Endangered Tibeto-Burman languages of Thailand

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Abstract

There are three endangered indigenous Tibeto-Burman languages of Thailand: Bisu (bzi), Mpi (mpz) and Gong (ugo). Bisu is spoken in Chiang Rai Province, Mpi in Phrae and Nan provinces, and Gong in Suphanburi and Uthai Thani provinces. All are Burmic languages: Bisu and Mpi are Southern Ngwi (Yi Branch, Loloish) languages and Gong is a Burmish language.

The history of Bisu and Mpi is known from traditional stories. The Mpi came from southwest Yunnan and served as elephant keepers for the Princes of Phrae from over 200 years ago; the Bisu came from Kengtung State in northeast Burma to the south of the Chiang Rai area about 170 years ago. Bisu is still spoken in two villages north of Kengtung and one village nearby in Yunnan; other closely-related languages include Laomian further north; also further east, Sangkong in Yunnan and Phunoi in Laos, also known as Côông in Vietnam. Bi-Ka Hani languages closely related to Mpi are spoken in south Pu'er Prefecture in south Yunnan, but no Mpi is spoken there. The Gong were in the Kanchanaburi area about 240 years ago, as tributaries to the restored Chakri Dynasty, under the name Lawáa; no Gong are now known outside Thailand. Until recently, the Bisu and Mpi were known in Northern Thai as Lua', a collective name for small tribal groups which mainly refers to various small groups speaking Mon-Khmer languages; the Gong were also included in this category.

There have been various efforts for language documentation and maintenance with all three groups. The Bisu effort has been particularly long-standing and intense, the Gong effort has been long-standing but less intense, and for Mpi the effort started well but stopped many years ago when the trained in-group worker passed away. These three languages are a part of Thailand's rich linguistic history, and the communities need both official support and ongoing expert linguistic assistance to strengthen their languages.

Keywords: endangered, indigenous, Tibeto-Burman languages, Thailand

1. Introduction

There are of course many non-endangered Tibeto-Burman languages spoken in Thailand, notably various Karenic languages in the west and some Ngwi (Loloish, Yi Branch) languages in the north such as Lahu, Akha and Lisu; also various other groups who arrived more recently. These are all also spoken by many more people in nearby countries. However, Thailand also has three indigenous endangered Tibeto-Burman languages which are the topic of this presentation.

There have been many previous surveys of the Tibeto-Burman and other indigenous minority languages of Thailand. In the 1960s and 1970s, they were referred to in English as Hill Tribes and in Thai as ชาวเขา *chaaw khaw*, and surveyed widely by the Tribal Research Center (later Institute), part of the Ministry of Public Welfare, which was also the base for a number of anthropologists such as Anthony Walker and affiliated linguists such as James A. Matisoff. One survey which paid particular attention to these three languages and their endangered status was Bradley (1983); Bradley (1985a) suggested some ways to assist in maintaining these languages; and Bradley et al. (1991) also introduced them to a wider popular audience.

In more recent years, there have been very extensive efforts by linguists in Thailand to document these languages. One early project which started in the mid-1970s was the Indigenous Languages of Thailand Research Project, partly funded by the Ford Foundation and headed by Prof Theraphan L. Thongkum, later at the Department of Linguistics of Chulalongkorn University. Another centre for this work was established by Prof Suriya Ranatakul at Mahidol University in 1974: what is now the Research Institute for Languages and Cultures of Asia. Within this, the Center for Documentation and Revitalization of Endangered Languages was established by Prof Suwilai Premsrirat in 2004, but work on language maintenance started many years earlier. A third major centre is at the Department of Linguistics of Payap University, mainly associated with members of SIL International and their local colleagues and students. All three universities have long continued to focus on documentation of the indigenous languages of the area, but none has a core focus on Tibeto-Burman languages of Thailand. Chulalongkorn is the world leader for Tai languages; Mahidol has mainly focussed on Mon-Khmer and other languages; and Payap on Tibeto-Burman and other languages of nearby countries. Individuals and groups of researchers from each university have also worked on some Tibeto-Burman languages of Thailand, including all three languages discussed here.

