## Lesson 2

## The Onset of the Syllable

### 2.1 The Tibetan Syllable

People generally have a fairly clear intuition about the notion of the syllable in their native language. The following discussion, thus, mainly serves as an introduction to the terminology used in this book to describe the various elements in a Tibetan syllable.

A syllable, universally, contains a nucleus, which is usually a vowel, as the core and the sole obligatory member of the syllable. Most syllables have a consonant (or a cluster of consonants) preceding the nucleus. This consonant (or consonant cluster) is called the onset of the syllable. The nucleus may optionally be followed by a consonant or a cluster of consonants, which is known as the coda. The two elements [nucleus + coda] form an intermediate phonological unit called the rhyme, an intuitive term if one knows why the two English words right [rajt] and bite [bajt] rhyme. Thus, a syllable has the following structure:


The English words rip, trip, and strip rhyme because they share the same rhyme [ip] consisting of the nucleus [i] and the coda [p]. The onset of the three syllables are [r], [tr], and [str], respectively. One simple way to look at the onset is to say that whatever elements that come before the nucleus will automatically constitute the onset. Tibetan, all dialects in this regard, has a very different idea about what constitutes the onset. In fact, the issue about the onset is so important (and no less fascinating) that we find it necessary to devote the entirety of this lesson to the Tibetan onset. A thorough understanding of what a Tibetan onset consists of and how it is related to the Tibetan orthography will prove extremely helpful to the learner in mastering his or her pronunciation (especially tones) of Lhasa Tibetan for the remainder of the course.

### 2.1.1 The Writing of a Tibetan Syllable

In Lesson 1, we introduced the basic form of a Tibetan syllable, which consists of the root letter and the vowel diacritic. The vast majority of Tibetan syllables are more complicated than that. Some letters are written on top of the root letter, while others combine with the root letter from underneath. The former are called superjoined letters or superfixes; the latter subjoined letters. Less dramatic are the letters written in a
(horizontal) linear fashion in relation to the root letter. Those which precede the root letter are called prefixed letters or prefixes; those which follow are called suffixes. One additional letter can follow a regular suffix. When it does, it is called a post-suffix.
Note that the terms prefixes and suffixes used here refer only to the Tibetan orthography. They are not used in the normal sense of the word to refer to the morphological structure of a word.

A Tibetan syllable, thus, can contain the whole or a subset of a number of elements including a prefix, a superjoined letter, a subjoined letter, a root letter, a vowel diacritic (could be left unmarked if the vowel is [a]), a suffix, and a post-suffix. The following diagram is of the syllable 冋त्जָ|\నv to line up, to pile, a "full house" with all seven elements present: बा is called the root letter (बे

 sequence of the writing.


Tibetan writing is syllable-based, i.e., punctuation marks are used to mark boundaries of syllables, not words. Using standard Latin transcription, the syllable shown above can be spelled, letter by letter, as bsgrigs. The spelling, although faithful to the Tibetan orthography, certainly does not suggest its actual pronunciation of [trí] in current Lhasa speech. Although written in the same syllable, the $b s$ in front of the pronounced onset $g r$ [tr] must not be considered as a true part of the onset. Similarly, many Tibetan words have one or two silent consonants that is spelled in front of the pronounced onset. This situation is not unlike the $k$ in knight and $p$ in psychic in English. The common impression is that they are required in the spelling but do not contribute to the pronunciation (in English, that is). This impression is not entirely accurate for Tibetan. Believed to be pronounced in Old Tibetan, these odd silent letters, called pre-onset elements in this book
due to their position in the syllable, do contribute to the pronunciation of the syllable in a significant and systematic way.

In the following sections, we will introduce some components of the Tibetan syllable, starting from the subjoined letters and moving on to superjoined letters and prefixes. We will analyze how the pre-onset elements (superjoined letters and prefixes) affect the onset. We hope that, at the end of the four foundational lessons, the learner will be able to easily pronounce bsgrigs, or any other bewildering academic spellings, quickly and correctly.

Focusing on the onset first, we will leave the introduction of suffixes and post suffixes to Lesson 3. This is not the traditional order in which Tibetan children learn how to read and write (root, suffix, prefix, subjoined letter, and finally superjoined letter). However, considering the complex interactions among tones and sound segments, the authors feel that it makes more linguistic and pedagogical sense to learn it in this particular sequence.

The following diagram offers a fine-grained look at the bsgr part of the syllable bsgrigs. We shall start with subjoined letters.


A Lhasa Tibetan Syllable

## * 2.2 Subjoined Letters (

Subjoined letters are the letters written underneath the root letter. Phonologically, they combine with the root letter and form a true onset. This description is at least true to two of the four subjoined letters, namely, $\mathfrak{d y}, \mathbf{\Sigma}, \mathfrak{r l}$, and 적. Traditional Tibetan orthography does not regard the subjoined letters as part of the root letter to which they are attached. However, at least for $\mathcal{J}$ and $\Sigma$, they combine with the root letter to become an integral part of the onset, modifying the pronunciation of the root letter. In some cases, even new sounds (phonemes) are created. Subjoined letters do not affect the tone of the root letter.




