in Ersu, ‘forge, strike (iron)’. This word may be related to ‘knock / strike’, which has an aspirated initial in Lizu (cf. Mn. **ts^hu**).

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*htsu	ŋA ¹ lxtʂu ¹ su ¹ ‘silver-smith’; htsu ⁵⁵	-tʂv				forge, strike (iron)

3.3.4 Fricatives

Finally, both voiced and voiceless dental fricatives can be reconstructed. Voiceless:

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*lesē	le ³³ su ⁵⁵	le ³³ se ⁵⁵		le ³³ se ⁵³		finger
*sa ⁻²			ˈsazi	sæ ⁵³		earth, ground
*desæ ¹			sæ	de ³³ sæ ⁵³		wear (a bracelet)
*sæ ¹	sa ⁵⁵		(tali) desæ	khe ³³ sæ ⁵³ xæ ³¹		bear (fruit)
*sē ¹		se ⁵³	se	se ³⁵	*r-sak	air, breath, steam
*sē ¹	si ⁵⁵	ˈse; se ⁵⁵	se	se ³⁵	*siŋ ʷ *sik	wood / log
*sēse ¹	si ⁵⁵ se ⁵⁵	tʂh ³³ s ¹ ⁵³ ‘persimmon’		se ³³ s ¹ ⁵³	*sey	fruit
*se ²	sē ¹ ; se ⁵⁵		ˈsɔbwe	se ⁵³	*su	who
*si	s ¹ l ¹ tʂuA ¹ ; s ¹ ⁵⁵		ˈsisi		*g-sik	new
*si ¹	s ¹ l ¹ ; s ¹ ⁵⁵	ne ³³ su ⁵³	si	de ³³ s-æ ⁵³	*g/b-sat	hit, kill
*suniu			ˈsuni ‘self’	su ³⁵ ŋy ⁵³ su ³³ ŋy ⁵³		each / respective / individual
*su ¹			(de)su ‘stab’	ne ³³ su ⁵³ , ŋo ³³ su ⁵³		thread (a needle)
*biususu ¹	bε ⁵⁵ su ⁵⁵ su ⁵⁵		bøsusu	bu ³³ su ⁵³ su ³¹		bladder
*k ^h esu ¹	k ^h ε ¹ su ¹ ; k ^h ε ⁵⁵ su ⁵⁵			khe ³³ su ⁵³		tight / taut
*desu ¹	su ⁵⁵	te ³³ su ⁵³	būtʂa sɯ, būtʂa sɯsɯ	te ⁵³ su ⁵³	PLB *si ²	sharpen, whet (a knife)

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*soso ¹	so so ; so ⁵⁵ so ⁵⁵		suso	suo ³³ suo ⁵³ , suo ³⁵		learn, teach
*taso ¹			taso ‘just now’	ta ³³ suo ⁵³	PLB *C-sok	morning ²⁷
*sohī ¹	so ⁵⁵ xi ⁵⁵		sohī	suo ⁵³ hi ⁵³		next year
*somwoŋk ^h wo			səmonk ^h o	suo ⁵³ mu ⁵³ nkhu ³¹		tomorrow night / evening
*soniu ²	so ŋo ; so ⁵⁵ ŋo ⁵⁵	`soni	`sə ^ə	suo ⁵³ ŋə ⁵³		tomorrow
*swa ¹			sa	sua ³⁵ , gu ³³ sua ⁵³		send (a message)

Voiced:

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*zæzæmu ¹	zə ⁵⁵ zə ⁵⁵ ŋ ⁵⁵		æzizæ mʉ	æ ³³ zæ ⁵³ mu ³¹		careful / cautious
*zæzæ ¹	zə zə ‘young’; zə ⁵⁵ zə ³³		zizæ	zæ ³³ zæ ⁵³		tender, young (plant)
*-zæzæ ²			`jozizæ	ja ⁵³ ka ⁵³ zæ ³³ zæ ³¹		baby
*mp ^h rozæ ¹	pho ⁵⁵ zə ⁵⁵ ‘husband’	p ^h rezæ	mpʂ ^h ozæ	nphzɿ ³³ zæ ⁵³	PL *m-ləŋ/pləŋ ¹ ‘husband’ (PL 217)	young lad / chap
*zē ¹	zi ⁵⁵		zə ¹ , zʉ ^ə	ne ³³ ze ⁵³		press (with palm or finger)
*zi ¹	zɿ ⁵⁵	zɿ	zi	zɿ ⁵³		shoe
*zi ²		`zɿ	`zi	zɿ ⁵³	*za	son
*zi	-zɿ ; -zɿ ³³		-zi	-zɿ ⁵³		ten (bound), -ty
*zikæ			`zikjæ	ʂɿ ³³ kæ ⁵³ , mæ ³³ zɿ ⁵³ mæ ³³ kæ ³¹	*ga ɤ *ʔa	mute, dumb, stupid
*te zu			`te zʉ	(te ³³) zʉ ³¹		lifetime
*zjeji/zijo ²	zi xi ‘woman’; zi ³³ ji ⁵⁵	`zjeje ?	`zijo	zʉ ³³ ju ⁵³ , zʉ ⁵³ ju ⁵³		daughter, woman
*zulje ¹		zu ³³ li ⁵³		zʉ ³³ li ⁵³		testicle
*zu ¹	zu ; zu ⁵⁵			zʉ ³⁵		animal fat/oil
*zo ¹	zo ⁵⁵ ; khe ³³ zo ⁵⁵		zo, k ^h ezo-a	(ndzu ³⁵) zuo ⁵³		owe/lose (money), suffer (illness); hit (a target)

²⁷The **so** of ‘morning’ seems to be the origin of the first syllable of the words ‘tomorrow’, ‘tomorrow night’, ‘next year’, etc.

3.3.5 Palatalized dental fricatives

There are a number of forms where TBL has palatal initials corresponding to dental affricates in the other languages. These are all followed by [-i] or [-e] rhymes in TBL. It seems likely that these forms have palatalized due to the rhyme; notice that the Ersu cognates all have [-i] rhymes.

It is also interesting to note that many of these forms seem to descend from PTB roots with nasal finals (*-am or *-im).

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*kuts ^h je ¹		ku ³³ tshi ⁵³	kʉts ^h epə ¹	kuo ³³ tʃhi ⁵³		life
*ts ^h je ¹			ts ^h e ‘throw down’	ŋe ³³ tʃhæɾ ⁵³		throw / hurl / toss
*ts ^h jets ^h je ¹	ts ^h i ⁵⁵ ʈts ^h i ⁵⁵ ; tshi ⁵⁵ tshi ⁵⁵		pæts ^h e	tʃhi ³³ tʃhi ⁵³		thin (in diameter) / fine
*ʃats ^h je	ʃa ³³ tshi ⁵⁵		(ʃata)	fu ⁵³ tʃhi ⁵³		broom
*tetsje			-tatse	(ne ³³) te ⁵³ tʃi ³¹		mace (= 0.1 tael)
*tsjē ¹	tsi ⁵⁵	tsi ⁵³	tʃe, tsɿ	tʃe ³¹	*tsam	hair
*tsjēs ¹			tʃiʃi	tʃi ³³ ʃi ⁵³		comb
*dzjē ¹	dzi ⁵⁵		dze	dʒe ³⁵	*m-dzam	bridge
*dzjē			ˈdzijɔ	dʒe ³⁵		sickle
*dzjēdzjē ²	dzi ⁵⁵ dzi ⁵⁵		ˈdzidzɿ	dʒe ⁵⁵ dʒe ⁵³	*dz(y)im	wet
*dzjēdzjē			ˈdzidzɿ	dʒe ³³ dʒe ⁵³	*dz(y)im	raw / uncooked
*zjē ¹	zi ⁵⁵		zɿ	ʒe ³⁵	*zum ʌ *zuŋ	use
*sjē ²	si ⁵⁵ ; si ⁵⁵	si ⁵³	ˈʃe	ʃi ⁵³ , ʃe ³⁵	*g-sum	three

Note that in Mn. column, ‘three’ and one of the variants for ‘hair’ do not quite fit the pattern, since they have palatal initials where we expect dentals. They have been included here because the Ersu and TBL forms match perfectly.

Some forms with palatal initials in TBL are reconstructed with dental stop initials. See section 3.2.2.

TBL ‘throw’ may not seem to belong here because it does not have a high front vowel, but I have included it here because the form may actually be morphologically decomposable into **tʃhi** + **æɾ**, where the root corresponds perfectly but has a perfective suffix attached. (This is the case for ‘hit/kill’ in TBL: **de³³sæ⁵³** = **de³³sɿ⁵³** + **æɾ**.)

3.4 Palatals

3.4.1 Palatal fricatives

There aren't very many forms with palatals in general, and in the modern languages it is theoretically possible to analyze them as allophones of the dental fricatives before a palatal glide. However, the palatals are reconstructed as a separate series for Proto-Ersuic, with a distinction between *tsj- and *tɕ-, as we will see below.

Ersu has merged almost all of the palatals with the dental fricatives; the major exception is before the vowel [-o]. This change applied not only to the palatal fricatives listed in this section, but also to extrusional palatal fricatives between bilabials and high front vowels, e.g. *pi > pɕi > pɕɿ, where there must have been an intermediate stage with a palatal fricative emerging due to coarticulation with the high vowel (this is in fact the situation in Lizu). In Ersu, the palatal fricative, originally the result of an allophonic process, later participated in sound changes which applied to all palatal fricatives.

There appear to be multiple origins for the palatals we see in Mn. and TBL., as suggested by the fact that Nq. sometimes has plain dentals corresponding to palatals in the other Lizu dialects. While there is not as much data available for Nq., the forms from it and the associated PTB roots suggest that some of these roots descend from a combination of dental fricative + palatal glide, as opposed to a different, older source of palatals.²⁸ For example, 'hair' may have developed as follows: PTB *tsam > PErsuic *tsjẽ, followed by separate developments into Ersu tsi⁵⁵, Nq. tsi⁵³, TBL tɕe³¹; whereas 'cloud' would have followed the route PTB *s-dim > PErsuic *tɕe > Ersu tse⁵⁵ and TBL tɕe⁵³.²⁹

The expected manner contrasts can all be reconstructed for the palatals.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
Voiceless aspirated						
*tɕ ^h a ¹	tɕho ⁵⁵		-ɕa	tɕhæ ³¹		on (the wall)
*tɕ ^h etɕ ^h e ¹	ts ^h ɛ\ts ^h ɛ\; tshɛ ⁵⁵ tshɛ ⁵⁵	tɕhe ³³ tɕhi ⁵³	tɕ ^h etɕ ^h e	tɕhe ⁵³ tɕhe ⁵³	*ts(y)i/əy/ay	ten
*tɕ ^h e ¹	ts ^h ɛ\; tshɛ ⁵⁵	`tɕ ^h e; tɕhu ⁵³	tɕ ^h e	tɕhi ⁵³		drink
*tɕ ^h u ¹			amjo tɕ ^h yde 'now'	(te ³³) tɕhu ³³ tɕhu ³¹		a while
*netɕ ^h o ¹		ne ³³ tɕhu ⁵³	tɕ ^h o, tɕ ^h itɕ ^h o	ne ³³ tɕhu ⁵³		cut up (vegetable)
*tɕ ^h opu ²			`tɕ ^h opu	tɕhu ⁵³ pu ⁵³	*taŋ	pine
Voiceless unaspirated						
*detɕa ¹	da ³³ tsa ⁵⁵	də ³³ tɕu ⁵³	dentɕ ^h a ??	de ³³ tɕæ ⁵³		wake up
*letɕu ¹	le\tsu\; le ⁵⁵ tʃu ⁵⁵ ke ³³	le ³³ tɕi ⁵⁵ pu ³³	`letɕy 'left'	le ³³ tɕy ⁵³		right (side)
*pætɕe ¹			pætɕe	ne ³³ pæ ⁵³ tɕi ³¹		cut (paper, cloth)

²⁸These have been separated out and placed in the section on dental fricatives (previous page).

²⁹Unfortunately the Nq. form for 'cloud', mǎ³³kha⁵⁵, is not cognate and thus is of no diagnostic value here.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*tɕe ¹	tɕe ¹ ; tɕe ⁵⁵	tɕe	tɕe, tsɻ	tɕe ⁵³	*s-dim	cloud, fog
*tɕitæ ¹	tsɿ ⁵⁵ tɕ ⁵⁵		`tɕitæ	khe ³³ tɕi ⁵³ tæ ³¹		collect, harvest, put away
*rwatɕo ¹	tɕe ⁵⁵	rɛ ³³ tɕu ⁵³	æ ¹ tɕo	yua ³³ tɕu ⁵³	*dz(y)u	egg
*tɕo ¹			æ ¹ tɕo (ne)tɕo	tɕu ³⁵		lay (eggs)
*netɕ ^h iu/ netɕiu ¹	tɕ ^h o ¹ ?; tɕho ⁵⁵ ?	(ni ³³ ma ⁵⁵) ne ³³ tɕi ⁵⁵	`nimæ netɕi-æ	ne ³³ tɕu ⁵³	*g(l)im ɤ *g(l)um	set (of the sun)
*tɕuk ^h wa ²	tsɿ ³³ khua ⁵⁵			tɕu ⁵³ khua ⁵³		cucumber
*tɕo ¹	tɕo ¹ 'twist, coil'		(nk ^h we) putɕo	de ³³ tɕu ⁵³ tɕu ³¹		wind (thread onto a keel)
*tɕuru	ɤ ³³ tsu ³³ ru ⁵⁵	`tɕorə		tɕye ³³ fiæ ³⁵		footprint / track
*tɕutɕu	tsu ¹ tsu ¹ ; tsu ⁵⁵ tsu ⁵⁵			tɕy ⁵³ tɕy ⁵³		straight
Voiced						
*(d)zapu			`zapu 'rich man'	dzæ ³³ pu ⁵³		leader / chieftain / headman (Mand. 'tūsi')
*t ^h edzo ¹	dzo ⁵⁵			the ³³ dzu ⁵³	PLB *C-cak ^L	push / shove
*lodzɹu ¹			lodzɹy	luo ³³ dzu ⁵³		wall (stone)
*dziki ¹		dzi ³³ ku ⁵³	dziki	dzi ³³ ki ⁵³	*m-ts(y)il	saliva
*dzi ¹		dzi	dzi	dzi ³⁵		speak, say
*(n)dzi(u) ²	ndzo ³³ ndzo ⁵⁵ ?			dzi ⁵³	cf. Lahu ɔ̃-cē < *dzya ?	ear / spike
*nedzo			nedzo 'col- lapse'	ne ⁵³ dzu ⁵³ su ³¹		topple / tear down (a wall)
*dzu ¹	dzu ⁵⁵	dzy ⁵³		dzy ³⁵	*duk ɤ *tuk	poison
*k ^h edzɹudzɹu ²	dzu ³³ dzu ⁵⁵		`k ^h edzɹudzɹy	khe ³³ dzy ⁵³ dzy ³¹		meet / come across
Prenasalized (voiceless)						
*dentɕ ^h u	ntshe ³³ ntshe ⁵⁵			de ³³ ntɕhu ⁵³		carry with pole, lift up
*ntɕ ^h o	ntshɿ ⁵⁵ pi ⁵⁵		`k ^h entɕ ^h o			choke
Prenasalized (voiced)						
*k ^h endza ¹	dza ¹ ; ndza ⁵⁵	khe ³³ ndzɹu ⁵⁵	k ^h endza	khe ³³ ndzæ ⁵³	*g-r(y)ap	stand
*ndzindza ²	ndzɿ ³³ ndza ⁵⁵		`ndzindza	ndzi ³³ ndzæ ⁵³ , te ⁵³ ntɕi ⁵³ ntɕæ ⁵³		think / idea / opinion
*ndzo ¹	ndze ⁵⁵	ndzu	ndzo	ne ³³ ndzu ⁵³		soak / steep
*zjendzɹu/ zindzɹu ²	zi ³³ ndzu ⁵⁵			zɿ ⁵³ ndzɹu ⁵³		nephew (brother's son)

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
Preaspirated						
*htɕi ¹		tɕi ³³ mi ⁵³	ɕtɕimæ		*s-tu	vagina

The Kl. form for ‘soak/steep’ is irregular, since it is transcribed with a retroflex initial.

There is also a voiceless fricative:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ɕaŋæ ²			ɕænæ	ɕæ ⁵³ ŋæ ⁵³		pitiable / pitiful
*sæmbæ ² neɕi	sA-ɪnbaɪ ‘feeling, emotion’		sæmbæ neɕi	sæ ⁵³ nbæ ⁵³ ɕi ⁵³		worry / be anxious

and a voiced fricative:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ʒo ¹			mele ʒo, me ʒo	me ³³ ʒu ⁵³		quake (earth)
*za ¹	za ⁵⁵ tshe ⁵⁵		za	zæ ³³ tshɿ ⁵³	*s-la	pants / trousers
*za ¹	zaɪ; za ⁵⁵	e ³³ zɛ ⁵³	za	(te ³³) zæ ⁵³	*b-r-gya	hundred
*zi ¹	zɿɪtAɪ ‘chair’; zɿ ⁵⁵		nezi	ne ³³ zi ⁵³		sit down
*ziu ¹	zo ⁵⁵	ze	ɣwæ zi	zu ³⁵		fall (rain)
*zu		zu ⁵³		zy ³⁵		plant ash
*zu ¹	zɿɪ; zɿ ⁵⁵		zy	zy ³⁵		snow

There are a small number of forms where Mn. retroflex fricatives correspond with palatals in the other Lizu dialects. These are all followed by a high back vowel in either Mn. or TBL, with the exception of the copula, which may have undergone an irregular change due to its frequency and/or status as a grammatical word. I tentatively reconstruct these with a -w- medial glide, with a *ɕw > ʂ sound change in Mn. This is plausible on phonetic grounds because lip rounding lowers all formants, potentially causing palatals to be misheard as retroflexes. It seems unlikely that this set belongs with the retroflexes; compare, e.g., the forms for ‘torch’ (section 3.5.2) which trivially descend from Proto-Ersuic *ʂu (i.e., nothing special happens to retroflexes when combined with /-u/) with the forms here for ‘catch fire’, which I reconstruct as *ɕwu. This set also does not fit with the other palatal series, which I reconstruct as *ʃ (section 3.6), since in that case *ʃu > *xu > fu in Mn.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ɕ ^w iu ¹	ɕo ⁵⁵	ɕi ³³	bædzi ʃi	khe ³³ ɕu ⁵³	*s-kəy	borrow (money)
*t ^h eɕ ^w iula			(k ^h e)ʃila	tho ³³ ɕuo ⁵⁵ la ³¹		slanted / askew
*ɕ ^w u ¹			se ʃu ‘burn wood’	(ni ³³ me ⁵³) ɕy ³¹		catch fire (a house)

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ʒ ^{wi} 1	ʒl̥; ʒl̥ ⁵⁵		ʒi	ʒi ³⁵	*s-ri(y)	be (copula)
*ndʒ ^w undʒ ^{wu} 1			ndʒundʒu	khe ³³ ndʒy ⁵³ ndʒy ³¹		coax / fool
*tɕ ^{wh} iu ²	tɕ ^{ho} l; tɕ ^{ho} 55	`tɕ ^h e; tɕ ^{hi} 53	`tɕ ^h i	tɕhu ⁵³	*d-k ^w əy	dog
*putɕ ^w ew/ gutɕ ^w ew			`deputɕɣ 'flip over'	the ³³ gu ⁵³ tɕu ³¹		turn (a corner)
*dʒ ^w ew ¹	dʒyil; dzo ⁵⁵ lq ⁵⁵		dʒɣ læ	dʒu ³³ læ ⁵³		return, go back

As noted above, the Ersu forms in this section are mostly dental fricatives, with a subset that retain palatals before [-o] rhymes ('borrow', 'return', 'push', 'ear / spike'). The remaining exception is 'dog', which for some reason has a retroflex initial in Ersu.

See also section 3.2.2 for forms with initial palatals that are actually reconstructed with stop initials. (Note that if there are no Ersu or Nq. forms, it is impossible to tell if we should reconstruct a stop or a palatal affricate here.)

3.4.2 Palatal sonorants

Most palatal glides in Ersuic have simple correspondences:

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*æja ¹			æja	æ ³³ ja ⁵³	PLB *ʔ-wyik ^L	elder brother/sibling
*jakra	ja ⁵⁵ dʒɛ ⁵⁵	`jæqa		ja ⁵³ ka ⁵³		child
*janiu ¹	jaɲo ^l ; je ⁵⁵ no ⁵⁵	`jæni	jæni	ja ⁵³ nu ⁵³	cf. Lahu yàʔ- < *yak	yesterday
*jahāŋk ^h wo ¹		`jæxwæ ?	jahāŋk ^h o	ja ³³ ha ³³ nkhu ³⁵		last night
*ja(ji)hī ¹	jaɪɪxi ^l ; je ⁵⁵ xi ⁵⁵		`jæhī	ja ³³ hi ⁵³		last year
*jajihī ²	jei ³³ hi ⁵⁵		`jæjy	ja ³³ ji ⁵³ hi ³¹		story
*jiji ¹	ji ⁵⁵ 'child'		jiji	ji ³³ ji ⁵³	*z(y)əy ?, cf. Lahu i	small
*jima ¹	ji ⁵⁵ ma ⁵⁵	nejema; je ³³ me ⁵⁵	(ne)jima	ji ³³ ma ⁵³ , zi ³⁵ ma ⁵³	*yip + *mak	dream
*ji ¹	ji ^l ts ^h u ^l		jit ^h o	ji ³³ mæ ⁵³	< yi?	ladle
*jimui ¹			jimwe 'sweet ~'	ji ³³ mu ⁵³		buckwheat
*(ji) mui ¹	(k ^h A ^l)mæ ^ɾ 'sleep'; ma ⁵⁵		jimwe ŋu, jimwe dedʒi	ji ³³ mu ⁵³ ku ³³		doze / nod off
*(ji)mbru ²	bʒl̥		`yɔjimɓɓu	ji ⁵³ nɓu ⁵³	*m-bruŋ ɤ *m-bruk; < WT ɥbrug?	dragon

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ju ¹	ndzɿ ^{33;55} 'buckwheat flour'		jy	dzɿ ^{33;55}		flour
*jVsi ¹	sɿ ⁵⁵ ja ⁵⁵		jisi	ju ³³ su ⁵⁵		peach
*leji ¹	le ⁵⁵ ji ⁵⁵ ; li ⁵⁵	le ³³ ji ⁵⁵ pu ³³	`lejo 'right'?	le ³³ ji ⁵³		left (side)
*jizæ ¹	i ³³ za ⁵⁵	ji ³³ ze ⁵⁵	jozæ 'husband'	ji ³³ zæ ³¹ 'man'		son
*t ^h ejo			`yo `k ^h ejo	the ³³ ju ⁵³		drunk, be
*k ^h ejo	ji ⁵⁵ ta ⁵⁵ 'bed'?	khə ³³ ja ⁵⁵	`k ^h ejo	khe ³³ ju ⁵³	(*s-yip ⌘) *s-yup	sleep, lie down
*deju ¹			dey	de ³³ ju ⁵³ ; de ³³ ju ⁵³		hot / spicy

There are two forms where Ersu [j-] corresponds to a fricative [z-] in some dialect(s) of Lizu, and three where the opposite is the case (Ersu [z-] corresponding with Lizu [j-]). The case of Ersu [z-] may be completely regular: *j > z / _ i, followed by zi > zɿ (this is a regular change that applied to all palatal fricatives, as discussed above). Note that Ersu has both variants, zɿ and ji, for 'go'.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ji ¹	k ^h -i ⁵⁵ 'enter', zɿ, ji; zɿ ⁵⁵ , ji ⁵⁵	na ³³ ji ⁵³	ji	ji ³⁵	*ʔay	go
*(ju/zu)xwa ¹	zu ⁵⁵ xuai ⁵⁵ zɿ ⁵⁵ mi ⁵⁵		`jime	jy ³³ xua ⁵³	*hya SWID- DEN Mand. 玉米 yùmǐ	paddy fields corn, maize ³⁰

However, the forms with Ersu [j-] are perplexing. In Lizu, 'sit down' (above, under voiced fricative [z]) and 'live' seem like they might be homophonous (they are both transcribed with low tone in TBL), but these two words are distinct in Ersu. It is possible that the Ersu word for 'live' is not cognate (perhaps a loan from Nuosu i⁵⁵ 'sleep, live').

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ji ¹	ji ⁵⁵		`ji	zi ³⁵	Tai *ʔya/ MC 'en 煙?	tobacco / cigarette
*ji/zi ¹	ji ⁵⁵	zi		ne ³³ zi ³¹ , ne ³³ zæ ³¹		live / reside

³⁰'Corn' is probably anachronistic for Proto-Ersuic; I have included it here for completeness, and to highlight the difficulty of separating late loanwords with good-looking correspondences from true cognates. Since corn is a New World plant and only appeared in Asia as a result of the Columbian exchange, a root for corn seems unlikely to be reconstructible for Proto-Ersuic, although this depends on the time depth assigned to the protolanguage. One way of estimating the time depth is to look at Tangut, which like Proto-Ersuic had undergone the brightening change of PTB *-a > -i. Since Tangut is documented since the eleventh century, Proto-Ersuic should also date to that time, assuming the brightening change was historically the same change (either a shared innovation in a common ancestor or an areal change that spread through the region).

There are a handful of forms where Ersu [j-] corresponds to a palatal nasal in Lizu. These descend from PTB forms with nasal finals.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*jē ¹	ji̯; ji ⁵⁵	je; ni ³³ tshu ⁵³ , ni ³⁵	ɲe	ni ³⁵	*k-yim ɤ *k-yum	house
*jā ¹	ja ⁵⁵		ɲa			home
*jō ¹	jo̯; jo ⁵⁵		ɲo	nu ³⁵	*yaŋ	sheep

The palatal nasals all correspond perfectly, except for Nq. ‘day (clf.)’ and ‘soft’, which have dental nasals.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ɲjap ^h o/ ɲjop ^h o ¹	ɲo̯p ^h ɛ̯; ɲo ⁵⁵ phɛ ⁵⁵	ɲop ^h o	ɲap ^h o ‘back, behind’	ɲæ ³³ phu ⁵³		outside
*ɲenja ¹	ɲa ³³ ɲa ⁵⁵		k ^h enɲa	t/ɲe ³³ ɲæ ⁵³ ɲæ ⁵		dodge, make way, retreat
*deni ¹	ni̯; ni ⁵⁵	ni ⁵³	deni	de ³³ ni ³¹ , de ³³ ni ⁵³	*na-t	sick, ache
*deni ¹	dɛ̯ni̯; ni ⁵⁵	ni ³³ tsu ⁵⁵ tsu ³³	ɲdeni	de ³³ ni ⁵³	*r-ni	red
*ni ¹	ni̯; ni ⁵⁵	ni ⁵³	ə̯ni	ni ³⁵		gold ³¹
*(ri)ni ¹	ni ⁵⁵		ə̯ni	ə̯ ³³ ni ⁵³	*s-ney	near
*nini	ja̯ni̯ni̯; ni ⁵⁵ ni ⁵⁵			ni ⁵³ ni ⁵³	*s-nem	low / short
*xuini ¹	ɕi ⁵⁵ ni ⁵⁵ wa ⁵⁵ za ⁵⁵			fu ³³ ni ⁵³		gum (“tooth-red”) ³²
*ni ²			k ^h enɲi	te ⁵³ ni ⁵³		be startled/afraid
*niu(mæ)lawu ¹			ɲimælavu	ni ³³ la ⁵³ wu ³¹		daytime
*niumæ ¹	ɲo ⁵⁵ ma ⁵⁵	ɲime; ni ³³ ma ⁵⁵	ɲimæ	ni ³³ me ⁵³ , ni ³³ mi ⁵³		sun
*nina ¹	ɲo̯- ??; ni ⁵⁵ nu ⁵⁵	ɲena	ɲina	ni ³³ na ⁵³ , ji ³³ na ⁵³	*nyey/*na-w	younger sibling
*niuŋk ^h wa bedi	ɲo ³³ nkhu ⁵⁵ bɛ ⁵⁵ dzi ⁵⁵			ni ³³ nkhu ⁵³ be ³³ dzi ³¹		earthworm
*niu ¹	ɲo̯tɕ ^h o̯; ɲo ⁵⁵ tɕho ⁵⁵			ni ³⁵	*s-ni/u(:)p	west
*neni ¹			neni	ne ³³ ni ⁵³		decrease, reduce
*bæni ¹	bA̯ni̯; bA̯ni̯; ba ³³ ni ⁵⁵ , be ³³ ni ⁵⁵	be ³³ ni ⁵³	bæni	bæ ³³ ni ⁵³	*r/g-na	listen
*breni ¹	ba ⁵⁵ ni ⁵³		ɲdebzɛni sɛ	ɲe ³³ ni ⁵³ , bu ³³ ni ⁵³	*g-na-s	rest

³¹ Although the form is different, the semantic connection between ‘gold’ and ‘red’ is also found in PTB *tsyak (see STC #184).

³² The second syllable means ‘red’ (the gums are the “red” of the teeth).

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*nik ^h æ ²			`nik ^h jæ	ni ⁵³ khæ ⁵³		when
*niu	no↓,no↓; no ⁵⁵	nu ⁵⁵	-ni	(te ⁵³) ny ⁵³	*nəy SUN	day, day's (work)
*niu ¹	no↓ '~ (polite)'; no ⁵⁵	je	teni `mæçi ni	te ³³ ny ⁵³ mæ ³³ thæ ³¹ ny ³⁵	*r-ney-t	every day have, exist (general/abstract)
*niuniu ²			`nyny (ndzoma)	ne ⁵³		oneself
*nini ¹	ni ⁵⁵ ni ⁵⁵	ni ³³ ni ⁵³	ni ³³ ni gɣ	nu ⁵³ ni ⁵³		few / little
*njonjo ²	no↓no↓; no ³³ no ⁵⁵	nu ³³ nu ⁵³ ??		nu ⁵³ nu ⁵³	*now	soft
*yeniu/yoniu ¹	ve ⁵⁵ no ⁵⁵	`yɣɣni~`gɣɣni; wo ³³ nu ⁵³	yweni, yɣni	yuo ³³ nu ⁵³	*ril x *rul	intestine
*æniu ¹	a ⁵⁵ no/a ⁵⁵ 'mother-in-law'		`æni	æ ³³ ne ⁵³		aunt

3.5 Retroflexes

3.5.1 Affricates

The retroflexes across Lizu correspond straightforwardly, but in Ersu these seem to correspond to two separate series: retroflexes and alveopalatals. Compare, e.g. ‘six’ with ‘sweet’, ‘grind’ with ‘sour’, ‘wok’ with the first syllable of ‘letter/book’, and ‘ghost’ with ‘skirt’:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*tʂ ^h u ²	tʂ ^h u ² ; tʂhu ⁵⁵	tʂhu ⁵³	`tʂ ^h u	tʂhu ⁵³	*d-kruk	six
*detʂ ^h iu ¹	tʂho ⁵⁵		`detʂ ^h i	de ³³ tʂhu ⁵³	*kyəw	sweet
*dze ¹	dze ⁵⁵		dzɣ	ŋe ³³ dzu ⁵³ dzu ³¹ / dzu ³¹	*kri:t	grind
*detʂew ¹	tʂe ⁵⁵	de ³³ tʂu ⁵⁵	detʂɣ	de ³³ tʂu ⁵³	*s-kyur ɤ *s-kwya:r	sour
*dzju ¹	dzo ² ; dzo ⁵⁵	`dzɿ	`dzɿ	dzu ³⁵		wok (large, iron) / pan
*ndziundzi ¹	dzo lndzɿ ² ; ndzo ⁵⁵ ndzɿ ⁵⁵		ndzɿ dzɿ	dzu ³³ ndzi ⁵³ , dzu ³³ ndzi ⁵³		letter, book
*tʂ ^h æ ¹	tʂ ^h A ² ; tʂha ⁵⁵		tʂ ^h æ	tʂhæ ⁵³		ghost / spirit
*(n)tʂ ^h æ	ntʂha ⁵⁵			tʂhæ ⁵³		skirt

Unfortunately the Qingshui and Zeluo forms disagree in some instances (e.g. ‘letter, book’ above); for such cases it seems least objectionable to prefer the Zeluo forms, which in general seem to be more reliably transcribed.

I have separated out the roots that have alveopalatal cognates in Ersu and listed them in a section of their own (section 3.6.2 below). The PTB forms suggest that the alveopalatals may descend from earlier clusters with -y-, whereas the retroflexes descend from clusters with -r- medials.

Sūn (1982b:243) notes that there is not only a difference in place of articulation between the Ersu retroflexes and alveopalatals, but also a difference in manner: Ersu retroflex affricates have a “relatively strong stop component”, i.e., they are close to retroflex stops in their pronunciation. This phonetic fact would be consistent with the idea that the Ersu retroflexes descend from -r- clusters, since the same change (velar or bilabial stop + -r- > postalveolar stop) happened in, e.g., Lhasa Tibetan and Central Chin languages; and similarly, palatalized stops tend to become affricates cross-linguistically.³³

³³It is also interesting to note that some modern Mandarin loanwords into Ersu that have retroflex affricate initials in the donor language are borrowed as alveopalatal affricates—it seems that affricate-ness outranks retroflexion/place of articulation for these loanwords. For example, ‘county head’ 𐑦³³tʂ^hā⁵⁵, cf. Standard Mandarin *xiànzhǎng*, where the second syllable is retroflex, is borrowed with an alveopalatal initial; on the other hand, the first syllable of 𐑦³³fu⁵⁵ ‘government’ (Standard Mandarin *zhèngfǔ*) is borrowed with a retroflex initial.

Retroflex Affricates

Voiceless aspirated:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*tʂʰæ¹	tʂʰAʎ; tʂʰa⁵⁵		tʂʰæ	tʂʰæ⁵³		ghost / spirit
*tʂʰa/tʂʰi²			`tʂʰa ???	tʂʰi⁵³		bed
*detʂʰe			`detʂʰɣ	(tʂʰi⁵³) de³³mæ⁵³tʂʰi⁵³ 'tasteless'	cf. Lahu *kyim/kyum	flavorful
*(n)tʂʰo¹	ntʂʰo⁵⁵ntʂʰo⁵⁵	de³³tʂʰo⁵³	tʂʰitʂʰo		*m-krak, PLB *m-prakʰ	scratch
*detʂʰu¹			detʂʰutʂʰu	de³³tʂʰu⁵³		mix / blend / mingle
*tʂʰu²	tʂʰuʎ; tʂʰu⁵⁵	tʂʰu⁵³	`tʂʰu	tʂʰu⁵³	*d-kruk	six
*tʂʰwæ			`tʂʰwæ 'water tank'	tʂʰuæ³³fiæ³³⁵- dzu³³gu⁵³ (me³³ndæ⁵³) tʂʰu⁵³		vat / jar
*tʂʰe¹	tʂʰo⁵⁵	(ma³³) tʂʰu⁵³	tʂʰɣ	(me³³ndæ⁵³) tʂʰu⁵³		shoot, fire a shot
*tʂʰe¹	tʂʰoʎ; tʂʰo⁵⁵		tʂʰɣ 'voice'	tʂʰu³⁵	cf. Lahu khô < *kraŋ	sound
*tʂʰe			tʂʰitʂʰɣ 'wall off'	tʂʰu⁵³dzu⁵³	*kram	fence (bamboo / twig)

Ersu 'scratch' has unexpected prenasalization.

Voiceless unaspirated:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*letʂu¹	le³³tʂu⁵⁵		lutʂu	le³³tʂu⁵³	MC draewk 錫, Mand. zhuó	bracelet
*tʂu¹	tʂu⁵⁵		tʂu	tʂu⁵³-⁵³	*s-krul	sweat
*batʂa/butʂa	pAʎtʂAʎ; ba³³tʂa⁵⁵		batʂa			knife

Voiced:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*nedzæ¹	na⁵⁵dza⁵⁵	nedzæ	`nedzæ	ne³³dzæ³⁵, ne³³dzæ⁵³	*k/gla-k/y/t	drop / fall
*dzju¹		dze	dzi	dzu³³dzu⁵³		have, exist (container)
*dedzu¹	dzu⁵⁵		dedzu	de³³dzu⁵³		dry
*nedzu			`nedzu	ne³³dzu⁵³		puncture (sthg.)
*dze¹	dze⁵⁵		dzɣ	ŋe³³dzu⁵³dzu³¹ / dzu³¹	*kri:t	grind

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*dzɛ	-dzɛ, -dzi; dzɛ ⁵⁵	-dzɛ	-dzɣ	(te ⁵³)dzɯ ⁵³	*dzum ɤ *tsum	pair
*dzɿu ¹	dzɔʔ; dzɔ ⁵⁵	`dzɿ	`dzɿ	dzɯ ¹³⁵		wok (large, iron) / pan
*dzwa		dza ³³ le ⁵⁵		dzu ^a 53le ⁵³		put in order / arrange
*bædzje ¹	ba ⁵⁵ dzɛ ⁵⁵	ba ³³ dzɿ ⁵⁵	bædzɿ	bæ ³³ dzɿ ⁵³		money

‘Money’ is reconstructed with a retroflex but has a palatal initial in Mn. The Mn. form has an [-i] rhyme, but it cannot be reconstructed with *-i because that would yield an apical vowel after retroflexes. Thus, it is reconstructed with the *-je rhyme. See also p. 24 for forms reconstructed with complex *-rj- medials after bilabial initials.

Prenasalized (voiceless):

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*mæntʂ ^h ew			`ɣumæ `mæntʂ ^h ɣ	mæ ³³ ntʂhu ⁵³		pregnant
*ntʂ ^h a			ntʂ ^h a ‘play inst.’	ntʂha ⁵³		blow (the trumpet)
*ntʂ ^h æntʂ ^h æ ²	jA`ntʂ ^h ɛʔ; je ³³ ntʂhe ⁵⁵		ntʂ ^h intʂ ^h æ, ntʂ ^h æ gɣ	tʂha ⁵³ ntʂha ⁵³		clever
*ntʂ ^h e ¹			-ntʂ ^h ɣ	(te ³³) ntʂhu ³¹		handful (of rice)
*ntʂ ^h e			ntʂ ^h ɣ ‘pull out’ ???	te ⁵³ ntʂhu ⁵³		grab / seize / catch

Prenasalized (voiced):

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*dendzɛw ¹			dendzɣ	de ³³ ndzɯ ⁵³		slippery (road)
*ndzɛ ²	dɛ`dzAʔ (perf.); ndzɛ ³³	ndzɯ ³³ ndzɯ ⁵³	`ndzɣ	ndzɯ ⁵³ ndzɯ ⁵³		sew (up)

Preaspirated:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*htʂomo ²	ʂo ⁵⁵ mo ⁵⁵		`ʂtʂomo	ʂɿ ⁵³ mu ⁵³	*kraŋ	strength (physical) ³⁴
*htʂew			ʂtʂɣ	ʂu ⁵³		dare

³⁴The forms here assume an earlier s- prefix. Cf. WT (m)khrəŋ ‘hard, solid, firm’, with evidence for a nasal prefix.

3.5.2 Retroflex fricatives

Most retroflex fricatives have simple correspondences across Ersuic. Nq. has undergone a [ʂ] > [xu] change, as evidenced by ‘blood’ and ‘die’.

At least one of the PTB sources for the voiceless retroflex fricative seems to be *s + r clusters.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*mbuʂew		bu ³³ ʂu ⁵⁵	ḁembuʂɤ	nbu ³³ ʂu ⁵³		shy / bashful
*ʂa			ʂa		*sywar SCATTER	pour (water) ³⁵
*ʂa	ʂe\ʂe\; ja ³³ ʂe ⁵⁵	ʂa ³³ ʂa ⁵³ , ʂe ³³ ʂe ⁵³ ‘far’	pæʂa, ʂiʂa	ʂa ⁵³ ʂa ⁵³	*s-riŋ	long
*htʂæ/ʂæ ¹	xtʂA\; htʂa ⁵⁵		ḁʂiʂæ	ʂl ³³ ʂæ ⁵³	PLB *x-ra ¹ ?	search, look for
*ʂæp ^h o/ʂop ^h o ¹	ʂo\p ^h e\; ʂo ⁵⁵ p ^h e ⁵⁵		ʂap ^h o	ʂæ ³³ p ^h u ⁵³		front
*ʂe ¹	sei\; ʂl ⁵⁵ ji ⁵⁵	ḁʂe; ʂe ⁵³		ʂe ³⁵	*sram	otter
*ʂinwa	ʂl ³³ nua ⁵⁵			ʂl ³³ nua ⁵³		mole
*ʂi ²	ʂl\; ʂl ⁵⁵		ḁvuli ʂi, tʂe ʂi	ʂl ⁵³	*si(y)	comb (v.)
*ʂewmæ ¹	ʂe ³³	ʂe ³³ mi ⁵³	ʂɤmæ, ʂɤ	ʂu ³³ mæ ⁵³	*s-r(y)ik, *s-row NIT	louse
	ʂe ³³ tse ³³			ʂu ³³ pe ⁵³ tse ³¹		nit
*ʂu			ḁʂu	ʂu ³³ me ⁵³		torch
*ʂu ¹			ʂu	ʂu ³³ su ⁵³		guard / defend
*ʂiu ¹	ʂo\; ʂo ⁵⁵	ḁʂe; xu ⁵³	ḁʂi	ʂu ³⁵	*s-hywəy	blood
*t ^h eʂiu ¹	ʂo ⁵⁵	thu ³³ xu ⁵³	ḁk ^h eʂi	the ³³ ʂu ⁵³ , thu ⁵³ ʂu ⁵³	*səy	die, dead
*ʂo ¹	ʂo ⁵⁵			hī ³³ ʂu ⁵³		dew
*ŋeʂu ¹	ŋe ⁵⁵ ʂu ⁵⁵			ŋe ³³ ʂu ⁵³		rescue / save
*ʂiu ¹	ʂu ⁵⁵		ḁʂik ^h wak ^h wa	de ³³ ʂu ⁵³		yellow < yi?
*ʂwa		ḁʂwa		ʂua ³³ nphzi ⁵³		mosquito (relatively small)
*ʂo(ji)hī ¹	ʂo ⁵⁵ i ⁵⁵ xi ⁵⁵		ḁʂohī	ʂu ³³ hī ⁵³		year before last
*ʂoniu ²	ʂo ⁵⁵ no ⁵⁵ no ⁵⁵		ḁʂunk ^h o ḁteŋi	ʂu ⁵³ no ⁵³		day before yesterday

For some reason the Ersu morpheme ʂo for ‘the one before the last’ (e.g. ‘day before yesterday’, ‘year before last’) has an alveopalatal initial where Lizu has a retroflex. One may be tempted to

³⁵The TBL form for ‘pour’ is ne³³qa⁵³su³¹ (the first syllable is a directional prefix, and the last syllable is a causative suffix). Since q- is not in the phonological inventory of TBL, one may be suspicious that it may be a typo for ʂ-; however, q- may simply be an allophonic variant of k-, since Huáng and Rénzēng (1991:144) cite the form the⁵⁵ka⁵³ ‘splash (water)’, also with a dorsal initial.

reconstruct *alveopalatal here, but this turns out to be incompatible with the *alveopalatal series which will be reconstructed below (next page). For now I will leave this morpheme unexplained, as it is the only example of this correspondence (except for Ersu ‘search’, but the preaspirated initial adds an extra complication in this case.)

There are a small number of cognates with voiced retroflex fricatives. Unlike its voiceless counterpart, the PTB origin of this initial is unclear; for reflexes of PTB initial *r-, see section 3.9.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*zɿu ²	zɔɿ; zɔ ³³	`ze; tʂɿ ⁵³ ???	`zɿ	zɿ ³⁵	*b-ləy	four
*zu ¹			zɿ	zɿ ³⁵	PLB *s-yəy ²	grass
*zɿudu ²	zɔ ³³ bu ⁵⁵			zɿ ⁵³ du ⁵³		square / rectangular
*zɿwæzɿwæ			zɿwæ	te ⁵³ zɿwæ ⁵³ zɿwæ ³¹		rinse (the mouth)
*zɿuzɿ ²	zɿɿzɿɿ ??; zɿ ³³ zɿ ⁵⁵		`zɿzɿ, `pæzɿ	vu ⁵³ vu ⁵³ ??		narrow

3.6 *Alveopalatals

3.6.1 Fricatives

The following set gives us evidence for reconstructing a fourth set of sibilant fricatives, in addition to the dental, palatal, and retroflex sibilants reconstructed above. The reflexes of this series, which I reconstruct here as *ʃ and *ʒ, are retroflex in all daughter languages except Mn., where they have become velar fricatives. Before a high back vowel, a further change, [x] > [f], occurred in this dialect. Also, note that in Nq. there is variation between a retroflex and a palatal initial for ‘meat’, and the form for ‘highland barley’ has only a variant with a palatal initial. Also note that the forms here in Nq. do not undergo the [ʃʌ] > [xʉ] change mentioned above for the retroflex fricatives, giving us a relative chronology: in Nq. [ʃʌ] > [xʉ] before [ʃ] > [ʃʌ].

It appears that PTB origins of this set are palatal fricatives, which is neatly demonstrated by the minimal triplet MEAT, CLEAN, and IRON.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ʃæ ¹	ʃAʎ; ʃa ⁵⁵	ʃa ⁵⁵	xjæ	ʃæ ⁵³		wheat
*ʃæ			(de)xjæ, xæ ¹	(dzʉ ⁵³) ʃæ ⁵³ ji ³¹		fetch / draw (water)
*ʃi ²	ʃlʎ; ʃl ⁵⁵	ʃl ⁵³ , ʃi ³³	ʎxʀ	ʃl ⁵³	*sya	meat
*deʃo			ʎdzɿ ʎdexo	de ³³ ʃʉ ⁵³	PLB *C-sip ^L	thirsty
*ʃoʃo ¹	ʃoʎʃoʎlaʎlaʎ; ʃo ⁵⁵ ʃo ⁵⁵	ʎdeʃʉ	ʎxuxo	ʃʉ ³³ ʃʉ ⁵³	*syaŋ	clean
*ʃje ¹	ʃe ⁵⁵	ʎʃe; ʃʉ ⁵³	xje	ʃʉ ⁵³	*syam	iron
*ʃu ¹			fʉ	(zɿ ³³ /ɣʉ ³³) ʃʉ ⁵³		guide, lead (the way)
*ʃu ²	ʃʉ ³³	ʃʉ ⁵³	ʎfʉpə ¹	ʃʉ ⁵³		barley (highland)
*ʃu ²	ʃʉ ⁵⁵		ʎwæ ¹ fʉ	khe ⁵³ ʃʉ ⁵³		marry (a woman)
*ʒje ¹	ʒlʎ; ʒe ⁵⁵		ɣɿɣje ‘climb’	ʒl ³³ ʒl ⁵³		crawl (of insects)
*t ^h ekiʃi ¹	(the ⁵⁵)hi ⁵⁵ ?	the ³³ tʃhi ⁵⁵ ʃi ³³	kiʃi	the ³³ ku ⁵³ ʃʉ ⁵³		hide (sthg.)

Note that there is only one example of a voiced *alveopalatal (‘climb/crawl’), forming a minimal pair with ‘iron’.

The forms for ‘hide’ are included here since they seem to fit best here, even though the initial is not a palatal/retroflex (or velar, in Mn.) fricative; perhaps there was a change of [x] > [ʃ] / _ [i] in Mn. (note that there are no full (that is, non sesquisyllabic) syllables of the form [xi] or [yi] in Mn.). The Ersu form appears similar, but with a voiceless lateral initial, it may not be related.

3.6.2 Affricates

As noted above (section 3.5.1), there are a number of roots which have alveopalatals in Ersu corresponding to retroflexes in Lizu, which I reconstruct with *alveopalatal initials here.

Plain stops (voiceless aspirated, unaspirated, and voiced):

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*tʰiujo ²	tʃh ³³ ji ³³		ʰjotʃ ^h ijō, jotʃ ^h ijō	tʃhu ³³ ju ⁵³		orphan
*tʰiumæ			ʰmozo tʃ ^h imæ	tʃhu ³³ mæ ⁵³	Lahu mê-chô-ma < *kyəw	widow
*netʰiu ¹	tʃho ⁵⁵			ne ³³ tʃhu ⁵³		rot
*detʰiu ¹	tʃho ⁵⁵		ʰdetʃ ^h i	de ³³ tʃhu ⁵³	*kyəw	sweet
*tʰiu ²	ts ^h o ⁵⁵ ʌmia ⁵⁵ ; tʃho ⁵⁵ mia ⁵⁵		ʰtʃ ^h i-	tʃhu ⁵³ pu ⁵³		how many
*tʃæ ¹	tʃA; tʃa ⁵⁵	de ³³ tʃe ⁵³		tʃæ ³¹ , ŋe ³³ tʃæ ⁵³		chase after, drive out / expel
*tʃew ¹	tʃo ⁵⁵	tʃu ⁵³	ʰtʃɣ	khe ³³ tʃu ⁵³	*s-glak ɤ *klak	cook / boil
*detʃew ¹	tʃe ⁵⁵	de ³³ tʃu ⁵⁵	detʃɣ	de ³³ tʃu ⁵³	*s-kyu:r ɤ *s-kwya:r	sour
*ndzew			ndzɣ	de ⁵³ ndzu ⁵³	*kyi:n	weigh (v.)
*dzui ¹	dzo ⁵⁵	ʰdze; dzɹ ⁵⁵ , dzu ³³ khu ⁵³ 'river'	dzi	(n)dzu ³⁵ , dzu ³⁵	*m-t(w)əy	water, river
*dzwa ¹	dza ⁵⁵ ; dzɹa ⁵⁵	dzuæ	dza	dzuæ ³¹		have, exist (movable)
*tʃwapu ¹			tʃapu	tʃua ³³ pu ⁵³	*kyak	navel

Prenasalized (both voiceless and voiced):

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ntʰiu ¹	ntʃho ⁵⁵	tʃh ³³ pu ⁵³	ntʃ ^h i	tʃh ³⁵		thorn / splinter
*ntʰew ¹	ntʃh ⁵⁵ ɛ; ntʃh ⁵⁵	tʃh ³³ pi ⁵³ , tʃh ⁵³ ??	ntʃ ^h ɣ	(n)tʃhu ⁵³		rice (uncooked)
*ntʰi/ntʰe ¹	ntʃhi ⁵⁵	tʃhi ⁵³	(ə ^h k ^o) ntʃ ^h ɣ	tʃhu ³⁵		gnaw / nibble
*ntʰiu ²	ja ³³ ntʃh ⁵⁵		ʰntʃ ^h i-, k ^h entʃ ^h a ?	tʃhu ⁵³ ntʃhu ⁵³		fast / quick / early
*ndzelje ¹	ndze ⁵⁵ li ⁵⁵		ʰndzɹi ⁵⁵ te gɣ, ʰnefti gɣ	dzɹu ³³ li ⁵³		believe / trust
*ndziundzi ¹	dzo ⁵⁵ ndzi ⁵⁵ ; ndzo ⁵⁵ ndzi ⁵⁵		ndzɹidzi	dzɹu ³³ ndzi ⁵³ , dzɹu ³³ ndzi ⁵³		letter, book

Note that Nq. ‘thorn’ and ‘rice’ have non-retroflex initials here, and Ersu ‘gnaw’ has a palatal instead of alveopalatal initial.

Preaspirated:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*htʃiu ²	htʃo ³³ re ⁵⁵ , htʃo ⁵⁵	ʃe; tʃl ⁵³	ʰtʃi	ʃu ³⁵	*kləy	feces
*htʃiukra ²	htʃo ³³ tʃe ⁵⁵		ʰtʃikæ ¹	ʃu ³³ ka ⁵³		fart

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*htfew ¹	htfɛ ⁵⁵		ɣʂɣ	khe ³³ tʂu ⁵³ ??		catch / grab / hold

There are also a number of forms where Mn. palatal affricates correspond to retroflexes in other Lizu dialects. Most of these correspond to alveopalatals in Ersu, as with the above sets.³⁶ These forms seem to be in complementary distribution with those forms above which have retroflexes across all Lizu dialects. The sets below have only a limited number of vowel correspondences: Mn. **-i**: TBL **-ɣ**; **-y**:**-u**; **-o**:**-u**; and **-a**:**-æ**.³⁷ These vowel correspondences do not appear where we have (Mn.) retroflex: (TBL) retroflex correspondences above. In terms of *rhymes, the above items are reconstructed with ***-iu**, ***-ew**, ***-wa**, ***-e**; whereas the items below are reconstructed with ***-i**, ***-u**, ***-o**, ***-A** (see next chapter).

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*tʃ ^h i	tʃ ^h ɿ	(sa ³³ phu ⁵⁵) tʂh ⁵³		ne ³³ tʂh ⁵³		cut (meat)
*tʃ ^h itʃ ^h i ¹	tʃh ⁵⁵ tʃh ⁵⁵		tɕ ^h itɕ ^h i	ɕæ ⁵³ tʂh ⁵³ 'move (house)'	*m-kyit	move
*ntʃ ^h i ²		tʂh ⁵³	ntɕ ^h i	ntʂh ⁵³		kill / slaughter (an animal)
*ngeso/ndziso ¹	nɣɛ ³³ so ⁵⁵		ndziso ^ɿ	ndzɿ ³³ suo ⁵³		day after tomorrow
*ndzih ²	ndzɿ ³³ xi ⁵⁵		ndzi hɿ	ndzɿ ⁵³ hi ⁵³		year after next
*tʃ ^h u ¹	tʃhu ⁵³ 'open (door)', tʃh ⁵⁵ 'open (lid)'	tʂ ^h v		de ³³ tʂhu ⁵³		open
*tʃ ^h ulje ¹	tʃhu ⁵⁵ li ⁵⁵	tʂ ^h v 'earth'	tɕ ^h yli	tʂhu ³³ ɿy ⁵³		mud
*tʃ ^h u ¹	tʂhu ⁵⁵ 'dirty'	nentʂ ^h u	tɕ ^h yli 'mud'	tʂhu ⁵³		muddy / turbid
*gætʃu ¹			gjætɕy	gæ ³³ tʂu ⁵³		monkey
*dʒu			-dzy	dzɿ ³⁵		hair / down ³⁸
*dʒu ¹	dʒu ⁵⁵		dzy '(lower back)'	dzɿ ³⁵	*gyuk	waist
*dʒu ²	dʒɿ ³³ mo ⁵⁵			dzɿ ⁵³ ɿu ⁵³		goose (wild)
*dʒumæ ¹	dʒu ⁵⁵ ma ⁵⁵			dzɿ ³³ mæ ⁵³		fox
*ndʒu	ndʒu ³³ khua ⁵⁵			dzu ³³ khæ ⁵³	MC drjoH 箸	chopsticks ³⁹

³⁶The form 'year' also has a palatal/retroflex correspondence, but it seems to descend from a dental stop. See section 3.2.2. Similarly, a number of forms with palatals in Mn. but retroflexes in TBL are reconstructed with **-rj**-medials; see p. 24.

³⁷The low front vowel in Mn. **dzæny** 'breast' is due to vowel harmony. Cf. **tɕænæ** 'miserable', where we expect the first syllable to be **ɕa**, but the vowel is fronted because of the vowel in the second syllable.

³⁸Lahu actually has a triplet here, **jí** ~ **čí** ~ **yí** < ***(n)(d)zip**.

³⁹The MC word for 'chopsticks' is not in Baxter and Sagart (2011), but the homophonous 除 'pass away' is (in this case the Mandarin reading is **zhù**, not **chú**).

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*netʰo ¹			netç ^h o	ne ³³ tʂhu ⁵³		pull down (a house), untie
*(xwajo)ntʰo ¹	xuai ⁵⁵ ntʂhe ⁵⁵		xajo ntç ^h o	xua ³³ ntʂhu ⁵³	*k ^w əy ? *(t)si/up?	nest (bird)
*mentʰo ²	mɛ\ntʰɛ\; mɛ ³³ ntʂhe ⁵⁵	`ments ^h o			*r-may ʰ *r-mey ʰ *r-mi	tail
*nedʒo ¹			nedʒo	ne ³³ dʒu ⁵³		collapse / fall down
*dʒo ¹	dzo\; dʒo ⁵⁵	dʒu	dʒo	dʒu ⁵³	*m-dʒyan	have, exist (animate)
*ndʒo ¹	ndʒo ⁵⁵	ndʒu	ndʒo			know how to, be capable of
*ndʒo ²	ndʒo ³³ khua ³³ dʒɿ ³³ ʂɛ ⁵⁵		`ndʒowa, `ndʒowæ ¹	ndʒu ⁵⁵ dʒɿ ⁵⁵		noon
*tʂatʂha ¹	tʂ ^h A\ʂ ^h A\; tʂha ⁵⁵ tʂha ⁵⁵	tʂ ^h ætʂ ^h æ	`tç ^h atç ^h a	tʂhæ ³³ tʂhæ ⁵³		magpie
*kætʂa			`kjætça	ku ³³ tʂæ ⁵³		squirrel
*(n)tʂhæ	ntʂha ⁵⁵			tʂhæ ⁵³		skirt
*dʒaniu ¹	ɲo ⁵⁵ ɲo ⁵⁵	dʒæ ³³ nu ⁵³	dʒænɿy	dʒæ ³³ nu ⁵³	*nəw	breast, milk
*dʒa ¹		dʒa	dʒa	dʒæ ³⁵	WT ja	tea
*sundʒa ²	sua ³³ ndʒa ⁵⁵		`sūdʒa	(su ⁵³) ndʒæ ⁵³ , su ⁵³ ndʒæ ⁵³	Mand. 算账 suànzhàng ?	count (numbers), calculate
*dʒwæ	dʒua ⁵⁵		-dʒa ?	(te ³³) dʒuæ ³¹	*m-twa	span (thumb to finger)

Ersu ‘dirty’ lacks prenasalization which is evident in Kl.

Note that under the present analysis, the *alveopalatal fricatives develop into retroflexes in Ersu but the affricates of the same proto-place of articulation do not.

3.7 Velars

The development of Ersuic velars is perhaps the most complicated of all the places of articulation. While the same manner contrasts are reconstructed as for other places of articulation, the picture is complicated by changes in place (due to -r- in the rhyme) and manner ([g] > [ɣ] in various environments) which overlap with original Proto-Ersuic retroflexes, velar fricatives, and *r. Thus, the cognate sets in this section are presented in a slightly different order to facilitate comparison with retroflexes and fricatives.

3.7.1 Velar Stops + r > Retroflexes

A number of forms have retroflexes which descend from earlier velar + -r-, as evidenced by Nq. and TBL. The likely PTB roots/PLB comparanda also show evidence of velar + r clusters.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*kriu(ju) ¹	tʂoɔ; tʂɿ ⁵⁵ tʂo ⁵⁵		`tʂijy	kə ¹³³ jy ⁵³		frost
*kri ¹	tʂɿɿ; tʂɿ ⁵⁵	`tʂɿ; kəɿ ⁵⁵	`tʂits ^h e	kə ¹³⁵	PLB *ʔgrəy ¹	star
*kriu ²	tʂo ⁵⁵	`tʂɿ	`tʂi	kə ¹⁵³	*krəy, PLB *ʔgrəy ¹	gall bladder
*dekri		de ³³ kəɿ ⁵³	`detʂitʂi	de ³³ dʒɿ ⁵³	*m-tsik ?	itch
*kri ¹	tʂɿ ⁵⁵	khə ³³ kɯɿ ⁵³	`tʂi	ne ³³ tʂɿ ⁵³ , tʂɿ ⁵³		bite
*t ^h egri ¹		the ³³ dʒɿ ⁵³ , the ³³ kəɿ ⁵³	k ^h edʒi	the ³³ dʒɿ ⁵³	*gra	hear
*ŋgriupje ¹	ndzo ⁵⁵ pi ⁵⁵	ndʒɿ; ngəɿ ³³ phi ⁵³	`ndʒɿpi; ʃtɤpe-`ndʒɿpi 'lip'	nga ¹³³ pi ⁵³ , n-gə ¹³⁵ , ku ⁵³ pe ⁵³ , nga ³³ pi ³¹ 'lip'	PLB *m-k-rəy	skin

When comparing with extra-Ersuic languages, it is important to keep in mind that there may be more forms that belong in this set but are hiding in the retroflex sections above because of lack of evidence in Nq. or TBL. Note that velar initials are only preserved when the Proto-Ersuic rhyme is *-i or *-iu (see section 8.2.3).

In addition to these, there are several items where Ersu has gone a step further, developing retroflexes where Lizu retains velars. This is the case for ‘catty’, ‘pestle’, ‘shake’, and ‘tile’ below. Notice that besides ‘tile’, Mn. retains *-r- as rhotacization on the vowel in these forms.

There are also some forms (‘speech’, ‘exchange’) where Ersu has developed alveolar affricates. The remaining forms show Ersu retroflex fricatives corresponding with Lizu velar fricatives; these seem to have developed under the influence of the *-ui rhyme (see section 4.2.8).

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*kra	-tʂɛʼ; tʂɛ ⁵⁵		-kæ ¹	(te ³³) ka ³¹		catty (= 1/2 kilogram)
*-ŋgra ²	tsu ³³ ndzɛ ⁵⁵		ʼlanŋæ ¹	luo ³³ nga ⁵³		pestle
*ŋgrɑŋgra ¹	ndzɛ ³³ ndzɛ ⁵⁵	ʼng ^v anɡ ^v a	ŋɡvŋɡæ ¹	nga ³³ nga ⁵³		shake / shiver
*ŋgo ²	dʒɿ ¹ ?; ndzu ⁵⁵ ?		ʼŋgolo	guo ⁵³ luo ⁵³		tile
*gui ¹	dʒɿ ¹ ; dʒɿ ⁵⁵	ʼgv	ʼgu, ʼgwe	(te ³³) gu ³¹ , gu ³³ sua ⁵³ 'send mes- sage'		speech, phrase, words
*denɡui ¹	dɛ\ndʒɿ ¹ 'change'; ndʒɿ ⁵⁵ ndʒɿ ⁵⁵		ŋɡwɛŋɡwe, ŋɡu	ne ³³ ngu ⁵³ ngu ³¹		exchange
*yui ¹ / yuindzA ¹	ʒɿ ³³ ŋɿ ³³		ʒrɿndza	ʒu ³³ ŋɿ ⁵³ ʒu ³³ ndzæ ⁵³		relatives
*yuiyui	ʒɿ ¹ lʒɿ ¹ ʼts ^h Aʼts ^h Aʼ; ja ³³ ʒɿ ⁵⁵		ʒuɿwe		*lway ?	easy
*yui ¹	ʒɿ ¹ ; ʒɿ ⁵⁵	v; wu ³⁵	(y)we, vu	vu ³³ ji ⁵³ 'go buy'	*rey	buy
*deyui ¹	ʒɿ ¹ ; ʒɿ ⁵⁵	ʼk ^h ev	ʼde(y)we, ʼdevu	de ³³ vu ⁵³	*gwa-n	wear (a garment)
*xui ¹	ʂɿ ⁵⁵ ma ⁵⁵	ʼfvme; xu ⁵³	ʼxwe	fu ³⁵	*swa	tooth
*xui	ʂɿ ³³ ʂɿ ⁵⁵			fu ³³ fu ⁵³	*s-wa GO	walk

3.7.2 Velar Stops > Palatals

Ersu has developed palatals before rhymes with high front vowels. The items in which this occurred have been collected below:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*k ^h je ¹	tɕ ^h i ¹ ; tɕ ^h i ⁵⁵	khe ⁵⁵	(k ^h e)k ^h je	khe ³⁵		give
*mɛŋk ^h je	mɛ ⁵⁵ ntɕ ^h i ⁵⁵	ʼmentɕ ^h e		te ⁵³ me ⁵³ nkhi ³¹		ask / question
*gje ²	ŋua ³³ dʒi ⁵⁵ 'pen'	-dʒe	degje le	(tshe ⁵³ ŋu ⁵³) khe ³³ gi ⁵³		pen in (sheep)
*gjegje	dʒi ⁵⁵ dʒi ⁵⁵			gi ⁵³ gi ⁵³ phu ³¹		horizontal
*gje ¹	dʒi ¹ ; dʒi ⁵⁵		ʼgijo	gi ³⁵		jar (earthen)
*ŋgje ²	vu ³³ ndʒi ⁵⁵		ʼŋgi	ŋgi ³⁵	*m-kum ≠ *m-kim	pillow
*ŋgi ¹	dʒɿ ¹ ; ndʒɿ ³³	ŋgi ⁵³	ŋgje	ŋgi ³⁵	PLB *g-ra ² ?	buckwheat
*ŋgi	ja ³³ ndʒɿ ⁵⁵		ʼdenɡi			difficult, hard
*megi ²	mɛ ³³ dʒɿ ⁵⁵	ʼmedʒe	ʼmegje	mɛ ³³ gi ³⁵ , mɛ ⁵³ gi ⁵³	*gle:k	thunder

The last three forms have undergone a further change of palatal > dental affricate. This is due to

the contrast between the *-i and *-je rhymes (see section 4.4).