The work at Mahidol includes practical language maintenance efforts, as discussed in depth in Suwilai and Hirsh (2018). This work has led to the creation of many new orthographies for minority languages of Thailand based on the Thai orthography, teaching materials to implement them, as well as other village-level projects driven by community wishes and funded by the Thailand Research Fund among other sources. Similar work is also long-established at Payap University.

With the development of an official language policy for Thailand by the Royal Society and its approval by three successive governments since 2010, this language maintenance work can now move ahead to the wider use of these and similar materials for initial mother tongue education, as already used in a few locations with substantial success.

I will now discuss Thailand's three indigenous endangered Tibeto-Burman languages, one by one, starting from the north.

2. Bisu

Bisu is one of a cluster of closely-related languages spoken in southwest Yunnan, the eastern Shan State of Burma, northeast Laos, northwest Vietnam and north Thailand. The other languages include Laomian spoken in south Lancang and Menglian counties (Li, 1997; Xu 1997a; 1997b; 1998; 1999; 2001) and Sangkong spoken in south Jinghong County (Li, 2002), both in China; Laomian also extends nearby into Burma (Xu, 2005). In Laos there are six rather distinct varieties of Phunoi, with another spoken nearby in Vietnam under the name Côông (Vuong, 1973; Bradley, 1977). Laomian and Bisu are very close; the connection with Sangkong and Phunoi is more distant, but all share a number of characteristic innovations not seen elsewhere within Southern Ngwi, such as a shift of prefixed nasals to voiced stops, and a strong tendency to preserve final stops and nasals.

There is one Bisu village, Laopinzhai, in Menghai County near the Burmese border, and two Bisu villages, Yaw Tan and Nam Theun, nearby in the Eastern Shan State (Maung Maung Tun, 2014). Early surveys by the incoming British in the late 1880s and early 1890s reported more Bisu villages south of Kengtung in the Möng Phyak area, under the ethnonym Pyin [p^hjin^{22}]; the source comments that the language was disappearing there in the 1890s (Scott and Hardiman, 1900). The Burmese name P¥c\ Pyin and the Chinese name 品 Pin are exonyms, the Bisu in all three countries call themselves Bisu, with dialect alternative forms Misu and Mbisu in some locations.

According to the tradition of the Bisu in Thailand, they were relocated from Burma into north Thailand in the 1850s, at a time when many other people were also being relocated from Kengtung State into the Chiang Rai area. The first outsider to encounter them there was a British engineer, Holt Hallett, who found them in 1876 at Takɔ and four other nearby villages, north of Wiang Pa Pao (Hallett, 1890). This village, also known as Din Dam, is now a large Tambon town in the south of Amphur Mae Sruai in southwest Chiang Rai; but no Bisu is spoken there. I recorded what was probably the last fluent speaker in 1977; the recording and transcription is archived in PARADISEC, and the dialect is compared with the others in Bradley (1988). Others have found semispeakers there more recently, but they were reluctant to provide data.

By 1977, Bisu in Thailand was mainly spoken at Doi Chomphu village and at Doi Pui Kham village, both in Amphur Myang of Chiang Rai. They reportedly had moved to Doi Chomphu about 1925 and some went further to Doi Pui Kham in the 1940s. In the late 1970s, there were also a few speakers remaining at Phadaeng village further south in Phayao Province, but now all remaining speakers from there have moved from Phadaeng to Doi Chomphu.