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《゙ロラダN．a palatal glide［y］，causes palatalization of the root letter it joins．Note
 exhaustive list of all the possible root letters that take ưन

| root letter | ग | $1 \times$ | \＄ | $\square$ | T | $\square$ | む |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| pronunciation | ［k］－н | $\left[\mathrm{k}^{\mathrm{h}}\right]$－${ }^{\text {r }}$ | $\left[\mathrm{k}^{\mathrm{h}}\right]$－L | ［p］－н | $\left[p^{\mathrm{h}}\right]$－${ }^{\text {H}}$ | $\left[p^{\text {h }}\right.$ ］－L | ［m］－L |
| with | ग | 28 | ⿹弋工 | 5 | 5 | 5 | dy |
| pronunciation | ［ky］－ H | ［ $\mathrm{k}^{\mathrm{h}} \mathrm{y}$ ］－н | $\left[\mathrm{k}^{\mathrm{h}} \mathrm{y}\right]$－ | ［c］－н | $\left[\mathrm{c}^{\mathrm{h}}\right]-\mathrm{H}$ | $\left[\mathrm{c}^{\mathrm{h}}\right]_{\text {－L }}$ | ［ny］－L |

There are no new sounds produced here．The three velars ग ग 刃 stops with a palatal feature［y］attached to it，although Tibetan speakers＇intuition may take them as new sounds due to orthography．The labial feature of $\mathbb{Z}$ is completely taken by
 $\boldsymbol{\sigma}^{\mathrm{h}}\left[\mathrm{c}^{\mathrm{h}}\right]$ ，and $\approx\left[\mathrm{c}^{\mathrm{h}}\right]$ ，respectively．Keep an eye on this group of consonants，especially $\neg$ ， as later they will change their pronunciation rather dramatically when superjoined and prefixed．We will come back to these three in section 2．4．3 when discussing the prefixes 5 and $\Omega$ ．

## 2．2．2 エ゙ロケォTN｜（The subjoinedさ）

ざログN $\mathbb{N}$ ，a retroflex consonant，creates three new phonemes in the consonant system，namely［ tr$],\left[\mathrm{tr}^{\mathrm{h}}\right]$ ，and［sr］，identical to the retroflexes in Mandarin Chinese zhi＇to know＇，chi＇to eat＇，and shi＇teacher＇．When エ゙ロク円 ${ }^{2}$ is subjoined to any root letter from the three groups of velars（ $\pi /, \|, \pi)$ ，alveolars（ $\overline{7}, \boldsymbol{\exists}, 5$ ），and labials $(\pi, \pi, 7)$ ，the new combination results in an alveolar retroflex sound $\left[\mathrm{tr}^{\mathrm{h}}\right]$ or $[\mathrm{tr}]$ ．Different places of articulation of the root letters do not matter anymore．In other words，the different
writings $A^{A}, \mathcal{A}$ ，and have the same pronunciation as the aspirated alveolar $\left[\operatorname{tr}^{\mathrm{h}}\right]-\mathrm{HH}$ ；


 does $\mathbb{N}(\mathbb{Z})$ ，which retains its simple labial nasal personality［m］．Below is the complete list of

| root letter | ग＂ぢ | （1984 | \＄7「 | む\} | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | गV2す | A＇sta | 959 | 젗 | 5 |
| pronunciation | ［tr］－ | ［tr ${ }^{\text {h }}$ ］－H | $\left[\mathrm{tr}^{\mathrm{h}}\right]-\mathrm{L}$ | no change | ［sr］－ H |

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リリーグオN is an anomaly among subjoined letters．It is treated as a subjoined letter in the traditional Tibetan grammar，but it behaves，at least phonologically，as the root．While
 ＂take over＂entirely．Of the six possible combinations，five of them（勾，勾，呑，疋，式）are pronounced［1］－HH．The tone is changed from LL to HH．As we shall learn，this change is a typical effect of a prefix or superfix on a sonorant root．In other words，one can
 superfix．Note，however，except for $\boldsymbol{\Sigma}$ and $\mathbb{N}$ ，the other three $(ग, \rrbracket, \nabla, \nabla)$ are not possible superfixes in Tibetan orthography．Thus the traditional analysis；thus the anomaly．

The sixth combination is also irregular：쟈 has an unexpected pronunciation of［t］－LL． Note that，unlike the other five，the tone of 司 remains LL．Some speakers may carry a pre－onset nasal and pronounce it as $[\mathrm{n} \mathrm{t}]$ ．We will discuss this phenomenon shortly．Here


| root letter |  | $\exists$ |
| :---: | :---: | :---: |
|  |  | ลี |
| pronunciation | ง［1］－H | ［t］－L |

