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Approaching the prosodic system of Shǐxīng¹

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Summary

The present approach to the prosodic system of Shǐxīng, a Tibeto-Burman language spoken in the South-West of China, aims to bring out the combinatorial properties of its lexical tones through systematic manipulations of nouns and verbs.

Shǐxīng is phonologically monosyllabic, with two types of monosyllables: (i) lexically specified for tone (roots), exhibiting a three-way tonal contrast between high (H), low (L) and falling (HL) tones; and (ii) toneless (affixes and clitics). Units of two syllables or more (words and phrases) are formed out of these two types of monosyllables– viz. tonally specified and toneless–, and exhibit three contrastive tone patterns, similar to those of monosyllables– viz. /H/, /L/ and /HL/.

The domain for contrastive tone patterns in Shǐxīng obtains at the intersection of lexicon and grammar; it is the phonological word in the lexicon and the phonological phrase in the utterance. We propose that the likeness of the tone patterns observed on phonological words and phonological phrases is due to the similarity of the processes of tone pattern derivation operating at both levels: these processes involve either (i) two elements, of which each has its own tone pattern, or (ii) two elements, of which one is specified for tone and the other is toneless. Overall, two rules apply in determining the resulting tone pattern for a unit of two syllables or more. Rule 1: The tone pattern of the first element decides the tone pattern of the resulting combination. Rule 2: /L/ and /HL/ neutralize to /L/.

We discuss the exact application of these rules on the basis of combinations of tonally specified and toneless elements, bringing out additional regularities of the system. We also set out hypotheses concerning the prototypical domain for tone rule application in Shǐxīng, as well as the domain above it– that of stress-related phenomena.

The article is concluded by a summary of the organization of the tonal system of Shǐxīng– including a re-analysis of /HL/ as accent. Two appendices provide (i) information about the language materials and experimental setup, and (ii) one transcribed traditional Shǐxīng story so as to facilitate the reader’s evaluation of the proposed analysis.

1. Introduction

It is probably not a coincidence that the term ‘omnisyllabic’, which refers to a tone system where each syllable carries distinctive tone, was coined by a Tibeto-Burmanist– James A. Matisoff–: this type of

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tonal organisation is widespread in Sino-Tibetan, as also in neighbouring language families– Hmông-Miên, Tai-Kadai and Austroasiatic. However, in recent years, groundbreaking research into the prosodic systems of various Tibeto-Burman languages has revealed an increasing number of systems structured in terms of H and L level tones, for instance in Tibetan dialects (Sun 1997), rGyalrong (Sun 2005), and Kuki languages (Hyman & VanBik 2002, Hyman 2007). Overall, these newly explored prosodic systems exhibit a wide range of prosodic types, particularly in terms of the relevant tone-bearing units, the domain of tone, and the relationships of tones with syllable structure, consonants, and phonation types. Similarities with some Sub-Saharan (essentially Bantu) tone systems have been noted (cf. Hyman, *op. cit.*, and Evans 2008a, b), allowing for the application to Tibeto-Burman tone systems of models and methods inspired from approaches developed in African linguistics (e.g. Michaud 2006; Michaud & He Xueguang 2007).

The present study adds to the growing body of research on Tibeto-Burman level-tone systems by providing a description of the prosodic system of Shǐxīng (史兴语), a Tibeto-Burman language of South-West China. Its aim is twofold: to bring to light the salient characteristics of Shǐxīng prosody, and to place the system in its broader areal and typological context.

1.1. Shǐxīng: location and linguistic affiliation

Shǐxīng is spoken by approximately 1,800 people who reside along the banks of the Shuǐluò 水洛 river in Shuǐluò Township 水洛乡 of Mùlǐ Tibetan Autonomous County 木里藏族自治县 (WT *smi li rang skyong rdzong*). This county is part of Liángshān Yí Autonomous Prefecture 凉山彝族自治州 in Sichuān Province 四川省 in the People's Republic of China (PRC). Shǐxīng is currently classified as belonging to the Qiangic subgrouping of the Sino-Tibetan language family (Bradley 1997:36-37, Sūn Hóngkāi 2001, Thurgood 2003:17).

Shǐxīng is one of the lesser-known Sino-Tibetan languages spoken in the PRC. Only two brief outlines in Chinese exist. They focus on two distinct sub-varieties of this language: that of the Lower Reaches of the Shuǐluò river (Sūn Hóngkāi 1983), and that of its Upper Reaches (Huáng Bùfán & Rénzēng Wāngmǔ 1991). The present research builds on these studies as well as on the first author's fieldwork on the Upper Reaches variety of Shǐxīng (Chirkova 2007, forthcoming).

1.2. Shǐxīng tones

Shǐxīng is a tonal language. It has three lexical tones on monosyllables, namely (i) high, /H/; (ii) low, /L/, realized as [LH] in isolation; and (iii) falling, /HL/, as illustrated in Table 1:²

² The phonemic transcription used here essentially follows the conventions proposed for the Upper Reaches sub-variety in Huáng and Rénzēng (1991), with some minor adjustments based on the first author's fieldwork.

Shǐxīng has a simple syllabic structure: (C)(G)V, where initial consonant and glide are optional; glides have a very restricted distribution, so that in effect most syllables are simply (C)V.

tone	realisation in isolation	example		meaning
		representation	realization	
/H/	[H]	/ʰtsʰi/	[ʰtsʰi]	to measure
/L/	[LH]	/ʰtsʰi/	[Lʰtsʰi]	ploughshare
/HL/	[HL]	/ʰLtsʰi/	[ʰLtsʰi]	backbone

Table 1. A minimal set exemplifying the three-way tonal contrast on monosyllables

We analyze the surface realization of /L/ tone as [LH] as resulting from the principle that at least one syllable per tonal domain must have a tone other than [L] – said differently, at the surface level a tonal domain should have at least one [H] (cf. the dictum that “all-L words are dispreferred” proposed among universal tendencies of tone by Cahill 2007:5-6). Overall, addition of a final [H] tone in prosodic words and phrases having /L/ tone is cross-linguistically common; it is attested in such diverse languages as Osaka Japanese (Haraguchi 1999:19), Matengo and Kinatuumbi (Bantu; Odden 2005:415) and in Mùkǎ Qiāng 木卡羌 (Evans 2008c), where the final H is described as a “right-edge postlexical tone”.

Most Shǐxīng monosyllables are lexically specified for tone. A small number of monosyllables are toneless, namely (a) affixes, e.g. the nominal agentive and feminine suffix /-mi/ and the verbal directional prefix /bə-/; and (b) clitics: nominal postpositions, viz. case markers, e.g. the genitive marker /ji/; and verbal postpositions, viz. aspectual and modal markers and markers of nominalization, e.g. the nominalising agentive marker /hī/.

Similar to many other phonologically monosyllabic languages of East Asia, e.g. Vietnamese (Thompson 1965) or Deuri (Jacquesson 2005), Shǐxīng has a strong tendency towards disyllabicity in the lexicon through affixation, compounding and reduplication. In other words, the majority of Shǐxīng words are disyllabic, formed from two morphemes each of which may originally be tonally specified or toneless. A disyllabic Shǐxīng word may contain:

(i) one morpheme lexically specified for tone per word, as in:³

(a) monomorphemic words, e.g. /ʰsĕ_tǝĕ/ ‘domestic animals, cattle’ (WT *sems can*);

(b) words formed through affixation, i.e. combinations of one morpheme lexically specified for tone and one toneless morpheme. In verbs, the latter precedes the root, e.g. /Lbə-gi/ ‘pull out, lengthen’ (</ʰL-gi/ ‘pull’); in nouns, it follows the root, e.g. /ʰL-rua-mi/ ‘flea’ (</ʰL-rua/ ‘flea’); and

(c) words formed through reduplication, e.g. /L-tsa-tsa/ ‘bundle’;

(ii) two morphemes which are lexically specified for tone, viz. in words formed through compounding, e.g. /L-ra-ŋō/ ‘feather’ (< /L-ra/ ‘chicken’, /L-ŋō/ ‘hair’).