3.7.3 Preaspirated Stops

A preaspirated velar stop is supported by the forms in Ersu and Mn.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*hko ¹	xku ^l ‘hatch’		xko	ŋo ³³ kuo ⁵³ læ ³¹		appear, come out
*hke ¹	hke ⁵⁵	pē ³³ nbi ⁵⁵ khur ³³	dexkɾ, koxkɾ	pi ⁵³ nbi ⁵³ khe ³³ ku ⁵³		kneel
*hke ¹	kɛ ^l ; hke ⁵⁵	`kuu	xkɾ ‘hawk’	ku ³³ nua ⁵³		eagle / hawk
*hke	hke ⁵⁵	-kuu	-xkɾ	ne ³³ ku ⁵³ ‘break, snap’		half
*hkui ¹	hku ⁵⁵		xkwe ‘herd’	zuo ³³ ŋuo ⁵³ ku ⁵³		herd, put out to pasture
*hkwohkwo ¹			xkoxkosu	ku ³³ ku ³³ su ³¹		beggar
*hko ¹	pɛ ⁵⁵ hku ⁵⁵	`qoqo	xko		*g/kuŋ, *kor	hole
*dexwa/ dehkwa ¹	da ³³ xa ⁵⁵		dexka	de ³³ xuæ ⁵³ , de ³³ xua ⁵³		open
*hkwa	hka ⁵⁵ dzu ⁵⁵ ‘lean (meat)’	qwa				skinny

The Mn. form for last form above, ‘open’, supports reconstructing a preaspirated initial, but Ersu and TBL have fricative initials instead of the expected preaspirated (in Ersu) and plain stop (in TBL) initials.

Note that the Nq. form ‘kneel’ has an aspirated initial, unlike the cognates for e.g. preaspirated bilabials, which are unaspirated.

A highly unusual form is ‘rain’, where the initial consonants do not pattern with any other cognate sets. I am tentatively reconstructing this form as ***rgwæ** (with a voiced, **r**-prefixed initial), which can plausibly develop into a plain voiced stop in Ersu, a prenasalized stop in Kl., and a voiced fricative in the other dialects of Lizu. (See also p. 131 for a discussion of the rhymes to motivate the **r**- prefix.) This solution is admittedly a bit ad hoc, but Sūn (1982b) does note that some older speakers of Ersu had preaspirated voiced stops (in addition to the preaspirated voiceless stops) which younger speakers had lost (unfortunately Sūn does not say which specific lexical items had this preaspiration).

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*rgwæ ¹	gua ³³	ngwæ; yue ⁵³	ɣwæ	yua ³⁵	*r/g-wa	rain

3.7.4 Prenasalized Stops

Voiceless prenasalized:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*meŋk ^h je	me ⁵⁵ ntɕhi ⁵⁵	`mentɕ ^h e		te ⁵³ me ⁵³ nkhi ³¹		ask / question
*meŋk ^h e ²	me ³³ ŋkhe ⁵⁵	me ³³ nkhu ⁵³	`menk ^h ɣ	me ³³ nkhu ⁵³	*kəw	smoke ⁴⁰
*meŋk ^h wo			`menk ^h o	me ³³ nkhu ⁵³		dark, get
*ŋk ^h æ ¹	nkha ⁵⁵	t ^h enk ^h æ; khe ⁵³	nk ^h jæ	(n)khæ ³⁵		sell
*ŋk ^h wo ¹	nkhua ¹⁵⁵	khwe ⁵⁵ ???	nk ^h o	nkhu ³⁵		night, evening
*ŋk ^h wohke ²			`nk ^h o xkɣ	nkhu ⁵³ ku ⁵³		midnight
*ŋk ^h wæ ²	nk ^h uA`; ŋkhu ³³	`q ^h wa	nk ^h wa	(n)khuæ ⁵³		lake
*k ^h eŋk ^h wæ	ŋkhu ³³			khe ³³ nkhuæ ⁵³ , khu ³³ khua ⁵³		rust
*ŋk ^h o ¹		nq ^h u		to ³³ nkuo ⁵³ ji ³¹		hook
*ŋk ^h o ¹	nk ^h u`; nkhu ⁵⁵	nq ^h o		khuo ³⁵ , no ³³ nkhuo ⁵³		lock
*ŋk ^h wo ¹	ko ³³ htɕe ⁵⁵ ??	nq ^h v	nq ^h o	khu ³⁵ , khu ⁵³ dzi ⁵³		silk/satin

Several of the Kl. forms have uvular initials. These (and other Kl. uvulars) will be discussed in section 3.8 below.

The uvular in Mn. ‘silk’ is the only example of a contrastive uvular in the language; unfortunately, without further comparative data there is not much more to say about it. The Ersu form for ‘silk’ lacks prenasalization and aspiration.

The TBL form for ‘hook’ is inconsistent with the phonotactics of Lizu, which disallows unaspirated voiceless stops when they are prenasalized. It is unclear if the “h” for aspiration was skipped or mistranscribed as “u”.

Voiced prenasalized:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*sēŋgæ ¹	sɿ ³³ ngua ⁵⁵		sengjæ	sɿ ³³ ngæ ⁵³		melon / gourd
*sengra ¹			sengæ ¹	se ³³ nga ⁵³		trunk
*-ŋgra ²	tsu ³³ ndzɕ ⁵⁵		`laŋgæ ¹	luo ³³ nga ⁵³		pestle
*leŋgui ²	le ³³ ngua ⁵⁵		`liŋgwe	le ³³ ngu ⁵³		ring
*neŋgwo			`neŋgo	(vu ³⁵) ne ³³ ngu ³¹		lower (the head)
*ŋgra ²		`ng ^ɣ a		nga ⁵³		kill (a person)
*ŋgraŋgra ¹	ndzɕ ³³ ndzɕ ⁵⁵	`ng ^ɣ ang ^ɣ a	ŋgɣŋgæ ¹	nga ³³ nga ⁵³		shake / shiver

⁴⁰The prenasalization on this form may be due to prefixization of the first syllable SKY of the binome *məw-kəw SMOKE. See e.g. examples from Mpi in Matisoff (1978a:2.42).

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ɲgæ ¹	gAʎ; nɠa ³³	`ngæ	ɲgɲæ	ngæ ³⁵	*m-ka, Mpi nko	door
*ɲgi ¹	dzɲʎ; ndzɲ ³³	ngi ⁵³	ɲgje	ɲgi ³⁵	PLB *g-ra ² ?	buckwheat
*ɲgi ¹	ndzɲʎ		ɲgje	ngi ³⁵		carry load (pack animals)
*ɲgje ²	vu ³³ ndzi ⁵⁵		`ɲgi	ngi ³⁵	*m-kum ɤ *m-kim	pillow
*ɲgi	ja ³³ ndzɲ ⁵⁵		`denɲi			difficult, hard
*denɲwo ¹	ngo ⁵⁵	ngo	denɲgo	de ³³ ngu ⁵³	*s-g-ruk	pick up
*ɲgo ²	dʒɲʎ ?; ndzɲ ⁵⁵ ?		`ɲgolo	guo ⁵³ luo ⁵³		tile
*denɲgui ¹	dɛʎndzɲʎ 'change'; ndzɲ ⁵⁵ ndzɲ ⁵⁵		ɲgwɛnɲgwe, ɲgɤ	ne ³³ ngu ⁵³ ngu ³¹		exchange
*ɲgwæ ¹	ngua ⁵⁵		ɲgwa	ngua ³³ phe ⁵³		pheasant (long-tailed)
*ɲge ²	gɛʎ; nɠɛ ³³		`ɲgɣ	ngw ³⁵	*d/s-kəw, PQc s/r/n-gəw	nine

3.7.5 Velar nasal

Most of the correspondences are trivial here, but note the rhinoglottophilic [ɲ] ~ [h] variation in Kl. (and possibly the Ersu form for ‘bear’). Mn. has palatalized the velar nasal before /-æ/ (and not /-æʎ/!), although we can still tell that these were originally velars from the vowel because forms with earlier palatal nasals have a back vowel (nɑ—see section 4.13).

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ɲap ^h o ¹	tʃa ³³ ɲa ³³ 'under'?		ɲap ^h o 'that side'	ɲa ³³ phu ⁵¹		lower part / lower reaches
*ɲæ ²	ɲAʎ; ɲa ³³		`jidenæ	ji ³³ de ⁵³ ɲæ ⁵³		hungry
*denɲra ¹	ɲua ⁵⁵		denɲæʎ	de ³³ ɲa ⁵³	*s-ɲ(y)a FISH	stinky, fishy-smelling
*ɲra ²	ɲAʎ; ɲua ³³	fɪ̃; e ⁵³ ?	`ɲæʎ	ɲa ⁵³	*l/b-ɲa	five
*ɲæ ¹	nɔ ⁵⁵		nɪnæ	ne ³³ ɲæ ⁵³		skinny, get thin
*xui/ɲui ¹	həʎʎ ?; xa ⁵⁵ ?	ɲo~fio; ɲue ³³ mo ⁵³	ɲwe, ɲwemo	ɲu ³³ mu ⁵³	*d/g-wam	bear (n.)
*ɲui ²	ɲAʎ; ɲua ³³	`ɲu	`ɲwe	ɲu ⁵³	*ɲwa	cattle, cow
*ɲuijo			`ɲwejo	ɲɤ ³³ ju ⁵³		calf (common)
*ɲuimæ			`ɲwemæ	ɲu ³³ mæ ⁵³		cattle (common, female)
*ɲu ¹		`ɲu~`fiu; ɲwe ⁵⁵	ɲɤ	ɲu ³⁵	*ɲəw	cry, weep

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ɣui ¹	ɳA ¹ ; ɳua ⁵⁵	ɳu; ɳu ⁵³	ə ¹ ɳwe	ɳu ³⁵	*d-ɳul	silver
*ɳo ¹	ɳua ¹ ; ɳ ⁵⁵		(de)ɳo	ɳuo ³⁵		crow (of cocks)
*(rwa)ɳwoŋwo ¹			æ ¹ ɳo, ɳoŋo, æ ¹ ɳoŋo	ɳua ³³ phə ⁵³ ɳu ⁵³ ɳu ⁵³		cockscorb
*ɳe ¹	ɳɛ ¹		ɳu, ɳubulɳu			kind of turnip (圓根 yuángēn)

3.7.6 Plain stops

Voiceless aspirated:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*k ^h je ¹	tɕ ^h i ¹ ; tɕhi ⁵⁵	khe ⁵⁵	(k ^h e)k ^h je	khe ³⁵		give
*k ^h e	tɕ ^h i ¹ ?		dʒl `k ^h ɣ		*kam (ɰ *ka:p)	draw water
*mek ^h a ¹	mɛ ⁵⁵ khua ⁵⁵	mə ³³ kha ⁵⁵ 'cloud'		mɛ ³³ kha ⁵³		rainbow
*k ^h arV ¹			k ^h aə ¹	kha ³⁵ ə ⁵³		walnut
*lak ^h a/lok ^h a ¹			lak ^h a k ^h eə ¹ 'get hurt'	luo ³³ khua ⁵³ ə ³¹ 'get hurt'		wound
*dek ^h ra ¹	dɛ ¹ ts ^h l ??; tʃhi ⁵⁵ ??	dɛ ³³ kha ⁵⁵	dek ^h æ ¹	dɛ ³³ kha ⁵³	*b-ka	bitter, salty
*k ^h æk ^h æ ¹			k ^h ik ^h jæ	khæ ³³ khæ ⁵³		separate, other
*k ^h æ		khɛ ⁵⁵	k ^h jæ	khæ ⁵³	Lahu qha < *ka	rice (cooked)
*p ^h uk ^h æ ²			`p ^h uk ^h jæ	phu ⁵³ khæ ⁵³		fortune / luck
*k ^h wo ¹	kho ⁵⁵		`k ^h o	khu ³¹		dry (clothes) in the sun
*k ^h wo ¹	kho ⁵⁵		`jotɕa k ^h o			make the bed
*k ^h uija			`k ^h weja, `k ^h wæ	khu ³³ jæ ⁵³		under
*k ^h ep ^h e/ k ^h up ^h o ¹	k ^h ɛ ¹ p ^h ɛ ¹ ; khɛ ⁵⁵ phɛ ⁵⁵	`k ^h vpho	k ^h ɛp ^h o	khu ³³ phu ⁵³	Lahu qhɔ < *kaŋ	inside
*k ^h ui ¹		khu ⁵³	k ^h we, k ^h ɛ	ne ³³ khu ⁵³		pluck (flowers)
*k ^h ui ¹			ʃtintɕ ^h i k ^h we	(ti ³³ nkhæ ⁵³) khu ³¹		blow (one's nose)
*t ^h ek ^h wa ¹	thə ³³ kha ³³		k ^h ek ^h a	thə ³³ khua ⁵³	PLB *k-ra ^{2/3}	win
*k ^h wæ ¹	ja ¹ l ^h ua ¹ ; ja ³³ khua ⁵⁵ 'big'	-k ^h wæ	dek ^h wa	dɛ ³³ khua ⁵³		grow, grow up
*riku/rik ^h u ¹	rgu ¹ ; ɳ ³³ ku ⁵⁵	ə ³³ khu ⁵³	ə ¹ k ^h o	ə ³³ khuo ⁵³	*g-rus	bone ⁴¹

⁴¹The Ersu forms have unaspirated initials; in the case of Qŕ. the first syllable appears to have fused onto the second and voiced the initial.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*k ^h o			-k ^h o	(to ³³) k ^h uo ³¹	*kwak	bowl
*k ^h oji		`k ^h oje		k ^h uo ³³ ji ⁵³		key
*k ^h ok ^h o ¹	k ^h u ^h l ^h u ^h l; k ^h u ⁵⁵ k ^h u ⁵⁵		dek ^h ok ^h o	k ^h uo ³³ k ^h uo ⁵³	*kuk	curved / crooked / bent
*ŋ(u)k ^h wa	nk ^h ua ⁵⁵			ŋu ⁵⁵ k ^h ua ⁵³	*kwa ?	hoof

Voiceless unaspirated:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*(h)kara(wa) ²	ka ³³ ra ⁵⁵	`kəwə	`xkawa ntʂ ^h amə	kə ⁵⁵ ə ¹⁵³		spider
*kwa/ka ²	ŋo ^h l ^h kuA ^h ; no ³³ kuA ³³		`ja kamu	ja ³³ ka ⁵³	PLB *ka ¹	all / the whole
*səkæle ¹	si ⁵⁵ ka ³³ le ⁵⁵	sə ³³ kəi ⁵⁵ ?		se ³³ kə ⁵³ li ³¹	*s-ka:k	branch / twig
*lekrwa ²	le ³³ kua ¹⁵⁵ tʃhu ³³		`lakwə ¹ ts ^h u (v.)			elbow
*mukr(w)V ¹		mu ³³ kəi ⁵³	mukwə ¹	mu ³³ kə ¹⁵³	*r-may ✕ *r-mey ✕ *r-mi	tail
*(mja)ko ²	dɛ ³³ ku ⁵⁵		`mjako	miə ³³ ku ⁵³ , no ³³ kuo ⁵³		blind
*kuts ^h je ¹		ku ³³ tʂhi ⁵³	kuts ^h epə ¹	kuo ³³ tʂhi ⁵³		life
*kætʃa			`kjætʃa	ku ³³ tʂə ⁵³		squirrel
*t ^h ekiʃi ¹	(t ^h ɛ ⁵⁵)ti ⁵⁵ ?	thɛ ³³ tʂhi ⁵⁵ ʃi ³³	kiʃi	thɛ ³³ ku ⁵³ ʃu ⁵³		hide (sthg.)
*kra	-tʂɛ ^h ; tʂɛ ⁵⁵		-kə ¹	(te ³³) ka ³¹		catty (= 1/2 kilogram)
*kra ²	tʂɛ ^h	`qa	`kə ¹	ka ¹⁵³		scales, steelyard
*kape ¹	ka ³³ pi ⁵⁵		kapø	ka ³³ pe ⁵³		garbage / debris
*ka ²	kA ^h ; ka ³³ pha ⁵⁵			ka ⁵³ ba ⁵³	< PLB *ʔ-ga ² ?	mute
*zikæ			`zikjæ	ʃl ³³ kə ⁵³ , mæ ³³ ʒl ⁵³ mæ ³³ kə ³¹	*ga ✕ *ʔa	mute, dumb, stupid
*kala/kælæ ²	no ³³ ma ⁵⁵ - ka ⁵⁵ le ⁵⁵	ke ³³ le ⁵³	kali, kala	mu ⁵³ tʃu ⁵³ kə ³³ læ ³³		butterfly
*kæ	-kA ^h ; ka ⁵⁵	-kə	-kjæ	(te ³³) kə ³¹		classif. long items
*kæmbæ ¹			kjæmbæ	kə ³³ nbæ ⁵³		tongs (fire)
*dekæ ²	dA ^h l ^h kA ^h ∨ (perf.); ka ⁵⁵		`dekjæ	kə ⁵³		hit (a person)
*kækæ ¹	ka ⁵⁵ ka ⁵⁵		kikjæ	kə ⁵³ kə ⁵³		fight
*kæpælæ			kjæpælæ	kə ⁵³ pæ ⁵³ læ ³¹		forehead

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ku			(dzj) ku 'feed (liquid)'	(dzæ ³³ ŋu ⁵³) ku ³¹		breastfeed / suckle
*ku(liu) ¹	ku ⁵⁵ ə ⁴⁵⁵	kurə	kuli	ku ³³ liu ⁵³	< MC ljo 驢 ?	donkey
*kwop ^h o			(kop ^h o)	ku ³³ phu ⁵³		this side / here
*gu			dzi gu	(dzu ³³) ku ⁵³		cross (a river)
*nekwo ¹		neko	(ne)ko	ne ³³ ku ⁵³		put (into a container)
*kwo			`kop ^h æ, `k ^h op ^h æ	tsha ³³ ə ⁴⁵³ ku ³¹		chest
*kui ¹	ku ⁵⁵		`ku, `kwe	de ³³ ku ⁵³		scoop up (water) / ladle
*kwo ²	kui ¹		`ko	(te ⁵³) ku ⁵³	Lahu kù < *gru	shout
*nekwo ¹		`neko		ne ³³ ku ⁵³		shrivel up / wither
*k ^h ekuliu ¹	k ^h ε ⁴ ku ¹ lyo ¹		dekulø, dekulø ¹	khe ³³ ku ⁵³ liu ⁵³		wrap (v.)
*kwakwa ¹	ka ⁵⁵ ka ⁵⁵ pi ⁵⁵		`kɤka	kua ³³ kua ⁵³		hard
*kwali ¹	ka ³³ ə ⁴⁵⁵ kua ⁵⁵		kali kwa	kua ³³ li ⁵³ ne ³³ kua ⁵³	*ka Mand. 刮 guā ?	crow take off (clothes), peel
*kapi ²	ka ³³ ps ¹ ⁵⁵		`kapi	kua ⁵³ pi ⁵³		lame person
*kotsV ¹	ku ³³ tsɛ ⁵⁵		kotsa	no ³³ kuo ⁵³ tsj ³¹		step on / stamp / tread
*kezi ¹		kuwz ¹		(te ³³) ku ³³ zu ³¹		bucket (of water)
*deke ¹		de ³³ kuw ⁵³	dekr	de ³³ kuw ⁵³	*krak	fear, be afraid
*keke			kɤkɤ	ku ⁵³ kuw ⁵³		big / large

Mn. 'spider' is irregular in having preaspiration. The middle syllable of Nq. 'hide' mismatches in both place of articulation and aspiration.

Proto-Ersuic *g- underwent different changes in different dialects. First, I list the forms that have [g] in all dialects (or its various palatalized reflexes in Ersu):

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*(ŋ)gætsi ¹	nga ⁵⁵ ts ¹ ⁵⁵		gjætsi		Mand. 茄子 qiézi	eggplant
*gæme ¹	ga ¹ lme ¹ ; nga ³³ me ⁵⁵	`gæmi	gjæme	gæ ³³ me ⁵³	Lahu vəʔ-qâ < *ga	clothing / garment
*megi ²	me ³³ dzi ⁵⁵	`medže	`megje	me ³³ gi ³⁵ , me ⁵³ gi ⁵³	*gle:k	thunder
*gje ²	ŋua ³³ dzi ⁵⁵ 'pen'	-dže	degje le	(tshe ⁵³ ŋu ⁵³) khe ³³ gi ⁵³		pen in (sheep)
*bugi ¹			būgje	be ³³ gi ⁵³		bury

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*gjegje	dʒi ⁵⁵ dʒi ⁵⁵			gi ⁵³ gi ⁵³ phu ³¹		horizontal
*gje ¹	dʒi ^l ; dʒi ⁵⁵		`gijo	gi ³⁵		jar (earthen)
*gægæ ¹	ga ⁵⁵ ga ⁵⁵		gigjæ	gæ ³³ gæ ⁵³	see SING	play
*gæ ¹	ga ^l 'song'; ga ⁵⁵			gæ ³³ mu ⁵³ , gia ³⁵ 'song'	*ga	sing
*gætʃu ¹			gʒætʃy	gæ ³³ tʃu ⁵³		monkey
*gap ^h o ¹			gap ^h o 'top of'	ka ³³ phu ⁵³		upper part
*dego ¹	gu ⁵⁵			do ³³ guo ⁵³		twist (hemp fibers) between the palms
*gui ¹	dʒi ^l ; dʒi ⁵⁵	`gv	`gu, `gwe	(te ³³) gu ³¹ , gu ³³ sua ⁵³ 'send mes- sage'		speech, phrase, words
*gu ¹	gu ^l ; gu ⁵⁵		`gu	gu ³⁵	< WT gru	boat
*guku ¹			`gu `ku	ngu ³³ ku ³³ su ³¹		boatman
*t ^h egew ²	the ³³ ge ⁵⁵ 'glad'		`degɣ	the ³³ gu ⁵³		happy / excited

Ersu 'clothing' and 'eggplant' have unexpected prenasalization. Note that 'eggplant' seems to be an early loan from Chinese, borrowed before voiced stops became voiceless.⁴²

There is a set of words which seem to descend from *g (as reflected in the Nq. and Ersu forms) whose initials become voiced fricatives in both Mn. and TBL; these have the rhymes **-uo**, **-u** in TBL.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*dego ¹	gu ⁵⁵	`ko; de ³³ go ⁵³	`yo	ɣuo ³⁵ , ɣuo ³³ ɣuo ⁵³		kick
*gojo ¹	gu ^l ; gu ⁵⁵ pha ⁵⁵	go ³³ je ⁵³	yojo	ɣuo ³³ ju ⁵³	*ɣəw/PLB *(k)-rwak ^H	mouse
*dege ¹	ge ⁵⁵ ge ⁵⁵	de ³³ gə ⁵³	`ɣɣ	de ³³ ɣu ⁵³		lick / lap
*ge ¹	ge ⁵⁵		ɣɣ, `ɣɣtse	ɣu ³³ zɿ ⁵³	*dzəy ?	seed
*ɣra/ge ¹	xa ⁵⁵	`ka; ge ³⁵	ɣɣ	ɣu ³⁵ , ɣa ³⁵	*k-rap	needle ⁴³

A similar spirantization change with a broader scope, conditioned by all non-low back vowels (including the **-w-** glide—this accounts for 'left over/remain') and also a palatal glide (see the forms for 'enemy' and love')⁴⁴, happened in Mn. only:

⁴²'Eggplant' is not found in Old Chinese, so 茄 is not found in Baxter. Tung (1965) reconstructs it as MC **gja**.

⁴³In fact there seem to be two similar but distinct roots for 'needle' here. The first, with initial *ɣ, is reflected in Ersu and Kl., and the second, with initial *g, in Nq. and Mn. TBL seems to have both variants.

⁴⁴Although 'enemy' is not transcribed with a medial **-i-** in TBL, there appears to be variation; see the forms for 'sing' and 'song', where 'sing' is literally 'song + do', but the latter is transcribed with **-i-** and the former without.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*gæwu			`ɣjævu	gæ ³³ wu ⁵³	*gra	enemy (personal)
*gæ/gja ¹	ga ⁵⁵		ɣjæ	giæ ³¹ , giæ ³⁵	*r/N/d/s-ga	like / love
*gwEmæ ²	ga ⁵⁵ ma ⁵⁵ ni ¹ 'behind'; ga ³³ ma ⁵⁵	`gime; ge ³³ phi ⁵³	`ɣumæ, `gumæ	ge ³³ ma ⁵³ , gu ³³ ma ⁵³	*g-raŋ CHEST	back
*gwogwo ¹	go ⁵⁵ go ⁵⁵	gu ³³ gu ⁵³	`ɣuɣo	gu ³³ gu ⁵³		light (weight)
*degwo ¹			deɣo	de ³³ gu ⁵³		rise / get up
*gwa ²			`neæ ²	gua ⁵³		left over / remain

For Mn. 'left over / remain', see the discussion under velar fricatives, below.

3.7.7 Fricatives and Glides

We now turn our attention to bona fide *fricatives (as opposed to fricatives derived from a *voiced stop). *ɣ is retained as a fricative in TBL and before certain rhymes in Mn. and TBL (where it undergoes a further change into **v-** before **-u**). In Ersu it becomes a retroflex fricative **z-** before certain rhymes.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ɣeniu/ɣoniu ¹	ve ⁵⁵ no ⁵⁵	`ɣuŋi~`guŋi; wo ³³ nu ⁵³	ɣweni, ɣuŋi	ɣuo ³³ nu ⁵³	*ril ɤ *rul	intestine
*ɣo ¹	vu]; vu ⁵⁵	wo ³⁵	ɣo	ɣuo ³⁵	*ɣəw ?	liquor
*ɣuini/ ɣuindzA ¹	ɣi ³³ ni ³³		ɣɣndza	ɣu ³³ ni ⁵³ ɣu ³³ ndzæ ⁵³		relatives
*ɣuiɣui	ɣi ³³ ɣi ³³ ts ^{hA} ts ^{hA}]; ja ³³ ɣi ⁵⁵		ɣuɣwe		*lway ?	easy
*ɣwEmo/ æɣwE ¹	xə ⁵⁵ mo ⁵⁵ , ə ⁵⁵ mo ⁵⁵		`ɣvɯ	æ ³³ ɣu ⁵³	*ɣyaŋ ?	uncle (mother's brother)
*ɣui ¹	ɣi]; ɣi ⁵⁵	v; wu ³⁵	(ɣ)we, vɯ	vu ³³ ji ⁵³ 'go buy'	*rey	buy
*deɣui ¹	ɣi]; ɣi ⁵⁵	`k ^h ev	`de(ɣ)we, `devu	de ³³ vu ⁵³	*gwa-n	wear (a garment)

The words for 'uncle' in Mn. and TBL seem to derive from *ɣ-, but the vowels are different: in Mn. it is [-ɯ], conditioning a change of the initial to [v-], whereas the TBL form has an unrounded vowel. It is unclear why the Ersu form has a [x-] initial.

The forms for 'wear' and 'buy' are either completely homophonous or differ only in tone in all dialects. There is variation in the Mn. forms, but it appears that **vɯ** is the result of borrowing from another dialect; compare with **xwe** 'tooth' below, which differs only in voicing.⁴⁵

There are also forms where it seems only TBL has retained the velar fricative. Most of these have

⁴⁵The Mn. forms for 'wear' and 'buy' are transcribed with initial [w-], but I suspect I may have mistranscribed them, and that they should have a velar fricative initial, i.e. **ɣwe**, homophonous with the root for 'easy'.

a labiovelar medial glide or the rhyme [-u] in TBL:

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ware/ɣare ¹			wæ ¹	ɣa ³³ ɛr ³⁵		liquor (yellow rice / millet / Shaoxing)
*ɣwoɣwo ¹	va ⁵⁵ va ⁵⁵		ˈwuwo	ɣu ³³ ɣu ⁵³		help
*ɣwebje/ ɣwobje ¹	vɛ ³³ bi ⁵⁵		wobi	ɣu ³³ pi ⁵³		shoulder
*ɣwo ¹	vɛː; vɛ ⁵⁵	ˈwo~ˈɣo; we ⁵³	wo	ɣu ³⁵	*p ^w ak, PLB *wak ^L	pig
*deɣwæ ¹	wɑ ⁵⁵		dewa	de ³³ ɣuæ ⁵³	*k-wa	full, satiated

(The [w-] initial in Ersu ‘hungry’ is unexplained, since we expect [v-].)

This leaves us with forms where TBL has no velar fricative, which I reconstruct with initial *w-:

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*diwæ ¹	dzi ⁵⁵ va ⁵⁵		dzyæ ¹	dzi ³³ wæ ⁵³		slow / clumsy
*wægæ	va ³³ gɑ ⁵⁵			wæ ³³ gæ ⁵³		mat
*wæ ¹			wæ (t ^h ɥ)	ɣuæ ³⁵	*wa	snare / trap
*wurA/wærA ¹	vurA ¹ ; vu ³³ ra ⁵⁵		wæ, wæə ¹	ɣuæ ³³ fiæ ³⁵		cloth
*wæ ¹			wæ ‘OK!’	ɣuæ ³⁵		permit / allow
*wawa ¹	dA ¹ wuA ¹ li ¹	wa ³³ wa ⁵⁵	wawa, wawaløø	ɣua ³³ ɣua ⁵³		circular (planar), round
*wilje/wulje ²	vi ³³ li ⁵⁵	wu ³³ li ⁵³	ˈvuli	wu ³³ li ⁵³	*d-bu	head
*riwu ¹			ɛ ¹ vɥ	fiu ³³ wu ⁵³		cave / hole
*wutɕ ^h a			ˈvɥɕa	wu ³³ tɕhæ ⁵³		above, on top of
*wutɕu			ˈvutɕy	wu ³³ tɕy ⁵³		point / tip

It appears that in many cases, TBL [ɣu-] is simply a phonetic variant of **w-**; Chirkova (2008) notes that [w-] in Kl. is “sometimes realized close to [ɣ]”, and further notes that “the interplay between w- and ɣ- initials has also been noted in Tosu (Meier, p.c.)”. The assignment of ‘mat’, ‘snare/trap’, ‘cloth’, and ‘permit/allow’ to the ***w-** initial is based on the rhyme correspondences; see section 4.15.

It also seems plausible that at least of some of these forms reconstructed with initial *ɣ- ultimately come from PTB *r-, since *ɣ- appears in a restricted environment: mostly before back rounded vowels and medial glide -w- (see also section 3.9). For example, PTB ***ru:l** > Mn. **ɣwe** ‘intestines’ parallels PTB ***mul** > Mn. **ˈmwe** ‘fur’ (although not PTB *(**s-**)**b-ru:l** > Mn. **ˈbɔ**).

Compared with the voiced velar fricative, the voiceless velar fricative is much more straightforward, with clear correspondences across all the dialects. Note also the change [x] > [f] / _ [u] except in Nq., which seems to have been immune from this common areal sound change.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*xɑ ¹ mu	xɑ ⁵⁵ ɲ ⁵⁵	`xwæ mu	`xɑxɑ mɯ	xɑ ³⁵ mu ³³		yawn
*xwɑjɔ ¹	huɑi ¹ ; xuɑi ⁵⁵	xɑ ⁵³ , xɑ ³³ jw ⁵³	xɑjɔ	xua ³³ jɯ ⁵³		bird, sparrow
*(ju/zu)xwɑ ¹	zu ⁵⁵ xuɑi ⁵⁵			jy ³³ xua ⁵³	*hya SWID- DEN	paddy fields
			xwɑ	the ³³ xua ⁵³	Mand. 還 huán ?	return (a pen)
*xe			`dexɣɣɣ	khe ³³ xu ⁵³		cover / hide from view
*xexe ²	xɑ ⁵⁵ xɑ ⁵⁵ ??		`xɣɣɣ	xu ⁵³ xu ⁵³		lid / cover
*xui ¹	ʂɿ ⁵⁵ ma ⁵⁵	`fvme; xu ⁵³	`xwe	fu ³⁵	*swa	tooth
*mexui ¹	mɛ ⁵⁵ ʂu ⁵⁵			mɛ ³³ fu ⁵³		charcoal
*xu ¹		xu ³³ tʂhe ⁵³	fɯ	fu ³⁵	*r/g-wa ?	village
*xuibu ¹	fu ⁵⁵ bu ⁵⁵	`fvbv		fu ³³ bu ⁵³	*swa-n	onion / scallion
*xui ¹	fu ⁵⁵			fu ³³ khua ⁵³	*swa-n	garlic
*xui	ʂɿ ³³ ʂɿ ⁵⁵			fu ³³ fu ⁵³	*s-wa GO	walk
*xutʂ ^h e ¹	fu ⁵⁵ tʂhe ⁵⁵			fu ³³ tʂhu ⁵³	*kram	garden (plot)

3.8 Uvulars

Although contrastive uvular series are found in other Qiangic languages, in Lizu and Ersu they are rare. Sūn (1982b) notes that some initial velars are pronounced as uvulars in Ersu, especially in the case of older speakers, but did not find any place where uvulars and velars contrastive. In my own fieldwork in Mianning, I have only found one word with a contrastive uvular (**nq^ho** ‘silk’). Chirkova (2008:8) states that Kl. uvular stops are only contrastive before the rhyme [-o], and that all uvulars are derived historically from *velar + r clusters. This appears to be at least partly correct; see section 7.2.1 for the exact Proto-Ersuic environments where Kala uvulars developed.

3.9 *r

Most instances of Proto-Ersuic *r- have collapsed into [rə] or [ʂ] in Lizu. Sūn (1982b) and Huáng and Rénzēng (1991) both note variation between [əʔ] and [zɿ], which explains some of the various transcriptions seen here. In TBL there also seems to be [əʔ] ~ [ɣuʔ] variation, which I will treat as insignificant here.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ru(bu)/du ¹	ru ⁵⁵	əʔ ³³ bu ⁵³	ʔəʔbu	əʔ ³³ bu ⁵³ , du ³⁵	*g-run	horn
*ru ¹	ru ⁵⁵		əʔ	ne ³³ zɿ ⁵³ , ne ³³ ɣu ⁵³ əʔ ⁵³		shave (the head)
*riku/rik ^{hu} ¹	rguʔ; rɿ ³³ ku ⁵⁵	əʔ ³³ khu ⁵³	əʔk ^h o	əʔ ³³ khuo ⁵³	*g-rus	bone
*rAɬæ ¹	ra ⁵⁵ ra ⁵⁵		ʔəʔɬæ	ɣuʔ ³³ læ ⁵³	*g-ray GOD/COPULA	soul / spirit
*rAne,rAna ¹	ra ⁵⁵ ne ⁵⁵	rəna		əʔ ³⁵ na ⁵³		shadow
*tɕuru	əʔ ³³ tsu ³³ ru ⁵⁵	ʔtɕorə		tɕye ³³ fiæ ³⁵		footprint / track ⁴⁶
*ri ¹		rə; zɿ ³⁵	əʔmæ	zɿ ³⁵ , zɿ ³³ phæ ⁵³		road
*ri ²	rɿ ³³ zɿ ⁵⁵ , rɿ ⁵⁵ pha ⁵⁵	rə	ʔəʔp ^h æ	ɣuʔ ³³ ɣuʔ ⁵³		means / way
*(ri)ni ¹	ni ⁵⁵		əʔni	əʔ ³³ ni ⁵³	*s-ney	near
*(ri)sa ¹	(ʂeʔʂeʔ); (ʂe ⁵⁵)	(ʂe ³³ ʂe ⁵³)	əʔsa	əʔ ³³ sa ³⁵	*s-rin	LONG far / distant
*ri ¹		re ³⁵ , ru ³³ me ⁵³	əʔ	zɿ ³³ mæ ⁵³		fields (wheat etc.)
*rik ^h wæ ¹			əʔk ^h wa ‘cliff’	fiu ³³ khuæ ⁵³		rock
*riwu ¹			əʔvu	fiu ³³ wu ⁵³		cave / hole
*ri ¹	rəʔ; rɿ ⁵⁵	ʔrə; əʔ ³⁵	ʔzɿ	əʔ ³⁵	*r(y)a	laugh / smile
*re ¹	ve ⁵⁵ ??		-əʔ, dzɿæ ^ʔ	əʔ ³⁵	*rəy	water / soup
*mjare ¹			mjaəʔ	miæ ³³ əʔ ⁵³		tears (“eye-water”)
*stiu(d)zære ¹	su ⁵⁵ za ⁵⁵ ɣe ⁵⁵ , su ⁵⁵ za ⁵⁵ re ⁵⁵	kjrae	ʔtedzæ ^ʔ		*s-nap + *rəy	snot (liquid)
*beri ²	bɛʔrəʔ; bɛ ³³ rɿ ⁵⁵	ʔbəʔ; bu ³³ rə ⁵³	ʔbəʔ	bu ³³ ɣuʔ ³⁵	*s-b-ru:l	snake
*berA/burA	ʂe ³³ bɛ ⁵⁵ ra ⁵⁵	bu ³³ ra ⁵⁵		bu ³³ əʔ ⁵³	*g/p-rwak	ant
*riu ¹	roʔ; zɿ ⁵⁵ zɿ ⁵⁵	rə	zɿ	ɣuʔ ³⁵	*b-rəy	write
*-ro	na ⁵⁵ ro ⁵⁵			nəu ⁵³ əʔ ⁵³		rib
*re ¹	rɛʔ; re ⁵⁵		əʔ	khɯ ³³ ɣuʔ ⁵⁵ ɣuʔ ³¹		dry by fire, toast
*dere ¹	dɛ ⁵⁵ re ⁵⁵		ʔdeəʔ	de ³³ əʔ ³⁵		swell (of tissue)

⁴⁶The final syllable in ‘footprint’ may be the same root as the first syllable of ‘shadow’, but note that the vowels are different in Ersu. The syllable tɕo is suspiciously similar to Southwest Mandarin tɕo¹¹ ‘foot’.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*rat ^h a ¹	ra ⁵⁵ tha ⁵⁵		æ ^t h ^a	ə ¹³³ tha ⁵³	< Tib. rang 'thag	millstones

The initial [z_r-] instead of expected [r-] for Ersu ‘write’ may simply be the result of variation. Sūn (1982b) notes that Ersu **z** and **r** are in free variation in some words. Also, notice that Ersu ‘means/solution’ **r**¹**z**³³**z**⁵⁵ appears to be a reduplicated form, i.e. both syllables reflect the same root; if this is the case this is evidence for [z_r-] variation in a single form.

Ersu [ra] and its Lizu cognates are quite interesting: Kl. and Nq. retain the [r-], but the Mn. and TBL initials have become [ɣ-]. The Mn. forms underwent a further change: [ɣa] > [æ^t]. Thus, the three items ‘chicken’, ‘obtain’, and ‘remain’ all merged in Mn. according to these paths: ‘chicken’ *rwa > ɣwa > ɣa > æ^t, ‘obtain’ *ra > ɣa > æ^t, ‘remain’ *gwa > ɣwa > ɣa > æ^t.⁴⁷

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*rwa ¹	ra ¹ ; ra ⁵⁵	rwæ; ra ⁵⁵	æ ^t	yua ³⁵	*k-rak	chicken
*rA		`ræ	æ ^t -			yak
*rA ¹	ra ³³	firæ	k ^h æ ^t	ɣæ ¹³⁵	PLB *ra ³	obtain, get
*rA/ɣwA	ra ⁵⁵	`ɣwæ				shout, yell
*gwa ²			`neæ ^t	gua ⁵³		left over / remain

The final item, ‘shout’, is the only example of a potential correspondence between Ersu **r**- and Kl. **ɣ**-. Since there is no other reason to think that Ersu **r** < ***ɣ**, or that Kala **ɣ** < ***r**, the similarity between these two forms may be accidental.

3.10 Glottals

The only cognate sets with zero-initial (pronounced as glottal stop) have low vowels.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*æ ¹	A ¹ ; a ⁵⁵	`æ; æ ³⁵	a	æ ⁵³ , a ³³ duo ⁵³		I
*antɕ ^h æ ²	a ³³ ntɕha ⁵⁵			a ⁵³ ntɕhæ ⁵³		sieve / sifter

Words with initial [h-] in Lizu are pronounced with nasalized vowels (see Matisoff 1975 for more on the connection between glottality and nasality). It is possible to analyze this synchronically in two ways: (1) [h-] is allophone of [x-] before nasalized rhymes, or (2) vowels are allophonically nasalized after [h-]. The diachronic evidence hints that there may be multiple origins: looking only at Ersuic-internal data, the Nq. form for ‘bamboo’⁴⁸ has a voiceless nasal initial, pointing to

⁴⁷Thus, Mn. ‘chicken’ æ^t < PTB *rak, not *ar as a superficial examination would suggest!

⁴⁸The TBL form for Mn. also has a voiceless nasal initial, but the phonological inventory for the language does not include this segment as a possible initial.

influence from the initial consonant; whereas the TBL form for ‘hatch’ has the opposite, a nasal rhyme combining with a velar fricative [x-] initial. Looking at possible PTB roots suggests origins in [s-] prefixed *nasal initials, but it is unclear how these s+nasal combinations are different from the ones that yield preaspirated voiceless stops.

Ersu has changed all [h-] initials to [x-] with non-nasal vowels, with the exception of ‘smell’.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*lahē/lahō			`lahē	la ³³ hū ⁵³		musk
	nuA`k ^h u ^l ?		`nahō(hō)	na ³³ xuo ⁵³ xuo ³¹ , *s-nak nua ³³ xo ⁵⁵ xo ⁵³		dark
*t(w)ah(w)ā ¹	tud ⁵⁵ xud ⁵⁵		tahā	ta ³³ xā ⁵³	*s-r(y)ak 24-HOURS	tonight
*(h)æne	A`ne ^l		`hæne	hæ ³³ ne ⁵³		what
*hjē ¹		khe ³³ hi ⁵³	hjē	khe ³³ hi ³¹	*r/s-ŋ(y)a	borrow (tools)
*ts ^h ehī ¹	tshi ⁵⁵ xi ⁵⁵	ts ^h ehē	ts ^h ehī	tshe ³³ hi ⁵³	*s-niŋ	this year
*hī ²	xi ^l ; xi ⁵⁵	`hē; m̩i ⁵³	`hī	ŋi ⁵³		bamboo
*hjēmæ ¹	xi ^l , xi ^l ma ^l ; xi ⁵⁵ ma ⁵⁵		hjēmæ	hi ³³ mæ ⁵³		sister
*dehī ¹	xi ^l ; de ³³ xi ⁵⁵		dehī	de ³³ hi ⁵³	*s-min ?	ripe, cooked, done
*hīhī	xi ⁵⁵ xi ⁵⁵			hi ⁵³ hi ⁵³ la ³³ la ⁵³		smooth / glossy / sleek
*mehī ²	mi ³³ xi ⁵⁵			me ⁵³ hi ⁵³		chin
*hā ¹	ha ^l ; xa ⁵⁵ , xa ⁵⁵	hæ	hā	hiæ ³¹		have, exist (immovable)
*hō ¹	fu ⁵⁵ tsi ⁵⁵			hū ³³ tɕi ⁵³		pepper (hot) / chili
*hō ¹	fu ^l ; fu ⁵⁵	hū	hō	hū ⁵³		want / need
*hwō ¹	-ho ^l ; xo ⁵⁵		nehō	ŋuo ³³ hū ⁵³	*s-m-raŋ ?	stretch out (the arm)
*hwō	ho ^l		-hō			speech, language, dialect
*hēhē ¹	hi ⁵⁵ hi ⁵⁵		hēhē	te ⁵³ hū ⁵³ hū ³¹	*s-nam ?	smell
*dehē ¹	he ⁵⁵ , xe ⁵⁵	`dehỹ		de ³³ hū ⁵³	cf. Thai hǎ:m ?	fragrant (smell)
*hē ¹	xɛ ^l ; xɛ ⁵⁵	firǎ	hē	hū ⁵⁵	*g/s-məw ?	mushroom
*hē ¹	xɛ ⁵⁵		`hē	(ɣua ³³) ju ⁵³ khe ³³ xŋ ³¹	*s/r-go-ŋ ?	hatch / incubate
*behē/behī			`behē	be ³³ hi ⁵³		fly (n.)

Chapter 4

Rhymes

Rhymes in Proto-Ersuic are phonotactically quite simple, generally having the shape -(G)V, glide + vowel.¹ The glide can be **-j-**, **-w-**, or **-r-** (which often develops into rhotacization on the vowel); and the vowel can be nasalized, though this only occurs in a small fraction (approximately 2%) of the forms. Some syllabic nasals have developed in Zeluo Ersu, but these appear in only a small handful of forms. Thus, the task of reconstructing the rhymes of Proto-Ersuic mainly involves the reconstruction of the vowel system. Despite (or perhaps because of) this phonotactic simplicity, this task turns out to be quite complex.

The vowels reconstructed below are as follows:

i	iu	ui	u
je		wE	wo
e	ew		o
(w)æ	ja		(w)ɑ

This chart includes all glide + vowel combinations except for **-r-** and nasalized vowels, which are discussed in sections 4.2 and 4.3 below.

4.1 Vowel harmony and vowel reduction

4.1.1 Low vowel harmony

There is some limited evidence for front-back vowel harmony with the low vowels in Proto-Ersuic. In particular, the vowel in the ***a-** kinship prefix, ***ta-** ‘today’ prefix, and ***ja-** ‘yester-/last’ prefix will often match the front/backness of the vowel in the following syllable. This is especially interesting given that there is no contrast between front and back low vowels

¹In rare cases I reconstruct two glides, with **-r-** as the first one: **-rj-** or **-rw-**.

after palatals in these languages (e.g. between [jæ] and [ja]).²

The **-a* perfective suffix also shows vowel harmony with the preceding verb root. See section 6.1.3.

Examples of the **a-*, **ta-*, and **ja-* prefixes are given below. Note that reflexes of the rhyme **-iu* pattern with front vowels for purposes of vowel harmony.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*æbæ ²	A\ɓA; a ⁵⁵ ba ⁵⁵	`æpæ	`æbæ	æ ⁵³ bæ ⁵³		father
*æp ^h u ¹			ap ^h u	æ ³³ phu ⁵³	*pəw	grandfather
*tæniu ¹	tA\ɓo\; ta/ta ⁵⁵ no ⁵⁵		tæni	tæ ³³ nu ⁵³		today
*t(w)ah(w)ā ¹	tua ⁵⁵ xua ⁵⁵		tahā	ta ³³ xa ⁵³	*s-r(y)ak 24-HOURS	tonight
*taso ¹			taso ‘just now’	ta ³³ suo ⁵³	PLB *C-sok	morning
*janiu ¹	jA\ɓo\; je ⁵⁵ no ⁵⁵	`jæpi	jæni	jæ ⁵³ nu ⁵³	cf. Lahu yà?	yesterday
*jahāŋk ^h wo ¹		`jæxwæ ?	jahānk ^h o	ja ³³ ha ³³ nkhu ³⁵		last night
*ja(ji)hi ¹	ja\ɓi\; je ⁵⁵ xi ⁵⁵		jæhi	jæ ³³ hi ⁵³		last year

Evidence for vowel height harmony, on the other hand, is difficult to find. One candidate is the ‘after next’ prefix found in the first syllables of Ersu *ndʒi³³xi⁵⁵* ‘year after next’ and *ngɛ³³so⁵⁵* ‘day after tomorrow’, where the vowel in ‘year after next’ may have been raised -i, causing palatalization of the initial consonant from *ŋg-* to *ndʒ-*.

4.1.2 Prefixal vowel reduction/assimilation

As noted above (section 1.4), directional prefixes in Ersuic languages have an /-e/ vowel. However, transcriptions assigning full tones to these syllables (e.g. TBL *de³³gu⁵³* ‘get up’) belie the sesquisyllabic nature of verbs carrying these directional prefixes. This becomes apparent when we examine the wordlists, where often the vowel in the prefix assimilates in backness, rounding, and/or height with the following syllable. For example, in TBL, although a majority of forms with the *de-* ‘up’ prefix are transcribed with the -e vowel, there are also forms such as *do³³guo⁵³* ‘twist’ and *do³³tsu⁵³* ‘wear (a hat)’. Similarly, with the other prefixes there are forms such as *kho³³luo⁵³* ‘wait’, *kho³³nduo⁵³* ‘see’, *na³³pha⁵³* ‘break’, *tho³³mo⁵³* ‘old’, or *ŋo³³tshuo⁵³* ‘extract’. The Nq. and Ersu forms also show this kind of variation in the vowel transcriptions of the directional prefixes. Generally this does not cause problems in interpreting the data, but the

²For example, in Mn. the low vowel is usually back or central after palatals, but it can be fronted in cases of vowel harmony, as in *jæni* ‘yesterday’, *dzæny* ‘breast’, and *çæpæ* ‘pitiful’. In TBL the situation is the opposite, with the front vowel usually appearing after palatals (see section 4.13), but a back vowel in the forms *ja³³ha³³nkhu³⁵* ‘last night’ and *ja⁵³ka⁵³* ‘child’.

reader should be aware of this phenomenon and not be confused by the range of transcriptions for the limited set of directional prefixes.

A related phenomenon can be found in Mn., where the “half-syllable” of a sesquisyllabic form (often this is a reduplicated syllable) will have a reduced vowel. For example, the full vowel **o** in **ts^ho** ‘person’ is reduced to **u** in **ts^humo** ‘old man’ and **ts^huk^hwa** ‘adult’. Some of the forms with reduced first syllables in Mn. are listed below. In the cognate sets presented in this chapter, the vowels in such syllables should not be considered exceptional, but rather the result of a productive process of vowel reduction in sesquisyllabic forms.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*mbro	ja ^h bo ^h ; ja ³³ nbo ⁵⁵	nbənbə; bo ³³ mbo ⁵³	mbzɪmbzɔ	bo ⁵³ nbo ⁵³	*m-raŋ	high / tall
*ŋgrɑŋgrɑ ¹	ndzɛ ³³ ndzɛ ⁵⁵	`ng ^ʁ ang ^ʁ a	ŋgɣŋgæ ¹	nga ³³ nga ⁵³		shake / shiver
*muimui ¹	ma ¹⁵⁵ ma ¹⁵⁵		`deməmwe	ne ³³ mu ⁵³ mu ³¹	*s-mi:t	close (the mouth)
*yuiyui	zɪ ^h zɪ ^h ts ^h A ^h ts ^h A ^h ; ja ³³ zɪ ⁵⁵		yuywe		*lway ?	easy
*dzjɛdzjɛ ²	dzi ⁵⁵ dzi ⁵⁵		`dzidzɣ	dze ⁵⁵ dze ⁵³	*m-ti-s or *dz(y)im	wet
*bjɛbjɛ ¹		dze ³³ dze ⁵³ , dzi ³³ dzi ⁵³	bzibze	bze ³⁵	*byam	fly (v.)
*zæzæ ¹	zA ^h zA ^h ; za ⁵⁵ za ³³		zizæ	zæ ³³ zæ ⁵³		tender, young (plant)
*k ^h æk ^h æ ¹			k ^h ik ^h jæ	khæ ³³ khæ ⁵³		separate, other
*kækæ ¹	ka ⁵⁵ ka ⁵⁵		kikjæ	kæ ⁵³ kæ ⁵³		fight
*soso ¹	so ^h so ^h ; so ⁵⁵ so ⁵⁵		suso	suo ³³ suo ⁵³ , suo ³⁵		learn, teach
*ywoywo ¹	va ¹⁵⁵ va ¹⁵⁵		`wuwo	yu ³³ yu ⁵³		help

4.2 r-colored vowels

We start our in-depth discussion of Proto-Ersuic rhymes with rhymes containing *-r-. The rhymes that can be reconstructed with a medial -r- form a subset of the rhymes above:

ri	riu	(ui)	ru
re			ro
ræ			ra

Strictly speaking, the rhyme reconstructed as *-ui might not actually coöccur with *-r-, but it has been included here since it at least develops into rhotic elements in Ersu, and because its distribution with respect to initial consonants (it only appears following bilabials and velars) is similar to the other rhymes in this section.

All the Ersuic languages that have been described have rhotic vowels in their inventories. Rhotic vowels appear to be an areal phenomenon with a geographic distribution reaching, e.g., Harbin (Mandarin) in the northeast, the Qinghai/Gansu area in the northwest, and Naxi-speaking territories in the southwest.³

The number of rhotic vowels in Ersuic ranges from one (ə̃) in Chirkova's description of Kala to supposedly five (ə̃¹ u¹ o¹ a¹ æ¹) in TBL. However, the transcriptions in TBL are not particularly consistent: 'skin', for example, is variously transcribed as **nga³³pi⁵³**, **n-gə³⁵**, and **nga³³pi³¹**; 'road' is **zɿ³³phæ⁵³**, but 'one day's journey' (presumably including the morpheme for 'road') is (**te⁵³**) **nu⁵³ fiu³³phæ⁵³**. In interpreting the TBL transcriptions below, I will assume that ə̃¹, u¹, yu¹, and fiu¹ are all equivalent.

4.2.1 *-ri

env.	Ersu	Kl.	Nq.	Mn.	TBL
P __	e ¹ /a ¹ ; a ¹	ə̃, ræ	i	ə̃ ¹	u(ˀ)
K __	(z)ɿ	(z)ɿ	ə̃ɿ/(z)ɿ	(z)ɿ̃	ə̃ ¹ /(z)ɿ
# __	rə; rɿ	rə	ə̃ɿ/rə/zɿ	ə̃ ¹	ə̃ ¹ /zɿ

There are three sets of forms with r-colored vowels where it seems best to reconstruct some rhyme with a high vowel. For the first set I reconstruct *-i:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*mri ¹	ja ³³ ma ⁵⁵	mræ	mə̃ ¹	mu ³³ mu ³⁵		tasty / delicious
*pri	-pe ^ɿ ; pa ⁵⁵	`pə̃ 'grain'; nu ³³ pi ⁵³ 'peas'	-pə̃ ¹	(te ³³) pu ³¹		classif. small round obj.
*mp ^h ri ¹	su ¹ mo ¹ lnp ^h a ^ɿ 'cremate'		mp ^h ə̃ ¹			burn, singe
*kri ¹	tɿ̃; tɿ̃ ⁵⁵	`tɿ̃; kə̃ ⁵⁵	`tɿ̃sɿ ^h e	kə̃ ³⁵	PLB *ʔgrəy ¹	star

³Languages outside this area that have rhotic vowels include North American English and Badaga (see Emeneau 1939).

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*kri ¹	tʂɿ ⁵⁵	khə ³³ kʷɿ ⁵³	`tʂi	ne ³³ tʂɿ ⁵³ , tʂɿ ⁵³		bite
*dekri		de ³³ kəɿ ⁵³	`detsitʂi	de ³³ dʒɿ ⁵³	*m-tsik ?	itch
*t ^h egri ¹		the ³³ dʒɿ ⁵³ , the ³³ kəɿ ⁵³	k ^h edʒi	the ³³ dʒɿ ⁵³	*gra	hear
*ri ¹	rəɿ; rɿ ⁵⁵	`rə; əɿ ³⁵	`zɿ	əɿ ³⁵	*r(y)a	laugh / smile
*neri	nɛɿrəɿ; nɛ ⁵⁵ rɿ ⁵⁵			næ ⁵³		you (pl.)
*ri ¹		rə; zɿ ³⁵	ə ¹ mæ	zɿ ³⁵ , zɿ ³³ phæ ⁵³		road
*ri ²	rɿ ³³ zɿ ⁵⁵ , rɿ ⁵⁵ phɔ ⁵⁵	rə	`ə ¹ p ^h æ	ɣu ³³ ɣu ⁵³		means / way
*ri ¹		re ³⁵ , ru ³³ me ⁵³	ə ¹	zɿ ³³ mæ ⁵³		fields (wheat etc.)
*beri ²	bɛɿrəɿ; bɛ ³³ rɿ ⁵⁵	`bə ^ə ; bu ³³ rə ⁵³	`bə ¹	bu ³³ ɣu ³⁵	*s-b-ru:l	snake
*mjari/meri ¹	mia ⁵⁵ rɿ ⁵⁵		mə ¹	mu ³³ fiu ³⁵	*r-ma + *ri GLEET	sore / boil
*riku/rik ^h u ¹	rguɿ; rɿ ³³ ku ⁵⁵	əɿ ³³ khu ⁵³	ə ¹ k ^h o	ə ¹ 33khuo ⁵³	*g-rus	bone

The forms with bilabial initials are placed here somewhat tentatively and require some special notes. The Ersu reflexes mostly have a rhotacized low vowel. The form for ‘small round object’ is presumed to descend from *pri based on the high front vowel in Nq., and ‘tasty’ and ‘burn/singe’ are placed in this set based on its similarity with ‘small round object’. Furthermore, *mri ‘tasty’ forms a minimal pair with *mræ ‘arrow’ (see below, p. 83).

The form for ‘hear’ could potentially be reconstructed with the *-iu rhyme (next section) based on the Lizu data (because there is no Ersu form), but it has been placed here since the PTB root is < *-a, not *-əy like the forms in the next section. Similarly, ‘road’ has no Ersu form, but has been placed here since it seems related to ‘means/solution’ and possibly ‘field’, where the Ersu forms point to *-i.

The forms for ‘snake’ and ‘sore (n.)’ appear to be original disyllabic forms which have coalesced into monosyllables in Mn. The Qs. Ersu rguɿ ‘bone’ also appears to be a fused form, apparently with a metathesized r-.

Note the variation between zɿ and ə¹ (in ‘laugh’ and ‘road’). TBL describes an almost identical variation between [ə¹ ~ zəɿ] (Huáng and Rénzēng 1991:137).

4.2.2 *-riu

Ersu	Kl.	Nq.	Mn.	TBL
zɿ	zɿ, rə	ə ¹	zɿ	ə ¹

The following set is distinguished from the above set solely by the reflexes in Ersu, where after velars, the forms above have the rhyme -ɿ and the ones below have the rhyme -o. For this set I

reconstruct a diphthong *-iu, with a rounded offglide, to account for the round vowel in Ersu.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*kriu ²	tʂo ⁵⁵	`tʂɿ	`tʂi	kə ⁵³	*krəy, PLB *ʔgrəy ¹	gall bladder
*kriu(ju) ¹	tʂoɿ; tʂɿ ⁵⁵ tʂo ⁵⁵		`tʂijy	kə ³³ ji ⁵³		frost
*ŋgriupje ¹	ndzɔ ⁵⁵ pi ⁵⁵	ndzɿ; ngəɿ ³³ phi ⁵³	`ndzɿpi; ʃtʏpe-`ndzɿpi 'lip'	nga ³³ pi ⁵³ , n-gə ³⁵ ; ku ⁵³ pe ⁵³ nga ³³ pi ³¹ 'lip'	PLB *m-k-rəy	skin
*riu ¹	roɿ; zɔ ⁵⁵ zɔ ⁵⁵	rə	zɿ	yu ³⁵	*b-rəy	write

4.2.3 *-ru

env.	Ersu	Kl.	Nq.	Mn.	TBL
p ^h ___	o		ʂə	ʂɸ	zɿ
b ___	u	o		zɸ	u
# ___	ru	-	əɿ	ə ¹	ə ¹

For the third high-vowel set I reconstruct *-u. This reconstruction is relatively straightforward for the forms with bilabial stop initials, where the Lizu forms mostly have high back rounded vowels; for the forms with *r- initials, I reconstruct *ru based on the Ersu forms.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*p ^h ru				ʂæ ⁵⁵ phzɿ ⁵³	PLB *ʔ-blɿ ¹	porcupine
*mp ^h ru ¹	npho ⁵⁵	tʂhə ³³ su ⁵³	`mpʂ ^h ɸ	nphzɿ ³⁵ , ntʂhɸ ³⁵	*r-kəw	steal
*mp ^h ru ¹			ntʂ ^h ɸ	nphzɿ ³⁵		steam (v.)
*mp ^h ru			`mpʂ ^h ɸ	ntʂhɸ ³³ tʂæ ⁵³		bamboo steamer
*p ^h ru			`mjapʂ ^h ɸ, `mjatʂ ^h ɸ		PLB *p(l/y)u:ŋ ² (MLBM 62)	face
*bru	buɿ; bu ³³	-bo	-bzɸ	(te ³³) bu ³¹		flock (of sheep)
*bru ²	dzɿ ³³ ??		`bzɸ			tendon
*(ji)mbru ²	bzɿɿ		`yajimbzɸ	ji ⁵³ nɸu ⁵³	*m-bruŋ ɤ *m-bruk; < WT ɸbrug?	dragon
*tʂuru	ə ³³ tsu ³³ ru ⁵⁵	`tʂorə		tʂye ³³ fiæ ³⁵		footprint / track
*ru ¹	ru ⁵⁵		ə ¹	ne ³³ zɸ ⁵³ , ne ³³ yɿ ⁵³ əɿ ⁵³		shave (the head)
*ru(bu)/du ¹	ru ⁵⁵	əɿ ³³ bu ⁵³	`ə ¹ bɸ	ə ³³ bu ⁵³ , du ³⁵	*g-ruŋ	horn

Note that in TBL, *-r- has developed into [zɿ] after the voiceless bilabial stops, but has disappeared after the voiced stops.

4.2.4 *-re

For mid vowels we can reconstruct a front *-e and a back *-o. First, we look at *(-)re:

env.	Ersu	Kl.	Nq.	Mn.	TBL
b __	ə ¹ ; a ¹	ø	e	zɛ	u ⁽¹⁾
# __	rɛ	ræ	-	ə ¹	ə ¹

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*nebre ¹	bə ¹ ŋi ¹ ; ba ¹⁵⁵ ŋi ¹⁵³ ‘rest’	nebø	nebʒɛ	ŋe ³³ bu ¹⁵³		tired, fatigued
*mbre ¹	nba ¹⁵⁵	se ³³ mbe ⁵³		se ³³ nbu ⁵³		root
*re ¹	rɛ ¹ ; rɛ ⁵⁵		ə ¹	khw ³³ ɣu ¹⁵⁵ ɣu ¹³¹		dry by fire, toast
*dere ¹	dɛ ⁵⁵ rɛ ⁵⁵		ˈdeə ¹	de ³³ ə ¹³⁵		swell (of tissue)
*mbere ²	mbe ³³ rɛ ⁵⁵			na ⁵³ nbə ¹⁵³	*ba-y	cheek
*re ¹	vɛ ⁵⁵ ??		-ə ¹ , dzjæ ¹	ə ¹³⁵	*rəy	water / soup
*mjare ¹			mjaə ¹	miæ ³³ ə ¹⁵³		tears (“eye-water”)
*stiu(d)zære ¹	su ⁵⁵ zɑ ⁵⁵ ɣɛ ⁵⁵ , su ⁵⁵ zɑ ⁵⁵ rɛ ⁵⁵	kjɾæ	ʃtedzæ ¹		*s-nap + *rəy	snot (liquid)
*ware/ɣare ¹			wæ ¹	ɣa ³³ ə ¹³⁵		liquor (yellow rice / millet / Shaoxing)

The last four examples above are all examples of WATER. E.g. ‘tears’ = “eye water”, ‘snot’ = “nose water”. In the Mn. forms for ‘snot’ and ‘rice wine’, it seems that the ‘water’ component has merged with and rhotacized the preceding syllable (e.g. **dza** + ə¹ > **dzæ¹**).

The TBL reflex of *re seems to be -ə¹ (note that the two syllables of ‘cheek’, as evidenced by Ersu, seem to have coalesced into one).

Mn. also has -ə¹ except for the one form with a bilabial stop initial, ‘tired’, which has -zɛ.

Ersu has a rhotic vowel in the form for ‘tired’, and rɛ as the usual reflex of *re. Note the variation between r- and velar fricative ɣ- in the last syllable of ‘snot’. More perplexing is the Ersu form vɛ⁵⁵ ‘water/soup’, which shows up as part of the compound ɣ¹⁵⁵vɛ⁵⁵ ‘meat soup’ in Sūn 1982b:260. The v- initial is unexpected here, since Ersu v- should correspond with Lizu w- or ɣ(w)-.

4.2.5 *-ro

env.	Ersu	Kl.	Nq.	Mn.	TBL
p ^h __	o	re	-	ʂo	zu
b __	o	ø	o	zɔ	o ⁽¹⁾
# __	ro	-	-	-	ə ¹

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*tsip ^h rjo/ ts ^h ip ^h rjo ²	ts ^h ɿ ^h p ^h o ¹ ; tsɿ ⁵⁵ pho ⁵⁵		ᵛts ^h ip ^h ɕo	tshe ⁵³ phzɿ ⁵³		age
*mp ^h rozæ ¹	pho ⁵⁵ za ⁵⁵ 'husband'	p ^h rezæ	mpɕ ^h ozæ	nphzɿ ³³ zæ ⁵³	PL *m-lan/plan ¹ 'husband' (PL 217)	young lad / chap
*debro ¹			debzɔ gɣ	de ³³ boɿ ⁵³	PKC *puar	feel bloated (stomach)
*m(b)ro ²	boː; nbo ³³	ᵛnbɔ; mbe ³³ qhɿ ⁵⁵	ᵛmbzɔ	nbo ³⁵	*k-m-raŋ	horse
*mbro	ja ^h boː; ja ³³ nbo ⁵⁵	nbɔnbɔ; bo ³³ mbo ⁵³	pæmbzɔ, mbzɿmbzɔ	bo ⁵³ nbo ⁵³	*m-raŋ	high / tall
*mbro ¹	nbo ⁵⁵ si ⁵⁵			nbo ³³ wu ⁵³		willow
*ado(ri) ¹			ado (incl.)	a ³³ do ³⁵		we
*-ro	na ⁵⁵ ro ⁵⁵			na ⁵³ ɿ ⁵³		rib

In Ersu and Nq., medial **-r-** is lost; in TBL it becomes [z] after voiceless initials, a rhotic vowel after voiced initials. TBL 'age' and 'husband' have unexpected high vowels.

The form for 'we (inclusive)' is phonotactically unusual because it appears that an **-r-** medial appears after a dental stop (all the other examples with medial **-r-** have bilabial or velar initials). The form is included here solely based on the rhotic vowel in the TBL form.

4.2.6 Indeterminate mid/high after *r

There are also some rhymes, appearing in the second syllables of the Lizu forms below, whose reconstructions at the Proto-Ersuic level (assuming they go back that far) are indeterminate between high and mid vowel because there are no recorded Ersu cognates:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*k ^h arV ¹			k ^h aɿ ¹	kha ³⁵ ɿ ⁵³		walnut
*lirV ¹			liɿ ¹	li ³³ ɿ ³⁵	< MC lij 梨 ?	pear ⁴
*mukr(w)V ¹		mu ³³ kəɿ ⁵³	mək ^w ɿ ¹	mu ³³ kəɿ ⁵³	*r-may ɰ *r-mey ɰ *r-mi	tail

⁴A comparison to the Mandarin diminutive suffix **-er** is tempting here, but to my knowledge the local Mandarin forms for 'walnut' and 'pear' (**xɛ²²t^hau²²** and **li²²tsɿ⁵⁵**) do not have this suffix.