It is reported that a Bisu monk visited from Burma in the 1950s, and there have been more substantial recent contacts with Bisu in Burma and China and Laomian in China, initiated by the SIL International linguist Dr Kirk Person. Altogether there are about 1,440 people now who identify as Bisu: 585 in Thailand, 615 in Burma and 240 in China; but not all speak the language. In Burma they are recognised as the Pyin ethnic group and have been assisted by SIL International to develop a romanisation similar to that for Lahu; in China they are not recognised as a separate national minority nor as part of one of the existing 55; unlike the Laomian, who are included in the Lahu national minority. In Thailand up to the early 1980s, they were included in the collective Thai Lawáa or Northern Thai Lua' hill tribe along with the Mpi, Gong and various small groups speaking various Mon-Khmer languages, but now they are recognised as a separate ethnic group and they have a well-developed and substantially used orthography based on Thai.

Among the documentary linguistic work on Bisu is Nishida (1966a; 1966b; 1967; 1973), Bradley (1978; 1981; 1985b; 1987; 1988; 1989a), Vacharee (1987), Beaudouin (1988; 1991) and particularly many works by Dr Kirk Person (1999; 2000; 2005; 2018 and many more) and his colleagues and students at Payap University (e.g. Day, 1999).

The Bisu and Laomian numerals in Table 1 below can be compared to the Mpi numerals in Table 2 and the Gong numerals in Table 4. By 1977, all numerals in Takɔ Bisu were Tai loans; Doi Chomphu Bisu has Tibeto-Burman cognate forms for 1 to 3 and 10 which are very often replaced by Northern Thai loans, with the rest only Tai loans; Laomian shows cognates

of a more conservative Tibeto-Burman system, but with alternative forms which are apparent blends of Tibeto-Burman and Tai forms for 7 and 8, and a Tai loan for 9. Sangkong and Phunoi also retain basically Tibeto-Burman numeral systems, but Phunoi has unexpected non-cognate and non-Tai forms for 7, 8 and 9 (Bradley, 1977; 1979). The Doi Chomphu Bisu 3 /sam^{33}/ is a blend of the Tibeto-Burman cognate with the vowel of the Thai form; other Bisu cognates of words from Proto-TB ***um** have Bisu /um/.

Table 1 Bisu numerals

	Doi Chomphu	Takɔ	Laomian
1	thɯ21/nɯŋ21	nɯŋ21	thi21
2	ni21/sɔŋ35	sɔŋ35	ni21
3	sam33/sam35	sam35	sum55
4	si21	si21	han55
5	ha53	ha53	ŋa21
6	hok55	hok55	khu̲21
7	tɕet55	tɕet55	ɕi̲21/ɕi̲t̲21
8	pɛt55	pɛt55	xɛ̲21/xet21
9	kaw53	kaw53	kaw31
10	tshɛ21/sip55	sip55	tshe55

Bisu is very well served with language maintenance efforts. The main Bisu person in the initial 1970s efforts was Moon Tacaan, originally from Phadaeng village but since the mid-1970s resident in Doi Chomphu. He was trained in phonetics and helped to create a Bisu orthography based on Thai by Dr Jimmy G. Harris of the Indigenous Languages of Thailand Project, and he was also my main consultant in work at Doi Chomphu in 1977. We improved the ILTP Bisu orthography, which was later further developed by Dr Kirk Person in consultation with the community, and is now in general use. Moon Tacaan continues to be very active in language maintenance efforts; below is a poem he wrote in Bisu using the Thai-based orthography, as published in Person (2005: 131); Thai or Northern Thai loanwords are in italics.

gu^{33} Bi^{21}su^{33} k^{h}ɔŋ^{21} *ni*^{53} mlaŋ^{21} *lai*^{33} *pi*^{33}

we Bisu village this long.time many year

Our Bisu village is many years old.

gu^{33}	ʔaŋ^{33} pi^{33}	ʔaŋ^{33} hu^{21}	*sɯp^{55}*	lɯ^{33} tɕ^{h}i^{33}
we	grandmother	grandfather	persist	PERF

Our ancestors have persisted.

gu^{33}	Bi^{21}su^{33}	k^{h}ɔŋ^{21}	*ti^{33}*	*taŋ^{21} lai^{33}*	*ni^{55}*
we	Bisu	village	place	every	this

Our Bisu village is the place of all of us.

ja^{21} maŋ^{21}	ʔi^{21} kɛ^{33}	ʔaŋ^{33} bɛ^{33}	ka^{33} ʔɛ^{21}	ɲa^{53}
old.people	children	know	completely	DEC

Old people and children know everything.