³ In our notations, the underscore sign (‘_’) separates syllables in a monomorphemic polysyllabic word; the hyphen (‘-’) separates morphemes in a word; the equals sign (‘=’) separates clitics from their host phonological word; and the pound sign (‘#’) separates tone pattern domains. A full list of symbols and abbreviations used in glossing is provided at the end of the article.

Shǐxīng words of two syllables or more as well as phonological phrases in connected speech exhibit a three-way tone pattern contrast similar to that of the three lexical tones, namely (i) /H/, (ii) /L/ and (iii) /HL/. These tone patterns are realized as follows:

(i) /H/ is attached to all the syllables within the tone domain, e.g. /^Hla-b3-la-mi/ ‘grandchildren’ realized as [^Hla-^Hb3-^Hla-^Hmi] ‘grandchildren’ or the phrase /^H?ǎ dzua=g3/ ‘hit the sheep’ (< /^H?ǎ/ ‘sheep’, /-dzua/ ‘hit’, the toneless volitional marker /g3/) realized as [^H?ǎ ^Hdzua=^Hg3]:

- (1) ^Hŋ3# ^H?ǎ dzua=g3#.
 1SG sheep hit=INT

‘I will hit the sheep.’

(ii) /L/ is attached to all syllables except the final one, which receives a [H] tone, analyzed here as a post-lexical addition. For example, /-ma_z1 sæ/ ‘cat’s blood’ (< /-ma_z1/ ‘cat’, /^HLsæ/) realized as [^Lma_^Lz1 ^Hsæ]:⁴

- (2) ^Lha=z1# ^Lma_z1 sæ# ∅ŋõ.
 this=TOP cat blood COP

‘This is cat’s blood.’

(iii) /HL/ is realized as [H] on the first syllable and [L] on the remaining syllables, e.g. /^HLrua-mi/ ‘flea’ (< /^HLrua/ ‘flea’, the toneless suffix /-mi/) realized as [^Hrua-^Lmi] or the compound /^HLsu-su=hĩ/ ‘collectors, gatherers; people who collect something’ (< /^HLsu-su/ ‘pick up, collect’, the toneless agentive nominalizer /hĩ/) realized as [^Hsu-^Lsu=^Lhĩ].

In sum, the three distinctive surface tone patterns of Shǐxīng, phonetically (i) a sequence of H tones, (ii) L on all syllables up to the penultimate, H on last syllable, and (iii) H on first syllable, L on following syllables, are here analysed as the phonetic implementation of /H/, /L/ and /HL/, respectively. We treat the mode of association of tones to syllables as one-to-one mapping of tones to available syllables, followed by spreading of the last tone, and finally by addition of a post-lexical final [H] in phrases that lack any [H] tone. Said differently, contrastive tone in Shǐxīng is distributed over the word as a whole, irrespective of the number of syllables, similar, for instance, to Kagoshima Japanese (Kubozono 2005:385). All in all, tonal output in units of two syllables or more in Shǐxīng is structured in terms of H and L level tones with the requirement of having at least one H tone per tone domain.

⁴ The copula /ŋõ/ is toneless, following the intonational fall at the end of the utterance. The tonelessness of an element is hereafter indicated by the “∅” sign.

1.3. Goals and method

The present study explores the relationship between the three lexical tones on monosyllables and the three contrastive surface tone patterns on words and phrases of two syllables or more (both phonological words and phonological phrases). The method used here consists in systematic derivations of di-, tri- and quadri-syllabic words and phrases out of mono- and disyllabic words, aiming to bring out the combinatorial properties of Shǐxīng tones.

On the level of words, derivations were performed through affixation and compounding. Notably, *productive* derivation being the essence of the manipulations attempted here, only productive affixes (namely, verbal prefixes) could be used. Nevertheless, regularities of tone pattern derivation revealed on the basis of productive derivation processes (in both words and phrases) allow to account for the processes of tone pattern derivation also in words with synchronically unproductive affixes as well as in those formed through reduplication (as detailed in §2.1.1).

On the level of phrases, di-, tri- and quadri- syllabic phrases were formed by adding one or several clitics to a word, or by combining two words: (i) modifying noun-noun compounds ('determinative compounds') and (ii) noun-verb (object-verb) phrases.

For example, in order to understand how the input tones of two monosyllabic words forming a disyllabic compound (word or phrase) relate to the resulting tone pattern of this compound, we examined all possible combinations of the input tones by combining /H/, /L/ and /HL/ monosyllabic words, respectively, with monosyllabic /H/, /L/, /HL/ and toneless words, leading to 12 combinations in total. Examples (3) through (6) combine a monosyllabic /H/ word with /H/, /L/, /HL/ and toneless words, respectively:

- (3) /^Hʔɛ/ 'sheep'+ /^Hrə/ 'skin' > /^Hʔɛ rə/ 'sheep skin'
 (4) /^Hʔɛ/ 'sheep'+ /^Lɬɛ/ 'neck' > /^Hʔɛ ɬɛ/ 'sheep neck'
 (5) /^Hʔɛ/ 'sheep'+ /^Lqʰə/ 'excrement' > /^Hʔɛ qʰə/ 'sheep excrement'
 (6) /^Hʔɛ/ 'sheep'+ the genitive particle /ji/ > /^Hʔɛ=ji/ 'of a sheep'

In a similar fashion, we examined all possible combinations of input tones in trisyllabic compounds, consisting of a monosyllabic element and a disyllabic element, and in quadri-syllabic compounds, consisting of two disyllabic elements. The target items were recorded first in isolation and then inside carrier sentences. (The interested reader is referred to Appendix I for additional information on the experiment: language materials, speaker and settings. Appendix II provides one transcribed traditional story to facilitate the assessment of the validity of our analysis and conclusions based on natural speech data.)

This pilot investigation allows us to formulate hypotheses concerning the tonal processes at play in Shǐxīng. From an experimental point of view, these production tasks allowed us to try a wide range of language materials and carrier sentences, paving the way for a larger experiment to test these hypotheses in a more focused and systematic way.

1.4. Tone domain: From monosyllables to phonological words and phonological phrases

The domain for the contrastive tone patterns in Shǐxīng obtains at the intersection of lexicon and grammar; it is the phonological word in the lexicon and the phonological phrase in the utterance (continuous speech).

A phonological word in Shǐxīng is a unit equal to or larger than one syllable, which, when larger than two syllables, is subject to the processes of consonant lenition and vowel harmony (Chirkova forthcoming). Phonological words in Shǐxīng coincide with grammatical words (a grammatical word is a grammatical unit between morpheme and syntactic phrase, which consists of a number of grammatical elements which always occur together, in a fixed order, and have a conventionalized coherence and meaning, Dixon & Aikhenvald 2002:35). Clitics are grammatical, but not phonological words in Shǐxīng, as they cannot serve as domain for the contrastive tone patterns.

A phonological phrase, on the other hand, is a unit consisting of two or more grammatical words. Its defining characteristic in Shǐxīng is that it serves as the domain of tone, similar to *bunsetsu* (文節) in Japanese (see, e.g., Uwano 1999, Kubozono 2007). When elicited in isolation, a phonological phrase is treated as the juxtaposition of the tone patterns of its constituting elements, as could be predicted from its status which differs from that of a grammatical word. Similar to words of two syllables or more, phonological phrases consist of tonally specified elements (words) and toneless elements (clitics), in various combinations.

In Shǐxīng, the level of the phonological word and that of the phonological phrase are indistinguishable in terms of tone patterns: the same tone patterns are found at both levels, viz. /H/, /L/ and /HL/, which are in turn similar to those of monosyllables. The surface similarity of the contrastive tone patterns of phonological words with those of phonological phrases in connected speech suggests that the two are of a similar nature, and obtain through the same tone pattern derivation rules.

We propose that the likeness of the tone patterns observed on phonological words and phonological phrases is due to the similarity of the processes of tone pattern derivation operating at both levels. These processes involve either (i) two elements, of which each has its own tone pattern, or (ii) two elements, of which only one is specified for tone and the other is toneless. Notably, both phonological words and phonological phrases are made out of an input that contains either:

(i) one element lexically specified for tone, i.e. phonological words formed through affixation or reduplication and phonological phrases composed of one word and a clitic, or

(ii) two or more elements lexically specified for tone, i.e. phonological words formed through compounding or phonological phrases consisting of two or more grammatical words (optionally followed by clitics).

