

RESILIENCE IN LANGUAGE ENDANGERMENT¹

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Abstract. Resilience thinking is a new approach to the understanding of complex ecological and social interactions and changes, so far been applied mainly to the study of ecosystems (Walker and Salt 2006) and community environmental knowledge (Berkes 2008). Resilience is defined as “the capacity of a system to absorb disturbance and still retain its basic function and structure” (Walker and Salt 2006: xiii).

This is also relevant for our response to the processes of change which occur in language endangerment. Such changes may be very rapid, and may have extreme effects on the structure and use of the endangered language. Many communities around the world are in or approaching a tip phase, with drastic changes in language ability, structure and use, as well as the loss of a great deal of other traditional knowledge. A resilience approach, empowering the community and giving it the respect, control and resources to document and use its traditional knowledge and make its own decisions about language, may allow many groups to achieve a new stability in the face of linguistic and cultural globalisation and top-down language policies.

Case studies from the Gong community in Thailand and the Lisu community in China, Burma, Thailand and India will illustrate the processes involved.

INTRODUCTION

Humans have long been making major changes to the environment, and all these changes have had substantial impact on the numbers and distribution of languages. The shift from hunting and gathering to agriculture and animal husbandry led to a major increase in the size of communities, and a gradual but substantial decrease in the number of human languages, starting over 10,000 years ago (Nettle 1999). This eventually led to the development of various smaller and larger territorial empires based on an agricultural heartland, with a written imperial

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lingua franca spreading at the expense of other languages. Starting just over 500 years ago, long-distance seaborne colonial empires radiating from Europe started to spread a small number of European languages, and also created contact situations in which many new pidgins and creoles developed, while weakening or eliminating large numbers of indigenous languages in many parts of the world. The industrial revolution over the last couple of centuries led to a series of technological advances in transport and communications, and along with improvements in health care and increased migration over the last century and the ongoing development and spread of nation states and their formal education systems, the outcome is much closer and more intimate contact between languages, but also a radically different environment for all languages, one in which even the most remote groups are increasingly exposed to outside linguistic influences, and monolingualism within a traditional minority society is no longer a realistic option. This rather Eurocentric view of human linguistic history oversimplifies by neglecting similar developments elsewhere in the world; those are largely parallel but on a more local scale.

Thus, languages have been disappearing for at least ten thousand years. If the language density and number of speakers of each language now seen in Papua New Guinea were present worldwide, there would be many times the number of languages currently spoken (7414 if we accept Lewis 2009, the latest edition of the *Ethnologue*), even allowing for increased population density based on agriculture and technology.

It seems to me there are four major sociolinguistic questions relating to language endangerment, in addition to many other questions relating to general linguistic issues.

- 1) Why is it that linguists are now so concerned about language endangerment?
- 2) Is there a recent paradigm shift in human behaviour which will lead to the extinction of up to 90% of currently spoken languages, with only 600 safe (Krauss 1992: 7)?
- 3) Is this loss of languages just a continuation of a long-term ongoing process, or has the rate of loss increased in recent times?
- 4) If the rate of loss has increased, why is this?

My answers to these four questions are:

- (1) Why are linguists now so concerned about language endangerment?

Linguists are part of the general community, and there is an increasing worldwide awareness of environmental issues such as species extinction and environmental degradation; it is natural for linguists, as the professionals concerned with language description, to be concerned with social trends as they apply to their own area of expertise. Also, as many linguists have spent much of their careers working in small indigenous communities whose languages are increasingly endangered, these linguists have a deep and natural concern for “their” languages; it would not be human not to want to do something.

(2) Is there a paradigm shift in human behaviour which will inevitably lead to the extinction of over 90% of languages?

There have been major changes, perhaps adding up to a paradigm shift, in the nature of human linguistic communication; but no, this need not force us to give up on many thousands of languages, and will not inevitably lead to their loss. With the universal spread of education and media in national and world languages, including their extension to formerly marginal and marginalised communities, and with increasing mobility and economic and social integration within and across nation states, the individual experience of most indigenous people in the world has irrevocably changed. This means that remaining monolingual is not an option for members of minority groups, unlike some majority communities. It does not necessarily mean that more and more languages will disappear, if minority communities choose to remain bilingual or multilingual. However, there is a popular view that children learn an outside language better if they are not required to know the local language, and this may be the underlying reason for many cases of tip or abrupt transmission failure (Dorian 1989: 9). As linguists, we should work to counteract this view and to be ready when community attitudes again become favourable to indigenous language maintenance, by documenting not just the language, but as much of the traditional knowledge as is still available. At the same time, by training and motivating community insiders, helping to prepare appropriate materials and acting as advocates within and outside a community, we can try to change attitudes to make them more favourable to language maintenance (Bradley 2002). There are many encouraging examples around the world of communities who have chosen to revitalise their endangered languages or revive their sleeping languages, and done so with some success. We need to consider what has succeeded, what is realistic and how to apply this in each community where we work. Professional ethics permits nothing less. However, we must be aware that communities ultimately will make their own choices, and accept that some languages now spoken will no longer be spoken in the future.

