

# *Comparative linguistics in Southeast Asia*

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# COMPARATIVE LINGUISTICS IN SOUTHEAST ASIA

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## TABLE OF CONTENTS

|   |     |
|---|-----|
| PREFACE   | vii |
| ABBREVIATIONS AND CUE TITLES                                      | ix  |
| CHAPTER 1: METHODOLOGICAL PRELIMINARIES                           | 1   |
| CHAPTER 2: AUSTRO-THAI LANGUAGES                                  | 11  |
| 2.1 The Kadai family  | 11  |
| 2.1.1 General information   | 11  |
| 2.1.2 Zhuang-Tai languages  | 17  |
| 2.1.3 Kam-Sui languages   | 31  |
| 2.1.4 Li dialects   | 44  |
| 2.1.5 Proto Kadai reconstruction                                  | 53  |
| 2.2 The Austro-Thai hypothesis                                    | 75  |
| CHAPTER 3: MIAO-AUSTROASIATIC LANGUAGES                           | 104 |
| 3.1 Austroasiatic languages                                       | 104 |
| 3.2 Miao-Yao languages  | 114 |
| 3.2.1 Proto Miao  | 114 |
| 3.2.2 Proto Yao   | 122 |
| 3.2.3 Proto Miao-Yao  | 135 |
| 3.3 The Miao-Austroasiatic and Austric hypotheses                 | 155 |
| CHAPTER 4: SINO-TIBETAN LANGUAGES                                 | 169 |
| CHAPTER 5: SOUTHEAST ASIA: MAIN FEATURES OF LINGUISTIC PREHISTORY | 218 |
| APPENDICES: DATA FOR LEXICOSTATISTICAL CLASSIFICATIONS            | 228 |
| A. Kadai data   | 229 |
| B. Mon-Khmer data   | 246 |
| C. Miao-Yao data  | 271 |
| D. Lolo-Burmese data  | 281 |
| E. Chinese characters referred to in the text                     | 306 |
| REFERENCES  | 308 |



## PREFACE

The topic of this book is the ancient history of the main language families of Mainland Southeast Asia: Kadai, Miao-Yao, Austroasiatic and Sino-Tibetan. Although divided by modern political and cultural borders, from a historical perspective these languages form a united body. Understanding the origins and formation of this body of languages, their relationships with each other, and their relationships with the Austronesian languages, constitutes one of the most intriguing and challenging problems of modern comparative linguistics: Southeast Asian prehistory.

The linguistic area to be discussed in this book includes vast territories of modern China, Vietnam, Laos, Kampuchea, Malaysia, Burma and some parts of North-East India. Many hundreds of local languages are in constant interaction, and have been for centuries, giving rise to the complex mosaic we see today. Any suggestion that the author is going to explicate the origins of this mosaic is clearly premature: a detailed discussion of the whole topic is not yet possible, due to (i) the limited information available on most Southeast Asian languages, and (ii) the lack of comparative studies in the area. Consequently, I by no means claim that any final solution is given in this book. My goals are much more modest:

to present my reconstructions of two language families of the area:

Proto Kadai (2.1) and

Proto Miao-Yao (3.2);

to discuss the results of comparative studies of two other families:

Austroasiatic (3.1) and

Sino-Tibetan (4);

to evaluate genetic claims connecting these families:

Austro-Tai hypothesis (2.2),

Miao-Austroasiatic and Austric hypotheses (3.3) and

Sino-Austronesian hypothesis (4);

to outline the main features of the linguistic prehistory of Southeast Asia (5)

This book has had an unhappy history. The first draft was written at the beginning of the 80s, and in 1984 it was distributed amongst colleagues in Russia and in the United States. That same year the manuscript (in Russian) was accepted for publication by the "Galavanija Redakcija Vostochnoj Literaturny" of the 'Nauka' Publishing House in Moscow. All the editing work and other preparations for publication were made by 1989, but following my migration to Australia in 1990, the publishers refused to print the book. Thus I have translated the text into English with a few minor changes, so that I am able to present it to an audience. In the preparation of the translation I have tried to limit myself mostly to the facts

and literature available to me when the original text was written. Due to the long delay in publication, several of the ideas presented here are no longer novel; the attentive reader will notice several cases of this type.

