

A PRELIMINARY STUDY OF THE BISU LANGUAGE - A LANGUAGE OF NORTHERN THAILAND, RECENTLY DISCOVERED BY US

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From September 1964 to February 1965, I investigated several languages belonging to the Burmese-Lolo group in Chiang Rai Province and Tak Province, Northern Thailand.¹

Some languages of this group are found in this region, especially in the mountainous area, along with various dialects of the Thai language.² Therefore, the region was very important for our investigations.

In Chiang Rai and Tak Province, the languages of Akha, Lahu Shi, Lahu Na, Lahu Ni and Lisu are spoken in many villages, and there are some variants of the same language from one village to another. These languages are considerably different, of course, from those of the tribes of Lahu, Lisu and Akha in the Shan States and Kachin States in Burma, and also quite different from the languages of the same tribes scattered in Yünnan Province in China.

During the investigation, I was able to study the languages of Akha, Lahu Na, Lahu Shi and Lisu out of the group mentioned above. It was in the last stage of the investigation that I encountered the Bisu language, which is the subject of this paper.³

DISTRIBUTION OF BISU LANGUAGE

1. To the best of my knowledge, the existence of the Bisu tribe and Bisu language has never been reported. At least, so far as the name is concerned, it would not be an error to say that the language and tribe are new discoveries. Naming the language as the Bisu language and the tribe as the Bisu tribe, must be proper, too, because that is the way they call themselves.

The Bisu language, which I am going to take up in this paper, is spoken at Ban Lua village, situated 10 kilometres west of Ban Huai San, which lies 23 kilometres south of Chiang Rai City in Chiang Rai Province. I shall call it the Ban Lua Bisu language of Ban Huai San, and for short, the Ban Lua Bisu language.

According to a report from Mr Mitani,⁴ a similar language, though it is almost dead as a spoken language, is remembered by old villagers at Ban Tha Ko, situated 45 kilometres southwest of Ban Huai San. I shall call this the Bisu language of Ban Tha Ko.

There was some information on some forms of the same language being spoken in another place, but it has not been verified yet. It is quite possible that the Bisu language is still spoken in some other villages in Thailand, but this must be left to further investigation.

The Bisu tribe is called the "Lawa tribe" (Lawa in the Thai language) by neighbouring Thai tribes, but the reason for it is not clear. It is, I assume, probably because the Bisu tribe was originally of the Lawa tribe and through the process of time came to speak a Burmese-Lolo language, or probably because they were originally a Burmese-Lolo tribe and yet came to identify themselves as the Lawa tribe for one reason or another. There is no basis for making a conclusion. Of the Lawa tribe itself, for that matter, no details have been discovered yet. What is almost certain about the tribe is that they used to be an influential group of people in some parts of Thailand and Burma. It is conceivable that some of the people, called the Lawa tribe in Thailand, still speak a language of the Burmese-Lolo group.

2. It is certain that the Ban Lua Bisu language has never been reported before, but languages similar to it have been reported as the language group of the Lawa in Thailand,⁵ under the name of the Phunoi language in Laos,⁶ and the Pyen or Pyin language in Kengtung, Shan State, in Burma.⁷

The Phunoi and Pyen languages are the closest to the Bisu language; however, the available data for these languages are so poor that it will hardly make any sense if one tries to compare them with the Bisu language.

But the Bisu, the Pyen and Phunoi languages are undoubtedly closely related sister languages, and as a group they are in an intermediate position between the Burmese language and the Akha language. Therefore, I may be right to treat the Bisu language as a representative language of this new group which is composed of the Bisu, Pyen and Phunoi languages. The subject of the system of the Bisu shall be dealt with in another paper.⁸

3. The following account is based on the data obtained from an informant, Mr X, who lived in Ban Lua in February 1965. No details of his personal history are available, but he has not been outside Ban Lua and Chiang Rai City. He understood and spoke the Northern Thai language as well as the Bisu language, and was a good informant.

The investigation was made through the Thai language. The Bisu tribe has many contacts with the Thai people, but surprisingly the informant scarcely replaced Bisu words with Thai words from my questions.

This paper is intended as a preliminary study of the Bisu language. The final report will be published with the studies of the languages of Akha, Lahu and Lisu, by the Center for Southeast Asian Studies, Kyoto University, by the end of 1968.

PHONEMIC SYSTEM OF BAN LUA BISU LANGUAGE

The following is a rough sketch of the phonemic system of Ban Lua Bisu. A morpheme of Ban Lua Bisu in most cases is a single monosyllable, and monosyllables have either CV# or CVC forms (C stands for consonant and V for vowel) accompanied by a toneme.

4. TONEME

The tonemes of Bisu are in a register tone system, based on high, mid and low level type tones. The basic identity of these can be seen from the following examples.

| | | | |
|--------------|-------------------|----------------|------------|
| [hja:55] | <i>rice field</i> | [?ḡŋ33 ?u:55] | <i>gut</i> |
| [hjḡ.33] | <i>fowl</i> | [hja:33 ?u.33] | <i>egg</i> |
| [hja:11 ŋɛi] | <i>to itch</i> | [?u:22 hɔŋ21] | <i>pot</i> |

From this data, we can recognise the existence in Bisu of three tonemes based on the opposition of high-level 55, mid-level 33, and low-level 11, which are given the following signs:

1) high level tone: 5; 2) mid level tone: a; 3) low level tone à.

Tonemes of the form shown in the example above are inscribed as in: hJá: hJa: hJà, ú; u: ù.

In a syllable with mid level tone, the vowel has the distinctive feature of being sounded with laryngeal tension (laryngeal-tensed vowels are written as ḡ, ṽ, ḑ). The same phenomenon is observed in the falling tone of Burmese in which the vowel has laryngeal tenseness. These three kinds of tone occur in the syllable form CVC (nasal), in addition to CV#. In syllables of the CVC (stop) type, only high and low level tones are found; the mid level tone is missing.

In syllables of the CVC (stop) type, a high level type tone is

uttered slightly lower [$\hat{4}_4$]-[$\hat{3}_3$], and is distinguished from mid level by the laryngal tenseness of vowels.

| | | | |
|---|-----------|--|-----------------|
| [bi ₁₁ khit' ⁴⁴] | 'match' | [ha ₃₃ mit' ²¹] | 'bamboo sprout' |
| [tu ₂₂ kap' ⁴⁴] | 'a cover' | [tɔk' ¹¹ tɔ:21] | 'house lizard' |
| [ʔaŋ ₃₃ jit' ⁴⁴] | 'few' | | |

Syllables of CVC (stop) type are chiefly found in words borrowed from the Thai language. The low level tone [₁₁] sometimes is freely replaced by the falling tone [₂₁] in Bisu, for example, [ian₁₁] does not contrast with [ian₂₁] 'earring', and [muŋ₁₁] does not contrast with [muŋ₂₁] 'sky'.

This falling tone appears in a syllable preceding pause; and a syllable affixed with the morpheme -ŋɛ takes the falling tone in many cases.

| | | | |
|---------------------------------------|--------|---|--------------|
| [ʔaŋ kɛŋ ₂₁] | 'hard' | [kɛŋ ₂₁ ŋɛ ₁₁] | 'to be hard' |
| [ʔaŋ vɥ: ₂₁] | 'far' | [vɥ: ₂₁ ŋɛ ₁₁] | 'to be far' |
| [ʔaŋ ^ŋ dw: ₂₁] | 'near' | [^ŋ dw: ₂₁ ŋɛ ₁₁] | 'to be near' |

These words are not pronounced [kɛŋ₁₁ ŋɛ] [vɥ:₁₁ ŋɛ] [^ŋdw:₁₁ ŋɛ], but always in the falling tone. However, since in addition to the fact that [₁₁] is freely replaced by [₂₁], [₁₁. 11] and [₂₁. 11] do not appear as contrastive continuant morphemes. The falling tone may be regarded as a variation of the low level tone.

Besides three basic tones, i.e. high, mid, low level tones, a rising tone is observed in Bisu as gliding sounds, and in numerals and in the twelve zodiacal signs, borrowed from Thai.

1) [na:₁₁ swŋ₁₅ hən₅₅] 'hole of the ear' is an example of the gliding tone. Comparing this rising tone with [na:₁₁ swŋ₁₁] 'ear', we can see that it is a variation of the low level tone which appeared next to the high level tone [₁₁. 11] → [₁₁. 15. 55].

2) Such numerals as [sam₃₅] 'three', [sɔŋ₃₅] 'two' and such zodiacal signs as [si₃₅] 'dragon (cycle of year)', [sa.n₃₅] 'monkey (cycle of year)' are examples of borrowed words with rising tones. Since they do not especially contrast with the high level tone [₅₅], we can regard them as a variation of the high level tone.