ʔa^{33} mɯ^{55}	Bi^{21}su^{33}	k^{h}ɔŋ^{21}	*sam^{33}*	*ti^{33}*	*ni^{53}*
now	Bisu	village	3	place	this

Now in these three Bisu villages,

gu^{33}	ʔi^{21} kɛ^{33}	ba^{21}	ga^{33}	*lɯm^{33}*	ka^{33} k^{h}a^{33}
we	children	NEG	MUST	forget	TOGETHER

our children must not forget!

k^{h}ɔŋ^{21} *sam^{33}*	k^{h}ɔŋ^{21}	ni^{53}	ja^{21}	*phi^{21} nɔŋ^{33}*	kaʔ^{33}
village 3	village this	TOP	relative	DEC	

These three villages are family!

jaw^{21}	gu^{33}	ja^{33}	*kam^{21} ʔu^{35}*	a^{33}	*lɯm^{33}*	tɕo^{33}
THEN	we	TOP	language	PROH	forget	PROH

So let us not forget our language!

(3 lines omitted)

ba^{21}	*ʔuj^{35}*	k^{h}e^{21}	k^{h}a^{33} jaw^{55}	ʔa^{33} saŋ^{33}	*ʔu^{33}*
NEG	speak	PROG	COND	who?	speak

If we are not speaking it, who will?

Kirk Person and many Bisu and other co-workers are continuing the effort to document and maintain Bisu, with a wide variety of teaching and other materials. The Bisu Thai orthography recently received official government approval, and work on a dictionary is underway.

3. Mpi

Traditional Mpi history indicates that the Mpi came to Thailand during the reign of King Rama II (1809-1824), probably from what is now east Mengla County, Xishuangbanna (Sipsongphanna) Prefecture in China or further northeast. That area was then under local Tai Lue rulers; Tai Lue also live in the area around Chiang Kham, near Ban Sakoen. The Mpi of Ban Dong came to Phrae to work as elephant keepers for the Princes of Phrae. Related languages such as Piyo are spoken to the northeast of Mengla.

The presence of the Mpi language was first reported in 1967 by an American Peace Corps volunteer working in Phrae, Richard B. Davis, who was later an anthropologist at the Australian National University. One Mpi village was later listed in early inventories of tribal villages by the Tribal Research Institute in Chiang Mai, and like Bisu included in the category Lawáa or Lua', so it was sometimes confused with the Bisu language whose speakers were also included in this category.

There are approximately 1,300 Mpi people in Ban Dong village (known to local people as Long Pi or Ban Mpi) of Amphur Myang, Phrae Province and approximately 250 in Sakoen village, Amphur Song Khwae, Nan Province; also a few scattered elsewhere in Thailand. In Ban Dong, the group autonym is [m^{33} pi^{33}], but in Sakoen, the autonym is now [$kɔ^{53}$]; the latter may originally have been a Tai Lue exonym, and is similar to a pejorative exonym for the Akha used in Laos and Burma. All Mpi are fluent in Northern Thai, which is the everyday language of the two villages and their areas, and nearly all are also fluent in standard Thai. Most people in Ban Dong are Mpi, but only about half the people in Sakoen are Mpi; the rest are Northern Thai or Tai Lue. Many younger ethnic Mpi do not speak the language, or have only limited knowledge of it. Mpi is the least well documented of the three endangered TB languages in Thailand, and the only one where no recent language maintenance work has been attempted.

The earliest documentation was by the Danish linguist Niels Ege, who collected a Swadesh list of 100 words at Ban Dong in 1972 while looking for Mon-Khmer languages in northern Thailand. Another early source on Ban Dong Mpi is an undated and unpublished report presented circa 1975 by Dr Jimmy G. Harris.