This is a pleasant opportunity for me to thank all my friends who have shared their interest and knowledge of linguistics with me, and who have also helped me with their advice. Without Vladimir Antonovich Dybo, Evgenij Khelimsky, Aleksej Alekseevich Moskalev, Ulo Sirk, Mikhail Viktorovich Sofronov, Sergej Starostin and Sergej Evgenjevich Jakhontov in Russia, and Mark Durie and Nick Evans of the University of Melbourne, this work would never have been finished. David Bradley helped me with his good advice and books not otherwise accessible. Jim Matisoff shared with me his knowledge of the area and made some valuable comments. I also want to express my gratitude to people who worked with me on the translation: Robert Handelsmann, Neile Kirk, and especially Mark Cerin, who read and significantly improved the whole text. My wife, Elena, has given me her priceless support during all the years of writing, rewriting and translating the book.



## ABBREVIATIONS AND CUE TITLES

### LANGUAGES

|     |                    |     |                       |
|-----|--------------------|-----|-----------------------|
| AA  | Austroasiatic      | PM  | Proto Miao            |
| An  | Austronesian       | Po  | Poai                  |
| AT  | Austro-Thai        | PrL | Proto Li              |
| Bd  | Baoding            | PY  | Proto Yao             |
| Bc  | Baocheng           | Qd  | Qiangdi               |
| Fi  | Fijian             | Sd  | Southern Li of Savina |
| Ht  | Heitu              | Si  | Siamese               |
| Jnp | Jingphaw           | SL  | Lingam Sui            |
| Ka  | Kam                | SS  | Standard Sui          |
| Kd  | Kadai              | ST  | Sino-Tibetan          |
| Kn  | Kimmun             | TB  | Tibeto-Burman         |
| KS  | Kam-Sui            | Tb  | Toba Batak            |
| LB  | Lolo-Burmese       | Tn  | Then                  |
| Lb  | Lobojiang          | TP  | Tai Proper            |
| Lz  | Longzhou           | Tp  | Taipan                |
| Lk  | Lakkja             | Ts  | Tongshi               |
| Lsh | Lushai             | VM  | Viet-Muong            |
| Ma  | Mak                | Vn  | Vietnamese            |
| MC  | Middle Chinese     | Wm  | Wuming                |
| MK  | Mon-Khmer          | WrB | Written Burmese       |
| Mm  | Mulam              | WrK | Written Khmer         |
| Mn  | Maonan             | WrM | Written Mon           |
| MY  | Miao-Yao           | WrS | Written Siamese       |
| Ngd | Ngadju             | WrT | Written Tibetan       |
| OB  | Ong Be             | Xf  | Xifang                |
| OC  | Old Chinese        | Xx  | Xiangxi               |
| PAn | Proto Austronesian | Ym  | Yuanmen               |
| PLB | Proto Lolo-Burmese | Zh  | Zhuang                |
|     |                    | ZhT | Zhuang-Tai            |

### SOURCES

|        |                         |        |                             |
|--------|-------------------------|--------|-----------------------------|
| B      | Benedict (1972a)        | Li     | Li (1965)                   |
| Ben    | Benedict (1975)         | LK     | Haudricourt (1967)          |
| H      | Haudricourt (1974)      | M      | Morev (1988)                |
| Hanson | Hanson (1906)           | P      | Purnell (1970)              |
| Ja     | Jakhontov (1981)        | Pin    | Pinnow (1959)               |
| LDY    | Ouyang and Zheng (1983) | P&S    | Peiros and Starostin (1996) |
| LFK    | Li (1977)               | Shafer | Shafer (1974)               |



## CHAPTER 1

### METHODOLOGICAL PRELIMINARIES

The comparative linguistic method remains the only reliable tool for investigating linguistic prehistory. Its successful application to different language families all over the world shows that the method can be used in the study of any sufficiently described language family, regardless of idiosyncratic phonological, grammatical and other features.