Usual pronunciation and careful pronunciation

Subordinate morphemes following another syllable have a specific tone when they are pronounced carefully, but in normal pronunciation, so-called weak utterances are observed. For example, 'boiled rice' is [haŋ₁₁ tsa:₅₅] in careful pronunciation, but usually it is uttered [haŋ₁₁ tsas]; 'to be salty' is uttered [jaŋ₅₅ ts'a:₅₅] in careful pronunciation, but usually is [jaŋ₅₅ ts'as]; and 'heard' is uttered

[ʔaŋ₃₃ tu:21], but usually is [ʔaŋ₃₃ tu·21].

Modulation phenomena of Bisu

This sort of variation of tones is most apparent when the main syllable is followed by a bound morpheme, especially /-ŋé/.

| | careful pronunciation | usual pronunciation | |
|--------------|---|--|------------------|
| CV#-ŋé | [ju:55 ŋɛ:55] | [ju:55-ŋɛ5] | 'to take' |
| CVC(stop)-ŋé | [^h dep ₄₄ -ŋɛ55-ŋɛ:55] | [^h dep ₄₄ -ŋɛ5-ŋɛ5] | 'to count' |
| CV#-ŋé | [gɑ:33-ŋɛ:55] | [gɑ:33-ŋɛ3] | 'to get' |
| CV#-ŋé | [jɛ:11-ŋɛ:55] | [jɛ:11-ŋɛ1] | 'to cut' |
| CV#-ŋé | [ju:21-ŋɛ:55] | [ju:21-ŋɛ1] | 'to sleep' |
| CVC(stop)-ŋé | [khit ¹ ₁₁ -ŋɛ55-ŋɛ:55] | [khit ¹ ₁₁ -ŋɛ1-ŋɛ1] | 'to draw a line' |

In the case of longer utterances, e.g. main syllable + secondary syllable (/lá, lé, lú, khá/ etc.) + the bound morpheme /ŋé/, the following modulate phenomena are observed.

| | | | |
|---|---|---|--------------|
| [ʔɔŋ ₅₅ la:55 ŋɛ:55] | → | [ʔɔŋ ₅₅ la:44 ŋɛ:33] | 'to enter' |
| [haŋ ₅₅ la:55 ŋɛ:55] | → | [haŋ ₅₅ la:44 ŋɛ:33] | 'to bring' |
| [vi ¹ ₃₃ lɔ:55 ŋɛ:55] | → | [vi ¹ ₃₃ lɔ:33 ŋɛ:33] | 'to abandon' |
| [t ^h a ¹ ₃₃ la:55 ŋɛ:55] | → | [t ^h a ¹ ₃₃ laŋ ₃₃ ŋɛ:33] | 'to rise up' |
| [^h duŋ ₁₁ la:55 ŋɛ:55] | → | [^h duŋ ₂₂ la:22 ŋɛ:22] | 'to wake up' |
| [ɛw:11 ʔɛ:55 ŋɛ:55] | → | [ɛw:22 ʔɛ:22 ŋɛ:22] | 'to convey' |

When a main syllable is followed by another main syllable, similar modulate phenomena occur as an influence of the tone of the following morpheme.

- high level [55] + high level [55] change to [44. 55]
 - 'leg' [pɔŋ₅₅ tu:55] → [pɔŋ₄₄ tu:55]
 - 'nickel' [pɰlu:55 tɔŋ₅₅] → [pɰlu:44 tɔŋ₅₅]
- mid level [33] + low level [21] change to [22. 33]
 - 'granary' [kɔ₃₃ tshɔŋ₂₁] → [kɔ₂₂ tshɔŋ₃₃]
- low level [11] + high level [55] change to [22. 53]
 - 'saliva' [khan₁₁ laŋ₅₅] → [khan₂₂ laŋ₅₃]
 - 'horse saddle' [ʔa₁₁ mɔŋ₁₁ taŋ₅₅] → [ʔa₁₁ mɔŋ₂₂ taŋ₅₃]
- low level [11] + mid level [33] change to [22. 33]-[22. 11]
 - 'eye' [mɛ:11 hnɰ¹₃₃] → [mɛ:22 hnɰ¹₃₃]
 - 'grave' [kam₁₁ tu¹₃₃] → [kam:22 tu¹₃₃]

5) low level [11] + low level [11]-[21] change to [22. 21]

'garlic' [la:11 phi:21] + [la:22 phi:21]

'tongue' [mɛn11 hla:11] + [mɛn22 hla:11]

5. CONSONANTS

The inventory of the consonantal phonemes of Bisu comprises thirty-one kinds of segmental phonemes and nine kinds of consonantal combinations.

The segmental phonemes can be grouped in the following way.

| | <i>stops</i> | <i>affricates</i> | <i>fricatives</i> | <i>nasals</i> | <i>laterals</i> |
|-----------------|--------------|-------------------|-------------------|---------------|-----------------|
| <i>velar</i> | k kh g ? | | h | ŋ hŋ | |
| <i>bilabial</i> | p ph b | | f w | m hm | |
| <i>dental</i> | t th d | ts tsh | s | n hn | l hl |
| | | tʃ tʃh | ʃ j hj | ɲ hɲ | |

The consonantal phonemic system, which is composed of the segments listed in the table, has one prominent feature. The contrast voiceless: voiced occurs under "stop" and "nasal" for the velar, bilabial and dental positions.

But for dental affricates, there is no dz contrasting with /ts tsh/, or dʒ contrasting with /tʃ tʃh/, or zʒ in contrast with /s ʃ/.

On the other hand, /hl/ contrasts with /l/, /hj/ with /j/, and /f/ with /w/. Therefore, the main features of the consonantal system in Bisu are three principal contrasts - stop: nasal: affricate: fricative: lateral; unaspirated: aspirated, and voiceless: voiced. These contrasts occur mostly in the position C- of the syllable CVC; and in the position of final -C only the contrast of stop: nasal: fricative (friction does not occur, in practice), that is to say, only the contrast /-k, -t, -p/ : /-ŋ, -n, -m/ : /-j, -w/ is functional.

Now about the character of sound for each phoneme.

1) Voiceless unaspirated stop /k/ /t/ /p/

/k/ /t/ /p/ are uttered [k] [t] [p], with complete stop and explosion, when they are in the initial position of syllables, but they are uttered [kʰ] [tʰ] [pʰ], with complete stop, but without explosion, in the final position of syllables.

| | | | |
|---------------|-------------|-----------------|-------------------|
| [ku:11 ŋɛ55] | 'to sew' | [nɛ33 ʔɣ·kʰ44] | 'breast' |
| [tɔ:55 lɔ:33] | 'butterfly' | [lɔŋ11 pɛ·tʰ44] | 'breast of woman' |
| [pa:11 pa:33] | 'cheek' | [kʰɛ·pʰ44] | 'shoe' |

A voiceless unaspirated stop also occurs in the glottis. /ʔ/ has

only weak explosion, and this is observed distinctly when the syllable is uttered with a tense vowel on the mid level tone. In a syllable which has a tone other than the mid level tone, the vowel is apt to be uttered tensely when /ʔ/ is in the initial position of that syllable.

[ʔʔŋ₃₃ tu:21] 'head' [ʔʔŋ₅₅ ŋɛ:55] 'to cry'
[ʔʔ:55 ŋɛ:55] 'to laugh' [ʔʔŋ₁₁] 'excrement'

2) Voiceless aspirated stop /kh/ /th/ /ph/

/kh/ /th/ /ph/ are uttered [kʰ] [tʰ] [pʰ], with complete stop, but not so strong explosion. These phonemes do not occur in the final position of syllables.

[kʰwŋ₅₅] 'thread' [tʰɛŋ₃₃] 'that'
[pʰa:33 tʰaʊ₅₅] 'Buddha'

3) Voiced unaspirated stop /g/ /d/ /b/

/g/ /d/ /b/ are uttered in two ways, that is, [g] [d] [b] with complete stop and explosion, and [ḡ] [ḏ] [ḃ] with weak, voiceless and non-nasal glide. When they are attached to another syllable, or follow pause, [g] [d] [b] are observed if they are uttered carefully.

[gā·33]~[ḡā·33] 'I' [ʔaŋ gaʊ₂₁] 'bone'
[dŋ₅₅ ŋɛ:55]~[ḏdŋ₅₅ ŋɛ:55] 'to sit' [bī:11 su:11]~[ḃbī:11 su:11] 'Bieu'
[laŋ₅₅ bɛ:21 ŋɛ₁₁] 'to be thirsty'

Therefore, [g] : [ḡ], [d] : [ḏ], [b] : [ḃ] are regarded as freely varying phones without contrast of features.

4) Voiceless fricative /ts, tsh, tʃ, tʃh/

The palatal alveolars [ts] [tʃ], and [tsh] [tʃh], which are articulated in the alveolar-palatal region, are observed in the following examples.

[tsɔ:11 mɛ:21] 'salt' [ʔaŋ₃₃ tʃɔ:21] 'waist'
[tʃhaʊ₁₁ ŋɛ:55] 'to cough' [ʔaŋ₃₃ tʃhaʊ₅₅] 'sweet'

For the former, we write the phonemes /ts/ /tsh/, and for the latter, /tʃ/ /tʃh/. The contrast of these two lines is obvious; however, among these, [tʃ-] turns freely into [kj-].