Consequently, two different processes are involved:

(i) in the former case, the spread of tone from the tonally specified element to the totality of the higher-level unit; and

(ii) in the latter case, a tonal derivation, i.e. the derivation of a new tone pattern for the higher-level unit from the tone patterns of its constituting elements.

1.5. Tone pattern derivation rules

Two rules operate both on the level of phonological words and on that of phonological phrases, and apply both in tone spread and in tonal derivation (with some added complexities to be set out below). These two rules can thus be considered as tenets of the tonal system of Shǐxīng:

Rule 1: The tone pattern of the first element decides the tone pattern of the resulting combination.

Rule 2: /L/ and /HL/ neutralize to /L/ in derivations.

These two rules yield only three contrastive tone patterns, thus neutralizing some of the tonal contrasts of the constituting elements (e.g. H+H, H+L and H+HL all yield H, see examples 3-5). The regular application of these two rules can be counteracted by hypercorrection. When, in the course of work sessions, the language consultant was faced with a pair of items that had identical tones on the surface but were made out of tonally different elements (such as the /H/-/HL/ tone pair /^hʂɿ/ 'fishing net' vs. /^{HL}ʂɿ/ 'tongue', in which the /H/-/HL/ contrast neutralizes in the carrier sentence /^hha=zɿ # NP # ^oŋō/ 'This is NP.', see §3), he tended to realize each of the constituting elements with its lexical tone, in a conscious effort to avoid surface homophony of underlyingly distinct forms. These instances of hypercorrection are in fact part of a broader phenomenon: a salient characteristic of Shǐxīng prosody is that there is some room for stylistic variation in the division of the utterance into phonological phrases and words, so that a sequence of two or more words that does not form a tone domain– and that is therefore in principle not subject to tone pattern derivation rules–, e.g. a phrase quoted in isolation, can occasionally receive one of the contrastive tone patterns, i.e. function as a single tonal domain. Conversely, a phonological word can be stripped of its tone pattern, and be realized as the succession of its constituting elements, each with its own tone, as typical in careful speech, viz. in those contexts where clarity and intelligibility are called for. For example, in word elicitation sessions, our language consultant often rendered disyllabic verbs formed through prefixation with the input tones on the verb root, e.g. [L^ku-L^Htɕ^hæ] 'handle, pass over' (< /L^{tɕ}æ/ 'pass, give') or [L^{bə}-H^Lxi] 'throw, cast' (> /^{HL}k^hɿ/ 'throw'); in fluent speech, both forms are realized with /L/ tone pattern, i.e. /L^ku-tɕ^hæ/ and /L^{bə}-xi/.

2. Tone pattern derivation rules: from monosyllables to phonological words and phonological phrases

Section 2.1 outlines tone pattern derivations in cases where there is only one tonally specified element in the input, and section 2.2--cases where the input contains two tonally specified elements.

2.1. One tonally specified element in the input

Cases where the input contains only one tonally specified element include:

(i) on the level of phonological words: verbs formed through prefixation. This category can in turn be subdivided into two subsets, depending on whether the verbal root (mono- or disyllabic) is preceded by one single prefix, or by two prefixes.

(ii) on the level of phonological phrases: mono- and disyllabic words followed by clitics; again, from the point of view of the tonal output a distinction has to be drawn between association of one single clitic and of two clitics.

The results of the derivations are summarized in Tables 2 and 3, respectively. The symbol '∅' stands for toneless elements (prefixes and clitics). The vertical column in Table 2 represents prefixes (one or two per combination). The horizontal column in Table 3 stands for verb roots, which can be either mono- or disyllabic.

The vertical columns in Table 3 correspond to (mono- or disyllabic) words; the lines represent clitics. The intersection of columns and lines provides the tone pattern of the resulting combination.

		verb root		
		H	L	HL
prefix	∅	H	L	
	∅+∅	L		

Table 2. Tone patterns in verbs formed through prefixation; ∅ stands for toneless elements (here, prefixes)

			clitic	
			∅	∅+∅
word	H	H	HL	
	L	L		
	HL	HL		

Table 3. Tone patterns in phonological phrases formed from a word followed by one or two clitics; ∅ stands for toneless elements (here, clitics)

The following observations can be made about these two data sets (verbs formed through prefixation and phrases formed from a word followed by clitics).

Observation 1: The number of constituting elements is relevant to the resulting tone pattern.

In both cases, combinations of two elements (one prefix and one root or one word and one clitic) and combinations of three elements (two prefixes and a root or one word and two clitics) yield different tone patterns. Combinations of one tonally specified element with one toneless element, on the one hand, and those of one tonally specified element with two or more toneless elements, on the other hand, are therefore considered separately.

2.1.1. Combinations of one tonally specified element with a toneless element: (i) Word+clitic and (ii) Prefix+verb

(i) Word+clitic

The examined combinations of a word followed by one clitic (Table 3) conform with Rule 1 (“The tone pattern of the first element decides the tone pattern of the resulting combination”). The resulting tone pattern is an expansion of the tone of the word. For example:

(7) /^Lsɿ/ ‘select’ + the agentive nominalizing particle /hĩ/ > /^Lsɿ=hĩ/ ‘those who select’

(8) /^HLtsa/ ‘jump’ + the perfective marker /sɿ/ > /^HLtsa=sɿ/ ‘have jumped’

Rule 1 appears to account also for tone patterns on words formed with synchronically unproductive affixes, e.g. nouns formed through suffixation, as observed through nouns which exist as doublets: one form as monosyllable (bare root) and another suffixed (root+suffix) (Chirkova 2007). For example:

(9) /^Hçæ/ ‘louse’ and /^Hçæ-mi/ ‘louse’

(10) /^HLrua/ ‘flea’ and /^HLrua-mi/ ‘flea’

The same rule is likely to apply also in the case of verbs formed through reduplication, e.g. /^Ltsa-tsa/ ‘bundle’, in which we take the first element to be the root. This suggests that from the tone of a disyllabic noun formed through suffixation, or of a verb formed through reduplication, we can predict the tone of its first element, its root. This is useful for the analysis of bound roots. For example, the bound root of the verb /^Ltsa-tsa/ ‘bundle’ must carry /L/ tone.

In sum, toneless morphemes (suffixes and clitics) apparently do not affect the input tone pattern of their preceding host, a tonally specified element (morpheme or word respectively). The process of tone pattern derivation can hence be said to be a left to right spread of the tone of the tonally specified element, this tone pattern adjusting to the new number of syllables in the resulting compound.

A comparison of combinations of clitics with, on the one hand, monosyllabic host words and, on the other hand, disyllabic host words yielded an additional observation:

Observation 2: The shorter the resulting combination, the greater the integration of the toneless element.

In the derivations, host words and clitics are likely to be integrated into a single phonological phrase (and thus to be subject to Rule 1), if the host word is monosyllabic, e.g. in examples (7-8). If the host word is disyllabic, such integration can also take place; alternatively, the clitic may simply be treated as an extra, weak syllable to a fully articulated phonological word after all tone derivation rules have applied.

For example:⁵

- (11) ^Hhī=^Lt^hi=^Lrē# ^Hma# ^Hʃu-hī=⁰sɿ# ^Hbā# ^Hɛē#.
 person=that=AGT today Shu-person=ACC guest call

‘That man invites the Shǐxīng person to his place today.’

- (12) ^Hhī=^Lt^hi=^Lrē# ^Hma# ^Lʃa-wɜ=⁰sɿ# ^Hbā# ^Hɛē#.
 person=that=AGT today monk=ACC guest call

‘That man invites the monk to his place today.’

- (13) ^Hhī=^Lt^hi=^Lrē# ^Hma# ^Hsī-zu=⁰sɿ# ^Hbā# ^Hɛē#.
 person=that=AGT today carpenter=ACC guest call

‘That man invites the carpenter to his place today.’