4.2.7 Low vowels after *r

It is possible to reconstruct two low vowels, front *-æ and back *-ɑ. There are only a few examples of *-ræ:

env.	Ersu	Kl.	Nq.	Mn.	TBL
P __	ə ¹ ; a ¹	ræ	e	zæ	æ ⁽¹⁾

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*præ ¹	pa ⁵⁵ dua ⁵⁵	`depræ	depsæ	pa ⁵³ la ⁵³		arrive
*debræ ¹	bə ¹ ʎ	`debræ; de ³³ be ⁵³	bzæ	de ³³ ba ⁵³	*b(w)ar ɤ *p(w)ar	burn

On the other hand, there are quite a few examples for *-rɑ. These can be distinguished from *-ræ based on (1) the TBL forms, where the vowels above are æ⁽¹⁾ while the vowels below are a⁽¹⁾; and (2) the Mn. forms, where after bilabial stops the -r- has become a medial fricative above but r-coloring on the vowels below. Note that whereas TBL transcribes r-coloring inconsistently, both Mn. and Ersu reflect *-r- faithfully (with Ersu yielding retroflex affricates after original velar stops).

env.	Ersu	Kl.	Nq.	Mn.	TBL
P __	ə ¹ ; a ¹	ræ	ɐɪ	æ ¹	a ⁽¹⁾
K __	zɛ/ua ¹	(ɤ)ɑ	a	æ ¹	a ⁽¹⁾

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*p ^h ra ²			`p ^h æ ¹ , dzæp ^h æ ¹	pha ⁵³	*pwa:y	chaff / bran
*bra ¹			nts ^h abæ ¹	tsh ¹ ba ⁵³		cane / vine
*debra ¹	bə ¹ ʎ; da ³³ ba ⁵⁵	de ³³ bɐɪ ⁵³	debæ ¹	de ³³ ba ⁵³	*bliŋ	full
*bra ¹	pɕɪ ¹ ?	`bræ	bæ ¹ , bæ ¹ jo	ba ¹³⁵		rope / string
*mbra ¹	bə ¹ ʎ; nba ¹⁵⁵	nɐɪ ⁵⁵	`mbæ ¹	nba ¹³⁵		urine
*mbra ¹	bə ¹ ʎ		mbombæ ¹ , mbzɪmbzæ	de ³³ nba ¹⁵³	Lahu bù < *mbwa	loud
*mra ¹	ma ¹⁵⁵	maɪ ⁵⁵ , mɐɪ ³³ ʂ ⁵³	`mæ ¹	ma ¹³⁵	*m-la-y	bow / arrow
*dek ^h ra ¹	dɛ ¹ ts ^h ??; tʃhi ⁵⁵ ??	de ³³ kha ⁵⁵	dek ^h æ ¹	de ³³ kha ⁵³	*b-ka	bitter, salty
*kra	-tʂɛ ¹ ; tʂɛ ⁵⁵		-kæ ¹	(tɛ ³³) ka ³¹		catty (= 1/2 kilogram)
*kra ²	tʂɛ ¹	`qa	`kæ ¹	ka ¹⁵³		scales, steelyard
*htʃiukra ²	htʃo ³³ tʂɛ ⁵⁵		`ʂtʂikæ ¹	ʂu ³³ ka ⁵³		fart
*jakra	ja ⁵⁵ dʒɛ ⁵⁵	`jæqa		ja ⁵³ ka ⁵³		child
*ŋgrɔŋgra ¹	ndʒɛ ³³ ndʒɛ ⁵⁵	`ng ^ɥ ang ^ɥ ɑ	ŋgɥŋgæ ¹	nga ³³ nga ⁵³		shake / shiver
*sɛŋgra ¹			sɛŋgæ ¹	se ³³ nga ⁵³		trunk

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*-ŋgra ²	tsu ³³ ndzɛ ⁵⁵		`lanɣæ ¹	luo ³³ nga ⁵³		pestle
*ŋgra ²		`nɣ ¹ a		nga ⁵³		kill (a person)
*yra/ge ¹	xa ⁵⁵	`ɣa; gɛ ³⁵	ɣɣ	ɣu ³⁵ , ɣa ³⁵	*k-rap	needle ⁵
*ŋra ²	ŋa ¹ ↓; ŋua ¹³³	fiā; ɛ ⁵³ ?	`ŋæ ¹	ŋa ⁵³	*l/b-ŋa	five
*denra ¹	ŋua ¹⁵⁵		denɣæ ¹	de ³³ ŋa ⁵³	*s-ŋ(y)a FISH	stinky, fishy-smelling

Note that the Kala uvulars above seem to have developed from velar + **r** before the low back vowel.

Ersu ‘rope’ may not be cognate with the Lizu forms, but the bilabial initial and rhotic element in the rhyme is nevertheless suggestive of some relationship.

The Ersu word for ‘bitter/salty’ is almost certainly not cognate with the Lizu, nor does it seem to descend from PTB *ka; I have included it for reference. Perhaps it is related to ‘salt’, though it is not homophonous (**tshɿ**³³ in Zl. Ersu).

The following forms can be reconstructed with initial ***r** and a low vowel, but it is unclear if it is a front or a back vowel. If we simply assume the Ersu form reflects the protolanguage, we could assign a front vowel to the final syllable of ‘ant’ and a back vowel to the most of the remaining forms, but there is not enough data to make any claims with confidence.

env.	Ersu	Kl.	Nq.	Mn.	TBL
# —	ra	ræ	ra	æ ¹	ə ¹

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*berA/burA	ʂe ³³ be ⁵⁵ ra ⁵⁵	bu ³³ ra ⁵⁵		bu ³³ ə ¹⁵³	*g/p-rwak	ant
*ht(w)arA ²	htua ³³ ra ⁵⁵		ʃtæ ¹	ta ⁵³ ə ¹⁵³	*m-liŋ	neck
*wurA/wærA ¹	vu↓ra↓; vu ³³ ra ⁵⁵		wæ, wæə ¹	ɣua ³³ fiæ ¹³⁵		cloth
*rAɬæ ¹	ra ⁵⁵ ra ⁵⁵		`əɬæ	ɣu ¹³³ læ ⁵³	*g-ray GOD/COPULA	soul / spirit
*rAne,rAna ¹	ra ⁵⁵ ne ⁵⁵	rəna		ə ¹³⁵ na ⁵³		shadow
*rA ¹	ra ³³	fira ^ẽ	k ^h eæ ¹	ɣæ ¹³⁵	PLB *ra ³	obtain, get
*lak ^h a/lok ^h a ¹			lak ^h a k ^h eæ ¹	luo ³³ khua ⁵³ ə ¹³¹		wound
*rA		`ræ	æ ¹ -	‘get hurt’		yak

The second syllable of ‘guest’ and ‘elbow’ (below) also can be reconstructed with an indeterminate low vowel (but note that the second syllable in TBL ‘guest’ appears not to be cognate). They are listed separately from the forms above because they do not have ***r**- initials, unlike the examples above.

⁵This root has two variants in Proto-Ersuic; see also p. 112.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*wra ¹	k ^h ɛ̃ və ¹ ; nda ⁵⁵ va ⁴⁵³		`ndæ ¹ wæ ¹	da ³³ wu ⁵³		guest
*lekrwa ²	le ³³ kua ⁴⁵⁵ tʃhu ³³		`lakwə ¹ ts ^h ɰ (v.)			elbow ⁶

There are also a few forms that look like they might descend from *ræ/ra, but in fact do not. These were discussed in section 3.9, but are worth repeating here:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*gwa ²			`neæ ¹	gua ⁵³		left over / remain
*rwa ¹	ra ; ra ⁵⁵	rwæ; ra ⁵⁵	æ ¹	yua ³⁵	*k-rak	chicken

‘Remain’ is reconstructed as *gwa, with a stop initial; and *rwa ‘chicken’ has a *-w- medial.

4.2.8 *-ui

Ersu	Kl.	Nq.	Mn.	TBL
zɿ/a ¹ /ua ¹	ɿ	u	we	u

Finally, we have a set of forms where the Lizu reflexes simply have high back rounded vowels (or diphthongs in Mn.⁷), but the Ersu forms indicate the presence of some rhotic element. For these I tentatively reconstruct *-ui and analyze the rhotacization in Ersu as secondary: rhotacization could have arisen through a pathway such as, e.g., **ui** > **yj** > **ɔj** > **əɿ/ɿ**, where rounding was reinterpreted as rhoticity.⁸ Also note the word for ‘Tibetan’, which appears to be an old loan from Tibetan **bod** that ended up with this rhyme (perhaps because of the coronal final consonant⁹) and the subsequent regular sound changes in all the daughter languages.

Under this analysis, Mn. is conservative, other Lizu dialects have glide preëmption, and Ersu has gone in another direction with its rhotic-rhyme development. However, notice that there is evidence of some variation between diphthong and r-colored vowel in Mn. in the form for ‘feather/body hair’.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*k ^h ep ^h ui ¹		khə ³³ phu ⁵⁵	p ^h we	khe ³³ phu ⁵³	cf. Lahu phe	tether (a cow)

⁶The final syllable in the Mn. form means ‘knock/strike’. The final syllable in the Ersu form does not appear to be cognate since it has an alveopalatal, not a dental, initial; it may be related to the final syllable in Lahu **lâ?mē-cu** ‘elbow’.

⁷In fact, although these rhymes in Mn. are phonemically transcribed as /-we/, there is not much rounding in the glide, so it is phonetically closer to [-uɸe] or [-uɸi]. Combined with aspiration, a form that is phonemically /p^hwe/ would be realized as something like [p^heʔ].

⁸Compare, for example, Cantonese-American speakers who use syllabic [ɿ] for phonemic /œ/, e.g. ‘foot’ /kœ:k³³/ as [kɿk³³].

⁹In Lhasa Tibetan, for example, coronal final consonants caused back rounded vowels to become fronted, so WT **bod** > Lhasa ¹p^hœ.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*p ^h ui ¹	p ^h ʂɿ̃; p ^h ʂɿ̃ ⁵⁵		p ^h wehō (~ lg.)	phu ⁵³	WT bod	Tibetan
*(ji) mui ¹	(k ^h A) mə ^ʔ ɿ̃ 'sleep'; ma ^{ʔ55}		jimwe ɲɤ, jimwe dedzɿ̃	ji ³³ mu ⁵³ ku ³³		doze / nod off
*mui ²	mi ¹ lmæ ^ʔ ; ma ^{ʔ55}	`mv; mu ⁵³	`mwe, `mə ^ʔ	mu ⁵³	*s-mul	feather, hair (of body)
*stiumui ²	su ⁵⁵ ma ^{ʔ55}		`stimwe	ku ⁵³ mu ⁵³		beard / moustache
*muimui ¹	ma ^{ʔ55} ma ^{ʔ55} (‘close eye’)		jiba `demumwe	ne ³³ mu ⁵³ mu ³¹	*s-mi:t	close (the mouth)
*jimui ¹			jimwe 'sweet ~'	ji ³³ mu ⁵³		buckwheat
*k ^h ui ¹			ʂtintʂ ^h i k ^h we	(ti ³³ nhæ ⁵³) khu ³¹		blow (one’s nose)
*k ^h uija			`k ^h weja, `k ^h wæ	khu ³³ jæ ⁵³		under
*k ^h ui ¹		khu ⁵³	k ^h we, k ^h ɤ	ne ³³ khu ⁵³		pluck (flowers)
*gui ¹	dʒɿ̃; dʒɿ̃ ⁵⁵	`gv	`gɤ, `gwe	(te ³³) gu ³¹ , gu ³³ sua ⁵³ 'send mes- sage'		speech, phrase, words
*dengui ¹	dɛ̃ndʒɿ̃ɿ̃ 'change'; ndʒɿ̃ ⁵⁵ ndʒɿ̃ ⁵⁵		ɲgweɲgwe, ɲgɤ	ne ³³ ngu ⁵³ ngu ³¹		exchange
*leɲgui ²	le ³³ ngua ^{ʔ55}		`liɲgwe	le ³³ ngu ⁵³		ring ¹⁰
*xui/ɲui ¹	hə ^ʔ ?; xa ^{ʔ55} ?	ɲo~ɲo; ɲue ³³ mo ⁵³	ɲwe, ɲwemo	ɲu ³³ mu ⁵³	*d/g-wam	bear (n.)
*ɲui ¹	ɲA ^ʔ ; ɲua ^{ʔ55}	ɲu; ɲu ⁵³	ə ^ʔ ɲwe	ɲu ³⁵	*d-ɲul	silver
*ɲui ²	ɲA ^ʔ ; ɲua ^{ʔ33}	`ɲu	`ɲwe	ɲu ⁵³	*ɲwa	cattle, cow
*ɲuimæ			`ɲwemæ	ɲu ³³ mæ ⁵³		cattle (common, female)
*xui ¹	ʂɿ̃ ⁵⁵ ma ^{ʔ55}	`fvme; xu ⁵³	`xwe	fu ³⁵	*swa	tooth
*xui	ʂɿ̃ ³³ ʂɿ̃ ⁵⁵			fu ³³ fu ⁵³	*s-wa GO	walk
*ɣuiɣui	ɰɿ̃ɿ̃ ^ʔ ts ^h A ^ʔ ts ^h A ^ʔ ; ja ³³ ɰɿ̃ ⁵⁵		ɣɤɣwe		*lway ?	easy
*deɣui ¹	ɰɿ̃; ɰɿ̃ ⁵⁵	`k ^h ev	`de(ɣ)we, `devɤ	de ³³ vu ⁵³	*gwa-n	wear (a garment)
*ɣui ¹	ɰɿ̃; ɰɿ̃ ⁵⁵	v; wu ³⁵	(ɣ)we, vɤ	vu ³³ ji ⁵³ ‘go buy’	*rey	buy
*ɣuini/ ɣuindzA ¹	ɰɿ̃ ³³ ɲi ³³		ɣɿ̃ndza	ɣu ³³ ɲi ⁵³ ɣu ³³ ndzæ ⁵³		relatives

Note that the Ersu forms for ‘speech/words’ and ‘exchange’ above have alveo-palatalized initials, not retroflexed initials as one might expect from an **-r-** medial. The form for ‘ring’ is different in

¹⁰The **ng** in the Ersu and TBL forms represents [ɲg].

yet another way, since it has a rhotic vowel while maintaining a velar place of articulation for the initial. Perhaps there are multiple proto-rhymes here; or perhaps these alternates are due to variation or dialect borrowing.

Ersu ‘bear’ has a fricative initial, in contrast to the Lizu nasal initial. In the other Ersu forms with Lizu cognates starting with velar nasals (‘silver’ and ‘cattle’), Zeluo Ersu seems to have some secondary labiovelarization (the **-u-**).

A small number of forms seem to match the correspondences above, except that Ersu has the rhyme **-u**, i.e. with no rhotic element. All of these except for one, the root common to ‘garlic’ and ‘onion’, have voiceless unaspirated velar stop initials, and thus are in complementary distribution with the set above (whether this is a plausible conditioning environment is another question entirely). The ‘onion/garlic’ exception in Ersu is a bit troublesome, since we can’t explain it as a loanword from Nuosu (the Nuosu word for ‘garlic’ is **ka³³si³³**, and ‘onion’ is **yo³³thu³³**; see Mǎ et al. 2008). Note also that the Lizu forms are identical to the Lizu forms above for ‘tooth’ and ‘walk’, as are the PTB reconstructions. Perhaps the Ersu forms can be explained as dialect borrowings/variation here as well.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*hkui ¹	hku ⁵⁵		xkwe ‘herd’	zuo ³³ ŋuo ⁵³ ku ⁵³		herd, put out to pasture
*kui ¹	ku ⁵⁵		`kũ, `kwe	de ³³ ku ⁵³		scoop up (water) / ladle
*xui ¹	fu ⁵⁵			fu ³³ khuae ⁵³	*swa-n	garlic
*xuibu ¹	fu ⁵⁵ bu ⁵⁵	`fvbv		fu ³³ bu ⁵³	*swa-n	onion / scallion

4.3 Nasalized vowels

The set of rhymes that can be nasalized is a small subset of the Proto-Ersuic rhyme inventory (*-ũ appears only in loanwords):

ĩ	(ũ)
jẽ	wõ
ẽ	õ
	ã

The forms listed below are those that are straightforwardly reconstructible with nasalized rhymes; almost all are reconstructed with initial *h-. Other forms where it may be possible to reconstruct nasalized vowels will be discussed in separate sections below. Note that Ersu has lost nasalization on vowels completely.

As noted in section 3.10 above, it is possible to analyze nasalization as allophonic after initial h-, or initial h- as an allophone of x- before nasal rhymes. However, it is not necessary for our purposes to choose the “best” phonemic analysis; for these forms I will simply reconstruct a nasal final with an *h- initial, leaving open the possibility that the origins of initial *h- and/or nasalized vowels may have nothing to do with *x- at all (see for example the various reflexes for ‘bamboo’).

There are five distinct roots that can be reconstructed as *hĩ: ‘smooth’, ‘ripe’, ‘year’, ‘chin’, and ‘bamboo’:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*hĩhĩ	xi ⁵⁵ xi ⁵⁵			hi ⁵³ hi ⁵³ la ³³ la ⁵³		smooth / glossy / sleek
*dehĩ ¹	xi ^l ; de ³³ xi ⁵⁵		dehĩ	de ³³ hi ⁵³	*s-min ?	ripe, cooked, done
*ts ^h ehĩ ¹	tshi ⁵⁵ xi ⁵⁵	ts ^h ehẽ	ts ^h ehĩ	tshe ³³ hi ⁵³	*s-niŋ	this year
*ja(ji)hĩ ¹	jaɪɪxi ^l ; je ⁵⁵ xi ⁵⁵		ˀjæhĩ	jæ ³³ hi ⁵³		last year
*ʂo(ji)hĩ ¹	ʂo ⁵⁵ xi ⁵⁵		ˀʂohĩ	ʂu ³³ hi ⁵³		year before last
*sohĩ ¹	so ⁵⁵ xi ⁵⁵		sohĩ	suo ⁵³ hi ⁵³		next year
*ndʒihĩ ²	ndʒɪ ³³ xi ⁵⁵		ndʒi hĩ	ndʒɪ ⁵³ hi ⁵³		year after next
*mehĩ ²	mi ³³ xi ⁵⁵			me ⁵³ hi ⁵³		chin
*hĩ ²	xiɪ; xi ⁵⁵	ˀhẽ; m̩i ⁵³	ˀhĩ	ŋi ⁵³		bamboo

‘Bamboo’ is an interesting case because of the Nq. and TBL forms, which suggest a reconstruction with a voiceless nasal initial. However, voiceless nasals are not in the inventory of any described Ersuic language; TBL does not include any voiceless nasals in the consonant inventory, and Ikeda 2009 is just a wordlist with no phonological analysis. Thus, it is possible that these forms are typographical or transcriptional errors.

The following forms are reconstructed as *hjẽ based on the Mn. forms, which have a vowel distinct from -ĩ above.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*hjēmæ ¹	xi\, xi\lma\; xi ⁵⁵ ma ⁵⁵		hjēmæ	hi ³³ ma ⁵³		sister
*hjē ¹		khe ³³ hi ⁵³	hjē	khe ³³ hi ³¹	*r/s-ŋ(y)a	borrow (tools)

The following forms, reconstructed with ***-ē**, have **ē/ɤ** rhymes in Mn., **ũ/ŋ** rhymes in TBL (the **ĩ** and **ũ** rhymes in ‘fly’ and ‘musk’ are unexplained), and **ε/ə** in Ersu. Ersu ‘smell’ is unexplained; and the two syllables in Zeluo Ersu ‘seven’ might be explained as coming from an ***s-** prefix plus a root like ***ni(s)**.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*behē/behĩ			`behē	be ³³ hi ⁵³		fly (n.)
*lahē/lahō			`lahē	la ³³ hi ⁵³		musk
*hēhē ¹	hi ⁵⁵ hi ⁵⁵		hēhē	te ⁵³ hũ ⁵³ hũ ³¹	*s-nam ?	smell
*dehē ¹	he ⁵⁵ , xe ⁵⁵	`dehỹ		de ³³ hũ ⁵³	cf. Thai hǒ:m ?	fragrant (smell)
*hē ¹	xε\; xə ⁵⁵	fırə	hē	hũ ⁵⁵	*g/s-məw ?	mushroom
*hē ¹	xε ⁵⁵		`hē	(yua ³³) ju ⁵³ khe ³³ xŋ ³¹	*s/r-go-ŋ ?	hatch / incubate
*sini/stē ²	sĩ\; fŋ ⁵⁵ n ⁵⁵	`tj~`kŋ; ki ⁵³	`jtɤ	skj ⁵³	*s-nis	seven

The forms below are reconstructed with ***hō** (or **hwō** where Ersu has **-o**; see section 4.10 for discussion on ***-o** vs. ***-wo**):

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*hō ¹	fũ\; fu ⁵⁵	hũ	hō	hũ ⁵³		want / need
*hō ¹	fũ ⁵⁵ tsi ⁵⁵			hũ ³³ tɕi ⁵³		pepper (hot) / chili
*hwō ¹	-ho\; xo ⁵⁵		nehō	ŋuo ³³ hũ ⁵³	*s-m-raŋ ?	stretch out (the arm)
*hwō	ho\		-hō			speech, language, dialect
	nuA\k ^h u\ ?		`nahō(hō)	na ³³ xuo ⁵³ xuo ³¹ , *s-nak nua ³³ xo ⁵⁵ xo ⁵³		dark

The second syllable of ‘dark’ does not correspond regularly and may be a loan from Loloish (cf. Lahu **nâʔ-hòʔ** ‘pitch dark’, Matisoff 1988:752).

There are two forms reconstructible with ***hã**:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*t(w)ah(w)ã ¹	tua ⁵⁵ xua ⁵⁵		tahã	ta ³³ xa ⁵³	*s-r(y)ak 24-HOURS	tonight
*hã ¹	ha\; xa ⁵⁵ , xa ⁵⁵	hã	hã	hiã ³¹		have, exist (immovable)

The **-i** in TBL ‘have/exist’ is unexplained. The ‘night’ morpheme in ‘tonight’ may need to be

reconstructed with a **-w-** glide based on the Ersu form; the lack of nasalization in the TBL form is also unusual.

There is one form with **-ũ**, which may well be a Tibetan loan (cf. WT **ston**):

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*htũ ²	tu\,tu\; hpu ⁵⁵ (htu ⁵⁵)		\ʃtũ	tu ⁵³	*s-ton	thousand; ten cents

There is also one form with a non-glottal initial reconstructed with the nasalized vowel ***-ĩ**. As shown in section 3.2.2, ***di** is expected to develop into ***dzi** except in Nq. The following form, with its phonotactically unusual dental stop + high front vowel combination, seems to have escaped this change; thus I reconstruct a nasalized vowel to account for this. Chirkova (2008:9) notes that the nasalization in Kl. properly belongs to the vowel of the first syllable, rather than being associated with the initial of the second syllable as prenasalization, as evidenced by the reduplicated form: **\dĩdĩbæbæ** ‘very stupid’ (not ***didimbæmbæ**).

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*dĩbæ		\dĩbæ ‘stupid’		di ³³ nbæ ⁵³		honest / well-behaved

Finally, there are some forms where a nasalized vowel seems to have changed an initial palatal glide to a palatal nasal. The following forms are reconstructed as ***jẽ**, ***jã**, and ***jõ**, respectively:

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*jẽ ¹	ji\; ji ⁵⁵	je; ɲi ³³ tshu ⁵³ , ɲje ³⁵	ɲe	ɲi ³⁵	*k-yim ɰ *k-yum	house
*jã ¹	ja ⁵⁵		ɲa			home
*jõ ¹	jo\; jo ⁵⁵		ɲo	ɲu ³⁵	*yaŋ	sheep

The forms for ‘house’ and ‘home’ certainly look related, but the origin of the low vowel in ‘home’ is unclear.

4.4 *i

The *-i rhyme is exemplified by forms with a variety of developments. After sibilants, I reconstruct *-i where present-day dialects have apical vowels. Ersu has gone further, exhibiting such sound changes as **li** > **ɬ**, palatalization of velar stops, and development of extrusional fricatives after bilabial stops (**pi** > **psɿ**). This rhyme is to be distinguished from *-je, which develops into -i in most dialects (see section 4.7).

env.	Ersu	Kl.	Nq.	Mn.	TBL
l __	əʰ	i	i	i	i
P __	zɿ	i	i	i	i
d __	ɿ	-	i	ɨ	i
s,ʃ __	ɿ	ɿ	ɿ	ɨ	ɿ
ʃ __	ɿ	ɿ	ɿ	i	ɿ
K __	zɿ	i	i	i/je	i
(other)	i	i	i	i	i

First, we look at the forms with lateral initials, where Ersu has undergone a **li** > **ɬ** change:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*li ¹	əʰɿ; əʰ ⁵⁵	li	li		*pla, PLB *C-la ¹	ashes
*kwali ¹	ka ³³ əʰ ⁵⁵		kali	kua ³³ li ⁵³	*ka	crow
*(rV)li ¹			əʰli	li ³⁵		dance (n.)

Below are forms < *-i after *palatals. (Note that there is no distinction between **n-** and **ɲ-** before **-i/-j-**, either in the modern dialects or the protolanguage.) Note that in Ersu, *palatal fricatives have mostly become dental fricatives (see section 3.4.1), with a consequent change in vowel quality from [-i] to [-ɿ].

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*deni ¹	ɲiɿ; ɲi ⁵⁵	ɲi ⁵³	deɲi	de ³³ ɲi ³¹ , de ³³ ɲi ⁵³	*na-t	sick, ache
*deni ¹	dɛʰɲiɿ; ɲi ⁵⁵	ɲi ³³ tsu ⁵⁵ tsu ³³	ɰdeni	de ³³ ɲi ⁵³	*r-ni	red
*xuini ¹	ʃɿ ⁵⁵ ɲi ⁵⁵ wa ⁵⁵ za ⁵⁵			fu ³³ ɲi ⁵³		gum ("tooth-red")
*ni ¹	ɲiɿ; ɲi ⁵⁵	ɲi ⁵³	əʰɲi	ɲi ³⁵		gold
*nini ¹	ɲi ⁵⁵ ɲi ⁵⁵	ɲi ³³ ɲi ⁵³	ɲini gɣ	ɲu ⁵³ ɲi ⁵³		few / little
*neni ¹			neni	ne ³³ ɲi ⁵³		decrease, reduce
*nini	jaʰɲiɿɲiɿ; ɲi ⁵⁵ ɲi ⁵⁵			ɲi ⁵³ ɲi ⁵³	*s-nem	low / short
*(ri)ni ¹	ɲi ⁵⁵		əʰɲi	əʰ ³³ ɲi ⁵³	*s-ney	near
*ni ²			ɰk ^h ɲi	te ⁵³ ɲi ⁵³		be startled/afraid
*breni ¹	ba ⁵⁵ ɲi ⁵³		ɰdebzenɿ sə	ɲe ³³ ɲi ⁵³ , bu ³³ ɲi ⁵³	*g-na-s	rest

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*bæni ¹	bA\ŋi\; bA\ŋi\; ba ³³ ŋi ⁵⁵ , be ³³ ŋi ⁵⁵	be ³³ ŋi ⁵³	bæni	bæ ³³ ŋi ⁵³	*r/g-na	listen
*yuiini/ yuindzA ¹	ʒi ³³ ŋi ³³		ʒyndza	ʒu ³³ ŋi ⁵³ ʒu ³³ ndzæ ⁵³		relatives
*tçitæ ¹	tsɿ ⁵⁵ ta ⁵⁵		`tçitæ	khe ³³ tçei ⁵³ tæ ³¹		collect, harvest, put away
*htçei ¹		tçei ³³ mi ⁵³	çtçimæ		*s-tu	vagina
*dziki ¹		dzi ³³ ku ⁵³	dziki	dzi ³³ ki ⁵³	*m-ts(y)il	saliva
*dçi ¹		dçi	dçi	dçi ³⁵		speak, say
*sæmbæ ² neçi	sA\ŋba\ 'feeling, emotion'		`sæmbæ `neçi	sæ ⁵³ nbæ ⁵³ çi ⁵³		worry / be anxious
*zi ¹	ʒi\ta\ 'chair'; ʒi ⁵⁵		`nezi	ne ³³ zi ⁵³		sit down
*ji ¹	k ^h -i\ 'enter', ʒi\, ji\; ʒi ⁵⁵ , ji ⁵⁵	nə ³³ ji ⁵³	ji	ji ³⁵	*ʔay	go
*jiji ¹	ji ⁵⁵ 'child'		jiji	ji ³³ ji ⁵³	*z(y)əy ?, cf. Lahu i	small
*ji/zi ¹	ji ⁵⁵	zi		ne ³³ zi ³¹ , ne ³³ zæ ³¹		live / reside
*ji ¹	ji ⁵⁵		`ji	zi ³⁵	Tai *ʔya/ MC 'en 煙?	tobacco / cigarette
*ji ¹	ji\ts ^h u\		jit ^h o	ji ³³ mæ ⁵³	< yi?	ladle
*jajih ²	jei ³³ hi ⁵⁵		`jæjy	jæ ³³ ji ⁵³ hi ³¹		story
*leji ¹	le\ji\; li ⁵⁵	le ³³ ji ⁵⁵ pu ³³	`lejo 'right'?	le ³³ ji ⁵³		left (side)

Note the variation between palatal glide and fricative in 'go', 'live', and 'tobacco'.

In the following set of forms showing *-i after bilabials, note that the Ersu reflex of *-i is an apical vowel after bilabial stops. This is most likely because these syllables went through an intermediate stage with a palatal fricative (*pi > pçi > psɿ), after which the (originally allophonic) palatals participated in the same palatal > dental change mentioned above (again, see section 3.4.1).

In some cases a form is indeterminate between *-i and *-je because there is no Ersu form¹¹; such forms have been placed in this section.

There does not appear to be a distinction between *-i/*-je after *m-.

¹¹Unfortunately, although it is true that Mn. seems to maintain the *-i/*-je distinction, I find the distinction rather difficult to hear and am hesitant to rely solely on my own transcriptions of these particular vowels.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*p ^{hi} 1	phsɿ ⁵⁵		p^hɕi , `nep ^h ɕi-æ	ŋe ³³ phi-æ ⁵³ , ŋe ³³ phz-æ ⁵³		lose / mislay, throw away
*lip ^{hi} /læp ^{hi} 1			lip ^h ɕi	læ ³³ phi ⁵³ ‘pot, jar’?		winnowing tray/basket
*dze ^{pi} /dzop ^{hi} 1	dze ⁵⁵ psɿ ⁵⁵		dzop ^h ɕi			hoe
*mp ^{hi} 2	p ^h sɿ ; nphsɿ ⁵⁵	phi ⁵³	`mp ^h ɕi	nphi ⁵³ , nphzi ⁵³	*m-pat	vomit, spit
*pimæ ¹	pzɿ ma ba ka ; psɿ ⁵⁵ ma ⁵⁵ ni ⁵⁵ za ⁵⁵		pimæ	pi ³³ ma ⁵³	*s-bal	frog, toad
*kapi ²	ka ³³ psɿ ⁵⁵		`kapi	kua ⁵³ pi ⁵³		lame person
*pi ²	psɿ ⁵⁵		`ʃtipi	næ ⁵³ pi ⁵³		chip (the rim)
*bi ²	bzɿ ; bzɿ ³³	bi ³³ jə ⁵³	`bi	bi ³⁵	*bya	bee, honey
*bi ¹	bzɿ ³³ bzɿ ⁵⁵	bi ³³ bi ⁵³	pæbi, `bibi	bi ⁵³ bi ⁵³	*ba	thin
*bibi ¹			debibi	de ³³ bi ³³ bi ³¹	PKC *buay	busy
*mbi ¹			mbi	nbi ³⁵	*k-r-p ^w at	leech
*mbimbi ²	nbzɿ ³³ nbzɿ ⁵⁵		mbimbi	nbi ⁵³ nbi ⁵³	Lahu pè < *bya	divide / share (things)
*mbi	mbzɿ / ; nbzɿ ⁵⁵		`mbi ‘step across’	(te ³³) nbi ³¹		step / stride
*mi ¹	mi ; mi ⁵⁵	mi ³⁵ mi ⁵³	mi	mi ³⁵	*r/s-miŋ	name
*mi	mi ; mi ³³	mi ³³ jə ⁵³		mi ³⁵	PLB *myuk ^L , *s-myuk ^H	monkey
*nemi ¹	mi ⁵⁵		`nemi	ne ³³ mi ⁵³		swallow
*mi ¹	mi ⁵⁵		mi		PLB *s/?-mi ¹	catch
*miso			`misuə ¹	mi ³³ suo ⁵³		three days from now
*sini/htimi ¹	sɿ ni ; sɿ ⁵⁵ ni ⁵⁵	su ³³ mbu ⁵³ ???	ʃtimi	ti ⁵³ mi ⁵³	*s-ni-ŋ	heart
*ht(s)ipi ²	htsɿ ³³ psɿ ⁵⁵	ɕi ³³ pa ⁵³ ???	`ʃti	ti ⁵³ pi ⁵³	*s-l(y)a	tongue
*stim(b)u ¹	su mbu ; sɿ ⁵⁵ nbu ⁵⁵	kɿræ ‘snot’; ki ³³ mɛ ⁵³	`ʃtimbu	ki ³³ mu ⁵³	*s-na	nose
*hti(u) ‘nose’			ʃtintɕ ^h i	ti ³³ nkhæ ⁵³		snot

The Nq. form for ‘heart’ may be an error, as it bears more resemblance to ‘nose’ (cf. Mn. **`ʃtimbu**).

The following forms are reconstructed with “unusual” initials: the root for ‘insect/worm’ (in the first two rows) is reconstructed as ***di**, where the vowel has caused the initial to become an affricate in all the dialects except for Nq. ‘Spacious’ shows a similar pattern, although there is no Ersu cognate recorded, so it may be homophonous with ‘eight’, which is reconstructed here (distinct from ‘insect’) with a complex initial to account for the plain fricative initial in Ersu. (See section 3.2.2 for discussion on all the above forms.) Finally, the initials for ‘be’ seem irregular (see p. 46), but the rhymes all agree on a ***-i** reconstruction.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*bedi ¹	bɛ ³³ dzɿ ⁵⁵	bə ³³ di ⁵³	bødzi	bɛ ³³ dzɿ ⁵³	*bəw, *zril > PLB *di ¹	insect / worm
*didi			`dzidzi	dzɿ ³³ dzɿ ⁵³		spacious
*rdi ¹	zɿ ⁵⁵ ; zɿ ⁵⁵		dzi	dzɿ ³⁵	*b-r-gyat ≠ *b-g-ryat	eight
*z̥wi ¹	zɿ ⁵⁵ ; zɿ ⁵⁵		z̥i	zɿ ³⁵	*s-ri(y)	be (copula)

After dental and retroflex sibilants (including secondary dental sibilants after bilabial stops and *palatal > dental fricatives in Ersu, as discussed above), the reflexes of *-i are apical vowels (-ɿ/-ɿ). Note that in the following forms all the daughter languages have apical vowels, so it might seem that an apical vowel is the obvious sound to reconstruct here; however, for reasons outlined in section 7.1, I am reconstructing all these forms with the rhyme *-i and treating the apicalization of *-i as a later development.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*si	sɿ ⁵⁵ tsua ⁵⁵ ; sɿ ⁵⁵		`sisi		*g-sik	new
*si ¹	sɿ ⁵⁵ ; sɿ ⁵⁵	nɛ ³³ sur ⁵³	si	dɛ ³³ s-æ ⁵³	*g/b-sat	hit, kill
*tosi mæni			tosi `mæni	tu ⁵³ sɿ ⁵³ mæ ³³ ɿ ⁵³		no problems, leisurely
*zi ²		`zɿ	`zi	zɿ ⁵³	*za	son
*zi ¹	zɿ ⁵⁵	zɿ	zi	zɿ ⁵³		shoe
*zi	-zɿ ⁵⁵ ; -zɿ ³³		-zi	-zɿ ⁵³		ten (bound), -ty
*kezi ¹		kuwzɿ		(te ³³) kuw ³³ zu ³¹		bucket (of water)
*nets ^{h1}	nɛ ⁵⁵ ts ^h ɿ ⁵⁵ ; nɛ ⁵⁵ ts ^h ɿ ⁵⁵	nə ³³ ts ^h ɿ ⁵³	`nɿts ^h i	nɛ ³³ ts ^h ɿ ⁵³		twenty
*ts ^h i ²	ts ^h ɿ ⁵⁵ ; ts ^h ɿ ³³	ts ^h ɿ ⁵³	`ts ^h i	ts ^h ɿ ⁵³	*tsa	salt
*ts ^h i ¹	ts ^h ɿ ⁵⁵ 'shoulder blade'	ts ^h ɿ ³³ ts ^h ɿ ⁵³	ts ^h its ^h i	ts ^h ɿ ³³ ts ^h ɿ ⁵³ - ta ³³ ta ³³	*tsik	joint
*mutsi ¹	m ³³ tsɿ ⁵⁵		mutsi	mu ³³ tsɿ ⁵³		cat
*(ŋ)gætsi ¹	ngə ⁵⁵ tsɿ ⁵⁵		gjætsi		Mand. 茄子 qiézi	eggplant
*tsi ¹	tsɿ ⁵⁵		tsi		*s-dzya	feed
*dzi ²	dzɿ ⁵⁵ ; dzɿ ³³	dzɿ; dzɿ ⁵³	dzi	dzɿ ⁵³	*dzya	eat
*dzi ¹	dzɿ ⁵⁵			dɛ ³³ dzɿ ⁵³		give birth to (e.g. piglets)
*(d)zi ²	ja ⁵⁵ fi ⁵⁵ ??; ja ³³ zɿ ⁵⁵ ?		`dzidzi	dzɿ ⁵³ dzɿ ⁵³		wide / broad
*myidzi ²	xi ⁵⁵ dze ⁵⁵ ?; mi ³³ dzɿ ⁵⁵		`nidzi	mi ³³ tsɿ ⁵³		rabbit
*nts ^h i ¹	nts ^h ɿ ⁵⁵		nts ^h i	dɛ ³³ nts ^h ɿ ⁵³		choose / pick
*ndzi ¹	ndzɿ ³³ nua ⁵⁵		ndzi	dzɿ ³³ mu ⁵³	*g-zik	leopard / panther

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ŋelesi ¹			nelesi 'face downhill'	ŋe ³³ le ⁵³ ŋ ³¹		turn around
*si ²	ʃl̥; ʃl̥ ⁵⁵		ʋuli si, tce si	ʃl̥ ⁵³	*si(y)	comb (v.)
*tsjēsi ¹			tci si	tci ³³ ʃl̥ ⁵³		comb
*ʃi ²	ʃl̥; ʃl̥ ⁵⁵	ʃl̥ ⁵³ , ci ³³	ʋx	ʃl̥ ⁵³	*sya	meat

After *alveopalatals, *-i develops into apical vowels except in Mn.:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*tʰitʰi ¹	tʰl̥ ⁵⁵ tʰl̥ ⁵⁵		tʰitʰi	ɕæ ⁵³ tʰl̥ ⁵³	*m-kyit	move
*tʰi	tʰl̥	(sa ³³ phu ⁵⁵) tʰl̥ ⁵³		ne ³³ tʰl̥ ⁵³		cut (meat)
*ntʰi ²		tʰl̥ ⁵³	ʋntʰi	ntʰl̥ ⁵³		kill / slaughter (an animal)
*ndzihi ²	ndʒl̥ ³³ xi ⁵⁵		ndzi hi	ndʒl̥ ⁵³ hi ⁵³		year after next
*ngeso/ndziso ¹	nge ³³ so ⁵⁵		ndzisuə ¹	ndʒl̥ ³³ suo ⁵³		day after tomorrow
*tʰekiʃi ¹	(tʰe ⁵⁵)hi ⁵⁵ ?	tʰe ³³ tʰci ⁵⁵ ci ³³	kiçi	tʰe ³³ kuw ⁵³ ʃu ⁵³		hide (sthg.)

The first syllables of 'year after next' and 'day after tomorrow' in Ersu may be allofamically related; perhaps at some earlier stage of the language there was a process of vowel harmony such that the rhyme in the first syllable of 'year after next' assimilated in vowel height to the second syllable, followed by palatalization of the velar initial.

*-i after velars has become -ɲ in Ersu, presumably through an intermediate palatal stage (e.g. *gi > dzi > dzɲ). The forms here have been separated from those reconstructed with *-je based solely on the Ersu rhymes for reasons similar to those given for the forms < *bilabials + *-i above; [dzi/dzɲ] in Ersu seems easier to distinguish (for a naive fieldworker) than [gi/gje] in Mn. and so is taken to be more reliable.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ŋgi	ja ³³ ndzɲ ⁵⁵		ʋdengi			difficult, hard
*megi ²	me ³³ dzɲ ⁵⁵	ʋmedze	ʋmegje	me ³³ gi ³⁵ , me ⁵³ gi ⁵³	*gle:k	thunder
*ŋgi ¹	dzɲ↓; ndzɲ ³³	ngi ⁵³	ŋgje	ŋgi ³⁵	PLB *g-ra ² ?	buckwheat
*bugi ¹			bugje	be ³³ gi ⁵³		bury
*ŋgi ¹	ndzɲ↓		ŋgje	ngi ³⁵		carry load (pack animals)
*tʰjeki ¹	hi ⁵⁵ tsɲ ⁵⁵	ʋtʰeci		hi ³³ ki ⁵³	*s-lay ≠ *s-ley	ladder

The remaining forms in this section show somewhat irregular correspondences. The first syllable

of ‘grandchild’ below may have assimilated to the vowel of the second syllable in Nq. and TBL, with Mn. preserving a high front vowel. The first syllable of ‘peach’ in Ersu appears cognate to the second syllable in Lizu, but the TBL form has an unexpected back rounded vowel. Finally, the first syllable of ‘daughter/woman’ looks like it should be reconstructed *zi based on the Mn. and TBL forms, but the Ersu and Kl. forms seem to point rather to *zje.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*lit ^h o/lot ^h o ¹		lo ³³ tho ⁵³	lit ^h o	luo ³³ thuo ⁵³	*b-ləy	grandchild
*jVsi ¹	sɿ ⁵⁵ ja ⁵⁵		jisi	ju ³³ su ⁵⁵		peach
*zjeji/zijo ²	zi\ɿi\ɿ ‘woman’; zi ³³ ji ⁵⁵	`zeje ?	`zijo	zɿ ³³ ju ⁵³ , zɿ ⁵³ ju ⁵³		daughter, woman

4.5 *iu

env.	Ersu	Kl.	Nq.	Mn.	TBL
pal. ___	o	i	i	i	y
l ___	iu/ə ¹	(j)u	u	ø	(i)u/y
d ___	u	i	i	i/y	u/i
P ___	ε	-	u	ø	u
(other)	o	e	i	i	u

*-iu is reconstructed where we have the correspondence of Ersu -o : Mn. -i : TBL -u (assuming TBL -y/-u to be allophonic variants of -u after palatals).

The phonetic value of -iu seems to be preserved as such after l- in most cases in TBL, but the high front vowel seems to have been absorbed by palatal initials. Note, however, that there is no distinction posited for the protolanguage between initial dentals and palatals (e.g. n- vs. ɲ-), so we can reconstruct the following nasal-initial forms as *niu.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*niumæ ¹	ɲo ⁵⁵ ma ⁵⁵	`ɲime; ni ³³ ma ⁵⁵	`ɲimæ	ɲi ³³ me ⁵³ , ɲi ³³ mi ⁵³		sun
*niu	ɲoɿ,ɲoɿ; ɲo ⁵⁵	nu ⁵⁵	-ɲi	(te ⁵³) ɲy ⁵³	*nøy SUN	day, day's (work)
*tæniu ¹	taɿɲoɿ; ta/ta ⁵⁵ ɲo ⁵⁵		tæɲi	tæ ³³ ɲu ⁵³		today
*janiu ¹	jaɿɲoɿ; jɛ ⁵⁵ ɲo ⁵⁵	`jæɲi	jæɲi	jæ ⁵³ ɲu ⁵³	cf. Lahu yàʔ- < *yak	yesterday
			teɲi `mæçi	te ³³ ɲy ⁵³ mæ ³³ thæ ³¹		every day
*niu ¹	ɲoɿtɕ ^h oɿ; ɲo ⁵⁵ tɕho ⁵⁵			ɲi ³⁵	*s-ni/u(:)p	west
*niu ¹	ɲoɿ '~ (polite)'; ɲo ⁵⁵	ɲe	ɲi	ɲy ³⁵	*r-ney-t	have, exist (general/abstract)
*suniu			`sɲi 'self'	su ³⁵ ɲy ⁵³ su ³³ ɲy ⁵³		each / respective / individual
*niuniu ²			`ɲyɲy (ndzoma)	ɲu ⁵³		oneself
*æniu ¹	a ⁵⁵ ɲo/a ⁵⁵ 'mother-in-law'		`æɲi	æ ³³ ɲu ⁵³		aunt
*yeniu/yoniu ¹	ve ⁵⁵ ɲo ⁵⁵	`ɣɲɲi~`gɲɲi; wo ³³ ɲu ⁵³	ɣweni, ɣɲɲi	ɣuo ³³ ɲu ⁵³	*ril × *rul	intestine
*niun ^h wa bedi	ɲo ³³ ɲkhuo ⁵⁵ be ⁵⁵ dzi ⁵⁵			ɲi ³³ ɲkhuo ⁵³ be ³³ dzi ³¹		earthworm
*netɕ ^h iu/ netɕiu ¹	tɕ ^h oɿ ?; tɕho ⁵⁵ ?	(ni ³³ ma ⁵⁵) ne ³³ tɕi ⁵⁵	`ɲimæ netɕi-æ	ne ³³ tɕu ⁵³	*g(l)im × *g(l)um	set (of the sun)
*ziu ¹	zo ⁵⁵	ze	ɣwæ zi	zu ³⁵		fall (rain)
*liu	-liuɿ; lio ⁵⁵		-li	(te ⁵⁵) liu ⁵³	*lam ?	fathom
*ku(liu) ¹	ku ⁵⁵ ə ⁵⁵	kurə	kuli	ku ³³ liu ⁵³	<MC ljo 驢 ?	donkey

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*k ^h ekuliu ¹	k ^h ε\ku\lyo\		dekulø, dekulølo	khe ³³ ku ⁵³ liu ⁵³		wrap (v.)
*deliu ¹	dε\ə ¹ ; ə ⁵⁵	lju; dε ³³ lu ⁵³	\`delø	dε ³³ lu ⁵³	*plu	white
*liu ¹	ə ⁵⁵	ly	lø, lølø	ly ³⁵ , the ³³ ly ⁵³		rob / loot
*du(liu) ¹	bu\kε\; bu ⁵⁵ ε ⁵⁵	\`dv 'plumage'; du ³³ ruu ⁵³	dølømæ	du ³³ ly ⁵³	*duŋ	wing
*nts ^h o ¹ liu ¹	ntsho ⁵⁵ lo ⁵⁵	te ⁵³	\`nts ^h uli	te ³³	*s-ləy	flea
*nts ^h e ¹ liu			\`nts ^h ili	tshe ³³ te ⁵³		gift / present
*diut ^h e ¹	bu ⁵⁵ t ^h ε ⁵⁵	ti ⁵⁵ t ^h ε ⁵³	d ^h zit ^h ɣ	(te ³³)d ^h zu ³³ t ^h shu ³¹ , d ^h zu ⁵³ t ^h shu ³¹		year
*diup ^h æ ¹	bu ⁵⁵ pha ⁵⁵ , ji ³³ pha ⁵⁵	\`t ^h εup ^h æ; di ³³ pe ⁵³	d ^h zyp ^h æ 'stomach'	d ^h zi ³³ pha ⁵³		belly

Reflexes of forms with initial **l-** are usually ə¹ in Ersu (exceptions are ‘fathom’ and ‘wrap’, and perhaps the second syllable in ‘wing’); and lø in Mn. (exceptions are ‘fathom’ and ‘donkey’). There are two forms with a voiceless lateral initial (‘flea’ and ‘gift’) which have been placed here because of the rounded vowel in Ersu.

The final two forms in the above set (‘year’ and ‘belly’) illustrate an initial syllable that may be reconstructible as ***diu**, with a stop initial (see section 3.2.2).

The following forms show the same vowel correspondence (Ersu **-o** : Mn. **-i** : TBL **-u**) after retroflexes. Note that this is almost the same as the correspondence for ***-riu** above (section 4.2.2), except that TBL has -ŋ above. Notice also that many of the PTB roots in both sections have the rhyme ***-əy**.

The first three items below have palatal initials in most of the dialects; as discussed on p. 46, these items are reconstructed with palatal initials having a -w- medial glide.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*t ^h ε ^w hiu ²	t ^h o\; t ^h sho ⁵⁵	\`t ^h ε ^h e; t ^h chi ⁵³	\`t ^h ɕi	t ^h chu ⁵³	*d-k ^w əy	dog
*ε ^w iu ¹	εo ⁵⁵	εi ³³	bædzɪ ɕi	khe ³³ εu ⁵³	*s-kəy	borrow (money)
*t ^h ε ^w iula			\`k ^h eɕila	tho ³³ εuo ⁵⁵ la ³¹		slanted / askew
*t ^h eɕiu ¹	ɕo ⁵⁵	thu ³³ xu ⁵³	\`k ^h eɕi	the ³³ ɕu ⁵³ , thu ⁵³ ɕu ⁵³	*səy	die, dead
*ɕiu ¹	ɕo\; ɕo ⁵⁵	\`ɕe; xu ⁵³	\`ɕi	ɕu ³⁵	*s-hywəy	blood
*ɕiu ¹	ɕu ⁵⁵		\`ɕik ^h wak ^h wa	dε ³³ ɕu ⁵³		yellow < yi?
*ziu ²	zo\; zo ³³	\`zε; tɕl ⁵³ ???	\`zɕi	zu ³⁵	*b-ləy	four
*ziudu ²	zo ³³ bu ⁵⁵			zu ⁵³ du ⁵³		square / rectangular
*dzɪu ¹		dze	dzi	dzu ³³ dzu ⁵³		have, exist (container)
*dzɪu ¹	dzo ⁵⁵	\`dze; dzɪ ⁵⁵ , dzɪ ³³ khu ⁵³ 'river'	dzi	(n)dzu ³⁵ , dzu ³⁵	*m-t(w)əy	water, river

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*tʰiumæ			`mozo tʰimæ	tʃhu ³³ mæ ⁵³	Lahu mê-chô-ma < *kyəw	widow
*tʰiujo ²	tʃh ³³ ji ³³		`jotʃ ^h ijo, jotʃ ^h ijo	tʃhu ³³ ju ⁵³		orphan
*detʰiu ¹	tʃho ⁵⁵		`detʃ ^h i	de ³³ tʃhu ⁵³	*kyəw	sweet
*tʰiu ²	ts ^h o ⁵⁵ l ^h miA ⁵⁵ ;		`tʃ ^h i-	tʃhu ⁵³ pu ⁵³		how many
*htʃiu ²	htʃo ³³ re ⁵⁵ , htʃo ⁵⁵	ʒe; tʃl ⁵³	`ʒtʃi	ʒu ³⁵	*kləy	feces
*ntʃiu ¹	ntʃho ⁵⁵	tʃh ³³ pu ⁵³	ntʃ ^h i	tʃh ³⁵		thorn / splinter
*ntʃiu ²	ja ³³ ntʃhe ⁵⁵		`ntʃ ^h i- k ^h entʃ ^h a ?	tʃhu ⁵³ ntʃhu ⁵³		fast / quick / early ¹²
*ʒoniu ²	ʃo ⁵⁵ n ^o ⁵⁵ n ^o ⁵⁵		`ʒunk ^h o `teŋi	ʒu ⁵³ n ^u ⁵³		day before yesterday

The Ersu form for ‘yellow’ has an irregular **-u** rhyme; this form may be a loan from Nuosu. Ersu ‘orphan’ also has an irregular rhyme, but it (and ‘widow’, which appears to be related) have been included in this set based on the TBL rhymes.

The following three forms have bilabial initials that are tentatively reconstructed with the present rhyme:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*piu ¹	pɛ ⁵⁵ re ⁵⁵	pu ⁵³	pø	pu ³⁵	*m-blen	pus
*biususu ¹	bɛ ⁵⁵ su ⁵⁵ su ⁵⁵		bøsusu	bu ³³ su ⁵³ su ³¹		bladder
*mbiulje ²	nbe ³³ li ⁵⁵	mbə ⁵⁵	`mbøli	nbo ³³ ly ⁵³		kidney

Finally, there are a handful of forms that may be best included in this section but are somewhat problematic. ‘Ear/spike’ does not have the expected **-u** rhyme in TBL; neither do ‘letter/book’ or ‘wok’. If these last two, which have retroflex initials, originally developed from velar + **-r-** clusters, this may explain why they have unrounded rhymes (i.e. they would belong in section 4.2.2), but there is no evidence for this (there are no Nq. forms, and the TBL forms do not record any variants with a velar initial).

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*(n)dzi(u) ²	ndzo ³³ ndzo ⁵⁵ ?			dzi ⁵³	cf. Lahu ò-cē < *dzya ?	ear / spike
*ndziundzi ¹	dzo ⁵⁵ ndzɿ ⁵⁵ ;		ndzɿdzi	dzu ³³ ndzi ⁵³ , dzu ³³ ndzi ⁵³		letter, book
*dzɿu ¹	dzo ⁵⁵ ; dzo ⁵⁵	`dzɿ	`dzɿ	dzu ¹³⁵		wok (large, iron) / pan

¹²The Ersu form has an unexpected **-ɛ** rhyme.

4.6 *u

env.	Ersu	Kl.	Nq.	Mn.	TBL
pal. —	u	-	y	y	y
alvpal. —	u	ɥ	u	y	u
(other)	u	u	u	ʉ	u

Rounding out the high vowels we have *-u. Reconstruction of this rhyme is straightforward; see the footnotes to individual forms for discussion of a small number of exceptions.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*æp ^h u ¹			ap ^h ʉ	æ ³³ phu ⁵³	*pəw	grandfather
*æpu	A ^l pu ^l ; a ³³ pu ⁵⁵			æ ³³ pu ⁵³	*pəw	grandfather
*mps ^h u ¹	ntshu ⁵⁵		mps ^h ʉ, nts ^h ʉ	ntshu ⁵³		hail
*sēpu ¹	si ^l bu ^l ; si ⁵⁵ pu ⁵⁵	sepv; sə ³³ pu ⁵³	sipʉ	se ³³ pu ³¹ , se ³³ pu ⁵³		tree
*pu	-pu ^l , -bu ^l ; pu ⁵⁵	-pv	-pʉ	(te ³³) pu ³¹	PLB *baŋ ¹	classif. trees/flat obj.
*bu ¹	bə ^l 'wild ox buffalo' ?		buk ^h wa	bu ³³ khu ⁵³		yak (male) ¹³
*ru(bu)/du ¹	ru ⁵⁵	ə ^l ³³ bu ⁵³	ʉ ^l bu	ə ^l ³³ bu ⁵³ , du ³⁵	*g-ruŋ	horn
*(d)zibu ¹	zo ^l bu ^l ; z ^l ⁵⁵ bu ⁵⁵ 'stick'		dzibu			walking stick
*bu ¹	bu ⁵⁵			ka ³³ bu ⁵³	*m-bup ROT / SPOTTED / WRITE	multicolored / pat- terned (cloth)
*dzæbu ¹			-bʉ, dzæbʉ	dzæ ³³ bu ⁵³		straw (rice)
*mbu ¹			mbʉ 'roast'	ne ³³ nbu ⁵³		scald / burn
*stim(b)u ¹	su ^l mbu ^l ; s ^l ⁵⁵ nbu ⁵⁵	kŋræ 'snot'; ki ³³ me ⁵³	ʉ ^l timbu	ki ³³ mu ⁵³	*s-na	nose
*mu ¹	ŋuə ^l ; ŋ ⁵⁵	ʉ ^l mu	mʉ	mu ³⁵	*mow	do / make ¹⁴
*mæt ^h u			ʉ ^l mæt ^h ʉ	ma ³³ thu ⁵³		lazy
*tupri ¹		tu ³³ pi ⁵³		tu ³³ pu ⁵³		bean / soybean / pea
*tu ¹			k ^h etʉ	ŋe ³³ tu ⁵³		infect
*dedulæ ²			ʉ ^l dedulæ	te ⁵³ du ⁵³ læ ³³ sæ ³¹		consult / discuss
*du ¹	bu ⁵⁵		ʉ ^l du	du ³⁵		plow (n.)
*du(liu) ¹	bu ^l lɛ ^l ; bu ⁵⁵ lɛ ⁵⁵	ʉ ^l dv 'plumage'; du ³³ ru ^l ⁵³	dølomæ	du ³³ ly ⁵³	*duŋ	wing

¹³The rhotic vowel in the Qš. Ersu form is unexplained.

¹⁴The Ersu forms point to an apparent sound change of *mu > ŋ or ŋu.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*k ^h edu ¹			k ^h edu ‘com- plete’	khe ³³ du ⁵³		right / correct
*zjudu ²	zɔ ³³ bu ⁵⁵			zu ⁵³ du ⁵³		square / rectangular
*rdumo ²	k ^h ɛ ^h bu ^h ; bu ³³ mo ⁵⁵		ʔdɔmo, ʔdɔsu	du ⁵³ mo ⁵³	*ru	crazy person, lunatic
*rdurdu	ja ^h bi ^h , ja ^h bu ^h ; ja ³³ bi ⁵⁵ , ja ³³ bu ⁵⁵	dy ³³ dy ⁵³	ʔdɔɔdu		*t/dow-n, *tu:k	thick ¹⁵
*lu			ʔdelu	khe ³³ lu ³¹		dilute / add water
*lu			ʔlu ‘mat- tress; felt’	lu ³⁵		pad
*lolu ²	ndza ³³ lo ⁵⁵ ɔ ^h ⁵⁵ ‘pigeon’	lo ³³ lu ⁵³		luo ³³ lu ⁵³		dove
*ts ^h uts ^h u ¹			ts ^h u, ts ^h ut- s ^h u	tshu ³³ tshu ⁵³		knock / strike
*dets ^h u ¹		dets ^h v; de ³³ tshu ⁵³	dets ^h u	de ³³ tshu ⁵³	*tsow	fat
*ts ^h u			ts ^h ipə ¹	tshu ⁵³		Sichuan pepper ¹⁶
*nts ^h u ²	tshu ⁵⁵	bu ³³ tshu ⁵⁵	ʔnts ^h ip ^h we, ʔnts ^h ip ^h ə ¹	ntshu ⁵³	*tsut	lung
*dents ^h u ¹		tshu ³³ ntshu ⁵³	dents ^h u	de ³³ ntshu ⁵³		alive
*detsu ¹			mbo tsu	do ³³ tsu ⁵³		wear (a hat)
*detsu ¹	tsu ^h ; tsu ⁵⁵		ʔdetsu æ	de ³³ tsu ⁵³	*tsyow	boil (of water)
*detsu ¹	dɛ ^h tsu ^h ; tsu ⁵⁵			de ³³ tsu ⁵³		dye
*k ^h etsu	tse ³³ tse ⁵⁵			khe ³³ tsu ⁵³	*tsyap or PLB *ʔ-dzak ^L ?	connect / join ¹⁷
*htsu	ɲA ¹ xtʂu ^h su ^h ‘silver- smith’; htsu ⁵⁵	-tsv				forge, strike (iron)
*ndzu			ntʂ ^h i dendzɔ	(tʂh ^h) khe ⁵³ ndzu ³¹	*tsow THORN	pricked (on a thorn)
*su ¹			(de)su ‘stab’	ne ³³ su ⁵³ , ŋo ³³ su ⁵³		thread (a needle)
*k ^h esu ¹	k ^h ɛ ^h tsu ^h ; khe ⁵⁵ su ⁵⁵			khe ³³ su ⁵³		tight / taut
*desu ¹	su ⁵⁵	te ³³ su ⁵³	bʉtʂa sɯ, bʉtʂa sʉsɯ	te ⁵³ su ⁵³	PLB *si ²	sharpen, whet (a knife)
*biususu ¹	bɛ ⁵⁵ su ⁵⁵ su ⁵⁵		bʉsʉsɯ	bu ³³ su ⁵³ su ³¹		bladder

¹⁵The Nq. form has an unusual front rounded vowel.

¹⁶The Mn. forms for ‘Sichuan pepper’ and ‘lungs’ have unexplained unrounded vowels.

¹⁷The Ersu form has a front vowel here making it an unlikely candidate for inclusion in this PEr *-u rhyme; however, the forms for ‘carry with pole’ below may show the same correspondence.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*te zu			`te zu	(te ³³) zu ³¹		lifetime
*zulje ¹		zu ³³ li ⁵³		zu ³³ li ⁵³		testicle
*zu ¹	zu ⁵⁵			zu ³⁵		animal fat/oil
*dentɕ ^h u	ntshe ³³ ntshe ⁵⁵			de ³³ ntɕhu ⁵³		carry with pole, lift up
*detɕ ^h u ¹			detɕ ^h utɕ ^h u	de ³³ tɕhu ⁵³		mix / blend / mingle
*tɕ ^h u ²	tɕ ^h u ⁵⁵ ; tɕhu ⁵⁵	tɕhu ⁵³	`tɕ ^h u	tɕhu ⁵³	*d-kruk	six
*tɕu ¹	tɕu ⁵⁵		tɕu	tɕu ⁵³ ə ¹⁵³	*s-krul	sweat
*letɕu ¹	le ³³ tɕu ⁵⁵		lutɕu	le ³³ tɕu ⁵³	MC draewk 鋤, Mand. zhuó	bracelet
*dedzu ¹	dzu ⁵⁵		dedzu	de ³³ dzu ⁵³		dry
*nedzu			`nedzu	ne ³³ dzu ⁵³		puncture (sthg.)
*ɕu			`ɕu	ɕu ³³ me ⁵³		torch
*ɕu ¹			ɕu	ɕu ³³ su ⁵³		guard / defend
*ɲeɕu ¹	ɲe ⁵⁵ ɕu ⁵⁵			ɲe ³³ ɕu ⁵³		rescue / save
*zu ¹			zu	zu ³⁵	PLB *s-yəy ²	grass
*zuzu ²	zɛɭzɛɭ ??; zu ³³ zu ⁵⁵		`zuzɕ, `pæzɕ	vu ⁵³ vu ⁵³ ??		narrow
*fu ¹			fɕ	(zɭ ³³ /ɣuɭ ³³) ɕu ⁵³		guide, lead (the way)
*fu ²	ɕu ³³	ɕu ⁵³	`fupə ¹	ɕu ⁵³		barley (highland)
*fu ²	ɕu ⁵⁵		`wæ ¹ fɕ	khe ⁵³ ɕu ⁵³		marry (a woman)
*ndzu	ndzɕu ³³ khua ⁵⁵			dzɕu ³³ khæ ⁵³	MC drjoH 箸	chopsticks
*k ^h ep ^h e/ k ^h up ^h o ¹	k ^h ɛɭp ^h ɛɭ; khe ⁵⁵ phe ⁵⁵	`k ^h vpho	k ^h ɛp ^h o	khu ³³ phu ⁵³	Lahu qhɔ < *kaŋ	inside
*ku(liu) ¹	ku ⁵⁵ ə ¹⁵⁵	kurə	kuli	ku ³³ liu ⁵³	< MC ljo 驢 ?	donkey
*ku			(dzɭ) ku 'feed (liquid)'	(dzæ ³³ ɲu ⁵³) ku ³¹		breastfeed / suckle
*gu			dzɭ gu	(dzɕu ³³) ku ⁵³		cross (a river)
*k ^h ekuliu ¹	k ^h ɛɭkuɭyoɭ		dekulø, dekuløɭ	khe ³³ ku ⁵³ liu ⁵³		wrap (v.)
*gu ¹	gu ⁵⁵		`gu	gu ³⁵	< WT gru	boat
*guku ¹			`gu `ku	ngu ³³ ku ³³ su ³¹		boatman
*gæwu			`ɣævu	gæ ³³ wu ⁵³	*gra	enemy (personal)
*wilje/wulje ²	vi ³³ li ⁵⁵	wu ³³ li ⁵³	`vuli	wu ³³ li ⁵³	*d-bu	head ¹⁸
*riwu ¹			ə ¹ vu	fiw ¹³³ wu ⁵³		cave / hole

¹⁸The first syllable of 'head' has /-u/ in Lizu but -i in Ersu.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*niu(mæ)lawu ¹			ɲimælavu	ɲi ³³ la ⁵³ wu ³¹		daytime
*mexui ¹	mɛ ⁵⁵ ʂu ⁵⁵			mɛ ³³ fu ⁵³		charcoal
*xu ¹		xu ³³ tʂhe ⁵³	fɯ	fu ³⁵	*r/g-wa ?	village
*xutʂhe ¹	fu ⁵⁵ tʂhe ⁵⁵			fu ³³ tʂhu ⁵³	*kram	garden (plot)
*ɲu ¹		ɲu~`fu; ɲwe ⁵⁵	ɲɯ	ɲu ³⁵	*ɲəw	cry, weep

A number of forms with high front rounded vowels in Lizu can also be reconstructed with **-u*, since they all occur after **palatals*. (See p. 46 for discussion on the initials of the last two items.)