[tʃu:11 ŋɛ₅₅]~[kju:11 ŋɛ₅₅] [tʃi:11 ŋɛ₅₅]~[kji:11 ŋɛ₅₅] 'to speak'
'to suck'
[ʔaŋ₃₃ tʃɔ:21]~[ʔaŋ₃₃ kjɔ:21] 'waist'

The informant preferred [kj-] to [tʃ-]. In some morphemes, only [kj-] occurs and [tʃ-] does not occur; for example, [kja:11 -ŋɛ₅₅] 'to hear'. Conversely, in some other morphemes, only [tʃ-] occurs, for example,

[tɕ an₃₃ bən₃₃] 'dish'. Therefore [tɕ] and [kɟ] do not always freely replace each other. Besides, the aspirated sounds [tɕ^h] and [kɟ^h] which correspond to [tɕ] and [kɟ], clearly contrast with each other. Thus, for the former [kɟ] I will claim the consonantal phonemic cluster /kɟ/, which shall be described later on, and regard it as a unit in contrast with the phoneme /tɕ/.

| | | | |
|--|-------|---------------------|---------------------|
| /tɕ/ | /kɟ-/ | /tɕ ^h -/ | /kɟ ^h -/ |
| [tɕ] (in some cases freely replaced by [kɟ]) | [kɟ] | [tɕ ^h] | [kɟ ^h] |

5) Fricative /s/ /ʃ/ /h/ /j/ /hj/ /f/ /w/

In the line of fricatives, we observe the following:

i) voiceless [s] which is articulated as palatal alveolar; ii) alveo-palatal voiceless [ɕ]; iii) glottal voiceless [h]; iv) weak voiced on-glide [j] and voiceless on-glide [j̥]; v) labiodental voiceless [f] and voiced [v]; vi) bilabial [w].

I shall posit the phonemes which correspond to them as follows:

| | | | | | | | |
|-----------------|-----------|-----|-----|-----------------------------|-----|-----|--------------|
| [s] | [ɕ] | [h] | [j] | [j̥] | [f] | [v] | [w] |
| /s/ | /ʃ/ | /h/ | /j/ | /hj/ | /f/ | | /w/ |
| [sɔ:11 phjɛ:21] | 'tooth' | | | [sa:11 tɕ ^h ·33] | | | 'priest' |
| [ɕa:55 ɲɛ:55] | 'to seek' | | | [ʔaŋ33 ɕum55] | | | 'shade' |
| [hã·33 ja:21] | 'bird' | | | [hãŋ55 man55] | | | 'wind' |
| [j̥ja·33] | 'hen' | | | [j̥jaŋ55 ba·33] | | | 'elephant' |
| [kaũ55 fei:55] | 'coffee' | | | [maĩ21 si:33 fan21] | | | 'toothbrush' |

This [f] occurs only in words borrowed from Thai. I have recorded only the two words mentioned above.

| | | | |
|---------------|----------|---------------------|--------------|
| [wa:21] | 'pig' | [ʔɔ:11 wam55] | 'bear' |
| [vɥ:33] | 'chisel' | [ʔaŋ33 vɛ̃·33] | 'flower' |
| [vũ:55 ɲɛ:33] | 'to buy' | [vĩ·33 lɔ·33 ɲɛ:33] | 'to abandon' |

The distribution of the [w] and [v] shows that they complement each other. [w] occurs in front of [a]; [v] occurs before all other vowels. For this distribution, I use the phoneme /w/. However, in case of words which are clearly recognised as borrowed from Thai, [w] also occurs in words like [pjaŋ55 wi:33] 'fan', [wɛn33] 'mirror'.

6) Nasal /ŋ/ /m/ /n/ /ɲ/: /hŋ/ /hm/ /hn/ /hɲ/

In this group, besides [ŋ], [m], [n], and [ɲ], there are [h^hŋ] [h^hm] [h^hn] [h^hɲ], which have voiceless on-glides. I write /ŋ/ /m/ /n/ /ɲ/ for the former, and /hŋ/ /hm/ /hn/ /hɲ/ for the latter. There are examples following for these contrasts.

| | | | | | |
|-----|---|--------------|------|--|------------|
| /ŋ/ | [ŋɔ̃ ₂₁ ɲɛ:11] | 'to be bent' | /hŋ/ | [^h ŋeɪ ₂₁] | 'leech' |
| /m/ | [muŋ ₂₁] | 'sky' | /hm/ | [^h muŋ ₅₅] | 'mushroom' |
| /n/ | [na:11 sɯŋ ₁₁] | 'ear' | /hn/ | [^h na:s ₅₅ khaŋ ₅₅] | 'nose' |
| /x/ | [^h ɔ̃ _{m11} ɲɛ:11] | 'to dye' | /hχ/ | [^h ɔ̃ _{ɔ33} ^h ɔ̃ _{ɔm55}] | 'short' |

7) Lateral /l/ /hl/

We find a voiced alveolar lateral [l] and voiceless on-glide [ɭ].

| | | | |
|---|--------------|---|------------|
| [lum ₅₅ ɲɛ:s ₅₅] | 'to be warm' | [ɭlum ₅₅ ɲɛ:s ₅₅] | 'to warm' |
| [lan ₅₅] | 'axe' | [^h ɔ̃ _{ɔ33} ɭlan ₅₅] | 'grandson' |

This contrast of two phonemes is expressed as /l/ : /hl/.

8) Combinations of phonemes

The only combinations of phonemes observed in Bisu are [pɿ] [phɿ] [bɿ] [^hmɿ] [kɿ] [khɿ], combinations with non-fricative glide [j], and [pɿ] [phɿ] [bɿ] [kɿ] [khɿ], combinations with voiced lateral [l]; there are no other combinations. Nucleus consonants are limited to bilabials and palatals. In combinations with [j], the nucleus stop and nasal are palatalised. [l] combined with a stop is usually shortened and is apt to become voiceless. [kɿ] → [kɿ] [khɿ] → [khɿ] [bɿ] → [bɿ].

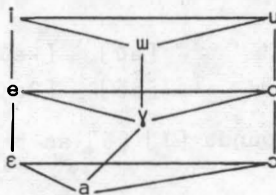
| | | | |
|--|----------------------------|--|----------|
| [pja:21] | 'bee' | [pɿum ₁₁] | 'taro' |
| [sɔ:11 phjɛ:21] | 'tooth' | [phɿɔ̃:33] | 'priest' |
| [^h ɔ̃ _{ɔ33} bja:21] | 'many' | [bla:11] | 'arrow' |
| [^h mja:33 thaŋ ₅₅] | 'knife' | | |
| [kja ^h ɿ ₁₁ ɲɛ:s ₅₅] | 'to wash (cloth, hair)' | [^h ɔ̃ _{ɔ33} kɿam ₁₁] | 'slow' |
| [^h ɔ̃ _{ɔ33} khja ^h ɿ ₅₅] | 'horn' | [^h ɔ̃ _{ɔ33} khɿa ^h ɿ ₅₅] | 'inside' |

Herewith, I give the following combinations of phonemes:

/pɿ, phɿ, bɿ, hmɿ: kɿ, khɿ/ /pɿ, phɿ, bɿ: kɿ, khɿ/, but /phɿ/ is very rare.

6. VOWELS

The inventory of vowels of Bisu shows a well regulated nine vowel system which is composed of four front tense unrounded vowels /i e ε a/, three back rounded vowels /u o ɔ/ and two back tense vowels /ɯ ɤ/. There are contrasts of [i] [u] [ɯ] [eɪ] [ʉo] [ɤ] [ε] [ɔ] [a] in Bisu, which can be observed in the following examples.



| | | | | |
|---------------------|------------|---------------------|-----------|-----|
| [pi:11 ηε:11] | 'to give' | [nε:33 li:55 ka:11] | 'clock' | /i/ |
| [peŷ:11 ηε:11] | 'to show' | [leŷ11 ja:21] | 'ogre' | /e/ |
| [pε:11 kha:21] | 'kidney' | [lε:55 ηε:55] | 'to go' | /ε/ |
| [pa:11 paː33] | 'cheek' | [la:55 ηε:55] | 'to come' | /a/ |
| [pɯ:55 lā:55 ηε:55] | 'to think' | [lɯ:55 ηε:55] | 'to come' | /u/ |
| [pɣː33 ηε:55] | 'to shoot' | [lɣ:33] | 'saw' | /ɣ/ |
| [la:11 pu:21] | 'hand' | [phlu:55] | 'money' | /u/ |
| [nem33 pŷo33] | 'bucket' | [lŷo33] | 'shovel' | /o/ |
| [pɔ:11 ηε:11] | 'to cure' | [lɔ:55] | 'wheel' | /ɔ/ |

In open syllables with mid level tone, when initial in the utterance, and in such limited environments as preceding [p] or [m], [e] occurs.

| | | | |
|----------------|------------|---------------|-----------|
| [nεː33 ɛɣː33] | 'tomorrow' | [tu:11kepˈ44] | 'a cover' |
| [teː33 se:55] | 'mountain' | [them33] | 'cavern' |
| [keː33 kju:21] | 'valley' | | |

This [e] can be regarded in this environment as a variation of [a]. Therefore, I deduce nine phonemes /i, e, ε, a, u, ɣ, u, o, ɔ/ for these vowels. The phonemes /e/ and /o/ also occur in the form [-eŷn], [-ŷon] in in CVC syllables.

| | | | |
|-----------------|---------|------------------|--------------|
| [hɔŋ33 tɛŷon55] | 'fox' | [khjεŷn55 ηε 55] | 'to be sour' |
| [ʔaŋ33 pŷon21] | 'white' | [ʔaŋ33 seŷn55] | 'voice' |

On the whole, the functional contrast of long vowels and short vowels is not observed. But vowels have a tendency to be lengthened in syllables which finish with unreleased [-pˈ] [-tˈ] [-kˈ]. On the other hand, vowels of syllables which end with nasals, are tense and shorter than in the former form.