(3) Is this a continuation of a long-term ongoing process, or has the rate of language loss increased?

Yes to both. The intensity of contact with dominant languages has clearly increased in the recent past due to various factors previously discussed, and the rate of loss of human linguistic diversity has almost certainly increased. This is not to belittle the many linguistic, cultural and social disasters, known or unreported, which befell large numbers of groups and their languages throughout human history; loss of languages has been a very long-standing ongoing process. It is also not to deny the many kinds of diversity which arise due to contact or internal sociolinguistic processes within complex societies.

(4) If the rate of loss has increased, why is this?

There are two main factors which are driving this increase: one is external, the forces of globalisation and increasing external contact for every minority society. The other is the internal response to these pressures, leading individuals to

make choices not to use or transmit their languages, but to shift to using dominant languages. Once most members of a community do not transmit their traditional language to their children, and the final domains of use disappear, the last holdouts may eventually follow, whether it is one village or one family. One effect of the increased rate of loss is the rapid change which many endangered languages undergo; this of course also raises theoretical issues, and needs to be compared with the kinds of change seen in the development of pidgins and their creolisation, where more work has already been done.

There is an increasing awareness of language endangerment as an issue, not just among linguists, but also in the media and most importantly among many communities. When the last speaker of Eyak (other than linguist Michael J. Krauss) passed away on 21 January 2008, *The Economist* printed an obituary. Many governments are committing substantial resources to bilingual education, including mother-tongue medium programs for indigenous and other minorities (Hornberger 2008). And some minority communities who have attracted resources for language activities, especially in many developed countries, have made major strides.

Some time after a language is no longer spoken, even several generations later, the community may wish to reclaim its sleeping language; but this is a very difficult task, much harder than language maintenance when speakers remain within the community. This is not the place to talk in detail about case studies of language revival, nor to recapitulate concerning successful examples like Hebrew, nor to argue whether a revived language is the authentic continuation of the sleeping language, all of which are important matters.

What I wish to suggest here is a new approach to language maintenance within traditional communities that encourages and empowers the community to maintain or revive what they choose of their language and culture, in a way and to a degree that they choose. This arises from resilience thinking, an approach to adaptation and change in ecological systems (Walker and Salt 2006) and human knowledge, classification and sustainable use of such systems (Berkes 2008). We must recognise that monolingualism is not an option for minority groups, and encourage the development of a new stable bilingual or multilingual situation in which the traditional language still plays whatever role is desired by the community, and the community is able to continue with whatever traditional activities they choose, while also participating as much as they wish in the wider society and having knowledge of the language(s) required to do so.

The basic insight of resilience thinking is that systems move through four phases, growth, conservation, release and reorganisation. The release phase, where the system has crossed a threshold and is breaking down, is what is happening now to a distressingly high proportion of the world's languages. Many more languages may appear to be in a conservation stage, and thus more or less intact and stable, but are nevertheless showing signs of stress and may not require much to tip them over into release. A resilience approach may help a community to move toward a

reorganization phase which does not lead to the disappearance of the language, or to avoid a release phase altogether, maintaining their traditional language and culture alongside dominant languages within larger political entities.

Stability for its own sake is not necessarily desirable, even if it were possible. Schumpeter (1976: 84) discusses the inevitability of what he calls creative destruction: “competition from the new” leading to social renewal. He is speaking specifically of economic life in developed capitalist countries; economists are usually not concerned with language and cultural diversity.

What does this mean in practice? I would like to use two case studies from my own experience to illustrate. One is the Gong community in Thailand; the other is the Lisu community in China, Burma, Thailand and India. The first is a typical small community whose language is subject to a tip process, but has now started some language maintenance activities. The second is a large, vigorous and expanding community speaking a language related to Gong, but which is nevertheless in danger of losing many of its traditions.

GONG²

The Gong are a group of some 500 people living in two villages in western central Thailand. Apart from these two villages, there are various former villages where the language ceased to be spoken twenty to fifty years ago, as the last elderly speakers passed away. Of the current ethnic Gong, about 50 speak the language fluently, and nearly all these are aged fifty or over. At Kok Chiang village in Suphanburi Province, there are 190 ethnic Gong, and at Khok Khway village in Uthai Thani Province, there are just over 300. In 1978, when I first went to these villages, they were mainly Gong apart from some in-marrying spouses. Due to continuing in-marriage and entire outsider families moving in, both villages now have a majority of non-Gong. According to Mayuree (2006: 40), in Kok Chiang in 2003 fourteen houses had only Gong inhabitants, 37 houses had Gong and Lao inhabitants, three houses had Gong and Thai inhabitants, with 49 other houses: Thai, Lao and Chinese. For a more detailed outline of the sociolinguistic situation of Gong up to the late 1980s, see Bradley (1989), and up to 2003, see Mayuree (2006).