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*zu		zu ⁵³		zy ³⁵		plant ash
*zu ¹	zɿ; zɿ ⁵⁵		`zy	zy ³⁵		snow
*tʂ ^h u ¹			amjo tʂ ^h yde 'now'	(te ³³) tʂhu ³³ tʂhu ³¹		a while
*tʂutʂu	tsu`tsu`; tsu ⁵⁵ tsu ⁵⁵			tʂy ⁵³ tʂy ⁵³		straight
*wutʂu			`vutʂy	wu ³³ tʂy ⁵³		point / tip
*letʂu ¹	le`tsu`; tʂu ⁵⁵ ke ³³	le ³³ tʂi ⁵⁵ pu ³³	`letʂy 'left'	le ³³ tʂy ⁵³		right (side)
*dzu ¹	dzu ⁵⁵	dzy ⁵³		dzy ³⁵	*duk ɤ *tuk	poison
*k ^h edzudzu ²	dzu ³³ dzu ⁵⁵		`k ^h edzydzzy	khe ³³ dzy ⁵³ dzy ³¹		meet / come across
*lodzu ¹			lodzy	luo ³³ dzu ⁵³		wall (stone)
*zjendzu/ zindzu ²	zi ³³ ndzu ⁵⁵			zɿ ⁵³ ndzu ⁵³		nephew (brother's son)
*dʒaniu ¹	ɲo ⁵⁵ ɲo ⁵⁵	dʒæ ³³ nu ⁵³	dʒæɲy	dʒæ ³³ nu ⁵³	*nəw	breast, milk
*ju ¹	ndzɿ ³³ ji ⁵⁵ 'buckwheat flour'		jy	dʒɿ ³³ ji ⁵³		flour
*deju ¹			deju	de ³³ ju ⁵³ ; de ³³ ju ⁵³		hot / spicy
*ndz ^w undz ^w u ¹			ndzændzɯ	khe ³³ ndzy ⁵³ ndzy ³¹		coax / fool
*ʂ ^w u ¹			se ʂu 'burn wood'	(ɲi ³³ me ⁵³) ʂy ³¹		catch fire (a house)

The remaining items below can also be reconstructed with **-u*, since they all occur after **alveopalatals* (see section 3.6).

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*tʂ ^h ulje ¹	tʂhu ⁵⁵ li ⁵⁵	`tʂ ^h v 'earth'	tʂ ^h yli	tʂhu ³³ ly ⁵³		mud
*tʂ ^h u ¹	tʂhu ⁵⁵ 'dirty'	nentʂ ^h u	tʂ ^h yli 'mud'	tʂhu ⁵³		muddy / turbid

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*tʃ ^h u ¹	tʃhu ⁵³ ‘open (door)’, tʃh ⁵⁵ ‘open (lid)’	tʃ ^h v		de ³³ tʃhu ⁵³		open
*gætʃu ¹			gʲætɕy	gæ ³³ tʃu ⁵³		monkey
*dʒu			-dzy	dʒu ³⁵		hair / down
*dʒu ¹	dʒu ⁵⁵		dzy ‘(lower) back’	dʒu ³⁵	*gyuk	waist
*dʒu ²	dʒl ³³ mo ⁵⁵			dʒl ⁵³ u ⁵³		goose (wild) ¹⁹
*dʒumæ ¹	dʒu ⁵⁵ ma ⁵⁵			dʒu ³³ mæ ⁵³		fox

¹⁹Zl. Ersu ‘goose’ and ‘open’ both have an unexplained unrounded apical vowel.

4.7 *je and *jẽ

As noted above in section 4.4, it can be difficult to tell *-i apart from *-je; Ersu, Kl., and Mn. are the only dialects that preserve the distinction. The rhymes *-je and *-e (see next section) are also notable for their complex interactions with dental and palatal fricative initials.

env.	Ersu	Kl.	Nq.	Mn.	TBL
(T)s ___	i	-	i	e	i
(T)s ___N	i	e/i	i	e/ɣ	e
(other)	i	je	i	je	i

First, we look at forms with bilabial and alveopalatal initials that are reconstructed with the *-je rhyme, distinct from the *-i rhyme above. The *-je rhyme is generally preserved in Kl. and Mn., while in Ersu *-je became -i after bilabials, taking over the vowel slot vacated by *-i, which became an apical vowel (e.g. **bzi**³³ ‘bee’ < *bi).

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*pjembje	pi ³³ npi ⁵⁵ ; pi ⁵⁵ mbi ⁵⁵	pi ³³ nbi ⁵³		pi ⁵³ nbi ⁵³		knee
*bje ¹	ja ⁵⁵ bi ⁵⁵		pæbi	bi ³³ bi ⁵³		coarse, rough, wide (in diameter)
*ɣwebje/ ɣwobje ¹	ve ³³ bi ⁵⁵		wobi	ɣu ³³ pi ⁵³		shoulder
*bje	bi ⁵⁵	`bje	labje	(te ⁵³) bi ⁵³		heap (e.g. of dung)
*mbje ¹	bi ⁵⁵ ; nbi ⁵⁵	mbe ⁵³	mbivə	nbi ³⁵		hill / mountain
*mp ^h je ¹	mphi ⁵⁵	`p ^h je	`mp ^h jeka	(n)phi ³⁵	*s-p ^w al ?	ice
*demp ^h je ¹	np ^h i ⁵⁵ ; nphi ⁵⁵	de ³³ phi ⁵³	demp ^h je	de ³³ nphi ⁵³		cold (weather, water)
*mbje	nbi ³³ sa ⁵⁵	mbi ³⁵ , mbi ³³ mbi ⁵³		nbi ³³ sa ⁵³ sa ³¹		cool (pleasantly)
*hpje ²		`pje; pi ⁵³ , pe ⁵³	`hpje	pi ⁵³	*s-man	medicine
*fje ¹	ʂe ⁵⁵	`ʂe; ʂu ⁵³	xje	ʂu ⁵³	*syam	iron
*zje ¹	ʒi ⁵⁵ ; ze ⁵⁵		ɣiɣje ‘climb’	ʒi ³³ ʒi ⁵³		crawl (of insects)

The *-je rhyme has palatalized *velar initials in Ersu and Kl. See p. 95 above for forms reconstructed with *-i, where Ersu again maintains the distinction by apicalizing *-i (e.g. **-dzi** ‘thunder’ < ****-dzi** < ***-gi**) but not *-je.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*k ^h je ¹	tɕ ^h i ⁵⁵ ; tɕhi ⁵⁵	khe ⁵⁵	(k ^h e)k ^h je	khe ³⁵		give
*men ^h je	mɛ ⁵⁵ ntɕhi ⁵⁵	`mentɕ ^h e		te ⁵³ me ⁵³ nkhi ³¹		ask / question
*gje ²	ŋua ¹³³ dzi ⁵⁵ ‘pen’	-dze	degje le	(tsh ⁵³ ŋu ⁵³) khe ³³ gi ⁵³		pen in (sheep)
*gjegje	dzi ⁵⁵ dzi ⁵⁵			gi ⁵³ gi ⁵³ phu ³¹		horizontal
*gje ¹	dzi ⁵⁵ ; dzi ⁵⁵		`gijo	gi ³⁵		jar (earthen)

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ŋgje ²	vu ³³ ndzi ⁵⁵		`ŋgi	ngi ³⁵	*m-kum ɤ *m-kim	pillow

Forms with lateral initials have more complex developments. Below, I assume that forms with Ersu **li** descend from *lje (since *li > ə¹. However, it seems that only the first item, ‘good’, maintains the -je rhyme in Kl. and Mn. Most of the **li** syllables in the remaining forms appear to be some sort of noun suffix. In TBL this suffix seems to have developed a rounded vowel, perhaps under the influence of the preceding syllable (in ‘kidney’, ‘testicle’, and ‘mud’); however this is not the case for ‘head’ or ‘dust’. Conversely, in Mn., it is the first syllable (in ‘kidney’ and ‘testicle’) that seems to have undergone fronting, e.g. ‘mud’ *tʃ^huli > tɕ^hyli.²⁰

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*lje ¹	ja ^h li ^h ; ja ³³ li ⁵⁵	lje	lje	li ³³ li ⁵³	*l(y)ak	good
*ljelje ¹	pu ⁵⁵ li ⁵⁵ li ⁵⁵	ta ³³ li ⁵³	tali, talili	ta ³³ li ⁵⁵ li ³¹		circular (spherical)
*wilje/wulje ²	vi ³³ li ⁵⁵	wu ³³ li ⁵³	`vuli	wu ³³ li ⁵³	*d-bu	head
*ndzelje ¹	ndze ⁵⁵ li ⁵⁵		`ndzi ^h te gɣ, `nefti gɣ	dzu ³³ li ⁵³		believe / trust
*p ^h ulje ¹			p ^h ele, p ^h uli	phu ³³ li ⁵³		dust
*mbiulje ²	nbe ³³ li ⁵⁵	mbə ⁵⁵	`mbøli	nbo ³³ ly ⁵³		kidney
*zulje ¹		zu ³³ li ⁵³		zu ³³ li ⁵³		testicle
*tʃ ^h ulje ¹	tʃhu ⁵⁵ li ⁵⁵	`tʃ ^h v ‘earth’	tɕ ^h yli	tʃhu ³³ ly ⁵³		mud
*sjelje	si ⁵⁵ li ⁵⁵				*d/s-ləy	bow (weapon)
*nelje/netje ¹	li ⁵⁵		nele, neɣ	ne ³³ li ³¹	*s/m-grəy	melt, dissolve
*ljek ¹	li ⁵⁵ ts ¹ li ⁵⁵	`letɕi		li ³³ ki ⁵³	*s-lay ɤ *s-ley	ladder
*lje ¹	phe ⁵⁵ li ⁵⁵			ne ³³ li ⁵³ li ³¹		winnow

Forms with dental and palatal fricative initials seem to require reconstructing two rhymes, both here and for the rhyme *-e (next section); I tentatively reconstruct a nasal vs. oral vowel in these cases (this is suggested by the nasal finals in many of the corresponding PTB roots). A near-minimal set illustrating the different combinations of initial consonant, nasality, and rhyme are presented below:

rhyme	init.	nas/or	PER	Ersu	Mn.	TBL	PTB	gloss
*-je	*(t)s	oral	*ts ^h je	ts ^h i ⁵⁵	-ts ^h e	-tɕ ^h i ⁵³		thin
		nasal	*tsjɛ̃	tsi ⁵⁵	tɕe	tɕe ³¹	*tsam	hair
		oral ~ nasal	*sje/sjɛ̃	si ⁵⁵	`ɕe	ɕi ⁵³ /ɕe ³⁵	*sum	three
*-e	*tɕ	?	*tɕe	tse ⁵⁵	tɕe	tɕe ⁵³	*s-dim	cloud
	*ts	oral	*ts ^h e	ts ^h ɛ ³³	`ts ^h i	-tshe ⁵³	*tsəy	wash
		nasal ²¹	*ts ^h ɛ̃	tshi ⁵⁵	ts ^h e	tshe ³⁵	*tsit	goat

²⁰Cf. the “umlaut” change in Old High German affecting such forms as ‘mouse (pl.)’ **mus-i** > **mys(-i)**.

²¹Many Mn. forms with this correspondence actually have the rhyme -ɣ; see p. 110.

There are quite a few examples of correspondences of the ‘thin’ and ‘cloud’ type. The other examples are not particularly numerous, but the fact that they are “basic” and/or “stable” roots in Tibeto-Burman encourages us to try to find some regularity in their histories rather than waving them aside as exceptions. The forms supporting the correspondences reconstructed with **-je* are given below:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ts ^h jets ^h je ¹	ts ^h i ^l ts ^h i ^l ; tshi ⁵⁵ tshi ⁵⁵		pæts ^h e	tçi ³³ tçi ⁵³		thin (in diameter) / fine
*kuts ^h je ¹		ku ³³ tshi ⁵³	kats ^h epə ¹	kuo ³³ tçi ⁵³		life
*sats ^h je	ʂa ³³ tshi ⁵⁵		(sata)	fu ⁵³ tçi ⁵³		broom
*ts ^h je ¹			ts ^h e ‘throw down’	ŋe ³³ tçhæɿ ⁵³		throw / hurl / toss
*tetsje			-tətse	(ne ³³) te ⁵³ tçi ³¹		mace (= 0.1 tael)

Nasal **-jẽ*:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*sjẽ ²	si ^l ; si ⁵⁵	si ⁵³	`çe	çi ⁵³ , çe ³⁵	*g-sum	three
*tsjẽ ¹	tsi ⁵⁵	tsi ⁵³	tçe, tsɿ	tçe ³¹	*tsam	hair
*zjẽ ¹	zi ⁵⁵		zɿ	ze ³⁵	*zum ɤ *zuŋ	use
*pjẽ		tçi ⁵⁵	`pse	pze ³⁵	*b-ləy, PLB *p-re	run
*bjẽbjẽ ¹		dze ³³ dze ⁵³ , dʒi ³³ dʒi ⁵³	bzibze	bze ³⁵	*byam	fly (v.)
*dzjẽ ¹	dzi ⁵⁵		dze	dze ³⁵	*m-dzam	bridge
*dzjẽ			`dzijo	dze ³⁵		sickle
*dzjẽdzjẽ ²	dzi ⁵⁵ dzi ⁵⁵		`dzidzɿ	dze ⁵⁵ dze ⁵³	*dz(y)im	wet
*dzjẽdzjẽ			`dzidzɿ	dze ³³ dze ⁵³	*dz(y)im	raw / uncooked

The two forms below are placed here because they do not quite fit under **-i*. As discussed on p. 24, these forms have a **retroflex* initial or medial, but have developed palatals in Mn., presumably under the influence of the rhyme. However, we cannot reconstruct **-i* here because we would expect **dʒi* > *dʒi* and **p^hri* > *p^hʂi*; thus, I reconstruct **-je* for these two items.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*bædzje ¹	ba ⁵⁵ dze ⁵⁵	ba ³³ dʒi ⁵⁵	bædzɿ	bæ ³³ dʒi ⁵³		money
*tsjẽp ^h rje ¹	tsi ^l p ^h ʂi ^l ; tsi ⁵⁵ p ^h ʂi ⁵⁵		tçe p ^h çip ^h çi	tçe ³³ phzu ⁵³	*pran/t	braid / plait

TBL ‘braid’ has an unexpected rounded vowel.

4.8 *e and *ẽ

Forms reconstructed with *-e show a wide variety of mid-vowel reflexes.

env.	Ersu	Kl.	Nq.	Mn.	TBL
P __	ɛ	e	e	ø, e	e
m, T	ɛ	e	ə	e/ɣ	e
(T)s __	ɛ	e	ɿ	e	e
(T)s __N	i	e	e	e/ɣ	e
(T)ç __	ɛ	e	e/i/u	e	e/i
R __	ɛ	e	ə	ɣ	ʉ
K __	ɛ	ʉ	ʉ	ɣ	ʉ

I will start with *-e after bilabial stops. In most dialects the reflex is -e (-ɛ in Ersu); in Mn. it seems to be -ø in many cases, perhaps under the influence of the bilabial initial. Similarly, the last two items (with lateral initials) below, ‘thumb’ and ‘daughter-in-law’ (a tonal minimal pair in Mn.) seem to have secondarily rounded vowels in Mn.; the first syllable of ‘thumb’ is most likely < *le ‘hand’ (cf. lep^he ‘hand’, lep^hçɑ ‘palm’).

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*læp ^h e ¹	lɑ ‘month’; lɑ ⁵⁵ pe ⁵⁵	læp ^h e; lɛ ⁵⁵	læp ^h ø	læ ³³ pe ⁵³	*s/g-la	moon
*kape ¹	ka ³³ pi ⁵⁵		kapø	ka ³³ pe ⁵³		garbage / debris
*bedi ¹	bɛ ³³ dzi ⁵⁵	bə ³³ di ⁵³	bødzi	bɛ ³³ dzi ⁵³	*bəw, *zril > PLB *di ¹	insect / worm
*bebe ¹	bɛ ⁵⁵ bɛ ⁵⁵	bebe	bøpø, bøbø	bɛ ³³ bɛ ⁵³		crawl, climb
*stiupe ¹		ku ³³ pe ⁵⁵	stɿpe	ku ³³ pe ⁵³		mouth
*belæ ¹			belæ	bɛ ³³ læ ⁵³		work / labor
*khemp ^h e	p ^h i\	khɛ ³³ nphe ⁵³	mp ^h e	khɛ ³³ nphe ⁵³	*s-p ^w ak	hide oneself ²²
*lemæ ¹	lɛ ³³ ma ⁵⁵		lømæ	lɛ ³³ mæ ⁵³		thumb
*lemæ			lømæ	lɛ ³³ mæ ⁵³		daughter-in-law

After *m-, and dental non-fricatives, we get Ersu -ɛ and Lizu -e (sometimes -ə in Nq.):

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*me ¹			me	me ³⁵	< WT mar ?	butter
*me ¹	mɛ\; mɛ ⁵⁵	mə ⁵³ , sa ³³ mə ⁵³	me	me ³⁵	*mey	fire
*t ^h eme ²	t ^h ɛ\mɛ\ɲuA\; t ^h ɛ ³³ me ⁵⁵	thə ³³ mə ⁵³	k ^h eme	thɛ ³³ me ⁵³	*ma-t	forget
*meli/mele ²	mɛ ⁵⁵ ə ¹⁵⁵	melje; mɛ ⁵⁵	mele	mɛ ⁵⁵ lɛ ⁵³	*g-ləy	wind ²³

²²Ersu ‘hide’ has an unexpected -i rhyme.

²³The second syllable in ‘wind’ and ‘ground’ poses some problems. In both Ersu and Mn., the forms for ‘wind’ and ‘ground’ are very similar to each other, but whereas in Mn. they form a tonal minimal pair, in Ersu the forms differ in tone and rhyme as well. We expect Ersu ə' < *li, and li < *lje; however, Mn., which is expected to preserve

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*melje	me ³³ li ⁵⁵		mele		*m-lej ɤ *m-ləy	earth, ground
*gæme ¹	gA ⁵⁵ me ⁵⁵ ; nga ³³ me ⁵⁵	`gæmi	gɣæme	gæ ³³ me ⁵³	Lahu vəʔ-qâ < *ga	clothing / garment
*t ^h e ¹	t ^h ɛ ⁵⁵ ; the ⁵⁵	`t ^h e	t ^h e	the ⁵³		s/he
*te ¹	tɛ ⁵⁵ ; te ⁵⁵	`te; tə ⁵³	`te	te ³¹		one
*dede ¹		də ³³ də ⁵³		de ³³ de ⁵³		heavy
*mende	me ³³ nde ⁵⁵	nde		me ³³ de ⁵³		clear (weather) / sunny
*ne/no ²	nɛ ⁵⁵ ; ne ⁵⁵	`ne	`no, ne	ne ⁵³	*naŋ	you
*ne ¹	nɛ ⁵⁵ ; ne ⁵⁵	ne; nə ⁵³	ne, nə	ne ³⁵	*g/s-nis	two
*nene	ja ³³ ne ⁵⁵			nu ⁵³ nu ⁵³	*s-nak	deep
*le(pje)		le ⁵³		le ³³ pi ⁵³	*g-lak	hand
*lep ^h ew ¹	le ³³ phɛ ⁵⁵	le ³³ phu ⁵³ 'arm'	lep ^h e	le ³³ phu ⁵³ 'arm'		hand
*lesē	le ³³ su ⁵⁵	le ³³ se ⁵⁵		le ³³ se ⁵³		finger

In a handful of forms, Mn. has an unrounded -ɣ rhyme instead; my consultants suggest that there is variation between the rhymes -e and -ɣ.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*de ¹	dɛ ⁵⁵	dɛ ³⁵	dɣ	dɛ ³¹	*dak	weave / knit
*nt ^h e ¹		`thent ^h e	nent ^h ɣ 'stumble, fall'	nthe ³⁵		jump
*hte ¹	xtei ⁵⁵ ??		ɣtɣ	dɛ ³³ te ⁵³		hold (a pen)
*le ¹	le ⁵⁵	le			PLB *ʔ-li ¹	old
*t ^h ele ¹			lɣ	the ³³ le ⁵³	*g-lwat	release / set free
*li/le ¹	ə ⁵⁵		`mele lɣ	me ³³ le ⁵³ læ ³³ ?		blow (wind) ²⁴

As discussed on page 106, the following set with dental fricative initials is reconstructed with non-nasal *-e:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*se ²	sɛ ⁵⁵ ; se ⁵⁵		`sɣbwe	se ⁵³	*su	who
*rdose ¹	do ⁵⁵ se ⁵⁵ ja ⁵⁵ dzɛ ⁵⁵ 'pupil'	do ³³ su ⁵⁵	ɣdo, ɣdosi 'eyeball'	nduo ³³ se ⁵³		eye

both *li and *lje, has le instead, and Kl. (which should also preserve *lje) has -lje as the second syllable of 'wind' where we might expect -li based on the Ersu form.

²⁴The rhymes for this root do not quite match up, but perhaps there is a root with an l- initial (remember Ersu ə' < *li).

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*sēse ¹	si ⁵⁵ se ⁵⁵	tʂh ³³ ɕ ⁵³		se ³³ ɕ ⁵³	*sey	fruit ²⁵
*sēkæle ¹	si ⁵⁵ ka ³³ le ⁵⁵	ʂə ³³ ka ⁵⁵ ?		se ³³ ka ⁵³ li ³¹	*s-ka:k	branch / twig
*ndze ¹	dɛ\ndzA\l (perf.); ndze ⁵⁵		ndzi	dze ⁵³	*dzyi	ride (a horse)
*nts ^h e ²	nts ^h ɛ\; nts ^h e ⁵⁵		\nts ^h i	nts ^h e ⁵³	*m-tsak DRIP	leak
*ts ^h e ²	ts ^h ɛ\; tʂe ³³	nents ^h e, \ts ^h e; ne ³³ tshu ⁵³	\ts ^h i	ne ³³ ts ^h e ⁵³	PLB *tsəy ²	wash (clothes)
*dets ^h e ²	tʂe ⁵⁵	\ts ^h e; də ³³ tshu ⁵⁵	\dets ^h i; ts ^h i	tʂe ⁵³	PLB *ʔ-dzəy ²	cough
*tse ²	tʂe ⁵⁵		\tsi	tʂe ⁵³		hemp
*tse			\tsi	tʂe ³³ tʂe ⁵³ ji ³¹		welcome, receive s.b.

This set, on the other hand, is reconstructed with *-ē̃ (note the variation in Mn. between -e and -ɣ):

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ts ^h ē ¹	tʂhi ⁵⁵		ts ^h e	ts ^h e ³⁵	*tsi:t	goat
*tsē			tsɣ	tse ⁵³	*dzyut ?	pull up (weeds)
*tsē̃			tsɣ ‘rip, tear’	the ⁵³ tse ⁵³		snap (thread)
*dzē ¹			dzidzɣ, dzɣ	dze ³⁵	*ts(y)ap	chop / hew
*dzē̃	dzi\		dzɣ			enough
*ndzē ¹	ndzi ⁵⁵			ndze ³⁵	*N-dzyam	wedge
*sē ¹		se ⁵³	se	se ³⁵	*r-sak	air, breath, steam
*sē ¹	si ⁵⁵	\se; se ⁵⁵	se	se ³⁵	*siŋ ≈ *sik	wood / log
*zē ¹	zi ⁵⁵		zə ¹ , zɰə ¹	ne ³³ ze ⁵³		press (with palm or finger)

The following forms with *palatal initials complete the developments outlined in the table on page 106:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*tɕ ^h etɕ ^h e ¹	ts ^h ɛ\ts ^h ɛ\; tʂe ⁵⁵ tʂe ⁵⁵	tɕhe ³³ tɕhi ⁵³	tɕ ^h etɕ ^h e	tɕhe ⁵³ tɕhe ⁵³	*ts(y)i/əy/ay	ten
*tɕ ^h e ¹	ts ^h ɛ\; tʂe ⁵⁵	\tɕ ^h e; tɕhu ⁵³	tɕ ^h e	tɕhi ⁵³		drink
*pætɕe ¹			pætɕe	ne ³³ pæ ⁵³ tɕi ³¹		cut (paper, cloth)
*tɕe ¹	tʂe\; tʂe ⁵⁵	tɕe	tɕe, tsɣ	tɕe ⁵³	*s-dim	cloud, fog

²⁵The second syllables of ‘eyeball’ and ‘fruit’ appear to be the same root, namely < PTB *sey FRUIT / ROUND OBJECT, but the TBL form has an aberrant apical vowel in ‘fruit’ where we expect se (presumably the first syllable is not < *sey, but rather < PTB *siŋ ≈ *sik TREE).

After retroflexes, **-e* yields Ersu *-ε*, Mn. *-ɣ*, and TBL *-u*. Note the exceptions with *-o* in Ersu (‘shoot’, ‘sound’). The last item below, ‘gnaw/nibble’, has an **alveopalatal* initial (section 3.6.2), the only example of this initial occurring with either of the rhymes **-e* or **-je*. The Ersu and Nq. forms point to a high front vowel, but the Mn. and TBL forms are consistent with the vowels in this set.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ʂe ¹	seɪ̯; ʂɪ ⁵⁵ ji ⁵⁵	ʂe; ʂe ⁵³		ʂe ³⁵	*sram	otter ²⁶
*dets ^h e			ʰdets ^h ɣ	(tshɪ ⁵³) de ³³ mæ ⁵³ tshɪ ⁵³ che < ‘tasteless’	cf. Lahu *kyim/kyum	flavorful
*tʂ ^h e ¹	tʂho ⁵⁵	(maɪ ³³) tʂhu ⁵³	tʂ ^h ɣ	(me ³³ ndæ ⁵³) tʂhu ⁵³		shoot, fire a shot
*tʂ ^h e ¹	tʂ ^h oɭ; tʂho ⁵⁵		tʂ ^h ɣ ‘voice’	tʂhu ³⁵	cf. Lahu khɔ̯ < *kraŋ	sound
*tʂ ^h e			tʂ ^h itʂ ^h ɣ ‘wall off’	tʂhu ⁵³ dzu ⁵³	*kram	fence (bamboo / twig)
*diutʂ ^h e ¹	bu ⁵⁵ tʂhe ⁵⁵	ti ⁵⁵ tʂhə ⁵³	dzitʂ ^h ɣ	(te ³³)dzu ³³ tʂhu ³¹ , dzu ⁵³ tʂhu ³¹		year ²⁷
*ntʂ ^h e ¹			-ntʂ ^h ɣ	(te ³³) ntʂhu ³¹		handful (of rice)
*ntʂ ^h e			ntʂ ^h ɣ ‘pull out’ ???	te ⁵³ ntʂhu ⁵³		grab / seize / catch
*dze ¹	dze ⁵⁵		dzɣ	ŋe ³³ dzu ⁵³ dzu ³¹ / dzu ³¹	*kri:t	grind
*dze	-dze, -dzi; dze ⁵⁵	-dze	-dzɣ	(te ⁵³)dzu ⁵³	*dzum ɤ *tsum	pair
*ndze ²	dɛ̯ɭdzAɯ (perf.); ndze ³³	ndzu ³³ ndzu ⁵³	ʰndzɣ	ndzu ⁵³ ndzu ⁵³		sew (up)
*ntʂ ^h i/ntʂ ^h e ¹	ntchi ⁵⁵	tʂhi ⁵³	(ə ¹ k ^h o) ntʂ ^h ɣ	tʂhu ³⁵		gnaw / nibble

After velars we get Ersu *-ε* and a back unrounded vowel in Lizu. This is consistent with Chirkova’s (2008) synchronic analysis of Kl. where [u] is the allophone of /e/ after velars.

Note the Ersu forms for ‘draw water’ and ‘foot/leg’, where the initials seem to have undergone unexpected palatalization.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*k ^h e	tʂ ^h iɭ ?		dzɭ ʰk ^h ɣ		*kam (ɤ *ka:p)	draw water
*meŋk ^h e ²	me ³³ ŋkhe ⁵⁵	me ³³ ŋkhu ⁵³	ʰmenk ^h ɣ	me ³³ ŋkhu ⁵³	*kəw	smoke
*hke ¹	hke ⁵⁵	pɛ̯ ³³ nbi ⁵⁵ khur ³³	dexkɣ, koxkɣ	pi ⁵³ nbi ⁵³ khe ³³ ku ⁵³		kneel

²⁶The Nq. and TBL forms do not quite fit here because they have a front *-e* rather than a back vowel. Perhaps this is because the initial is a fricative, rather than an affricate like the other forms in this set.

²⁷Note the irregular palatal initial in the Nq. form.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*hke ¹	kɛ̃; hke ⁵⁵	`kuu	xkɣ 'hawk'	kuu ³³ nua ⁵³		eagle / hawk
*hke	hke ⁵⁵	-kuu	-xkɣ	ne ³³ kuu ⁵³		half
*deke ¹		de ³³ kuu ⁵³	dekɣ	de ³³ kuu ⁵³	*krak	fear, be afraid
*keke			kɣkɣ	kuu ⁵³ kuu ⁵³		big / large
*dege ¹	ge ⁵⁵ ge ⁵⁵	de ³³ ge ⁵³	`ɣɣ	de ³³ ɣu ⁵³		lick / lap
*ge ¹	ge ⁵⁵		ɣɣ, `ɣɣtse	ɣu ³³ zɪ ⁵³	*dzəy ?	seed
*ɣra/ge ¹	xa ⁵⁵	`ba; ge ³⁵	ɣɣ	ɣu ³⁵ , ɣa ³⁵	*k-rap	needle ²⁸
*nge ²	gẽ; nge ³³		`ngɣ	ngu ³⁵	*d/s-kəw, PQc s/r/n-gəw	nine
*lingje/lenge ²	ə ³³ ndzi ⁵⁵ , ə ³³ ndzi ⁵⁵		`lengɣ			foot, leg
*ne ¹	nẽ		nẽ, nẽbɔlɔlɔ			kind of turnip (圆根 yuángēn)
*xe			`dexɣɣ	khe ³³ xu ⁵³		cover / hide from view
*xexe ²	xa ⁵⁵ xa ⁵⁵ ??		`xɣɣ	xu ⁵³ xu ⁵³		lid / cover

Finally, there are a couple of forms with mid front vowels in Ersu but high vowels in Mn. These have been tentatively placed in this section.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*htje	hte ⁵⁵		`fti		*r-tsyəy	count
*batʃi/batʃe	ba ³³ tʃe ⁵⁵		batʃi			basket (for straining)

²⁸This root has two variants in Proto-Ersuic; see also p. 84.

4.9 *ew and *wE

The lexical items in this section are look like they should be < *-e based on Ersu and Mn., but in many cases have -u rhymes in Nq. and TBL. I tentatively reconstruct *-ew in these cases. Below are forms with *retroflex, *palatal, or *alveopalatal initials:

Ersu	Kl.	Nq.	Mn.	TBL
ɛ	-	u	ʎ	u

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*putɕ ^w ew/ gutɕ ^w ew			`deputɕʎ 'flip over'	the ³³ gu ⁵³ tɕu ³¹		turn (a corner)
*dʒ ^w ew ¹	dʒyil; dʒo ⁵⁵ lɑ ⁵⁵		dʒʎ læ	dʒu ³³ læ ⁵³		return, go back
*htɕew			ɕtɕʎ	ɕu ⁵³		dare
*mæntɕ ^h ew			`ɣumæ `mæntɕ ^h ʎ	mæ ³³ ntɕhu ⁵³		pregnant
*dendzɕew ¹			dendzʎ	de ³³ ndzɕu ⁵³		slippery (road)
*ndzɕew			ndzʎ	de ⁵³ ndzɕu ⁵³	*kyi:n	weigh (v.)
*tɕew ¹	tɕo ⁵⁵	tɕu ⁵³	`tɕʎ	khe ³³ tɕu ⁵³	*s-glak ɤ *klak	cook / boil
*detɕew ¹	tɕe ⁵⁵	de ³³ tɕu ⁵⁵	detɕʎ ¹	de ³³ tɕu ⁵³	*s-kyu:r ɤ *s-kwya:r	sour
*htɕew ¹	htɕe ⁵⁵		ɕtɕʎ	khe ³³ tɕu ⁵³ ??		catch / grab / hold
*ntɕ ^h ew ¹	ntɕ ^h eɿ; ntɕ ^h e ⁵⁵	tɕhə ³³ pi ⁵³ , tɕhə ⁵³ ??	ntɕ ^h ʎ ¹	(n)tɕhu ⁵³		rice (uncooked)
*ɕewmæ ¹	ɕe ³³	ɕe ³³ mi ⁵³	ɕʎmæ, ɕʎ	ɕu ³³ mæ ⁵³	*s-r(y)ik, *s-row NIT	louse
	ɕe ³³ tse ³³			ɕu ³³ pe ⁵³ tshe ³¹		nit
*mbuɕew		bu ³³ ɕu ⁵⁵	`dembuɕʎ	nbu ³³ ɕu ⁵³		shy / bashful
*t ^h egew ²	the ³³ ge ⁵⁵ 'glad'		`degʎ	the ³³ gu ⁵³		happy / excited

Note that Ersu 'return/go back' and 'cook/boil' have back rounded vowels, not -ɛ like the rest of the forms.

There are also a handful of *bilabial and *dental fricative initials that may have this rhyme as well. Note that Ersu 'other' and 'friend' (apparently the same root) have a round vowel.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*lep ^h ew ¹	le ³³ phē ⁵⁵	le ³³ phu ⁵³ 'arm'	lep ^h e	le ³³ phu ⁵³ 'arm'		hand
*lip ^h ew ¹	rəɿ ¹⁵⁵ phē ⁵⁵	li ³³ phu ⁵³		li ³³ phiaē ⁵³		foot ²⁹

²⁹The second syllable in the TBL form seems unrelated to the Ersu and Nq. forms, but may mean 'flat object'; cf. lep^hɕɑ 'palm', se³³phzæ⁵³ 'leaf', and perhaps tɕhu³³phiaē⁵³ 'thigh'.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*nts ^h ew		(dze ³³ nu ⁵⁵) tshe ³³	nts ^h ɣ ‘milk; squeeze’	ntshu ⁵³	*m-dzu/ip SUCK	squeeze (for milk)
*ndzew ¹	ndzo ⁵⁵ ji ⁵⁵		ndze	ndzu ³³ ji ⁵³		other person(s)
*ndzew ¹	ndzo ⁵⁵ ndzo ⁵⁵		ndzɣ	ndzu ³⁵		friend
*ndzewbjē ²			`ndzibze	ndzu ⁵³ bze ⁵³		friend / amiable
*me/mo		`me		muo ³⁵	*r-məw	sky

Finally, there are a number of forms with apparently almost the opposite correspondence, where Mn. has a round vowel **-u** where the other varieties have a front or low vowel. There are very few of these, but they include such basic items as ‘back’ and ‘uncle’. For these items I have thrown my hands up in the air and assigned them a ***-wE** reconstruction (with a capital “E” to indicate its indeterminate nature), but hopefully more data or investigation will yield a more satisfying solution.

Ersu	Kl.	Nq.	Mn.	TBL
ɛ	i	u/i/e	u	e

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*pwEpwE ²	pe ³³ pe ⁵⁵	(gə ³³ mo ⁵⁵) pu ³³	`pʉtə ‘patch (v.)’	pe ⁵³ pe ⁵³	*p ^w a, PLB *ba ¹ ?	patch (clothing)
*pwEki/pwEtc̣i			`pʉki	the ³³ pe ⁵³ tci ³¹		send/dispatch (a person)
*mwEdzæ ¹			mʉdzæ	me ³³ dzæ ⁵³		barley
*gwEmæ ²	gA`lma`ni` ‘behind’; ga ³³ ma ⁵⁵	`gime; ge ³³ phi ⁵³	`ɣumæ, `gumæ	ge ³³ mæ ⁵³ , gu ³³ mæ ⁵³	*g-raŋ CHEST	back
*ɣwEmo/ æɣwE ¹	xə ⁵⁵ mo ⁵⁵ , ə ⁵⁵ mo ⁵⁵		`ɣvʉ	æ ³³ ɣw ⁵³	*ryaŋ ?	uncle (mother’s brother)

4.10 *o

Two kinds of “o” are reconstructed for Proto-Ersuic, a plain *-o (this section) and *-wo, with a labiovelar glide (next section). The distinction is based on the TBL transcriptions, where *-wo is assigned to lexical items with bilabial and velar initials where Mn. has an -o rhyme but TBL has -u. The reconstruction of *-wo makes the set of back vowels somewhat symmetric with the front vowels, since the rhyme reconstructed as *-je has merged with *-i in TBL, just as *wo has merged with *-u. However, this similarity is rather superficial, since the evidence for *-je (as a rhyme distinct from *-i) is found in Ersu, Kl., and Mn., whereas the evidence for *-wo (as a rhyme distinct from *-o, not *-u!) is found only in TBL (and perhaps Kl., in the form of uvulars—see p. 119, below).

Complicating this reconstruction is the fact that the TBL reflex of *-o is usually -uo (but -o after bilabials and -u after palatals and alveopalatals); and the fact that Huáng and Rénzēng (1991) claim that there is a contrast of -o vs. -uo after bilabials (but nowhere else), although this contrast does not show up in any of the supporting forms here (thus, it has been ignored for the purposes of reconstructing Proto-Ersuic).

env.	Ersu	Kl.	Nq.	Mn.	TBL
P __	o	o	o	o	o
pal. __	o	o	o	o	u
K __	u	o	o	o	uo
(other)	o	o	o	o	uo

Below are forms with *bilabial initials. Note that Ersu ‘escape’ and ‘hat’ have unexpected -u (but notice the variation between -o and -u in Qš. ‘have’); Ersu ‘soldier’ does not have a back vowel and is perhaps a Tibetan loan (WT **dmag mi**).

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*t ^h ep ^h o ¹		tha ³³ pho ⁵³	k ^h ep ^h o	tha ³³ ph-a ⁵³ ‘die out’		extinguish, put out fire
*p ^h o ¹	phu ⁵⁵	pho ³³ ji ⁵³	`nep ^h o-a	pho ³⁵	*ploŋ ?	run away / escape
*bo ¹	bo ¹ ‘have livestock’, bu ¹ ‘have N (be age N)’; bo ⁵⁵	bo	bo	bo ³¹		have, exist (money)
*mbo ¹	bu ¹ ; nbu ³³	nbo	mbo, mbojo	nbo ³⁵ , nbo ⁵³ ju ⁵³		hat
*nembo			`nembo	ne ³³ nbo ⁵³	*m-baŋ	deaf
*nambo ²	na ³³ nbo ⁵⁵		`æ ¹ na mbo	na ³³ nbo ³⁵	*m-baŋ	deaf person
*t ^h emo/momo ¹	mo ¹ mo ¹ ; mo ⁵⁵ mo ⁵⁵	the ³³ mo ⁵³	k ^h emo-a	tho ³³ mo ⁵³	*maŋ	old / elderly
*mamo	mA ¹ mo ¹ ‘mom’	mæmo	mamo ‘wife’	ma ⁵³ mo ⁵³		old lady
*ts ^h omo		`ts ^h omo	ts ^h umo	tshuo ⁵³ mo ⁵³		old man

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*djemo ¹	dʒi ⁵⁵ mo ⁵⁵			dʒe ³³ mo ⁵³		rich
*ndzomo ²	ndzo ³³ mo ⁵⁵			ndzuo ⁵³ mu ⁵³	PLB *m-dzəw ²	official (government)
*lamo	la ⁵⁵ mo ⁵⁵			la ⁵³ mu ⁵³		stutterer
*mo ¹		`mo	ə'mo	mo ³⁵	<MC muH 墓?	tomb
*mo	me ⁵⁵	`mo	`mo		*d-mak	soldier, army

In the forms below (all with *dental initials except for the last two items), some Ersu forms again prove problematic. Some of the forms with initial *l- are **lo** in Ersu ('wait', 'tael', 'mirror', penultimate syllable of 'dove'), but others have become **ə'** ('stone', 'maggot', 'bark'). Also, 'extract' and 'light a fire' have the rhyme **-u**, and 'hoe' has the rhyme **-ɛ**.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*mboto		`nbuto		nbo ³³ tuo ⁵³	PL *taŋ ³ (PL 257)	knife
*lit ^h o/lot ^h o ¹		lo ³³ tho ⁵³	lit ^h o	luo ³³ thuo ⁵³	*b-ləy	grandchild
*nt ^h ont ^h o ¹			nt ^h o, nt ^h on- t ^h o	nthuo ³³ nthuo ⁵³	PLB *tok TSR #15	peck at (of a chicken)
*k ^h endo ¹	ndo ⁵⁵	thɛ̃ ³³ ndo ⁵³	k ^h endo	kho ³³ nduo ⁵³		see
*ndojo ¹			ndojo	nduo ³³ ju ⁵³		calf (yak)
*hto		`to; khe ³³ htsho ⁵³	ʃto	tuo ⁵³		watch, look
*k ^h elo ¹	lo ⁵⁵	khelo	`lo	kho ³³ luo ⁵³	*l(y)aŋ	wait
*lo	-loʔ; lo ⁵⁵		-lo	(to ³³) luo ³¹	<MC ljangX 兩?	tael (= 50 grams)
*mjalo ¹	mia ⁵⁵ lo ⁵⁵		`mjalo	mi ³³ luo ⁵³		mirror
*lolu ²	ndza ³³ lo ⁵⁵ ə ⁵⁵ 'pigeon'	lo ³³ lu ⁵³		luo ³³ lu ⁵³		dove
*lo			loxo	dzo ³³ luo ⁵³ ku ³¹		ditch / gully ("water-ditch"?)
*lo ¹	ə ⁵⁵ ʔk ^h uAʔ; ə ⁵⁵ khuə ⁵⁵		lomæ	luo ³³ mæ ⁵³	*r-lung *k-luk	stone
*lo(bwo) ¹	ə ⁵⁵ ʔk ^h uAʔ; ə ⁵⁵ khuə ⁵⁵	lo ³³ pu ⁵³ , lo ³³ bu ⁵³		luo ³³ bo ⁵³ , luo ⁵³ bu ⁵³	*r-lung, *k-luk	stone, rock
*bulo	bɛ ³³ ə ⁵⁵		bulo		*s-luk/ŋ	maggot
*lolo/lulu ¹	ə ⁵⁵	`lulu	lulu	luo ³⁵	*s-loŋ	bark (of dog)
*nopri ¹		nu ³³ pi ⁵³	nopə ⁵³ 'soy- bean'		*s-nuk BEAN	beans/peas
*ts ^h o	ntʃho ⁵⁵ ???			me ³³ tshuo ⁵³		dawn (the day)
*ts ^h o ¹	ts ^h uʔ		nets ^h o	ŋo ³³ tshuo ⁵³		extract / take out
*ts ^h o ¹	tsho ⁵⁵ pha ⁵⁵ 'young man'	tsho ⁵³ , tʃho ⁵³ ?	ts ^h o	tshuo ⁵³	PLB *tsaŋ ¹	human being, person

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ts ^h omo		`ts ^h omo	ts ^h umo	tshuo ⁵³ mo ⁵³		old man
*tsumu/tsumo ²	tsu ³³ tj ⁵⁵		`tsu ^h mo	tsuo ⁵³ mo ⁵³	*tsum ?	mortar
*nts ^h o ¹	ntshu ⁵⁵		dents ^h o	kho ³³ ntshuo ⁵³		light (a fire, a light)
*tso	tso ^h txo ^h		ə ^h li tso	li ³³ tsuo ⁵³		dance
*dzepi/dzop ^{hi1}	dze ⁵⁵ psɿ ⁵⁵		dzop ^h ɕi			hoe
*t ^h endzo			jo k ^h endzo 'spoil-child'	tho ⁵³ ndzuo ⁵³		accustomed to, in the habit of
*ndzomo ²	ndzo ³³ mo ⁵⁵			ndzuo ⁵³ mu ⁵³	PLB *m-dzəw ²	official (government)
*soso ¹	so ^h so ^h ; so ⁵⁵ so ⁵⁵		suso	suo ³³ suo ⁵³ , suo ³⁵		learn, teach
*taso ¹			taso 'just now'	ta ³³ suo ⁵³	PLB *C-sok	morning
*somwoŋk ^h wo			səmonk ^h o	suo ⁵³ mu ⁵³ nkhu ³¹		tomorrow night / evening
*soniu ²	so ^h no ^h ; so ⁵⁵ no ⁵⁵	`soni	`sə ^h	suo ⁵³ no ^h ⁵³		tomorrow
*zo ¹	zo ⁵⁵ ; khe ³³ zo ⁵⁵		zo, k ^h ezo-a	(ndzu ³⁵) zuo ⁵³		owe/lose (money), suffer (illness); hit (a target)
*(n)tɕ ^h o ¹	ntɕho ⁵⁵ ntɕho ⁵⁵	de ³³ tɕho ⁵³	tɕ ^h itɕ ^h o		*m-krak, PLB *m-prak ^h	scratch
*htɕomo ²	ɕo ⁵⁵ mo ⁵⁵		`ɕtɕomo	ɕi ⁵³ mu ⁵³	*kraŋ	strength (physical)

TBL 'strength' has an unexplained unrounded vowel.

Forms with *palatal and *alveopalatal initials/medials are listed below (remember that there is no contrast between *-uo and *-o in TBL). Included at the end are some examples of the diminutive suffix, which seems to descend from *jo in Lizu but *ji in Ersu.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*mp ^h jo	ja ^h ntɕ ^h o ^h ; ja ³³ ntɕho ⁵⁵		mp ^h ɕo	phiu ⁵³ nphiu ⁵³		beautiful
*p ^h jo			-p ^h ɕo	(te ³³) phiu ³¹		bolt (of cloth)
*p ^h jo	-tɕ ^h o ^h	-tɕ ^h o	-p ^h ɕo	phzuo ⁵³	< WT phyogs	direction / orientation
*mp ^h jo ²	ntɕho ^{33/55}		mp ^h ɕo 'slap'	te ⁵³ nphzuo ³³ nphzuo ³¹		strike (the table)
*mp ^h rjo ¹	ntshe ⁵⁵		mp ^h ɕo (xko)	ntɕhuo ⁵³		measles
*pjo			`pɕowa, `pɕowə ^h 'agate'	pzu ³³ wu ⁵³ , ptɕu ³³ wu ⁵³		coral
*netɕ ^h o ¹		ne ³³ tɕhu ⁵³	tɕ ^h o, tɕ ^h itɕ ^h o	ne ³³ tɕhu ⁵³		cut up (vegetable)
*tɕ ^h opu ²			`tɕ ^h opɕ	tɕhu ⁵³ pu ⁵³	*taŋ	pine
*ntɕ ^h o	ntshɿ ⁵⁵ pi ⁵⁵		`k ^h entɕ ^h o			choke

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*rwatɕo ¹	tse ⁵⁵	re ³³ tɕu ⁵³	æ ² tɕo	yua ³³ tɕu ⁵³	*dz(y)u	egg
*tɕo ¹			æ ² tɕo (ne)tɕo	tɕu ³⁵		lay (eggs)
*tɕo ¹	tɕo\ 'twist, coil'		(nk ^h we) putɕo	de ³³ tɕu ⁵³ tɕu ³¹		wind (thread onto a keel)
*metɕo			`metɕo	mi ³³ tɕu ⁵³		flower
*t ^h edzo ¹	dzo ⁵⁵			the ³³ dzu ⁵³	PLB *C-cak ^L	push / shove
*nedzo			nedzo 'col- lapse'	ne ⁵³ dzu ⁵³ su ³¹		topple / tear down (a wall)
*ndzo ¹	ndze ⁵⁵	ndzu	ndzo	ne ³³ ndzu ⁵³		soak / steep
*defo			`dzi `dexo	de ³³ su ⁵³	PLB *C-sip ^L	thirsty
*fofo ¹	ʂo\ʂo\la\la\; ʂo ⁵⁵ ʂo ⁵⁵	`deʂu	`xuxo	ʂu ³³ ʂu ⁵³	*syaŋ	clean
*ʂo ¹	ʂo ⁵⁵			hi ³³ ʂu ⁵³		dew
*ment ^h o ²	me\nt ^h ε\; me ³³ nt ^h ε ⁵⁵	`ment ^h o			*r-may × *r-mey × *r-mi	tail
*net ^h o ¹			net ^h o	ne ³³ tʂhu ⁵³		pull down (a house), untie
*net ^h iu ¹	tʂho ⁵⁵			ne ³³ tʂhu ⁵³		rot
*(xwajo)nt ^h o ¹	xuai ⁵⁵ ntʂhe ⁵⁵		xajo nt ^h o	xua ³³ ntʂhu ⁵³	*k ^w əy ? *(t)si/up?	nest (bird)
*nedzo ¹			nedzo	ne ³³ dzu ⁵³		collapse / fall down
*dzo ¹	dzo\; dzo ⁵⁵	dzu	dzo	dzu ⁵³	*m-dzyaŋ	have, exist (animate)
*ndzo ¹	ndzo ⁵⁵	ndzu	ndzo			know how to, be capable of
*ndzo ²	ndzo ³³ khua ³³ dzi ³³ ʂε ⁵⁵		`ndzowa, `ndzowæ ^t	ndzu ⁵⁵ dzi ⁵⁵		noon
*njonjo ²	no\no\; no ³³ no ⁵⁵	nu ³³ nu ⁵³ ??		no ⁵³ no ⁵³	*now	soft
*zo ¹			mele zo, me zo	me ³³ zo ⁵³		quake (earth)
*t ^h ejo			`yo `k ^h ejo	the ³³ ju ⁵³		drunk, be
*k ^h ejo	ji\ta\ 'bed' ?	khə ³³ ja ⁵⁵	`k ^h ejo	khe ³³ ju ⁵³	(*s-yip ×) *s-yup	sleep, lie down
*t ^h iujo ²	tʂhi ³³ ji ³³		`jotʂ ^h ijo, jotʂ ^h ijo	tʂhu ³³ ju ⁵³		orphan
*mbo ¹	bu\; nbu ³³	nbo	mbo, mbojo	nbo ³⁵ , nbo ⁵³ ju ⁵³		hat
*ndojo ¹			ndojo	nduo ³³ ju ⁵³		calf (yak)
*zjeji/zijo ²	zi\xin 'woman'; zi ³³ ji ⁵⁵	`zeje ?	`zijo	zhi ³³ ju ⁵³ , zhi ⁵³ ju ⁵³		daughter, woman

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*gojo ¹	gu ⁵⁵ ; gu ⁵⁵ pha ⁵⁵	go ³³ je ⁵³	ɣojo	ɣuo ³³ ju ⁵³	*ɣəw/PLB *(k)-rwak ^H	mouse
*xwajo ¹	huai ⁵⁵ ; xuai ⁵⁵	xa ⁵³ , xa ³³ ju ⁵³	xajo	xua ³³ ju ⁵³		bird, sparrow
*ɲuijo			ɲwejo	ɲu ³³ ju ⁵³		calf (common)

After velars, *-o yields -uo in TBL and -u in Ersu. Intriguingly, the *-o/*-wo distinction, which has been set up on the basis of the TBL rhymes, seems to be corroborated by the Kl. forms, which for the most part have developed uvulars from unaspirated velars before *-o, but not before *-wo (see next section).

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*k ^h o			-k ^h o	(to ³³) khuo ³¹	*kwak	bowl
*k ^h oji		ɲ ^h oje		khuo ³³ ji ⁵³		key
*k ^h ok ^h o ¹	k ^h u ⁵⁵ lk ^h u ⁵⁵ ; khu ⁵⁵ khu ⁵⁵		dek ^h ok ^h o	khuo ³³ khuo ⁵³	*kuk	curved / crooked / bent
*riku/rik ^h u ¹	rgu ⁵⁵ ; ɲ ³³ ku ⁵⁵	əɹ ³³ kh ^u ⁵³	ə ^h k ^h o	ə ³³ kh ^u ⁵³	*g-rus	bone
*(mja)ko ²	dɛ ³³ ku ⁵⁵		ɲmjako	miæ ³³ ku ⁵³ , no ³³ ku ⁵³		blind
*kotsV ¹	ku ³³ tɕɛ ⁵⁵		kotsa	no ³³ kuo ⁵³ tsɲ ³¹		step on / stamp / tread
*kuts ^h je ¹		ku ³³ tshi ⁵³	kuts ^h epə ^ɹ	kuo ³³ tchi ⁵³		life
*ɲk ^h o ¹		nq ^h u		to ³³ nkuo ⁵³ ji ³¹		hook
*ɲk ^h o ¹	nk ^h u ⁵⁵ ; nkhu ⁵⁵	nq ^h o		khuo ³⁵ , nk ³³ khuo ⁵³		lock
*hko ¹	xku ⁵⁵ ʼhatchʼ		xko	ɲo ³³ kuo ⁵³ læ ³¹		appear, come out
*hko ¹	pɛ ⁵⁵ hku ⁵⁵	ɲqoqo	xko		*g/kuɲ, *kor	hole
*ɲgo ²	dʒɲ ⁵⁵ ?; ndzu ⁵⁵ ?		ɲgolo	guo ⁵³ luo ⁵³		tile
*dego ¹	gu ⁵⁵			do ³³ guo ⁵³		twist (hemp fibers) between the palms
*gojo ¹	gu ⁵⁵ ; gu ⁵⁵ pha ⁵⁵	go ³³ je ⁵³	ɣojo	ɣuo ³³ ju ⁵³	*ɣəw/PLB *(k)-rwak ^H	mouse
*dego ¹	gu ⁵⁵	ɲo; de ³³ go ⁵³	ɲo	ɣuo ³⁵ , ɣuo ³³ ɣuo ⁵³		kick
*go ¹ læ ²	gu ³³ lɑ ⁵⁵		ɲxolæ	guo ³³ lɑ ⁵³	*m/s-la:y	middle
*ɲo ¹	ɲuə ⁵⁵ ; ɲ ⁵⁵		(de)ɲo	ɲuo ³⁵		crow (of cocks)
*ɣo ¹	vu ⁵⁵ ; vu ⁵⁵	wo ³⁵	ɣo	ɣuo ³⁵	*ɣəw ?	liquor
*ɣeniu/ɣoniu ¹	vɛ ⁵⁵ no ⁵⁵	ɲɣɲni~ɲgɲni; wo ³³ nu ⁵³	ɣweni, ɣɲni	ɣuo ³³ nu ⁵³	*ril ≠ *rul	intestine
*læwo			læwo	læ ⁵³ ɣuo ⁵³		temple

4.11 *wo

As discussed in the previous section, all the forms reconstructed with **-wo* are mostly forms with **bilabial* and **velar* initials where Mn. *-o* corresponds to TBL *-u*.

env.	Ersu	Kl.	Nq.	Mn.	TBL
P ___	o	-	u	o	u
K ___	o	o	u	o	u

Bilabial initials are listed below. Note the front vowel in Ersu ‘side, direction’, and a variant with a low vowel in Ersu and Nq. for ‘blow’.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*p ^h wo	-phe ⁵⁵		-p ^h o	-phu	Lahu phô < *paŋ	side, direction
*p ^h wo			-p ^h o	(te ³³) phu ³¹		classif. one of pair (hand, eye)
*ŋep ^h wo ¹	phu ⁵⁵			ŋe ³³ phu ⁵³	*m-pup	flip over, reverse
*mp ^h womp ^h wo			mp ^h o gɣ, mp ^h omp ^h o	(n)phu ⁵³ nphu ⁵³		industrious / hardworking
*lo(bwo) ¹	ə ¹ lk ^h uA ⁵⁵ ; ə ¹⁵⁵ khua ⁵⁵	lo ³³ pu ⁵³ , lo ³³ bu ⁵³		luo ³³ bo ⁵³ , luo ⁵³ bu ⁵³	*r-lung, *k-luk	stone, rock
*hpwo ²	hpo ⁵⁵		ʰhpo	pu ⁵³		incense (bark of cy- press? tree)
*debwo ¹			(ji) debo	(ji ³⁵)de ⁵³ pu ³¹		want (to go)
*mbwo ²	nbo ³³ ntsho ⁵⁵		ʰmbo	nbu ⁵³ ‘100,000’	WT hbum ‘100,000’	ten thousand
*mbwo		nbə ⁵³	ʰmbo	nbu ³⁵ , nbo ³⁵		dig / scoop out / excavate
*demwo ¹	ma ¹⁵⁵ ?	de ³³ ma ⁵³ ?	mo	te ⁵³ mu ⁵³	*s-mut	blow (away)
*htšomo ²	ʂo ⁵⁵ mo ⁵⁵		ʰtšomo	ʂl ⁵³ mu ⁵³	*kraŋ	strength (physical)

There are a few sporadic forms apparently fitting this correspondence (i.e., TBL has *-u*) that do not have bilabial or velar initials. These aberrant forms are listed below. Since high back rounded vowels exist in a very small acoustic space, they are easily confusable, and these aberrant forms are possibly the result of transcriptional errors.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*nwo ¹	no ⁵⁵ ; no ⁵⁵ ??	no ³³ pa ⁵³	ə ¹ no	nu ⁵³	*s-nuk	brains
*lwo		(mbe ³³) lo ⁵³		(nbi ³³) lu ⁵³		climb (a mountain)
*tshwo ¹			tshw-a	ma ³³ tshu ⁵³ ‘forbid’		allow

With the velar initials, the Ersu forms again show some irregularities. ‘Inside’, ‘pig’, ‘shoulder’

and ‘intestine’ have front vowels; ‘night/evening’ and ‘help’ have low r-colored vowels; and ‘throat’, ‘shout’, and ‘thing’ have **-u** rhymes.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*k ^h wo ¹	kho ⁵⁵		`k ^h o	khu ³¹		dry (clothes) in the sun
*k ^h wo ¹	kho ⁵⁵		`jotɕa k ^h o			make the bed
*meŋk ^h wo			`menk ^h o	me ³³ nkhu ⁵³		dark, get
*ŋk ^h wo ¹	nkhua ⁵⁵	khwe ⁵⁵ ???	nk ^h o	nkhu ³⁵		night, evening
*ŋk ^h wohke ²			`nk ^h o xkɤ	nkhu ⁵³ ku ⁵³		midnight
*ŋk ^h wo ¹	ko ³³ htʃe ⁵⁵ ??	nq ^h v	nq ^h o	khu ³⁵ , khu ⁵³ dzi ⁵³		silk/satin
*jahāŋk ^h wo ¹		`jæxwæ ?	jahānk ^h o	ja ³³ ha ³³ nkhu ³⁵		last night
*hkwohkwo ¹			xkoxkosu	ku ³³ ku ³³ su ³¹		beggar
*myihkwo ¹	mi ⁵⁵ hku ⁵⁵		`nipwe-kota	mi ³³ ku ⁵³	*mit, *l-ko(k)	throat
*kwop ^h o			(`kop ^h o)	ku ³³ phu ⁵³		this side / here
*nekwo ¹		neko	(ne)ko	ne ³³ ku ⁵³		put (into a container)
*kwo			`kop ^h æ, `k ^h op ^h æ	tsha ³³ ə ⁵³ ku ³¹		chest
*kwo ²	kui ¹		`ko	(te ⁵³) ku ⁵³	Lahu kù < *gru	shout ³⁰
*nekwo ¹		`neko		ne ³³ ku ⁵³		shrivel up / wither
*neŋgwo			`neŋgo	(vu ³⁵) ne ³³ ngu ³¹		lower (the head)
*deŋgwo ¹	ngo ⁵⁵	ngo	deŋgo	de ³³ ngu ⁵³	*s-g-ruk	pick up
*(p ^h e)ŋgwo ²	nga ³³ ngu ⁵⁵		`p ^h oŋgo	phe ³³ ngu ⁵³		thing, tool
*tsexwo ¹	tɕa ³³ xə ⁵⁵		tsixo	tse ³³ hu ⁵³		pheasant (short-tailed)
*gwogwo ¹	go ⁵⁵ go ⁵⁵	gu ³³ gu ⁵³	`yuyɔ	gu ³³ gu ⁵³		light (weight)
*degwo ¹			deyɔ	de ³³ gu ⁵³		rise / get up
*ywoywo ¹	va ⁵⁵ va ⁵⁵		`wuwo	yɥ ³³ yɥ ⁵³		help
*ywo ¹	vɛ ¹ ; vɛ ⁵⁵	`wo~`yɔ; we ⁵³	wo	yɥ ³⁵	*p ^w ak, PLB *wak ^L	pig
*ywebje/ ywo ¹	vɛ ³³ bi ⁵⁵		wobi	yɥ ³³ pi ⁵³		shoulder
*(rwa)ŋwoŋwo ¹			æ ¹ ŋo, ŋoŋo, æ ¹ ŋoŋo	yua ³³ phe ⁵³ ŋu ⁵³ ŋu ⁵³		cockscomb

TBL ‘cockscomb’ has an unrounded vowel.

³⁰The Ersu form may be composed of **ku** ‘shout’ + **ji** ‘go’.

4.12 *æ

Proto-Ersuic is reconstructed with both front and back low vowels. This is based on a front/back contrast that is quite consistently maintained in Lizu but mostly lost in Ersu.

Ersu	Kl.	Nq.	Mn.	TBL
ɑ	æ	æ	æ	æ

When looking at the Ersu forms, the reader should keep in mind the differences in transcription used by each source (see Ch. 1): Qŝ. (the one with the IPA tone letters) transcribes front/back using æ/A; Zl. (Sūn Hóngkǎi's data, uses numbers for tones below) uses a/ɑ. The visually oriented may find this chart helpful as a reminder:

	front	back
Qŝ. Ersu	æ	A
Zl. Ersu	a	ɑ

Inspecting the forms below for those transcribed with -æ/-a, we find that Ersu by and large uses the low back vowel. There are only seven forms below where Lizu has -æ and Ersu also has a front vowel, and three of these ('father', 'wheat', and 'clothing') are transcribed differently by the two different sources. Thus, it seems safe to conclude that Ersu has essentially merged these two vowels.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*p ^h æla ¹	p ^h A ¹ le ¹		(ne)p ^h æla ¹	phæ ³³ la ⁵³		used / old
*p ^h æ ¹	-p ^h A		p ^h æ	phæ ³⁵		can, be able
*diup ^h æ ¹	bu ⁵⁵ pha ⁵⁵ , ji ³³ pha ⁵⁵	`tɕup ^h æ; di ³³ pe ⁵³	dzy ^h p ^h æ 'stomach'	dzi ³³ pha ⁵³		belly
*mop ^h æ ¹	mu ¹ ; m ⁵⁵ pha ⁵⁵		mop ^h æ			brother
*mopæ ²	mo ³³ pa ⁵⁵			mo ⁵³ pa ⁵³	*s-mak	son-in-law ³¹
*dībæ		`dībæ 'stupid'		di ³³ nbæ ⁵³		honest / well-behaved
*æba ²	A ¹ ba; a ⁵⁵ ba ⁵⁵	`æpæ	`æba ²	æ ⁵³ ba ⁵³		father ³²
*debæ ¹	ba ⁵⁵		debæ	de ³³ ba ⁵³	*ba ?	carry on the back
*rbæ	rbæ ¹		`ə ^h mbæ			kind, type
*mumbæ ¹		mu ³³ nba ⁵³		mu ³³ nbæ ⁵³ mu ³¹		hunt
	htɕi ³³ nba ⁵⁵ su ⁵⁵			pi ⁵³ nbæ ⁵³ mu ³³ su ³³		doctor
*t ^h æ ¹	thæ ⁵⁵	`t ^h æ	`t ^h æ	thæ ³³	*ta	neg. imp.
*tɕitæ ¹	tsɿ ⁵⁵ ta ⁵⁵		`tɕitæ	khe ³³ tɕi ⁵³ ta ³¹		collect, harvest, put away

³¹Note the front vowel in the second syllable of the Ersu form.

³²Note the front vowel in the Ersu forms for this and the next three items.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*htæ ¹	thua ⁵⁵ ??		ʃtæ	tæ ⁵³		mule ³³
*hto/htæ	-xtoʃ; hto ⁵⁵		ʃtæ, ʃtʁʃtæ		PQc *N/s-tsak	jump ³⁴
*læ ¹	laʃ		=læ	læ ³⁵		and
*læ ¹	laʃ; la ⁵⁵		læ	læ ³¹ , læ ³⁵	*la-y	come
*læ			-læ ‘pint, 1/10 peck’	(te ³³) læ ³¹ , læ ³⁵		liter, container (measuring, 1-liter-volume)
*belæ ¹			belæ	be ³³ læ ⁵³		work / labor
*læ ¹	laʃ; la ⁵⁵		læp ^h æ, læ	læ ³³ phæ ⁵³	PLB *k-la ²	tiger
*dedulæ ²			ʃdedulæ	te ⁵³ du ⁵³ læ ³³ sæ ³¹		consult / discuss
*læp ^h e ¹	ʃA ‘month’; ʃa ⁵⁵ phæ ⁵⁵	ʃæphe; ʃe ⁵⁵	ʃæp ^h ø	ʃæ ³³ phæ ⁵³	*s/g-la	moon
*læ	ʃAʃ; ʃa ³³		ʃæ		*m-hla / WT lha	spirit, deity
*rAʃæ ¹	ra ⁵⁵ ra ⁵⁵		ʃæ	yur ⁴³ læ ⁵³	*g-ray GOD/COPULA	soul / spirit
*t ^h ets ^h æ ¹			k ^h ets ^h æ	the ³³ tshæ ⁵³		finish
*ts ^h æ ²	tsha ⁵⁵	tshæ ³³ tshæ ⁵⁵	ʃdets ^h æ	tshæ ⁵³ tshæ ⁵³	*tsa-t	hot
*nts ^h æ ¹	ntsha ⁵⁵		nts ^h æ			make, fix, repair
*nts ^h æ	ntsha ⁵⁵			ntshæ ⁵³		mark / sign / bound- ary line
*k ^h ents ^h æ	kha ³³ ntsha ⁵⁵			khe ³³ ntshæ ⁵³		remember
*dzæ ¹	dzaʃ; dza ⁵⁵		dzæ-	dzæ ³⁵		rice (paddy), seedling (rice)
*dzæ	teʃdzaʃ		-dzæ	(te ³³)dzæ ⁵³		meal
*mwEdzæ ¹			mudzæ	me ³³ dzæ ⁵³		barley
*ndzæ ¹	ndza ⁵⁵		ndzæ	ndzæ ⁵³		stir-fry
*desæ ¹			sæ	de ³³ sæ ⁵³		wear (a bracelet)
*sæ ¹	sa ⁵⁵		(tali) desæ	khe ³³ sæ ⁵³ xa ³¹		bear (fruit)
*zæzæmu ¹	za ⁵⁵ za ⁵⁵ ʃ ⁵⁵		æzizæ mʉ	æ ³³ zæ ⁵³ mu ³¹		careful / cautious
*zæzæ ¹	zaʃzaʃ ‘young’; za ⁵⁵ za ³³		zizæ	zæ ³³ zæ ⁵³		tender, young (plant)
*-zæzæ ²			ʃjozizæ	ja ⁵³ ka ⁵³ zæ ³³ zæ ³¹		baby
*jizæ ¹	i ³³ za ⁵⁵	ji ³³ ze ⁵⁵	jozæ ‘husband’	ji ³³ zæ ³¹ ‘man’		son
*nik ^h æ ²			ʃnik ^h jæ	ni ⁵³ khæ ⁵³		when

³³It would be nice if the Ersu form for ‘mule’ was **hta⁵⁵, which would correspond perfectly with the Lizu forms. Perhaps the **th** is a transposition error, but the **-u-** medial is unexplained.