2．2．4 젗ㅋํ（The subjoined 저）
 -9, , , ₹, and even some already with a subjoined letter: 죠 $\rightarrow \sqrt[7]{ }$. Its presence has no effect on the pronunciation of the root letter, but does serve the orthographic purpose of distinguishing words such as oy robe vs. the grammatical particle wis to in. This function resembles the French accent circomflex used on dû (past participle of devoir) to



### 2.3 Pre-onset (I): Superjoined Letters (इर्बॅ•उす)

### 2.3.1 Deaspiration and Tone Change

There is one good reason to put superjoined letters and prefixes all in one bag as "preonset" elements. The two groups have virtually the same effect on the root letter: they (i) deaspirate the third column obstruents (ग, $\bar{\mp},\lceil, \square$, and $\overline{\mathcal{F}}$ ) and (ii) change the tone of sonorants (nasals [m, n, ny, ng], liquids [1, r], and glides [y, w]) from LL to HH. The only difference is that the superjoined letters are written on top of the root and the prefixes precede the root letter.

As we mentioned in Lesson 1, in the Tibetan alphabet table, letters line up in rows and columns, for the most part, according to their place of articulation and manner of articulation. Some members of the third column undergo sound changes when superjoined. They are $\mathcal{\nabla}, \mathcal{F},\lceil, \square$, and $\mathcal{F}$, all aspirated low-tone obstruents derived from voiced obstruents in Old Tibetan. Subjoined letters with these "third columners" as the root such as $\sqrt[\pi]{, ~} 5, ~ \sqrt{2}$ and $\sqrt{0}$ are also affected in exactly the same way. ( $\sqrt{2}$ is extremely tricky with prefixes and superfixes, which we will deal with separately.) When superjoined, they all become unaspirated, while maintaining the same (low) tone. Sonorants, on the other hand, change their tone from LL to HH.

The alphabet chart below should offer the reader some visual help in remembering the two effects. No voiceless obstruents other than the five third columners are affected by prefixes and superfixes. The two vowels $\mathfrak{\Omega}$ and $\mathfrak{V}$ don't participate in this game either.

They are all put in parentheses. The shaded areas indicate the deaspiration zone and the the zone of tone change. (Letters with a prefix and/or superfix are marked with a circumflex mark in front.)

| Column I | Column II | Column III | Column IV |
| :---: | :---: | :---: | :---: |
| （ग） | （／7） | $\wedge^{\wedge} 1$ | Cos5 |
| （5） | （あ） | $\wedge$－ | 15 |
| （5） | （9） | $\wedge$ | （1）$\square^{\square}$ |
| （5） | （4） | $\wedge$ | （1） 5 |
| （5） | （あ） | ヘЕ́ | NOH |
| （6） | （习） | （R） | （l）crim |
| 55 | ar | （－9） | （\＄） |
| （5） | （ $\mathrm{VV}^{\text {）}}$ |  |  |


tone change $(\mathrm{LL} \rightarrow \mathrm{HH})$

Chart 2．1 Deaspiration and Tone Change by Pre－onset Element

The effects are obvious with the third columners and nasals．Now the deaspirated $[\mathrm{k}, \mathrm{c}$ ，

 $\bar{\sigma}, \mathbb{\alpha})$ in tone．The effect on the glide $\boldsymbol{W}$ can only be seen when it is prefixed by $\bar{\nabla}$ ．The
 other glide $\underset{\text { fid }}{ }[\mathrm{w}]$－LL，happens to take no superfix of prefix．The high tone $[\mathrm{w}]$ is instead observed from a $\checkmark$ prefixed by $\boldsymbol{7}(7 \boxed{)}$ ，still a manifestation of the effect of tone change by a prefix．Similarly，the retroflex $\boldsymbol{\Sigma}$ does not combine with any superfix or prefix．The high tone［r］is represented by 5习．Finally，for the case of $\sqrt{2}$ ，although not treated as a
 ワク可N，exhibit the same effect of tone change．

Recall that in Lesson 1，we point out in Chart 1.5 that more than half of the consonants lack a corresponding tone when represented by a single letter，leaving too many gaps in the system for a tone language to use its full capacity of tonal contrast．With prefixes and superfixes，the gaps are filled nicely，as shown in the following chart．


Chart 2.2 Tonal gaps filled in by prefixed or superfixed letters
When a root letter is simultaneously subjoined and superjoined, it is called a folded
 subjoined letter are subject to the same effects of deaspiration and tone change. Examples:


 L, respectively, when subjoined by them, see section 2.4.2 for details.