The Gong appear in Thai history for the first time after 1782, when a group called Lawa were among minority tributary groups in strange clothes marching in parades in Bangkok at the beginning of the current dynasty. The traditional Gong territory was on the River Kwai, the main invasion route through which the Burmese had come to destroy Ayudhya in 1767, so it is natural that the new

² I am delighted to acknowledge and warmly thank my friends in the Gong community for their assistance over more than thirty years.

Bangkok dynasty wanted to solidify its control over that area. The Thai word *Lawaa*⁵⁵ reflects a Thai attempt at the autonym of the Gong at the time; in now-extinct southwestern dialects, the autonym was *Waing*⁵⁵ in the late 1970s, usually preceded by 'lu'²¹ 'person' when referring to the group as opposed to its language³. The Gong are now officially classified as part of the Lawa ethnic group, most of whose members live in northern Thailand and speak unrelated Mon-Khmer languages or distantly-related Tibeto-Burman languages. The early Bangkok dynasty had no contact with other groups now included in this category and living in the north of modern Thailand.

The Gong in Kok Chiang have been mainly exogamous for at least sixty years; the community is too small to find marriageable spouses within it. The last marriage between two Gong spouses took place over thirty years ago, with one spouse from Kok Chiang and the other from Khok Khway, but was later discovered to be incestuous. Most spouses in Kok Chiang come from a neighbouring Lao village, and most in Khok Khway are Thai. Up to about thirty years ago, in-marriage spouses in these two villages learned to speak Gong, but mixed families formed since then speak some other language at home, and many all-Gong homes have also chosen not to use Gong, even at home. Other former Gong villages have mostly been relocated due to the construction of dams; even before then, all intermarried with local Karen, Khmu, Mon or Thai and assimilated into those groups. No Gong identity now persists or is officially recognised outside two villages.

In Kok Chiang, the key event leading to linguistic tip was the death of the last Gong headman over thirty years ago. He had led the group away from a mixed Lao-Gong village, tried to maintain Gong traditions, and required in-marriage Lao, including his son-in-law who succeeded him as headman, to speak Gong. Since his death, Gong language transmission has virtually ceased, in-marriage has exploded, and many non-Gong households have moved in. A similar sequence of events took place in the other Gong village, but the last Gong headman there only died about 25 years ago and so somewhat younger people there can still speak Gong.

Distinctive Gong material culture has effectively disappeared. While there is still one traditional priest who carries out an annual ritual in Kok Chiang, all Gong are now Buddhist, and there have been Buddhist temples in both villages for nearly twenty years. Thai primary schools were also set up just over twenty years ago; before that, the only education available was in nearby villages an hour's walk away or for boys as novices in Buddhist monasteries elsewhere. Up to the early 1980s, some of the oldest people still wore traditional Gong clothing. The coming of schools and temples in the late 1980s did not impinge on the centre of the village, as they were built a short distance away, but electricity brought television in Thai and permanent rice mills to the village centre in the early 1990s.

³ The superscript numerals represent tones; 5 is high, 1 is low; so 55 is a high level tone.

In 1978, Kok Chiang was an hour on foot or by buffalo cart track from a nearby Lao village, Huai Khamin, which itself was at the end of a long unpaved road from the Dan Chang subdistrict office. By 1982, there was a rough unpaved dry-season road with several fords. By 1988, this road was improved, the road from the nearby Lao village to the upgraded Dan Chang district office was paved and continued into the neighbouring province, and regular transport to there was available. By 1992, bridges had been built at all fords and the local stream was in a concrete channel to eliminate flooding. Now, Huai Khamin has been upgraded to a subdistrict office and roads continue to improve. In 1978, only the village headman had a motorcycle; then motorcycles became widespread, and now quite a few people have their own small pickups.

The phonology of Gong shows extensive convergence toward Thai, the language which is replacing it. This applies to the consonant system, the vowel system, and the tone system. The consonant system used to have a number of clusters with medial *l*, but the last speaker who used these regularly died in 1984; there is still one speaker who more or less remembers which words used to have medial *l*, but does not use them. Some salient non-Thai consonants such as *g* and still persist, supported by its presence in a large number of frequent words including the group name.

Traditional Gong as spoken by the oldest people in Kok Chiang has a complex vowel system with ten monophthongs and three diphthongs. All vowels and diphthongs have higher allophones in open syllables and lower allophones in closed syllables; the lower allophone of a high or higher-mid vowel overlaps with the higher allophone of the corresponding higher-mid or lower-mid vowel. Furthermore, these include three typologically-unusual central rounded vowels and one diphthong with a central rounded onset; these have spread allophones before final *k*. Thus, overall there are seventeen surface monophthongs and seven surface diphthongs. Once there are unintegrated Thai loanwords with central spread vowels or diphthongs not followed by *k*, high vowels in closed syllables, and two additional diphthongs, the allophonic pattern collapses and younger fluent bilingual speakers are left with a system of up to 17 or 18 monophthongs and up to nine diphthongs. The youngest and least fluent speakers of Gong have a system with only the nine Thai monophthongal vowels and usually five diphthongs, retaining two salient and frequent Gong diphthongs but otherwise collapsing entirely to the Thai vocalic system.