When syllables which are open are uttered with high or low tone, a long vowel occurs, but when they are uttered with mid tone, the vowel is tense and shortened.

| | | |
|-----------------|-----------|------------------|
| [la:55 ηε:55] | 'to come' | CV# (high level) |
| [lεː33 tɯ:21] | 'rope' | CV# (mid level) |
| [laŋ55] | 'water' | CVC (nasal) |
| [keː33 laːtˈ44] | 'paper' | CVC (stop) |

The ascending diphthong vowels in Bisu are observed in the following examples.

| | | | | | |
|------|----------------|-----------|------|---------------|----------|
| [aŷ] | [ɛaŷ11 ηε:11] | 'to bend' | [ɔŷ] | [ʔaŋ ηɔŷ21] | 'curved' |
| [ɣŷ] | [mɣŷ55] | 'fog' | | | |
| [aŷ] | [ʔaŋ33 gaŷ21] | 'bone' | [eŷ] | [keŷ33] | 'glass' |
| [eŷ] | [ʔaŋ33 theŷ21] | 'a row' | [ɔŷ] | [ʔaŋ khjɔŷ33] | 'green' |

If we regard auxiliary sounds [ŷ] [ŷ] as the equivalent units of

consonantal phonemes /j/ /w/ which occur in the final position of syllables, it is possible to posit the continuants /aj/ /ŋj/ /ɣj/ /aw/ /ew/ /ɛw/ /ɔw/. But these diphthong vowels do not have identical distribution with the initial sounds of syllables, and are limited in such a way that [eu] comes only after [k] and [ɛu] comes only after [t^h]; therefore, I will unite them as /ɛw/, rather than deal with them as contrastive units of /ew/ /ɛw/.

The words in which such units occur are mostly words borrowed from Thai. According to my data, the distributional relations between vowel phonemes and final consonants in Bisu are as follows:

| | -ŋ | -m | -n | -k | -p | -t | -j | -w |
|---|----|----|----|----|----|----|----|----|
| a | aŋ | am | an | ak | ap | at | aj | aw |
| i | iŋ | x | in | ik | x | it | x | x |
| e | eŋ | em | en | ek | x | et | x | x |
| ɛ | ɛŋ | ɛm | ɛn | x | ɛp | ɛt | x | ɛw |
| w | wŋ | x | wn | x | x | wt | x | x |
| ɣ | ɣŋ | ɣm | ɣn | ɣk | ɣp | ɣt | ɣj | x |
| u | uŋ | um | un | uk | up | ut | x | x |
| o | oŋ | x | on | ok | op | ot | x | x |
| ɔ | ɔŋ | ɔm | ɔn | ɔk | x | ɔt | ɔj | ɔw |

7. JUNCTURE PHONEME /ŋ/

When the nucleus morpheme is in close juncture relation with the auxiliary morpheme -/ŋɛ/, the juncture morpheme /ŋ/ occurs occasionally between these two morphemes. For example, the construction of /dap/ and /ŋɛ/ becomes [ᵀdepᵀ ᵀᵀᵀ ᵀᵀᵀ ᵀᵀᵀ] 'to count'. This phenomenon occurs regardless of the phonemic composition of the nucleus morpheme, but it is observed more frequently in the forms ending with stops and forms having mid level tone.

| | | |
|-------------|---------------------|------------|
| /pɣk+/ŋɛ/ | : [pɣkᵀᵀᵀ ᵀᵀᵀ ᵀᵀᵀ] | 'to jump' |
| /tit+/ŋɛ/ | : [titᵀᵀᵀ ᵀᵀᵀ ᵀᵀᵀ] | 'to fix' |
| /phɔŋ+/ŋɛ/ | : [phɔŋᵀᵀᵀ ᵀᵀᵀ ᵀᵀᵀ] | 'to open' |
| /tshan+/ŋɛ/ | : [tshᵀᵀᵀ ᵀᵀᵀ ᵀᵀᵀ] | 'to throw' |

When the phoneme structure of the nucleus morpheme is CV#, the phoneme /ŋ/ which comes as the juncture, sometimes combines with that syllable and becomes CVŋ.

| | | | |
|----------|------------------------------|-----------|-----------------------------|
| /lǎ+/ŋɛ/ | : [la:ᵀᵀᵀ ᵀᵀᵀ]~[laŋᵀᵀᵀ ᵀᵀᵀ], | /lɛ́+/ŋɛ/ | : [lɛ:ᵀᵀᵀ ᵀᵀᵀ]~[lɛŋᵀᵀᵀ ᵀᵀᵀ] |
| /ʔɛ+/ŋɛ/ | : [ʔɛ:ᵀᵀᵀ ᵀᵀᵀ]~[ʔɛŋᵀᵀᵀ ᵀᵀᵀ], | /lú+/ŋɛ/ | : [lu:ᵀᵀᵀ ᵀᵀᵀ]~[luŋᵀᵀᵀ ᵀᵀᵀ] |

Thus, CV# and CVŋ are free variations, but it can be said that the

morphemes {lá} {lé} consist of two different morphemes [Ed. allomorphs?] such as /lá/ and /láŋ/, /lé/ and /léŋ/. In usual utterances, the latter is used more often.

GRAMMATICAL SYSTEM OF BISU

At present, I do not have enough data to describe the grammar of Bisu satisfactorily. I can only outline it.

8. *WORD-UNITS OF BISU* consist of combinations of one, two or more morphemes. One of the morphemes of the word-units which consist of two or more morphemes, is usually an auxiliary morpheme ?aŋ- or -ŋɛ.

| | | | |
|------------|--------|-----------|--------------|
| /?aŋ-khjì/ | 'debt' | /khjì-ŋɛ/ | 'to lend' |
| /?aŋ-hjà/ | 'itch' | /hjà-ŋɛ/ | 'to itch' |
| /?aŋ-dò/ | 'soft' | /dò-ŋɛ/ | 'to be soft' |

As is clear from the examples mentioned above, when ?aŋ combines with a morpheme, it becomes a noun expression and when -ŋɛ combines with the same morpheme, it becomes a verb expression. This process is the basic prominent feature of word structure in Bisu. It is possible, of course, to make a word-unit by a construction of two or more morphemes without ?aŋ- or -ŋɛ.

tù tshòŋ 'hat' + ?aŋ-tù 'head' and tshòŋ-ŋɛ 'put in'

khú tshòŋ 'trousers' + là-khú 'leg' and tshòŋ-ŋɛ 'put in'

mà plàw phà 'leaf of the palm' + mà-plàw 'palm' and ?aŋ-phà 'leaf'

The constructions on the left side must be treated as word-units. Therefore, we can regard the existence of ?aŋ- as a unit which shows the breaking point [Ed. constituent boundaries] of words. For instance, 'fruit' /tsùŋ-tswŋ sù/ is a word-unit made up of the construction of three morphemes; however, 'nut' /tsùŋ-tswŋ ?aŋ- sù/ is a construction of two word-units each formed by single morphemes. 'egg' /hja-?u/ is a word-unit made up of two morphemes, but 'sword' /hmja ?aŋ-sò/ is a construction of two word-units, one of which is a single morpheme and the other is two morphemes. And also 'hilt of the sword' /hmja ?aŋ-phù/ should be dealt with as a construction of two word-units.

9. *SENTENCES OF BISU* can be grouped roughly into the equational type and narrative type. These types have different negatives and are distinguished by the following points. The equational type is composed of two noun expressions, and when it is pronounced carefully there is a pause between the two noun expressions. The narrative type is composed of a verb expression ending with the morpheme -ŋɛ, or with an auxiliary

- | | | |
|------|-------------------------|--------------------------------|
| 1. | ga naŋ-na niŋ pi-ŋe | 'I give this to you.' |
| ii. | ga naŋ-kóŋ niŋ kji-ŋe | 'I borrow this from you.' |
| iii. | ga tšàŋ-hàj-tšàj lú-ŋe | 'I have come from Chiang Rai.' |
| iv. | ga naŋ-ne ?é-ŋe | 'I go with you.' |
| v. | ga nu-?γ dúŋ-ŋe | 'I sit here.' |
| vi. | ga naŋ-lò bà pá hmóŋ-ŋe | 'I am taller than you (are).' |

In addition, the -na is used in the following cases:

- | | |
|------------------|-----------------------|
| ga naŋ-na khe-ŋe | 'I am afraid of you.' |
| ga naŋ-na mý-ŋe | 'I dislike you.' |

The relation between the subject and the object which the subject is afraid of or dislikes is expressed by an equivalent of the Japanese *ni* but not *o* in Bisu.