The comparative method includes several obligatory steps. These are of special importance when a 'new' language family (a family without extensive comparative tradition) is investigated. Let us review them briefly.<sup>1</sup>

The first step is the selection of the languages which will form the basis of the study. In dealing with 'new' families we usually find that only a limited number of the languages in the family are represented by reliable and sufficient data. For example, only about ten to twenty per cent of Sino-Tibetan languages can be used for full-scale comparative research. The use of lesser known languages can lead to unsupported claims.<sup>2</sup> Accordingly, it seems reasonable in the early stages of investigation to deliberately limit the scope of the research, concentrating primarily on better known languages.

An internal reconstruction should be applied to each of the selected languages, especially if the language has a long written tradition. One cannot use, say, Chinese, without reconstructing Archaic Chinese. This reconstruction must be conducted absolutely independently from the subsequent comparative research. For example, Shafer's (1974) hypothesis of a Tai-Chinese relationship, later dismissed, was primarily based on Middle Chinese reconstructions instead of more archaic Old Chinese ones.

The comparative method requires a thorough comparison of each pair of the languages involved. 'Mass' comparison, in which a word from language A is compared with a word from language B, while another word of A is compared with a word from language C without any attempt to find its counterpart in language B, is not a valid procedure. All

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<sup>1</sup> This approach, based on formalisation of the standard procedure of comparative linguistics, was developed by members of the Moscow Nostratic Seminar, which included (in the late 1970s and early 1980s) A. Dolgopolsky, V. Dybo, A. Dybo, E. Khelimsky, A. Militarev, S. Nikolaev, I. Peiros and S. Starostin among others. Unfortunately, no general description of this approach has ever been published, but its application can be seen in Nikolaev and Starostin's (1994) comparative North-Caucasian dictionary, Peiros and Starostin's (1996) comparative Sino-Tibetan dictionary, and in various publications on the comparative phonology of different language families. I bear the sole responsibility for the explicit formulation of these principles here, and any inaccuracies are my own.

<sup>2</sup> A good example is the role played by Tsou, and other poorly known Formosan languages, in Austronesian comparative phonology. Two phonemes of these languages, *c* and *t*, are usually treated as evidence for two different Austronesian phonemes (*\*C* and *\*t*), but thorough analysis of the Tsouic data shows that the phonemes are in complimentary distribution and can be traced back to one proto phoneme (Peiros 1994a).

comparisons should be conducted between pairs of languages (A and B, B and C, A and C, etc.), and the overall investigation should include a thorough comparison for each of the possible pairings of the chosen languages. The reasons for this requirement are clear: the aim of a proper comparative study is to find regular patterns which connect the systems of all languages under investigation, in order to reconstruct the ancestral protolanguage. This necessitates a knowledge of relationships between the systems of all languages under investigation. Only a comparison of each and every pair of these languages, one by one, is sure to discover all possible connections between their systems. Completeness is thus a central principle in modern comparative studies.

The end product of a preliminary investigation of a particular group of languages is a representative list of comparisons which include similar morphemes found in these languages. Such a list is the only valid starting point for proper comparative research. Typological, grammatical or other considerations cannot substitute for it: morphemic similarities, and comparative phonology based on them, are the starting point for comparative research into grammar, syntax and etymology.

At the first stage of investigation, there may be various reasons for similarities among the morphemes found in lexical comparisons: chance, borrowing or common genetic origin. To ensure that we are talking about genetically related languages, a reasonably large portion of the morphemic similarities uncovered should exist between members of the so-called core lexicon. Core morphemes are usually resistant to substitution from borrowing, in contrast to the cultural lexicon where borrowing is much more likely (see discussion in Peiros 1997b). Resistance to borrowing is a tendency rather than an absolute rule, and loans into the core lexicon also can be found in any language. The tendency is, however, very strong, and similarity between core morphemes is likely to indicate genetic relationship.