³⁴The Ersu and Mn. rhymes do not match here.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*tʂʰæ ¹	tʂʰAʎ; tʂha ⁵⁵		tʂʰæ	tʂhæ ⁵³		ghost / spirit
*nedzæ ¹	na ⁵⁵ dza ⁵⁵	nedzæ	`nedzæ	ne ³³ dza ³⁵ , ne ³³ dza ⁵³	*k/gla-k/y/t	drop / fall
*(n)tʃʰæ	ntʃha ⁵⁵			tʂhæ ⁵³		skirt
*tʃæ ¹	tʂA; tʃa ⁵⁵	de ³³ tʂe ⁵³		tʂæ ³¹ , ŋe ³³ tʂæ ⁵³		chase after, drive out / expel
*htʃæ/ʒæ ¹	xtʃAʎ; htʃa ⁵⁵		`ʒiʒæ	ʒʎ ³³ ʒæ ⁵³	PLB *x-ra ¹ ?	search, look for
*ʃæ ¹	ʒAʎ; ʒa ⁵⁵	ʒa ⁵⁵	xjæ	ʒæ ⁵³		wheat ³⁵
*ʃæ			(de)xjæ, xæ ¹	(dzu ⁵³) ʒæ ⁵³ ji ³¹		fetch / draw (water)
*kʰækʰæ ¹			kʰikʰjæ	khæ ³³ khæ ⁵³		separate, other
*kʰæ		khɛ ⁵⁵	kʰjæ	khæ ⁵³	Lahu qha < *ka	rice (cooked)
*tsukʰæ			`tsukʰjæ	tsu ³³ khæ ⁵³		stove (cooking) / range (kitchen)
*pʰukʰæ ²			`pʰukʰjæ	phu ⁵³ khæ ⁵³		fortune / luck
*ŋkʰæ ¹	nkha ⁵⁵	tʰenkʰæ; khɛ ⁵³	nkʰjæ	(n)khæ ³⁵		sell
*kæ	-kaʎ; ka ⁵⁵	-kæ	-kjæ	(te ³³) kæ ³¹		classif. long items
*sɛkæle ¹	si ⁵⁵ ka ³³ le ⁵⁵	sɛ ³³ ka ⁵⁵ ?		se ³³ ka ⁵³ li ³¹	*s-ka:k	branch / twig
*kæmbæ ¹			kjæmbæ	kæ ³³ nbæ ⁵³		tongs (fire) ³⁶
*dekæ ²	daʎkaʎ (perf.); ka ⁵⁵		`dekjæ	kæ ⁵³		hit (a person)
*kækæ ¹	ka ⁵⁵ ka ⁵⁵		kikjæ	kæ ⁵³ kæ ⁵³		fight
*zikæ			`zikjæ	ʒʎ ³³ ka ⁵³ , mæ ³³ zʎ ⁵³ mæ ³³ ka ³¹	*ga ≈ *ʔa	mute, dumb, stupid
*kæpælæ			kjæpælæ	kæ ⁵³ pæ ⁵³ læ ³¹		forehead
*gæme ¹	gaʎmeʎ; nga ³³ me ⁵⁵	`gæmi	gjæme	gæ ³³ me ⁵³	Lahu vèʔ-qâ < *ga	clothing / garment ³⁷
*gægæ ¹	ga ⁵⁵ ga ⁵⁵		gigjæ	gæ ³³ gæ ⁵³	see SING	play
*gæ ¹	gaʎ 'song'; ga ⁵⁵			gæ ³³ mu ⁵³ , giæ ³⁵ 'song'	*ga	sing
*gæ/gja ¹	ga ⁵⁵		ɣjæ	giæ ³¹ , giæ ³⁵	*r/N/d/s-ga	like / love
*wægæ	va ³³ ga ⁵⁵			wæ ³³ gæ ⁵³		mat
*sɛŋgæ ¹	ʒʎ ³³ ngua ⁵⁵		sɛŋgæ	ʒʎ ³³ ngæ ⁵³		melon / gourd ³⁸

³⁵Note the front vowel in one of the Ersu forms.

³⁶Interestingly, Mn. also has the form `kæʰni, a loan from Nuosu ǃꞤ ka³⁴ne³³. The Mn. form has somehow acquired r-coloring on the vowel of the first syllable.

³⁷Note the front vowel in one of the Ersu forms.

³⁸The -u- medial in Ersu is unexplained.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ŋgæ ¹	gA\; ngɑ ³³	\`ngæ	ŋgjæ	ngæ ⁵³	*m-ka, Mpi nko	door
*pwondzɔŋgæ ²			\`pondzɔŋgjæ	pu ⁵³ dzũ ⁵³ ngæ ³¹		window
*ŋæ ²	ŋA\; ŋɑ ³³		\`jidenæ	ji ³³ de ⁵³ ŋæ ⁵³		hungry
*ŋæ ¹	nɔ ⁵⁵		nɪnæ	ne ³³ ŋæ ⁵³		skinny, get thin ³⁹
*ɕaŋæ ²			\`ɕænæ	ɕæ ⁵³ ŋæ ⁵³		pitiable / pitiful
*antʂ ^h æ ²	ɑ ³³ ntʂha ⁵⁵			a ⁵³ ntʂha ⁵³		sieve / sifter
*(h)æne	A\ne\		\`hæne	hæ ³³ ne ⁵³		what

The following are miscellaneous exceptional forms where Mn. has a front vowel but TBL has a back vowel.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ntʂ ^h æntʂ ^h æ ²	jA\ntʂ ^h ɛ\; je ³³ ntʂhe ⁵⁵		ntʂ ^h intʂ ^h æ, ntʂ ^h æ gɾ	tʂha ⁵³ ntʂha ⁵³		clever
*gɔlæ ²	gu ³³ lɑ ⁵⁵		\`xolæ	guo ³³ lɑ ⁵³	*m/s-la:y	middle
*dzæp ^h æ ¹	dza ⁵⁵ pha ⁵⁵		\`dzæp ^h æ	dza ³³ pha ⁵³		pillar / column
*æmæ ¹	A\mɑ\,A\mɑ\; a ⁵⁵ ma ⁵⁵	\`æmæ	æmæ	a ³³ ma ⁵³	*ma	mother

Ersu ‘clever’ has -ɛ where Lizu has a low vowel.

There are other miscellaneous forms where Mn. has a back vowel but TBL has a front vowel:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*na-			nami	næ ⁵³ pu ⁵³		host / master
*dzæpu ¹			dzapɯ	dzæ ³³ pu ⁵³		food
*æp ^h u ¹			ap ^h u	æ ³³ phu ⁵³	*pəw	grandfather
*yuiini/ yuiindzA ¹	ʒi ³³ ɪi ³³		ɣɾndza	ɣuɾ ³³ ɪi ⁵³ ɣuɾ ³³ ndzæ ⁵³		relatives
*sɑ- ²			\`sɑzi	sæ ⁵³		earth, ground
*sæp ^h o/ʂop ^h o ¹	ʂo\p ^h ɛ\; ʂo ⁵⁵ phɛ ⁵⁵		ʂap ^h o	ʂæ ³³ phu ⁵³		front
*kala/kælæ ²	no ³³ ma ⁵⁵ - ka ⁵⁵ lɛ ⁵⁵	ke ³³ lɛ ⁵³	kali, kala	mu ⁵³ tɕu ⁵³ ka ³³ læ ³³		butterfly
*æ ¹	A\; a ⁵⁵	\`æ; æ ³⁵	ɑ	æ ⁵³ , a ³³ duo ⁵³		I

Some of these (‘food’, ‘grandfather’, ‘front’) may be explained as back vowel harmony in Mn.

³⁹The Ersu form has an -o final.

4.13 *ja

env.	Ersu	Kl.	Nq.	Mn.	TBL
pal. —	ɑ	æ	ə	ɑ	æ

After *palatals and *alveopalatals, there is no contrast between low front and low back vowels. Thus, I use a plain *-a symbol (i.e., not æ or ɑ) for the low vowel in this environment.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*p ^h ja	-ts ^h Aʎ; tsha ⁵⁵		-p ^h ɕɑ	(te ³³) phzæ ³¹		classif. garments
*lep ^h ja ¹		le ³³ tɕhə ⁵³	lep ^h ɕɑ			palm
*sēp ^h ja ¹	si ⁵⁵ tsha ⁵⁵	sæ ³³ tɕhe ⁵³	sip ^h ɕɑ	se ³³ phzæ ⁵³	*r-pak	leaf
*-p ^h ja		li ³³ tɕhə ⁵³	`ts ^h ip ^h ɕɑ	tʂhu ³³ phia ⁵³		thigh
*p ^h ja		`pɕæ		ŋe ³³ phzæ ⁵³	*py(w)ak	sweep
*p ^h jap ^h ja ¹		de ³³ tɕhu ⁵⁵ tɕhu ³³		ne ³³ phia ⁵³ phia ³¹		wipe (the table)
*p ^h ja ² mu			`p ^h ɕɑ mu	phzæ ⁵³ /(n)phia ⁵³ mu ⁵³		kowtow, make obeisance to
*pja ¹	tsɑ ⁵⁵	pzæ	pɕɑ	de ³³ pzæ ⁵³		hang
*pja ¹		depzæ		pzæ ³⁵		catch (in mouth)
*mbroza	nbo ⁵⁵ za ⁵⁵		`mbzoza			saddle
*amja/amjo/æmi			amjo, amja	æ ⁵³ mi ⁵³		now
*mja ¹	mia ⁵⁵		mja	miæ ³³ ku ⁵³ 'blind'	*s-mik ≠ *s-myak	eye
*mja ²	miAʎ; vu ³³ miɑ ⁵⁵		`mjapɕ ^h ɥ, `mjatɕ ^h ɥ	miæ ³⁵	cf. EYE	face
*mje/mja	ja ³³ mi ⁵⁵	mjemje	mimja	miæ ⁵³ miæ ⁵³	*mra, PLB *C-mya ²	many / much ⁴⁰
*za ¹	za ⁵⁵ tshə ⁵⁵		zɑ	zæ ³³ tsh ¹ ⁵³	*s-la	pants / trousers
*za ¹	zAʎ; za ⁵⁵	e ³³ zɕe ⁵³	zɑ	(te ³³) zæ ⁵³	*b-r-gya	hundred
*tɕ ^h a ¹	tɕho ⁵⁵		-ɕɑ	tɕhæ ³¹		on (the wall) ⁴¹
*wutɕ ^h a			`vɥɕɑ	wu ³³ tɕhæ ⁵³		above, on top of
*detɕa ¹	da ³³ tsa ⁵⁵	də ³³ tɕw ⁵³	dentɕ ^h a ??	de ³³ tɕæ ⁵³		wake up
*(d)zapu			`zapɥ 'rich man'	dzæ ³³ pu ⁵³		leader / chieftain / headman (Mand. 'tūsi')
*k ^h endza ¹	dzaʎ; ndza ⁵⁵	khe ³³ ndzɥ ⁵⁵	k ^h endzɑ	khe ³³ ndzæ ⁵³	*g-r(y)ap	stand
*ndzindza ²	ndzɿ ³³ ndza ⁵⁵		`ndzindzɑ	ndzɿ ³³ ndzæ ⁵³ , te ⁵³ ntɕi ⁵³ ntɕæ ⁵³		think / idea / opinion

⁴⁰The Ersu and Kl. forms seem to descend from *-je rather than *-ja.

⁴¹The Ersu form has -o instead of -ɑ.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*janiu ¹	jaɿŋoɿ; je ⁵⁵ no ⁵⁵	`jæni	jæni	jæ ⁵³ ŋu ⁵³	cf. Lahu yàʔ- < *yak	yesterday
*æja ¹			æja	æ ³³ jæ ⁵³	PLB *ʔ-wyik ^L	elder brother/sibling
*k ^h uija			`k ^h weja, `k ^h wæ	khu ³³ jæ ⁵³		under
*legija ¹			ligjæja, ligija	le ³³ gi ⁵³ jæ ³¹		armpit
*jakra	ja ⁵⁵ dze ⁵⁵	`jæqa		ja ⁵³ ka ⁵³		child
*njap ^h o/ njop ^h o ¹	noɿp ^h ɛɿ; no ⁵⁵ phɛ ⁵⁵	no ^h o	`nap ^h o 'back, behind'	næ ³³ phu ⁵³		outside ⁴²
*ŋenja ¹	ŋa ³³ na ⁵⁵		k ^h enina	t/ŋe ³³ na ⁵³ na ⁵		dodge, make way, retreat
*tʃ ^h atʃ ^h a ¹	tʃ ^h Aɿtʃ ^h Aɿ; tʃha ⁵⁵ tʃha ⁵⁵	tʃ ^h ætʃ ^h æ	`tʃ ^h atʃ ^h a	tʃhæ ³³ tʃhæ ⁵³		magpie
*kætʃa			`kjætʃa	ku ³³ tʃæ ⁵³		squirrel
*sundʒa ²	sua ³³ ndʒa ⁵⁵		`sūdʒa	(suo ⁵³) ndzæ ⁵³ , su ⁵³ ndzæ ⁵³	Mand. 算账 suànzhàng ?	count (numbers), calculate
*dʒa ¹		dʒa	dʒa	dzæ ³⁵	WT ja	tea

⁴²The Ersu and Kl. forms point to an -o rhyme.

4.14 *a

Ersu	Kl.	Nq.	Mn.	TBL
a	a	a	a	a

Forms reconstructed with a low back vowel are listed below:

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*p ^h a	-p ^h A\		-p ^h a			classif. sheet/small object
*nep ^h a ¹	p ^h A\; pha ⁵⁵		nep ^h a	na ³³ pha ⁵³		break open, broken
*pa	pA\; pa ⁵⁵		-pa	(te ³³) pa ³¹		peck, unit of dry measure for grain (= 1 decaliter)
*ba ²	dA\bae\; ba ³³ wa ⁵⁵		`debalo	ba ³³ laŋ ⁵³ laŋ ³¹	PLB *m-ba ³	bright ⁴³
*jima ¹	ji ⁵⁵ ma ⁵⁵	nejema; je ³³ me ⁵⁵	(ne)jima	ji ³³ ma ⁵³ , zi ³⁵ ma ⁵³	*yip + *mak	dream
*rat ^h a ¹	ra ⁵⁵ tha ⁵⁵		æ ^t h ^a	ə ³³ tha ⁵³	< Tib. rang 'thag	millstones
*ta ¹			deta 'accurate'	ta ³³ ma ⁵³		true
*taso ¹			taso 'just now'	ta ³³ suo ⁵³	PLB *C-sok	morning
*ta	tA\ (perf.)		`neta	də ³³ ta ⁵³ 'open (an umbrella)'		close
*dada ²			pæda, `deda	da ⁵³ da ⁵³		short
*htahta ²	hta ³³ hta ⁵⁵	ta ³³ tsha ⁵³ ??	`tʃʏtʃa	na ³³ ta ⁵³ ta ³³		chew
*na			ə'na	na ⁵⁵ na ⁵³ tʃhu ³³ tʃhu ⁵³		stable, steady
*na ²	na ⁵⁵ ku ⁵⁵	na ³³ pu ⁵⁵	`æ'napi	na ⁵³ pi ⁵³	*r/g-na	ear
*nina ¹	no\- ??; ni ⁵⁵ nua ⁵⁵	`jena	`ni ⁵³ na	ni ³³ na ⁵³ , ji ³³ na ⁵³	*nyey/*na-w	younger sibling
*rAne,rAna ¹	ra ⁵⁵ ne ⁵⁵	rəna		ə ³⁵ na ⁵³		shadow ⁴⁴
*sēla ¹			sela	se ³³ la ⁵³		forest
*la ²	la\; la ³³ phe ⁵⁵ , la ³³ ma ⁵⁵		`la	la ³³ mæ ⁵³ , la ³³ nphæ ⁵³	WT glaba 'musk deer'	deer (river)
*la ¹	la\ 'plant (v.); la ⁵⁵		la	la ³⁵		plow / till (v.)
*la ¹	la\; la ⁵⁵		la	la ³⁵		dung, manure
*t ^h eçwiula			`(k ^h e)çila	tho ³³ çuo ⁵⁵ la ³¹		slanted / askew
*niu(mæ)lawu ¹			ni ^m ælavu	ni ³³ la ⁵³ wu ³¹		daytime

⁴³This is most likely a relatively recent borrowing from Nuosu; note the front vowel in Ersu, and the unusual nasal-final rhyme in the reduplicated syllables in TBL.

⁴⁴The second syllable of Ersu 'shadow' has a mid front vowel.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*lamo	la ⁵⁵ mo ⁵⁵			la ⁵³ mu ⁵³		stutterer
*lala ¹	la ⁵⁵ la ⁵⁵	`lælæ	deɬa, deɬɻɬa	la ³³ la ⁵³		roll
*ɬa ¹			deɬa, deɬɻɬa	ɬa ³³ hi ⁵³		roll, turn (cause to)
*ɬa ¹	ɬa ⁵⁵		ɬa	ɬa ⁵³ , ɬa ⁵⁵	*gliŋ	flute
*k ^h ets ^h a ¹			k ^h ets ^h a	khe ³³ tsha ⁵³		block (the wind)
*buts ^h a ¹	vu ⁵⁵ tshua ⁵⁵	`nbutsh ^h æ	buts ^h a	bu ³³ tsha ⁵³	*r-p ^w a	axe ⁴⁵
*nts ^h a ¹	ntsha ⁵⁵	tsha ³⁵	nts ^h a	tsha ³⁵	*m-sin	liver
*dents ^h a ¹	ntsha ⁵⁵	`dents ^h æ	nts ^h ints ^h a	ntsha ³⁵ , de ³³ ntsha ⁵³	Lahu ʃe < *sin	pull / drag / lead (a cow) along
*tsa ¹	tɕa ⁵⁵	khe ³³ tɕa ⁵³ le ³¹	tsitsa, tɕa	khe ³³ tɕa ⁵³ le ³¹		tie up, bind
*ledzi/letsa ²	le ³³ dzi ⁵⁵	`ledzj; le ³³ tɕa ⁵³	`lidza ‘claw’	le ³³ tɕa ⁵³	*m-tsyen	nail ⁴⁶
*dzidzi/dzadza ¹ dzi ⁵⁵	dzi ⁵⁵	`ledzj; dza ³³ dza ⁵³	`lidza	dza ³³ dza ³³	*m-tsyen	claw / talon
*adzje/adza ¹	A`dzi`; a ⁵⁵ dzi ⁵⁵		adza	a ³³ dza ⁵³		we (dual) ⁴⁷
*nedzje/nedza ¹	ne`dzi`		nedza	ne ³³ dza ⁵³		you two
*(n)dza ¹ ?	dza`]; ndza ⁵⁵	ndza	dza	dzaŋ ³⁵		drum
*ndza ²	dza`]; ndza ⁵⁵	`ndza	`ndza	dzæ ⁵³ , dza ³³		Chinese (Han)
*ndza ¹	ndza ⁵⁵		`bi ndza	ndza ³⁵		sting (of wasps)
*nts ^h a			nts ^h a ‘play inst.’	nts ^h a ⁵³		blow (the trumpet)
*(ri)ʃa ¹	(ʃe\ʃe\); (ʃe ⁵⁵)	(ʃe ³³ ʃe ⁵³)	əʃa	ə ³³ ʃa ³⁵	*s-riŋ LONG	far / distant ⁴⁸
*ʃa	ʃe\ʃe\; ja ³³ ʃe ⁵⁵	ʃa ³³ ʃa ⁵³ , ʃe ³³ ʃe ⁵³ ‘far’	pæʃa, ʃiʃa	ʃa ⁵³ ʃa ⁵³	*s-riŋ	long
*ʃa			ʃa		*sywar SCATTER	pour (water)
*batʃa/butʃa	pa`tʃa`]; ba ³³ tʃa ⁵⁵		bətʃa			knife
*mek ^h a ¹	me ⁵⁵ khua ⁵⁵	mə ³³ kha ⁵⁵ ‘cloud’		me ³³ kha ⁵³		rainbow ⁴⁹
*ts ^h ek ^h a ¹	tʃhe ⁵⁵ ka ⁵⁵		ts ^h ik ^h a	(n)tʃh ⁵³ kha ⁵³	*ka:k	sputum, phlegm
*kape ¹	ka ³³ pi ⁵⁵		kapø	ka ³³ pe ⁵³		garbage / debris
*(h)kara(wa) ²	ka ³³ ra ⁵⁵	`kəwæ	`xkawa nts ^h amæ	kæ ⁵⁵ ə ⁵³		spider ⁵⁰

⁴⁵The medial glide in the Ersu form is unexplained.

⁴⁶The Ersu and Kl. forms for ‘nail’ and ‘claw’ point to a variant with the rhyme *-i.

⁴⁷The Ersu form seems to descend from *-je.

⁴⁸Not the -e rhyme in Ersu in ‘far’ and ‘long’ (clearly from the same root) instead of expected -A/a.

⁴⁹The medial glide and rhotic vowel in the Ersu form are unexplained.

⁵⁰The first syllable of the Kl. form appears to have fused the two syllables apparent in the Ersu and TBL forms.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ka ²	ka↓; ka ³³ pha ⁵⁵			ka ⁵³ ba ⁵³	< PLB *ʔ-ga ² ?	mute
*kwa/ka ²	no↓kuA↓; no ³³ kuA ³³		ʔja kamu	ja ³³ ka ⁵³	PLB *ka ¹	all / the whole ⁵¹
*gap ^h o ¹			gap ^h o 'top of'	ka ³³ phu ⁵³		upper part
*xa ¹ mu	xa ⁵⁵ ɲ ⁵⁵	ʔxwæ mu	ʔxaxa mɯ	xa ³⁵ mu ³³		yawn
*ɲap ^h o ¹	tʃa ³³ ɲa ³³ 'under'?		ɲap ^h o 'that side'	ɲa ³³ phu ⁵¹		lower part / lower reaches
*ado(ri) ¹			ado (incl.)	a ³³ do ^{r35}		we

Finally there are a few exceptional forms where Mn. **-a** has a similar-looking form with a high vowel in TBL:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*kotsV ¹	ku ³³ tse ⁵⁵		kotsa	no ³³ kuo ⁵³ tsɿ ³¹		step on / stamp / tread
*tʃ ^h a/tʃ ^h i ²			ʔtʃ ^h a ???	tʃhɿ ⁵³		bed

⁵¹The medial glide in the Ersu form is unexplained.

4.15 *wæ and *wa

Both of the low vowels can coöccur with the **-w-** medial glide. As noted on p. 4.12, Ersu has merged the two low Mn. has undergone a mini-chain shift where ***-wa > -a** (see below), followed chronologically by ***-wæ > -wa**. I present the forms reconstructed with the front-vowel diphthong ***-wæ** below:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*dʒwæ	dzuɑ ⁵⁵		-dʒɑ ?	(te ³³) dzuæ ³¹	*m-twa	span (thumb to finger)
*k ^h wæ ¹	ja ^h kuɑ ^h ; ja ³³ khua ⁵⁵ 'big'	-k ^h wæ	dek ^h wa	de ³³ khua ⁵³		grow, grow up
*p ^h ek ^h wæ ¹	phe ⁵⁵ khua ⁵⁵		p ^h uk ^h wa	phe ³¹ khua ⁵³	*pəw PRICE	expensive
*ts ^h ok ^h wæ			ts ^h uk ^h wa	tshuo ⁵³ khua ⁵³		adult
*ŋk ^h wæ ²	nk ^h uɑ ^h ; ŋkhua ³³	`q ^h wa	nk ^h wa	(n)khua ⁵³		lake
*k ^h enk ^h wæ	ŋkhua ³³			khe ³³ nkhua ⁵³ , khu ³³ khua ⁵³		rust
*ŋgwæ ¹	nguɑ ⁵⁵		ŋgwa	nguæ ³³ phe ⁵³		pheasant (long-tailed)
*deywæ ¹	wɑ ⁵⁵		dewa	de ³³ yuæ ⁵³	*k-wa	full, satiated
*rik ^h wæ ¹			ə ^h k ^h wa 'cliff'	fiu ³³ khua ⁵³		rock

The ***-wæ > *-wa** change in Mn. was suppressed if the initial consonant was retroflex, or if there was no initial consonant (the voiced velar fricative in TBL is deemed secondary).

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*tʂ ^h wæ			`tʂ ^h wæ 'water tank'	tʂhua ³³ fiæ ³⁵ - dzu ³³ gu ⁵³		vat / jar
*zʷæzʷæ			zʷzʷæ	te ⁵³ zʷæ ⁵³ zʷæ ³¹		rinse (the mouth)
*wurA/wærA ¹	vu ^h ra ^h ; vu ³³ ra ⁵⁵		wæ, wæə ¹	yuæ ³³ fiæ ³⁵		cloth
*wæ ¹			wæ (t ^h ʷ)	yuæ ³⁵	*wa	snare / trap
*wæ ¹			wæ 'OK!'	yuæ ³⁵		permit / allow
*diwæ ¹	dzi ⁵⁵ va ⁵⁵		dzyæ ¹	dzi ³³ wæ ⁵³		slow / clumsy
*rgwæ ¹	gua ³³	ngwæ; yue ⁵³	ɣwæ	yuæ ³⁵	*r/g-wa	rain
*rA/ɣwA	ra ⁵⁵	`ɣwæ				shout, yell

The very unusual form 'rain' is reconstructed as ***rgwæ**, with a retroflex prefix to account for the Mn. vowel. See p. 62 for discussion on the initials.

See p. 73 for discussion on 'shout'.

The following items illustrate Mn. medial **-w-** disappearing when followed by ***a**. Note that Ersu

‘have/exist’ and most of the Ersu forms with initial velars (exceptions are ‘hoof’, ‘cucumber’, ‘bird’, and ‘paddy fields’) have also lost the medial glide.

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*t ^h wa ¹			t ^h a	thua ³⁵		fit, can hold
*nt ^h wa ¹	ja ^l nt ^h ua ^l ; nthua ⁵⁵	th ^l ~ ³³ nth ^l ~ ⁵³	nt ^h a gɣ	thua ⁵³ nthua ⁵³	PLB *tak ^H	sharp, pointed
*nt ^h wa	nt ^h o ^l ; nthua ⁵⁵		-nt ^h a	(te ⁵⁵) nthua ⁵³		drop (of oil) ⁵²
*detwa ¹	tua ⁵⁵		`detɣta	de ³³ tua ⁵³		hug / embrace
*dwa ¹	dua ^l ; ɲe ⁵⁵ dua ⁵⁵ ‘pass by’	dæ	da	dua ³⁵ , ɲe ³³ dua ³⁵		go / leave (past)
*denwa ¹	da ^l nu ^l ; nua ⁵⁵	de ³³ ne ⁵³	dena	de ³³ nua ⁵³	*s-nak	black
*ɣinwa	ɣ ^l ~ ³³ nua ⁵⁵			ɣ ^l ~ ³³ nua ⁵³		mole
*ts ^h wa			-ts ^h a	(te ³³) tshua ⁵³		classif. rooms
*tswa			`tsa	ne ³³ tsua ⁵³		filter / strain
*swa ¹			sa	sua ³⁵ , gu ³³ sua ⁵³		send (a message)
*tʃwapu ¹			tʃapɯ	tʃua ³³ pu ⁵³	*kyak	navel
*dzwa		dza ³³ le ⁵⁵		dzua ⁵³ le ⁵³		put in order / arrange
*dʒwa ¹	dʒa ^l ; dʒa ⁵⁵	dzuæ	dʒa	dzua ³¹		have, exist (movable)
*ɣwa		`ɣwa		ɣua ³³ nphzi ⁵³		mosquito (relatively small)
*t ^h ek ^h wa ¹	tha ³³ kha ³³		k ^h ek ^h a	the ³³ khua ⁵³	PLB *k-ra ^{2/3}	win
*ŋ(u)k ^h wa	nkhua ⁵⁵			ŋu ⁵⁵ khua ⁵³	*kwa ?	hoof
*tɕuk ^h wa ²	tɕ ^l ~ ³³ khua ⁵⁵			tɕu ⁵³ khua ⁵³		cucumber ⁵³
*lak ^h a/lok ^h a ¹			lak ^h a k ^h eæ ^ɿ ‘get hurt’	luo ³³ khua ⁵³ əɿ ³¹ ‘get hurt’		wound
*dexwa/ dehkwa ¹	da ³³ xa ⁵⁵		dexka	de ³³ xua ⁵³ , de ³³ xua ⁵³		open
*hkwa	hka ⁵⁵ dzɯ ⁵⁵ ‘lean (meat)’	qwa				skinny
*kwakwa ¹	ka ⁵⁵ ka ⁵⁵ pi ⁵⁵		`kɣka	kua ³³ kua ⁵³		hard
*kwali ¹	ka ³³ ə ⁵⁵		kali	kua ³³ li ⁵³	*ka	crow
*kapi ²	ka ³³ psɿ ⁵⁵		`kapi	kua ⁵³ pi ⁵³		lame person
*xwajo ¹	huai ^l ; xuai ⁵⁵	xa ⁵³ , xa ³³ ju ⁵³	xajo	xua ³³ ju ⁵³		bird, sparrow

⁵²Note the variation between -o and -ua in the Ersu forms.

⁵³The second syllable of ‘cucumber’ may simply mean ‘big’. Cf. Ersu ja³³khua⁵⁵ ‘big’, TBL de³³khua⁵³ ‘grow up’.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*(xwajo)ntʰo ¹	xuai ⁵⁵ ntʃhe ⁵⁵		xajo ntɕ ^h o	xua ³³ ntʃhu ⁵³	*k ^w əy ? *(t)si/up?	nest (bird)
*(ju/zu)xwa ¹	zu ⁵⁵ xuai ⁵⁵			ɟy ³³ xua ⁵³	*hya SWID- DEN	paddy fields

The following forms have **wa** in both TBL and Mn. The relevant syllables in ‘gruel’ and ‘circle’ probably have zero-initials and thus are exempt from the change. ‘Take off/peel’ and ‘return’ may be borrowings from Chinese (cf. Mandarin **guā** ‘scrape, shave’ and **huán** ‘return’). The final two forms underwent changes in Mn. resulting in **æ¹**; these changes will be explained in detail below.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ts ^h awa ¹			ts ^h awa	tsha ³³ wa ⁵³		gruel / porridge
*wawa ¹	dA\wuA\li\	wa ³³ wa ⁵⁵	wawa, wawaløø	yua ³³ yua ⁵³		circular (planar), round
	kua ⁵⁵		kwa	ne ³³ kua ⁵³	Mand. 刮 guā ?	take off (clothes), peel
			xwa	the ³³ xua ⁵³	Mand. 還 huán ?	return (a pen)
*gwa ²			`neæ ¹	gua ⁵³		left over / remain
*rwa ¹	rA]; rA ⁵⁵	rwæ; rA ⁵⁵	æ ¹	yua ³⁵	*k-rak	chicken

Since the developments in Mn. are the most drastic, sound changes in Mn. relating to the developments of ***wæ** and ***wa** are presented below, along with some roots illustrating these changes. (Two hypothetical forms are also given to show what developments we would expect if these roots are later discovered and reconstructed.)

The relative ordering of these sound changes is crucial, and the letters and numbers identifying each change attempt to indicate this. Change #2/c must follow change #1 since #1 feeds #2/c. #A must precede #B because #B removes **-w-** medials that #A looks for (i.e. they are in counterbleeding order). #B must precede #C since they form a chain shift (i.e. they are in counterfeeding order). #C must precede #D since #D removes an initial consonant that is relevant to #C (counterbleeding order). Finally, #2/c must follow #B since #B feeds #2/c.

	CHICKEN *rWA	OBTAIN *rA	REMAIN *gwa	- **gwæ	- **ywa	FULL *ywæ	RAIN *rgwæ
1. rw > y	yA	-	-	-	-	-	-
A. g > y / ___ {w,u,o,ɣ,j} ⁵⁴	-	-	ywa	ywæ	-	-	rywæ
B. wa > a / C ___	-	-	yɑ	-	yɑ	-	-
C. wæ > wa/ C[-retro] ___	-	-	-	ywa	-	ywa	-
D. y > ø / ___ wA	-	-	-	wa	-	wa	-
2/c. {yA, rA} > æ ¹	æ ¹	æ ¹	æ ¹	-	æ ¹	-	-
(output)	æ ¹	æ ¹	æ ¹	wa	æ ¹	wa	ywæ

⁵⁴See p. 68 for a list of forms affected by this rule.

Since this table of sound changes may seem overly mechanical, it is important to note that this is not merely a set of ordered rules, but a relative chronology of (hypothesized) real sound changes. Although it is difficult to determine the time depth of Proto-Ersuic (see note 30, p. 48 for some discussion on this topic), we can at least figure out the order in which some of these changes occurred.

4.16 Summary

The table on the next page lists all the rhymes from this chapter along the top with the various places of articulation reconstructed in the previous chapter along the side to illustrate which initials and rhymes can occur with each other.

Checkmarks are given for initial-rhyme combinations where the reconstructions seem fairly sound. In some cases (dental stops in combination with **-i** and **-iu**), only one or two specific initials can combine with the rhyme, and those are explicitly listed instead.

Question marks are used where the assignment of certain forms to the rhyme is tentative. The reader should consult the relevant sections for details, but a brief summary is provided here. For ***-iu**, a small number of forms with bilabial stop initials and voiceless lateral initials have somewhat aberrant vowel correspondences and thus have been marked as tentative. The **tʃ + e** combination refers to a single form ('gnaw/nibble'), again with unusual vowel correspondences. The rhyme ***-ew** as well has only a handful of unusual forms with bilabial and dental-fricative initials, and the ***-wE** rhyme is itself a tentative reconstruction. Finally, there are three forms with dental initials (**n-**, **l-**, **ts^h-**) placed under ***-wo** simply because the TBL transcriptions have a **-u** rhyme, but these transcriptions may be errors, and the forms may ultimately belong under ***-o**.

The nasalized rhymes from section 4.3 do not have their own columns; rather, since most of these forms begin with ***h-**, checkmarks have been placed at the intersections of ***h-** with the rhymes' non-nasal counterparts. This leaves five forms unaccounted for in the table: **htě** 'seven', **htũ** 'thousand', ***jě** 'house', ***jã** 'home', and ***jõ** 'sheep'.

Among other things, this table allows us to quickly see which rhymes are "good" rhymes that can coöccur with many different initials vs. ones that have more restricted distributions, and also which rhymes are contrastive vs. those where the distinction might potentially be collapsed. For example, comparing ***o** with ***wo**, we see that ***wo** only occurs after bilabials and velars, and perhaps it can merged with ***o** (e.g. if we discover that the TBL data, which the distinction rests on, is transcribing phonetic details that are not phonemically contrastive). Likewise, we can see that there is apparently no front/back distinction for low vowels after palatals and alveopalatals, nor after initial ***r-**.

	ri	riu	re/o/u	ræ	ra	ui	i	iu	u	je	jē	e	ē	ew	wE	o	wo	æ	ja	a	wæ	wa
P	✓		✓	✓	✓	✓	✓	?	✓	✓		✓		?	?	✓	✓	✓		✓		✓
T							d-, ht-	d-	✓	✓	✓	✓	✓			✓	?	✓		✓		✓
TS							✓	✓	✓	✓	✓	✓	✓			✓	?	✓		✓		✓
l							✓	✓	✓	✓	✓	✓	✓			✓		✓		✓		✓
ɬ							✓	?	✓	✓	✓	✓	✓			✓		✓		✓		✓
Tɕ							✓	✓	✓	✓	✓	✓	✓			✓		✓		✓		✓
Tʃ							✓	✓	✓	✓	✓	?	✓			✓		✓		✓		✓
Tʂ							✓	✓	✓	✓	✓	✓	✓			✓		✓		✓		✓
K							✓	✓	✓	✓	✓	✓	✓			✓		✓		✓		✓
h							✓	✓	✓	✓	✓	✓	✓			✓		✓		✓		✓
∅							✓	✓	✓	✓	✓	✓	✓			✓		✓		✓		✓

Figure 4.1: Cooccurrence of Proto-Ersuic *initials and *rhymes

Chapter 5

Tones

Proto-Ersuic is reconstructed with two tones, with the correspondences as follows:

PEr	Ersu	Lizu	number of forms
*1	H	L	504
*2	L	H	141

Synchronic high tones in Ersu seem to correspond with low tones in Lizu, and vice versa. Items reconstructed with *Tone 1 are over three times more numerous than those reconstructed with *Tone 2. (The counting method is detailed below.) Since the phonetic values of the tones in Ersu vs. Lizu are opposite, the tones are reconstructed simply as *1 and *2, with *1 being more common.

Unfortunately, it is difficult to find perfect tonal minimal pairs at the Proto-Ersuic level. Some possible candidates are listed below. The best example is ‘joint’/‘salt’, where the tones agree all the way across, although many of the forms for ‘joint’ are disyllabic. Next, ‘Shoe’/‘son’ is a good minimal pair for Mn. and Kl., but there is no Ersu cognate for ‘son’, and TBL ‘shoe’ has a high tone. The Ersu forms for ‘bear’ have aberrant initials, and the Kl. form for ‘bear’ has an aberrant rhyme, even though the tones are unproblematic. Finally, there is ‘hat’/‘ten thousand’, where the reconstructed rhymes are slightly different, and for ‘hat’ the Zl. form and the disyllabic TBL form have aberrant tones.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ts ^h i ¹	tsh ^h ɿ ⁵⁵ ‘shoulder blade’	tsh ^h ɿ ³³ tsh ^h ɿ ⁵³	ts ^h its ^h i	tsh ^h ɿ ³³ tsh ^h ɿ ⁵³ - ta ³³ ta ³³	*tsik	joint
*ts ^h i ²	ts ^h ɿ [↓] ; tsh ^h ɿ ³³	tsh ^h ɿ ⁵³	`ts ^h i	tsh ^h ɿ ⁵³	*tsa	salt
*zi ¹	zɿ ⁵⁵	zɿ	zi	zɿ ⁵³		shoe
*zi ²		`zɿ	`zi	zɿ ⁵³	*za	son
*xui/ɲui ¹	hə ¹ ɿ ?; xa ¹⁵⁵ ?	ɲo~fio; ɲue ³³ mo ⁵³	ɲwe, ɲwemo	ɲu ³³ mu ⁵³	*d/g-wam	bear (n.)
*ɲui ²	ɲa [↓] ; ɲua ¹³³	`ɲu	`ɲwe	ɲu ⁵³	*ɲwa	cattle, cow

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*mbo ¹	bu ^l ; nbu ³³	nbo	mbo, mbojo	nbo ³⁵ , nbo ⁵³ ju ⁵³		hat
*mbwo ²	nbo ³³ ntsho ⁵⁵		`mbo	nbu ⁵³ '100,000'	WT hbum '100,000'	ten thousand

The origin of these two tones is unclear. Both tones occur with a wide variety of initials/rhymes, manners of articulation, and vowel qualities. Prefixes, either at the PTB level or at a hypothetical Pre-Proto-Ersuic level (such as a causative *s- prefix accounting for pairs such as Mn. **dzi** 'eat'/**tsi** 'feed') also do not seem to affect the tonal categories.

Most descriptions of Ersu and Lizu agree (at least implicitly) that there are two synchronic lexical tones. Chirkova's (2008) analysis of Kl. and my own analysis of Mn. agree on an unmarked low tone and a marked high tone. As discussed in chapter 1 (p. 10), TBL transcribes four surface syllable-tones, but these can be analyzed as two word-tones, corresponding exactly with the two tones of Kl. and Mn. Ikeda (2009) provides no phonological analysis and simply uses the tone transcriptions used in TBL.

On the Ersu side, Sün (1982b) gives exactly two tones for Zl.: high level and mid level, with mid level often realized as mid rising and high level often realized as high falling (due to the "effects of intonation"); these tonal values are exactly the same as in Lizu, except that the tone categories are reversed (as we shall see below). Qš. is described as having five tones, but as explained on p. 12 (and somewhat similar to the TBL case), these appear to be surface transcriptions of syllable-tones where there are in fact only two lexical word-tones.

To count the number of cognate sets belonging to each tone category, the following procedure was used: Zl., Mn., and TBL were chosen as the three most reliable/largest sources to use as a basis of comparison. Cognate sets were categorized based on whether (1) the tones matched across all languages for which data was available, (2) two of the three languages from the "major" sources agreed on the tone category, or (3) there were only two languages with cognates and the tones did not match each other. Some items were excluded because they consisted of a form from a single language (included for comparison with a PTB root), or because the tones were indeterminate. Often, this was because they were adjectives with the **ja-** prefix in Ersu, which forces a low tone in Ersu; similarly, the **mæ-** negative prefix in Mn. forces a high tone. The number of items in each category are presented below:

	*Tone 1	*Tone 2
Agree - all (2/2 or 3/3)	355	60
Agree - 2/3	149	81
Subtotal for "Agree":	504	141
Mismatch	143	
Total:	788	

Note that the "Agree - all" category consists of items where (1) the three "major" sources agree on the tone; (2) only two of the "major" sources have data, and those two agree on the tone; or

(3) only one of the “major” sources have data for that set, but the tone is corroborated by the “minor” sources.

It is striking that of the 788 items where there is enough data to make tonal comparisons, almost half (355/788, or 45%) have tones that agree on *Tone 1 across the three major sources. However, the small number of items that agree on *Tone 2 (60/788—less than 8%), and the large number of mismatching tonal transcriptions (approximately 18%), are a cause for concern. One possibility is that there were no contrastive tones in Proto-Ersuic, and that there was a default intonational or prosodic melody that developed into high tone in Ersu and low tone in Lizu when contrastive tones eventually did develop separately in Ersu vs. Lizu. If this was the case, we might expect that in cases where two out of three languages (Zl., Mn., and TBL) agree on the tone, the odd one out would be Ersu; that is, Mn. Lizu and TBL Lizu might retain an original low tone (i.e., those categorized as Tone 1) where Ersu innovated a second tone on those forms, or the opposite scenario might have occurred where Ersu has Tone 1 but Lizu developed Tone 2. However, this does not appear to be the case. Below are the numbers of cognate sets where Ersu, Mn., or TBL is the odd language out within the “Agree - 2/3” category above. Mn. has an unusually high number of high tones where the other languages have Tone 1 and an unusually low number of low tones where the other languages have Tone 2:

	Ersu	Mn.	TBL	Total
Disagree - *Tone 1	35	76	38	149
Disagree - *Tone 2	35	9	37	81

Furthermore, there does not appear to be any conditioning environment to determine which forms in individual languages have aberrant tones.

Another possibility is that there were indeed two tones in Proto-Ersuic, but unreliable transcriptions and a poor understanding of the tonal systems of Ersuic languages prevents us from assigning tones to many lexical items with certainty.

Problems with the reliability of field transcriptions cannot be taken lightly. Older wordlists—even going back to Baber (1882), which makes sporadic attempts to transcribe tone using Mandarin tone categories—are based on the model of Sinitic languages where every syllable carries a contrastive tone. This theoretical assumption pervades every aspect of elicitation, analysis, and presentation of the data, and when applied to languages like Lizu and Ersu can obscure the data or even make it impossible to find the right generalizations. For example, in Mianning Lizu (and probably all of Ersuic), classifiers cannot appear by themselves—usually a numeral precedes it (without a numeral, it must be attached to a noun and acts as an indefinite marker).¹ However, in wordlists, classifiers are typically listed by themselves with no numeral (as they are for Zl. Ersu), or listed with the numeral ‘one’ in parentheses (as they are for TBL), with an attached tone, assumed by the transcriber to be lexically specified by the classifier itself. Below are all the cognate classifiers across Ersuic:

¹Conversely, numerals typically only appear when attached to classifiers; when counting, a “default” classifier is used (in Mn., it is -pəʔ, the classifier for small round objects).

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*pri	-pe ¹ ; pa ⁵⁵	`pə 'grain'; nu ³³ pi ⁵³ 'peas'	-pə ¹	(te ³³) pu ³¹		classif. small round obj.
*p ^h a	-p ^h A ¹		-p ^h a			classif. sheet/small object
*kæ	-ka ¹ ; ka ⁵⁵	-kæ	-kjæ	(te ³³) kæ ³¹		classif. long items
*pu	-pu ¹ , -bu ¹ ; pu ⁵⁵	-pv	-pu	(te ³³) pu ³¹	PLB *bar ¹	classif. trees/flat obj.
*dze	-dzε, -dzi; dzε ⁵⁵	-dze	-dzɣ	(te ⁵³) dzu ⁵³	*dzum ≠ *tsum	pair
*p ^h wo			-p ^h o	(te ³³) phu ³¹		classif. one of pair (hand, eye)
*p ^h ja	-ts ^h A ¹ ; tsha ⁵⁵		-p ^h ɕa	(te ³³) phzæ ³¹		classif. garments
*p ^h jo			-p ^h ɕo	(te ³³) phiu ³¹		bolt (of cloth)
*ts ^h wa			-ts ^h a	(te ³³) tshua ⁵³		classif. rooms
*bru	bu ¹ ; bu ³³	-bo	-bzɥ	(te ³³) bu ³¹		flock (of sheep)
*hke	hke ⁵⁵	-kuu	-xkɣ	ne ³³ kuu ⁵³ 'break, snap'		half
*dzwæ	dzua ⁵⁵		-dza ?	(te ³³) dzuæ ³¹	*m-twa	span (thumb to finger)
*liu	-liu ¹ ; lio ⁵⁵		-li	(te ⁵⁵) liu ⁵³	*lam ?	fathom
*mbi	mbzɿ ¹ / ¹ ; nbzɿ ⁵⁵		`mbi 'step across'	(te ³³) nbi ³¹		step / stride
*k ^h o			-k ^h o	(to ³³) khuo ³¹	*kwak	bowl
*nt ^h wa	nt ^h o ¹ ; nthua ⁵⁵		-nt ^h a	(te ⁵⁵) nthua ⁵³		drop (of oil)
*bje	bi ⁵⁵	`bje	labje	(te ⁵³) bi ⁵³		heap (e.g. of dung)
*kra	-tʂε ¹ ; tʂε ⁵⁵		-kæ ¹	(te ³³) ka ³¹		catty (= 1/2 kilogram)
*lo	-lo ¹ ; lo ⁵⁵		-lo	(to ³³) lu ³¹	< MC ljangX 兩 ?	tael (= 50 grams)
*tetsje			-tatse	(ne ³³) te ⁵³ tci ³¹		measure of weight (= 0.1 tael)
*læ			-læ 'pint, 1/10 peck'	(te ³³) læ ³¹ , læ ³⁵		liter, container (measuring, 1-liter-volume)
*pa	pa ¹ ; pa ⁵⁵		-pa	(te ³³) pa ³¹		unit of dry measure for grain (= 1 de- caliter), peck
*dzæ	te ¹ dzA ¹		-dzæ	(te ³³) dzæ ⁵³		meal
*niu	no ¹ , no ¹ ; no ⁵⁵	nu ⁵⁵	-ni	(te ⁵³) ny ⁵³	*nəy SUN	day, day's (work)

Notice that almost all the classifiers in Zl. and TBL have exactly the same tone! In fact, the surface tone on the classifier is completely predictable because the tone of numeral-classifier combination is dependent on the first syllable, the numeral. The practice of transcribing a tone on every syllable misses this generalization; furthermore, it is misleading because there will invariably be one or two classifiers that happen to be transcribed with a tone different from all the rest (for whatever reason, whether it be intonation-induced or simply an error), and the reader of the wordlist will be led to believe this difference is significant.

A second example has to do with lexical items that have tones which are obscured by various prefixes. We already noted above that the adjective prefix (**ja-** in Ersu and **pæ-** in Mn.) overrides the tone of the following syllable; however, adjectives without the prefix (often in a reduplicated form) have their own underlying tones. Other prefixes that override the following morphemes' tones include the negative (**ˆmæ**), negative imperative (**ˆtʰæ**), and interrogative (**ˆæ**) prefixes. Taking syllables out of their context and assuming that their surface tones are their underlying tones is easy to do while wearing syllable-tone-colored glasses, but it makes the tonal analysis difficult or impossible.

We have mentioned above two relatively simple examples of tone interacting with morphology; more complex is the interaction between tone and intonation in running speech, which to date has not been analyzed in any Ersuic language. These phenomena are merely the tip of the iceberg; without a thorough understanding of the phonology of Ersuic languages, our data will, unfortunately, remain messy.

For the time being, then, it seems best to tentatively reconstruct two tones (ultimately of uncertain origin) for Proto-Ersuic, with *Tone 1 accounting for a large portion of the reconstructed vocabulary, and *Tone 2 a much smaller portion. The remaining lexical items will have to wait for more work to be done before they can be assigned a tone.

Chapter 6

Morphosyntax

The lexical and grammatical similarities of Lizu, Ersu, and Tosu were noted by Sūn (1982b:241). This chapter presents a compilation of morphosyntactic features that appear to be reconstructible to the protolanguage. The importance of morphology for determining genetic relationships between languages has been noted by many, but I will quote Goddard (1975:250), who explains it thus:

Proving a genetic relationship between two languages is a matter of showing that they share similarities which can only be accounted for by the assumption that the languages have descended from a common ancestor. There are, logically, two stages in such a demonstration. It is necessary to show not only that the resemblances are so numerous and detailed as to exclude the possibility of chance as an explanation but also that they are so tightly woven into the basic fabric of the languages that they cannot be explained simply as borrowings.... [T]he kinds of similarities which are most valuable for showing genetic relationship are those which involve details of the morphological structures of the languages. If one finds in two languages what is essentially the same system, with the same internal structure, embedded in their grammars, then it is likely that the criteria for proof can be met. Similarities between lexical items are much less satisfactory, since individual words are readily borrowed and since each comparison must stand alone and does not have the added impact which it would gain from being part of a system of similarities.

6.1 Verbs

6.1.1 Directional Prefixes

The Ersuic languages are notable for their use of directional prefixes on almost all verbs (indeed, directional prefixes are a defining feature of the Qiangic languages; see Sūn 2001). Five directional prefixes are reconstructed for Proto-Ersuic:

	PEr	TBL	Kl	Nq	Mn	Zl	Qš	num. of forms
up	*de-	de-	de-	də-	de-	dɛ-	dɛ-	70
down	*ne-	ne-	ne-	nə-	ne-	nɛ-	nɛ-	40
inward/upstream	*k ^h e-	khe-	khe-	khə-	khe-	khɛ-	khɛ-	30
outward/downstream	*ŋe-	ŋe-		?		ŋɛ-	ŋɛ-	10
away	*t ^h e-	the-	the-	thə-		(thɛ-)	(thɛ-)	20

TBL and both Ersu dialects (Zl. and Qš.) have preserved all five of these prefixes. The grammatical sketches for Zl. and Qš. do not list **the-** as one of the directional prefixes, but it is clear from the data and/or the other parts of the sketches that it is indeed part of the paradigm. For example, Liú (1983) includes it under a list of unpredictable verbal prefixes required for imperatives; similarly, data from Zl. includes four forms with the ‘away’ suffix: **the³³gɛ⁵⁵** ‘happy/glad’, **tha³³kha³³** ‘win’, **(the⁵⁵)hi⁵⁵** ‘hide (smtg.)’, and **the³³mɛ⁵⁵** ‘forget’.¹

In Kl. and Mn., **ŋe-** ‘outward/downstream’ has been replaced by **ne-** ‘down’. This is apparent when we look at items that have data from both Mn. and TBL; where TBL has **ŋe³³bu⁵³** ‘tired’, **ŋe³³le⁵³ŋ³¹** ‘turn around [face downhill]’, **ŋe³³phi-æ⁵³** ‘lose, throw away’, **ŋo³³tshuo⁵³** ‘extract/take out’, and **ŋuo³³hũ⁵³** ‘stretch out (the arm)’,² Mn. has the **ne-** prefix instead.³ In the Kl. data set, there is only one cognate to these TBL forms (Kl. **nebə** ‘tired’), and it also has a **ne-** prefix. There are no cognates in the data from Nq., so it is unknown if Nq. retains the ***ŋe-** prefix. Mn. has a gone a step further, merging **t^he-** with **k^he-**.

The “number of forms” listed in the table above is the approximate number of reconstructed lexical items (rounded to the nearest ten) with each prefix. Not surprisingly, the prefixes most likely to be lost (or overlooked in grammatical sketches!) are the ones that are least common.

6.1.2 Mood Prefixes

Three prefixes, ***æ-** ‘interrogative’, ***mæ-** ‘negative’, and ***t^hæ-** ‘negative imperative’⁴ are reconstructed for Proto-Ersuic. These show up before the verb root and after the directional prefix (i.e. the order is DIR-MOD-VERB), if there is one. The prefixes show up in all daughter languages, and two of them descend from PTB roots: ***ma** NEGATIVE and ***da** ≠ ***ta** NEG. IMPERATIVE. Note, however, that these grammatical morphemes seem to have been exempt from the PTB ***-a** > PEr ***-i** brightening change.

¹The prototypical meanings of these prefixes is indeed directional, since they attach productively to verbs like ‘go’, ‘jump’, ‘carry’, or ‘push’. It is also curious that there is a separate ‘away’ (meaning ‘towards the other party’) prefix but no ‘towards (yourself)’ prefix separate from the ‘inward’ prefix. Huáng and Rénzēng (1991:144) do not give examples of this prefix with ‘go’, but they do give examples such as **the⁵⁵pe⁵³tɕi³¹** ‘send (someone)’, **the⁵⁵le⁵³** ‘release’, **the⁵⁵ka⁵³** ‘splash water’, **the⁵⁵pu⁵³** ‘change, become’, and **the⁵⁵ly⁵³** ‘rob’.

²Note the assimilation of the vowel in the prefix to that of the root in these TBL forms.

³There is one exception: TBL **ŋe³³tu⁵³** and Mn. **k^hetu** ‘infect’.

⁴For lack of a better term, I have called this set of three prefixes “modal prefixes”.

6.1.3 Aspectual Suffixes

Of the various verb suffixes reported in the different sources (such as causative, experiential, completive, etc.), only two seem to be common to all dialects. These can be reconstructed as (1) **-A* ‘perfective aspect’ (completed action) and (2) **-ge* ‘imperfective aspect’. Based on more recent data from Kl. and Mn., it may also be possible to reconstruct an egophoric/non-egophoric⁵ distinction for the imperfective, with **bo* the egophoric form and **-ge* the non-egophoric form.

Perfective **-A*

The perfective aspect marker **-A* is tightly bound to the verb that it attaches to, exhibiting vowel harmony and other assimilatory effects. In Mn., for example, the *-A* suffix takes on the front- or backness of the vowel of the verb root. Often it may seem to be swallowed up as part of the main syllable of the verb, so that *deŋo-a* ‘crowed’ and *deŋu-a* ‘cried’ both sound like [deŋwa], though my consultant assures me that they are different. Verbs like *k^heŋi-æ* ‘died’ sound like [k^heŋæ], and one has to pay close attention to notice that the fricative (or rather, the apical vowel after the fricative) is held just slightly longer in [ŋi-æ] vs. [ŋæ]. In fact, Sūn (1982b:253) reports that in Zl. Ersu, the suffix is completely incorporated into the main syllable, with an accompanying change in tone. For example, the perfective form of ‘eat’ is composed of /*dzɿ*³³ + *A*/ yielding *dza*³⁵.

verb	verb + <i>a</i>	gloss
<i>dzi</i> ⁵⁵	<i>dzia</i> ³⁵	cut (grass)
<i>ntʂhu</i> ⁵⁵	<i>ntʂhua</i> ³⁵	steam
<i>tʃo</i> ⁵⁵	<i>tʃua</i> ³⁵	cook
<i>tʂe</i> ⁵⁵	<i>tʂa</i> ³⁵	weigh
<i>dzɿ</i> ³³	<i>dza</i> ³⁵	eat
<i>kua</i> ⁵⁵	<i>kua</i> ³⁵	take off (clothes)

Imperfective **-ge* (Non-egophoric)

Reflexes of **-ge* are labeled differently by different sources. Chirkova (2008:28) describes *ge* as “indicating both the progressive and the inchoative aspect”. In my own work in progress on Mn., I have analyzed *gr* as imperfective, since the perfective/imperfective distinction is more basic. Sūn (1982b:252) categorizes *ge*⁵⁵ as a marker of immediate future (*jiāngxíngtǐ* 将行体), with a different (and, interestingly enough, morphologically more complex!) form *ge*⁵⁵*se*⁵⁵ marking the progressive (*jìnxíngtǐ* 进行体).⁶

Chirkova (2008:37) notes that similar markers with velar initials “implying intent on the part of the speaker and referring to events soon to take place” are also found in Queyu (*rguə*) and

⁵An *egophoric* form means that “the speech act participant in charge of the assertion is involved in the event” (Creissels 2008). The egophoric/non-egophoric distinction is sometimes referred to a conjunct/disjunct distinction; see Tournadre (2008) for arguments against using these terms for Tibetic languages.

⁶It is unclear what the *se*⁵⁵ in *ge*⁵⁵*se*⁵⁵ contributes to the meaning.

Shixing (**gɜ**),⁷ and that this, along with genitive **ji** and locative **ke**, “shared among the languages of Sìchuān are expected to be retention from their common ancestors or evidence of a shared substratum, just like the expression of topography-based spatial deixis or elaborate inventories of existential verbs, all pervasively present in the languages of the region.”

Imperfective *-bo (Egophoric)

Both Kl. and Mn. have **bo** as the egophoric version of **ge**. Since older descriptions of Lizu and Ersu were based on wordlists and sentence-lists which probably did not elicit sentences of the type that would contain this particular suffix,⁸ it is entirely possible that ***-bo** should also be reconstructed for Proto-Ersuic.

6.1.4 Suppletive Paradigm for ‘Go’

It is clear that in addition to ***ji** ‘go’, we must also reconstruct ***dua** ‘go (perfective)’:

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*ji ¹	k ^h -iɿ ‘enter’, ʒɿ ¹ , ji ¹ ; ʒɿ ⁵⁵ , ji ⁵⁵	nə ³³ ji ⁵³	ji	ji ³⁵	*ʔay	go
*dwa ¹	dua [∨] ; ŋe ⁵⁵ dua ⁵⁵ ‘pass by’	dæ	da	dua ³⁵ , ŋe ³³ dua ³⁵		go / leave (past)

This suppletive paradigm, reminiscent of English “go/went”, is rather unusual. The perfective form may well descend from an earlier combination of a full verb that looked something like ***du** or ***do** plus the perfective marker ***-A**.

The perfective form of ‘go’ may require a further split into egophoric and non-egophoric, as in Mn., where **da** is ‘go (perf. non-ego.)’, and **p^{hi}(-æ)** is ‘go (perf. ego.)’. A table illustrating the different combinations of ‘go’, egophoricity, and perfective/imperfective in Mianning Lizu is provided below for clarity:

	ego.	non-ego.
imp. suffix	-bo	-guu
‘go’ imp.	ji bo	ji guu
‘go’ pfv.	p ^{hi} (-æ)	da

This paradigm, with both an imperfective/perfective split and a further egophoric/non-egophoric split within the perfective category is so unusual and so specific (these forms do not have any

⁷Interestingly, the fact that these are described as “implying intent” point to some egophoric value for this marker, rather than non-egophoric as I have analyzed it here.

⁸Chirkova (2008:38) notes that in Huáng and Rénzēng (1991) and Sūn (1982b), “all quoted sentences in both sources are in the third person,” and that “it is unclear what marker is used in egophoric utterances in these varieties and, more generally, whether these varieties distinguish between egophoric and other person utterances at all.”

obvious synchronic relationship to other items in the lexicon) that it seems unlikely to be a recent innovation; rather, this egophoric perfective form of ‘go’ may be original to Proto-Ersuic, but not yet described for Ersuic languages other than Mn.

6.1.5 Causative/Simplex Pairs

Unlike the above verbal morphology which can be reconstructed for Proto-Ersuic proper, the causative/simplex alternations like those shown below may be a vestige of an earlier causative prefix, ultimately going back to the PTB causative *s- prefix, or a voicing alternation, also going back to the PTB stage (see LaPolla 2003).

Below is a list of verb pairs⁹ that have initial consonant manner alternations and whose meanings seem compatible with an ancient causative/simplex or intransitive/transitive alternation, although the pairs ‘cool/cold’ and ‘see/look at’ are not, strictly speaking, simplex/causative. The causative forms for ‘eat’ and ‘wear’ may have had original *s- prefixes, which caused the initial of the causative alternant to be unvoiced, and also suppressing aspiration in the case of ‘feed’. The forms for ‘break’ and ‘scatter’, on the other hand, seem to descend from a simple voicing alternation.

language(s)	simplex	causative
Mn.	dzi ‘eat’	tsi ‘feed’
Mn.	de(y)we ‘wear’	dexwe ‘dress smn.’
Mn.	-mbzo ‘tall’	hō ‘stretch out’ ¹⁰
Zl.	ba ⁵⁵ ‘break’	pha ⁵⁵ ‘break (caus.)’
Zl.	be ³³ dza ⁵⁵ ‘scattered’	phe ³³ tʃha ⁵⁵ ‘scatter (caus.), untie’
TBL	ne ³³ ku ⁵³ ‘shrivel up, wither’	khu ³¹ ‘dry smtg. in the sun’
Zl.	hpu ⁵⁵ ‘change’	phu ⁵⁵ ‘change (caus.)’
TBL	mbi ³³ mbi ⁵³ ‘pleasantly cool’	de ³³ nphi ⁵³ ‘cold’
Mn.	khendo ‘see’	ʃto ‘look at’
TBL/Mn.	la ³³ la ⁵³ ‘roll’	deɬa, deɬɬa ‘roll’
Zl./TBL	li ⁵⁵ ‘melt’	ne ³³ hi ³¹ ‘melt’

The last two items above, both with lateral initials, have a voiced variant in one language but a voiceless one in another; these may originally have come from simplex/causative pairs, with different languages choosing one or the other variant.

⁹The verb pairs from Zl. Ersu are taken directly from Sūn 1982b:253; all other pairs have been compiled separately from the wordlists.

¹⁰This pair requires an explanation, since it is a bit of a leap both phonologically and semantically. The root for ‘tall’ is PTB *m-raŋ, yielding Mn. mbzo through regular developments. Adding an *s- prefix would yield a form like *s-m-raŋ; cf. the Burmese forms mraŋ¹ ‘be high’ and hmraŋ¹ ‘raise’, as pointed out by Jacques and Michaud (2011:472). The phonological leap here is the idea that complex clusters with *s like PTB *smr- may have developed into Proto-Ersuic *h (see section 8.2.12). The semantic leap involves positing a semantic change from ‘raise’ to ‘stretch/extend’.

6.1.6 Verbs of Existence

Proto-Ersuic can be reconstructed with at least five verbs of existence. The sixth verb (for ‘have/exist (container)’ is not attested in Ersu.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*dʒo ¹	dzoʎ; dʒo ⁵⁵	dʒu	dʒo	dʒu ⁵³	*m-dzyaŋ	have, exist (animate)
*hã ¹	hA.ʎ; xã ⁵⁵ , xã ⁵⁵	hã	hã	hiã ³¹		have, exist (immovable)
*dʒwa ¹	dʒA.ʎ; dʒa ⁵⁵	dʒuæ	dʒa	dʒua ³¹		have, exist (movable)
*niu ¹	noʎ ‘~ (polite)’; no ⁵⁵	ne	ni	ny ³⁵	*r-ney-t	have, exist (general/abstract)
*bo ¹	boʎ ‘have livestock’, buʎ ‘have N (be age N)’; bo ⁵⁵	bo	bo	bo ³¹		have, exist (money)
*dʒju ¹		dʒe	dʒi	dʒu ³³ dʒu ⁵³		have, exist (container)

6.2 Nouns

6.2.1 Genitive *ji

The genitive marker **ji**, used to link two noun phrases, is found in all dialects across Ersuic and thus is straightforwardly reconstructed as ***ji**. Chirkova (2008:37) notes that this marker is also found in Shixing and Queyu.

6.2.2 Noun Particles

Object marker *wA

An object marker¹¹ can also be found across Ersuic: Mn. **wA**, Kl. **æ/ɑ/wæ**, TBL **wæ**, Zl. **va**, Qš. **vaʎ**, **vaʎkaʎ**. Chirkova (2008:22) describes this marker in Kl. as signaling “animate (primarily human) arguments of the verb (except for agent)”. Sūn (1982b:258) calls Ersu **va⁵⁵** an “affected object” marker (受动助词 *shòudòng zhùcí*) that usually attaches to indirect objects (but sometimes direct objects).