The auxiliary morphemes such as -na, are: dative na; comitative kóŋ (person), tšàj (place); accompaniment ne; locative ?γ. I put all these morphemes into Group E, alongside the abovementioned ma- and -ŋe.

- | | |
|-----------------------|-------------------|
| 'I go to Chiang Rai.' | ga tšàŋ-hàj ?é-ŋe |
| 'I sit on a chair.' | ga tàŋ-?i dúŋ-ŋe |

The relation (of *ni* in Japanese) 'to', 'on' in English in the above sentences is not expressed by a special morpheme in Bisu.

11. Among the morphemes of Group S, personal pronouns which can be replaced by ga have the following system. In addition to singular and plural forms, there is a dual form - 'we two' and 'you two'.

- | | | | | | |
|------|--------|-----|-----|-----|-----|
| 1sg. | ga | pl. | gu | du. | gaj |
| 2sg. | na~naŋ | pl. | noŋ | du. | naj |
| 3sg. | ja~jaŋ | pl. | joŋ | du. | x |

In the singular form, there are two variant forms Ca and Caŋ for the second person and third person. But for the first person, there is no Caŋ form as opposed to a Ca form. The second person and third person show an alteration of vowels such as singular Caŋ, plural Coŋ. In the dual form, the first person and second person have Caj in contrast to the singular Ca form. /ga ?é-ŋe/ 'I go' can change to /ga-láŋ ?é-ŋe/ 'I go myself'. For the second person and third person, this ga-láŋ 'myself' has the following forms:

- | | | |
|-------------------|--------------------|--------------------|
| 1. ga-láŋ (?é-ŋe) | 2. naŋ-láŋ (?é-ŋe) | 3. jaŋ-láŋ (?é-ŋe) |
|-------------------|--------------------|--------------------|

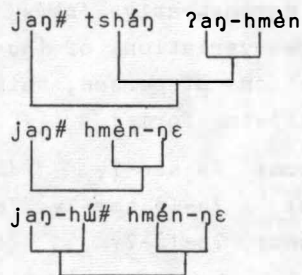
A basic sentence pattern of the equational type jaŋ# tsháŋ ?aŋ-hmèn 'He is a good man' is jaŋ# hmèn-ŋe 'He is good' in the narrative type. This can change further to jaŋ-hú# hmèn-ŋe 'His is good'.

The forms correlating with jaŋ-hú are as follows:

ga-hú hmén-ηε 'Mine is good.'

naη-hú hmén-ηε 'Yours is good.'

jaη-hú hmén-ηε 'His is good.'



niη# náη-sú ?aη-hmèn 'This is a good book' of the equational type is ni-nán-sú# hmén-ηε 'This book is good' in the narrative type. The demonstratives in contrast with niη have the following system.

(1) ni-niη (object near the speaker); (2) the ~ theη (object far from the speaker); (3) ηε ~ ηεη (object further from the speaker); (4) ηjɔ (object even further from the speaker); (5) hɔk ηjɔ (object furthest from the speaker). The CV# and CVη forms which occur in (1)-(3) can freely replace each other, but it is obscure where (4)-(5) are distinguished or whether they have any obvious distinction.

niη# náη-sú 'This is a book' can change to ni-ma# náη-sú 'This thing is a book'. The forms of other demonstratives in contrast with this ni-ma are as follows.

ni → ni-ma; the → the-ma 'that thing'; ηε → ηε-ma 'that thing';
 ηjɔ → ηjɔ-ma 'that thing over there'; hɔk-ηjɔ → hɔk-ηjɔ-ma 'that thing far over there'.

These locatives can come before the locative -?γ mentioned above. Here are examples.

| | | |
|---------------|--------|----------------------------|
| ga nu-?γ | dúη-ηε | 'I sit here.' |
| ga the-?γ | dúη-ηε | 'I sit there.' |
| ga ηε-?γ | dúη-ηε | 'I sit over there.' |
| ga ηjɔ-?γ | dúη-ηε | 'I sit far from here.' |
| ga hɔk-ηjɔ-?γ | dúη-ηε | 'I sit further from here.' |

Among these examples, only the demonstrative (object near the speaker) does not correspond with the system mentioned above.

It is necessary to describe here the variation of 'this' ni. It has been pointed out that the form niη is freely interchangeable with ni; besides that there are also nu- and ηε- distributed in the following way.

/nu-?γ/ 'here' {nu-} /ηε-hia/ 'this month' {ηε-}

Since 'that' the and 'there' ηε have the same form before -?γ and any other environment, we treat {nu-} and {ηε-} as variations of {ni ~ niη}.

The demonstrative 'this' consists of the free variation of {ni ~ niŋ} and three variations of {nu-, nɛ-}.

Questions of person, thing, time, place and number are expressed in the following forms:

| | | | | | |
|---------|---------------|--------|--------|-----------|---------|
| person: | ?a-sàŋ-?ɣ | 'who' | thing: | ma-tšɣ-?ɣ | 'what' |
| time: | ?a-lɔ́ hmw-?ɣ | 'when' | place: | kɣŋ-?ɣ | 'where' |
| number: | ?a-lɔ́-?ɣ | 'how' | | | |

All of them occur with -?ɣ. I assume that they are the same morpheme as the locative -?ɣ mentioned above. In short, all representative forms of questions are expressed by the locative in Bisu.

If we translate word by word ?a-sàŋ-?ɣ lǎ-ŋɛ 'Who comes?', it will be 'In whom does it come?', ma-tšɣ-?ɣ tsà-ŋɛ 'What do you eat?' will be 'In what do you eat?' and ?a-lɔ́-?ɣ tša-ŋɛ 'How much do you have?' will be 'In how much do you have?'.

12. In addition to personal nouns, demonstratives and interrogatives mentioned in Section 11, words which can be put in Group S, may be grouped into seven classes by their forms:

- 1) Forms without prefix.
- 2) Forms with prefix ?aŋ-.
- 3) Forms with prefix ?a-.
- 4) Forms with prefix jʃ-.
- 5) Forms with prefix ka-.
- 6) Forms with prefix ?ù-.
- 7) Forms with suffix -ba.

The following is an outline of each case.

1) Forms without prefix -

i. Words of a single morpheme

lǎŋ 'water', khún 'year'.

ii. Words which consist of two morphemes

mé-hnw 'eye', hná-kháŋ 'nose'.

iii. Words which consist of three morphemes

lǎ-tshù-tɔŋ 'elbow', lǎm-tɔŋ-hné 'dragonfly'.

A great number of loanwords from Thai consist of three syllables, but we cannot regard them in Bisu as words which consist of three morphemes:

mǎj sɪ fǎn 'a toothbrush', ni lɪ kǎ 'a watch'.

2) Forms with prefix ?aŋ-. This prefix signifies 'matters or names of objects'. ?aŋ-hɔŋ 'room', ?a -thǎ 'floor', ?aŋ-phǎ 'leaf', ?aŋ-khɔ

'bark of tree'.

The majority of words with ʔaŋ- can be put into the frame of the equational type, ni-ma# ... 'This is ...', but several words with ʔaŋ- cannot be put into this environment, for instance, *ni-ma ʔaŋ-tha, *ni-ma ʔaŋ-thú, *ni-ma ʔaŋ-hù, *ni-ma ʔaŋ-lá. These words were originally in Group V; tha-ŋe 'keen', thú-ŋe 'thick', hù-ŋe 'big' and lá-ŋe 'come' as words with -ŋe, and after prefixing ʔaŋ joined Group S. This is the difference between words which are originally Group S and words which can be assigned to Group S from Group V after derivation with ʔaŋ. The latter has the same potential as the former with respect to ga in a narrative type.

| | | | |
|-------------------|------------------------|-------------------|--------------------------|
| ni-ma # hù-ŋe | 'This is big.' | ni-ma # thú-ŋe | 'This is thick.' |
| ʔaŋ-hù # hmèn-ŋe | 'The big one is good.' | ʔaŋ-thú # hmèn-ŋe | 'The thick one is good.' |
| ʔaŋ-hóŋ # hmèn-ŋe | 'The room is good.' | ʔaŋ-thà # hmèn-ŋe | 'The floor is good.' |

3) Forms with prefix ʔa-. These forms occur in some consanguineous nouns and some names of animals.

| | | | |
|--------|------------------|----------|-------------------|
| ʔa-hù | 'grandfather' | ʔa-phé | 'younger brother' |
| ʔa-phǐ | 'grandmother' | ʔa-meŋ | 'cat' |
| ʔa-tsi | 'elder sister' | ʔa-hmjàŋ | 'cow' |
| ʔa-pò | 'younger sister' | ʔa-móŋ | 'horse' |
| ʔa-ʔáj | 'elder brother' | ʔa-kàw | 'duck' |

4) Forms with prefix jí-. I have recorded only two words of this type. Both are connected with fluid.

| | | | |
|---------|----------|----------------------|-------------------|
| jí-tshù | 'sneeze' | + ga jí-tshù tshù-ŋe | 'I have a sneeze' |
| jí-ʒǐ | 'urine' | + ga jí-ʒǐ ʒám-ŋe | 'I urinate' |

5) Forms with prefix ka-. There are many loanwords from Northern Thai in this form.

ka-tàj 'rabbit' < N. Thai kà-tàaj; ka-pàw 'sack' < N. Thai kà-pǎw; ka-póŋ 'tin' < N. Thai kà-póŋ; ka-sýj 'monkey' < N. Thai ?; and ka-kjú 'valley' < N. Thai ?.