Traditional Gong in Kok Chiang has four tones, and also has a complex tone sandhi process for verbs, whereby every verb has two alternative forms in the speech of the oldest community members. The sandhi form occurs when the verb is preceded or followed by certain frequent grammatical elements, such as preceding ‘negative’ *ma*³³ and/or following ‘want to’ *do*³⁵; the main form occurs in other environments, as shown in the following table.

Table 1

Gong verb tone sandhi	
nonsandhi	sandhi
35	55
55	35
35	35
21	13

This process is productive for speakers in the fifties, except that they tend to have a [35] instead of a [13] sandhi form of /²¹/, thus collapsing the sandhi forms of three distinct tones, not just two. This change also results in the elimination of the only surface form that does not correspond to a Thai tone.

Gong remains resolutely verb-final, even when all of the noun and verb lexicon in a clause is borrowed from verb-medial Thai, and even in the usage of its least fluent speakers and those who know only a few set phrases. The number of prehead serial elements has been substantially reinforced by Thai loans, but the majority of original Gong serial verbs is posthead.

Gong is full of borrowed Thai lexicon. This includes material borrowed long ago which has undergone various internal changes in Gong, material borrowed more recently and adapted to Gong phonology, and the most recent Thai loans in more or less standard form. The Kok Chiang Gong word for ‘Thai’ is *’Eng*⁵⁵ which comes from Siam, the former name of Thailand, but showing many changes that have taken place within Gong and thus proving an early date for this borrowing. The word for ‘Buddhist temple’ is *wa*²¹, compare Thai *wat*⁵⁵, where the Gong form shows phonological integration with glottal stop for Thai final *t*, which is absent from Gong, and probably reflecting early borrowing or borrowing from Lao with the low tone. The Gong word for ‘car’ is *lot*⁵⁵, borrowed from Thai *rot*⁵⁵, ultimately of course from Sanskrit, with unintegrated final *t* and high tone for Thai high tone, but with *l* for *r* as is normal in spoken Thai. Borrowed lexicon includes some grammatical material, such as prehead serial verbs, clause-final markers, adverbs and quantifiers, as well as many verbs and a very large number of nouns, but no pronouns, demonstratives or posthead serial verbs, and few classifiers. Most of the borrowed grammatical elements show phonological integration and/or internal changes within Gong, and so must have been in use for some time.

Older Gong speakers are not literate in Thai, but working with younger speakers (now in their fifties, then in their twenties) who became literate in Thai as novices in Buddhist temples, in 1982 we devised a Thai-based orthography for Gong as spoken in Kok Chiang. This required some modified letters, as Gong has some consonants such as *g* which do not exist in Thai. It also required some hard decisions about sandhi and segmental forms. We used the existing Thai diacritics for tones, but with consistent values, one diacritic for each Gong tone, and kept the verb tone sandhi in the form used by younger fluent speakers, which allowed us to

use exactly the tone system of Thai. For vowels, we also followed the Thai vowel system as used by the less fluent youngest speakers; and for consonants, we left out medial *l*. The local school started a heritage Gong program in the late 1980s using our materials. This later stopped with a change of head teacher, and also because the majority of children in the village is no longer ethnic Gong and no children speak any Gong at all.

We introduced Mayuree, a Thai colleague from Mahidol University, to Kok Chiang in 1992, and she has been working with the village ever since. This has included working with community members in the village, bringing Gong people to Bangkok for training in the Gong orthography and techniques for preparing Big Books, networking the Gong with other groups elsewhere in Thailand whom Mahidol University is helping in language maintenance, and documenting and attempting to revive Gong texts and remaining material culture: clothing, baskets, tools, ritual objects and so on. Her PhD thesis (Mayuree 2006, which I co-supervised) carefully surveyed the sociolinguistic situation in Kok Chiang in 2003, and she has been involved in documentation work and the establishment of a village cultural centre there⁴.

In summary, while the remaining Gong elders now feel proud of their Gong heritage and are helping to document it, the spoken language remains in decline. No child has started to learn the language in the home for at least thirty years, and people now in their thirties and forties have extremely limited skills if any at all. Those in their fifties speak a type of Gong which is quite different from the most conservative Gong as spoken by recently-deceased and older people. Hence, the language maintenance efforts also face the issue of what kind of Gong to aim for: the oldest conservative variety, something more like what the speakers in their fifties use, or the most Thai-like form of the language?

LISU⁵

The Lisu are a large group of nearly a million people in northwestern Yunnan Province, China, northern Burma, northern Thailand and northeastern India who have spread over this large area without losing their Lisu identity and often maintaining contact by travel over very long distances.