¹¹The term “non-agent marker” or even “animate non-agent marker” is probably a more accurate but less mellifluous term.

Locative marker *ke

A locative particle can also be reconstructed, with perfect cognates found in Kl. (**ke**) and Ersu (**ke**). Mn. has a locative particle with a velar initial but a low vowel (**kjæ**).

6.2.3 Personal Pronouns

Only the basic roots for the personal pronouns can be reconstructed with any amount of certainty for Proto-Ersuic: first person *A, with an indeterminate low vowel, second person *ne or *no, with an indeterminate mid vowel, and third person *t^he. The personal pronoun paradigms for Mn., TBL, and Zl. are given below:¹²

	PEr	Mn.	TBL	Zl.
1sg	*A	a	æ ⁵³	a ⁵⁵
1du		adza	a ³³ dza ⁵³	a ⁵⁵ dzi ⁵⁵
1pl		adi, ado ¹³	a ³³ doɿ ³⁵	a ⁵⁵ ɾɿ ⁵⁵
2sg	*ne/*no	no,ne	ne ⁵³	ne ⁵⁵
2du		nedza	ne ³³ dza ⁵³	ne ⁵⁵ dzi ⁵⁵
2pl		nidi	nuo ³³ doɿ ³⁵	ne ⁵⁵ ɾɿ ⁵⁵
3sg	*t ^h e	t ^h e, t ^h o- ¹⁴	the ⁵³	the ⁵⁵
3du		t ^h edza	the ³³ dza ⁵³	the ⁵⁵ dzi ⁵⁵
3pl		t ^h idi	the ³³ doɿ ³⁵	the ⁵⁵ ɾɿ ⁵⁵

Each language seems to have chosen its own set of dual and plural suffixes. The Mn. and TBL dual suffixes are the same, but the Ersu suffix has a different vowel. The plural suffixes are even more different: Mn. and TBL seem to share the **-do(ɿ)** suffix, but the Mn. form is the first person plural inclusive form; and perhaps the **ɿ** in TBL is related to the Ersu suffix **ɾɿ**.

The second person morpheme has a variant with a back vowel in Mn. and TBL. In TBL this may be due to vowel harmony with the suffix, but in Mn. the form **no** can be used by itself, without any suffix. This is in contrast with Mn. **t^ho-**, which can only be used with the object marker **wa**. Perhaps the basic form for the second person pronoun was originally ***no**, ultimately < PTB ***naŋ**, with the expected development of PTB ***-aŋ** > PEr ***-o**.

¹²Like most languages of the region, the “dual” forms listed below are probably not true, obligatory duals, but simply mean “us two”, “you two”, etc. Nonetheless I have copied over the usual categories as presented in published grammatical sketches for these languages.

¹³**adi** is exclusive ‘we’, **ado** is inclusive.

¹⁴The **t^ho** variant only shows up before the object marker **wa**: **t^howa**. Second person **no** also shows up before the suffix **wa**, but it can also be used without it.

6.3 Numerals and Classifiers

Numerals for Proto-Ersuic are collected in the following table:

PER	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*te ¹	tɛ̃; tɛ ⁵⁵	`te; tə ⁵³	`te	te ³¹		one
*ne ¹	nɛ̃; nɛ ⁵⁵	ne; nə ⁵³	ne, næ	ne ³⁵	*g/s-nis	two
*sjē ²	sĩ; si ⁵⁵	si ⁵³	`ɕe	ɕi ⁵³ , ɕe ³⁵	*g-sum	three
*zju ²	zɔ̃; zɔ ³³	`zɛ; tʂɿ ⁵³ ???	`zɿ	zu ³⁵	*b-ləy	four
*ŋra ²	ŋa ¹ ; ŋua ¹³³	fīā; ɐ ⁵³ ?	`ŋæ ¹	ŋa ⁵³	*l/b-ŋa	five
*tʂ ^h u ²	tʂ ^h ũ; tʂhu ⁵⁵	tʂhu ⁵³	`tʂ ^h u	tʂhu ⁵³	*d-kruk	six
*sini/stē ²	s̃i; ʃɿ ⁵⁵ ŋ ⁵⁵	`tj~`kŋ; ki ⁵³	`ʃtɿ	skj ⁵³	*s-nis	seven
*rdi ¹	z̃i; zɿ ⁵⁵		dzi	dzi ³⁵	*b-r-gyat ≠ *b-g-ryat	eight
*ŋge ²	gɛ̃; nge ³³		`ŋgɿ	ngu ³⁵	*d/s-kəw, PQc s/r/n-gəw	nine
*tɕ ^h etɕ ^h e ¹	tʂ ^h ɛ̃ tʂ ^h ɛ̃; tʂ ^h ɛ ⁵⁵ tʂ ^h ɛ ⁵⁵	tɕ ^h ɛ ³³ tɕ ^h i ⁵³	tɕ ^h etɕ ^h e	tɕ ^h ɛ ⁵³ tɕ ^h ɛ ⁵³	*ts(y)i/əy/ay	ten
*tʂ ^h etɕi	tʂ ^h ɛ̃ tʂɿ; tʂ ^h ɛ ⁵⁵ tʂɿ ⁵⁵		`tʂ ^h etɕi	tʂ ^h ɛ ⁵³ tɕi ⁵³		eleven
*tʂ ^h ene	tʂ ^h ɛ̃ nɛ̃; tʂ ^h ɛ ⁵⁵ nɛ ⁵⁵		tʂ ^h enæ, tʂ ^h ene	tʂ ^h ɛ ⁵³ nɛ ⁵³		twelve
*tʂ ^h esa/ts ^h esjē	tʂ ^h ɛ ⁵⁵ sa ⁵⁵		`tʂ ^h eɕe	tʂ ^h ɛ ⁵³ sa ⁵³		thirteen
*tʂ ^h ezju	tʂ ^h ɛ ⁵⁵ zɔ ³³		`tʂ ^h ezɿ	tʂ ^h ɛ ⁵³ zu ³³		fourteen
*tʂ ^h ɛŋra	tʂ ^h ɛ ⁵⁵ ŋua ¹³³		`tʂ ^h ɛŋæ ¹	tʂ ^h ɛ ⁵³ ŋa ⁵³		fifteen
*tʂ ^h etʂ ^h u	tʂ ^h ɛ ⁵⁵ tʂhu ⁵⁵		`tʂ ^h etʂ ^h u	tʂ ^h ɛ ⁵³ tʂhu ⁵³		sixteen
*tʂ ^h esini/htē	tʂ ^h ɛ ⁵⁵ ʃɿ ⁵⁵ ŋ ⁵⁵		`tʂ ^h ɛʃtɿ	tʂ ^h ɛ ⁵³ skj ⁵³		seventeen
*tʂ ^h erdi	tʂ ^h ɛ ⁵⁵ zɿ ⁵⁵		`tʂ ^h edzi	tʂ ^h ɛ ⁵³ dzi ³⁵		eighteen
*tʂ ^h ɛŋge	tʂ ^h ɛ ⁵⁵ nge ³³		`tʂ ^h ɛŋgɿ	tʂ ^h ɛ ⁵³ ngu ³⁵		nineteen
*nets ^h i ¹	nɛ̃ tʂ ^h ɿ; nɛ ⁵⁵ tʂɿ ⁵⁵	nə ³³ tʂɿ ⁵³	`nɿtʂ ^h i	nɛ ³³ tʂɿ ⁵³		twenty
*sats ^h i	sã tʂ ^h ɿ; sa ⁵⁵ tʂɿ ⁵⁵		sats ^h i	sa ³³ tʂɿ ⁵³		thirty
*zi	-z̃i; -zɿ ³³		-zi	-zɿ ⁵³		ten (bound), -ty
*zjuzi	zɔ̃ z̃i; zɔ ³³ zɿ ³³		`zɿzi	zu ³³ zɿ ⁵³		forty
*ŋrazi	ŋua ¹³³ zɿ ³³		`ŋæ ¹ zi	ŋa ³³ zɿ ⁵³		fifty
*tʂ ^h uzi	tʂ ^h ũ z̃i; tʂhu ⁵⁵ zɿ ³³		tʂ ^h uzi, `tʂ ^h uzi			sixty
*sini/htēzi	ʃɿ ⁵⁵ ŋ ⁵⁵ zɿ ³³		ʃtɿzi, `ʃtɿzi			seventy
*rdizi	z̃i ⁵⁵ zɿ ³³		dzizi			eighty
*ŋgezi	nge ³³ zɿ ³³		`ŋgɿzi			ninety

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*zɑ ¹	zA ^l ; zɑ ⁵⁵	e ³³ zε ⁵³	zɑ	(te ³³) zæ ⁵³	*b-r-gya	hundred
*htū ²	tu ^l , tu ^l ; hpu ⁵⁵ (htu ⁵⁵)		ʃtū	tu ⁵³	*s-toŋ	thousand; ten cents
*mbwo ²	nbo ³³ ntsho ⁵⁵		`mbo	nbu ⁵³ '100,000'	WT hbum '100,000'	ten thousand

Of note with the numerals is that the morpheme for ‘ten’ in the forms for ‘twenty’ and ‘thirty’ have an aspirated affricate initial **ts^h**-, while ‘forty’ to ‘ninety’ use one with an initial **z**-. This peculiarity is the same for all described languages of Ersuic.

A list of classifiers reconstructible for Proto-Ersuic can be found on p. 139.

Chapter 7

Sound Changes and Subgrouping

A list of the sound changes for each language is presented below. There are only a few changes that turn out to be useful for subgrouping; these will be discussed as well.

For conciseness, the following abbreviations are used in the formulas for the sound changes below:

- A any low vowel (æ and ɑ)
- C any consonant, including prenasalized and preaspirated consonants
- F all labiodental fricatives (f and v)
- HC all preaspirated stops
- NC all prenasalized stops
- P/T/K all bilabial/dental/velar stops, including prenasalized and preaspirated stops but not including nasals
- Q all uvular stops, including prenasalized and preaspirated stops but not including nasals
- R all retroflexes
- S all non-palatal sibilant (i.e. dental, alveopalatal, and retroflex) fricatives, including prenasalized and preaspirated affricates (s, ʃ, ʂ, etc.)
- Tç/Tʃ/Tʂ all palatal/alveopalatal/retroflex affricates, including prenasalized and preaspirated affricates
- (T)ç/(T)s/(T)ʃ/(T)ʂ all palatal/dental/alveopalatal/retroflex fricatives, including prenasalized and preaspirated affricates
- V any vowel
- X all velar fricatives (x and ɣ)

For clarity, the front and back low vowels in Ersu will be represented as æ and ɑ, respectively, rather than using the potentially confusing notation specific to the individual sources for Zl. and Qš.

7.1 Ersu

The Zl. and Qš. varieties of Ersu are largely similar, with many of the differences between the two sources due to typographical errors and/or disagreements in transcription. Some retroflexes in one source are transcribed as alveopalatals in the other and vice versa, for example.¹

A number of sound changes are postulated for Ersu, including six sets of ordered sound changes.

The first set has to do with ***r** and its developments. First, the ***-ui** rhyme became rhotic; then the ***-ri** rhyme (including those from original ***-ui**) apicalized to [rɿ]; then velar + **r** combinations became retroflexes before the apical vowel ɿ; and finally some of the remaining ***r** medials induced r-coloring on the vowel. The ***-iu** rhyme generally developed into **-o**, but only after it conditioned the velar retroflexion change. The change of ***ɣ**- > **v**- affected those instances of ***ɣ**- not affected by the retroflexion change.

Example: ***xui**¹ ‘tooth’ > **xri** > **xrɿ** > **ɣɿ**⁵⁵.

sound change	comments
1. ui > ri	“spontaneous” rhotacization ²
2. i > ɿ / {S, r} __	apicalization (also see below)
3. [Kr, xr, ɣr] > [Tʂ, ʂ, z] / __ ɿ	retroflexion
4. rɿ, re, rA > a ¹ / C __ ru, ro > o / C __ ɿu > o ɿ > v	r-coloring of unrounded vowels ³ r-deletion next to rounded vowels other changes with *iu (see next set for more on this change)

Note that the apicalization change is placed in this sequence to make the retroflexion change phonetically plausible. In other words, it would be possible to omit the apicalization change and have the environment for the retroflexion change simply be the high vowel [i]; however, while a change of [kri] > [tʂi] seems unlikely, a change from [krz_v] to [tʂz_v] seems quite natural. The ordering of the apicalization change here (for Ersu) and in the following sections (for the various Lizu dialects) is motivated by these arguments for phonetic naturalness.

The apicalization change also interacts with various palatalization changes, which are discussed below.

The very last sound change above of ***ɣ**- > **v**- was itself preceded by other sound changes. This series of machinations is set up solely to account for the form ***ɣwa**¹ ‘hungry’ > Ersu **wa**⁵⁵ using the ɿ-deletion rule, with the other two changes ordered so they do not affect it.

¹Substantive differences are minimal, and consist of the following: (1) where Zl. has **a**¹, Qš. almost always has **ə**¹ (the one exception is ‘cremate’); and (2) where Zl. has the syllable **ri** Qš. usually has **rə**.

²See section 4.2.8.

³The term “r-coloring” may bring to mind the *erhua* phenomenon in e.g. Beijing Mandarin, where an “r” suffix is attached to various words, often as a diminutive. However, in this case, r-coloring refers the transmutation of a consonantal /r/ into a rhotic quality on an adjacent vowel.

1. w > v / # ___	initial w > v
2. ɣ > Ø / ___ wA	ɣ-deletion
3. ɣ > v	ɣ > v

The next set of changes revolves around the depalatalization of all palatal fricates (except before **-o**). First, a number of changes created palatals where there were none before. After the depalatalization change, original ***-i** became apical after certain sibilant fricates, and a second round of palatalization occurred to velar initials. The final raising of ***-je** and ***-ẽ** to **-i** had to occur after the apicalization change (since these new **-i** rhymes do not get apicalized).⁴

Examples: (1) ***mp^hi²** ‘throw up, vomit’ > **mp^hçi** (extrusional ç) > **mp^hsi** (depalatalization) > **nphsɿ⁵⁵** (apicalization). (2) ***p^hja** ‘leaf/flat object’ > **tç^ha** (P-j fusion) > **ts^ha⁵⁵** (depalatalization). (3) ***mbje¹** ‘hill/mountain’ > **nbi⁵⁵** (je-raising).

1. Ø > ç / P ___ i Pj > Tç / ___ {A, o} j > ʒ / # ___ i K > Tç / ___ i	extrusional ç P-j fusion high front glide frication (optional) palatalization #1
2. (T)ç > (T)s / except before -o	depalatalization
3. i > ɿ / {S, r} ___ K > Tç / ___ je	apicalization palatalization #2
4. je, jẽ > i ẽ > i	je-raising ẽ > i

In the following pair of sound changes, ***-wa** lost its medial glide before the two low vowels merged in Ersu.

Examples: (1) ***k^hwa¹** ‘win’ > **kha³³** (glide deletion). (2) ***k^hwæ¹** ‘big’ > **khua⁵⁵** (*A merger).

1. wa > a / K ___	*-w- glide deletion
2. æ > a	*A merger

The change of dental stops to bilabials occurred before both the ***-u** and ***-iu** rhymes, so it is ordered before the palatalization of dental stops before **i**.

Examples: (1) ***diutɕ^he¹** ‘year’ > **bu⁵⁵tɕhe⁵⁵** (*du* to *bu*). (2) ***diwæ¹** ‘slow’ > **dzi⁵⁵va⁵⁵** (palatalization).

1. T(i) > P / ___ u #	du to bu
2. d > dz / ___ i	palatalization

⁴As written, the “je-raising” change must follow “palatalization #2”, since ***-je** provides the environment for the palatalization change, but it is possible to get the reverse order by changing the environment for the palatalization change to **-i**, so that je-raising feeds palatalization.

The areal *xu* > *fu* change was preceded by a mini-chain shift of the high back vowels of *wo* → *o* → *u*.

Example: ***yo**¹ ‘liquor’ > **yu** > **vu**⁵⁵.

1. o > u / K ___ 2. wo > o X > F / ___ u	xu > fu
--	---------

The remaining changes are unordered. For the sake of thoroughness, some sound changes which only apply to one or two forms are included in this list and similar lists in the sections below. Although many of them are the same across multiple dialects, the changes themselves are not particularly unusual and should not present complications with respect to subgrouping.

h \tilde{V} > xV li, liu, lu, lo > ə ¹ [ʃ, ʒ] > [ʂ, ʐ] [rd, rg] > [d, g] mps > nts my > m rw > r ɕ ^w > ɕ ew, e, wE > ε je > ε / R ___ iu > ε / P ___	denasalization li > ə (but with various exceptions!) merger of alveopalatal fricatives into retroflexes (also with sundry exceptions) prefixed r-deletion (for ‘hail’) (for ‘throat’, ‘rabbit’) (for ‘chicken’)
--	---

The *li/liu/lu/lo* > ə¹ change appears rather unwieldy, and in fact it probably happened in multiple stages, perhaps first with high front vowels (compare with Mandarin **ér** < MC **nyi**). As discussed below (under *Subgrouping*), there are some Ersu dialects where PEr ***lo** did not change to [ə¹], but ***li** apparently did. Thus, the *lo* > ə¹ change may be relatively recent; at the very least it can be chronologically ordered after the importation of the Tibetan loanword **lo** ‘year’, which shows up in Qingshu Ersu in terms such as **la**ʔə¹ ‘year of the tiger’.⁵

7.2 Lizu

Three sound changes are shared by all the Lizu varieties and can be considered shared innovations for purposes of subgrouping:

j > ŋ / ___ \tilde{V} e > u / [velar] ___ riu > ri	palatal glide to nasal before nasal rhyme *-e becomes back vowel after all velars merger of * -riu into * -ri
--	---

⁵This Tibetan loanword exists alongside the two native morphemes for ‘year’, the free/countable form **bu**⁵⁵**tʂhe**⁵⁵ and the bound form **-xi**⁵⁵.

Examples (from Mianning Lizu): (1) *jō¹ ‘sheep’ > ɲo. (2) *hke¹ ‘eagle / hawk’ > xkɻ. (3) *riu¹ ‘write’ > zɿ; ri¹ ‘laugh’ > `zɿ.

7.2.1 Kala Lizu

The development of contrastive uvulars is a particularly interesting feature of Kl. Lizu. There appear to be two sources: first, velar + r clusters before the vowel -a. The fronting of ra to ræ must occur after this change (otherwise the back vowel environment is lost). (See p. 83 for the forms affected by this change.)

Example: ɲgrɑŋgrɑ¹ ‘shake/shiver’ > `ng^ʁɑŋg^ʁɑ.

1. Kr > Q / __ a	uvulars from Kra ⁶
2. ra > ræ / C __	merger of -ra into -ræ

The second source of uvulars is simply velars before certain rhymes. Notably, the rhyme *-o (but not *-wo!) conditions the change of velars to uvulars, leading to minimal pairs like ^hqoqo ‘hole’ < *hko vs. neko ‘put, place’ < *nekwo. (Compare pp. 119 and 121.)

Example: *ɲk^hwæ² > `q^hwa.

1. g > ɣ / __ o	spirantization
2. [K,ɣ] > [Q,ɛ] / __ {o, wA}	uvulars from Ko/Kwa
3. wæ > wa / Q __	vowel backing after uvular (for ‘lake’)

Chirkova (2008:8) hypothesizes that all uvulars are derived historically from *velar + r clusters. We have shown here that this is true at least for rhymes with the vowel *-a. While it is possible that it is also true for rhymes with the vowel *-o, there is little or no evidence for this internal to Ersuic. However, note the form `qoqo ‘hole’ < PEr *hko¹, which is assigned to PTB allofam *kor HOLE with an *-r final consonant (see p. 183).

The development of some uvulars from velar + r clusters is interesting in the Tibeto-Burman context because in Lahu, the opposite change occurred: e.g. all *k > q *except* when medial -r- (or -y- or -w-) suppressed this change (see Matisoff 2003:72).

Like all other Ersuic languages, Kl. Lizu has apical vowels after dental and retroflex sibilants. The apicalization change happened before retroflexion, and the changes affecting the *-ri rhyme after.

Example: *kri¹ ‘star’ > `tɕɿ.

1. i > ɿ / S __	apicalization
2. Kr > Tɕ / __ ɿ	retroflexion
3. rɿ > ɕ / P __, rɿ > ræ / m __; <i>then</i> ri > rə	various changes to *-ri

⁶[ng^ʁ] can be considered the phonetic realization of underlying /ng-/ (< *ɲgr-), but the fricative component is apparently quite salient; Chirkova (2008:8) notes that [ng^ʁ] is “strongly affricated”. This feature can be interpreted as a retention of Proto-Ersuic *-r-.

The **iu** > **e** change after retroflexes is ordered after the alveopalatal merger.

Example: ***htju**² ‘feces’ > **ʒe**.

1. T(j) > T(ʒ)	merger of alveopalatals into retroflexes iu > e
2. iu > e / R ___	

The remaining sound changes are unordered with respect to the others.

HC > C st > k NC[-vc,-vel] > C / # ___ rg > ŋg ŋ > h K > Tç / ___ {i, je} X > F / ___ u ro, re > ø / C[-asp] ___ ru > o > C ___; <i>then</i> ru > rø ui > u my > m ç ^w > ç ẽ, wE > e wo > o iu > y / l ___ iu > i / ɲ ___ iu > e / ʒ ___ d > tç / ___ iu	depreaspiration deprenasalization (does not apply intervocalically) rhinoglottophilia (optional) palatalization xu > fu (optional) (for ‘fall (rain)’) (for ‘belly’)
--	---

7.2.2 Naiqu Lizu

The first set of changes presented here for Nq. Lizu revolve around the apicalization change. *-**iu** merged with *-**i** in most cases, after which *-**i** became an apical vowel after non-palatal sibilants. The raising of *-**je** to **-i** happened afterwards, since these rhymes did not undergo apicalization.

The change of **ʒl** to **xu** (in the Nq. forms **xu**⁵³ ‘blood’ and **thu**³³**xu**⁵³ ‘die’) occurred before the alveopalatal merger, since the **ʒl** > **xu** change only applied to Proto-Ersuic *retroflexes, not *alveopalatals.

Example: ***ʒiu**¹ ‘blood’ > **ʒi** > **ʒl** > **xu**⁵³.

1. iu > i (<i>but</i> iu > u / l ___)	apicalization je-raising ʒl > xu merger of alveopalatals into retroflexes
2. i > ɿ / S ___	
3. je, jẽ > i ʒl > xu	
4. (T)ʒ > (T)ʒ	

Changes involving *r are presented below. In many cases, medial -r- disappeared, but not before it had an effect on certain initials.

Examples: (1) *mp^hru¹ ‘steal’ > tʂhə³³. (2) *kri¹ ‘star’ > kəɪ⁵⁵. (3) *mbro ‘high/tall’ > bo³³mbo⁵³.

1. p ^h r > tʂ ^h ri > ə ¹ / {K, #} __ ra > ɐɪ / C __ 2. r > ø / C __	p ^h -r fusion (except ‘road’ ʒɪ ³⁵ and variant for ‘hear’)
---	---

The remaining sound changes are unordered with respect to the others.

Pj > Tɕ / __ {A, ẽ} A > ə / palatal __ HC > C st > k NC[-vc] > C / # __ rd > d rg > ɣ ru > ə ¹ / # __ my > m ɕ ^w > ɕ ui, ew > u e > ə / {m, T} __ e > ɻ / (t)s __ ẽ > ɐ wE > e wo > o rw > r	P-j fusion depreaspiration deprenasalization (does not apply intervocalically)
--	--

7.2.3 Mianning Lizu

In Mn. Lizu, the apicalization change was preceded by the split of *alveopalatals into palatals and retroflexes, conditioned by the rhyme. The alveopalatal split was sensitive to the distinction between the *-iu and *-i rhymes, so these rhymes merged after the split.

The u-fronting change must be ordered after the development of the palatals from *alveopalatals.

The retroflexion change is ordered after the apicalization change (see the section above on Ersu sound changes for the rationale behind this).

Examples: (1) *htʂiu² ‘feces’ > htʂiu (alveopalatal split) > htʂi (iu/i merger) > `tʂʂi (apicalization). (2) *tʂ^hu- ‘mud’ > tʂ^hu- (alveopalatal split) > tʂ^hy- (u-fronting).

1. Tʃ > Tɕ / ___ {i, u, o, A} #; then Tʃ > Tʂ	alveopalatal affricate split
2. iu > i or ø / l ___; iu > ø / P ___; then iu > i	iu merger into i except after bilabials and laterals
3. i > i̥ / S ___ u > y / [palatal] ___	apicalization u-fronting
4. Kr > Tʂ / ___ i	retroflexion

The following set of sound changes with somewhat complex relative chronologies is discussed on p. 133.

1. rw > ɣ	rw > ɣ (for ‘chicken’)
A. g > ɣ / ___ {w,u,o,r,j}	spirantization
B. wa > a / C ___	*-w- glide deletion
C. wæ > wa / C[-retro] ___	*wæ-backing
D. ɣ > ø / ___ wA	ɣ-deletion
2/c. {ɣA, rA} > æ¹	rhotacization of ɣA and rA

The areal sound change of **xu** > **fu** was preceded by the change of the alveopalatal retroflex to a velar place of articulation. This change is essentially the same as the change of ʃ > x in 16th century Spanish,⁷ which was triggered by having three sibilant fricatives ([ʃ, s, ʂ]) that were too acoustically similar. In the case of Mianning Lizu, it seems the crowding in the acoustic space containing four sibilant fricatives ([s, ɕ, ʃ, ʂ]) was eased by changing ʃ > x.

1. [ʃ, ʂ] > [x, ɣ]	ʃ > x
2. X > F / ___ u	xu > fu

It is also interesting to note the interaction between the ʃ > x change and the apicalization change. The apicalization change must have happened first, giving us *ʃi ‘meat’ > ʃ̣i, followed by ʃ̣i > **xu**. This is clearer if we replace the shorthand symbol -ɺ, which stands for something like “a syllabic fricative at the same place of articulation as the preceding consonant”, with an explicit IPA symbol: [ʃ̣ > xɿ]. If we tried the opposite order, we would get *ʃi > xi, with no reason for xi to turn into **xu**.

The depalatalization change below is posited to account for the forms `pse ‘run’ < *pjě and **bzibze** ‘fly (v.)’ < **bjěbjě**¹; the change follows the emergence of palatal fricatives from the fortition of original palatal glides. Note that the fortition rule ends up affecting the nasal rhyme -jě in ‘run’ and ‘fly’, but not the non-nasal rhyme -je (e.g. in **bje** ‘pile’). This solution is admittedly somewhat ad-hoc—compare with the P-j fusion rule from Ersu above (Pj > Tɕ / ___ {A, o}), where the environment is more natural-looking. Unfortunately, ‘run’ and ‘fly’, with a salient palatal fricative component,⁸ are problematic precisely because they differ from forms like

⁷For example, ‘people’ *gente* [xente] < [ʃente]. The [ʃ] arose from devoicing of an earlier [ʒ], which in turn was palatalized from a voiced stop ([g] before the front vowel [e], as suggested by the orthography).

⁸E.g. ‘run’: Nq. **tci**⁵⁵, Mn. `pse, TBL **pze**³⁵. Cognates for ‘run’ and ‘fly’ are not found in the wordlists for Ersu; the Ersu form for ‘run’ is **li**⁵⁵**ga**⁵⁵, and ‘fly (v.)’ is **gua**⁵⁵.

‘pile’, where the rhyme is **-je** but where the palatal glide is pronounced with no frication. The present solution analyzes these forms as having *palatal glides that became fricatives in their specific nasal-rhyme environments.

Example: ***pja**¹ ‘hang’ > **pca**.

1. j > ɕ/z / P __ {A, o, ĕ}	high front glide fortition ⁹
2. [ɕ, z] > [s, z] / P __ ĕ	depalatalization (for ‘run’ and ‘fly (v.)’)

The next two sound changes are also set up to account for the Mn. reflexes of ***-je/jĕ**. The first change accounts for the palatalization of the initials in ‘three’ (***sjĕ** > **ʰce**) and ‘hair’ (***tsjĕ** > **tce**). The second accounts for all the other forms with ***-je/jĕ** finals following *dental affricate initials, where Mn. has no trace of the palatal glide (see p. 106).

1. [s, ts] > [ɕ, tɕ] / __ jĕ	palatalization (for ‘three’ and ‘hair’)
2. je, jĕ > e / T(s) __	j-glide deletion

The final set of ordered sound changes have to do with the development of the ***-e** rhyme, where the rhymes ***-ĕ** and ***-ew** both merged into ***-e** before ***-e** developed further.

Example: ***sĕ**¹ ‘wood’ > **se** ~ **sr**.

1. ĕ, ew > e	merger of ĕ and ew into e
2. e > r / R __	e-backing after retroflexes
e > r / {T, s} __	e~r variation (optional)

The remaining changes are unordered with respect to the others.

ri > ə ¹ / {P, #} __	(except ‘laugh’ zĭ and ‘write’ zĭ)
re, ru > ə ¹ / # __	
r > z _v	r > z _v
ʃ > l / V[-reduced] __ V	
ɕ ^w > ʃ	
my > ŋ	
∅ > j / [velar] __ æ; then nj > ŋ	
d > dz / __ i	(except ‘insect’)
rg > ɣ	
ui > we	
wE > u	
wo > o	
rje > i e > ∅ / {P __, __ m}	
e > i / (t)s __	
Pr > Tʃ	P-r fusion (optional)
mps > nts	(optional)

⁹The choice of **ɕ** or **z** depends on the voicing of the initial consonant: ***p^hjo** > **p^hco**, and ***bjo** > **bzo**.

7.2.4 Lūsū/Kala Lizu (TBL)

In TBL, *-r- deleted after non-aspirated initials and became a fricative after aspirated **p^h**. The remaining **r**'s induced r-coloring on the vowel, which was sometimes lost. In other words, instances of Proto-Ersuic *r, which are solidly reconstructed based on consistent transcriptions in Mn. Lizu and Ersu, are sometimes retained as r-coloring and sometimes lost in TBL.

The existence of some retroflex initials descending from earlier velar + r clusters is assumed to be due to a retroflexion change of Kr > Tʂ which happened before the r-coloring, while the clusters still existed. The apicalization change feeds the retroflexion change.

1. i > ɿ / S __	apicalization
2. r > Ø / C[-asp] __ V[+hi]	r-deletion
r > z / p ^h __	r-frication after aspirated p
Kr > Tʂ / __ ɿ	retroflexion (optional)
3. rV > V ^r / C __	r-coloring
4. V ^r > V	r-color deletion (optional)

The following changes have to do with u-fronting after palatals. It appears that u>y after palatals (just as in Mn.), but that the rhyme **-u** which came from ***-iu** did not undergo fronting.

Example: (1) *zu¹ 'snow' > zy³⁵ (u-fronting). (2) *ziu¹ 'fall (rain)' > zu³⁵ (no u-fronting).

1. u > y / [palatal] __	u-fronting
2. iu > u / except after l-	iu > u

The remaining changes are unordered.

T(j) > T(ʂ)	merger of alveopalatals into retroflexes
X > F / __ u	xu > fu
(Ts) > (T)ç / __ j	palatalization
HC > C	depreaspiration
st > k	
g > ɣ / __ {uo, w}	spirantization
w > ɣw / # __	ɣ-deletion
mps > nts	
my > m	
ç ^w > ç	
ui > u	
je > i	
jě > je	
ẽ > e	
e > ɯ / R __	
ew > u	
wE > e	

o > uo / [dental, velar] —	
o > u / [palatal, alveopalatal] —	
wo > u	
d > dz̥ / ___ i	(except ‘year’)
rd > (n)d	(for ‘eyeball’)
rg > ɣ	(for ‘rain’)
p ^{hr} or p ^{hz} > tʂ ^h	P-r fusion (optional)
iu > y / l ___	(optional)

7.3 Subgrouping

As noted above, the unusual change of $j > \tilde{n} / _ \tilde{V}$, along with the less unusual change of $e > u / [velar] _$ and the $riu > ri$ merger, are shared innovations setting Lizu apart from Ersu as a subgroup. This brings up two questions: first, are there common innovations setting apart Ersu as a subgroup? Second, can we find an internal family tree structure for Lizu?

7.3.1 Ersu as a subgroup

For Ersu, we must look outside of Zl. and Qš. Ersu, since the two are virtually identical in terms of sound changes. Thus, we turn to Baber (1882), which contains a short wordlist from a variety of Ersu spoken in present-day Hanyuan. The wordlist contains approximately 200 words, and although the transcriptions are certainly not up to modern-day standards (for example, they do not seem to distinguish among palatals, alveopalatals, and retroflexes), they nevertheless provide some useful information.

First, we must establish that the language described by Baber is not, in fact, Lizu. It should be sufficient to note that it did not undergo the $j > \tilde{n}$ change (‘sheep’ is “Yo”) or the $riu > ri$ merger (‘skin’ is “ndjro-pi”).¹⁰

On the other hand, many of the features that seem like good candidates for distinguishing Ersu from Lizu are not, in fact, found in Baber. For example, the unusual $du > bu$ change did not occur, since it has “Du-ge” (not “Bu-ge”) for ‘plow’. Similarly, the raising of $je > i$ did not occur, since ‘good’ is “Ya-lie” (not “Ya-li”).

Other features are ambiguous. For example, the depalatalization change did not occur in ‘cloud’ and ‘hundred’, which are “Djie” and “Ta-jia”, respectively; had the palatals become dentals, we would expect something like “Dze” and “Ta-za”. On the other hand, ‘pants/trousers’ (which should be homophonous with ‘hundred’) is recorded as ‘Za-tsa’.

¹⁰The third sound change, $e > u / [velar] _$, also seems not to apply, since ‘nine’ is “Ngo” and not “Ngu” (Baber uses a “u” with a dot underneath to indicate an unrounded vowel and/or apical), although the expected vowel here would be “e” < Proto-Ersuic *ŋge.

The change of *li/liu/lu/lo* > *ɬ* which happened in Zl. and Qš. Ersu also seems to have limited scope in Baber’s wordlist. Although ‘wind’ is “Mḡ”, apparently < PEr **meli*, ‘stone’ is “Lo-k’wa”, and the autonym is “Lo-ssu”. Liú (1983) notes that there are also some present-day dialects of Ersu where the autonym is **loʃsu**; these dialects must not have undergone a *lo* > *ɬ* change.

We are left, then, with lexical and morphological peculiarities. Baber’s wordlist is not particularly long, but we can note that ‘seven’ and ‘eight’ are transcribed as “Shḡ” and “Jih”, with fricative initials like Zl. and Qš. Ersu, and unlike the stop and affricate initials in Lizu. Baber also has a long list of adjectives carrying the **ja-** (“Ya-”) prefix,¹¹ as seen in Zl. and Qš. Ersu. This is quite possibly an innovation in Ersu: in Kl. and Mn. Lizu, the **jæ-** prefix is a comparative prefix attached to adjectives and means ‘more X’ (e.g. **lje** ‘good’, **jæ-lje** ‘better’). The comparative meaning may be original, and the use as a generic adjective prefix may be the result of semantic bleaching.

7.3.2 Internal structure of Lizu

There are not many sound changes that can be used to set apart two or three of the Lizu dialects. Changes which might be used as a basis for subgrouping, such as the *xu* > *fu* change (which happened in all dialects except Nq.) or the complete merger of alveopalatals into retroflexes (which happened in all dialects except Mn.) are often preceded by language-specific sound changes, so they cannot be shared innovations. Other changes are not unusual enough to assume that they could only have happened once.

One possibility is to use the deaspiration change (*HC* > *C*) and the related development of a subset of preaspirated **t-** > **k-** (*st* > *k*) as shared innovations for grouping Kl., TBL, and Nq. These changes are not preceded by language-specific sound changes, and the *st* > *k* change is unusual enough to be used a criterion for subgrouping.

7.3.3 Tosu

Unfortunately, very little modern data has been published on Tosu. Sūn Hóngkǎi has listed a total of forty lexical items from his own fieldwork on Tosu in Nishida and Sūn (1990:17) (thirty items) and Sūn (1982b:242) (ten additional items). Based on these items—specifically the form for ‘sheep’, which is **jo**³⁵—we can conclude that Tosu has not undergone the *j* > *ɲ* change characteristic of Lizu.

The 18th century *Sino-Xenic Vocabularies* included a volume on Tosu, with lexical items transcribed in Tibetan and Chinese scripts. (Nishida 1973 examines this volume in depth.) Although the transcriptions are undoubtedly problematic, a list of antonymic adjectives is provided in Nishida (1973:172), where it is clear that adjectives in Tosu are not given with a **ja-** prefix, as is characteristic of Ersu.

¹¹These include ‘good’, ‘high’, ‘low’, ‘long’, ‘short’, ‘thick’ ‘thin’, ‘fast’, ‘big’, ‘handsome’, ‘clever’, and ‘rich’.

Thus, Tosu is placed in its own branch under Proto-Ersuic. This analysis is preliminary due to the lack of reliable data, but it nevertheless seems likely given the distinctiveness of the Tosu lexical items that have been published, along with the geographic location of Tosu from both Lizu and Ersu.

7.3.4 Summary

The family tree for Ersuic is presented below.

Lizu is characterized by a set of three changes: (1) **j** > **ɲ** before nasal rhymes, (2) the merger of the ***-riu** and ***-ri** rhymes, and (3) the change of the rhyme ***-e** to a back unrounded vowel after velars.

The set of languages labeled as “Central Lizu” is characterized by a loss of preaspiration on initial consonants, and by the development of a **k-** initial from a subset of the preaspirated dental stops.

Tosu forms the second branch of Ersuic.

Ersu is characterized by the development of the **ja-** adjective prefix.

The areal of changes of apicalization¹² and *xu* > *fu* are included in this tree, along with some of the changes, in chronological order.

¹²For an overview of apicalization in the Sino-Tibetan context, see Baron (1974).

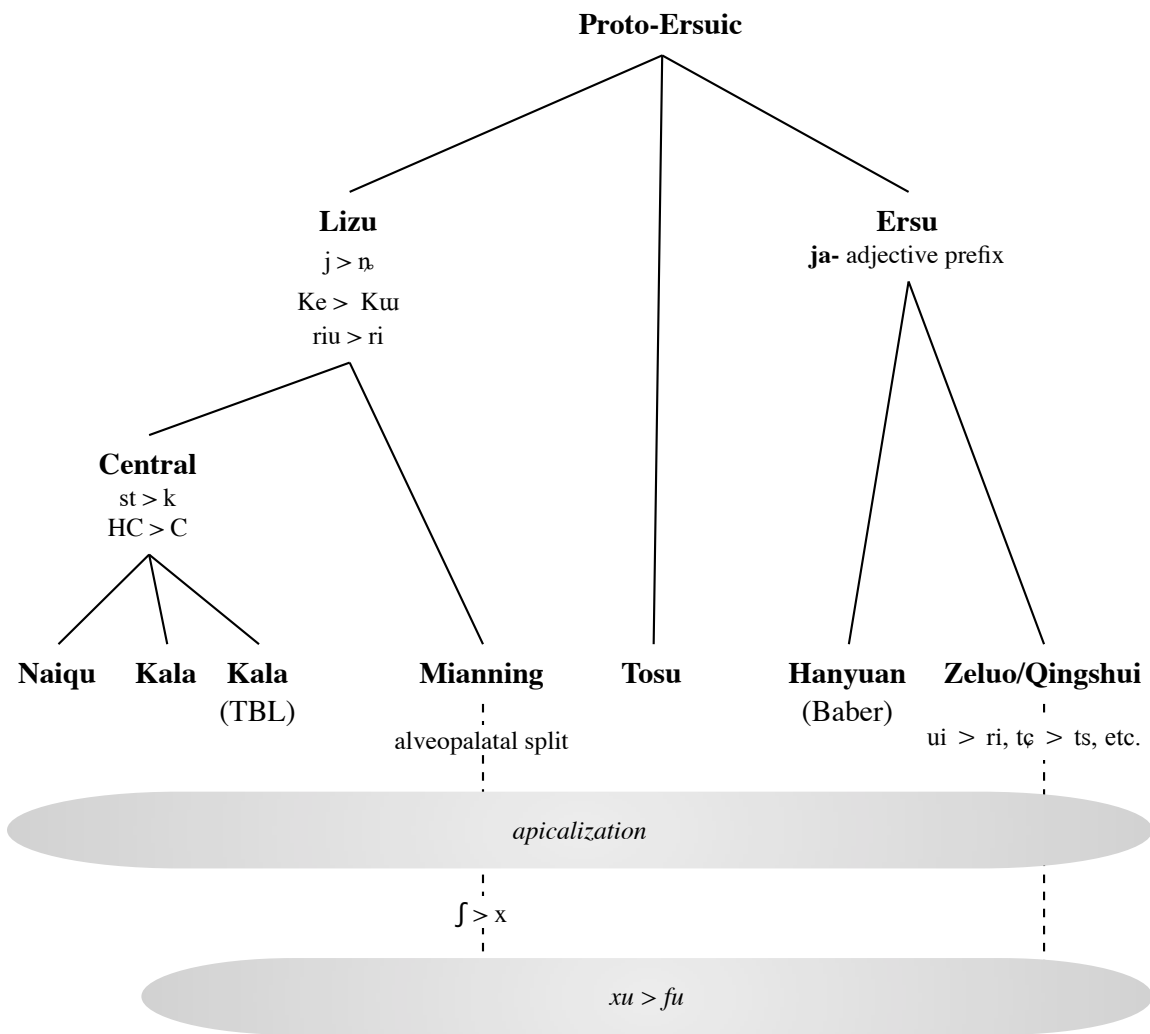


Figure 7.1: Ersuic family tree

Chapter 8

From PTB to Proto-Ersuic

Developments from Proto–Tibeto–Burman to Proto-Ersuic are presented below. Regular developments from PTB rhymes, initials, and prefixes are highlighted, but notable exceptions and a number of more speculative connections are provided as well.

The PTB roots chosen for the cognate sets here come mainly from two sources: Many of the roots are a subset of the ones found in Matisoff (1999). Most of them can also be found in Matisoff (2003) (“HPTB”) and Matisoff (2008) (“TBRs”). In all, over 300 potential PTB roots for Proto-Ersuic reconstructions are identified below (extra-Ersuic cognates have been used if the root has not been reconstructed to the PTB level). Detailed reconstructions for all roots below can be found in Matisoff (2003) unless otherwise noted.

8.1 Rhymes

8.1.1 *-a-

Developments of rhymes containing **-a-** are as follows:

***(y)a > *-i**

There are many solid examples of ***-a > *-i**, the best attested rhyme in PTB. This brightening is characteristic of the Qiangic languages (Matisoff 1999).

Note that ***-a > *-i** represents a merger with ***-i**, which remains ***-i** (see below).

PTB	PEr	gloss
*ba	*bi ¹	thin
*bya	*bi ²	bee, honey

PTB	PEr	gloss
Lahu pè < PLB *bya	*mbimbi ²	divide / share (things)
*tsa	*ts ^h i ²	salt
*dzya	*dzi ²	eat
cf. Lahu ð-cē < PLB *dzya ?	*(n)dzi(u) ²	ear / spike ¹
*za	*zi ²	son
*na-t	*deni ¹	sick, ache
*r/g-na	*bæni ¹	listen
*g-na-s	*breni ¹	rest
*s-na	*stim(b)u ¹	nose
*nyey/*na-w	*nina ¹	younger sibling
*s-l(y)a	*ht(s)ipi ²	tongue
*pla, PLB *C-la ¹	*li ¹	ashes
*r(y)a	*ri ¹	laugh / smile
*sya-n	*ʃi ²	meat
*gra	*t ^h egri ¹	hear
PLB *g-ra ² ?	*ŋgi ¹	buckwheat ²

***-al, *-at > *-i**

Similarly, ***-al** and ***-at** are exemplified by the following roots, which have undergone brightening as well:

PTB	PEr	gloss
*s-bal	*pimæ ¹	frog, toad
*m-pat	*mp ^h i ²	vomit, spit
*k-r-p ^w at	*mbi ¹	leech
*g/b-sat	*si ¹	hit, kill
*b-r-gyat ∞ *b-g-ryat	*rdi ¹	eight

¹If the Lahu and Ersuic forms are cognate, the initial is a problem here (compare with the immediately preceding form ‘eat’, with a regular PEr ***dz-** initial).

²This form is placed here tentatively, since velar initials are expected to inhibit brightening.

***-an > *-je**

The rhyme ***-an** also brightened, but only to ***-je**, not all the way to ***-i**.

PTB	PEr	gloss
*s-man	*hpje ²	medicine
*pran/t	*tsjēp ^h rje ¹	braid / plait

Exceptions to brightening

Regular exceptions to this brightening tendency have roots with a velar initial, where for some forms ***-a > -æ**, others have developed an ***-r-** medial, and still others seem to have developed ***-w-** medials:

PTB	PEr	gloss
PLB *ʔ-ga ²	*zikæ	dumb, stupid
*ga	*gæ ¹	sing
*r/N/d/s-ga	*gæ/gja ¹	like / love
*gra	*gæwu	enemy (personal)
*m-ka, Mpi nko	*ŋgæ ¹	door
Lahu qha <	*k ^h æ	rice (cooked)
PLB *ka		
Lahu vətʔ-qâ <	*gæme ¹	clothing / garment
PLB *ga		
*b-ka	*dek ^h ra ¹	bitter, salty
*l/b-ŋa	*ŋra ²	five
*s-ŋ(y)a FISH	*deŋra ¹	stinky, fishy-smelling
*ka	*kwali ¹	crow
PLB *ka ¹	*kwa/ka ²	all / the whole
PLB *k-ra ^{2/3}	*t ^h ek ^h wa ¹	win
*hya SWIDDEN	*(ju/zu)xwa ¹	paddy fields

Based on the forms below, laterals may appear to be exceptions as well, but the forms for ‘tongue’ and ‘ashes’ (above), both with lateral initials, seem to demonstrate that laterals do not suppress brightening. Rather, the form for ‘moon’ may have escaped the brightening change due to the velar prefix. If this is the case, then both the ***s-** and ***g-** prefixes affected the development of this root, the former creating a voiceless lateral and the latter suppressing brightening of the vowel. The forms for ‘tiger’ and ‘spirit’ are likely loans from Loloish and Tibetan, respectively.

PTB	PEr	gloss
*s/g-la	*ɬæp ^{he1}	moon ³
< PLB *k-la ²	*læ ¹	tiger
*m-hla / WT lha	*ɬæ	spirit, deity

There is another group of exceptions consisting of grammatical particles:

PTB	PEr	gloss
*ma-y	*mæ	neg.
*ta	*t ^h æ ¹	neg. imp.

Another pair of apparent exceptions are the following, where the initials have palatalized (although note that the PTB root for HUNDRED does have a velar in it):

PTB	PEr	gloss
*s-la	*ʒa ¹	pants / trousers
*b-r-gya	*ʒa ¹	hundred

There remain sundry exceptions, where the sound changes discussed above are expected but do not occur:

PTB	PEr	gloss
*r/g-na	*na ²	ear
*ma	*æmæ ¹	mother
*tsa-t	*ts ^h æ ²	hot
*ba ?	*debæ ¹	carry on the back
*mra, PLB *C-mya ²	*mje/mja	many / much
PLB *x-ra ¹ ?	*htʃæ/ʒæ ¹	search, look for
PLB *ra ³	*rA ¹	get / obtain

The *g- prefix in EAR may have prevented brightening. Presumably this is the same root as LISTEN (above); perhaps the former had the *g- prefix and the latter did not.

MOTHER may be explained as a linguistic universal/nursery word; Matisoff (2004:#68) notes that “no modern Qiangic language shows raising or fronting with this root.”

HOT has also been noted to be an exception to the brightening rule across Qiangic. Matisoff (2004:#69) suggests that this may be due to a suffixal -t; however, in the case of Proto-Ersuic, if such an explanation is to be appealed to, such a suffix must be kept separate from other roots ending in -t, which as shown above have regular reflexes in -i.

³This is a common binome in TB (the second element is a masculine suffix). For extra-Qiangic forms, cf. WT **zla-ba** and Lahu **ha-pa**.

Finally, some more speculative forms have **-e* or **-je* rhymes.

PTB	PEr	gloss
*ma-t	*t ^h eme ²	forget
*r-ma	*mjari/meri ¹	sore / boil
*ba-y	*mbere ²	cheek
*r/s-ŋ(y)a	*hjē ¹	borrow (tools)

***-wa, *-wal > *-ui/*-u**

After velars (either velars original to PTB, or velars apparently descended from PTB **s-*), it seems that **-wa* > **-ui*. This change can also be viewed as a brightening change.

PTB	PEr	gloss
*swa	*xui ¹	tooth
*s-wa GO	*xui	walk
*swa-n	*xui ¹	garlic
*gwa-n	*deyui ¹	wear (a garment)
*lway ?	*γuiγui	easy
*ŋwa	*ŋui ²	cattle, cow
*r/g-wa ?	*xu ¹	village ⁴

There are also cases where the nuclear vowel remains low. Note that TRAP and FULL have PTB **w-* as their initial consonants, rather than as medial glides. The form for ‘hoof’ does not follow the pattern of plain velar initials above and may be a loan.

PTB	PEr	gloss
*wa (see LITB)	*wæ ¹	snare / trap
*k-wa	*deywæ ¹	full, satiated
*r/g-wa	*rgwæ ¹	rain
*m-twa	*dʒwæ	span
*kwa ?	*ŋ(u)k ^h wa	hoof

Examples of **-wa* after labials are not particularly satisfying, with one form (AXE) showing perhaps **-wa* > **-u* and another candidate (PATCH) with **-wa* > **-we* (PEr **-we* is reconstructed where Mn. has *-u* and other dialects have *-e*; see p. 114). A possible cognate to Lahu **bù** has **-r-* in Proto-Ersuic.

⁴Note that the rhyme for ‘village’ is **-u*, not **-ui*; and the origin of the PEr **x-* initial is mysterious.

PTB	PEr	gloss
*r-p ^w a	*butsh ^h a ¹	axe
*p ^w a, PLB *ba ¹ ?	*pwE ^h pwE ²	patch (clothing)
Lahu bù < PLB *mbwa	*mbr ^h a ¹	loud

Finally, we have some lone forms demonstrating perhaps ***-wal** > ***-je** or ***-wat** > **e**.

PTB	PEr	gloss
*g-lwat	*t ^h ele ¹	release / set free
*s-p ^w al	*mp ^h je ¹	ice

*-am > -jẽ

The rhyme ***-am** > ***-je** (***-e** after PEr retroflexes and perhaps velars, based on the form for ‘draw water’). Note that a trace of the ***-m** final consonant is retained as nasalization after certain initials (see p. 106).

PTB	PEr	gloss
*byam	*bjẽbjẽ ¹	fly (v.)
*tsam	*tsjẽ ¹	hair
*m-dzam	*dzjẽ ¹	bridge
*N-dzyam	*ndzẽ ¹	wedge
*syam	*[j]e ¹	iron
*sram	*ʃe ¹	otter
*kram	*tʃ ^h e	fence (bamboo / twig)
*kram	*xutʃ ^h e ¹	garden (plot)
*kam (≠ *ka:p)	*k ^h e	draw water

Forms with other possible developments are listed below. BEAR suggests ***-wam** > ***-ui**, similar to ***-wa** > ***-ui** above. FATHOM is more speculative.

PTB	PEr	gloss
*d/g-wam	*xui/ŋui ¹	bear ⁵
*lam ?	*liu	fathom

⁵HPTB does not list an allofam with **g-**, but see Matisoff (1999) for other Qiangic forms which support this prefix.

***-aŋ > -o**

There are many good examples of *-aŋ > -o:

PTB	PEr	gloss
PL *m-laŋ/plaŋ ¹ 'husband' (PL 217)	*mp ^h rozae ¹	young lad / chap
*k-m-raŋ	*m(b)ro ²	horse
*m-raŋ	*mbro	high / tall ⁶
*naŋ	*ne/no ²	you
*kraŋ	*htsomo ²	strength (physical)
*taŋ	*tɕ ^h opu ²	pine
*syaŋ	*ʃoʃo ¹	clean
*m-dzyaŋ	*dʒo ¹	have, exist (animate)
PL *taŋ ³ (PL 257)	*mboto	knife
*l(y)aŋ	*k ^h elo ¹	wait
MC ljangX ?	*lo	tael (= 50 grams) ⁷
PLB *tsaŋ ¹	*ts ^h o ¹	human being, person
*m-baŋ	*nembo	deaf
*maŋ	*t ^h emo/momo ¹	old / elderly
*yaŋ	*jō ¹	sheep
*s-m-raŋ ?	*hwō ¹	stretch out (the arm)
Lahu phô < PLB *paŋ cf. Lahu khô < PLB *kraŋ	*p ^h wo *tʂ ^h e ¹	side, direction sound ⁸

Some plausible exceptions have *-wE or *-u instead:

PTB	PEr	gloss
*g-raŋ	*gwEmæ ²	back
*ryaŋ ?	*y ^w Emo/ æy ^w E ¹	uncle (mother's brother)
PLB *baŋ ¹	*pu	classif. trees/flat obj. ⁹

⁶Benedict (1972:143, n. 139) suggests that HORSE may be related to HIGH, i.e. “the high one”, similar to Indonesian *ad'ar/an ‘the learned one’.

⁷The “X” is Baxter’s notation for Middle Chinese Rising (*Shǎng*) tone.

⁸The Proto-Ersuic form is reconstructed with *-e because of the Lizu forms, but Ersu has an exceptional -o rhyme. See p. 111.

⁹This root is not in HPTB, but note the similar forms and identical morphological structure for the words for

PTB	PEr	gloss
Lahu qhɔ <	*k ^h ep ^h e/	inside
PLB *kaŋ	k ^h up ^h o ¹	

*-ak > *-wa/*-e/*-a/*-o

It is difficult to figure out the regular reflex of *-ak. Some forms have PEr *-wa:

PTB	PEr	gloss
PLB *tak ^H	*nt ^h wa ¹	sharp, pointed
*s-nak	*denwa ¹	black
*kyak	*tʃwapu ¹	navel ¹⁰
*k-rak	*rwa ¹	chicken

Others have PEr *-e:

PTB	PEr	gloss
*s-p ^w ak	*khemp ^h e	hide oneself
*dak	*de ¹	weave / knit
*g-lak	*le(pje)	hand
*l(y)ak	*lje ¹	good
*s-nak	*nene	deep ¹¹
*r-sak	*sē ¹	air, breath, steam ¹²
*m-tsak DRIP	*nts ^h e ²	leak
*krak	*deke ¹	fear, be afraid

It is interesting to note that the *-wa set above includes items where PTB *-ak > Naxi -a: BLACK, CHICKEN/FOWL, and SHARP; while the *-e set includes items where PTB *-ak > Naxi -ɔ: BREATH, HIDE, WEAVE (see Matisoff 1991:97).

An interesting form is GOOD, which does not have -ja, but -je. Assuming a palatal medial, and a parallel development to PTB *myak EYE > PEr *mja, we might expect *lja as reflex of *lyak. However, there are no examples of such a syllable in any of the modern languages; -ja does not seem to occur after laterals. Thus, perhaps there was a change from lja > lje.

Other forms have low vowels:

‘tree’ in e.g. WB sac-paŋ, Mn. sipu, where the first element < PTB *sik ɤ *siŋ; and also in ‘one (+ clf.)’: WB ta paŋ, Mn. `tepu.

¹⁰HPTB has the PLB form *ʔ-kyak^H; see Matisoff (2008) for a more general discussion of this root.

¹¹Even though this root is undoubtedly the same as BLACK (see Matisoff 1972 #142 and #157), there seems to have been a divergence in Qiangic.

¹²The nasal vowel in the Proto-Ersuic form is reconstructed to account for the vowel correspondences. See p. 106.

PTB	PEr	gloss
*yip + *mak	*jima ¹	dream ¹³
*r-pak	*sēp ^h ja ¹	leaf
*py(w)ak	*p ^h ja	sweep
*s-mik ≠ *s-myak	*mja ¹	eye
PQc *N/s-tsak	*hto/htæ	jump ¹⁴
*ka:k	*ts ^h ek ^h a ¹	sputum, phlegm
*s-ka:k	*sēkæle ¹	branch / twig
*s-r(y)ak 24-HOURS cf. Lahu yàʔ- < PLB *yak	*t(w)ah(w)ã ¹ *janiu ¹	tonight yesterday

Still others have PEr *-o:

PTB	PEr	gloss
*s-mak	*mopæ ²	son-in-law
*d-mak	*mo	soldier, army
PLB *C-cak ^L	*t ^h edzo ¹	push / shove ¹⁵
*m-krak, PLB *m-prak ^H	*(n)tʂ ^h o ¹	scratch

Some more speculative forms have PEr rhymes with *-u or *-ew.

PTB	PEr	gloss
*tsyap or PLB *ʔ-dzak ^L ?	*k ^h etsu	connect / join
*s-glak ≠ *klak	*tʃew ¹	cook / boil ¹⁶

***-wak > *-o**

Finally, the forms for PIG, MOUSE, and BOWL are examples of ***-wak > *-o**.

PTB	PEr	gloss
*p ^w ak, PLB *wak ^L	*ɣwo ¹	pig

¹³The relevant allofam here is *mak, not *maŋ, because *-aŋ > o (see above). This is interesting because the *mak variant has so far only been attested in Lolo-Burmese.

¹⁴See Matisoff (1999) for this reconstruction.

¹⁵See Matisoff (1972) #33 for this root.

¹⁶A comparison perhaps may be made instead to MC tsoX 煮.

PTB	PEr	gloss
*yəw/PLB *(k)-rwak ^H	*gojo ¹	mouse
*kwak	*k ^h o	bowl ¹⁷
*g/p-rwak	*berA/burA	ant

*-ap

There are too few examples to establish a general pattern for ***-ap**. CHOP and NEEDLE have mid vowels, while STAND may have retained a low vowel after a palatalized initial (perhaps dissimilatory; compare with PANTS and HUNDRED above, which have palatal initials and escaped brightening). The root for SNOT has been included here as well, but the first syllable may simply be NOSE (PEr ***stim(b)u¹**).

PTB	PEr	gloss
*ts(y)ap	*dzē ¹	chop / hew
*k-rap	*γra/ge ¹	needle
*g-r(y)ap	*k ^h endza ¹	stand
*s-nap + *rəy	*stiu(d)zære ¹	snot (liquid)

*-ar

BURN and BLOATED are the two best forms with likely PTB roots having the rhyme ***-ar**. The vowels are different, but perhaps this is because BURN descended from an allofam with no ***-w-**medial, while the rounded medial in BLOATED led to a different vowel development (i.e. ***-war** > ***-ro**).

PTB	PEr	gloss
*b(w)ar ≈ *p(w)ar	*debræ ¹	burn
PKC *puar	*debro ¹	feel bloated (stomach)
*sywar SCAT- TER	ʂa	pour (water)
WT mar ?	*me ¹	butter

PEr ***si** ‘new’, with potentially two PTB roots ***g-sik** and ***g-sar**, has been placed under the ***-ik** rhyme below, although (BURN and STOMACH aside) it is interesting to think of ***-ar** brightening to **-i** just like ***-a**, ***-al**, ***-at**.

¹⁷Note that Mn. has two forms for ‘bowl’: the classifier **-k^ho**, and the free form **k^hwælæ**. Compare with TBL **-khuo**³¹ ‘bowl (classif.)’ and **khuo**^{33la}⁵³ ‘bowl’, both with **khuo**. Perhaps Mn. **k^hwæ** is a loan (cf. PNa ***k^hwa**, Prinmi **k^hwă**).

*-ay

The forms listed here for *-ay show no clear pattern, with BUSY and GO suggesting brightening, and the remaining forms with low vowels.

PTB	PEr	gloss
PKC *buay	*bibi ¹	busy
*ʔay	*ji ¹	go
*la-y	*læ ¹	come
*m/s-la:y	*go ¹ læ ²	middle
*g-ray	*rA ¹ læ ¹	soul / spirit
GOD/COPULA		
*k/gla-k/y/t	*nedzæ ¹	drop / fall
*pway	*p ^h ra ²	chaff / bran
*m-la-y	*mra ¹	bow / arrow

8.1.2 Front vowels: *-i-, *-əy, *-e-

*-i(l) > *-i

All these forms show -i(l) < *-i.

PTB	PEr	gloss
*s-ri(y)	*ʔ ^w i ¹	be (copula)
*s-ni-ŋ	*sini/htimi ¹	heart
PLB *s/ʔ-mi ¹	*mi ¹	catch
*r-ni	*deni ¹	red
*ri GLEET	*mjari/meri ¹	sore / boil
*si(y)	ʃi ²	comb (v.)
*m-ts(y)il	*dziki ¹	saliva

However, there are some exceptional forms:

PTB	PEr	gloss
*dzi	*ndze ¹	ride (a horse)
PLB *si ²	*desu ¹	sharpen, whet (a knife)

*-əy > *-iu/-e

In many cases, *-əy > *-iu.

PTB	PEr	gloss
*krəy, PLB	*kriu ²	gall bladder
*ʔgrəy ¹		
PLB *m-k-rəy	*ŋgriupje ¹	skin
*b-rəy	*riu ¹	write
*səy	*t ^h ɛʃiu ¹	die, dead
*b-ləy	*zɪu ²	four
*kləy	*htʃiu ²	feces
*m-t(w)əy	*dʒiu ¹	water, river
*s-kəy	*ɕ ^w iu ¹	borrow (money)
*nəy SUN	*niu	day, day's (work)
*s-ləy	*nts ^h oɬiu ¹	flea

The two examples of *-wəy, BLOOD and DOG, both show the same correspondences as *-əy.

PTB	PEr	gloss
*s-hywəy	*ʃiu ¹	blood
*d-k ^w əy	*tɕ ^{wh} iu ²	dog

The remaining items mostly have PEr *-i, *-e, or *-je.

PTB	PEr	gloss
-i		
PLB *ʔgrəy ¹	*kri ¹	star
*z(y)əy ?, cf. Lahu i	*jji ¹	small
*b-ləy	*lit ^h o/lot ^h o ¹	grandchild
*g-ləy	*meli/mele ²	wind ¹⁸
-e		
PLB *tsəy ²	*ts ^h e ²	wash (clothes)
PLB *ʔ-dzəy ²	*dets ^h e ²	cough
*rəy	*re ¹	water / soup
*r-tsyəy	*hte	count
PLB *ʔ-li ¹	*le ¹	old ¹⁹

¹⁸The first element in this forms is SKY (PTB *r-məw > PEr *me/mo). Cf. also the first element of PEr *mɛŋk^he²* SMOKE. For similar collocations in a Lolo-Burmese language, cf. Lahu *mû-hɔ* ‘wind’, *mû-qhɔ* ‘smoke’, both perfect cognates to the forms given here.

PTB	PEr	gloss
-je		
*m-ley ≈ *m-ləy	*melje	earth, ground
*d/s-ləy	*sjelje	bow (weapon)
*s/m-grəy	*nelje/nelje ¹	melt, dissolve
*b-ləy > PLB *p-re	*pjē	run
*ts(y)i/əy/ay	*tɕ ^h etɕ ^h e ¹	ten
-o		
*k ^w əy ? *(t)si/up?	*(xwajɔ)ntɕ ^h o ¹	nest (bird)

*-ey

Forms for *-ey show a wide variety of high and mid vowel reflexes:

PTB	PEr	gloss
*s-ney	*(ri)ni ¹	near
*r-ney-t	*niu ¹	have, exist (general/abstract)
*mey	*me ¹	fire
*sey	*sēse ¹	fruit
*r-may ≈ *r-mey ≈ *r-mi	*mentɕ ^h o ²	tail
*r-may ≈ *r-mey ≈ *r-mi	*mukr(w)V ¹	tail
*s-lay ≈ *s-ley	*ɬjeki ¹	ladder
*b-rey	*ɣui ¹	buy

*-iŋ, *-in, *-en > -a

In this section, the best looking roots are probably LONG, FULL, and LIVER (below), which show *-iŋ, *-in > -a. First, I present the *-iŋ roots:

¹⁹See Bradley (1979:#537B) for this reconstruction, where the only supporting forms are found in Mpi and Akha. This root and six others all reconstructed as *ləy with various prefixes (BOAT, BOW/SLING, FOUR, GRAND-CHILD, HEAVY, and WIND—see Matisoff 2003:192) are interesting because their unusual but regular development into Lahu hɔ.

PTB	PEr	gloss
*s-riŋ	*ʂa	long
*bliŋ	*debra ¹	full
*gliŋ	*ɬa ¹	flute
*siŋ ≈ *sik	*sē ¹	wood / log ²⁰
*s-niŋ	*ts ^h ehī ¹	this year

More speculative are the following, where NECK may belong in this set if it had an ***s-** prefix. NAME, usually a solid TB root, does not show the same **-a** reflex as the other forms.

PTB	PEr	gloss
*m-liŋ	*ht(w)arA ²	neck
*r/s-miŋ	*mi ¹	name

LIVER and PULL/DRAG are good roots here for ***-in**; WEIGH is more speculative.

PTB	PEr	gloss
*m-sin	*nts ^h a ¹	liver
Lahu šε < PLB *sin	*dents ^h a ¹	pull / drag / lead (a cow) along
*kyi:n	*ndzew	weigh (v.)

Finally, for ***-en**, CLAW fits the pattern of ***-in**, ***-iŋ** > **-a**, whereas PUS does not.

PTB	PEr	gloss
*m-tsyen	*dzidzi/dzadza ¹	claw / talon
*m-blen	*piu ¹	pus

***-im > *-jě**

Cf. the identical outcome in ***-am** > ***-jě** above. SET (OF THE SUN) is the only exception here.