6) Forms with prefix ʔù-. I have recorded only the following three words. It is possible that ʔù- is a morpheme which is connected with rounded objects.

ʔù-hia 'moon', ʔù-kù 'star', ʔù-hiŋ 'jar'.

When ʔù-hia is modified by another morpheme and makes another word, the prefix ʔù- does not occur.

ʔù-hla + tǎ-hla 'next month', ne-hla 'this month'.

7) Forms with suffix -ba. Three types of the suffix -ba are possible:

i. -ba₁ means 'big'. lǎ-ba 'thumb', tsǎŋ-ba 'eagle'.

ii. -ba₂ means 'female'. khǎ-ba 'wife', ʔù-ba 'aunt'.

iii. -ba₃ - it is obscure what this -ba means.

nwŋ-ba 'mind', khǒŋ-ba 'village', kéŋ-ba 'road', lɔ-ba 'stone', pǒŋ-ba 'abdomen'.

13. Among the words of Group S, numerals have an obvious system. All numerals in Bisu are loanwords from Northern Thai.

| | | | | | | | | | | | | | |
|-----|-----|------|------|----|-----|----|---------|----|-----|----|---------|---|------|
| 1 | nùŋ | 2 | sǒŋ | 3 | sám | 4 | sí | 5 | hǎ | 6 | hók | 7 | kjít |
| 8 | pét | 9 | káw | 10 | síp | 11 | síp-ʔét | 20 | sáv | 21 | sáv-ʔét | | |
| 100 | lǒj | 1000 | phan | | | | | | | | | | |

For 'one', as in Thai, two morphemes nùŋ and -ʔét are found. Besides this, tǔ is used instead of nùŋ,ʔét in the following environments: 'one person' tshǎŋ tǔ mǎŋ, 'one month' tǔ hla, 'one year' tǔ pi, 'half' tǔ khwŋ. Therefore, in the case of 'one', three morphemes are used, and they supplement each other.

For 'two', ni is used alongside sǒŋ as in nǐ hla 'two months', nǐ hnwŋ 'two days'. Therefore, in the case of 'two', sǒŋ and nǐ supplement each other.

For classifiers which follow numerals, I have recorded only one word which concerns human beings, maŋ (as in the abovementioned 'one person' and ja-kha tǔ mǎŋ 'one friend'), but we can expect to find various kinds of classifiers.

14. The basic form of verb expression for constructing the narrative type is Group V + -ŋɛ. -ŋɛ can be replaced by the following forms (2)-13)).

1) Basic Form V-ŋɛ: The negative form is ma-V mentioned above.

ga # kjǎ-ŋɛ 'I hear' + ga # ma kjǎ 'I do not hear'
ga # ʔé-ŋɛ 'I go' + ga # ma ʔé 'I do not go'

2) V-ga-ŋɛ: This form shows "possibility" of the basic form V-ŋɛ; the negative of it is ma-V-ga.

ga # ʔé-ŋɛ 'I go' + ga # -ʔé-ga-ŋɛ 'I can go'
ga # ma-ʔé 'I do not go' + ga # ma-ʔé-ga 'I cannot go'

3) V-tša-ηε: This form shows "progressiveness" of the basic form V-ηε; there is no negative for this form.

ga # bí-sù tǎη kjí-ηε 'I speak the Bisu language' →
ga # bí-sù tǎη kjí-tša-ηε 'I am speaking the Bisu language'

This tša-ηε is a morpheme which means 'have', 'be'. Therefore, it is quite possible that the word was derived by analogical influence of the word -jù in Thai (original meaning is 'have').

4) V-ka-ηε: This form shows "mutualness" of the basic form V-ηε. ('to do reciprocally').

ga # kjí-ηε 'I speak' → gaj # kjí-ka-ηε 'We two speak to each other'
gaj # sí-tǎη-ka-ηε 'We two struggle with (each other)'

This form can be regarded as a borrowed -kan from Thai.

5) V-là: This form expresses "question" for the basic form V-ηε.

naη # ?é-ηε 'You go' → naη # ?é-là 'Do you go?'
naη # tsà-ηε 'You eat' → naη # tsà-là 'Do you eat?'

6) V-tšhí: This form shows "causation" for the basic form V-ηε.

naη # ?é-ηε 'You go' → naη # ?é-tšhí 'You make one go'
naη # kjà-ηε 'You hear' → naη # kjà-tšhí 'You make one hear'

7) V-sí-khà: This form shows "desire" in the basic form V-ηε.

ga # ?é-ηε 'I go' → ga # ?é-sí-khà 'I want to go'
ga # tsà-ηε 'I eat' → ga # tsà-sí-khà 'I want to eat'

8) ma-Vn-sù: This form expresses (Mizenkei, "near negative") 'not yet', etc. in the basic form V-ηε.

ga # kjà-ηε 'I hear' → ga # ma-kjàn-sù 'I did not hear yet'
ga # wà-ηε 'I make' → ga # ma-wàn-sù 'I did not make yet'
ga # ?é-ηε 'I go' → ga # ma-?én-sù 'I did not go yet'

9) V-kan-sù: This form shows "experience of the past" in the basic form V-ηε; the negative of it is ma-Vkan-sù.

ga # lá-ηε 'I come' → ga # lá-kán-sù 'I have come' →
ga # ma-lá-kán-sù 'I have not come'

10) V-tshá: This form expresses the perfect tense of the basic form V-ηε; as alternatives, V-na-tshá and V-kha-tshá are found.

tsùη-tsuη # hjùη-ηε 'The tree dies' → tsùη-tsuη # hjùη tshá 'The tree has died'

mɔŋ-mɔŋ # hmiŋ-ŋɛ 'The mango becomes ripe' → mɔŋ-mɔŋ # hmiŋ-tshá
 'The mango has become ripe'
 ni-ma # hù-ŋɛ 'This is big' → ni-ma # hù-na-tshá 'This has be-
 come big'
 ga # khɔ́-ŋɛ 'I got tired' → ga # khɔ́-kha-tshá 'I have got tired'

11) V-ʔɔ́: This form expresses the imperative of the basic form V-ŋɛ.

lǎ-ŋɛ 'to come' → lǎ-ʔɔ́ 'Come!'
 ʔé-ŋɛ 'to go' → ʔé-ʔɔ́ 'Go!'

12) ma-V (high level falling tone and lengthened vowel): This form indicates negative imperative of the basic form V-ŋɛ.

kjà-ŋɛ 'hear' → ma-kjà [mɛɜ kja:ɔɔ₁] 'Don't hear!'
 sà-ŋɛ 'eat' → ma-sà [mɛɜ sa:ɔɔ₁] 'Don't eat!'
 ʔé-ŋɛ 'go' → ma-ʔé [mɛɜ ʔɛ:ɔɔ₁] 'Don't go!'

13) V-jà (high level falling tone): This form forms exclamations with the basic form V-ŋɛ.

mèn kha-ŋɛ 'to thank' → mèn kha-jà [ɔɔ₁] 'Thanks!'
 kà-tsà-ŋɛ 'to win' → kà-tsà-jà 'Won!'
 kan-lǎŋ-ŋɛ 'to be defeated' → kan-lǎŋ-jà 'I am defeated!'
 wà-khɔ-ŋɛ 'to finish the work' → wà-khɔ-jà 'I have finished
 the work!'

This jà is used particularly in negative expressions:

ma-hmá-jà 'True!' (translated word for word, it means 'Not a lie!');
 ma-ʔa-ja 'Lie!' (translated word for word, it means 'Not the truth!');
 however, I have not heard *hma-ŋɛ, *ʔa-ŋɛ.

15. INTERLOCKING SYSTEM

Sequences of one word from Group V plus another one from the same group sometimes express two continuing actions, or the trend of the action defined by the main word. As in the examples in the section on the phonemic system [Ed., p.59], the form of this construction is limited to the following four forms which mean 'to go', 'to come'.