(ii) Prefix+verb

The following observation holds for the examined cases of verbs formed through prefixation (Table 2):

If the tone of the root is H, the prefix assimilates to it, resulting in a H pattern for the combination, as in examples (14-17):

- (14) /miæ-/ ‘downward’ + /^Hçī/ ‘look’ > /^Hmiæ-çī/ ‘look down’

- (15) /bə-/ ‘outward’ + /^Hçī/ ‘look’ > /^Hbə-çī/ ‘look out’

- (16) /k^hu-/ ‘inward’ + /^Hçī/ ‘look’ > /^Hk^hu-çī/ ‘look inside’

- (17) /dʒi-/ ‘upward’ + /^Hçī/ ‘look’ > /^Hdʒi-çī/ ‘look up’

If the tone of the verbal root is /L/ or /HL/, the resulting tone is /L/, neutralizing the contrast between /L/ and /HL/ over the root. For example:

- (18) /dʒi-/ ‘upward’ + /^Lpiæ/ ‘climb’ > /^Ldʒi-piæ/ ‘climb up’

- (19) /k^hu-/ ‘inward’ + /^Ldzō-dzō/ ‘run’ > /^Lk^hu-dzō-dzō/ ‘look inside’

- (20) /miæ-/ ‘downward’ + /^{HL}kɰ/ ‘throw’ > /^Lmiæ-xɰ/ ‘throw down’

- (21) /miæ-/ ‘downward’ + /^{HL}pū/ ‘pile up’ > /^Lmiæ-pū/ ‘pile down, put down’

⁵ The mechanism involved in tone pattern placement in the phrase [^Hhī=^Lt^hi=^Lrē] ‘that man’ is detailed in §2.1.2.

2.1.2. Combinations of one tonally specified element with two or more toneless elements

When a combination consists of three elements (a verbal root preceded by two prefixes or a word followed by two clitics), the regularities that apply are markedly different from those noted above. In light of the above observations, one would expect word-clitics combinations to undergo a left-to-right spread of the tone of the host word. However, all examined combinations in our data neutralize to /HL/: the host word receives [H], and the clitics received [L] (see Table 3). This pattern is observed in (11-13) above, over the phrase [ʰhĩ=˩thi=˩rẽ] ‘that man’; see sentences (22-23), in which the verb is followed by three clitics:

- (22) ʰŋʒ# ʰqua=tsʰa=wu=sɿ#.
1SG weep=TERM=RES=PFV

‘I finished weeping.’ (< /ʰqua/ ‘weep’)

- (23) ʰŋʒ# ʰtsa=tsʰa=wu=sɿ#.
1SG jump=TERM=RES=PFV

‘I finished jumping.’ (< /ʰtsa/ ‘jump’)

In the case of verbs preceded by two prefixes, there is a similar neutralization of the three contrastive tones of the root to one single tone pattern: the prefixes receive [L] and the root [H]. For example:

- (24) ˩dzi-˩lɜ-ʰçĩ # ˩miæ-˩lɜ-ʰçĩ # ˩kʰu-˩lɜ-ʰçĩ # ˩bə-˩lɜ-ʰçĩ #
upward-PFV-look downward-PFV-look inward-PFV-look outward-PFV-look

‘have looked up and down, inside and outside’ (< /ʰçĩ/ ‘look’)

- (25) ˩çĩ-˩lɜ-ʰpʰɜ # ˩kʰu-˩lɜ-ʰpʰɜ #, ˩dzi-˩lɜ-ʰpʰɜ # ˩miæ-˩lɜ-ʰpʰɜ #
outward-PFV-dig inward-PFV-dig upward-PFV-dig downward-PFV-look

‘dig in and out, up and down’ (< /˩pʰɜ/ ‘dig’)

- (25) ˩çĩ-˩lɜ-ʰtsa # ˩kʰu-˩lɜ-ʰtsa #, ˩dzi-˩lɜ-ʰtsa # ˩miæ-˩lɜ-ʰtsa #
outward-PFV-jump inward-PFV-jump upward-PFV-jump downward-PFV-jump

‘jump in and out, up and down’ (< /ʰtsa/ ‘jump’)

This neutralization of all tones in both cases suggests that the input lexical tones are disregarded altogether. Instead, the root of the word in the case of verbs and the head of the compound in the case of word+clitics combinations, respectively, receives a [H] tone, and the other syllables a [L] tone. This differs radically from the tonal derivations over two-element combinations. We therefore propose

that when the number of elements per combination exceeds three, tone derivation rules no longer apply.

The neutralization of tones in combinations consisting of three elements, taken together with Observation 2 above (“The shorter the resulting combination, the greater the integration of the toneless element”), leads to the conclusion that the prototypical domain for the application of regular tone pattern derivation rules is restricted in Shǐxīng to two elements, and ideally, two syllables. This entails that in Shǐxīng, the lexical and phonological levels converge in favoring disyllabicity both in the lexicon and in the prosodic organization.

As for the way in which tone is assigned over units that exceed this size, we suggest that the H tone is assigned to the most “stress-prone” element within the combination: the root at the word level, and the head at the phrase level; whereas the remaining elements are unstressed, or L. Overall, the link between H tone and stress is well-attested cross-linguistically: H tone can be diachronically reinterpreted as stress under certain conditions— when it is obligatory, culminative, privative, metrical, or otherwise restricted in distribution. Synchronically, numerous systems are analytically indeterminate, and can be described either in tonal terms, or in terms of *stress realized as H tone* (see, for instance, Yoneda 2005:394; for a general discussion, see the special issue of *Phonology* entitled “Between stress and tone”: vol. 23.2, 2006).

2.2. Two tonally specified elements in the input

Cases where the input contains two tonally specified elements include:

- (i) modifying noun-noun compounds, formed from mono- and disyllabic nouns;
- (ii) noun-verb (object-verb) phrases, formed from mono- and disyllabic nouns and verbs, followed by a clitic.

The observed tone derivation patterns for combinations containing two tonally specified elements are summarized in Table 4. The lines and columns indicate the input tones: one column for each of the three possible contrastive tones of the first element, one line for each of the the three possible contrastive tone of the second element. The intersection gives the resulting tone pattern for the combination. Both the first and the second member of the compound can be mono- or disyllabic, so that Table 4 applies to di-, tri- and quadri-syllabic combinations alike.

		tone of the second element		
		H	L	HL
tone of the first element	H	H		
	L	L		
	HL	L		

Table 4. Tone patterns in determinative compounds and object-verb phrases

The resulting combinations obtain from the application of Rules 1 and 2 (§1.5), recalled here:

Rule 1: The tone pattern of the first member of the compound decides the tone pattern of the resulting combination.

Rule 2: /L/ and /HL/ neutralize to /L/.

In other words, it is again the tone pattern of the first element that determines the tone pattern of the compound. If the tone of the first element is /H/, the resulting tone pattern is /H/. If the tone of the first element is /L/ or /HL/, the resulting tone pattern is /L/. For example:

(27) /^Hʔǝ/ 'sheep'+ /^Hk^ha-miǝ/ 'footprint' > /^Hʔǝ k^ha-miǝ/ 'sheep hoof prints'

(28) /^Hʔǝ/ 'sheep'+ /^Lṁiǝ-tṣũ/ 'tail' > /^Hʔǝ ṁiǝ-tṣũ/ 'sheep tail'

(29) /^Hʔǝ/ 'sheep'+ /^{HL}ɲɜ-mi/ 'heart' > /^Hʔǝ ɲɜ-mi/ 'sheep heart'

(30) /^Lrõ/ 'horse' + /^Hrə/ 'skin' > /^Lrõ rə/ 'horse skin'

(31) /^Lrõ/ 'horse'+ /^Lɤǝ/ 'neck' > /^Lrõ ɤǝ/ 'horse neck'

(32) /^Lrõ/ 'horse' + /^{HL}q^hə/ 'excrement' > /^Lrõ q^hə/ 'horse excrement'

(33) /^{HL}bõ/ 'yak' + /^Hk^ha-miǝ/ 'footprint' > /^Lbõ k^ha-miǝ/ 'yak hoof prints'

(34) /^{HL}bõ/ 'yak'+ /^{HL}ɲɜ-mi/ 'heart' > /^Lbõ ɲɜ-mi/ 'yak heart'

(35) /^{HL}bõ/ 'yak' + /^Lṁiǝ-tṣũ/ 'tail' > /^Lbõ ṁiǝ-tṣũ/ 'yak tail'

In sum, the prosodic structure of compounds in Shǐxīng is determined by their initial member, as in Kagoshima Japanese (Kubozono 2005:386, Uwano 2007) or Shanghai Chinese (Yip 2002:187).