PTB	PEr	gloss
*s-dim	*tɕe ¹	cloud, fog
*k-yim ≈ *k-yum	*jě ¹	house
*m-kum ≈ *m-kim	*ŋgje ²	pillow
*dz(y)im	*dzjědzjě	raw / uncooked

²⁰Unlike DREAM above, the relevant allofam here seems to be the one with a nasal final, since ***sik** would develop into **ʂɿ** (see below).

PTB	PEr	gloss
*g(l)im ɤ	*netɕ ^{hi} iu/	set (of the sun)
*g(l)um	netɕiu ¹	
cf. Lahu che	*detɕ ^{he}	flavorful
< PLB		
*kyim/kyum		
cf. Lahu phe	*k ^h ep ^{hi} ui ¹	tether (a cow)
< PLB		
*pim/pum		

*-em

A single form for *-em has PEr *-i:

PTB	PEr	gloss
*s-nem	*nini	low / short

*-ik, *-e:k > *-i

The best examples of *-ik have sibilant initials. ELDER SIBLING and ITCH are more speculative.

PTB	PEr	gloss
*g-sik	*si	new
*tsik	*ts ^{hi} i ¹	joint
*g-zik	*ndzi ¹	leopard / panther
PLB *?-wyik ^l	*æja ¹	elder brother/sibling
*m-tsik ?	*dekri	itch

The one form for *-e:k also shows a development into PEr *-i:

PTB	PEr	gloss
*gle:k	*megi ²	thunder

*-i:t

Most of the forms listed here have front vowels in Proto-Ersuic.

PTB	PEr	gloss
*mit, *l-ko(k)	*myihkwo ¹	throat
*m-kyit	*t ^{hi} it ^{hi} i ¹	move

PTB	PEr	gloss
*kri:t	*dze ¹	grind
*tsi:t	*ts ^h ẽ ¹	goat ²¹
*s-mi:t	* muimui ¹	close (the mouth)

*-ip

The form for WEST is placed here instead of under ***-up**. However, the assignment of this PTB root is tentative; note the seemingly homophonous Proto-Ersuic root for ‘sun’ ***niu**. THIRSTY and SUCK are also included here tentatively.

PTB	PEr	gloss
*s-ni/u(:)p	*niu ¹	west ²²
PLB *C-sip ¹	*de fo	thirsty
*m-dzu/ip SUCK	*nts ^h ew	squeeze (for milk)

*-is

There are not enough examples of the rare rhyme ***-is** to figure out regular sound changes.

PTB	PEr	gloss
*g/s-nis	*ne ¹	two
*s-nis	* sini/htẽ ²	seven

8.1.3 Back vowels: ***-u-**, ***-əw**, ***-o**

*-u

In general, PTB ***-u** seems to yield PEr ***-u**:

PTB	PEr	gloss
*d-bu	* wilje/wulje ²	head
*ru	* rdumo ²	crazy person, lunatic
PLB *ʔ-blu ¹	*p ^h ru	porcupine
<WT gru	*gu ¹	boat / ship

²¹See p. 106 for details on the Proto-Ersuic reconstruction of this root.

²²This root is glossed ‘sink/submerge’ in HPTB.

Some forms are not quite so neat, however:

PTB	PEr	gloss
*plu	*deliu ¹	white
*su	*se ²	who
*s-tu	*htɕi ¹	vagina
*dz(y)u	*rwatɕo ¹	egg
Lahu kù < PLB *gru	*kwo ²	shout

*-əw

The development of *-əw seems rather complex. In NINE and SMOKE, both with velar initials, we get *-e; the first syllables of EXPENSIVE and INSECT also have *-e. in CRY/WEEP, which has a velar nasal initial, we get *-u. SWEET and BREAST HAVE *-iu; note that the vowel development here is identical to that for the rhyme *-əy, above. CRY/WEEP, STEAL, and GRANDFATHER have *-u. Some more speculative forms have other vowels in Proto-Ersuic.

PTB	PEr	gloss
-e		
*d/s-kəw, PQc s/r/n-gəw	*ŋge ²	nine
*kəw	*meŋk ^h e ²	smoke
*pəw PRICE	*p ^h ek ^h wæ ¹	expensive
*bəw, *zril > PLB *di ¹	*bedi ¹	insect / worm
*r-məw	*me/mo	sky
-iu		
*kyəw	*detʃ ^h iu ¹	sweet
Lahu mê-chô-ma < PLB *kyəw	*tʃ ^h iumæ	widow
*nəw	*dzaniu ¹	breast, milk
-u		
*ŋəw	*ŋu ¹	cry, weep
*r-kəw	*mp ^h ru ¹	steal
*pəw	*æp ^h u ¹	grandfather
*pəw	*æpu	grandfather
-o, -ë		
PLB *m-dzəw ²	*ndzomo ²	official (government)

PTB	PEr	gloss
*yəw ?	*yo ¹	liquor
*g/s-məw ?	*hē ¹	mushroom

LIQUOR (*yo¹) and MOUSE (*go¹) are almost homophonous in Proto-Ersuic, so it is possible that both descend from *yəw (with, of course, a prefix on one or both forms to differentiate them). However, a separate root for MOUSE, PTB *r-wak (cf. PLB *k-rwak^H, with a velar stop prefix), would also be consistent with the -o final; thus, MOUSE has been placed under *-ak above.

*-ow > *-u

Most forms here show *-ow > -u, with LOUSE and SOFT the exceptions:

PTB	PEr	gloss
*tsow	*dets ^h u ¹	fat
*tsyow	*detsu ¹	boil
*tsow THORN	*ndzu	pricked (on a thorn)
*mow	*mu ¹	do / make
*t/dow-n, *tu:k	*rdurdu	thick
*s-r(y)ik, *s-row NIT	*sewmæ ¹	louse
*now	*njonjo ²	soft

For PEr ‘louse’, *s-row NIT seems the best fit here, since we expect PTB *-ik > PEr *-i. PTB *sar is less likely still (see PTB *-ar above).

*-ur > *-ew

The one example of *-ur indicates *-ur > *-ew.

PTB	PEr	gloss
*s-kyur ɤ *s-kwya:r	*detfew ¹	sour

*-ul > *-ui

For the two forms following nasals, *-ul > *-ui (cf. *-wa > *-ui above), whereas the form for SWEAT has -u. The form for SNAKE has perhaps developed into a sesquisyllabic form, with the first “half” syllable coming from the *b- prefix.

PTB	PEr	gloss
*s-mul	*mui ²	feather, hair (of body)
*d-ŋul	*ŋui ¹	silver
*s-krul	*tʂu ¹	sweat
*s-b-ru:l	*beri ²	snake
*ril ≈ *rul	*yeniu/yoni ¹	intestine

INTESTINE has been placed here, rather than with the alternate root (PTB *wu), because the mid vowel reflex in Proto-Ersuic seems more likely to come from *-ul than from *-u (cf. the forms under *-u above).

*-um

*-um has quite similar developments to *-im and *-am above. This may reflect *-im ≈ *-um variation in the proto-language. This variation is discussed in HPTB pp. 270–276, where SET (OF THE SUN), PILLOW, and HOUSE are among the examples; I have placed these three roots in the *-im section, above. The roots included in this section are not known to exhibit *-im ≈ *-um variation at the PTB level.

PTB	PEr	gloss
*g-sum	*sjē ²	three
*lum	*-lje	round object
*zum ≈ *zuŋ	*zē ¹	use
*dzum ≈ *tsum	*dze	pair
*tsum ?	*tsumu/tsumo ²	mortar

Since MORTAR does not have a rhyme with a mid front vowel, its inclusion here is speculative; perhaps it is a loanword.

*-uŋ > *-u, *-or > *-o

The forms below demonstrate *-uŋ > *-u:

PTB	PEr	gloss
*duŋ	*du(liu) ¹	wing
*g-ruŋ	*ru(bu)/du ¹	horn
PLB *p(l/y)u:ŋ ² (MLBM 62)	*p ^h ru	face
*m-bruŋ ≈ *m-bruk; < WT ḥbrug?	*mbru ²	dragon

***-or > *-o**

Since HOLE does not fit the pattern of ***-uŋ > *-u**, it seems better to assign it to PTB ***kor** instead.

PTB	PEr	gloss
*g/kuŋ, *kor	*hko ¹	hole

***-oŋ**

There are not many examples of reflexes of PTB ***mid vowels**. The forms here (except for HATCH, which is speculative) show either PEr ***-o** or ***-u**, although ‘thousand’ may be a loan from Tibetan (cf. WT **ston**).

PTB	PEr	gloss
*s-loŋ	*lolo/lulu ¹	bark (of dog)
*ploŋ ?	*p ^h o ¹	escape / run away
*s-toŋ	*htū ²	thousand
*s/r-go-ŋ ?	*hē ¹	hatch / incubate

***-uk > *-(w)o/*-u**

We now turn our attention to the stop finals, where we find many convincing examples of ***-uk > *-o**. SIX and WAIST show ***-uk > *-u** after retroflex/alveopalatal affricates.

PTB	PEr	gloss
*r-lung, *k-luk	*lo ¹	stone
*s-luk/ŋ	*bulo	maggot
*s-nuk BEAN	*nopri ¹	garden peas
*s-nuk	*nwo ¹	brains
*s-g-ruk	*deŋgwo ¹	pick up
*kuk	*k ^h ok ^h o ¹	curved / crooked / bent
*gyuk	*dʒu ¹	waist
*d-kruk	*tʂ ^h u ²	six

I have put STONE and MAGGOT in this set because of the ***-o** rhymes in Proto-Ersuic. Also note that for MAGGOT the ***luŋ** allofam is attested only in Mizo, whereas the ***luk** allofam is found throughout Lolo-Burmese.

MONKEY and POISON look like they have reflexes that belong in this set, but seem to have

irregular developments: POISON has an unexplained palatal initial, and MONKEY has an unexplained front vowel.

PTB	PEr	gloss
*duk ≈ *tuk	*dzu ¹	poison
PLB *myuk ^L , *s-myuk ^H	*mi	monkey

*-ok > *-o

The development of *-ok > *-o here seems identical to *-uk.

PTB	PEr	gloss
PLB *C-sok	*taso ¹	morning
PLB *tok TSR #15	*nt ^h ont ^h o ¹	peck at (of a chicken)
*mit, *l-ko(k)	*myihkwo ¹	throat

FEAR (*k/grok ≈ *k/grak) has been placed under the *-ak allofam, above.

*-ut

For the sparsely attested *-ut rhyme, two good-looking examples are LUNG with PEr *-u and BLOW with PEr *-wo.

PTB	PEr	gloss
*tsut	*nts ^h u ²	lung
*s-mut	*demwo ¹	blow (away)

*-up

All the Proto-Ersuic forms that might descend from PTB *-up have different rhymes. The following forms have been listed in order of plausibility.

PTB	PEr	gloss
(*s-yip ≈) *s-yup	*k ^h ejo	sleep, lie down
*m-pup	*ŋep ^h wo ¹	flip over, reverse
*m-bup ROT / SPOTTED / WRITE	*bu ¹	multicolored / patterned (cloth)

Interestingly, it may be the case that both alloforms for SLEEP can be found in Proto-Ersuic; note the first syllable of **jima**¹ ‘dream’, probably from ***yip**.

***-us**

There is one form for this rhyme, suggesting ***-us** > ***-u**.

PTB	PEr	gloss
*g-rus	*riku/rik ^h u ¹	bone

* * *

A summary of these rhyme developments, along with a chart of consonant and prefix developments, is given in section 8.3.

8.2 Consonants

8.2.1 Voiced stops

PTB ***voiced stops** develop rather straightforwardly: ***b** > ***b**, ***d** > ***d**, ***g** > ***g**. (Consonant + glide clusters will be discussed below.)

PTB	PEr	gloss
b		
*bya	*bi ²	bee, honey
*ba	*bi ¹	thin
*ba ?	*debæ ¹	carry on the back
*byam	*bjēbjē ¹	fly (v.)
*b(w)ar ∅ *p(w)ar	*debræ ¹	burn
PKC *puar	*debro ¹	feel bloated (stomach)
PKC *ḡuay	*bibi ¹	busy
*bəw, *zril > PLB *di ¹	*bedi ¹	insect / worm
*m-bup ROT / SPOTTED / WRITE	*bu ¹	multicolored / patterned (cloth)
*s-b-ru:l	*beri ²	snake
d		
*dak	*de ¹	weave / knit

PTB	PEr	gloss
*bəw, *zril > PLB *di ¹	*bedi ¹	insect / worm
*duk ≈ *tuk	*dzu ¹	poison
*duŋ	*du(liu) ¹	wing
*t/dow-n, *tu:k	*rdurdu	thick
g		
*ga	*gæ ¹	sing
*r/N/d/s-ga	*gæ/gja ¹	like / love
*r/g-wa	*rgwæ ¹	rain ²³
g + C		
*gra	*gæwu	enemy (personal)
< WT gru	*gu ¹	boat / ship
*gle:k	*megi ²	thunder
*s-g-ruk	*deŋgwo ¹	pick up
*g-raŋ	*gwEmæ ²	back
*gyuk	*dzu ¹	waist
*k/gla-k/y/t	*nedzæ ¹	drop / fall
*b-r-gyat ≈ *b-g-ryat	*rdi ¹	eight ²⁴
gw		
*gwa-n	*deyui ¹	wear (a garment)

Note that PTB *gwa > PEr *yui in WEAR.

The following forms have voiceless initials, but it is unclear why this is so (possibly an earlier *s- prefix unattested elsewhere in TB). Interestingly, the first two forms have **bl-** clusters, though it is hard to see why such a cluster would devoice.

PTB	PEr	gloss
*m-blen	*piu ¹	pus
*b-ləy, PLB *p-re	*pjē	run ²⁵
PLB *baŋ ¹	*pu	classif. trees/flat obj.
*g-rus	*riku/rik ^h u ¹	bone
*g(l)im ≈ *g(l)um	*netç ^h iu/ netçiu ¹	set (of the sun)

²³See p. 62 for discussion of this root, which is reconstructed with an *r- prefix in Proto-Ersuic.

²⁴The Proto-Ersuic reconstruction here is tentative; see section 3.3.5 for details.

²⁵PLB supports a reconstruction with *r; the reconstruction with *l is based on various Chin forms (see Matisoff 2003:190, note n and VanBik 2003:#1251).

Next, we look at prenasalized stops. In this and in the sets below, I include both PTB roots with a nasal prefix and forms that exhibit prenasalization in the modern languages, which presumably reflect nasal prefixes at some stage between PTB and Proto-Ersuic.

PTB	PEr	gloss
*m-baŋ	*nembo	deaf, be
*m-bruŋ ɰ *m-bruk; < WT ḥbrug?	*mbru ²	dragon
*ba-y	*mbere ²	cheek
*d/s-kəw, PQc s/r/n-gəw	*ŋge ²	nine

Roots with an *s- prefix have become voiceless unaspirated; furthermore, the prefix has disappeared:

PTB	PEr	gloss
*s-bal	*pimæ ¹	frog, toad
*s-dim	*tɕe ¹	cloud, fog
PLB *ʔ-ga ²	*zikæ	dumb, stupid
*s-glak ɰ *klak	*tʃew ¹	cook / boil

The remaining roots suggest such sound changes as *d-b- > w-, *s/r-g- > x-, and *gr-, gl- > ʈ-.

PTB	PEr	gloss
*d-bu	*wilje/wulje ²	head
*s/r-go-ŋ ?	*hē ¹	hatch / incubate
*glinj	*ɬa ¹	flute
*s/m-grəy	*nelje/nelje ¹	melt, dissolve

8.2.2 Voiceless stops

For the most part, the *voiceless stops become voiceless aspirated.

PTB	PEr	gloss
p		
*r-pak	*səp ^h ja ¹	leaf
*py(w)ak	*p ^h ja	sweep
*pwa:y	*p ^h ra ²	chaff / bran
*pran/t	*tsjēp ^h rje ¹	braid / plait

PTB	PEr	gloss
*pəw	*æp ^h u ¹	grandfather
*pəw	*æpu	grandfather
*pəw PRICE	*p ^h ek ^h wæ ¹	expensive
*m-pup	*ŋep ^h wo ¹	flip over, reverse
*p ^w a, PLB *ba ¹ ?	*pwEpwE ²	patch (clothing)
t		
*ta	*t ^h æ ¹	neg. imp.
*taŋ	*tɕ ^h opu ²	pine
k		
*b-ka	*dek ^h ra ¹	bitter, salty
*ka:k	*ts ^h ek ^h ɑ ¹	sputum, phlegm
PLB *k-ra ^{2/3}	*t ^h ek ^h wɑ ¹	win
*kam (≠ *ka:p)	*k ^h e	draw water
*kuk	*k ^h ok ^h o ¹	curved / crooked / bent
*kwak	*k ^h o	bowl
*kwak	*k ^h wælæ/k ^h ola ¹	bowl
*kwa ?	*ŋ(u)k ^h wa	hoof
k + C		
*kram	*tɕ ^h e	fence (bamboo / twig)
*kram	*xutɕ ^h e ¹	garden (plot)
*d-kruk	*tɕ ^h u ²	six
*kyəw	*det ^h iu ¹	sweet
*m-kyit	*tɕ ^h it ^h i ¹	move

A smaller number have unaspirated initials. As with the exceptional examples above (voiceless initials from PTB voiced initials), this may be due to an earlier *s- prefix that has not been generally reconstructed for PTB. GRIND, NEEDLE, and MOUSE have even more exceptional voiced initials.

PTB	PEr	gloss
*p ^w a, PLB *ba ¹ ?	*pwEpwE ²	patch (clothing)
*ka	*kwali ¹	crow
PLB *ka ¹	*kwa/ka ²	all / the whole
*krak	*deke ¹	fear, be afraid
*kyak	*tɕ ^h wapu ¹	navel
*kri:t	*dze ¹	grind

PTB	PEr	gloss
*k-rap	*γra/ge ¹	needle
*yəw/PLB *(k)-rwak ^H	*gojo ¹	mouse

The prenasalized forms in this set are not as neat as for the voiced initials. In some forms, the prenasalization has disappeared, leaving only voicing as a trace; other forms are prenasalized, but it seems unpredictable whether they are voiced or voiceless aspirated.

Interestingly, in several cases prenasalization seems to arise from the *r- prefix, a phenomenon also seen in Jingpho (Matisoff 2003:129).

PTB	PEr	gloss
*r-p ^w a	*butsh ^h a ¹	axe
*m-t(w)əy	*dziu ¹	water, river
*m-twa	*dʒwæ	span
*k ^w əy ? *(t)si/up?	*(xwəjo)ntʃ ^h o ¹	nest (bird)
*m-ts(y)il	*dziki ¹	saliva
*m-pat	*mp ^h i ²	vomit, spit
*k-r-p ^w at	*mbi ¹	leech
*s-p ^w al	*mp ^h je ¹	ice
*s-p ^w ak	*khemp ^h e	hide oneself
PLB *tak ^H	*nt ^h wa ¹	sharp, pointed
PLB *tok TSR #15	*nt ^h ont ^h o ¹	peck at (of a chicken)
*kyi:n	*ndʒew	weigh (v.)
*kəw	*meŋk ^h e ²	smoke
*m-ka, Mpi nko	*ŋgæ ¹	door
*m-kum ⋈ *m-kim	*ŋgje ²	pillow
PLB *m-k-rəy	*ŋgriupje ¹	skin
*r-kəw	*mp ^h ru ¹	steal ²⁶

Just as for the voiceless stops above, prefixal *s- suppresses aspiration. In this set, the prefix seems to remain in several cases.

²⁶The prenasalization and the rhyme for this form are plausible developments, but the change of *r-k- > mpr- does not seem very likely on the whole. Also note the form ‘smoke’ above, with a similar PTB root and a much more plausible development into Proto-Ersuic.

PTB	PEr	gloss
*s-tonj	*htũ ²	thousand; ten cents
*r-tsyəy	*hte	count
*s-tu	*htɕi ¹	vagina
PQc *N/s-tsak	*hto/htæ	jump
*g/kuŋ, *kor	*hko ¹	hole
*s-kɑ:k	*səkæle ¹	branch / twig ²⁷
*kləy	*htʃiu ²	feces
*s-kyu:r ∅ *s-kwya:r	*detʃew ¹	sour
*krəy, PLB *ʔgrəy ¹	*kriu ²	gall bladder ²⁸
*s-krul	*tʃu ¹	sweat
*kraŋ	*htʃomo ²	strength (physical)
*s-glak ∅ *klak	*tʃew ¹	cook / boil

Some bilabial stops with **-l-** medials have unique developments. In ESCAPE, the lateral disappears; this contrasts with WHITE and ASHES, where the **p** has disappeared. In other forms, the ***-l-** medial seems to have turned into **-r-**.

PTB	PEr	gloss
*ploŋ ?	*p ^h o ¹	escape / run away
*plu	*deliu ¹	white
*pla, PLB *C-la ¹	*li ¹	ashes
*bliŋ	*debra ¹	full
PLB *p(l/y)u:ŋ ² (MLBM 62)	*p ^h ru	face
PL *m-laŋ/plaŋ ¹ 'husband' (PL 217)	*mp ^h rozæ ¹	young lad / chap
*m-la-y	*mra ¹	bow / arrow ²⁹
*b-ləy, PLB *p-re	*pjē	run

²⁷The ***s-** prefix here may ultimately be from PTB ***siŋ** ∅ ***sik** TREE.

²⁸Matisoff (p.c.) notes that contra Matisoff (1988:339), the PLB reconstruction should be ***ʔgrəy¹**, since Lahu has a plain initial + mid tone (**kɪ**), while WB has an aspirate (**khre**). This is noted in Matisoff (2003:436) under 'bile/gall', although the PLB reconstruction is not listed in the index.

²⁹This PTB form exhibits proto-variation between lateral and dental stop initial: ***m-la** ∅ ***m-da**.

8.2.3 Retroflex consonants

So far, we have focused mainly on voicing and aspiration. We now make a brief digression to talk about place of articulation.

Retroflexes in Proto-Ersuic come mostly from two sources: velar + ***-r-** clusters, and ***sr-** clusters. In this section, we will discuss examples with velar initials (***sr-** clusters will be discussed under *Fricatives*, below).

Note that before the Proto-Ersuic rhymes ***-i** and ***-iu**, velars are preserved:

PTB	PEr	gloss
*gra	*t ^h egri ¹	hear
PLB *ʔgrəy ¹	*kri ¹	star
*krəy, PLB *ʔgrəy ¹	*kriu ²	gall bladder
PLB *m-k-rəy	*ŋgriupje ¹	skin

Everywhere else these clusters have become retroflexes—or at least, none of the modern dialects have any evidence that these initials were once velar. It is possible that at the Proto-Ersuic stage, all of these clusters were still velar + **-r-**, and that the $Kr > T\zeta$ retroflexion change happened much later but swept across all varieties of Ersuic, obscuring the original clusters. As explained in section 7.1, the apicalization change (which turned $ri > r\zeta$ [rʒ]) had to precede the retroflexion change. If the output of the apicalization went on to lose its frication (i.e. $r\zeta > \sigma$), the original velar + **-r-** cluster would be effectively dissolved, having been replaced by velar + rhotic vowel, and thereby escaping the retroflexion change. This explains why a high vowel environment (***-i** and ***-iu**) would preserve these original velars, rather than palatalizing them.

PTB	PEr	gloss
*kri:t	*dze ¹	grind
*s-krul	*tʂu ¹	sweat
*kraŋ	*htʂomo ²	strength (physical)
*kram	*tʂ ^h e	fence (bamboo / twig)
*m-krak, PLB *m-prak ^H	*(n)tʂ ^h o ¹	scratch
*kram	*xutʂ ^h e ¹	garden (plot)
*kri:t	*dze ¹	grind
*d-kruk	*tʂ ^h u ²	six
*s-krul	*tʂu ¹	sweat

However, note that there are some roots where a PTB ***-r-** medial seems to have disappeared completely:

PTB	PEr	gloss
*gra	*gæwu	enemy (personal)
< WT gru	*gu ¹	boat / ship
PLB *g-ra ² ?	*ŋgi ¹	buckwheat
*s-g-ruk	*deŋgwo ¹	pick up
*g-raŋ	*gwEmæ ²	back
*g-rus	*riku/rik ^h u ¹	bone ³⁰
PLB *k-ra ² / ³	*t ^h ek ^h wa ¹	win
*krak	*deke ¹	fear, be afraid
*k-rap	*ge ¹	needle

Two more examples of Proto-Ersuic retroflexes are listed below. FOUR derives from PTB *b-l- (but compare with the homophonous RUN above, which gives PEr *pjě).

PTB	PEr	gloss
*b-ləy	*zju ²	four
*s-hywəy	*siu ¹	blood

Note that the reconstruction of PEr *riu WRITE as opposed to *zju FOUR (i.e. a distinction between *r- and *z- in Proto-Ersuic) is based partly on the TBL rhyme contrast (and partly on the Qš. and Kl. initials). It is nice to see that the PTB roots are also consistent with this distinction.

PEr	Ersu	Kl./Nq.	Mn.	TBL	PTB	gloss
*riu ¹	roʃ; zɔ ⁵⁵ zɔ ⁵⁵	rə	zɨ	ɣu ³⁵	*b-rəy	write
*zju ²	zɔʃ; zɔ ³³	ʔɛ	ʔɨ	zu ³⁵	*b-ləy	four

8.2.4 Alveopalatal affricates and PTB velar clusters

Proto-Ersuic alveopalatal affricates generally descend from PTB velar + -y- or velar + -l- clusters:³¹

PTB	PEr	gloss
*kyəw	*detʃiu ¹	sweet
*s-kyu:r ɰ *s-kwya:r	*detʃew ¹	sour

³⁰In this case the *-r- might not have disappeared but metathesized.

³¹Note that the last two forms, NAVEL and WEIGH, could be reconstructed with either a retroflex or alveopalatal initial in Proto-Ersuic, since there are no supporting forms from Ersu for these two roots. With the rhymes *-wa and *-ew, an alveopalatal vs. retroflex reconstruction can only be determined by a cognate in Ersu, which maintains the distinction (see section 3.6.2). These two roots have been reconstructed with alveopalatal initials because they fit the pattern of the first four roots in this set.

PTB	PEr	gloss
*m-kyit	*tʃ ^h itʃ ^h i ¹	move
*gyuk	*dʒu ¹	waist
*kləy	*htʃiu ²	feces
*s-glak ≈ *klak	*tʃew ¹	cook / boil
*kyak	*tʃwapu ¹	navel
*kyi:n	*ndʒew	weigh (v.)

PTB *tw- clusters also seem to yield PEr *alveopalatals, as shown in WATER and SPAN. The alveopalatal HAVE/EXIST seems have developed from a PTB palatal, but most PTB palatal affricates have merged with dental affricates (see below). The form for NEST is more speculative.

PTB	PEr	gloss
*m-t(w)əy	*dʒiu ¹	water, river
*m-twa	*dʒwæ	span
*m-dzyaŋ	*dʒo ¹	have, exist (animate)
*k ^w əy ? *(t)si/up?	*(xwajɔ)ntʃ ^h o ¹	nest (bird)

The remaining forms are exceptions of various sorts. DROP/FALL has a *gl- cluster but seems to develop into a PEr retroflex, rather than alveopalatal. FLUTE has a *gl- cluster but has a voiceless lateral initial in Ersuic; this is similar to MELT, which has a *gr- cluster but has a PEr voiceless lateral instead of the expected retroflex.

PTB	PEr	gloss
*k/gla-k/y/t	*nedzæ ¹	drop / fall
*gliŋ	*ɬa ¹	flute
*s/m-grəy	*nelje/netje ¹	melt, dissolve

8.2.5 Dental affricates: ts, dz

Just as for the stops, the *voiceless affricates have voiceless aspirated reflexes, and the *voiced affricates have voiced reflexes.

PTB	PEr	gloss
ts		
*tsa	*ts ^h i ²	salt
PLB *tsaŋ ¹	*ts ^h o ¹	human being, person
PLB *tsəy ²	*ts ^h e ²	wash (clothes)
*tsi:t	*ts ^h ē ¹	goat

PTB	PEr	gloss
*tsik	*ts ^h i ¹	joint
*tsow	*dets ^h u ¹	fat
*tsa-t	*ts ^h æ ²	hot
dz		
*m-dzam	*dzjē ¹	bridge
*dz(y)im	*dzjēdzjē	raw / uncooked

The prenasalized forms have unpredictable voicing and aspiration, just like for the stops.

PTB	PEr	gloss
PLB *m-dzəw ²	*ndzomō ²	official (government)
*m-dzu/ip SUCK	*nts ^h ew	squeeze (for milk)
*m-tsak DRIP	*nts ^h e ²	leak
*tsut	*nts ^h u ²	lung
*tsow THORN	*ndzu	pricked (on a thorn)

Some forms exhibit various irregularities in their initials. HAIR and MORTAR are unaspirated, while COUGH and CHOP have the opposite voicing from what is expected. Finally, PAIR has an unexpected retroflex initial.

PTB	PEr	gloss
*tsam	*tsjē ¹	hair
*tsum ?	*tsumu/tsumo ²	mortar
PLB *ʔ-dzəy ²	*dets ^h e ²	cough
*ts(y)ap	*dzē ¹	chop / hew
*dzum ≠ *tsum	*dze	pair

8.2.6 Palatal affricates: tsy, dzy

PTB palatal affricates have mostly merged with the dentals. The lack of aspiration on CONNECT may be due to a PTB *s- prefix (cf. the glottal stop prefix in Lolo-Burmese), but there is no external evidence for a PTB *s- prefix in BOIL.

PTB	PEr	gloss
plain		
*dzya	*dzi ²	eat
*tsyap or PLB *ʔ-dzak ^L ?	*k ^h etsu	connect / join

PTB	PEr	gloss
*tsyow	*detsu ¹	boil
prenasalized		
*dzyi	*ndze ¹	ride (a horse)
*N-dzyam	*ndzē ¹	wedge
*m-tsyen	*ledzi/letsu ²	nail

A few forms with PTB *palatals have palatal or (in the case of HAVE/EXIST) alveopalatal initials in Proto-Ersuic.

PTB	PEr	gloss
*ts(y)i/əy/ay	*tɕ ^h etɕ ^h e ¹	ten
*dz(y)u	*rwatɕo ¹	egg
*m-dzyaŋ	*dʒo ¹	have, exist (animate)

8.2.7 Secondary palatals

There are several sources of palatal affricates in Proto-Ersuic. A couple of forms seem to involve PTB *palatal affricates, but as we shall see below, PTB palatal affricates merged with dental affricates in Proto-Ersuic. For SALIVA, at least, the palatal probably emerged due to the influence of the high front vowel following the initial consonant, just as in CLOUD and SET (OF SUN).³²

PTB	PEr	gloss
*m-ts(y)il	*dʒiki ¹	saliva
PLB *C-cak ^L	*t ^h edʒo ¹	push / shove
*s-dim	*tɕe ¹	cloud, fog
*g(l)im ≠ *g(l)um	*netɕ ^h iu/ netɕiu ¹	set (of the sun)

Some complex clusters with PTB *-y- medials also become palatals. The sound changes involved here would look something like *r-gy- > ʒ- and *g-ry > /dʒ-.

PTB	PEr	gloss
*b-r-gya	*ʒa ¹	hundred
*g-r(y)ap	*k ^h endʒa ¹	stand

The emergence of palatals in the following forms is more mysterious. In DOG it may have to do with the combination of the high vowel rhyme *-əy with the labiovelarized initial consonant.

³²It is interesting to note that coronals are palatalized in this environment, but not velars. See, e.g., the forms on p. 177 from PTB *-im. A comparison may be made to Japanese, which has palatalized *ti > [tʃi], but not *ki.

PTB	PEr	gloss
*d-k ^w əy	*tɕ ^{wh} iu ²	dog
*s-kəy	*ɕ ^w iu ¹	borrow (money)
*s-la	*zɑ ¹	pants / trousers

Finally, there remain several cases of seemingly unconditioned, sporadic palatalization:

PTB	PEr	gloss
*taŋ	*tɕ ^h opu ²	pine
*r-pak	*sẽp ^h ja ¹	leaf
*s-tu	*htɕi ¹	vagina
*duk ≈ *tuk	*dzu ¹	poison
*r/N/d/s-ga	*gæ/gja ¹	like / love

8.2.8 Fricatives

PTB	PEr	gloss
s		
*g/b-sat	*si ¹	hit, kill
*r-sak	*sẽ ¹	air, breath, steam
*səy	*t ^h ɕiu ¹	die, dead ³³
*si(y)	ɕi ²	comb (v.)
*sey	*sẽse ¹	fruit
*g-sik	*si	new
*siŋ ≈ *sik	*sẽ ¹	wood / log
PLB *C-sip ^l	*defo	thirsty ³⁴
PLB *si ²	*desu ¹	sharpen, whet (a knife)
*su	*se ²	who
PLB *C-sok	*taso ¹	morning
*g-sum	*sjẽ ²	three
z		
*za	*zi ²	son
*zum ≈ *zuŋ	*zẽ ¹	use

³³Note the unexpected retroflex initial here and in the next item, ‘comb (v.)’.

³⁴The alveopalatal initial here is unexplained.

In addition to the expected **s-** and **z-** reflexes above, we also find PTB ***sy-** > PEr ***ʃ** and PTB ***swa** > PEr ***xui**.

PTB	PEr	gloss
sy		
*sya-n	*ʃi ²	meat
*syam	*ʃje ¹	iron
*syaŋ	*ʃoʃo ¹	clean
sw		
*swa-n	*xui ¹	garlic
*swa	*xui ¹	tooth
*s-wa GO	*xui	walk

The prenasalized fricatives have developed into prenasalized affricates. An excrement consonant is also found in the word for HORSE, where a **b** is inserted between **m** and **r**.³⁵ There is a phonetic explanation for this change: to go from a nasal stop to a (non-nasal) fricative, the velum must be raised simultaneously with the oral release into the fricative. If the velic gesture is early, causing the nasal passage to be prematurely blocked off, the effect is to create a stop consonant followed by a fricated release—in other words, an affricate.

PTB	PEr	gloss
*g-zik	*ndzi ¹	leopard / panther
*m-sin	*nts ^h a ¹	liver

8.2.9 Glides

Moving on to the sonorants, we find that ***w-** remains **w-** in Proto-Ersuic, sometimes acquiring a voiced velar fricative in front of it. VILLAGE, with a voiceless fricative initial, is an exception.

PTB	PEr	gloss
*k-wa	*deywæ ¹	full, satiated
*wa (see LITB)	*wæ ¹	snare / trap
*p ^w ak, PLB *wak ^L	*γwo ¹	pig
*r/g-wa ?	*xu ¹	village

The palatal glide remains a palatal glide in Proto-Ersuic, with the exception of LIQUOR.

³⁵Textbook examples of excrement consonants between nasal and oral stops include the **b** in *chamber* (cf. *camera*, from the same Latin root), and the **d** in *thunder* < OE *thunrian*.

PTB	PEr	gloss
*yaŋ	*jō ¹	sheep
*k-yim ɰ *k-yum	*jē ¹	house
*yip + *mak	*jima ¹	dream
(*s-yip ɰ) *s-yup	*k ^h ejo	sleep, lie down
*z(y)əy ?, cf. Lahu i	*jiji ¹	small
*yəw ?	*yo ¹	liquor

8.2.10 Liquids

There are three different reflexes of ***sl-** clusters below. Most common is the voiceless lateral. Another possibility is for the lateral to become an obstruent, forming a ***ht-** cluster; we will see this phenomenon again with the nasals, below. Finally, the form for PANTS seems to show ***s-l-** > **ʒ**. We can try to explain this as a difference between prefixal vs. root **s-**. However, this can only account for two of the three reflexes, and we must endeavor to look elsewhere to explain the third.

PTB	PEr	gloss
l > l		
*l(y)aŋ	*k ^h elo ¹	wait
*g-lak	*le(pje)	hand
*l(y)ak	*lje ¹	good
*g-lwat	*t ^h ele ¹	release / set free
*lam ?	*liu	fathom
*k-la	*læ ¹	tiger
*la-y	*læ ¹	come
*d/s-ləy	*sjelje	bow (weapon)
*m-leɣ ɰ *m-ləy	*melje	earth, ground
*b-ləy	*lit ^h o/lot ^h o ¹	grandchild
*g-ləy	*meli/mele ²	wind
PLB *ʔ-li ¹	*le ¹	old
*s-loŋ	*lolo/lulu ¹	bark (of dog)
*s-luk/ŋ	*bulo	maggot
*r-lung, *k-luk	*lo ¹	stone
*lum	*-lje	round object
sl > ʃ		
*s/g-la	*ʃæp ^h e ¹	moon

PTB	PEr	gloss
*m/s-la:y	*goɫæ ²	middle
*s-ləy	*nts ^h oɫiu ¹	flea
*s-lay ≠ *s-ley	*ɫjeki ¹	ladder
*m-hla / WT lha	*ɫæ	spirit, deity
sl > ht		
*s-l(y)a	*ht(s)ipi ²	tongue
*m-liŋ	*ht(w)arA ²	neck ³⁶
other		
*s-la	*ʒa ¹	pants / trousers
*lway ?	*yuiyui	easy

EASY has a lateral initial in PTB, but the *-w- medial seems to have taken over.

PTB *r remains as PEr *r in general. Note the excrescent -b- in HORSE and HIGH/TALL, which has shown up between the *r and its nasal prefix (see the discussion on excrescent consonants under Fricatives, above).

PTB	PEr	gloss
r		
*r(y)a	*ri ¹	laugh / smile
*k-rak	*rwa ¹	chicken
*g/p-rwak	*berA/burA	ant
PLB *ra ³	*rA ¹	get / obtain
*g-ray	*rAɫæ ¹	soul / spirit
GOD/COPULA		
*b-rəy	*riu ¹	write
*rəy	*re ¹	water / soup
*g-ruŋ	*ru(bu)/du ¹	horn
*g-rus	*riku/rik ^h u ¹	bone
mr		
*k-m-raŋ	*m(b)ro ²	horse
*m-raŋ	*mbro	high / tall

Some forms appear to have developed PEr *ɣ- from PTB *r-.

PTB	PEr	gloss
*ryaŋ ?	*ɣwEmo/ æɣwE ¹	uncle < mother's brother >

³⁶This form fits here assuming an *s- prefix: *s-liŋ > *hta, with the *sl- cluster obstruentizing.

PTB	PEr	gloss
*b-rey	*ɣui ¹	buy
*ril ≈ *rul	*ɣeniu/ɣoniu ¹	intestine

BE and CRAZY seem to have some irregular developments in their initials:

PTB	PEr	gloss
*s-ri(y)	*ɸ ^w i ¹	be (copula)
*ru	*rdumo ²	crazy person, lunatic

sr- clusters uniformly yield ʃ-.

PTB	PEr	gloss
*s-riŋ	*ʃɑ	long
*sram	*ʃe ¹	otter
*s-r(y)ik, *s-row	*ʃewmæ ¹	louse
PLB *x-ra ¹ ?	*htjæ/ʃæ ¹	search, look for
*sywar SCAT- TER	ʃɑ	pour (water)

8.2.11 Nasals

The nasals are for the most part very straightforward:

PTB	PEr	gloss
m		
*ma	*æmæ ¹	mother
*ma-t	*t ^h eme ²	forget
*r-ma	*mjari/meri ¹	sore / boil
*mra, PLB *C-mya ²	*mje/mja	many / much
*d-mak	*mo	soldier, army
*s-mak	*mopæ ²	son-in-law
*maŋ	*t ^h emo/momo ¹	old / elderly
*ma-y	*mæ	neg.
PLB *s/?-mi ¹	*mi ¹	catch
*mey	*me ¹	fire
*r/s-miŋ	*mi ¹	name
*mit, *l-ko(k)	*myihkwo ¹	throat

PTB	PEr	gloss
*s-mi:t	*muimui ¹	close (the mouth)
*s-mik ɰ *s-myak	*mja ¹	eye
*r-məw	*me/mo	sky
*mow	*mu ¹	do / make
*s-mul	*mui ²	feather, hair (of body)
*s-mut	*demwo ¹	blow (away)
PLB *myuk ^L , *s-myuk ^H	*mi	monkey
n		
*na-t	*deni ¹	sick, ache
*g-na-s	*breni ¹	rest
*r/g-na	*bəni ¹	listen
*r/g-na	*na ²	ear
*nyey/*na-w	*nina ¹	younger sibling
*s-nak	*denwa ¹	black
*s-nak	*nene	deep
*naŋ	*ne/no ²	you
*r-ni	*deni ¹	red
*nəy SUN	*niu	day, day's (work)
*r-ney-t	*niu ¹	have, exist (general/abstract)
*s-ney	*(ri)ni ¹	near
*s-nem	*nini	low / short
*s-ni/u(:)p	*niu ¹	west
*g/s-nis	*ne ¹	two
*nəw	*dʒaŋu ¹	breast, milk
*now	*ŋjonjo ²	soft
*s-nuk BEAN	*nopri ¹	garden peas
*s-nuk	*nwo ¹	brains
ŋ		
*l/b-ŋa	*ŋra ²	five
*s-ŋ(y)a FISH	*deŋra ¹	stinky, fishy-smelling
*ŋəw	*ŋu ¹	cry, weep
*d-ŋul	*ŋui ¹	silver
*ŋwa	*ŋui ²	cattle, cow

PTB	PEr	gloss
*d/g-wam	*xui/ŋui ¹	bear

It is unclear where the nasal initial in BEAR comes from (the nasal initial is found only in Lizu, not Ersu). Perhaps initial *w- became a velar nasal *ŋ- under the influence of a nasalized rhyme (i.e. *wam > **wuĩ > *ŋui), much like the palatal glide *j- became *ɲ- in Lizu before nasalized vowels (see p. 49).

*s-prefixed nasals denasalize to fricative + stop clusters. This obstruentization also occurred in Kanauri (see Matisoff 2003:103 and Benedict 1972:105). Note that there are no *sŋ- initials that have developed into k-, for reasons unknown.

PTB	PEr	gloss
*s-man	*hpje ²	medicine
*s-na	*stim(b)u ¹	nose
*s-nap + *rəy	*stiu(d)zære ¹	snot (liquid)
*s-nis	*sini/htē ²	seven
*s-ni-ŋ	*sini/htimi ¹	heart

8.2.12 Glottals

Most of the forms in this section are of a more speculative nature. As discussed in sections 3.10 and 4.3, Proto-Ersuic *h automatically come with *nasalized vowels. The origin of these nasalized vowels is unclear; some possible PTB roots are offered below. In some cases it seems that these *h + Ñ combinations are the result of roots with *s-prefixed nasal initials, but these must be kept separate from *s-prefixed nasal initials that become preaspirated stops (above). Compare, for example, HEART *s-ni-ŋ (above) with the root for YEAR (below), where the former has a Proto-Ersuic form *hti, but the latter is PEr *hĩ.

PTB	PEr	gloss
*s-niŋ YEAR	*ts ^h ehĩ ¹	this year
*r/s-ŋ(y)a	*hjē ¹	borrow (tools)
*g/s-məw ?	*hē ¹	mushroom
*s-m-raŋ ?	*hwō ¹	stretch out (the arm)
*s-r(y)ak 24-HOURS	*t(w)ah(w)ā ¹	tonight
*hya SWIDDEN	*(ju/zu)xwa ¹	paddy fields

8.3 Summary of Sound Changes

The regular developments of PTB rhymes into Proto-Ersuic are summarized below:

	*a	*i	*e	*u	*o
open	i	i		u	
*-y	æ/i	iu/e	i		
*-w				e/iu/u/o	u
*-l	i			ui	
*-r	ræ/ro			ew	
*-m	jě	jě	i	jě	
*-n	je	a	a		
*-ŋ	o	a		u	o/u
*-p	e/a	o?		o/u?	
*-t	i	i/e		u/wo	
*-k	e/wa/a/o	i	i	(w)o/u	o
*-s		e?		u	

Table 1: Proto-Ersuic reflexes of PTB rhymes

The presence of the medial glides /y/ and /w/ do not seem to affect rhyme developments very much.

Regular consonant developments are summarized in Table 2, with prefixal elements (none, s-prefix, or nasal prefix) as columns, and individual consonants or consonant clusters as rows.

	*plain	*s-	*N-
*p	p^h		(m)b/mp^h
*t	t^h	ht	nt^h
*k	k^h	hk	ŋg, ŋk^h
*b	b	p	mb
*d	d	t	
*g	g	k	ŋg
*kr	tʂ^h	htʂ	ntʂ^h
*ky, *kl	tʃ^h	tʃ	ndʒ
*tw			dʒ
*s	s		nts^h
*z	z		ndz
*sy	ʃ		
*sw	x		
*sr	ʂ		
*ts(y)	ts^h	ht	dz/nts^h
*dz(y)	dz		ndz
*w	(ɣ)w		
*y	j		
*r	r	(= *sr-)	mbr
*l	l	ɬ/ht	
*m	m	hp	
*n	n	ht	
*ŋ	ŋ		

Table 2: Proto-Ersuic reflexes of PTB initial consonants and prefixes

Chapter 9

Ersuic, Qiangic, and PTB

With a reconstruction of Proto-Ersuic in hand, we can now turn our attention to the larger issues of subgrouping in Tibeto-Burman and the place of Ersuic within Tibeto-Burman. In this chapter I will provide an overview of various subgrouping hypotheses as they apply to Ersuic and discuss the evidence provided by the present reconstruction in light of these hypotheses.

There is no consensus on where to place Ersuic on the TB family tree, and there likely will not be until full-scale reconstruction is done on all the languages that are potentially closely related to Ersuic. This is because the genetic affiliation of languages in this region can often be obscured by contact phenomena such as lexical borrowing and areal sound changes. Because of this lack of meso-level reconstructions, the analysis provided here is necessarily tentative.

There are three major branches/subgroups of Tibeto-Burman involved in this discussion:

(1) Lolo-Burmese, a very well-established branch of TB (see Matisoff 2003, Bradley 1979, etc.);¹ (2) Naish, consisting of Naxi, Na, and Laze, reconstructed by Jacques and Michaud (2011), and generally believed to be closely related to Lolo-Burmese; and (3) Qiangic, a proposed branch of TB that has generated considerable debate. In section 9.1, I will discuss the scholarly views on which languages belong in Qiangic. For the set of languages that most scholars agree belong to Qiangic, I use the term “core Qiangic”. In addition to “core Qiangic”, there is rGyalrongic, a widely accepted grouping whose wider genetic affiliation is still in question; and three languages (Ersu, Namuyi, and Shixing) under the label of “Southern Qiangic” that, as the name implies, is usually considered to be part of Qiangic, but may align more closely with Naish. Adding another layer of complexity is the question of whether Qiangic and Lolo-Burmese–Naxi should form a larger “Burmo-Qiangic” branch of TB, and if so, where Qiangic would fit in the Lolo-Burmese–Naxi complex. Data from Proto-Ersuic that is relevant to this hypothesis is presented in section 9.2. Finally, section 9.3 offers some speculations as to what Proto-Ersuic may tell us about these subgrouping questions.

¹Bradley favors the term “Ngwi” instead of “Loloish”, as seen in Figure 9.4.

9.1 What is Qiangic?

Most people who have worked on the internal structure of Tibeto-Burman agree that there are a set of languages, all spoken in present-day southwest China, which seem to comprise a major branch of TB. The term “Qiangic” for this branch comes from Sūn (1962).² Within Qiangic are a dozen or so languages. Figure 9.1 shows the geographic distribution of the languages in question. Readers interested in the specific counties where these languages are spoken should refer to Tables 9.2 and 9.3 (data from Sūn 2001).

Names for Qiangic languages are especially plentiful, partly because of the existence of language and place names in both Chinese and Tibetan, partly because of dialectal variations, and partly because of the relative infancy of the field. Table 9.1 lists the names of the languages as used in this dissertation, along with examples of autonyms (which, again, will vary by dialect) and alternate names which are used in the literature. This list is, unfortunately, not exhaustive.

Language	Autonyms	Alternate names in the literature
Northern Qiang	rma, z̥ma	羌 Qiāng, Ch’iang
Southern Qiang	ma	
rGyalrong	kəru, kərə	嘉戎 Jiāróng, Gyarong
Lavrung	?	拉烏戎 Lāwūróng
Ergong	stɛ wu va	尔龚 Ěrgōng, 道孚 Dào fú, Stau, Horpa
Choyo	t̥o ⁵⁵ yo ⁵⁵	卻隅 Quèyú, 却域 Quèyù, formerly mistakenly identified as 扎巴 Zhábā
nDrapa	ndza ³³ pa ⁵³	扎巴 Zhábā, 扎坝 Zhábà
Guiqiong	gu ³³ t̥ɕ ^{h55}	贵琼 Guìqióng
Minyak	mə ³³ ŋæ ⁵³ , mu ⁵⁵ ŋa ⁵⁵	木雅 Mùyǎ, Mu-nya, Mi-nyag
Ersu	ɛ ⁵⁵ su ⁵⁵	尔苏 Ěrsū, Eastern Ěrsū
Tosu	do ⁵⁵ ɕu ⁵⁵	多续 Duōxù, Central Ěrsū
Lizu	li ⁵⁵ zu ⁵⁵ , lɛ ⁵⁵ zu ⁵⁵	吕苏 Lǔsū, Western Ěrsū
Namuyi	næ ⁵⁵ mu ³³ zɿ ³¹ , na ⁵³ mzi ⁵³	纳木依 Nàmùyī, 纳木义 Nàmùyì, 纳木兹 Nàmùzī
Shixing	ʃɿ ⁵⁵ hĩ ⁵⁵	史興 Shǐxīng, Shuhi
Prinmi	p ^h z̥ɛ ⁵⁵ mĩ ⁵⁵	普米 Pǔmǐ, Prmi ³

Table 9.1: Alternate language names

²As Sūn (2001) notes, Thomas (1948) was the first person to propose a separate “Hsifan” subgroup in TB, pointing out non-Tibetan lexical items found in wordlists. Sūn (1962) and later articles attempt to establish Qiangic more rigorously, though as Chirkova (2009) points out, Qiangic originally included only Qiang, Prinmi, and Minyak, with other languages added later as more was discovered about them.

Speakers of Qiangic languages were originally grouped into a catch-all category of “Western Barbarians” (西番 *Xīfān* or *Hsifan*), which in older Chinese texts (dating back to the Táng period) referred to various peoples on the Gānsù border, and in the early twentieth century was sometimes used to refer to certain non-Tibetan groups who lived in the border area between Tibet and China. For a detailed discussion of the term *Hsifan* and its various senses, see Thomas (1948).

³“Prmi” is not a typo! This spelling is used in Harrell (2001).

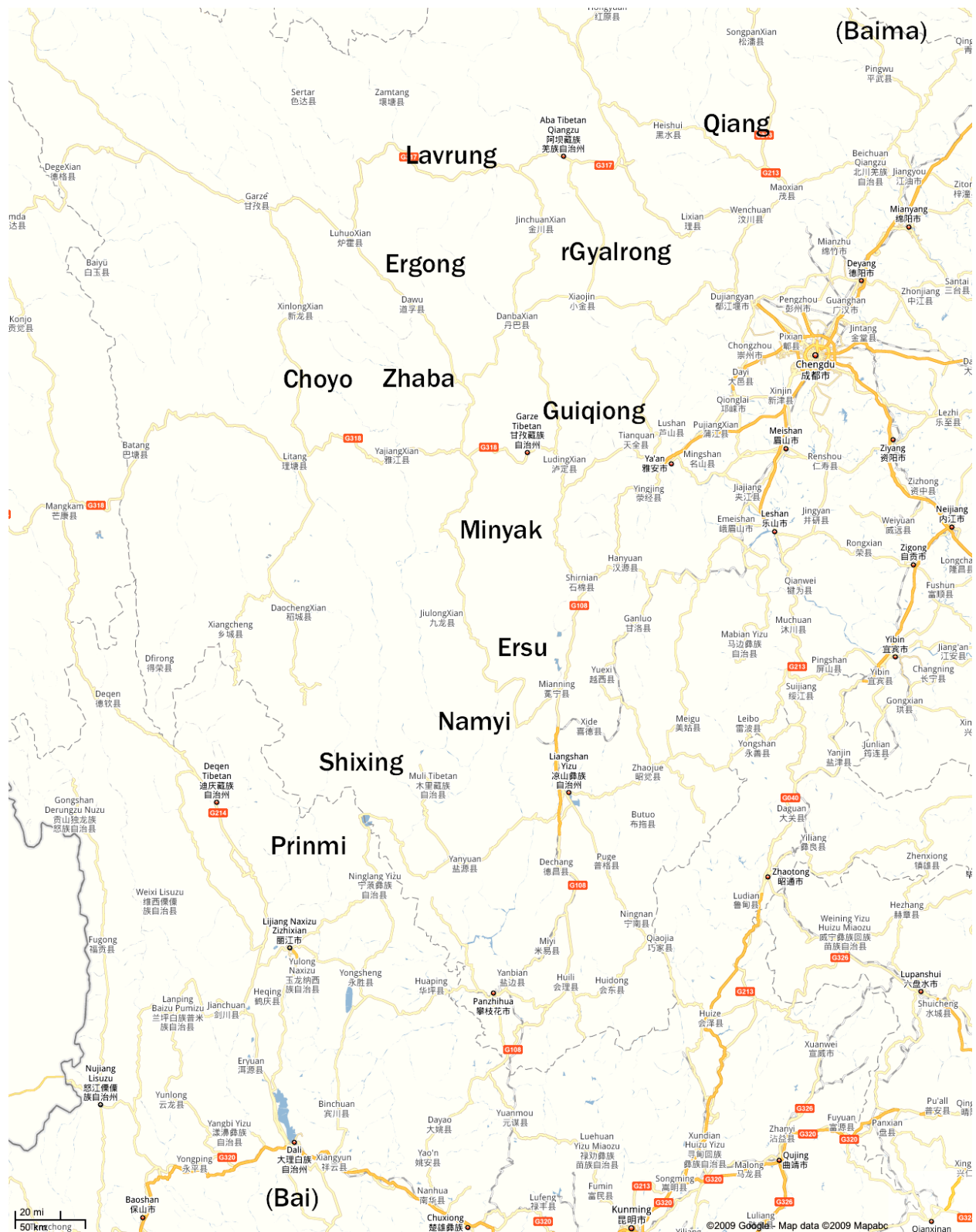


Figure 9.1: Map of Qiangic-speaking areas

	County	Chinese	Tibetan	Languages
Ngawa	Barkam	马尔康 Mǎ'ěrkāng	འབར་ཁམས་	rGyalrong, Lavrung, Ergong
	Heishui	黑水 Hēishuǐ	ཁོ་ཚུ་	Qiang
	Jinchuan	金川 Jīnchuān	རྒྱ་ཚེན་	rGyalrong, Lavrung, Ergong
	Li	理 Lǐ		Qiang, rGyalrong
	Mao	茂 Mào		Qiang
	Songpan	松潘 Sōngpān	བྱང་ཚུ་	Qiang
	Wenchuan	汶川 Wènchuān		Qiang, rGyalrong
	Xiaojin	小金 Xiǎojīn	བཅོན་ལྗ་	rGyalrong
Zamtang	壤塘 Rǎngtáng	འཛམ་གང་	rGyalrong, Lavrung, Ergong	
Garzê	Danba	丹巴 Dānbā	དོང་བྲག་	rGyalrong, Ergong
	Dawu	道孚 Dàofú	རྟ་ཕུ་	rGyalrong, Ergong, Choyo, nDrapa
	Jiulong	九龙 Jiǔlóng	བརྒྱུད་བྱུར་	Minyak, Ersu, Namuyi, Prinmi
	Kangding	康定 Kāngdìng	དར་མདོ་	Guiqiong, Minyak
	Litang	理塘 Lítáng	ལི་གང་	Choyo
	Luhuo	炉霍 Lúhuò	བྲག་འགོ་	rGyalrong, Ergong
	Xinlong	新龙 Xīnlóng	ཉག་རོང་	Ergong, Choyo
	Yajiang	雅江 Yǎjiāng	ཉག་ཚུ་	Choyo, nDrapa
Yǎ'ān	Baoxing	宝兴 Bǎoxīng		rGyalrong
	Hanyuan	汉源 Hànyuán		Ersu
	Shimian	石棉 Shímían		Minyak, Ersu
Liángshān	Ganluo	甘洛 Gānlùò		Ersu
	Mianning	冕宁 Miǎnníng		Ersu, Namuyi
	Muli	木里 Mùlǐ	མྱི་ལི་	Ersu, Namuyi, Shixing, Prinmi
	Xichang City	西昌市 Xīchāng		Namuyi
	Yanyuan	盐源 Yányuán		Namuyi, Prinmi
	Yuexi	越西 Yuèxī		Ersu
Lìjiāng	Yulong	玉龍 Yùlóng		Prinmi
	Ninglang	宁蒗 Nínglàng		Prinmi
	Yongsheng	永胜 Yǒngshèng		Prinmi
Nùjiàng	Lanping	兰坪 Lánpíng		Prinmi
Líncāng	Yun	云 Yún		Prinmi

Table 9.2: Counties with Qiangic speakers

Language	Speakers	Location
Qiang	130,000	Ngawa: Mao, Li, Wenchuan, Heishui, Songpan
rGyalrong	95,000	Ngawa: Barkam, Li, Wenchuan, Xiaojin, Jinchuan, Zamtang; Garzê: Danba, Dawu, Luhuo; Ya'an: Baoxing
Lavrung	10,000	Ngawa: Jinchuan, Zamtang, Barkam
Ergong	40,000	Garzê: Danba, Dawu, Luhuo, Xinlong; Ngawa: Jinchuan, Zamtang, Barkam
Choyo	15,000	Garzê: Litang, Xinlong, Yajiang, Dawu
nDrapa	7,000	Garzê: Dawu, Yajiang
Guiqiong	7,000	鱼通 Yútōng District of Kangding
Minyak	15,000	Kangding, Jiulong, Shimian
Ersu	20,000	Liangshan: Ganluo, Yuexi, Mianning, Muli; Garzê: Jiulong; Ya'an: Shimian, Hanyuan
Namuyi	5,000	Liangshan: Mianning, Muli, Xichang, Yanyuan; Garzê: Jiulong
Shixing	2,000	水洛 Shuǐluò Township in Muli
Prinmi	35,000	Yunnan: Lanping, Ninglang, Yulong (formerly Lijiang), Yongsheng, Yun ⁴ ; Sichuan: Muli, Yanyuan, Jiulong

Table 9.3: Number of speakers and geographic distribution by language

9.1.1 “Core” Qiangic

All scholars agree that at least Qiang, Prinmi, and Minyak are closely related. For example, Sūn Hóngkǎi places these languages in a “Qiang” group under Northern Qiangic (see Figure 9.2).⁵ Thurgood (2003) agrees, saying that putting Qiang and Prinmi in the same subgroup is “easily and fully substantiated by careful examination of cognate sets. The inclusion of Muya [= Minyak] in this group... is also strongly supported by the cognate sets, but Sūn’s rationale for the inclusion of... Tangut is not, as yet, clear to me.” As for the remaining languages (except for rGyalrongic, which he places in a separate Rung branch—this will be discussed below) Thurgood says that “an inspection of the vocabulary suggests these are also part of this subgroup,” but that “the definitive subgrouping evidence remains to be presented” (2003:17).

Jacques and Michaud (2011) expand Qiangic to include not only Qiang, Prinmi, and Minyak, but also Tangut, rGyalrongic, and Choyo, stating that all these languages “can be shown to have an extensive amount of uniquely shared vocabulary (there remain doubts concerning Zhaba [= nDrapa]”.⁶ See Figure 9.3.

⁴Yun County is outside the bounds of the map, about 50 km south of Dǎlǐ.

⁵All translations from Chinese sources into English, including Figure 9.2, are mine.

⁶Actually they only include Choyo (= Queyu) in their Figure 2 family tree, not in the text itself, but I assume this was simply an accidental omission in the text. nDrapa (= Zhaba) is also included under Qiangic in their family tree, but with a question mark to show that “there remain doubts” about it.

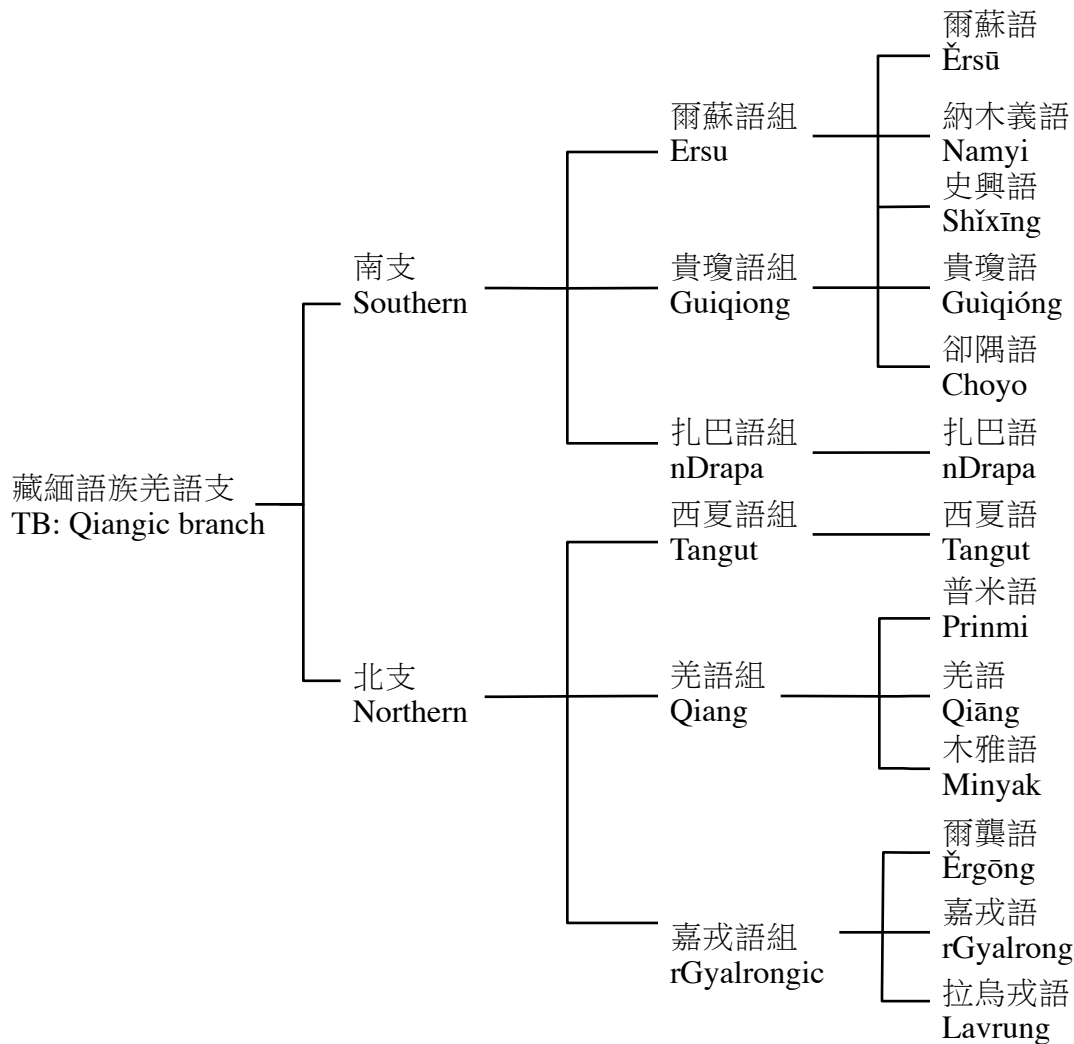


Figure 9.2: Subgrouping of Qiangic from Sūn (2001)

9.1.2 rGyalrongic

A rGyalrongic subgroup is widely accepted, but there is disagreement on whether it belongs to Qiangic or not. Matisoff (2004:328) states:

It is already clear that rGyalrong (= Gyarung = Jiarong) and Ergong (= Daofu = Stau) belong together in a separate subgroup of this family. They have preserved PTB prefixes and thus have especially complicated systems of initial consonants, and also preserve final consonants better than the other languages.⁷ Yet their systems of directional prefixes seem to indicate that they belong somewhere in the Qiangic group.

⁷However, Sūn (2001:166) points out that many final consonants in rGyalrong are found not in the native vocabulary but in loans from Tibetan.

See also Sūn (2004) for details on placing rGyalrong, Ergong, and Lavrung in a separate subgroup in Qiangic.

Unlike Sūn and Matisoff, LaPolla (2003) places rGyalrong⁸ in a separate Rung branch of TB, along with T’rung, Rawang, Kiranti, Kham, and West Himalayan (Kinauri-Almora). (Thurgood 2003:16 speculates that Magar and Chepang may also belong in this group.) This is based on “clearly cognate complex person marking systems, and all but rGyalrong have a *-si reflexive/middle marking suffix on the verb.” LaPolla gives the evidence as follows (Table 9.4):

	1sg	1pl	2pl	dual	refl/middle
Proto-rGyalrong	*-ŋ	*-i	*-ñ	*-tsh	
Proto-Dulong-Rawang	*-ŋ	*-i	*-n	*-si	*-si
Proto-Kiranti	*-ŋ	*-i	*-ni	*-ci	*-nsi
Proto-W. Himalayan	*-g/ŋ	*-ni	*-ni	*-si	*-si

Table 9.4: Cognate person-marking systems in Rung (reproduced from LaPolla 2003:30)

Thurgood notes that Qiangic languages “are often assumed to subgroup with the rGyalrong languages, but the rGyalrong languages subgroup more strongly with the rest of the Rung group. ... On the other [hand], an examination of cognate sets suggest a special relationship, but one that is not yet clear.” LaPolla suggests that the “similarities rGyalrong shares with Qiangic may simply be areal influence.”