Despite a notional preference for matrilineal cross cousin marriage which is sometimes still followed, Lisu society is extremely open to in-marriage, with both higher-status outsider men marrying Lisu women and joining a Lisu community,

⁴ We are most grateful to the Kanchanaphisek Foundation for support for this PhD project, and to the Thailand Research Fund for support for the village cultural centre and other language and culture maintenance activities in Kok Chiang.

⁵ I am delighted to acknowledge and warmly thank my friends and colleagues in the Lisu community for their assistance over nearly forty years.

and Lisu men marrying women from other groups and bringing them to a Lisu village. In-marriage by Chinese men was so frequent in the case of the Southern Lisu now living in Thailand that a rather high proportion of Lisu there have a Chinese surname and a fairly recent known Chinese ancestor. A similar but older case is seen in northwestern Yunnan and into Burma and India, where one very large Lisu patriclan consists entirely of descendants of male Bai ancestors with the surname *Læ²¹ mæ²¹*. In this case, few members of the clan are aware of their Bai ancestry, as it probably dates back at least several hundred years. When Lisu men marry non-Lisu women, this does not give rise to a new Lisu patriclan, but such intermarriage has been so pervasive in northwestern Yunnan that some languages in the area, including Nusu and Anung, are endangered or even severely endangered as these groups now usually speak Lisu, and some other groups may already have been absorbed into the Lisu. There have also been quite a few Lahu, especially Shehleh and Nyi, absorbed into the Lisu in Thailand in this way. One reason for this is that marrying a Lisu woman used to require the payment of a high bride price, while Lahu girls can be ‘earned’ by living in the father-in-law’s house initially for a few years. I was surprised to find that the ritual leader of one Lisu village has a Lahu Shehleh mother, a Lahu Shehleh wife, and speaks Lahu Shehleh (as well as Lisu, of course). The Lisu spirit priest of the same village has a Chinese surname from his Chinese grandfather, and the majority of people in the village also have Chinese surnames, but they identify themselves as 100% Lisu, speak Lisu among themselves, and follow a Lisu lifestyle.

Another positive factor for Lisu language maintenance is a strong preference for multilingualism. In the first Lisu village I visited many years ago, no one would accept payment for teaching me Lisu, but English lessons in return were in very great demand. Language learning is enthusiastically pursued, often reaching surprisingly fluent results. Part of this multilingualism is derived from languages learned from in-marrying spouses: many Lisu in Thailand speak Yunnanese Chinese and Lahu. Another part is derived from international mobility; many Lisu were born and partly educated in one country, then moved to another. For this reason, many Lisu speak two of standard Chinese, Burmese and standard Central Thai. Due to market and other everyday contact, many Lisu have also come to speak other local Tai languages like Shan or Northern Thai. A surprising number of Lisu also speak English, and many individuals have other foreign languages and/or local languages of the area. Such multilingualism is especially frequent among men, but also not unusual among women; a completely monolingual Lisu person is most unusual.

Lisu culture is also open to new external influences. Just considering clothing, Northern Lisu women wear what were originally Anung or Dulong female clothes, and Southern Lisu women wear clothes not too different from those of Lahu Nyi women. This could of course partly reflect earlier marriage patterns, with women keeping the clothes of their original ethnicity, and Lisu women

copying them. Fashions in clothing also change rapidly; between 1971 when I first went to Thailand and now, both styles and colours for women's clothing have changed several times. Part of this is due to the arrival of substantial numbers of Central Lisu from the mid-1970s, bringing their more traditional clothing which is now used as an alternative model by some Southern Lisu women. Changes are also due to the availability of attractive new fabrics, patterns and colours. But it also reflects a general openness to change, while still keeping a Lisu core.

After hundreds of years of gradual linguistic divergence, Lisu has been reunified by the creation of a romanised orthography starting in 1914 and reaching its current form in 1915. This is often called the Fraser script, after one of the foreign missionaries involved. It uses capital letters only, 25 upright and 15 inverted with different values, and punctuation marks after each syllable for tones; for details and examples, see Bradley et al. (2006). One unusual feature also found in many nearby orthographies, like that of Burmese, is that the vowel *a* is inherent in a consonant that has no other vowel written after it; so *B* represents *ba*. A syllabic script was invented by a Lisu religious leader, Wang Renpo, and used to write traditional Lisu religious material in what is now Weixi Lisu Autonomous County in the mid-1920s, but is not in use now. Confusingly, the closely related Lipo language of north central Yunnan Province has an orthography sometimes called Eastern Lisu, though Lipo is distinct from Lisu and not mutually intelligible; this uses a quite different principle from the Fraser script, one originally devised by the missionary Pollard for a Miao language.