Sharp-eared learners may notice that some Lhasa speakers pronounce aspirated low
 example, one may find some speakers pronounce the single letter $\underset{\AA}{ }$ as $\left[t s^{h} \mathrm{a}\right]$-L, some others pronounce it as [tsa]-L, without aspiration. The reason is simple: There are two internal subdialects within the Lhasa speech. One group distinguishes aspirated low tone third columners from their non-aspirated counterparts (when super- or pre-fixed). For
them the pair 幸［ k h o ］－L to hear and 贰［ko］－L door are clearly different．For the other group，the words are simply homophones，both pronounced［ko］－L．There is no social prejudice again either group．This textbook will mark aspiration for these sounds as contrastive．

Now we will discuss the superjoined letters and prefixes one at a time．

## 2．3．2 इंइर्גो（The superfix $工)$

 ［lăngkō］and combination $\frac{11}{\overline{5}}[1 h \bar{a}]$ ，silent pre－onset elements．The word＂silent＂here means that the superjoined letters are not pronounced when the syllable is cited alone．When the syllable is morphologically close enough to a preceding syllable，the superjoined letter may then be resurrected and become pronounced．This phenomenon，called by the authors a ＂leftward liaison＂，will be discussed in Lesson 4.

 with only one exception： $\boldsymbol{\tau}$ ，where the entire $\boldsymbol{\Sigma}$ is produced．As predicted by the above－ mentioned effects，among the twelve combinations，元 $[\mathrm{k}]-\mathrm{L}, \boldsymbol{\Sigma}[\mathrm{c}]-\mathrm{L}, \boldsymbol{\mp}[\mathrm{t}]-\mathrm{L}, \boldsymbol{\AA}$［p］－L，and
 go tone change．

## 2．3．3 वासर्ब（The superfix $\sqrt{1}$ ）



 new phoneme in the sound system，the aspirated lateral［ $\left.1^{\mathrm{h}} \mathrm{a}\right]-\mathrm{H}$ ．

वरसर्गे may have a nasal quality in situations when a pre－onset element is pronounced as the coda of the previous syllable．When this happens，the superfix of behaves just like the prefixes $\mathbb{\mathbb { V }}$ and $\mathfrak{R}$ ．See 2．4．2 and 2．5．2 for relevant discussion．

## 


 columners，
 also becomes a high tone［ng］－H．

## 

 horizontally to the left of the root letter，there is little to be said about them that we have not already said about superjoined letters．Prefixes resemble superjoined letters in that they are not part of the onset．As silent pre－onset elements，they trigger the deaspiration rule on third columners and tone change on sonorants．

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Prefixes may appear to the left of a root letter，a superjoined letter，a subjoined letter， or a folded letter．Remember that they create the same effects of deaspiration and tone change before the＂appropriate＂root letters just as a superfix．Even if the appropriate root letter is already affected by a superfix，the prefix＇s effect applies anyway，although vacuously．For example，the aspirated $5\left[\mathrm{t}^{\mathrm{h}}\right]$－LL becomes deaspirated［t］－LL either with a


The prefix $₹$ creates three remarkable exceptions：（1）$\left\{+\checkmark\left[\mathrm{p}^{\mathrm{h}}\right]\right.$－LL becomes $5 \square[\mathrm{w}]-$
 The following examples are useful words to remember the pronunciations by．
（1）$\left\{\begin{array}{|c} \\ \text { 「＇あ } \\ \text {［wā：ngcā］＇power，authority，rights＇}\end{array}\right.$

（3） $5 \mathrm{~A}^{\wedge}$［ $\left.\mathrm{r} \bar{\varepsilon}:\right]$＇to tear，to rip＇
The interaction between the root letters $\pi, \pi, \neg$ and the prefix $\lceil$ is summarized below in Chart 2．3．

| root letter |  | prefixed | with | prefixed |
| :---: | :---: | :---: | :---: | :---: |
| $\tau$［p］－HH | 玉t［c］－HH | 5 ［d［c］－HH | $\ddagger[\mathrm{tr}]-\mathrm{HH}$ | $5 \mathbb{[ t r ] - H H}$ |
| ${ }^{\text {t }}$［ $\left.p^{\text {h }}\right]$－HH | $5\left[\mathrm{c}^{\mathrm{h}}\right]-\mathrm{HH}$ | 250［ $\left.\mathrm{c}^{\mathrm{h}}\right]$－ HH | S［tr $\left.{ }^{\text {h }}\right]$－ HH | RE才［ $\left.\mathrm{rr}^{\mathrm{h}}\right]$－ HH |
| $\square\left[\mathrm{p}^{\mathrm{h}}\right]$－LL | 2［ $\left.\mathrm{c}^{\mathrm{h}}\right]$－LL | 5，［y］－HH | ，$\left[\mathrm{tr}^{\mathrm{h}}\right]-\mathrm{LL}$ | 5，［r］－HH |
| 5®［w］－HH |  | R2，［c］－LL |  |  |