There are two major ways to compile a list of comparisons between languages. One way is simply to find a sufficient number of comparisons to establish phonological correspondences between the languages. The other possibility is to conduct a systematic search through the languages, to find all possible comparisons between them. The result of this procedure is a complete list of comparisons with forms found in any two or more of the languages chosen for the investigation. In this book I try to follow the second approach, and for the language families discussed below, I have (I hope) complete or near-complete sets of comparisons found by myself or by other scholars who have studied these languages.

Comparisons are used as a database for establishing systematic phonological correspondences, which connect the phonological systems of the languages and are traces of various features of the phonology of the protolanguage. For the Southeast Asian languages we can talk about four types of systematic correspondences:

- (1) correspondences of syllabic structure (such as 'monosyllabic morphemes in language A correspond to the first syllable of disyllabic morphemes in language B');
- (2) consonantal correspondences for prefixes, suffixes, or initials, medials and terminals of major syllables;<sup>3</sup>

---

<sup>3</sup> In this book I use the following terminology, based on the Sino-Tibetan tradition. A morpheme can be formed by up to three parts: an obligatory major syllable, and an additional prefix and/or suffix. Both prefixes and suffixes are treated here as phonological parts of a morpheme. No grammatical meanings are *a priori* connected with these 'affixes'. The major syllable includes an initial consonant (initial), a vocalic part, and possibly a final consonant (terminal). The vocalic part and terminal together are

- (3) vocalic correspondences for major syllables;
- (4) tonal correspondences (if any).

Often there are correlations between correspondences of different types: a certain tone may be found only in syllables with aspirated initial consonants, or long vowels may occur only in stressed syllables.

The set of phonological correspondences for a group of languages may be considered adequately defined only if the correspondences can be applied simultaneously to all parts of the morphemic syllable structure – initial consonants, vowels, and so on – rather than to just one part of the morpheme, for instance just the terminal. This condition is of great importance in the study of ‘new’ families because simultaneous application allows the discovery of correlations between correspondences which might otherwise be overlooked.

It is generally accepted that languages are genetically related if they can be traced back to the same common ancestor. This means that strictly speaking if we want to demonstrate that languages A and B are related, what we need to do is to present their ancestor, language C. With few exceptions, C will be a protolanguage, whose system is reconstructed through the comparative method via a comparison of its daughter-languages. This leads us to a vicious circle: to prove that the languages are related we need a reconstructed protolanguage, but to reconstruct it we need to know which languages are related. To overcome this contradiction we need a working definition of genetic relatedness which does not include the notion of protolanguage.

There is no doubt that related languages should always reveal certain similarities which are traces of their common origin. Such similarities between languages may be functional and/or material. In the case of pure functional similarities, certain parts of the languages’ grammatical systems are organised similarly. For example, the languages may distinguish identical sets of noun classes, although the forms of the grammatical morphemes used to mark the classes may be quite different. As systemic features and their particular combinations do not appear at random, it is not totally impossible that these functional similarities indicate genetic relationship. It is, however, also possible that they are results of areal influences, typological universals and other non-genetic factors. For this reason, functional similarities should never be used as the sole piece of evidence for genetic relationship. The main body of evidence must be constituted by material similarities. These include similarities between morphemes of the languages, sometimes together with similar irregularities found in the languages, like the similarities between English and German irregular verbs *drink, drank, drunk* and *trinken, trank, getrunken*. It is very unlikely that such irregularities would be borrowed, or result from independent development. Therefore, they seem to be very convincing indications of possible genetic relationship. Unfortunately, however, they are often difficult to find, and genetic claims are generally based primarily on morphemic similarities and conclusions drawn from them. That is why a list of comparisons (similar morphemes found in the languages under investigation) is absolutely crucial and without it no genetic claim can be substantiated by means of comparative linguistics.