3. Discussion

Looking back on all the above observations on tone-pattern spreading and tonal derivation, we propose the following conceptualization of the tonal system of Shǐxīng.

This system is based on a binary opposition of /H/ and /L/ levels. The /HL/ tone appears to have a status of its own within the system, dissimilar to that of /H/ and /L/, as evidenced by (i) the neutralization of the /L/-/HL/ contrast to /L/ in derivations (see Tables 2 and 4) and (ii) the neutralization of the /H/-/HL/ contrast to /H/ in continuous speech. Examples (36-37) show two contrastive /H/-/HL/ pairs: /^Hʂɿ/ 'fishing net' vs. /^{HL}ʂɿ/ 'tongue', and /^Hpũ/ 'move' vs. /^{HL}pũ/ 'pile up'. The tonal contrast neutralizes to /H/ in continuous speech, so that example (36) stands for both 'This is a fishing net' and 'This is a tongue', whereas example (37) stands both for 'They are about to move' and 'They are about to pile up':

(36)	^L ha=zɿ#	^H ʂɿ#	∅ɲõ.
	this=TOP	fishing.net	COP
		tongue	

‘This is a fishing net.’

‘This is a tongue’

- (37) $\text{H}^{\text{H}}\text{i}=\text{r}\check{\text{e}}\#$ $\text{H}\text{p}\check{\text{u}}\#$ $\text{L}\text{t}\check{\text{c}}\text{i}-\text{t}\check{\text{c}}\text{i}\#$ $\text{L}\text{b}\text{z}=\text{j}\text{i}\#$.
 that=PL move do-do make=PROG
 pile.up

‘They are about to move.’

‘They are about to pile up.’

Notably, in view of the surface homophony of these tonally distinct forms and in the absence of a larger context to disambiguate them in the context of our experiment, our language consultant resorted to the strategy of hypercorrection (see §1.5). Thus, he insisted on realizing each member of each pair with its citation tone, so that his rendering of the sentence ‘This is a tongue.’ was $/\text{L}\text{h}\text{a}=\text{z}\check{\text{u}}\#$ $\text{H}^{\text{L}}\text{ʂ}\text{a}\#$ $\text{ʈ}\text{ŋ}\check{\text{o}}$ and that of the sentence ‘They are about to pile up.’ was $/\text{H}^{\text{H}}\text{i}=\text{r}\check{\text{e}}\#$ $\text{H}^{\text{L}}\text{p}\check{\text{u}}\#$ $\text{L}\text{t}\check{\text{c}}\text{i}-\text{t}\check{\text{c}}\text{i}\#$ $\text{L}\text{b}\text{z}=\text{j}\text{i}\#$.

In terms of tones, the neutralization of the /H/-/HL/ contrast to /H/ in continuous speech is difficult to account for satisfactorily. In the abstract, the tonal context in these examples would seem to be suitable for the realization of a [HL] contour over the verb; since this verb is preceded by H and followed by L, the deletion of the L portion of its contour does not result in the simplification of the tonal string for the utterance. Therefore, to account for both (a) the /HL/ to /H/ neutralization and (b) the /HL/ to /L/ neutralization in compound and phrase derivations, we propose to analyze the /HL/ category as the realization of an *accented* syllable. Lexical accent is lost in derivations; it is realized on accented words of two syllables or more; monosyllabic accented words fall into the /H/ tonal category.

This perspective implies that, from a synchronic point of view, the lexical items of Shǐxīng fall into one of four prosodic classes: H-toned; L-toned (provisionally leaving aside the issue of privacy); accented; and unspecified (i.e., toneless and unaccented).

As a complement to this flat synchronic statement, it appears useful to place the facts in diachronic perspective, as argued by Martinet, who referred to this approach as “synchronie dynamique” (Martinet 1990). The class of accented words in Shǐxīng is likely to be a recent development. In addition to the neutralisation patterns just cited, this is evidenced by:

(i) the relative rarity of accented words in the lexicon, as compared to /H/ and /L/ words;

(ii) the fact that /H/ and accent (/HL/) both tend to occur on syllables with voiceless initials; whereas /L/ tends to occur on syllables with voiced initials. (There are some exceptions, including high frequency basic vocabulary items, such as the second person singular pronoun $/\text{H}^{\text{L}}\text{ŋ}\text{i}/$.)

Consequently, the tonal system of Shǐxīng is likely to have originated in the basic tonal contrast of pitch registers: high vs. low, conditioned by syllable-initial consonants (as in Tibetan: Sun 1997, and in numerous East Asian languages: Haudricourt 1954, 1972). The latter observation suggests that

accent (/HL/) developed from the /H/ category, or in conjunction with the /H/ category. This issue will be investigated in future by examining more closely the structure of the Shǐxīng lexicon.

4. Conclusion and perspectives for future research

This study brought out what appear to be essential characteristics of the prosodic system of Shǐxīng:

- (i) the use of two tonal levels, [H] vs. [L]
- (ii) the requirement of at least one [H] tone per phrase (obligatoriness)
- (iii) the tonelessness of affixes and clitics
- (iv) the domain of tone patterns: the phonological word in isolation and the phonological phrase in continuous speech
- (v) a constraint on the length of the domain for tone rule application: (a) the prototypical domain is equal to two syllables; and (b) when the number of elements per combination exceeds three, tone derivation rules no longer apply
- (vi) the heterogeneity of the system, combining two basic lexical tones (/H/ and /L/) with a third lexical category, /HL/, here described as ‘accented’
- (vii) the prevalent association of the lexical /H/ tone with syllables with voiceless initials and of the lexical /L/ tone with syllables with voiced initials

Characteristics (i)-(iv) and (vii) are shared by the neighbouring languages due to common inheritance and to areal contact. Disentangling the two, in particular in view of a better understanding of the genetic affiliation of Shǐxīng, is one of the challenges for future work. Another challenge will consist in reflecting on the necessity for the recognition of higher-level prosodic domains, in addition to the level of tone-rule application (§1.5), and to the level where tone patterns are determined by what appear as stress rules (§2.1.2). Other tasks that are considered for future research include: enlarging the data corpus and verifying the data with more speakers; setting up phonetic experiments (concerning production and perception), for instance, to compare phonologically identical tonal patterns over phrases of different syntactic structure; and extending the investigation to the Lower Reaches dialect of Shǐxīng.

Abbreviations

1,2,3	first, second, third person pronoun
<	derived from
>	shows the outcome of a derivation
-	separates morphemes within a word
_	separates syllables within a monomorphemic polysyllabic word
=	separates a word from clitics
#	indicates a juncture between two tone domains
∅	indicates a toneless element
?	indicates a morpheme or word whose meaning is unclear
ACC	accusative
AGT	agent
ANM	animate
COM	comitative
CONJ	conjunction
COP	copula
DAT	dative
DUR	durative
GEN	genitive
INT	intention, volitional immediate future
IPFV	imperfective
LOC	locative
NEG	negation
NMLZ	nominalizer
PL	plural
PFV	perfective
PNT	patient
PROG	progressive
RES	resultative
SCS	successive marker, signaling the temporal succession of two events
SG	singular
TERM	terminative
TOP	topic
VOC	vocative
WT	Written Tibetan
[<i>italics</i>]	indicate personal names

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Appendix I: Experiment: Language materials, speaker, settings

The corpus for this study is made up of mono- and disyllabic grammatical words (both nouns and verbs), taken from the Shǐxīng vocabulary list compiled by the first author during her fieldwork in 2005 and 2006. For disyllabic words, we mostly used monomorphemic disyllabic words in the case of nouns, e.g. /^Hsɛ̃_tɕɛ̃/ ‘domestic animals (WT *sems can*)’ and /^Lma_zɿ/ ‘cat’; as well as some words formed through affixation, e.g. /^Hɲɜ-mi/ ‘heart’, /^Hɿpu-mi/ ‘frog’. In the case of disyllabic verbs, verbs formed through reduplication were mostly made use of, e.g. /^Hsu-su/ ‘pick up’, /^Htō-tō/ ‘chat’.