Chart 2．3 Labial Root Letters and Their Variations

## 2．4．2 Prefixes $\mathbb{\alpha}$ and $\mathbb{R}$

The prefixes $\mathbb{Z}$ and $\Omega$ affect the root letter in exactly the same way as the other three prefixes．The only difference is that $\mathbb{Z}$ and $\Omega$ also have an underlying nasal sound． Together with the superfix $\mathfrak{N}$ ，the three form a natural group of pre－onset nasal consonant． Some Lhasa Tibetans constantly pronounce the nasal sound of $\mathbb{Z}, \mathfrak{R}$ ，and $\mathfrak{r l}$ in front of the root letter even when the syllable is in isolation．For example，among the nine
 can be pronounced as［nt］．In the summary chart of all consonants，the possible pre－onset nasal sound is marked with an asterisk mark：＊딕，＊275，＊R5．It should be noted that this nasal sound is not specified for a specific place of articulation and that it is decided by the place of articulation of the root letter．The same prefix $\mathbb{Z}$ ，for instance，is pronounced
differently as［m］，［n］，and［ng］in front of＊дち［nt］and＊及円7［ngk］，respectively；whereas different prefixes are pronounced identically as［mp］in front of the same root＊익 and＊R $\neg$ ．

The three nasal pre－onset letters tend to be pronounced as the coda of the previous syllable if the two syllables are morphologically or syntactically close enough．See 2．5．2 for examples．

## ＊2．6 Oral Spelling（I）

## 2．6．1 Simple Syllables

The peculiar way of spelling out a syllable orally is unique to the Tibetan language． Unlike English，which spells out words in a letter－by－letter fashion，Tibetan spells out syllables in a＂progressively－staged＂fashion．Take the word knight for example．English employs a straightforward K－N－I－G－H－T－knight［najt］oral spelling．The progressively－ staged fashion of Tibetan spelling works like this：K－N reads N ［ En ］，plus I becomes NEE ［ni］，plus GH becomes NIE［naj］，plus T results in NITE［najt］．The intermediate stages ［ $\varepsilon n$ ］，［ni］，and［naj］are all spelled out before the final output［najt］is reached．This may sound complicated and difficult，but it is not．The traditional method of language education in Tibet trains young pupils to master oral spelling even before they are to read texts．This is because，as homonyms such as there，their，and they＇re，exist in abundance in Tibetan，oral spelling serves an important role in preserving the written tradition．As a result，anyone who has had a couple of years of formal education at a Tibetan elementary school knows this spelling method like the back of his hand and can do it in rapid rhythm． Often，when asked by someone how a word is written，a native speaker of Tibetan will immediately perform the oral spelling．Therefore，it is practical to learn this method well． In this lesson，we will introduce the more basic oral spellings．More complicated syllables will be covered in Lesson 3.

Basic concept first．Oral spelling does not spell out vowels by their sound values such




Examples：
（1）गो spells［kā $\left.k^{h} \mathbf{1} k u \bar{u} k i ̄\right]$
（2）$\widetilde{\check{c}}$ spells［ngă nărō ngŏ］
（3）历్ळु spells［ $c^{h} \bar{a}$ shăpcū $\left.c^{h} \bar{u}\right]$
（4）主 spells［ $t^{\mathrm{h}} \overline{\mathrm{e}}$ trě：ngpō $\left.\mathrm{t}^{\mathrm{h}} \overline{\mathrm{e}}\right]$
（5）$\overline{\text {（ }}$ simply spells［nă］（ $($ ）
For syllables without an onset（initial consonant），either $\mathfrak{V}$（HH）or $\mathfrak{R}$（LL）fills in to carry the vowel diacritic（or in the case of［a］，to represent the entire syllable［a］）． Examples：
（6）$\widetilde{\sim}$ spells［ă nărō ŏ］
（7）⿶弋V spells［ā shə̆pcū ū］
A multisyllabic word is spelt out syllable by syllable before the whole word is repeated．Examples：（Note that the tone sandhi rule is at work．）

（9）夭઼ণर्ข＇younger sister＇spells［ nă shăpcū nŭ｜mă nărō mŏ｜nŭmō ］
（10）গิ’অ＇sun＇spells［ nyă khŷkū nyı̆｜mă｜nyı̆mā ］
（11）匂＇言＇what＇spells［ $k$ hă $\mid$ ră trĕngpō rĕ｜$k$ hărē ］

## 2．6．2 Subjoined，Superjoined，and Prefixed Letters

The relation between a prefix and what follows（superfix or root letter）to its right

 used to indicate the vertical relationship between a superfix and a root letter or between a root letter and a subscript．The basic idea is to make sure that when spelling two letters $A$ and B，with A stacking on top of B，one says A－B－aŋ耻N［tà］，literally A with B attached （underneath）．For example，the word $\overline{\bar{\eta}}$＇horse＇is spelt as［ ră $\mid$ tātà $\mid$ tā ］．The prefix $\neg$ of $\square ク^{7} \mathbb{N}$ may be pronounced，in which case the spell－out becomes［ ră $\mid$ tāptà $\mid$ tā ］．The
 example， $\boldsymbol{A}^{\operatorname{A}}$ spells［ $\mathrm{k}^{\mathrm{h}}{ }^{\text {a }}$ rătà tr $^{\mathrm{h}} \overline{\mathrm{a}}$ ］．More examples：