V-lǎ-ŋɛ '(downward) ... come to do'
 V-lé-ŋɛ '(upward) ... go to do'
 V-lú-ŋɛ '(from below upward) ... go to do'
 V-ʔé-ŋɛ '(downward) go to do'

For example, tsà-ŋɛ 'to eat' → tsà-lǎ-ŋɛ 'come to eat' → tsà-ʔé-ŋɛ 'go to eat'.

ʔó-ŋɛ 'enter' + ʔóŋ-lá-ŋɛ '(downward) enter (come)'
 ʔóŋ-lé-ŋɛ '(upward) enter (go)' + ʔóŋ-lú-ŋɛ '(upward) enter (come)'
 ʔóŋ-ʔé-ŋɛ '(downward) enter (go)'

Forms such as V-lá-ŋɛ, show in a single form expressions correlating to

shang lai - hsia lai - shang chü - hsia chü
 (上來) (下來) (上去) (下去)

in Chinese.

The contrasts of 'bring' háŋ-lá-ŋɛ, 'take away' háŋ-ʔé-ŋɛ, 'fetch' ʒù-lá-ŋɛ and 'carry away' ʒù-ʔé-ŋɛ are expressed in the differences of the attached part. Of course, the attached parts are defined by the character of the words of Group V. tha-ŋɛ 'stand up' as opposed to tha-lá-ŋɛ 'rise' is possible. But *tha-lú-ŋɛ is impossible. One can make khŋn-lá-jà 'arrive' become + khŋn-lá-ŋɛ 'come' + khŋn-lá-jà 'Oh, I have arrived!', but other forms are impossible.

The eminent feature of this interlocking system is that V-V-ŋɛ exists side by side with V-ŋɛ which is not interlocking.

16. In Bisu, there are also words formed by Group V plus Group V. But only of the V₁-V₂-ŋɛ type; there is no V₁-ŋɛ type.

tšù-tsà-ŋɛ 'remember', tšam-tsà-ŋɛ 'remember'. These are not, e.g. *tšù-ŋɛ + tšù-tsà-ŋɛ; only the latter sequence is possible. This tsà-ŋɛ in its origin is the same word as 'eat' tsà-ŋɛ, and 'remember' is expressed as 'to eat memory'; 'win' is expressed as 'to eat a win'. There are similar coinages in spoken Tibetan.⁹

17. The distinguishing of the intransitive form from the transitive form in a word of Group V is rarely accomplished by two morphemes which have a [minimal: Ed.] contrast in part of their phonemic structure, but in many cases it is shown clearly by two morphemes which have unrelated phonemic structures. For example,

tsùŋ-tswŋ hìwŋ-ŋɛ 'A tree falls down' ga tsùŋ-tswŋ tɣ-ŋɛ 'I fell a tree'
 tsùŋ-tswŋ kw-ŋɛ 'A tree becomes dry' ga tsùŋ-tswŋ hìw-ŋɛ 'I dry a tree'

But in the following cases, the partial contrast of phonemes in two morphemes indicates the function of intransitive or transitive.

ga # ʔa-mòŋ tšàj kla-ŋɛ 'I fall down from the back of a horse' + kla-ŋɛ 'to fall'

ga # ʔa-mɔŋ tʃàj khla-ŋe 'I drop something from the back of a horse' +
khla-ŋe 'to drop'

láj # lúm-ŋe 'The water becomes warm' + lúm-ŋe 'to warm'

ga # láj hlúm-ŋe 'I warm up water' + hlúm-ŋe 'to warm up'

Examples such as the above are very small in number.¹⁰ In addition, the following contrasts are found.

plɔŋ-ŋe 'to make a hole' + plɔŋ tʃhí 'A hole is made'
tʃhit-ŋe 'to tear' + tʃhit tʃhí 'to be torn'

This V-tshi form is regarded as the form of the causative mentioned above, therefore, 'A hole is made', 'to be torn' may be expressed in passive form; however, I am not sure this is actually so.

18. There is a verb expression which is constructed by the concatenation of a word of Group S with a word of Group V in Bisu.

For example,

| | | | |
|-------------------|---------------------------------------|----------------|-----------------------------|
| jí tʃhù tʃhù-ŋe | 'to sneeze' | mè-bún bún-ŋe | 'to dream of' |
| tù-tʃhɔŋ tʃhɔŋ-ŋe | 'to have a hat on' | sùŋ kho kho-ŋe | 'to have a straw hat on' |
| muŋ biáp biáp-ŋe | 'There is a flash of lightning' | ʔaŋ-lɔj lɔj-ŋe | 'to swim' |

In these constructions it is possible to place pause, for example, between jí-tʃhù and tʃhù-ŋe. The negative of it is not *ma-jí-tʃhw tʃhù but jí-tʃhù ma-tʃhù or mè-bún ma-bún. Thus, these should be regarded as the constructions of words of Group S and Group V which consist of two morphemes in each.

19. DETERMINATIVE

When a word of Group S is modified by a word of Group V, these are ordered in the form S-V. Transformations to noun phrases from the verbal construction S + V are as follows:

| | | | |
|------------------|--------------------------------------|-------------|-------------------|
| tʃhán # hmɔŋ-ŋe | 'The man is tall' | tʃhán hmɔŋ | 'a tall man' |
| láj hlɔŋ-ŋe | 'to warm up water' | láj hlɔŋ | 'warm water' |
| láj hlúm-ŋe | 'to boil water' | láj hlúm | 'boiled water' |
| tʃhà-là # pɔj-ŋe | 'The tiger has a striped pattern' | tʃhà-là pɔj | 'a striped tiger' |

20. LOAN WORDS

I have reported the basic points of the phonemic system and

grammatical system of Ban Lua Bisu briefly in this paper. There is much left to be desired; I wish to re-examine the data and investigate further.

Lastly, I wish to discuss loan words from Thai.

Bisu vocabulary contains a considerable number of loan words from Thai. In 850 words recorded this time, approximately 150 words were from Thai. Those loan words were borrowed in several stratum under various forms. Considering the whole of Bisu vocabulary, first, it is considered that some came with new things; that is to say, they are new words added to the original vocabulary of Bisu. Secondly, similar to the numerals '*three*' and following, mentioned above, there are words which took the place of original words of Bisu. Thirdly, though most borrowings took the place of original Bisu words such as the numerals '*one, two*', some of them are used in complementary distribution. For example, there are two morphemes which mean '*year*'. The distribution of them is as follows:

| | | | |
|-----------------|------------------|------------------|------------------|
| <i>one year</i> | <i>two years</i> | <i>this year</i> | <i>last year</i> |
| tù pí | ní pí | mí hnw | mí hnw šy |

In the cases of '*one year*', '*two years*', pí which was borrowed from Thai is used. But in the case of '*this year*', '*last year*', the original Bisu hnw occurs.

As to the times of the borrowing, roughly three strata can be distinguished. As to the loan words of the oldest stratum, these came when the Bisu tribe lived in Burma or Yün-nan. All of the words which have different phonemic features from Northern Thai and Standard Thai, for example, '*silk*' ?aŋ-hmáj (13th century Thai hmaŋ); '*oil*' nam hman (13th century Thai nam man (hman?)); '*north*' hùŋ hnɣ (13th century Thai hn'ə); '*to be easy*' hŋáj-ŋɛ (13th century Thai ŋaŋ (*hŋaŋ)); '*blacksmith*' tšaŋ hlek (13th century Thai džəŋ hlek); '*to be pointed*' hléŋ-ŋɛ (13th century Thai hléŋ), which all contain hm-, hn-, hŋ-, hl-, are quite within the bounds of possibility as loan words which preserve the phonemic system of antiquated Thai. The twelve zodiacal signs might be borrowed at that stratum. The twelve zodiacal signs are the most similar to the Thai Lü language of Yün-nan Province.¹¹

As the second stratum, it is conjecturable that Bisu has borrowed a large number of words from Northern Thai after coming to the northern region of Thailand. The loan words of this stratum comprise the largest number of loan words, for example, the ŋ of '*to dye*' ŋəm-ŋɛ (N. Th. ŋəm), '*age of person*' ?aŋ-ŋu (N. Th. ?a-ŋu) is an eminent syllable-initial phoneme of Northern Thai; and '*umbrella*' tšəŋ (N. Th. cəŋ), '*clothes iron*' taw ŋit (N. Th. tawnlɪt), '*market*' kat (N. Th. kàat), '*priest*' sà-tu (N. Th. satu), and '*body*' ?aŋ-to (N. Th. tua) are unique

word forms of Northern Thai; there are no such forms in Standard Thai. As the third stratum, there are fresh loan words which are considered as having been borrowed from Standard Thai recently: 'toothbrush' māj si fan (Thai: præŋ sǐ fan); 'to read' ?an-ŋɛ (Thai: ?aan), and 'dish' tʃan-bən (Thai: caan-beŋ). The forms of these words are different from Northern Thai, but correlate with Standard Thai.