There is an excellent dictionary using a Thai-based script and IPA to write Mpi, Srinuan (Liang) Duanghom (1976); this was prepared as part of the Indigenous Languages of Thailand Research Project, founded by Dr Jimmy G. Harris and led by Prof Theraphan L. Thongkum. The author was one of several people trained to write their languages, and the only one to complete a dictionary. He also worked with me to collect additional vocabulary in 1976, and later worked with Sittichai Chai-iam. The data in the dictionary was used in Matisoff (1978) and Bradley (1979) to demonstrate that Mpi is a Southern Ngwi language closely related to various languages classified in the Bi-Ka subgroup of the Hani national minority in China, such as Piyo and Khatu as described in Hansson (1989), and also Enu/Ximoluo.

The Thai scholar Sittichai Chai-iam completed an MA thesis (1984) at Mahidol University which is a brief sketch of Mpi syntax, and a PhD thesis (1996) which is an in-depth study of the Mpi deictic system.

In 2004-2005, the Payap University scholar Nahhas conducted a brief survey of the vitality of Mpi, Nahhas (2007); he used standard questionnaires for evaluating language attitudes, endangerment and use, finding that Mpi was increasingly endangered; he also gives some lexical data for both varieties. The results of the survey are briefly summarised in Tehan and Nahhas (2008).

The eminent Chulalongkorn University scholar Prof Theraphan L. Thongkum and colleagues published an extensive vocabulary of 15 languages of Nan Province, Theraphan et al. (2007), including Mpi from Ban Sakoen, based on fieldwork in 2005.

Both varieties of Mpi, particularly that of Ban Sakoen, have a very large number of Lue, Northern Thai and Thai loanwords, some more assimilated than others. For example, all numerals above '5' are Tai loanwords, as shown in Table 2; data from Srinuan (1976) and Theraphan et al. (2007).

Table 2 Mpi Numerals

	Ban Dong	Ban Sakoen	Proto-Burmic
1	$t^{h}o^{45}$	$t^{h}u^{31}$	***ti²**
2	ɲi^{45}	ɲi^{31}	***s-ɲi²**
3	siŋ^{45}	si$^{\sim 31}$	***C-sum²**
4	li^{45}	li^{31}	***b-le²**
5	ŋo^{11}	ŋo^{31}	***ŋa²**
6	$k^{h}o$ʔ^{11}	hok^{45}	***C-krok^{L}**
7	siʔ^{11}	tɛet^{45}	***C-ʃik^{L}**

	Ban Dong	Ban Sakoen	Proto-Burmic
8	hɤʔ^{11}	pɛt^{45}	***C-jet^{L}**
9	kwi^{11}	kaw^{13}	***go^{2}**
10	t^{h}ɤ^{11}	sip^{45}	***tsay^{1}**

The phonological differences between the two varieties are very substantial; for example, Ban Sakoen retains a medial /l/ which Ban Dong merges into medial /j/ after bilabial initials and loses after velar initials, as shown in Table 3.

Table 3 Ban Sakoen and Ban Dong Mpi medials

	Ban Dong	Ban Sakoen	Proto-Burmic
SILVER/MONEY	p^{h}ju^{45}	p^{h}lu^{35}	***p^{h}lu^{1}**
BE/BECOME	p^{h}jaʔ^{13}	p^{h}l̲ə^{13}	***p^{h}lek^{L}**
FULL	pjɯ^{343}	plɨ^{33}	***mbliŋ^{3}**
LAZY	pjoŋ^{13}	plə$^{\sim 13}$	***mblaŋ^{2}**
LICK	mjaŋʔ^{13}	ml̲ə^{13}	***m-ljak^{L}**
LONG TIME	mjo^{343}	ml̲ə$^{\sim 33}$	***mloŋ^{3}**
WIDE	kɯ^{454}	klɨ^{453}	***glai^{1}**
FALL	ko^{343}	klo^{33}	***kla^{3}**
FECES	k^{h}i^{11}	k^{h}li^{31}	***kle^{2}**