The following derivation strategies were made use of:

(i) compounding in nouns and verbs: modifying noun-noun compounds; object-verb compounds; and combinations of a noun or a verb with one or two clitics, notably the genitive marker /ji/, the dative marker /no/, the accusative marker /sɿ/, the nominalising agentive marker /hĩ/ and the nominalising patient marker /gɜ/

(ii) affixation in verbs: derivation of a verb from a mono- or di-syllabic root and one of the directional prefixes: (a) /dzi-/ ‘upward’, (b) /miæ-/ ‘downward’, (c) /k^hu-/ ‘inward’, (d) /bə-/ ‘outward’, (e) /ɕi-/ ‘hence’ (opposite to /k^hu-/ ‘forth’ in set expressions) or (f) the perfective prefix /lɜ-/; or from a root and one of the directional prefixes and the perfective prefix together.

For each resulting di-, tri- and quadri-syllabic unit we examined the relationship between the input and the resulting surface tones.

The first stage of the experiment consisted in recording the target items in isolation and then inside carrier sentences. Some examples of the carrier sentences are:

For nouns:

(38) ^Lha=zɿ# NP # ɕɲō.
this=TOP COP

‘This is NP.’

(39) ^Hhĩ=^Lt^hi=^Lrɛ̃=^Lzɿ# ^Hma # NP=sɿ# ^Hbā # ^Hɕɛ̃=ji#.
person=that=AGT=TOP today NP=ACC guest call=PROG

‘Today that man invites NP to his place.’

For verbs:

(40) ^Hɲɜ # V=gɜ#.
this V=INT

‘I will V.’

- (41) ʰu-wu=ʋõ# V=gɜ# ʰdzõ#.
3SG-family=DAT V=NMLZ.PNT exist

‘They have a lot of V NMLZ.PNT.’

The use of carrier sentences was initially intended to stabilize phonetic realization, for ease of comparison of F0 curves across items. In the end, the use of carrier sentences yielded a number of minor differences in tone realization, such as the late realization of the LH and HL tone patterns in disyllabic words (free variation of L.H/L.H and H.L/H.HL patterns respectively). For example:

- (42) ʰa=zɿ# ʰpʰa_ʰza# ɔ̃.
this=TOP shoes COP

‘These are shoes.’ (< [ʰpa_ʰza] ‘shoes’ in isolation)

- (43) ʰa=zɿ# ʰʃɛ=ʰji ʰkʰa-ʰmiæ# ɔ̃.
this=TOP sheep=GEN hoof-below COP

‘These are sheep hoof prints.’ (< [ʰʃɛ ʰkʰa-ʰmiæ] ‘sheep hoof prints’ in isolation)

The second stage of the experiment consisted in systematic derivations of tone patterns in di-, tri- and quadri-syllabic words or compounds. The target items were recorded again first in isolation and then in the appropriate carrier sentence.

The data were elicited in four work sessions in March-April 2008, during the joint fieldwork of the two authors in the town of Qiáowǎ 乔瓦, the administrative seat of the Mùlǐ Tibetan Autonomous County. The language consultant who took part in the study is Mr Lǚróng Duōdīng 鲁绒多丁 [ʰdzi-ʰʃɛ ʰlu-ʰzũ ʰto-ʰdĩ] (WT *blo bzang stobs ldan*), the principal language consultant of the first author since 2005.⁶

The recordings took place in a quiet room that had been padded up with household linen to reduce reverberation as far as possible. An electroglottographic signal was recorded simultaneously with the audio signal by a Fostex FR2-LE digital recorder (24-bit, 44,100 Hz). The equipment used was an EG2-PC two-channel electroglottograph (Rothenberg 1992) and a Beyer M88 microphone.

⁶ Lǚróng Duōdīng is a native speaker of the Upper Reaches sub-variety of Shǐxīng, originally from Lánmǎn [ʰlǎ-ʰmǎ] hamlet in Shuǐluò Township. In addition to Shǐxīng, he is proficient in the local variety of Chinese, the local variety of Tibetan (Kami Tibetan 嘎米藏语) and in the local variety of Prinmi (Púmǐ 普米藏语). He has lived and worked in the town of Qiáowǎ, the administrative seat of the Mùlǐ Tibetan Autonomous County, for several decades, but he visits his home township regularly and speaks his native language at home with his wife, also a native of Shuǐluò, thereby maintaining a good proficiency in Shǐxīng.

Appendix II: “Daly Kuku and Gutsen Padzhe”

1. ^HLji-ŋɛ # ^HLji-ŋɛ # ^Hhĩ # ^Lda-^Hlɐ-^Lku-^Lku # ^Hma=hĩ # ^Ldzĩ # ^LHji=∅dzõ.⁷

^H Lji-ŋɛ	^H Lji-ŋɛ	^H hĩ	^L da- ^H lɐ- ^L ku- ^L ku	^H ma=hĩ
previous-?	previous-?	person	<i>personal.name</i>	name=NMLZ.AGT

^Ldzĩ ^LHji=∅dzõ.

one exist.ANM=DUR

Long time ago, there was a man by the name of Daly Kuku.

2. ^Hha # ^Hhĩ # ^Hha # ^HLɣɑ-duɜ.

^H ha	^H hĩ	^H ha	^H Lɣɑ-duɜ
this	person	this	strength-big

He was very strong.

3. ^Ltʰɜ-læ=zɿ # ^Hgu-tsɛ-pa-tɕɜ # ^HLpɜ=hĩ # ^Ldzĩ=lɜ # ^LHji=∅dzõ.

^L tʰɜ-læ=zɿ	^H gu-tsɛ-pa-tɕɜ	^H Lpɜ=hĩ
that-become=TOP	<i>personal.name</i>	speak=NMLZ.AGT

^Ldzĩ=lɜ ^LHji=∅dzõ

one=also exist.ANM=DUR

Then, there was also a man called Gutsen Padzhe.

4. ^Ltʰi=lɜ # ^HLɣɑ-duɜ=hĩ # ∅ŋõ.

^L tʰi=lɜ	^H Lɣɑ-duɜ=hĩ	∅ŋõ
3SG-also	strength-big=person	COP

He, too, was very strong.

5. ^Ldzi-ma # ^Hgu-tsɛ-pa-tɕɜ=∅rɛ̃ # ^Lbi=sɿ # ^Lda-^Hlɐ-^Lku-^Lku=∅kɜ # ^HLɣɑo-tsʰi=gɜ # ^HLɕyɜ=lɿ=ŋõ.

^L dzi-ma	^H gu-tsɛ-pa-tɕɜ=∅rɛ̃	^L bi=sɿ	^L da- ^H lɐ- ^L ku- ^L ku=∅kɜ
one-day	<i>personal.name</i> =AGT	walk=SCS	<i>personal.name</i> =at

⁷ Note the unusual tone pattern of the name of the main protagonist, i.e. [^Lda-^Hlɐ-^Lku-^Lku] ‘Daly Kuku’. Personal names in Shǐxīng normally carry /H/ tone pattern, e.g. /^Hgu-tsɛ-pa-tɕɜ/ or /^Hlu-zũ-to-dĩ/ (/^Ldzi-sɛ̃/ in /^Ldzi-sɛ̃ # ^Hlu-zũ-to-dĩ / is a place name). At present, we do not have any explanation for the atypical tone pattern of the name of the main protagonist of the story, neither do we know what the name means. In transcriptions, the name is provided in phonetic transcription, i.e. [^Lda-^Hlɐ-^Lku-^Lku].

H_Lɣɑo-ts^hi=gɜH_Lɕyɜ=L_{li}=L_ŋõ

strength-measure=INT

think=NMLZ.PFV=COP

One day, Gutsen Padzhe wanted to measure strength with Daly Kuku.