Jacques and Michaud (2011) swing the pendulum back the other way again, arguing as follows:

LaPolla’s proposed grouping is based on the hypothesis that the morphology found across these languages is a common innovation.... However, the comparison of Rgyalrong to Kiranti reveals very little common vocabulary: a careful examination of Boyd Michailovsky’s unpublished Kiranti etymological dictionary brought out less than 150 potential cognates, which are too widespread within the Sino-Tibetan family to be convincing instances of shared innovation. If Rgyalrong and Kiranti were closely related in the Sino-Tibetan family tree, one would expect more cognate vocabulary, including some lexical innovations.

9.1.3 “Southern Qiangic”

If the reader has been following along and using Figure 9.2 as a checklist, there should now be three languages left on the list: Ersu (by which Sūn 2001 means Lizu, Tosu, and Ersu), Namuyi, and Shixing. Sūn (2001) groups these under a larger “Ersu” subgroup under Southern Qiangic.⁹ Their inclusion in Qiangic as a whole is based mostly on typological features, such as the existence of directional prefixes and complex initial consonant inventories. Matisoff (2004:329)

⁸ To confuse matters, LaPolla, unlike Sūn and Thurgood, does not put Daofu (=Ergong) and Lavrung under rGyalrongic, but merely lists them under the Qiangic group.

⁹ I am not sure whether the line connecting the Ersu and Guiqiong groups is supposed to represent some sort of linguistic affinity or if it is merely a typographical error.

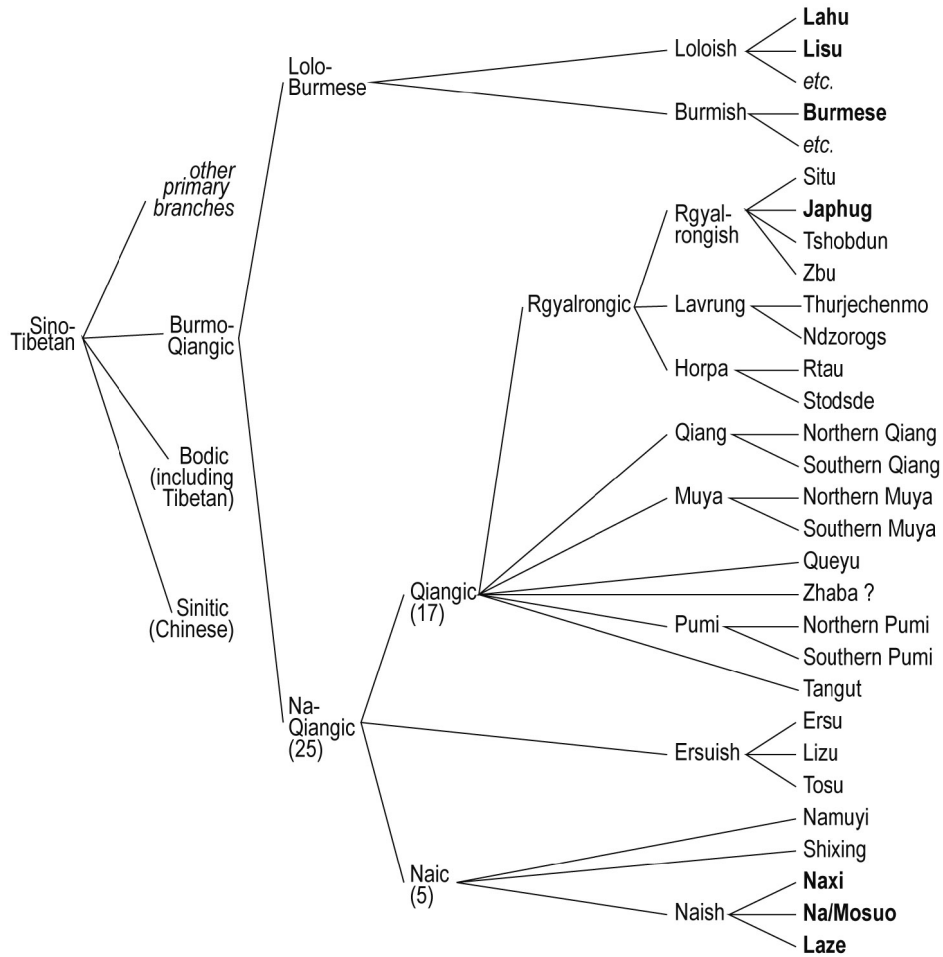


Figure 9.3: Subgrouping of Burmo-Qiangic from Jacques and Michaud (2011)

also notes that there is a strong tendency for PTB **-a* to undergo a “brightening” change to *-i* in Tangut and modern Qiangic languages (including Ersuic, Namuyi, and Shixing) and suggests that this can be taken as a characteristic innovation for Qiangic languages.

Chirkova (2008:38) looks at the question of whether Lizu and Shixing have an especially close historical relationship based on the morphosyntactic evidence, and so far has not found evidence in favor of such a subgrouping, noting that Shixing is “strikingly distinct [from Lizu] in all its linguistic sub-systems”, including noun markers, verb particles, and verbs of existence which do not appear to be cognate.

If we look instead at lexical similarities, the results are also unclear. The following table lists the results of comparisons, based on 1500-word lists of core vocabulary, of Zeluo Ersu with other Qiangic languages (along with Yi and Tibetan thrown in for comparison) in descending order of percentage of apparent cognate vocabulary, as presented in Sūn (1983b).

Language	% Cognate
Namuyi	31.0
Prinmi	27.8
Qiang	26.1
Guiqiong	24.0
Shixing	21.3
Choyo ¹⁰	21.0
Minyak	20.5
Ergong	20.1
rGyalrong	17.5
Yi	16.6
Tibetan	11.9

On one hand, Namuyi seems to have the most vocabulary in common with Ersu; on the other, the next two languages on the list are Prinmi and Qiang, both solidly in the “core Qiangic” category.

Jacques and Michaud (2011) express the opinion that the evidence for the inclusion of Ersu/Tosu/Lizu in Qiangic (as defined in Figure 9.3) is weak, preferring instead to tentatively place Ersuic¹¹ by itself in a larger “Na-Qiangic” branch. On the other hand, they consider Shixing and possibly Namuyi to be closely related to Naish (i.e. Naxi/Na/Laze).

Bradley (2008) lists specific lexical items suggesting that Namuyi and Naxi/Na are most closely related, followed by Shixing. Bradley’s family tree (see Figure 9.4) includes Ersu as the next branch out after Shixing, but it is unclear if he is making an explicit claim about Ersu. His arguments regarding Namuyi and Shixing are as follows (the following is reproduced from Bradley 2008):

... shared cognate lexical material:

- | | |
|--|--|
| 1) general Tibeto-Burman | ‘silver’ /ŋu ⁵⁵ / < *d-ŋul |
| 2) Eastern Tibeto-Burman (Qiangic plus Burmic) | ‘year’ /k ^h uə ¹⁵⁵ / < *kok |
| 3) Qiangic | ‘urine’ /mbe ³³ / < *s-mbi |
| 4) Southern Qiangic | ‘winnow’ /mp ^h i ⁵⁵ / < *(m)phi |
| 5) Na/Naxi/Namuyi/Shixing | ‘barley’ /mu ⁵⁵ dzɿ ⁵⁵ / < *mu dzi |
| 6) Na/Naxi/Namuyi | ‘look at’ /ly ³⁵ / < *ly |

Namuyi LACKS specific Burmic or Ngwi (Yi Branch, Loloish) innovations:

- | | |
|--|----------------------------------|
| 1) lexical items | ‘buckwheat’ *ŋga ² |
| 2) lexical fields | birth order names |
| 3) semantic innovations in cognate lexicon | ‘silver’ > ∅, ‘white’ > ‘silver’ |
| 4) phonological | development of Tone 3 |
| 5) morphological | extensive grammaticalisation |

¹⁰A.k.a. Queyu. Mistakenly referred to as Zhaba in Sūn (1983a,b).

¹¹Jacques and Michaud actually call it “Ersuish”, using the “-ish” suffix to indicate that it is lower-level grouping like “Naish”, rather than a higher-level grouping like “Qiangic” or “Naic”.

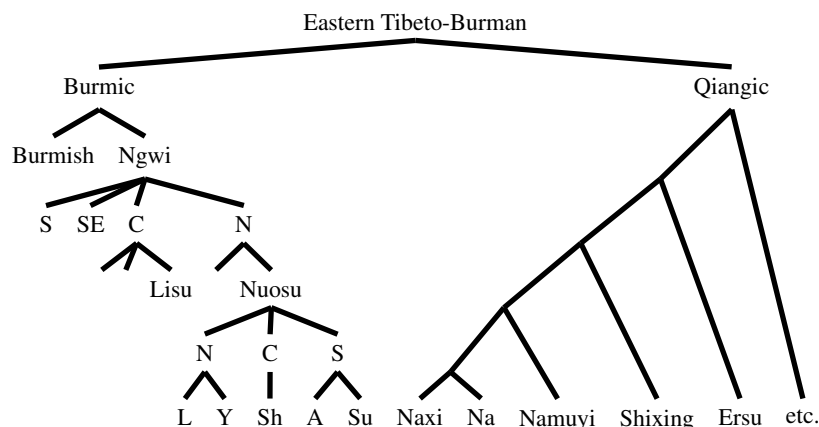


Figure 9.4: Subgrouping of “Eastern Tibeto-Burman” from Bradley (2008)

To summarize, Ersuic, Namuyi, and Shixing are typologically similar to Qiangic, but in terms of lexicon, at least Namuyi and Shixing appear to be more closely related to Naish.

9.2 Ersuic, Naish, Lolo-Burmese, and Qiangic

The short list of cognate lexical material provided by Bradley (2008) for analyzing Namuyi is a convenient jumping-off point for analyzing Ersuic. In fact, we can check off items (1)-(5):

1. PEr ***ŋui**¹ ‘silver’
2. PEr ***diutʂ^he**¹ ‘year’ (the retroflex initial could descend from a ***kr-** cluster; note the rhotic vowel in Namuyi form **k^huə**¹⁵⁵)
3. PEr ***mbra**¹ ‘urine’
4. Zeluo Ersu **phɛ⁵⁵i⁵⁵** ‘winnow’¹²
5. PEr ***mwEdzæ**¹ ‘barley’ (the second syllable of ‘barley’ has the wrong vowel, but at least the first syllable looks like the same root).

Regular sound correspondences have not been worked on, of course, but Ersuic could plausibly group all the way down with Shixing, closer to Naish than to “core” Qiangic. The last item for ‘look at’ is not found in Ersuic: the Proto-Ersuic form is ***hto** ‘watch/look’. (On the other hand, PEr ***k^hendo**¹ ‘see’ seems to have a Proto-Naish cognate, listed below.)

There are also some good-looking roots in Proto-Ersuic (and sometimes Proto-Naish) that otherwise are found only in Lolo-Burmese. If Ersuic is ultimately classified as Qiangic, this may

¹²This is probably circular logic, since Bradley most likely bases his Southern Qiangic isogloss for *(**m**)**phi** on exactly this Ersu form (I could not find a corresponding form in Shixing). Cf. also some lookalike forms: Atsi **pjan**²¹, Nusu (Bijiang) **piã**³⁵, etc.

lend support to the idea of a Burmo-Qiangic branch, where Lolo-Burmese and Qiangic are closer to each other than to other Tibeto-Burman subgroups. In the table below, Proto-Naish reconstructions from Jacques and Michaud (2011) are provided where available:

PNa	PEr	PLB	gloss
*kri	*kri ¹	*ʔgrəy ¹	star
*ri	*ŋgriupje ¹	*m-k-rəy	skin
	*zikæ	*ʔ-ga ²	dumb, stupid
*rts ^{hi}	*ts ^{he2}	*tsəy ²	wash
(*rtsU)	*dets ^{he2}	*ʔ-dzəy ²	cough
(*bu)	*bedi ¹	*di ¹	insect / worm
*so	*soniu ²	*C-sok MORNING	tomorrow
	*nt ^h ont ^h o ¹	*tok TSR #15	peck at
	*p ^h ru	*ʔ-blu ¹	porcupine
	*ts ^h o ¹	*tsaŋ ¹	human being ¹³
*t ^h aC ₁	*nt ^h wɑ ¹	*tak ^H	sharp
	*mi ¹	*s/ʔ-mi ¹	catch

Additionally, there are some forms from Lahu that have not been reconstructed for Lolo-Burmese but have potential cognates in Ersuic. These forms are listed below, along with the most likely PLB reconstruction(s) to compare with Proto-Ersuic.

Lahu	PLB	PEr	gloss
pè	*bya	*mbimbi ²	divide / share (things)
ð-cē	*dzya ?	*(n)dzi(u) ²	ear / spike
qha	*ka	*k ^h æ	rice (cooked)
vəʔ-qâ	*ga	*gæme ¹	clothing / garment
bù	*mbwa	*mbra ¹	loud
phô	*paŋ	*p ^h wo	side, direction
khô	*kraŋ	*tʂ ^{he1}	sound
qhɔ	*kaŋ	*k ^h ep ^{he} / k ^h up ^{ho1}	inside
yàʔ- ‘today’	*yak	*janiu ¹	yesterday
šɛ	*sin	*dents ^{ha1}	pull / drag / lead (a cow) along
che	*kyim/kyum	*dets ^{he}	flavorful
phe	*pim/pum	*k ^h ep ^{hui1}	tether (a cow)
kù	*gru	*kwo ²	shout
mê-chô-ma	*kyəw	*tʂ ^{hiumæ}	widow

In addition to those items above that are shared across Naish, Ersuic, and Lolo-Burmese, there are also some lexical items specific to Ersuic and Naish (and sometimes Shixing and Namuyi as well), but these are not (to my knowledge) found in Lolo-Burmese or “core” Qiangic:

¹³Note, however, that Bradley (2008) identifies Namuyi ts^{ho33} ‘person’ as a loan from Nuosu ts^{ho33}. In the case of Ersuic, since the regular reflex of PTB *-aŋ is PEr *-o, it is not possible to tell if this form is descended from PTB or borrowed from Nuosu just by inspecting the form.

PNa	PEr	gloss	
* laC₁taC₁	* t^heç^wiula	slanted	(Shixing lɛ³³dzyɛ³³dzyɛ⁵⁵)
* ndaC₂	* k^hendo¹	see	(Namuyi ndo⁵³ , Shixing dɔ³³)
* saC₂ ‘study’	* soso	learn, teach	(Namuyi so³³so⁵⁵)

Other unique features include the fact that ‘water’ and ‘sweet’ are minimal pairs in both PNa and PEr; and the presence of a rhotic element in the form for ‘die’ (PEr ***ʂ** for the most part developed from earlier ***sr-** clusters):

PNa	PEr	gloss	PTB
* gi	* dʒiu¹	water	* m-t(w)əy
* k^hi	* det^hiu¹	sweet	* kyəw
* rsi	* t^heʂiu¹	die, dead	* səy

See also p. 171, where some potential correspondences between Naxi and Proto-Ersuic in the development of the PTB ***-ak** rhyme are noted.

With respect to nasal vs. non-nasal final consonant variation in the roots DREAM and TREE/WOOD, Naish and Ersuic agree at least on TREE/WOOD, choosing PTB ***siŋ** (unlike Lolo-Burmese, but like the rest of TB). (The reconstructed forms are PNa ***siN** and PEr ***sē¹** ‘wood’.) On the other hand, Ersuic ***jima¹** descends from PTB ***mak** (just like Lolo-Burmese and unlike the rest of TB). Unfortunately, Jacques and Michaud (2011) do not reconstruct a form for ‘dream’ but it would be interesting to see which variant the Naish root points to.

It is also worth mentioning that Jacques and Michaud (2011), in their Appendix 1, p. 4, reconstruct PNa ***ki** ‘cloud’ as one of six probable Naish-only lexical innovations. They also point out the lookalike form **tçe³⁵** in Lizu, stating that that “more research is needed to determine whether or not this could be an external cognate.” I am happy to report that Proto-Ersuic ***tçe¹** most likely descends from PTB ***s-dim** and is not related to PNa ***ki**, since initial velars were retained as such in Proto-Ersuic (see p. 177 and various roots reconstructed with velar + **-i** on p. 95).

On the Qiangic side of things, Ikeda (2007) proposes a set of six unique lexical innovations for Qiangic, including Ersuic as part of Qiangic (with “Lūsū” as the representative language). These items are shown in Table 9.6. (The line for ‘year’ looks messy because there are apparently two roots involved; this which will be explained below.)

Ikeda’s definition of Qiangic is exactly that of Sūn (2001), and the goal of his paper was simply to find lexical items that were not found in other major branches of Tibeto-Burman. In fact, all of the items except for ‘sharpen’ can not only be found in the languages Ikeda considers Qiangic, but in Naish as well. Compare with the following Proto-Naish forms: ‘kidney’ ***Smbu**,¹⁴ ‘urine’ ***mbi**, ‘pus’ ***priN**, ‘forget’ ***mi**¹⁵, and ‘year’ ***Cba** and ***k^hu**.

¹⁴Also compare Naxi **mby-lyl** with Ersu **nbe³³li⁵⁵**, with the same suffix < PTB ***lum** ROUND OBJECT.

¹⁵Jacques and Michaud actually list ‘forget’ as a possible Burmese-Qiangic innovation.

	Qiāng (Máwō)	rGy.	Minyak	Prinmi (Jiǔlóng)	Guìqióng	Lūsū	Nàmùyī	nDrapa	Shìxīng	Tibetan
kidney	ʃpu lu	tum	pɛ ⁵⁵ lɛ ⁵³	pu ¹¹ lɛ ⁵⁵	dʒ ³⁵ tʃɑ ⁵³	nbo ³³ ly ⁵³	fu ³³ ly ³⁵	vʌ ³³ lɛ ⁵⁵	bə ⁵⁵ hi ³³	mkhāl ma
urine	bi	rmbi	bɪ ²⁴	bɛ ³⁵	ɛ ⁵⁵ ʃl ⁵⁵	nba ³⁵	mbe ³³	ʒʌ ¹³	phu ³³ læ ⁵⁵	gcin
pus	spə sa	spu	pə ²⁴	pu ⁵⁵	pu ⁵³	pu ³⁵	mbe ³⁵	fʌ ¹³	bā ⁵⁵	rnag
sharpen	sə	fse	to ⁵⁵ ʃi ³³	khui ¹¹ sy ⁵⁵	sl ⁵⁵	te ⁵³ su ⁵³	sl ³⁵	ə ⁵⁵ ʃi ³³ ʃi ³³	suɔ ⁵³	rdar
forget	rmə	jmut	the ⁵⁵ mə ⁵³	a ¹¹ mā ¹¹	ʃo ³³ mu ⁵⁵ tɑ ³³	the ⁵³ me ⁵³	ji ³³ pa ⁵³	tə ⁵⁵ mə ⁵⁵	lɜ ⁵⁵ ma ⁵⁵	brjed
year	pə	pa	kui ⁵³	ko ³⁵	ŋɔ ⁵³	dzu ⁵³ tʃhu ³¹	kuə ⁵⁵	wo ⁵⁵	khu ⁵³ /bə	lo

From Chirkova (2009), adapted from Ikeda (2007:12-13). rGyalrong (Japhug) data is from Jacques (2004). Shìxīng data is Chirkova's. Chirkova also provides Tibetan for comparison.

Table 9.6: Ikeda's proposed lexical innovations

For ‘year’, Jacques and Michaud point out “the suppletion found for the noun ‘year’, with a labial-initial root (Proto-Tangut *C-pja) in ‘this year, next year, last year’ and a different root (Proto-Tangut *kjuk) with numerals.... In Lolo-Burmese languages, only the root related to Tangut *kjuk is found.” In Proto-Ersuic there are also two roots for ‘year’: *-hĩ ‘(this/next/last) year’ and *diuṣ^he¹ ‘year (with numerals)’, with the second syllable in *diuṣ^he¹ possibly descending from a velar + -r- cluster and thus potentially related to the velar-initial root found in Naish, Qiangic, and Lolo-Burmese; however the form *-hĩ cannot be related to a bilabial-initial root. Ikeda (2007:7) points out the potential cognate to PEr *-hĩ in Namuyi ji³¹ ~ ɲi³¹ and relates it to PTB *s-niŋ YEAR.

Another peculiarity with ‘year’ is the morpheme for ‘this’ in ‘this year’, where Qiang, rGyalrongic, Choyo, Minyak, and Prinmi have one root, but nDrapa, Guiqiong, Ersuic, Namuyi, and Shixing have another. Ikeda reconstructs these two roots as *pə- and *tshe-, respectively. The latter form can again be found in Naish: Naxi *tshu/ɬe*-, Na *tshi.i*^(M), Laze *tshu/ɬie*-.

9.3 Beyond Ersuic

The lexical comparisons above are certainly suggestive, and given such apparent lexical innovations it seems worthwhile to entertain the possibility that “Southern Qiangic” (Ersuic, Namuyi, and Shixing) may be closer to Naish than to “core” Qiangic. If this is the case, then it is not surprising that this “Naic” subgroup (pulling “Southern Qiangic” into the Naish fold, so to speak) shares similarities with Lolo-Burmese. If, on the other hand, “Southern Qiangic” and “core” Qiangic can be shown to have a close relationship (this will have to wait for a reconstruction of Proto-“core”-Qiangic), then the similarities between Proto-Ersuic and Proto-Lolo-Burmese may indeed point to a Burmo-Qiangic connection.

The possibility of “Southern Qiangic” being more closely related to Naish than to “core” Qiangic highlights the problem of defining Qiangic mainly by the existence of directional verb prefixes, which is problematic if it is not possible to show that these prefixes are actually cognate. LaPolla (2003) notes that although all the Qiangic languages exhibit this feature, “the actual forms of the systems in different languages do not all correspond in any clear way.” It may well be the case that the development of directional prefixes was spread through language contact.

Using the “brightening” change of PTB *-a > -i as a shared innovation to define Qiangic is more promising, but ideally we would also be able to use other phonological, lexical, and morphological innovations to define the subgroup. It is interesting to note that brightening has also occurred in many forms in Naish (see Lidz 2010:143 and Jacques and Michaud 2011), although Jacques and Michaud generally reconstruct rhymes descending from PTB *-a with Proto-Naish *-a (distinct from rhymes from PTB *-i), whereas for Proto-Ersuic I have reconstructed *-i < PTB *-a, *-i.

Ultimately, we will only be able to conclusively answer questions about subgrouping with detailed meso-level comparative work. Hopefully in the not-too-distant future we will be able to move from making educated guesses about Qiangic and Naic to building solid reconstructions.

References

- Baber, E. Colborne. 1882. *Travels and researches in the interior of China*, volume 1, pt. 1 of *Royal Geographical Society of London, Supplementary Papers*. London: J. Murray.
- Baron, Stephen P. 1974. On the tip of many tongues: Apical vowels across Sino-Tibetan. Handout circulated at the 7th International Conference on Sino-Tibetan Language and Linguistic Studies. Georgia State University, Atlanta, October 18th–19th, 1974.
- Baxter, William H., and Laurent Sagart. 2011. Baxter-Sagart Old Chinese reconstruction, version of 20 February 2011. URL <http://crlao.ehess.fr/document.php?id=1217>.
- Benedict, Paul K. 1972. *Sino-Tibetan: a conspectus*. James A. Matisoff, contributing editor. Princeton-Cambridge Series in Chinese Linguistics, #2. New York: Cambridge University Press.
- Bradley, David. 1979. *Proto-Loloish*. London: Curzon.
- Bradley, David. 2008. The position of Namuyi in Tibeto-Burman. Presentation at the Workshop on the Namuyi language. Institute of Linguistics, Academia Sinica, Taipei, November 24th 2008.
- Chirkova, Katia. 2006. Review of Sūn Hóngkāi 孙宏开, editor. 中国新发现语言研究丛书 Zhōngguó xīn fāxiàn yǔyán yánjiū cóngshū [New found minority languages in China series], 31 volumes. Beijing: Chinese Academy of Social Sciences. *China Review International* 13:312–321.
- Chirkova, Katia. 2008. Essential characteristics of Lizu, a Qiangic language of western Sichuan. Workshop on Tibeto-Burman Languages of Sichuan, November 21–24, 2008.
- Chirkova, Katia. 2009. Shǐxīng, a Sino-Tibetan language of south-west China: A grammatical sketch with two appended texts. *LTBA* 32:1–90.
- Creissels, D. 2008. Remarks on so-called “conjunct/disjunct” systems. Paper delivered at the conference Syntax of the world’s languages III. Berlin.
- Dài Qìngxìà 戴庆厦, Fù Àilán 傅爱兰, and Liú Júhuáng 刘菊黄. 1994. 关于我国藏缅语的系属分类 [A genetic classification for Tibeto-Burman languages in China]. In 藏缅语新论 *Zàng-Miǎn-yǔ xīn lùn* [Recent contributions to Tibeto-Burman studies], ed. Mǎ Xuéliáng 马学良 et al., 1–22. Beijing: 中央民族学院出版社 The CUN Press.
- Dài Qìngxìà 戴庆厦, and Huáng Bùfán 黄布凡, ed. 1992. 藏缅语族语言词汇 *Zàng-Miǎn yǔzú yǔyán cíhuì* [A Tibeto-Burman lexicon]. Beijing: Central Institute of Minorities.
- Emeneau, Murray B. 1939. The vowels of the Badaga language. *Language* 15:43–47.

- Fù Màoqī 傅懋勤. 1997. A descriptive grammar of Lolo. *Linguistics of the Tibeto-Burman Area* 20:1–242.
- Goddard, Ives. 1975. Algonquian, Wiyot, and Yurok: Proving a distant genetic relationship. In *Linguistics and anthropology in honor of C. F. Voegelin*, ed. M. Dale Kinkade et al., 249–262.
- Harrell, Stevan. 2001. *Ways of being ethnic in southwest China*. University of Washington Press.
- Hill, Nathan W. 2007. Aspirated and unaspirated voiceless consonants in Old Tibetan. *Language and Linguistics* 8:471–493.
- Huáng Bùfán 黄布凡, and Rénzēng Wàngmǔ 仁增旺姆. 1991. 吕苏语 Lǚsūyǔ [The Lǚsū language]. In 藏缅语十五种 *Zàngmiǎn-yǔ shíwǔ zhǒng* [Fifteen Tibeto-Burman languages], ed. Dài Qìngxià 戴庆厦 et al., 132–152. Beijing: Yānshān Chūbǎnshè 北京燕山出版社.
- Ikeda Takumi 池田巧. 2007. 羌语支语言的特征词:试探西夏语和羌语支的关系 Characteristic words of the Qiangic languages: A contribution to the comparative study of Qiang and Tangut. Paper presented at the 40th ICSTLL, Harbin.
- Ikeda Takumi 池田巧. 2009. 200 basic words of the Lyuzu language (Naiqu dialect). Progressive Report, Vol. 3. Grant-in-Aid for Scientific Research (S).
- Jacques, Guillaume, and Alexis Michaud. 2011. Approaching the historical phonology of three highly eroded Sino-Tibetan languages. *Diachronica* 28:468–498.
- Judson, Adoniram. 1893. *Burmese-English dictionary*. Revised and enlarged (1953) by Robert C. Stevenson and F. H. Eveleth. Reprinted (1966). Rangoon: Baptist Board of Publications.
- LaPolla, Randy J. 2003. Overview of Sino-Tibetan morphosyntax. In Thurgood and LaPolla (2003), 22–42.
- Lǐ Shào míng 李绍明, and Liú Jùn bō 刘俊波, ed. 2007. 尔苏藏族研究 [Studies on Ersu Tibetan]. Beijing: 民族出版社 [Nationalities Press].
- Lidz, Liberty A. 2010. A descriptive grammar of Yongning Na (Mosuo). Doctoral Dissertation, University of Texas at Austin.
- Lin Ying-chin 林英津, et al., ed. 2004. 漢藏語研究：龔煌城先生七秩壽慶論文集 *Studies on Sino-Tibetan languages: Papers in honor of Professor Hwang-chenng Gong on his seventieth birthday*. Taipei: Institute of Linguistics, Academia Sinica.
- Liú Huīqiáng 刘辉强. 1983. 尔苏语概要 Ěrsūyǔ gài yào [An Outline of Ersu]. 四川民族研究所编辑：《民族研究论文集》 *Minzu Yanjiu Lunwenji* 1.
- Liú Yáohàn 刘尧汉, et al. 1981. 一部罕见的象形文历书：耳苏人的原始文字 [A rare document of a pictographic writing system: primitive writing of the Ersu]. *Bulletin of the Museum of the Chinese History* 中国历史博物馆馆刊 1981:125–131.
- Mǎ Lín yīng 马林英, Dennis Elton Walters, and Susan Gary Walters, ed. 2008. *Nuosu Yi - Chinese - English glossary* 彝汉英常用词词汇. Nationalities Publishing House 民族出版社.
- Matisoff, James A. 1972. *The Loloish tonal split revisited*. Berkeley: University of California Center for South and Southeast Asia Studies.

- Matisoff, James A. 1975. Rhinoglottophilia: the mysterious connection between nasality and glottality. In *Nasálfest: Papers from a symposium on nasals and nasalization*, ed. Charles A. Ferguson, John J. Ohala, and Larry M. Hyman, 265–87. Stanford, Calif.: Stanford University Language Universals Project.
- Matisoff, James A. 1978a. Mpi and Lolo-Burmese microlinguistics. *Monumenta Serindica (ILCAA, Tokyo)* 4:1–36.
- Matisoff, James A. 1978b. *Variational semantics in Tibeto-Burman: the ‘organic’ approach to linguistic comparison*. Philadelphia: Institute for the Study of Human Issues.
- Matisoff, James A. 1988. *The dictionary of Lahu*. University of California Press.
- Matisoff, James A. 1991. Jiburish revisited: tonal splits and heterogenesis in Burmo-Naxi-Lolo checked syllables. *Acta Orientalia* (Copenhagen) 52:91–114.
- Matisoff, James A. 1999. A preliminary sorting of materials for the reconstruction of Proto-Qiangic. Paper presented at Workshop on Qiangic Languages and Linguistics, Academia Sinica, Taipei.
- Matisoff, James A. 2003. *Handbook of Proto-Tibeto-Burman: System and philosophy of Sino-Tibetan reconstruction*. University of California Press.
- Matisoff, James A. 2004. “Brightening” and the place of Xixia (Tangut) in the Qiangic subgroup of Tibeto-Burman. In Lin et al. (2004), 327–352.
- Matisoff, James A. 2008. *The Tibeto-Burman reproductive system: Toward an etymological thesaurus*. University of California Press.
- Meier, Kristin. 2011. Personal communication.
- Nishida Tatsuo 西田龍雄. 1973. 多續譯語の研究：新言語トス語の構造と系統 [A study of the Tosu-Chinese vocabulary, *Tosu i-yu: the structure and lineage of Tosu, a new language*]. Kyoto: Shokado 松香堂.
- Nishida Tatsuo 西田龍雄, and Sūn Hóngkāi 孙宏开. 1990. 白馬譯語の研究：白馬語の構造と系統 [A study of the Baima-Chinese vocabulary *Baima I-Yu: The structure and lineage of the Baima language*]. Kyoto: Shokado 松香堂.
- Sūn Hóngkāi 孙宏开. 1962. 羌语概况 Qiāngyǔ gàikuàng [An outline of the Qiāng language]. 中国语文 *Zhōngguó Yǔwén* 1962:561–567.
- Sūn Hóngkāi 孙宏开. 1982a. 尔苏沙巴图文字 Ěrsū Shābā túwénzì [Ersu Shaba pictorial writing]. 民族语文 *Mínzú Yǔwén [Minority languages of China]* 44–48.
- Sūn Hóngkāi 孙宏开. 1982b. 尔苏（多续）话简介 Ěrsū (Duōxù) Huà jiǎnjiè [A brief introduction to Ersu (Doshu)]. 语言研究 *Yǔyán Yánjiù* 3:241–264.
- Sūn Hóngkāi 孙宏开. 1983a. 六江流域的民族语言及其系属分类 [The nationality languages in the six valleys and their language branches]. 民族学报 *Mínzú Xuébào* 3:99–274.
- Sūn Hóngkāi 孙宏开. 1983b. 川西族语走廊地区的语言 [Languages of the ethnic corridor in western Sichuan]. In 西南民族研究 [*studies of the ethnic groups of southwestern china*], 429–454.

- Chengdu: Sichuan People's Press. Translated into English, with notes, by Jackson T.-S. Sun in LTBA 13.1 (1990).
- Sūn Hóngkāi 孙宏开. 2001. 論藏緬語族中的羌語支語言 *Lùn Zàng-Miǎn yǔzú zhōng de Qiāngyǔzhī yǔyán* [On language of the Qiangic branch in Tibeto-Burman]. *Language and linguistics* 2:157–181.
- Sūn Hóngkāi 孙宏开. 2004. 嘉絨語在藏緬語族語言中的歷史地位 [The historical position of rGyalrong in Tibeto-Burman]. In Lin et al. (2004), 297–314.
- Sūn Hóngkāi 孙宏开, et al., ed. 1991. 藏緬語語音和詞匯 *Zàng-Miǎn-yǔ yǔyīn hé cíhuì* [Tibeto-Burman phonology and lexicon]. Beijing: Chinese Social Sciences Press.
- Thomas, F.W. 1948. *Nam, an ancient language of the Sino-Tibetan borderland: text, with introduction, vocabulary and linguistic studies*. London: Oxford University Press.
- Thurgood, Graham. 2003. A subgrouping of the Sino-Tibetan languages: The interaction between language contact, change, and inheritance. In Thurgood and LaPolla (2003), 3–21.
- Thurgood, Graham, and Randy J. LaPolla, ed. 2003. *The Sino-Tibetan languages*. London; New York: Routledge.
- Tournadre, Nicolas. 2008. Arguments against the concept of ‘conjunct’/‘disjunct’ in Tibetan. In *Chomolangma, Demawend und Kasbek, Festschrift für Roland Bielmeier*, 281–308.
- Tung T'ung-ho 董同龢. 1965. 漢語音韻學. Taipei: 文史哲出版社.
- VanBik, Kenneth. 2003. Proto-Kuki-Chin. Doctoral Dissertation, University of California, Berkeley.

Appendix A

Additional Sources

The following supplementary data is provided here for the convenience of the reader. Translations from Chinese to English have been provided where necessary.

A.1 Lizu

The following items are from Nishida and Sūn (1990:15), from a variety of Lizu spoken somewhere in Muli County (Sūn does not specify the exact location). Sūn also provides the Chinese character transliterations from the Sino-Xenic Vocabularies, Volume 5 (《川五》).

gloss		form	translit.	gloss		form	translit.
belly	肚	ji ⁵⁵ phe ⁵⁵	也怕	horse	馬	mbzə ⁵³	卜
bone	骨	ə ¹³³ qo ⁵⁵	勒骨	lungs	肺	ntshu ⁵³	初
chest	胸	ə ¹⁵⁵ kho ⁵⁵	勒庫	monkey	猴	mi ⁵⁵ dzɿ ⁵⁵	迷自
cloud	雪	ji ⁵⁵	衣	moon	月	ɬɛ ³³ phe ⁵⁵	納魄
cloud	雲	tɕe ³⁵	借	one	一	te ⁵⁵	得
ear	耳	na ⁵⁵ pi ⁵⁵	乃比	rain	雨	ŋgue ⁵⁵ (zu ⁵⁵)	掛
earth	地	me ³³ li ⁵⁵	梅利	sheep	羊	no ³⁵	藥
eye	眼	ndo ³³ sɿ ⁵³	奪索	smoke	煙	me ⁵⁵ ŋkhu ⁵³	悶客
fire	火	me ⁵³	麥	star	星	me ⁵⁵ tɕɿ ³⁵	墨治
fish	魚	y ⁵⁵	魚	stone	石	lo ³³ bo ⁵⁵	勒布
foot	脚	dzɿ ³³ dzɿ ³³	知之	ten	十	tshe ⁵⁵ tɕhi ⁵⁵	擇且
frost	霜	tɕɿ ³⁵	掣	thunder	雷	me ⁵⁵ dzi ⁵⁵	墨這
hair	髮	tɕi ⁵³	接	tooth	齒	fu ³³ me ⁵⁵	胡麻
hand	手	le ³³ pho ⁵⁵	勒迫	water	水	dzu ³⁵	者
head	頭	yu ³³ li ⁵⁵	物利	wind	風	me ⁵⁵ li ⁵⁵	墨利

A.2 Tosu

The following items are compiled from Nishida and Sūn (1990:17) and Sūn (1982b:242). The field location is given as “Mianning Town, Wǔsù” (冕宁城关伍宿). Sūn also provides the Chinese character transliterations from the Sino-Xenic Vocabularies, Volume 8 (《川八》).

gloss		form	translit.	gloss		form	translit.
arrive	到	pa ⁵⁵ la ⁵⁵	摆大	moon	月	ne ³³ ma ⁵⁵	良麻
belly	肚	do ⁵⁵ p ^h a ⁵⁵	度怕	nose	鼻	na ³³ ku ⁵⁵	啞孤
bone	骨	jo ⁵⁵ ku ⁵⁵	玉古	one	一	tɕi ³³	幾
cloud	雲	tɕa ¹³	甲	rain	雨	wa ⁵⁵ dzu ³³	凹鞠
earth	地	da ⁵⁵	大	s/he	他	the ⁵⁵	特
eye	眼	mi ⁵⁵ sɿ ³³	迷思	see	看见	do ⁵⁵	躲
fire	火	mi ³³	祕	sheep	羊	jo ³⁵	哟
fish	魚	ju ⁵⁵	淤	skinny	瘦	qa ⁵⁵	呷
foot	脚	gu ⁵⁵ du ³³	穀獨	smoke	煙	me ⁵⁵ ŋkhu ⁵³	麥卡
gold	金子	ni ⁵⁵	你	snow	雪	je ³³	噎
hail	雹	ts ^h u ¹³	族	star	星	ki ¹³	庚
hair	髮	tɕa ¹³	雜	stone	石	nio ⁵⁵ bu ³³	路補
hand	手	lo ³³ ko ⁵⁵	鑼鍋	tael	一两	tɕi ⁵⁵ lo ⁵⁵	计诺
have/exist	在	dzo ⁵⁵	觉	ten	十	tɕ ^h i ⁵⁵	齊
head	頭	ku ⁵⁵ dzo ³³	務鞠	thunder	雷	me ³³ dzi ³³	墨吉
horse	馬	mo ³³	摸	tooth	齒	ɕe ⁵⁵ ma ³³	謝馬
iron	铁	ʂa ⁵⁵	沙	water	水	vu ³³	威
liver	肝	ɕe ⁵⁵ p ^h u ³³	謝哺	wear	穿	ve ³¹	歪
lungs	肺	ts ^h e ³³ p ^h u ³³	擇哺	wind	風	me ³³ li ⁵⁵	墨利
monkey	猴	mi ³³	密	write	写	zi ⁵⁵ zi ⁵⁵	认

Appendix B

Index by Gloss

gloss	PEr	pages
(1) a while	*tɕ ^h u ¹	44, 103
(2) above, on top of	*wutɕ ^h a	70, 126
(3) accustomed to, in the habit of	*t ^h endzo	40, 117
(4) adult	*ts ^h ok ^h wæ	37, 131
(5) age	*tsip ^h rjo/ ts ^h ip ^h rjo ²	24, 37, 82
(6) air, breath, steam	*sē ¹	41, 110, 171, 196
(7) alive	*dents ^h u ¹	40, 101
(8) all / the whole	*kwa/ka ²	66, 130, 166, 188
(9) allow	*ts ^h wo ¹	38, 120
(10) and	*læ ¹	34, 123
(11) animal fat/oil	*zu ¹	42, 102
(12) ant	*berA/burA	20, 72, 84, 173, 199
(13) appear, come out	*hko ¹	62, 119
(14) armpit	*legija ¹	34, 127
(15) arrive	*præ ¹	23, 83
(16) ashes	*li ¹	36, 91, 165, 190
(17) ask / question	*menk ^h je	61, 63, 105
(18) aunt	*æniu ¹	50, 97
(19) axe	*but ^h ɑ ¹	21, 37, 129, 169, 189
(20) baby	*-zæzæ ²	42, 123
(21) back	*gwEmæ ²	69, 114, 170, 186, 192
(22) bamboo	*hi ²	74, 88
(23) bamboo steamer	*mp ^h ru	23, 24, 80
(24) bark (of dog)	*lolo/lulu ¹	35, 116, 183, 198
(25) barley	*mwEdzæ ¹	27, 114, 123
(26) barley (highland)	*ju ²	56, 102

gloss	PEr	pages
(27) basket (for straining)	*batʃi/batʃe	20, 112
(28) be (copula)	*ɰwi ¹	47, 94, 174, 200
(29) bean / soybean / pea	*tupri ¹	29, 100
(30) beans/peas	*nopri ¹	33, 116, 183, 201
(31) bear (fruit)	*sæ ¹	41, 123
(32) bear (n.)	*xui/ɲui ¹	64, 86, 136, 169, 202
(33) beard / moustache	*stiumui ²	32, 86
(34) beautiful	*mp ^h jo	21, 24, 117
(35) bed	*tʃ ^h a/tʃ ^h i ²	52, 130
(36) bee, honey	*bi ²	20, 93, 164, 185
(37) beggar	*hkwohkwosu ¹	62, 121
(38) believe / trust	*ndzelje ¹	57, 106
(39) belly	*diup ^h æ ¹	31, 98, 122
(40) big / large	*keke	67, 112
(41) bird, sparrow	*xwajo ¹	71, 119, 132
(42) give birth to (e.g. piglets)	*dzi ¹	39, 94
(43) bite	*kri ¹	60, 79
(44) bitter, salty	*dek ^h ra ¹	65, 83, 166, 188
(45) black	*denwa ¹	33, 132, 171, 201
(46) bladder	*biususu ¹	21, 41, 99, 101
(47) blind	*(mja)ko ²	66, 119
(48) feel bloated (stomach)	*debro ¹	23, 82, 173, 185
(49) block (the wind)	*k ^h ets ^h a ¹	37, 129
(50) blood	*ɣiu ¹	54, 98, 175, 192
(51) blow (away)	*demwo ¹	28, 120, 184, 201
(52) blow (one's nose)	*k ^h ui ¹	65, 86
(53) blow (the trumpet)	*ntʃ ^h a	53, 129
(54) blow (wind)	*li/le ¹	35, 109
(55) boat	*gu ¹	68, 102, 179, 186, 192
(56) boatman	*guku ¹	68, 102
(57) boil (of water)	*detsu ¹	38, 101, 181, 195
(58) bolt (of cloth)	*p ^h jo	21, 117, 139
(59) bone	*riku/rik ^h u ¹	65, 72, 79, 119, 185, 186, 192, 199
(60) borrow (money)	*ɕwi ¹	46, 98, 175, 196
(61) borrow (tools)	*hjē ¹	74, 89, 168, 202
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(63) bow / arrow	*mra ¹	27, 83, 174, 190
(64) bowl	*k ^h o	66, 119, 139, 173, 188
(65) bracelet	*letsu ¹	35, 52, 102
(66) braid / plait	*tsjēp ^h rje ¹	24, 107, 166, 187
(67) brains	*nwo ¹	33, 120, 183, 201
(68) branch / twig	*sēkæle ¹	66, 110, 124, 172, 190

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(70) breast, milk	*dʒaniu ¹	59, 103, 180, 201
(71) breastfeed / suckle	*ku	67, 102
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(79) burn, singe	*mp ^h ri ¹	25, 78
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(81) busy	*bibi ¹	20, 93, 174, 185
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(86) calf (yak)	*ndojo ¹	31, 116, 118
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(92) carry with pole, lift up	*dentɕ ^h u	45, 102
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(96) catch / grab / hold	*htfew ¹	58, 113
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(98) cattle (common, female)	*ŋuimæ	64, 86
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(431)	magpie	*t ^{hat} ^{ha} ¹	59, 127
(432)	make the bed	*k ^{hwo} ¹	65, 121
(433)	make, fix, repair	*nts ^{ha} ¹	39, 123

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(434) many / much	*mje/mja	27, 126, 167, 200
(435) mark / sign / boundary line	*nts ^h æ	40, 123
(436) marry (a woman)	*ʃu ²	56, 102
(437) mat	*wægæ	70, 124
(438) meal	*dzæ	39, 123, 139
(439) means / way	*ri ²	72, 79
(440) measles	*mp ^h rjo ¹	24, 25, 117
(441) meat	*ʃi ²	56, 95, 165, 197
(442) medicine	*hpje ²	26, 105, 166, 202
(443) meet / come across	*k ^h edzudzu ²	45, 103
(444) melon / gourd	*sēngæ ¹	63, 124
(445) melt, dissolve	*nelje/nelje ¹	36, 106, 176, 187, 193
(446) middle	*gołæ ²	36, 119, 125, 174, 199
(447) midnight	*ŋk ^h wohke ²	63, 121
(448) millstones	*rat ^h ɑ ¹	73, 128
(449) mirror	*mjalo ¹	27, 116
(450) mix / blend / mingle	*detʃ ^h u ¹	52, 102
(451) mole	*ʃinwa	54, 132
(452) money	*bædzje ¹	20, 53, 107
(453) monkey	*gætʃu ¹	58, 68, 104
(454) moon	*læp ^h e ¹	36, 108, 123, 167, 198
(455) morning	*taso ¹	29, 42, 76, 117, 128, 184, 196, 215
(456) mortar	*tsumu/ tsumo ²	28, 38, 117, 182, 194
(457) mosquito (relatively small)	*ʃwa	54, 132
(458) mother	*æmæ ¹	27, 125, 167, 200
(459) mouse	*gojo ¹	68, 119, 119, 173, 189
(460) mouth	*stiupe ¹	32, 108
(461) move	*tʃ ^h itʃ ^h i ¹	58, 95, 178, 188, 193
(462) mud	*tʃ ^h ulje ¹	58, 103, 106
(463) muddy / turbid	*tʃ ^h u ¹	58, 103
(464) mule	*htæ ¹	32, 123
(465) multicolored / patterned (cloth)	*bu ¹	20, 100, 184, 185
(466) mushroom	*hē ¹	74, 89, 181, 202
(467) musk	*lahē/lahō	74, 89
(468) mute	*ka ²	66, 130
(469) mute, dumb, stupid	*zikæ	42, 66, 124, 166, 187, 215
(470) nail	*ledzi/letsɑ ²	35, 38, 129, 195
(471) name	*mi ¹	27, 93, 177, 200
(472) narrow	*zuzu ²	55, 102
(473) navel	*tʃwapu ¹	57, 132, 171, 188, 193

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(474) near	* (ri)ni ¹	49, 72, 91, 176, 201
(475) neck	* ht(w)arA ²	32, 84, 177, 199
(476) needle	* ɣra/ge ¹	68, 84, 112, 173, 189, 192
(477) neg. imp.	* t^hæ ¹	29, 122, 167, 188
(478) nephew (brother's son)	* zjendzu/ zindzu ²	45, 103
(479) nest (bird)	* (xwajo)ntf^ho ¹	59, 118, 133, 176, 189, 193
(480) new	* si	41, 94, 178, 196
(481) next year	* soh ¹	42, 88
(482) night, evening	* ŋk^hwo ¹	63, 121
(483) nine	* ŋge ²	64, 112, 148, 180, 187
(484) nit	-	54, 113
(485) no problems, leisurely	* tosi māni	30, 94
(486) noon	* ndzo ²	59, 118
(487) nose	* stim(b)u ¹	32, 93, 100, 165, 202
(488) now	* amja/amjo/ æmi	27, 126
(489) obtain, get	* rA ¹	73, 84, 167, 199
(490) official (government)	* ndzomo ²	40, 116, 117, 180, 194
(491) old	* le ¹	35, 109, 175, 198
(492) old / elderly	* t^hemo/ momo ¹	27, 115, 170, 200
(493) old lady	* mamo	27, 115
(494) old man	* ts^homo	38, 115, 117
(495) on (the wall)	* tɕ^ha ¹	44, 126
(496) one	* te ¹	29, 109, 148
(497) oneself	* niuniu ²	50, 97
(498) onion / scallion	* xuibu ¹	71, 87
(499) open	* dexwa/ dehkwa ¹	62, 132
(500) orphan	* t^hiujo ²	57, 99, 118
(501) other person(s)	* ndzew ¹	40, 114
(502) otter	* ɕe ¹	54, 111, 169, 200
(503) outside	* njap^ho/ njop^ho ¹	49, 127
(504) owe/lose (money), suffer (ill-ness); hit (a target)	* zo ¹	42, 117
(505) pad	* lu	35, 101
(506) paddy fields	* (ju/zu)xwa ¹	48, 71, 133, 166, 202
(507) pair	* dze	53, 111, 139, 182, 194
(508) palm	* lep^hja ¹	21, 126
(509) pants / trousers	* za ¹	46, 126, 167, 196, 199

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(511) peach	*jVsi ¹	48, 96
(512) pear	*lirV ¹	35, 82
(513) peck at (of a chicken)	*nt ^h ont ^h o ¹	31, 116, 184, 189, 215
(514) peck, unit of dry measure for grain (= 1 decaliter)	*pa	19, 128, 139
(515) pen in (sheep)	*gje ²	61, 67, 105
(516) pepper (hot) / chili	*hō ¹	74, 89
(517) permit / allow	*wæ ¹	70, 131
(518) pestle	*-ŋgra ²	35, 61, 63, 84
(519) pheasant (long-tailed)	*ŋgwæ ¹	64, 131
(520) pheasant (short-tailed)	*tsexwo ¹	38, 121
(521) pick up	*deŋgwo ¹	64, 121, 183, 186, 192
(522) pig	*γwo ¹	70, 121, 172, 197
(523) pillar / column	*dzæp ^h æ ¹	38, 125
(524) pillow	*ŋgje ²	61, 64, 106, 177, 189
(525) pine	*tç ^h opu ²	44, 117, 170, 188, 196
(526) pitiable / pitiful	*çanæ ²	46, 125
(527) plant ash	*zu	46, 103
(528) play	*gægæ ¹	68, 124
(529) plow (n.)	*du ¹	30, 100
(530) plow / till (v.)	*la ¹	34, 128
(531) pluck (flowers)	*k ^h ui ¹	65, 86
(532) point / tip	*wutçu	70, 103
(533) poison	*dzu ¹	45, 103, 184, 186, 196
(534) porcupine	*p ^h ru	23, 80, 179, 215
(535) pour (water)	*ça	54, 129, 173, 200
(536) pregnant	*mæntç ^h ew	53, 113
(537) press (with palm or finger)	*zē ¹	42, 110
(538) pricked (on a thorn)	*ndzu	40, 101, 181, 194
(539) pull / drag / lead (a cow) along	*dents ^h a ¹	40, 129, 177, 215
(540) pull down (a house), untie	*net ^h o ¹	59, 118
(541) pull up (weeds)	*tsē	38, 110
(542) puncture (sthg.)	*nedzu	52, 102
(543) pus	*piu ¹	19, 99, 177, 186
(544) push / shove	*t ^h edzo ¹	45, 118, 172, 195
(545) put (into a container)	*nekwo ¹	67, 121
(546) put in order / arrange	*dzwa	53, 132
(547) quake (earth)	*zo ¹	46, 118
(548) rabbit	*myidzi ²	28, 94
(549) rain	*rgwæ ¹	62, 131, 168, 186

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(550) rainbow	*mek ^{ha} 1	65, 129
(551) raw / uncooked	*dzjēdzjē	43, 107, 177, 194
(552) red	*deni ¹	49, 91, 174, 201
(553) relatives	*yuini/ yuindzA ¹	61, 69, 86, 92, 125
(554) release / set free	*t ^h ele ¹	35, 109, 169, 198
(555) remember	*k ^h ents ^{hæ}	40, 123
(556) rescue / save	*ŋeʃu ¹	54, 102
(557) rest	*breni ¹	49, 91, 165, 201
(558) return (a pen)	-	71, 133
(559) return, go back	*dz ^w ew ¹	47, 113
(560) rib	*-ro	72, 82
(561) rice (cooked)	*k ^{hæ}	65, 124, 166, 215
(562) rice (paddy), seedling (rice)	*dzæ ¹	39, 123
(563) rice (uncooked)	*nt ^h ew ¹	57, 113
(564) rich	*djemo ¹	30, 116
(565) ride (a horse)	*ndze ¹	40, 110, 174, 195
(566) right (side)	*letçu ¹	34, 44, 103
(567) right / correct	*k ^h edu ¹	30, 101
(568) ring	*lengui ²	35, 63, 86
(569) rinse (the mouth)	*zwæzwæ	55, 131
(570) ripe, cooked, done	*dehi ¹	74, 88
(571) rise / get up	*degwo ¹	69, 121
(572) road	*ri ¹	72, 79
(573) rob / loot	*liu ¹	35, 98
(574) rock	*rik ^h wæ ¹	72, 131
(575) roll	*lala ¹	36, 129
(576) roll, turn (cause to)	*la ¹	36, 129
(577) root	*mbre ¹	26, 81
(578) rope / string	*bra ¹	23, 83
(579) rot	*net ^h iu ¹	57, 118
(580) run	*pjē	22, 107, 176, 186, 190
(581) run away / escape	*p ^h o ¹	18, 115, 183, 190
(582) rust	*k ^h enjk ^h wæ	63, 131
(583) s/he	*t ^h e ¹	29, 109
(584) saddle	*mbroza	26, 126
(585) saliva	*dziki ¹	45, 92, 174, 189, 195
(586) salt	*ts ^h i ²	37, 94, 136, 165, 193
(587) scald / burn	*mbu ¹	26, 100
(588) scales, steelyard	*kra ²	66, 83
(589) scoop up (water) / ladle	*kui ¹	67, 87
(590) scratch	*(n)tʃ ^h o ¹	52, 117, 172, 191

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(592)	see	*k ^h endo ¹	31, 116, 216
(593)	seed	*ge ¹	68, 112
(594)	sell	*ŋk ^h æ ¹	63, 124
(595)	send (a message)	*swa ¹	42, 132
(596)	send/dispatch (a person)	*pwEki/ pwEtçi	19, 114
(597)	separate, other	*k ^h æk ^h æ ¹	65, 77, 124
(598)	set (of the sun)	*netç ^{hiu} / netçi ^u ¹	45, 97, 178, 186, 195
(599)	seven	*sini/stē ²	32, 89, 148, 179, 202
(600)	sew (up)	*ndze ²	53, 111
(601)	shadow	*rAne,rAna ¹	72, 84, 128
(602)	shake / shiver	*ŋgrangra ¹	61, 63, 77, 83
(603)	sharp, pointed	*nt ^h wa ¹	31, 132, 171, 189, 215
(604)	sharpen, whet (a knife)	*desu ¹	41, 101, 174, 196
(605)	shave (the head)	*ru ¹	72, 80
(606)	sheep	*jō ¹	49, 90, 170, 198
(607)	shoe	*zi ¹	42, 94, 136
(608)	shoot, fire a shot	*tʂ ^h e ¹	52, 111
(609)	short	*dada ²	30, 128
(610)	shoulder	*ywebje/ ywobje ¹	70, 105, 121
(611)	shout	*kwo ²	67, 121, 180, 215
(612)	shout, yell	*rA/ywA	73, 131
(613)	shrivel up / wither	*nekwo ¹	67, 121
(614)	shy / bashful	*mbuʒew	26, 54, 113
(615)	Sichuan pepper	*ts ^h u	37, 101
(616)	sick, ache	*deni ¹	49, 91, 165, 201
(617)	sickle	*dzjē	43, 107
(618)	side, direction	*p ^h wo	18, 120, 170, 215
(619)	sieve / sifter	*antʂ ^h æ ²	73, 125
(620)	silk/satin	*ŋk ^h wo ¹	63, 121
(621)	silver	*ŋui ¹	65, 86, 182, 201
(622)	sing	*gæ ¹	68, 124, 166, 186
(623)	sister	*hjēmæ ¹	74, 89
(624)	sit down	*zi ¹	46, 92
(625)	six	*tʂ ^h u ²	52, 102, 148, 183, 188, 191
(626)	skin	*ŋgriupje ¹	60, 80, 175, 189, 191, 215
(627)	skinny	*hkwa	62, 132
(628)	skinny, get thin	*ŋæ ¹	64, 125
(629)	skirt	*(n)tʂ ^h æ	59, 124

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(631) slanted / askew	* t^heç^wiula	46, 98, 128, 216
(632) sleep, lie down	* k^hejo	48, 118, 184, 198
(633) slippery (road)	* dendzew¹	53, 113
(634) slow / clumsy	* diwæ¹	30, 70, 131
(635) small	* jiji¹	47, 92, 175, 198
(636) smell	* hēhē¹	74, 89
(637) smoke	* menjk^he²	63, 111, 180, 189
(638) smooth / glossy / sleek	* hihī	74, 88
(639) snake	* beri²	21, 72, 79, 182, 185
(640) snap (thread)	* tsē	38, 110
(641) snare / trap	* wæ¹	70, 131, 168, 197
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(643) snot (liquid)	* stiu(d)zære¹	32, 72, 81, 173, 202
(644) snow	* zu¹	46, 103
(645) soak / steep	* ndʒo¹	45, 118
(646) soft	* njonjo²	50, 118, 181, 201
(647) soldier, army	* mo	27, 116, 172, 200
(648) son	* jizæ¹	48, 123
(649) son-in-law	* mopæ²	27, 122, 172, 200
(650) sore / boil	* mjari/meri¹	28, 79, 168, 174, 200
(651) soul / spirit	* rAɬæ¹	72, 84, 123, 174, 199
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(653) sour	* detfew¹	57, 113, 181, 190, 192
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(657) speech, language, dialect	* hwō	74, 89
(658) speech, phrase, words	* gui¹	61, 68, 86
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(660) spirit, deity	* ɬæ	36, 123, 167, 199
(661) sputum, phlegm	* ts^hek^hɑ¹	38, 129, 172, 188
(662) square / rectangular	* ziudu²	30, 55, 98, 101
(663) squeeze (for milk)	* nts^hew	40, 114, 179, 194
(664) squirrel	* kætʃa	59, 66, 127
(665) stable, steady	* na	33, 128
(666) stand	* k^hendza¹	45, 126, 173, 195
(667) star	* kri¹	60, 78, 175, 191, 215
(668) be startled/afraid	* ni²	49, 91
(669) steal	* mp^hru¹	23, 25, 80, 180, 189
(670) steam (v.)	* mp^hru¹	23, 24, 80
(671) step / stride	* mbi	25, 93, 139

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(674) stinky, fishy-smelling	*deŋra ¹	64, 84, 166, 201
(675) stir-fry	*ndzæ ¹	40, 123
(676) stone	*lo ¹	35, 116, 183, 198
(677) stone, rock	*lo(bwo) ¹	20, 35, 116, 120
(678) story	*jajihĩ ²	47, 92
(679) stove (cooking) / range (kitchen)	*tsuk ^{hæ}	38, 124
(680) straight	*tɕutɕu	45, 103
(681) straw (rice)	*dzæbu ¹	39, 100
(682) strength (physical)	*htɕomo ²	53, 117, 120, 170, 190, 191
(683) stretch out (the arm)	*hwõ ¹	74, 89, 170, 202
(684) strike (the table)	*mp ^h jo ²	21, 25, 117
(685) stutterer	*lamo	34, 116, 129
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(688) sweat	*tɕu ¹	52, 102, 182, 190, 191, 191
(689) sweep	*p ^h ja	22, 126, 172, 187
(690) sweet	*det ^h iu ¹	57, 99, 180, 188, 192, 216
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(694) take off (clothes), peel	-	67, 133
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(696) tea	*dza ¹	59, 127
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(698) temple	*læwo	36, 119
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(700) ten (bound), -ty	*zi	42, 94, 148
(701) ten thousand	*mbwo ²	26, 120, 137, 149
(702) tender, young (plant)	*zæzæ ¹	42, 77, 123
(703) tendon	*bru ²	23, 80
(704) testicle	*zulje ¹	42, 102, 106
(705) tether (a cow)	*k ^h ep ^h ui ¹	19, 85, 178, 215
(706) thick	*rdurdu	33, 101, 181, 186
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(708) thin	*bi ¹	20, 93, 164, 185
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(711) think / idea / opinion	*ndzindza ²	45, 126
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(715) thorn / splinter	*nt ^h iu ¹	57, 99
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(717) thread (a needle)	*su ¹	41, 101
(718) three	*sjē ²	43, 107, 148, 182, 196
(719) three days from now	*miso	27, 93
(720) throat	*myihkwo ¹	28, 121, 178, 184, 200
(721) throw / hurl / toss	*ts ^h je ¹	43, 107
(722) thumb	*lemæ ¹	34, 108
(723) thunder	*megi ²	61, 67, 95, 178, 186
(724) Tibetan	*p ^h ui ¹	19, 86
(725) tie up, bind	*tsa ¹	38, 129
(726) tiger	*læ ¹	34, 123, 167, 198
(727) tight / taut	*k ^h esu ¹	41, 101
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(730) tobacco / cigarette	*ji ¹	48, 92
(731) today	*tæniu ¹	29, 76, 97
(732) tomb	*mo ¹	27, 116
(733) tomorrow	*soniu ²	42, 117
(734) tomorrow night / evening	*somwoŋk ^h wo	42, 117
(735) tongs (fire)	*kæmbæ ¹	66, 124
(736) tongue	*ht(s)ipi ²	32, 93, 165, 199
(737) tonight	*t(w)ah(w)ã ¹	29, 74, 76, 89, 172, 202
(738) tooth	*xui ¹	61, 71, 86, 168, 197
(739) topple / tear down (a wall)	*nedzo	45, 118
(740) torch	*ŋu	54, 102
(741) tree	*sēpu ¹	19, 100
(742) true	*ta ¹	29, 128
(743) trunk	*sengra ¹	63, 83
(744) turn (a corner)	*putç ^w ew/ gutç ^w ew	47, 113
(745) turn around	*ŋelesi ¹	35, 95
(746) kind of turnip (圆根 yuángēn)	*ŋe ¹	65, 112
(747) twenty	*nets ^h i ¹	37, 94, 148
(748) twist (hemp fibers) between the palms	*dego ¹	68, 119
(749) two	*ne ¹	33, 109, 148, 179, 201
(750) uncle (mother's brother)	*yweMo/ æywe ¹	69, 114, 170, 199

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(753) urine	*mbra ¹	24, 25, 83
(754) use	*zjē ¹	43, 107, 182, 196
(755) used / old	*p ^h ælæ ¹	18, 34, 122
(756) vagina	*htɕi ¹	46, 92, 180, 190, 196
(757) vat / jar	*tɕ ^h wæ	52, 131
(758) village	*xu ¹	71, 103, 168, 197
(759) vomit, spit	*mp ^h i ²	18, 24, 93, 165, 189
(760) waist	*dʒu ¹	58, 104, 183, 186, 193
(761) wait	*k ^h elo ¹	35, 116, 170, 198
(762) wake up	*detɕa ¹	44, 126
(763) walk	*xui	61, 71, 86, 168, 197
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(765) wall (stone)	*lodʒu ¹	35, 45, 103
(766) walnut	*k ^h arV ¹	65, 82
(767) want (to go)	*debwo ¹	20, 120
(768) want / need	*hō ¹	74, 89
(769) wash (clothes)	*ts ^h e ²	37, 110, 175, 193, 215
(770) watch, look	*hto	32, 116
(771) water / soup	*re ¹	72, 81, 175, 199
(772) water, river	*dʒiu ¹	57, 98, 175, 189, 193, 216
(773) we	*ado(ri) ¹	30, 82, 130
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(776) wear (a garment)	*deyui ¹	61, 69, 86, 168, 186
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(781) welcome, receive s.b.	*tse	38, 110
(782) west	*niu ¹	49, 97, 179, 201
(783) wet	*dzjēdzjē ²	43, 77, 107
(784) what	*(h)æne	74, 125
(785) wheat	*ʃæ ¹	56, 124
(786) when	*nik ^h æ ²	50, 123
(787) white	*deliu ¹	36, 98, 180, 190
(788) who	*se ²	41, 109, 180, 196
(789) wide / broad	*(d)zi ²	39, 94
(790) widow	*t ^h iumæ	57, 99, 180, 215
(791) willow	*mbro ¹	26, 82
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(795) window	*pwondzɔŋgæ ²	19, 125
(796) wing	*du(liu) ¹	30, 98, 100, 182, 186
(797) winnow	*ɭje ¹	36, 106
(798) winnowing tray/basket	*lip ^{hi} /læp ^{hi} ¹	18, 93
(799) wipe (the table)	*p ^h jap ^h ja ¹	22, 126
(800) wok (large, iron) / pan	*dziu ¹	53, 99
(801) wood / log	*sɛ ¹	41, 110, 177, 196
(802) work / labor	*belæ ¹	20, 34, 108, 123
(803) worry / be anxious	*sæmbæ ² neçi	46, 92
(804) wound	*lak ^h ɑ/lok ^h ɑ ¹	35, 65, 84, 132
(805) wrap (v.)	*k ^h ekuliu ¹	67, 98, 102
(806) write	*riu ¹	72, 80, 175, 192, 199
(807) yak	*rA	73, 84
(808) yak (male)	*bu ¹	20, 100
(809) yawn	*xɑ ¹ mu	71, 130
(810) year	*diutɕ ^h e ¹	31, 98, 111
(811) year after next	*ndzihi ²	58, 88, 95
(812) year before last	*ɕo(ji)hi ¹	54, 88
(813) yellow <yi?	*ɕiu ¹	54, 98
(814) yesterday	*janiu ¹	47, 76, 97, 127, 172, 215
(815) you	*ne/no ²	33, 109, 170, 201
(816) you (pl.)	*neri	33, 79
(817) you two	*nedzje/ nedza ¹	38, 129
(818) young lad / chap	*mp ^h rozæ ¹	23, 24, 42, 82, 170, 190
(819) younger sibling	*nina ¹	49, 128, 165, 201