Very sadly, in the late 1980s, Srinuan Duanghom passed away in his mid-forties, and since then there has been no one within the community who has continued his language documentation and maintenance work. When I most recently visited Ban Dong in 2018, there was still no public signage or other external evidence reflecting the distinctive status of the people, almost no public use of the language and no school or other activity in support of their identity or language. Most younger people now have limited knowledge of the language; older adults have varying but mostly fairly strong Mpi language ability. Both Mpi communities might greatly benefit from the assistance of an enthusiastic outsider linguist or team of linguists, if it comes soon enough.

4. Gong

The Gong were among the traditional inhabitants of the Khwae valley, both western Khwae Noy and eastern Khwae Yay, in Kanchanburi Province. They were included among the

subject groups of Thailand from the beginning of the current Chakri Dynasty, and were thus already in the area by the 1780s. Their original autonym was probably the source of the Thai term *Lawáa*, as the autonym among the last speakers of Gong varieties in Kanchanaburi Province was [lu^{33} waiŋ^{55}] or [lu^{33} waŋ^{55}] 'Waing/Wang people'. They were officially registered as part of Thailand's cultural heritage by the Minstry of Culture in 2012 (Mayuree 2012).

The Gong now live only in Kok Chiang village of Amphur Dan Chang, northwest Suphanburi Province, and until recently in Khɔɔk Khwaay village of Amphur Huai Khot, west Uthai Thani Province, now relocated nearby due to a recently constructed small dam. Both villages moved from northeast Kanchanaburi northwards, and speak related varieties of the language; the village names are in Thai. Since they left over a hundred years ago, the language has completely disappeared from Kanchanaburi Province.

The earliest documentation of the language is Kerr (1927), which was written by a botanist also surveying for a railway route between Burma and Thailand; he encountered them at various locations along the Khwae Noy and Khwae Yay. Speakers reported that the language was formerly also spoken across the Burmese border near the upper Khwae Noy area. The American anthropologist Theodore Stern, who did research with the Karen in Kanchanaburi, also encountered the Gong in 1964 but did not publish or report on them (Stern, 1964). There was formerly a series of Gong villages along the upper Khwae Noy speaking one variety of the language; the last such village was Ban Lawáa, a couple of kilometres downriver from the former site of Amphur Sangkhlaburi. There was another series of villages further east along the upper Khwae Yay, the last of which was at the former site of Amphur Na Suan. A third series of villages was east of Na Suan in modern Amphur Nong Prue, close to the village in Suphanburi. I visited all these areas and collected data from the last speakers and semispeakers between 1977 and 1982; the recordings are archived in PARADISEC. The language stopped being transmitted to children in Nong Prue about 1900, in Na Suan about 1910 and in Ban Lawáa about 1920, with the last speakers in Kanchanaburi Province gone by the mid-1980s. Stern reported 15 Gong in Ban Lawáa in 1964, I found seven who could speak the language to some degree in 1977, with the youngest then 52, but by 1981 only one remained. This last speaker was a retired kamnan (village cluster headman) with a Karen wife and descendants who identify as Karen. In the Na Suan area in 1978, there were scattered semispeakers, but no fluent speakers, mainly women living in villages of other ethnic groups. The final end for Gong in Kanchanaburi was the submersion of Na Suan by the Srinakarin Dam finished in 1980 and of Ban Lawáa by the Vajiralongkorn Dam finished in 1984, and the dispersal of their remaining

populations, who by then no longer spoke the language or identified as Gong; some became Karen and some became Thai, according to the ethnicity of some of their parents.

There is extensive published research on Gong, mainly by me and by Mayuree Thawornpat at Mahidol University; see Bradley (1978; 1981; 1989b; 2010; 2011; 2012 etc.), Mayuree (1993; 1997; 2004; 2005; 2006 etc.), Pusit (1986), Buachat (2018) and Udom et al. (2018). A dictionary is in preparation at Mahidol University, and expected to be completed soon.