There was another orthography created in the mid-1950s in China, which went through several versions until stabilising in late 1958. This uses only normal roman letters with values based on the phonetic principles of Chinese *pinyin*, and was used for Lisu in China from then until the early 1980s, and to a much lesser degree afterward. In 1983, the government of the Nujiang Lisu Autonomous Prefecture decided to return to the former 'Old Lisu' or Fraser script described above for official purposes; books had already started to be printed in this orthography in China a couple of years earlier. Feng et al. (2004) list 215 titles printed in China from 1952 to 2004: 1952 to 1957 in Fraser Lisu, 1958 to 1960 and 1979 to 1983 mostly in *pinyin* Lisu, and from 1980 onward in Fraser Lisu with a few titles after 1983 still in *pinyin* Lisu. Up to 1960 these were published by the Yunnan People's Press, and from 1979 by the Yunnan Nationalities Press. Some other publishers in Yunnan, notably the Dehong Nationalities Press, have published additional books in Lisu, mostly in Fraser script. The *pinyin* Lisu script is phonologically adequate for the dialect it is based on, Northern Lisu, but not for other dialects. While it provides transfer to the learning of Chinese, is much more practical as it requires no special font, and was the only kind of Lisu writing ever taught to Lisu students at the Yunnan Institute of Nationalities, most of whom later became teachers and administrators in Lisu areas, it never achieved popularity among the Christian Lisu, who are very numerous and the most advanced among

the community, and the Fraser script continued to be used and taught in Lisu Christian churches in the 1950s and from the mid-1970s on.

Outside assistance with appropriate technology is important and has supported the Lisu language. After the final design of the Fraser Lisu orthography in 1915, it was necessary to manufacture Lisu typewriters by soldering some letters onto keys upside down. One problem with this was that the soldered letters sometimes broke off; a group of Lisu living in a remote area of northern Burma in the mid-1960s had only one typewriter, and one letter had fallen off; so for several years they had to make do without that letter. Typesetting from movable type using normal letters upside down was possible, but with more advanced printing techniques this became impossible, and many Lisu printed materials from the 1960s to the 1980s, and even later in Burma, were typed onto mimeograph stencils and then mimeographed. In the mid-1980s, a Lisu computer font for Macintosh was created by David Morse in Chiangmai, Thailand, and separately a Chinese software firm in Shandong created another Lisu font. The Morse font continued to develop, and has been freely available as a series of TTF fonts since the late 1990s; these fonts are very widely used in all countries where Lisu is spoken, and in China they have replaced the font created in Shandong. Another font was created in the mid-1990s by Andy Thompson of the Overseas Mission Fellowship, and was also the basis of a Macintosh font created by me. In 2007, with the assistance of SIL International, we (the Lisu community and I) submitted a proposal to Unicode, and in mid-2008 this was accepted, so that there is now a Unicode for Lisu. This makes the so-called advanced Lisu orthography, which eliminates inverted letters by replacing them with digraphs (as outlined in Morse and Tehan 2000), unnecessary, and will allow Lisu to be used for email and all other computer purposes.

Many Lisu have enthusiastically embraced new media. Publishing is widespread, including a daily newspaper in China, a magazine published since 1997 and which is now quarterly in Burma, and many books and pamphlets, notably the more than 200 published by the Yunnan Nationalities Press and many others published by Christian religious organisations. We have published two booklets containing traditional Lisu songs (Bradley *et al.* 2000, 2008) as well as two dictionaries (Bradley 1995, Bradley *et al.* 2006). There is also regular radio broadcasting; a Christian Lisu radio station based in Thailand with all Lisu staff has half an hour daily by shortwave, and other local government radio stations based in China and Thailand have regular Lisu-language programs. There are many Lisu bands making CDs, especially in Burma; some of this is modern love songs, some is Christian four-part harmony, but some is in traditional Lisu song language with seven-syllable paired lines. There are also DVDs and VCDs on Lisu Christian themes, such as a recent movie (available in Lisu and in English) on the life of the missionary Fraser filmed in Thailand with the support of the Overseas Mission Fellowship; some other Christian films are dubbed into Lisu and available on DVDs and VCDs.

At Lisu public ceremonies in China, an elder may sing a semi-traditional song: much shorter than a full traditional version, but in the seven-syllable paired line style. For example, this happens at the Lisu New Year festival in Kunming, the capital of Yunnan Province and at similar festivals in Nujiang Lisu Autonomous Prefecture and Weixi Lisu Autonomous County. This same seven-syllable paired line genre is carried over into a great deal of Christian literature; much of the material in the Lisu magazine from Burma follows this pattern. It is also seen as a formal style; a Lisu Christian elder, Communist Party member and retired government official farewelled me once by giving me a page of twelve paired lines in this style, thanking me for my visit. However, much of the original oral Lisu tradition is being lost, as it was associated with traditional non-Christian religion and is not viewed as important or even viewed negatively by most Lisu Christians, the only literate people within the community who could document it.

There is a great deal of lexical innovation within Lisu. Firstly, all varieties of Lisu share a large and very long-established stratum of Chinese loanwords in forms that reflect early borrowing from Yunnan dialect, not from standard Mandarin; these occur even in core areas of culturally-important lexicon such as birth-order names (Bradley 2008). There are also some borrowings from various Tai languages including from Shan in Burma and in China, and from Northern Thai and standard Thai in Thailand. Some of the Shan loans ultimately come from Burmese, like ‘festival’, Lisu *pai*²¹ from Shan *poi*²¹ from Burmese *pweh*⁵³. Lisu in Burma has borrowed a substantial number of Burmese words directly as well, and since 1950 Lisu in China has borrowed a very large number of standard Mandarin words. These loans make it difficult for Lisu from different countries to communicate concerning modern issues.