（12）Эे̉＇tip＇spells［ ră tsātà tsā｜trě：ngpō tsē ］
ちえे"क ‘book' spells [ thăwò | pā trě:ngpō pē | chā | pēcā ]

Recall that superfixes and prefixes trigger deaspiration and tone change on third columners and sonorants，respectively．The oral spelling wastes no time in noting this sound change．For example，when the aspirated DT $^{2}$ is preceded by a superfix $\Sigma$ ，the $\left[\mathrm{k}^{\mathrm{h}}\right]$－LL is deaspirated to［k］－LL as a result．The spelling for $\bar{\pi}$ ，［ră kătà kă］，addresses the sound change when ${ }^{\circ}$ is mentioned the first time．The oral spelling does not＂derive＂$[\mathrm{k}]$ by saying＊［ ră k hătà kă ］．The same philosophy applies to prefix－root sequence．For example，the word वर्ब̆＇head＇is spelt as［ măwò $\mid$ kă nărō kŏ ］and not＊［ măwò $\mid \mathbf{k}^{\text {hă nărō }}$ kŏ ］．More examples：
（15）क्रै spells［ sā nātà nā ］（not＊［ sā nătà nā ］）

In case of a folded letter，with a superfix over the root letter over a subjoined
 kyă｜nărō kyŏ］and त्तู［sā kătà kă｜rătà tră｜shŏpcū trŭ ］．More examples：
（17）万弐＇enemy＇spells［ thăwò｜kă rătà tră ］
（18）Дगु＇lovely＇spells［ p hăwò｜kā rătà trā ］

This last example merits some comments．First，the superfix $\mathbb{N}$［sāngkō］changes the tone of the nasal $\mathcal{L}$ to high tone．Then，the subscript $£$［rătà ］changes the root $₹$ to a retroflex $\left[\operatorname{tr}^{\mathrm{h}}\right]$－LL．Finally，when the two syllables are put together，the onset of the second
 detail）．We will continue the second part of oral spelling in Lesson 3，after having learned the pronunciation of the rhyme．

## 2．7 Summary of Consonants

In Lesson 1 we mentioned that individual letters in the alphabet only represent a subset of the consonantal phonemes in Lhasa Tibetan， 21 out of 25 ，to be exact．A more conspicuous problem is the lack of one tone for some of the sounds．By adding subscript letters，prefixes，and superfixes， 4 more consonants（ $\left[\mathrm{tr}, \mathrm{trh}, \mathrm{sr}, \mathrm{l}^{\mathrm{h}}\right]$ ）are represented and most of the tonal gaps are filled．The only three sounds that have only one tone $(\mathrm{HH})$ are 5,5 ，and ${ }^{2}\left[\mathrm{~h}, \mathrm{sh}, 1^{\mathrm{h}}\right]$ Although the correspondence between sound and orthography in Tibetan is remarkably systematic，it may be overwhelming at the beginning for learners．

The following two charts offer sound－based or orthography－based references for our readers to check pronunciation of consonants．

## 2．7．1 Summary of Sound－Orthography Correspondence

| Sound | High Tone | Low Tone |
| :---: | :---: | :---: |
| p | 제 ㅇㅞㅞ 췌 5利 | 지 젬＊몜＊RD1 |
| $\mathrm{p}^{\text {b }}$ | 动 5 如 | व1 |
| t |  |  <br>  |
| $\mathrm{t}^{\text {h }}$ | 9｜xa｜ 291 | 715 |
| k |  |  |
| $\mathrm{k}^{\text {b }}$ |  | ग1 ${ }^{1}$ |
| ky |  |  |
| ky ${ }^{\text {h }}$ |  | 낀 |
| c |  |  |
| $\mathrm{c}^{\text {b }}$ |  | 디 $\square^{1}$ |
| ts |  |  |
| ts ${ }^{\text {b }}$ |  | ¢ |
| tr |  |  ＊2 2 ｜ |
| $\mathrm{tr}^{\text {b }}$ | （＊）ㅚㅢ 利 |  |
| s |  |  |
| sh |  |  |
| sr | 列 | －－－ |
| h | 列 5 | －－－ |

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| m |  | ग1 $\\|^{1}$ |
| :---: | :---: | :---: |
| n |  | व |
| ny |  | 勺｜ 21 d |
| ng |  | 5 |
| r | 5 1 | 기 |
| 1 |  | 别际 |
| $1^{\text {h }}$ | 單 | －－－ |
| y | 可比 5 | W1 |
| w | 57 | 짗 |