Before taking the next step in our discussion, we need to clarify several notions. In a comparative study where the history and relationships between the languages are known:

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sometimes called the ‘rhyme’. Major syllables may also have a medial consonant following the initial. Some languages distinguish several tones in major syllables.

- morphs are called genetically related if they all result from the direct and uninterrupted development of the same morph of the protolanguage. This morph is called their *protomorph (protoform)*.
- morphs which can be traced back to the same protomorph are called *cognates*.
- a set of cognates which have developed from a single protoform is called an *etymology*. An etymology thus includes only forms which are genetically related to each other, and which are found in some or all of the languages under investigation.
- morph  $\alpha$  in language A is a *reflex* of the protomorph  $*\phi$ , if  $\alpha$  is the result of direct historical development of  $*\phi$  in language A.
- phoneme  $\alpha$  in language A is a *reflex* of the proto-phoneme  $*\phi$ , if  $\alpha$  is the result of direct historical development of  $*\phi$  in language A.

If the history and relationship between the languages is not yet known:

- similar morphs in those languages are called *resemblances*. There are various reasons why the morphs may be similar: they could be cognates, borrowings, or even chance similarities.
- a set of resemblances found in the languages is called a *comparison*. No substantial claims can be made about the origins of a comparison. An etymology is a particular type of comparison, one which includes only genetically related morphs.

Using the notions of etymology (a set of genetically related cognates) and comparison (a set of resemblances which are not necessarily genetically related), we can say that two languages are genetically related if:

- (i) there is a sufficient number of lexical comparisons, constituted by resemblances found in these languages;
- (ii) it can be demonstrated that these comparisons are etymologies in the strict sense, rather than the result of borrowings or chance similarities.

As the only accepted way to demonstrate the genetic nature of a comparison is to show that its resemblances are connected by systematic phonological correspondences, provision of a list of such correspondences is an obligatory element in the proof of a genetic relationship. It is important to distinguish the notions of systematicity and regularity of correspondences. Regular phonological correspondences are those which are supported by a sufficient number of examples. They can connect phonemes in comparisons based on borrowing, as well as those based on genetic relationship: a set of regular phonological correspondences between unrelated Chinese, Japanese, and Vietnamese is used for example in the reconstruction of Middle Chinese. Systematic correspondences may be regular, but may equally be found in only a few reliable examples. Their main feature is that each systematic correspondence is related to a distinction in the phonological system of the protolanguage.

These considerations lead us to the following set of criteria for proof of genetic relatedness. Any well-proved genetic claim regarding a particular group of languages is based upon:

- (i) a sufficient number of comparisons consisting of resemblances found in these languages;
- (ii) a reasonable number of these comparisons belonging to the core lexicon;

- (iii) a set of phonological correspondences between the phonological systems of the languages;
- (iv) the fact that these correspondences are represented in the comparisons included in the claim.

In cases where data is limited and a set of phonological correspondences is not yet established, formal evidence of genetic relationship is still missing. Here, it is better to talk about 'possible' genetic relationships, rather than proven ones.

Note that this definition specifically does not require identity of grammatical morphemes. In many Southeast Asian languages, grammatical morphemes barely exist in any case. For the families with old morphology we should be able to reconstruct ancestral grammatical morphemes on the basis of comparisons of attested grammatical morphemes. Such reconstructions, however, are not included in the obligatory requirements for proof of genetic relationship.

Satisfaction of the four conditions set out above provides us with information sufficient for the phonological and lexical reconstruction of the protolanguage. Such reconstructions, however, do not form an essential part of the proof.

With the list of phonological correspondences we can begin the phonological reconstruction using the procedure of 'step by step reconstruction'. We first reconstruct the most recent proto languages. These low level independently reconstructed systems are then used to reconstruct more ancient proto languages. These in turn can be used for other, even more ancient reconstructions. In principle, there are no limits on the number of such steps, and very ancient languages can be reconstructed in a process involving three or four consecutive steps back into the past. This is the case in the reconstruction of Proto Iranian, Proto Indo-Iranian, Proto Indo-European, and Proto Nostratic, for instance. It is important that the direction of this process is always from modern times to prehistory and not vice versa.