In terms of form, loan words of these three stratum are grouped according to the following three types:

1) Words which have retained the original structural features of Thai, such as 'umbrella', 'market', 'clothes iron', 'toothbrush' mentioned above.

2) Words which have taken the appearance of Bisu, such as the words 'to dye', 'age', 'to read', 'to draw a line' mentioned above.

These have taken the same form as original Bisu by attaching ?aŋ-, -ŋɛ which are the prominent features of words of Group S and Group V.

3) New word types have been made by loan words combined with original morphemes of Bisu.

For example, ?à-mǝŋ kip 'hoof' was constructed by the combination of a loan word from Thai kip (Standard Thai and Northern Thai is kǐp) and a word of Bisu ?à-mǝŋ 'horse'. And also bǐ khít 'match' was constructed from bǐ- Bisu for 'fire' and khít from Thai mǎj khít 'match' (Standard Thai). Several other words look like the same construction type; however, the part which is native Bisu is not clear; for instance, the final parts hŋɣ, wí of 'north' hùŋ hŋɣ and 'fan' pǎŋ wí are borrowings from Thai: nǎ, wǐi. But it is obscure whether the initial parts hùŋ and pǎŋ are native Bisu or not.

Since the abovementioned word 'match' has an obvious element of Standard Thai, this construction type is not always loan words of the old stratum. In addition, there are several words which resemble Thai in form; but it is difficult to decide if they are, or are forms of original Bisu.

| | | | | | |
|----------------|---------|---------------|---------|---------|--------------|
| 'goods' | ?aŋ kǝŋ | : Thai = khǝŋ | 'voice' | ?aŋ sɛŋ | : Thai = sǎŋ |
| 'to get drunk' | màw-ŋɛ | : Thai = maw | 'bed' | ten | : Thai = tǎŋ |

It is a very interesting problem to me to study the correlations of loan words in Bisu and the origins of these words as a whole. I wish to refer to that problem in another paper, in connection with the additional facts of languages of other mountain tribes.

ADDITIONAL NOTE

I will note briefly here the phonemic system of loan words.

It is clear that 'to count' *dáp-ŋɛ* is a loan word from Thai *nab*, and it is quite possible to think that this word was borrowed at a very old stage.

In accordance with my report (*Tōnan Ajia Kenkyū* Vol.3, No.3, p.128), at some stage (probably when the Bisu tribe lived in the northern part of Burma or Yün-nan Province), the part of forms in Bisu which begin with voiced nasal was replaced by a voiced stop such as **ŋ* → *ŋg* → *g*, **n* → *nd* → *d*, **m* → *mb* → *b*.

nap, which was originally a Thai word, was already borrowed when that change occurred. Therefore, it was changed **náp* → *ndáp* → *dáp* like native Bisu words; for example, **?aŋ-ná* 'pain' → *?aŋ-dá*. On the other hand, *nà*, which means 'rice field', was borrowed from Thai *na*, but it was not changed to *dà*, because this word was borrowed after the change of **n* → *nd* → *d*. In graphic form those words are as follows:

| | Bisu word | loan word | loan word |
|----------------|-----------------|-----------------------------------|----------------------------|
| | 'pain' | 'to count' | 'rice field' |
| Earlier stage: | * <i>?aŋ-ná</i> | * <i>náp-ŋɛ</i> < Thai <i>nab</i> | x |
| | <i>?aŋ-ndá</i> | <i>ndáp-ŋɛ</i> | x |
| Later stage: | <i>?aŋ-dá</i> | <i>dáp-ŋɛ</i> | <i>nà</i> < Thai <i>na</i> |

Bisu is closest to Punoi in Lao and Pyen in Shan State; I think that these three are contained in a subgroup separate from, and parallel to, the Maru-Lashi-Atsi group, Akha group, Lahu group and Lisu group, within the Burmese-Lolo branch.

See: Tatsuo Nishida, *Bisu go no kenkyū* (A preliminary study on the Bisu Language), *Tōnan Ajia Kenkyū* (The Southeast Asian Studies, Kyoto University), Vol.IV, No.1 (1966). Tatsuo Nishida, *Bisu go no keito I, II* (A comparative study of the Bisu, Akha and Burmese languages), *Tōnan Ajia Kenkyū* Vol.IV, No.3 (1966); Vol.IV, No.5 (1967).

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- 1966 "A preliminary study on the Bisu language - a language of northern Thailand recently discovered by us", *Tōnan Ajia Kenkyū* 4, pp.65-87.

N O T E S

1. This survey has been carried out as one item of the First Five Years Plan of the Center for Southeast Asian Studies, Kyoto University. The linguistic group was comprised of members such as Yasuyuki Mitani, Makio Katsura and myself.

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2. The so-called Khammyaṅ (Northern Thai language) is spoken in this region, with such dialects as Chiangrai, Chiengmai, Lampang and Lampoon, with further variants among these dialects, cf. Herbert C. Purnell, *A short Northern Thai - English dictionary*. Chiengmai, 1963.

3. Mr Mitani gave me valuable co-operation in the study of the Bisu language. For my whole study, please refer to "A study on the languages in Northern Thailand", *Tōnan Ajia Kenkyū (Southeast Asian Studies)*, Vol.3, No.3, 1965.

4. Yasuyuki Mitani, "Notes on the survey of Lawa language in Thailand", *Tōnan Ajia Kenkyū (Southeast Asian Studies)*, Vol.3, No.1, 1965, p.153.

5. Dr A.F.G. Kerr, "Two Lawa Vocabularies", *Journal of the Siam Society*, 21, 1927. He speaks of two Lawa languages; one of them is spoken in Ban Luang village, situated southwest of Chiengmai City of Chiengmai Province, and the other is used by the Lawa tribe in Kanburi Province. Dr Kerr reported 48 words of the former, recorded when he visited the place in 1922, and 86 words of the Lawa language of Kwēyai and 34 words of Kwēnoi; however, he thought that they do not resemble Lawa of Ban Luang, but rather resemble one of the language group of Tibetan-Burmese languages which is close to Lisu and Akha. The description of the words is not clear, and no record of tonemes is presented.

6. Henri Roux, "Deux tribus de la région de Phong Saly (Laos Septentrional)", BEFEO 24, 1924, pp.489-500. Mr Roux reported 542 words of the P'u-Noi language. He did not know how this language, as well as the Akha language which he reported in the same paper, should be classified. R. Shafer marked it as a language situated between Burmese and Lolo, cf. R. Shafer, "The link between Burmese and Lolo", *Sino-Tibetica*, No.2, 1938; "Phunci and Akha tones", *Sino-Tibetica*, No.4, 1938.

7. G. George Scott, *Gazetteer of Upper Burma and the Shan States*, pt.1, Vol.I, Rangoon, 1900, pp.717-19. "Vocabulary of Pyen (or Pin) tribe, Kengtung, Southern Shan States" (by G.C.B. Stirling). 246 words of Pyen are recorded in this paper. There is no record of tonemes, but its form is closest to the Bisu language.

8. I wish to advocate that there is a new group represented by the Bisu, Pyen and Phunoi languages which have few differences, and I would make a guess that several languages belonging to this language group are still spoken at some places scattered over Laos, Thailand and Burma (Shan State). I will prove that this group is intermediate between Akha, which is spoken (along with Bisu) in Laos, Thailand and Burma (Shan State), and Burmese, which is spoken over in Burma. Please refer to "Bisu go no keito (A comparative study of the Bisu, Akha and Burmese languages)", *Tōnan Ajia Kenkyū (Southeast Asian Studies)*, Vol.4, No.2 (to be published as Vol.4, No.3, 1966). And for Akha, please refer to "Akha go no onso taikai; Tai koku hokubu ni okeru sanchimin Akha zoku no gengo no kizyutsuteki kenkyū (Phonemic system of the Akha language; descriptive studies on the language of the Akha hill tribe in Northern Thailand)", *Studia Phonologica (Onsei kagaku kenkyū)*, Vol.IV, 1966, pp.1-37.

9. For instance, there are coinages in the oral language of Central Tibet: sùr sà-wa 'to eat a horn = to say in a roundabout way'; khoŋ-tšho sà-wa 'to eat anger = angry'; tshik-po sà-wa 'to eat a burning thing = angry'.

There are other compound types in Bisu which have -tsá as in the following verbs: 'to learn' hièn tsá-ŋe; 'to write' tɛm tsá-ŋe; 'to read' ?an tsá-ŋe. The common feature of these three examples is that they are all loan words from Thai and have the same meaning of "letter"; therefore, they seem to be structural patterns of Thai.

10. For another feature, the contrast of tones shows contrast of meaning. phú-ŋe 'unbind' phù-ŋe 'combine' : -phí-ŋe 'make a fire' phí-ŋe 'close'.

11. Tatsuo Nishida: "A study of the 16th century Pai i = Chinese and Chinese = Pai i vocabularies", *The Toyo Gakuho (Reports of the Oriental Society)*, 43 (1960), pp.46-47.

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