## 2．7．2 Summary of Orthography－Sound Correspondence

（＊indicates pre－onset nasal possible for some speakers．）

| Root | Orthographic Environment | Sound | Exhaustive Listing |
| :---: | :---: | :---: | :---: |
| T | single or with prefix／superfix | ［k］－H |  |
|  | subscribed by d，with or without prefix／superfix | ［ky］－H |  |
|  | subscribed by $\leq$ ，with or without prefix／superfix | ［tr］－H |  |
| $\cdots$ | single or with prefix／superfix | ［ $\left.\mathrm{k}^{\mathrm{h}}\right]$－H |  |
|  | subscribed by $\boldsymbol{W}$ ，with or without prefix／superfix | ［ $\left.\mathrm{k}^{\mathrm{h}} \mathrm{y}\right]$－H |  |
|  | subscribed by $£$ ，with or without prefix／superfix | $\left[\operatorname{tr}^{\mathrm{h}}\right]-\mathrm{H}$ | A |
|  | single letter | $\left[\mathrm{k}^{\mathrm{h}}\right]$－L | \ग ग 7 |
|  | with prefix／superfix | ［k］－L |  |
|  | subscribed by ${ }^{w}$ ， single letter | $\underset{\left.k^{h} y\right]-L}{[ }$ | ⿹勹巳｜ |


| 71 | subscribed by $\mathfrak{w l}$, with prefix/superfix | [ky]-L |  |
| :---: | :---: | :---: | :---: |
|  | subscribed by $\mathbf{\Sigma}$, single letter | $\left[\mathrm{tr}^{\mathrm{h}}\right]$-L | $\sqrt{1}$ |
|  | subscribed by , with prefix/superfix | [tr]-L |  |
| F | single | [ng]-L | $F$ |
|  | with prefix/superfix | [ng]-H |  |
| 5 | single or with prefix/superfix | [c]-H | 51 गᄁ5 |
| ぁ | single or with prefix/superfix | $\left[\mathrm{c}^{\mathrm{h}}\right]$ - H | का चका २का |
| 5 | single | $\left[\mathrm{c}^{\mathrm{h}}\right]$-L | ¢ |
|  | with prefix/superfix | [c]-L |  |
| \% | single | [ny]-L | ר\| 21 |
|  | with prefix/superfix | [ny]-H |  |
| 5 | single or with prefix/superfix | [t]-H |  |
|  | subscribed by $\mathbf{I}$, with or without prefix/superfix | [tr]-H | ई |
| 9 | single or with prefix/superfix | $\left[\mathrm{t}^{\mathrm{h}}\right]-\mathrm{H}$ | 91 तब\| 291 |
|  | subscribed by $£$, with or without prefix/superfix | $\left[\mathrm{tr}^{\mathrm{h}}\right]$ - H | 9 |
| 5 | single letter | [ $\mathrm{t}^{\mathrm{h}}$ ]-L | $\rceil$ 引 |
|  | with prefix/superfix | [t]-L |  *듁 *ম |
|  | subscribed by $£$, single letter | $\left[\mathrm{tr}^{\mathrm{h}}\right]$-L | $\vdots$ |


|  | subscribed by $£$ ， with prefix／superfix | ［tr］－L | ＊251 |
| :---: | :---: | :---: | :---: |
| б | single letter | ［n］－L | す1 |
|  | with prefix／superfix | ［ n ］－H |  |
| 5 | single or with prefix／superfix | ［p］－H | 可 刮划 5 |
|  | subscribed by w，with or without prefix／superfix | ［c］－H | 包 5 |
|  | subscribed by $\mathbf{I}$ ，with or without prefix／superfix | ［tr］－H |  |
| T | single or with prefix／superfix | ［ $\left.\mathrm{p}^{\mathrm{h}}\right]-\mathrm{H}$ |  |
|  | subscribed by ${ }^{w}$ ，with or without prefix／superfix | ［ $\left.\mathrm{c}^{\mathrm{h}}\right]$－H | 딘 |
|  | subscribed by $£$ ，with or without prefix／superfix | $\left[\operatorname{tr}^{\mathrm{h}}\right]-\mathrm{H}$ | 핀 |
| $\square$ | single letter | $\left[p^{\mathrm{h}}\right]$－L | $\square$ |
|  | with prefix／superfix other than 5 | ［p］－L |  |
|  | with prefix 5 | ［w］－H | $7{ }^{71}$ |
|  | subscribed by ${ }^{2}$ single letter | ［ $\mathrm{c}^{\mathrm{h}}$ ］－L | 21 |
|  | subscribed by ${ }^{2}$ with prefix $\Omega$ | ［c］－L | 젱＊ |
|  | subscribed by ${ }^{\omega}$ with prefix 5 | ［y］－H | 721 |
|  | subscribed by $\mathbf{~}$ ， single letter | $\left[t r^{\mathrm{h}}\right]$－L | a |
|  | subscribed by $£$ ， with prefix $\Omega$ | ［tr］－L | ＊2， |
|  | subscribed by $\mathbf{\Sigma}$ ， with prefix 5 | ［r］－H | 731 |
|  | single letter or subscribed by $\boldsymbol{I}$ | ［m］－L | ब小 ${ }^{1}$ |