Another kind of lexical innovation is internal coinage within Lisu. The Lisu magazine from Burma has regular stories about world events, and creates all kinds of new compounds from Lisu material. One innovative compound formation process is particularly interesting; it involves adding the Lisu word *ni*³⁵ ‘heart’ after a verb to form an abstract noun, like *ny*³³ *ni*³⁵ ‘love (N)’ from *ny*³³ ‘want’ + *ni*³⁵ ‘heart’. This structure is completely alien to Lisu, in which many emotion and human attitude concepts are expressed by a sequence of *ni*³⁵ ‘heart’ plus a verb with a lexicalised meaning, which can be nominalised with a suffixed form *a*³³ *ma*³³. It seems that during the initial Bible translations in the 1920s and 1930s, a need was felt for two-syllable abstract nouns to avoid the use of longer nominalised forms like *ni*³⁵ *ny*³³ *a*³³ *ma*³³ ‘what one loves, love (N)’. It is not now known who suggested it, but obviously it was agreed to create abstract nouns by reversing the elements of a ‘heart’ + verb construction. This was done for a few crucial concepts like ‘knowledge’ *ja*²¹ *ni*³⁵ from *ja*²¹ ‘think’ + ‘heart’ and so on. Since then, some people have adopted this strategy much more widely; for example, the Lisu magazine from Burma uses forms such as *dza*²¹ *ni*³⁵ ‘eating’ from *dza*²¹ ‘eat’ + ‘heart’, where the corresponding original ‘heart’ + verb form does not exist; in

other cases, new abstract nouns are created where the corresponding ‘heart’ + verb means something different. Many Christian Lisu people reject these generalised forms, and non-Christian Lisu are puzzled by all of them, unless they have been exposed to Christianity. The process is not productive for most Lisu ‘heart’ + verb forms.

Apart from lexical material and the new structure just described, the main effect on Lisu of the focus provided by a written language has been to make that literary language an alternative variety, at first in written and now also in spoken use. The literary Lisu created by the missionaries and their Lisu committee in the 1920s was something of a dialect compromise, mainly one variety of Central Lisu but with some features of Northern Lisu. An example of the former is the retroflex initial affricate and fricative series found in some Central Lisu subvarieties before *a*, usually corresponding to sequences of palatoalveolar plus variable medial *w* in Northern Lisu and to alveolars in Southern Lisu, is distinguished in written Lisu. When speaking, Northern and Southern Lisu speakers usually continue to use their own pronunciation, but in a formal situation may try to approximate a Central Lisu form. The sequence of an alveopalatal fricative plus *a* in Central Lisu corresponds to an alveolar plus *æ* in Northern Lisu, and is written with the Northern Lisu pronunciation, as in *sæ*²¹ ‘breath’; the Central Lisu pronunciation would be *sha*²¹. However, here Central Lisu speakers still often use their own spoken forms in formal contexts, or may sometimes adjust to the Northern form found in writing. There are many similar examples from Southern Lisu (Bradley *et al.* 2006: xix–xxii). As the Lisu orthography can represent any dialect phonologically, it is easy for any literate person to write in his own dialect. However, most people choose not to do so, and those who do write with dialect forms that differ from literary Lisu are often criticised. The positive outcome of this new standard is that, once literate, Lisu speakers become more aware of dialect differences and more able to understand and adjust for them. It also means that literary Lisu, especially written but also spoken, has become an additional variety of the language; nearly but not quite Central Lisu.

In summary, the Lisu are a large speech community with a strong positive identity. They accept and absorb many incoming spouses or whole groups, and are extremely multilingual. Lisu has a stable agreed writing system with a Unicode, a lexicon open to loans and new coinages, and a growing body of literature, including new genres. The Lisu are enthusiastic users and consumers of new media, are geographically highly mobile and open to outside ideas and new technology. One outside idea which has taken root is Christianity, and the Lisu draw on the resources of outside Christian support for education, development and language maintenance. However, partly as a consequence, much of the traditional Lisu oral literature is disappearing, though the genre survives within new Christian material.

CONCLUSION

Why does Lisu expand, while Gong contracts? A language and the culture in which it is embedded is of course a highly complex system which goes through adaptive cycles. Lisu is a successful and expanding player at the conservation phase with a strong positive identity, and is not close to the threshold for language shift, despite powerful outside influences over more than a millennium, and recent increases in their intensity which have led to some reorganisation. Gong was already beyond the conservation phase and into the release phase when first located and identified by outsiders in the 1920s, and probably already past the threshold for language shift even then. It has only now started to manifest some minor moves toward reorganisation at a very late stage in the release process, after transmission to children had already almost stopped, with remaining speakers using a range of quite divergent varieties of the language.