I believe that phonological and lexical reconstructions are the most important elements in the reconstruction of a proto language, especially if we are dealing with the 'new' language families of Southeast Asia. Consequently, this book concentrates on problems of comparative phonology and lexicon.

In discussing the results of comparative phonology and reconstruction, it is extremely important to realise that at least five types of protoforms can be found in the literature: real reconstructions, unstratified reconstructions, reflections, pre-reconstructions and ghost-reconstructions. (This rather vague terminology is mine). The most reliable are *real reconstructions*. They are obtained through the strict universal procedure of comparative linguistics: (i) their identification is based on the system of phonological correspondences and plausible semantic relationships, (ii) their reflexes are found in all or major languages of the family and (iii) they can be attributed with certainty to the protolanguage level.

Sometimes a reconstruction is based on forms found in several languages and is confirmed by proper phonological correspondences, but it cannot be demonstrated that the form should be attributed to the protolanguage level, rather than to a later period of the family's history. In such cases we are dealing with an *unstratified reconstruction* which could belong either to the protolanguage of the whole family, or to one of its daughter protolanguages, or alternatively could result from the effect of unidentified local influences on some languages of the family. The status of unstratified reconstructions is similar to that

of protoforms reconstructed for different branches of the family: we do not know what level of genetic relationship they represent.

If a morph is recorded in a language with a known history, but cognates are not found in other related languages, a linguist who believes that this morph was not borrowed can assume that its ancestor was present in the protolanguage, and a corresponding protoform can be reconstructed. Such '*reflections*' are less convincing than real or unstratified reconstructions, as there is usually no good reason why they should be attributed to the protolanguage level rather than to the level of one of its daughter (proto)languages.

Two other types of protoforms found in the literature, pre-reconstructions and ghost-reconstructions, do not strictly speaking belong to comparative linguistics. *Pre-reconstructions* are not based on a proper set of phonological correspondences but only on the intuition of the linguist who introduced them. In working with language families where the comparative phonology is poorly understood, a linguist may bring together fragments of historical information to gain an idea of how a protoform might look. To transform such pre-reconstructions into real reconstructions, we need a detailed comparative phonology of the language family under consideration. Without it, pre-reconstructions can become a very treacherous tool of investigation.

A *ghost-reconstruction* is the least reliable type of protoform found in the literature. It is usually based on a single morph, sometimes marginally represented in the language, or simply on a mistake due to poor knowledge of the language's history. Such a morph, without sufficient comparative evidence, is treated as a trace of a protolanguage morpheme, giving rise to other equally unsupported claims. Obviously no serious conclusions can be made on the basis of such ghosts.

All five types of protoforms are found in publications on Southeast Asian languages. Therefore, in discussing various reconstructions and protoforms suggested for these languages, I will always try to identify to which of these five groups a protoform belongs. This should aid us in our judgments not only about these protoforms, but also about the classifications and genetic claims based on them.

Classifying related languages can be more problematic than doing a phonological reconstruction. A complete genetic classification of a family includes:

1. reasons why the family has been identified;
2. (i) identification of primary groups formed by closely related languages;  
 (ii) evidence supporting primary group identification;  
 (iii) a genetic tree of the family;  
 (iv) justification of the tree's structure.

When dealing with well-known major languages, linguists usually know if these languages belong to the same primary group. It is generally accepted that Siamese and Lao should be kept together, but Mon and Khmer or Tibetan and Burmese should not be included in the same primary group. A 'new' family is often represented by a set of primary groups, each including at least one major language together with languages which are obviously closely related to it. At the same time, there will be other languages which cannot be connected to these primary groups, their precise genetic affiliation being unknown. In this book I will present more or less clearly defined primary groups for the Kadai, Austroasiatic,



Miao-Yao and Sino-Tibetan language families, paying attention to the reasons for their identification.