Table 4 shows the numerals in two Gong varieties: as formerly spoken at Ban Lawáa in Kanchanaburi and at Kok Chiang in Suphanburi; for Kok Chiang, older forms used up to 1985 are also shown. All forms are cognates of Proto-Tibeto-Burman and Proto-Burmic numeral etyma, though the tone contrasts have been levelled. Ban Lawáa /d/ or /l/ and Kok Chiang /ʔl/ ~ /ʔ/ are regular reflexes of Proto-TB and Burmic ***s**.

Table 4 Gong numerals

	Ban Lawáa	Kok Chiang	former Kok Chiang
1	t^hi^{33}	t^hi^{33}	
2	$nɑŋ^{33}$	$nəŋ^{33}$	
3	$loŋ^{33}$	$ʔoŋ^{33}$	$ʔloŋ^{33}$
4	pli^{21}	pi^{33}	pli^{33} ~ pji^{33}
5	$ŋɔ^{33}$	$ŋɔ^{33}$	
6	$k^hɔʔ^{33}$	$k^hɔʔ^{33}$	
7	li^{33}	$ʔi^{33}$	$ʔli^{33}$
8	$hɛʔ^{33}$	$hɛʔ^{33}$	
9	ku^{33}	ku^{33}	
10	$sɛʔ^{33}$	$sɛ^{33}$	$tɕ^hɛ^{33}$

One of the most striking phonological characteristics of Gong is that most verbs show regular tonal alternations: the basic allotone occurs in most environments in verbs, and another allotone occurs after the negation prefix /ma^{33}/ and/or before the modal postverb 'want' /du^{55}/ among other environments: /35/ > [55], /55/ > [35], /33/ > [35], /51/ > [35] and /11/ > [13} ~ [35] as illustrated in Table 5. These alternation patterns are seen in most verbs; some verbs instead show other tone sandhi patterns, including two ('go' and 'eat') showing additional vowel alternations. A few verbs, particularly Thai loans, have no sandhi alternation. This tonal alternation process is fairly strongly maintained even by most semispeakers, but most semispeakers merge the [13] sandhi form of /11/ into [35], thus neutralising four of the five tones in this environment. This sandhi does not

occur in nouns. Additional sandhi patterns are seen in reduplicated verbs. Another productive tonal alternation is in two or more syllable nouns with an underlying low tone in the final syllable, which surfaces as a high falling tone (Bradley, 2012).

Table 5 Gong verb tone alternations

	Declarative	Negative	Desiderative
'know'	/ʔe^{35} a^{33}/	/ma^{33} ʔe^{55}/	/ʔe^{55} du^{55} a^{33}/
'die'	/ʔi^{55} a^{33}/	/ma^{33} ʔi^{35}/	/ʔi^{35} du^{55} a^{33}/
'work'	/p^{h}u^{33} a^{33}/	/ma^{33} p^{h}u ^{35}/	/p^{h}u ^{35} du^{55} a^{33}/
'chop up'	/so^{51} a^{33}/	/ma^{33} so^{35}/	/so^{35} du^{55} a^{33}/
'take'	/jo^{11} a^{33}/	/ma^{33} jo^{13}/ ~ /ma^{33} jo^{35}/	/jo^{13} du^{55} a^{33}/ ~ /jo^{35} du^{55} a^{33}/
'astringent'	/gɔŋ^{55} ɔ ^{33}/	/ma^{33} gɔŋ^{35}/	
'have broken skin'	/gɛŋ^{35} ɔ^{33}/	/ma^{33} gɛŋ^{55}/	/gɛŋ^{55} du^{55} a^{33}/
'drink'	/dɛŋ^{33} ɔ^{33}/	/ma^{33} dɛŋ^{35}/	/dɛŋ^{35} du^{55} a^{33}/
'muddy'	/gəŋ^{51} ɔ^{33}/	/ma^{33} gəŋ^{35}/	
'high'	/gɔŋ^{11} ɔ^{33}/	/ma^{33} gɔŋ^{13}/ ~ /ma^{33} gɔŋ^{35}/	
'go'	/kɔ^{11} ɔ^{33}/	/ma^{33} ka^{33}/	/ka^{33} du^{55} a^{33}/
'eat'	/so^{35} a^{33}/	/ma^{33} se^{55}/	/se^{33} du^{33} a^{33}/

5. Conclusion

All three languages are important for community identity and pride, as well as the history of Thailand, and it is our responsibility to document them; also to assist the communities to maintain or revive them as they wish.