Like ecological systems, the same language may be at different stages of decline in different places at the same time. Just as coral may remain viable in Thailand while under stress in Australia and at severe risk in the Caribbean, so also a language may survive fairly well in one village, but be at various stages of decline or even completely gone from others. Gong shows this: the last two remaining villages, outside the traditional territory and set up relatively recently by leaders who wanted to remain distinct, have persisted for much longer than any village in the original territory, most of which now have no memory of their former identity or language. Another example is the situation of Tujia in China (Braslett and Braslett 2005), and there are many more.

We can also see a change to a resilience approach in linguistic terminology and the behaviour of many linguists. Not that long ago, we spoke of “language death” rather than language endangerment. Languages were said to be “extinct”, but now we may view a language no longer spoken as sleeping, as long as a community persists and may wish to revive it someday. Tip or abrupt transmission failure has become a target of language maintenance efforts, unwritten languages have appropriate orthographies developed, and “semispeakers” are viewed as people who speak an advanced variety of a language, not as imperfect speakers of a defective version of the most conservative speech form. After all, does anyone in fact speak exactly the same way as their grandparents, even in large societies?

So how can we foster resilience in linguistic behaviour, like that of the Lisu, as opposed to continuing decline, as among the Gong? How do we detect whether a community in an apparently stable situation in the conservation phase is approaching a release phase and potential language breakdown and shift? How do we assist a community in a release phase to move beyond it to a reorganization phase and potentially then to a growth phase? There is no one answer, but I believe we can identify at least five key sociolinguistic factors: Identity, Vitality, Setting, Domains and Policy.

Identity is a group's own perception of itself (Bradley 1983), and has many facets; individuals and groups may have multiple identities in different contexts, and may change identity/ies through time. Identity includes community attitudes to language: whether language is a core component of a group's identity, whether group members are proud of it, and so on. The key aspect of linguistic Vitality is whether a language is vital and transmitted to children, and how much the group chooses to use it. The linguistic Setting is the group and speaker population and distribution, both geographical and by age, as well as its cohesiveness and its position relative to other languages in the area. Domains concerns choices about using the language: at home, in the community, in school, and so on; also whether to maintain existing traditional genres such as oral literature, and whether to use the language in newly-available domains such as media. The final sociolinguistic factor is Policy, both concerning languages and concerning minority status and rights. What are the status and rights of the group and its language within the political entities where it is spoken (Bradley 1994, 1998)? Have corpus decisions such as orthographies been successful (Bradley 2001, Bradley and Bradley 1999)? How does the group deal with and react to regional, age-related and other differences in linguistic behaviour within the speech community? Apart from these five, many additional factors are also relevant, and may have deep impacts not just on language but on a minority community's lifestyle and persistence: education, health, economics, communications, politics, history and so on.

One lesson from Lisu is that orthographies do matter, and that it is not always what linguists or outside authorities might view as the most convenient orthography that is preferred by the community. In this case, the orthography is phonologically adequate or even slightly overdifferentiated and uniquely Lisu, but provides limited transfer to learning any other writing system and has held Lisu publishing back for many years. This is a community decision which we must accept. Revisions of existing orthographies or new competing orthographies are almost certain to lead to division within the community, even where the existing system(s) may be problematic.

We must allow communities to make the decisions and control the process, and not impose external goals or unreasonable expectations (Thieberger 2002, Dobrin 2008). Top-down models have long been part of the problem. A bottom-up approach empowers local groups to determine what they want, and then try to achieve it. This may require advocacy with governments and other policy-making bodies, getting training for group members, obtaining facilities and technical assistance, gaining support for mother-tongue education and other types of language maintenance activities, networking with other groups facing similar issues, and drawing on outside experts for specific kinds of help. Self-determination may lead to a more sustainable outcome than something coming from outside, even if it is not always a success.

The role of the outsider linguist can be to help in such a process, to train, to motivate, to be an advocate, sometimes to guide, but not to lead. “A number of communities have raised concerns about non-indigenous linguists taking control of language projects, and, as they see it, seeking to disempower the Aboriginal team members.” (Liston 2009: 29). Even more often, linguists and other outsider researchers have collected data and then disappeared, rather than becoming what Dorian has called a sojourner: an outsider who maintains a long-term co-operative relationship with a language community. During the long journey, we should also try to document traditional literature and other cultural knowledge, even among groups like the Lisu whose language appears not to be at risk. It is precisely because we do not know exactly when an apparently stable conservation phase may shift to a release phase, and because much will be irreplaceably gone by then, that we should be documenting whatever we can in the meantime.

The aim should not be to maintain the current linguistic situation, nor to return to some earlier situation, but rather for communities to make informed decisions whether their languages should persist, in what form and to what degree. As linguists, we can help to document languages for the future, including for the group’s descendants; as sociolinguists, we may also try to understand the processes which can help languages to remain resilient and to avoid crossing the threshold to the chaos of the release phase, or to reach a reorganisation phase without disappearing.

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