6. L^hɜ=ma=li # H_{gu}-ts^hẽ-pa-tɕɜ # L_{da}-H_lə-L_{ku}-L_{ku}=ø_{ji} # L_{dzo}-hõ=no # H_{pao}=L_{tɕ}^hu=L_{li}=L_ŋõ.L^hɜ=ma=liH_{gu}-ts^hẽ-pa-tɕɜL_{da}-H_lə-L_{ku}-L_{ku}=ø_{ji} L_{dzo}-hõ=no

that=day=NMLZ.PFV

*personal.name**personal.name*=GEN

house=inside

H_{pao}=L_{tɕ}^hu=L_{li}=L_ŋõ

arrive=come=NMLZ.PFV=COP

That day he arrived at Daly Kuku's house.

7. L_{da}-H_lə-L_{ku}-L_{ku} # L_mɜ=L_Hji=L_{li}=L_ŋõ.L_{da}-H_lə-L_{ku}-L_{ku}L_mɜ=L_Hji=L_{li}=L_ŋõ*personal.name*

NEG=exist.ANM=NMLZ.PFV=COP

Daly Kuku was not at home.

8. L_{da}-H_lə-L_{ku}-L_{ku}=H_{ji} # L_{ts}^h-dzyɜ=z_ɿ # L_{dzo}-hõ # L_Hji=ø_{dzo}.L_{da}-H_lə-L_{ku}-L_{ku}=H_{ji}L_{ts}^h-dzyɜ=z_ɿL_{dzo}-hõL_Hji=ø_{dzo}*personal.name*=GEN

life-friend=TOP

house

exist.ANM=DUR

Daly Kuku's wife was at home.

9. H_{gu}-ts^hẽ-pa-tɕɜ # L^hu-wu # L_{dzo}-hõ # H_k^hu-pao=L_{tɕ}^hu=L_{li}=L_ŋõ.H_{gu}-ts^hẽ-pa-tɕɜL^hu-wuL_{dzo}-hõH_k^hu-pao=L_{tɕ}^hu=L_{li}=L_ŋõ*personal.name*

3SG-family

house

inward-arrive=come=NMLZ.PFV=COP

Gutsen Padzhe entered their house.

10. H_ŋɜ # L^hɜ-wu # H_ɣɑ-dɜ=gɜ # H_Lpɜ=L_{li}=L_ŋõ.H_ŋɜL^hɜ-wuH_ɣɑ-dɜ=gɜH_Lpɜ=L_{li}=L_ŋõ

1SG

3SG-COM

strength-perform-INT

speak=NMLZ.PFV=COP

"I was to fight with him!", he said.

11. L^hɜ-læ # L_{da}-H_lə-L_{ku}-L_{ku}=ø_{ji} # L_{ts}^h-dzyɜ=ø_{rẽ} L_{zu}=s_ɿ # H_{ts}^hɜ # L_{dzo}-bu=ø_ɕõ # L_k^hu-tɕ^ha=s_ɿ # L_{dzy}ɜ-H_lɜ=L_{tɕ}^hi=L_{li}=L_ŋõ.L^hɜ-læL_{da}-H_lə-L_{ku}-L_{ku}=ø_{ji}L_{ts}^h-dzyɜ=ø_{rẽ}L_{zu}=s_ɿH_{ts}^hɜ

this-become

personal.name=GEN

life-friend=AGT

be.afraid=SCS

salt

L_{dzo}-bu=ø_ɕõL_k^hu-tɕ^ha=s_ɿL_{dzy}ɜ-H_lɜ=L_{tɕ}^hi=L_{li}=L_ŋõ

chest=DAT

inward-seize=SCS

lift=do=NMLZ.PFV=COP

Then, scared out of her wits, the wife of Daly Kuku grabbed the salt cupboard and lifted it.

12. ^Hgu-tsĕ-pa-tɕɜ # ^Ldō=læ # ^Hl^hi # ^Hɕy3=Lj=Ljō.

^Hgu-tsĕ-pa-tɕɜ ^Ldō=læ ^Hl^hi ^Hɕy3=Lj=Ljō
personal.name see=become that think=NMLZ.PFV=COP

Upon seeing that, Gutsen Padzhe thought the following.

13. ^Hha# ^Ha-me # ^Hhī ^Hha=rĕ=ɔlɜ # ^Ldɜ3-bu=lɜ # ^Ldɜy3-lɜ # ^Ldō=ji.

^Hha ^Ha-me ^Hhī ^Hha=rĕ=ɔlɜ ^Ldɜ3-bu=lɜ
 this VOC-mother person this=AGT=also chest=also

^Ldɜy3-lɜ ^Ldō=ji
 lift be.able=PROG

“This woman can lift a whole cupboard!”

14. ^Lda-Hlĕ-Lku-Lku=ɔli # ^Ls3-bɑ=lɜ # ^Hɣɑ # ^Hka-pao # ^Lk^hu3=^Hso-ti # ^Hɕy3=Lj=Ljō.

^Lda-Hlĕ-Lku-Lku=ɔli ^Ls3-bɑ=lɜ ^Hɣɑ ^Hka-pao ^Lk^hu3=^Hso-ti
personal.name=?NMLZ.PFV compare=also strength very big=probably

^Hɕy3=Lj=Ljō
 think=NMLZ.PFV=COP

“Daly Kuku is probably even stronger than she is,” he thought.

15. ^Lse-ji=zɿ # ^Lhda # ^Lt^h3=mu=tʂɿ # ^Lb3=sɿ # ^Lɜu=sɿ # ^Lbə-Htsɑ=Lxa=Lj=Ljō.

^Lse-ji=zɿ ^Lhda ^Lt^h3=mu=tʂɿ ^Lb3=sɿ ^Lɜu=sɿ
 then-?=TOP nothing ?=NEG=delay make=SCS be.afraid=SCS

^Lbə-Htsɑ=Lxa=Lj=Ljō
 outward-go=go.PFV=NMLZ.PFV=COP

Then, without saying a word, he ran away in fear.

16. ^Lma-lɜ-bua # ^Lda-Hlĕ-Lku-Lku # ^Ldɜō-hō # ^Hla-Hpao=Lt^hu=Lj=Ljō.

^Lma-lɜ-bua ^Lda-Hlĕ-Lku-Lku ^Ldɜō-hō ^Hla-Hpao=Lt^hu=Lj=Ljō
 day-?LOC-back *personal.name* house PFV-arrive=come=NMLZ.PFV=COP

Then Daly Kuku returned home later that afternoon.

17. ^Lt^h3-læ # ^Lt^hi=ji # ^Lts^hɿ-Hdɜy3=ɔrĕ # ^Lda-Hlĕ-Lku-Lku=ɔno # ^Hp3=Lj=Ljō.

^Lt^h3-læ ^Lt^hi=ji ^Lts^hɿ-Hdɜy3=ɔrĕ ^Lda-Hlĕ-Lku-Lku=ɔno
 this-become 3SG=GEN life-friend=AGT *personal.name*=DAT

^Hp3=^Lli=^Lŋō

speak=NMLZ.PFV=COP

His wife told Daly Kuku.

18. ^Hma # ^Hgu-tsē-pa-tɕ3 # ^La=l3 # ^Ltɕ^hũ=s1#, ^Lŋi=wu # ^Hʌɑ-d3=g3 # ^HLp3=ji.

^H ma	^H gu-tsē-pa-tɕ3	^L a=l3	^L tɕ ^h ũ=s1#,	^L ŋi=wu
today	<i>personal.name</i>	here=LOC	come=PFV	2SG=COM

^Hʌɑ-d3=g3

^HLp3=ji

strength-perform=INT

speak=PROG

“Gutsen Padzhe came over today, saying he wanted to fight with you.”

19. ^Lt^h3=læ # ^Lda-^Hlɛ-^Lku-^Lku # ^Lrē=zɿ # ^LHza # ^LHji # ^HLp3=^Lli=^Lŋō.