Primary groups combine to form language families. Although the structures of such families are often presented as genetic trees, the process of creating a genetic tree is not sufficiently formalised. There are two major methods for classifying related languages. The first is based on innovations, which are found in tightly related languages and are absent in more distantly related ones. Genuine innovations are the results of independent shared development, not borrowings or local features. Sets of innovations should differentiate one group of languages from another. In the literature one can find two different understandings of the term 'innovations'. According to one,<sup>4</sup> an innovation is any structural change (including a merger) in a group of tightly related languages, which is not found in other languages of the family. Another understanding is based on the assumption that an innovation is not simply a structural change, but a new feature which appeared in a proto language and is retained in all its daughter languages but is not found in any sister proto languages. I prefer to operate with the second understanding, but often it is very difficult or even practically impossible to prove that a chosen feature is a real innovation and not (say) a local addition common to the languages spoken in a particular region.

Another method of classifying languages is lexicostatistics. This method is based on interpretations of relative lexical retention rates across the members of a language family. Languages which systematically reveal higher percentages of shared forms are treated as being more closely related. In this book I apply lexicostatistics to classify language families; however, the procedure adopted differs considerably from what is usually called 'lexicostatistics'.<sup>5</sup> Major features of this modified method include the following:

1. The diagnostic list is the standard 100-word list by Swadesh (see Appendix). The list is translated into all the languages chosen for classification, the most common unmarked form being taken as the translation for each item on the list.
2. The investigation deals with morphs and not words. Thus, in a compound, we have two different morphs which can be connected with different morphs in other languages.
3. A borrowing is treated as the absence of a word (0) and not as an absence of identity (-). Thus the diagnostic lists for different languages could be of different length.
4. Etymological identity of forms is assessed on the basis of comparative phonology; thus, lexicostatistical classification should follow and not precede historical investigation. Two forms are called identical (+) if their meanings are precisely the same (they are the simplest translations of the same core meaning) and they can be traced back to the same form in the proto language.
5. The starting point for classification is a matrix of percentages of shared etymologically identical morphemes in each pair of languages under consideration. A sample of such percentages is not sufficient.

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<sup>4</sup> See, for example, the Austronesian classification by Blust (1980 and subsequent publications), who explicitly formulated this approach in a conversation with me in 1990. Blust treats mergers as innovations.

<sup>5</sup> The lexicostatistical method was very popular among the members of the Moscow Nostratic Seminar in the late 1970s and early 1980s. Mostly under the influence of Jakhontov, we tried to modify the method and to apply it to different groups of languages. Jakhontov, Khelimsky, Militarev, Peiros and other scholars participated in these discussions (Peiros and Starostin, forthcoming).

6. Interpretation of this matrix of percentages leads to a classification. Reasonable explanations of all the percentages and their differences – including various higher and lower values – are obligatory.

Starostin's software STARLING is based on these principles and provides an automatic classification of languages based on prior etymological identification by a linguist.<sup>6</sup> In several cases the results of this automatic classification differ from what might be done manually. In these cases I give both classifications, with additional commentary.

Unfortunately for some languages discussed in this work I do not have detailed historical data. I have decided to include a number of these in the lexicostatistical classifications, together with the better known languages. The positions of these languages within the classifications are uncertain, but I think that even these preliminary results can be of some use.

A lexicostatistical matrix can also be used as 'negative' evidence: it is assumed that two languages cannot be specifically related if they do not have a high percentage of shared lexicon. The occurrence of a high percentage, however, does not necessarily indicate a closer genetic relationship within the family. Both 'positive' and 'negative' lexicostatistical evidence are used in this book.

If lexicostatistical and innovation-based classifications are conducted properly, their results should be identical. However, for most Southeast Asian families lexicostatistical classification provides us with a genetic tree quite different from supposedly innovation-based classifications. In most cases the explanation of the differences can be found through a thorough examination of the parameters used in these classifications. Lexicostatistics is based on a matrix of percentages which is open to examination and reinterpretation, while other classifications usually do not include the sets of innovations supporting them. Further, they are often based on various additional considerations, including the geographical distribution of the languages. These factors exclude any fruitful discussion of the differences between lexicostatistical and other classifications.