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| む | with prefix／superfix | ［m］－H |  |
| :---: | :---: | :---: | :---: |
|  | subscribed by ${ }^{* 1}$ | ［ny］－L | D్ర |
|  | subscribed by $£$ ， with prefix 5 | ［ny］－H | 万包 |
| ร์ | single or with prefix／superfix | ［ts］－H |  |
| あ | single or with prefix／superfix | $\left[\mathrm{ts}^{\mathrm{h}}\right]-\mathrm{H}$ | あ゙ あీ｜इळ゙｜२お｜ |
| $E$ | single | $\left[\mathrm{ts}^{\mathrm{h}}\right]$－L | E1 |
|  | with prefix／superfix | ［ts］－L |  |
| 楽 | single（only） | ［w］－L | 제 |
| $\square$ | single or with prefix／superfix | ［sh］－L |  |
| $\exists$ | single or with prefix／superfix | ［s］－L |  |
|  | subscribed by ${ }^{1}$ | ［t］－L | ＊司＊刀 司 |
| W | single | ［y］－L | W |
|  | with prefix ${ }^{\text {d }}$ | ［y］－H | प小0 |
| I | single（only） | ［r］－L | \} \ |
| 2 | single | ［1］－L | वा य |
|  | subscribed $\sqrt{ }$ acts as if it were the root letter in these cases | ［1］－H |  |
| $-9$ | single or with prefix／superfix | ［sh］－H | －9－9－1－9－－9 |
| ＊ | single or with prefix／superfix | ［s］－H |  |
|  | single（only） | ［h］－H | 551 |


| 5 | subscribed by $\pm$ | ［sr］－H | 21 |
| :---: | :---: | :---: | :---: |
|  | superscribed by ${ }^{1}$ | $\left[1^{\mathrm{h}}\right]-\mathrm{H}$ | 믹 |

## 2．8 Exercises

## 2．8．1 Pronunciation Drill（I）：subjoined letters

（1）ता
（7）ग़ा गु｜
（13）命
（19）篎
（2）से बे।
（8） $5 \mid$
（14）बो त्टे।
（20）बे जो
（3）र्गा त्रे।
（9）हु
（15）ग ग ग ग
（21）命
（4）키 리
（10）वा वृ
（16）刑 す
（22）펑 뎅
（5）$\square \mid$

（17）动 ลิ
（23）ป็ च
（6）勾｜⿹勹䶹
（12）剂
（18）因
（24）ग़ा गु｜

## 2．8．2 Pronunciation Drill（II）：superjoined and prefixed letters


（7）⿹ㅡㄴ 牙 $\mid$ 敬
（13）वึ वाव｜
（19）वैँ वै वर्त्रैं
（2）기 적
（8）匈 亿式
（14）बो 5 रो वत्रों
（20）हें हे। वहें।
（3）匈｜सर्षो।
（9） 5
（15）㐫唏 5 रे
（21）떼 덩
（4）万利
（10）万丁 $\sqrt{ }$ 万可
（16）तो 命
（22）기 可［20｜

（11）शो शे़ गबने।
（17）데 包 5
（23）下゙ 진제


（18）వ్｜స్ట゙ โవ్｜
（24）刑 す小す

## 2．8．3 Pronunciation Drill（III）：disyllabic words

（1）बरेंत्रो
（8）永市
（15）年

（2）郎則
（9）Бबेच
（16）⿹ㅓㅇ
（23）気交
（3）愈和
（10）万等刓
（17）弐文
（24）젝체

（11）WV＇太্N｜
（18）सर्बैंवा
（25）দड⿹\zh26ु－Дवे｜
（5）उुंबे
（12）त্ฟ
（19）तथ゙司
（26）त्रुㅈํ
（6）大⿹丁口入入｜
（13）देरें।
（20）离入
（27）ন্মী
（7）気玄｜
（14）答列
（21）त्रेंत्रो
（28）त्रोग

2．8．4 Tone Discrimination：circle the syllable which has a different tone from others
（1）젠 젣 젣
（6）㢦 騳 젠




（4）RATR जगा




## 2．8．5 Sound Discrimination：circle the syllable which has a different pronunciation

 from others










2．8．6 Oral Spelling（I）：spell out the syllables

（4）
（7）万节司
（10）万合
（2）万र्वे गु
（5）बझेंत्रो।
（8）ते ते वर्व
（11）से जै।
（3）준ㅈㅜㅢ
（6）万気
（9）2ंत्रो
（12）ब्रैपदो।

2．8．7 Oral Spelling（II）：Listen to the recording and write down the syllables．
（1）गोग
（4）家包
（7）可至坒
（10）令•彥
（2）त्रतु वे।


（11）สが $\ddagger$
（3）
（6）合馬
（9）発亦