Data from these languages is also very valuable for the understanding of the prehistory of the Burmic languages. Though endangered, the languages all maintain typical Tibeto-Burman structural patterns, such as verb-final clauses, as well as various complex innovative structural patterns, such as tone sandhi in Gong.

The three languages are full of borrowed lexicon from Tai languages, not only Thai but also Northern Thai, Lue, Tai Yai varieties and so on, reflecting centuries of close contact. The loans include some old borrowings which are phonologically integrated and show later sound changes since the borrowing. One extreme example of this is /ʔɛŋ^{55}/, the current Gong word for Thai; in this, the initial ***s** > /ʔl/ > /ʔ/ change, the merger of ***(j)am** into modern /ɛŋ/, and the

change of *Tone 1 into a 55 tone in nouns must have taken place as part of the borrowing and phonological integration of the Thai word *sajaam*, and subsequent internal change within Gong. The most recent is the change of /ʔl/ to /ʔ/ and the loss of medial /l/, which took place just beyond current living memory; the last speaker who used /ʔl/ and clusters with medial /l/ in Kok Chiang passed away in 1985, and the last speakers who remembered which words used to have /ʔl/ or medial /l/ died a few years later.

These three languages reflect much of the lexical richness of their Tibeto-Burman and Burmic heritage. For example, Table 6 shows the forms for the positive dimensional extent verbs in the three languages; for discussion, see Bradley (1995).

Table 6 Dimensional extent verbs

	Bisu (Doi Chomphu)	Mpi (Ban Dong)	Gong (Kok Chiang)	Proto-Burmic
MANY	bja^{21}	mjo^{13}	ɲɑ^{35}	***mja^{2}**
FAR	wə^{21}	hɤ^{13}	wɑŋ^{35}	***we^{2}**
BIG	hɨ^{21}	hɯ^{13}	(t^{h}i^{35})	***k-ri^{2}**
HIGH	hməŋ^{21}	mju^{453}	gɔŋ^{11}	***mraŋ^{3}**
WIDE	klɨ^{55}	kɯ^{454}	k^{h}li^{33}	***glai^{1}**
LONG	(hməŋ^{55})	sɯ^{454}	kəŋ^{51}	***s-riŋ^{1}**
LONG TIME	mlaŋ^{21}	mjo^{343}	duɔŋ^{35}	***mloŋ^{3}/*loŋ^{2}**
DEEP	hna^{21}	n<u>a</u>^{13}	nɔʔ^{33}	***C-nak**
THICK	t^{h}u^{55}	t^{h}u^{453}	dɔ^{33}	***t^{h}u^{1}**
HEAVY	han^{33}	li^{13}	di^{35}	***le^{2}**

As is sometimes the case, cognates for some of these etyma have been replaced in some languages; note the Bisu LONG form and the Gong BIG form. However, despite their centuries of residence in Thailand as well as close contact with and bilingualism in Thai among all speakers of these three languages, nearly all of the basic dimensional extent lexicon still has modern cognates of older Tibeto-Burman etyma; this is also true for many other areas of lexicon.

Bradley and Bradley (2019) include various examples of processes of language endangerment and language maintenance for Bisu and Gong, as well as general background on the causes and processes of language endangerment and suggestions about how to respond with action. The key factor is the community's attitude to its own language (Bradley, 2002). As

linguists, we have a responsibility to the communities where we work, and should help in language maintenance efforts where possible.

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