^L t ^h 3=læ	^L da- ^H lɛ- ^L ku- ^L ku	^L rē=zɿ	^L Hza	^L Hji	^H Lp3= ^L li= ^L ŋō
this=become	<i>personal.name</i>	AGT=TOP	where exist.ANM	speak=NMLZ.PFV=COP	

Daly Kuku asked: “Where is he?”

20. ^Lt^hi=ji # ^Lts^hɿ-dzy3 # ^Lrē=zɿ # ^HLp3=^Lli=^Lŋō.

^L t ^h i=ji	^L ts ^h ɿ-dzy3	^L rē=zɿ	^H Lp3= ^L li= ^L ŋō
3SG=GEN	life-friend	AGT=TOP	speak=NMLZ.PFV=COP

His wife answered.

21. ^Hgu-tsē-pa-tɕ3 # ^Hŋo-wu=ɔk3 # ^Hpao=læ #, ^Hŋ3 # ^Lzu=s1 # ^Hts^h3 # ^Ldʒ3-bu # ^Ldzy3-dzi-l3 # ^Ld3=s1 #,
^Lt^h3=læ=zɿ # ^LHda # ^Lt^h3=mu=tɕ1 # ^Lb3=s1 # ^Htsɑ=^Lwu=^Ls1.

^H gu-tsē-pa-tɕ3	^H ŋo-wu=ɔk3	^H pao=læ	^H ŋ3
<i>personal.name</i>	ourselves-family=at	arrive=become	1SG

^L zu=s1,	^H ts ^h 3	^L dʒ3-bu	^L dzy3-dzi-l3	^L d3=s1
be.afraid=SCS	salt	chest	lift-one-lift	make=PFV

^L t ^h 3=læ=zɿ	^L Hda #	^L t ^h 3=mu=tɕ1 #	^L b3=s1
that=become=top	nothing	?=NEG=delay	perform=SCS

^Htsɑ=^Lwu=^Ls1

go=RES=PFV

“When Gutsen Padzhe came to our place, I was so afraid that I lifted the cupboard in the air, and seeing this, he went away without saying a word.”

22. ˩ma-˩sɿ-˩ma-˩li # ˩da-˩lɛ-˩ku-˩ku # ˩li # ˩bi=sɿ # ˩gu-tsɛ-pa-tɕɜ # ˩la-ɕæ # ˩xa=˩li=˩ŋõ.

˩ma-˩sɿ-˩ma-˩li ˩da-˩lɛ-˩ku-˩ku ˩li ˩bi=sɿ ˩gu-tsɛ-pa-tɕɜ
the.second.day *personal.name* again walk=SCS *personal.name*

˩la-ɕæ ˩xa=˩li=˩ŋõ
PFV-search go.PFV=NMLZ.PFV=COP

The following day, Daly Kuku went to look for Gutsen Padzhe.

23. ˩tʰɜ=læ # ˩gu-tsɛ-pa-tɕɜ # ˩tʰu-bu-za-hĩ # ˩ji=no # ˩ji=˩li=˩ŋõ.

˩tʰɜ=læ ˩gu-tsɛ-pa-tɕɜ ˩tʰu-bu-za-hĩ ˩ji=no
that=become *personal.name* other.side field-inside

˩ji=˩li=˩ŋõ
exist.ANM=NMLZ.PFV=COP

Gutsen Padzhe found him in a field on the other side of the river.

24. ˩tʰɜ=læ # ˩da-˩lɛ-˩ku-˩ku # ˩tɜ # ˩pao=˩tɕʰu=˩li=˩ŋõ#, ˩gu-tsɛ-pa-tɕɜ # ˩da-˩lɛ-˩ku-˩ku#
˩dõ=˩tɕi=˩li=˩ŋõ#, ˩zu=wu # ˩pu=wu=sɿ # ˩zɿ-bɜ # ˩dzi-wu=ŋi# ˩wɜ-suɜ-hĩ # ˩dzyɜ-lɜ=sɿ # ˩tʰa-pao #
˩ku-la # ˩sũ=ku_ri # ˩to-˩wu=˩tɕi=˩li=˩ŋõ.

˩tʰɜ=læ ˩da-˩lɛ-˩ku-˩ku ˩tɜ ˩pao=˩tɕʰu=˩li=˩ŋõ,
this=become *personal.name* there arrive=come=NMLZ.PFV=COP

˩gu-tsɛ-pa-tɕɜ ˩da-˩lɛ-˩ku-˩ku ˩dõ=˩tɕi=˩li=˩ŋõ,
personal.name *personal.name* see=do NMLZ.PFV=COP

˩zu=wu ˩pu=wu=sɿ ˩zɿ-bɜ ˩dzi-wu=ŋi ˩wɜ-suɜ-hĩ
be.afraid=RES IPFV=RES=SCS plough.ox one-pair=CONJ cow-lead-NMLZ.AGT

˩dzyɜ-lɜ=sɿ ˩tʰa-pao ˩ku-la ˩sũ=ku_ri
lift=SCS head ?around three=circle

˩to-˩wu=˩tɕi=˩li=˩ŋõ
circle=RES?=do=NMLZ.PFV=COP

When Daly Kuku arrived there, Gutsen Padzhe saw him and, scared out of his wits, grabbed the pair of oxen together with the boy leading the oxen, lifted all of them and swung them three times around his head.

25. ˩gu-tsɛ-pa-tɕɜ # ˩tʰi # ˩pɜ=˩li=˩ŋõ.

˩gu-tsɛ-pa-tɕɜ ˩tʰi ˩pɜ=˩li=˩ŋõ

personal.name that speak=NMLZ.PFV=COP

Gutsen Padzhe then [pretended he was not himself, and] said.

26. ˩ni=wu # ˩ɣɑ-d3=g3 # ˩Lp3=hĩ # ˩ŋ3 # ˩Lmō=fhō #, ˩gu-tsẽ-pa-tɕ3 # ˩ŋ3 # ˩Lmō=fhō, ˩tʰi # ˩p3=læ #, ˩da-˩lɛ-˩ku-˩ku # ˩tsɑ=˩xa=˩li=˩ŋō.

˩ni=wu	˩ɣɑ-d3=g3	˩Lp3=hĩ	˩ŋ3	˩Lmō=fhō
2SG=COM	strength-perform=INT	speak-NMLZ.AGT	1SG	NEG=COP

˩gu-tsẽ-pa-tɕ3	˩ŋ3	˩Lmō=fhō	˩tʰi	˩p3=læ
<i>personal.name</i>	1SG	NEG.COP	that	speak=become

˩da-˩lɛ-˩ku-˩ku	˩tsɑ=˩xa=˩li=˩ŋō
<i>personal.name</i>	go=go.PFV=NMLZ.PFV=COP

"I am not the one who wanted to fight with you. I am not Gutsen Padze." So, Daly Kuku went away.

Daly Kuku and Gutsen Padzhe

Long time ago, there was a man by the name of Daly Kuku. He was very strong. Then, there was also a man called Gutsen Padzhe. He, too, was very strong. One day, Gutsen Padzhe wanted to measure strength with Daly Kuku. When he arrived at Daly Kuku's house, Daly Kuku was not at home, but his wife was at home. Gutsen Padzhe entered their house. "I want to fight Daly Kuku!", he said. Scared out of her wits, the wife of Daly Kuku grabbed the cupboard and lifted it. Upon seeing that, Gutsen Padzhe thought: "This woman can lift a whole cupboard! Daly Kuku is probably even stronger than she is." Then, without saying a word, he ran away in fear. When Daly Kuku returned home, later that afternoon, his wife told him: "Gutsen Padzhe came over, saying he wanted to fight with you." Daly Kuku asked: "Where is he?" His wife answered: "When Gutsen Padzhe came to our place, I was so afraid that I lifted the cupboard in the air, and seeing this, he went away without saying a word." The following day, Daly Kuku went to look for Gutsen Padzhe and found him in a field on the other side of the river. When Daly Kuku arrived there, Gutsen Padzhe saw him and, scared out of his wits, grabbed the pair of oxen together with the boy leading the oxen, lifted all of them and swung them three times around his head. Gutsen Padzhe then pretended he was not himself, saying: "I am not the one who wanted to fight with you. I am not Gutsen Padze." So, Daly Kuku went away.