Glottochronology may be used to gain absolute datings of the disintegration of various proto languages. The procedure involves application of the glottochronological formula which connects the percentage of morpheme retention in a list with the time elapsed from the moment the list was formed. The list and the percentages are provided by lexicostatistical analysis. From the moment of its invention in the early 1950s (Swadesh 1952), glottochronology together with lexicostatistics was the subject of very intensive and severe criticism, which created a predominantly negative attitude to this approach. However, thorough revision of these methods, mostly by Starostin (1989a), has improved the glottochronological formula in such a way that it provides datings very similar to those which are traditionally given for such language families as Germanic, Slavonic, Romance, Chinese, Turkic, and others. There are no obvious mistakes in these datings, so one can assume that the formula is universally applicable, providing that proper lexicostatistical analysis for each language family has been done beforehand. It is still not sufficiently proved, however, that such datings will always be correct. The glottochronological part of STARLING has been used for all absolute datings given below.

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<sup>6</sup> I want to express my great gratitude to Starostin, who provided me with the STARLING. All lexicostatistical calculations in this book have been done by this program.

As the lexicostatistical and glottochronological procedures accepted in this book differ considerably from methods with the same names used in many other publications, it is not surprising that the results of their application should be different from, and not directly comparable with, results presented elsewhere. At the same time, all classifications and datings given below are obtained with the same procedure, and can easily be compared with each other, even for unrelated or very remotely related languages.

Prehistoric interpretation of linguistic data or the 'linguistic account of prehistory' involves correlation of the solutions to a number of different problems (Peiros 1994a, 1997a). It is based on localisation of the homelands of the protolanguages investigated, dating of the protolanguage dispersals, interpretation of linguistic contacts between the languages, and with their help, development of an understanding of the relationships between their speakers.

A homeland can be localised in time and two different spaces: geographical and ecological. To localise a protolanguage homeland in geographical space one can use the method of 'geographical pinpointing', which is based mainly on interpretation of the geographical distribution of the daughter languages. A region containing genetically diverse languages (presuming that they did not arrive there in a single wave of migration) is more likely to be the protolanguage's homeland than a linguistically homogeneous region: other things being equal,<sup>7</sup> it is easier to assume long-term independent development of languages within a region than it is to propose several independent waves of migration bringing many distantly related languages to the same region. The pinpointing method depends upon a prior genetic classification of languages, as only such a classification can provide us with information about genetic relationships within a language family. Additional information can be obtained from proper names of different geographical objects (rivers, mountains, etc.) investigated in toponymy studies. In theory these names can be also found on a map and thus be useful in geographical pinpointing, but no reliable results of this type are known for Southeast Asia.

The localisation in ecological space is based on the results of lexical reconstruction, and on the assumption that if a word is used in a language it means that its speakers know what it represents. (Note that the absence of a word does not necessarily mark the absence of the corresponding idea.) An analysis of reconstructed words can provide us with some information about the world of the protolanguage speakers. This assumption is widely used for all types of cultural interpretation in comparative linguistics, and in fact the protolanguage lexicon is the main source of data for any cultural reconstruction. However, there are some general problems concerning lexical reconstructions and their ability to provide the necessary information.

A protolanguage's lexicon provides us with information about the natural environment in which the language was spoken: its geographical, climatic, floral and zoogeographical zones. Each zone has some specific features which may be reflected in the lexicon under consideration. We can talk about the following groups of words associated with the environment:

- words for different wild plants endemic to a particular zone, like 'Siberian cedar', 'mangrove' or 'mulga trees';
- words for different wild animals, like 'crocodile', 'polar bear' or 'kangaroo';
- words for specific natural phenomena, like 'monsoon', 'Northern lights' or 'earthquake'.

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<sup>7</sup> We do not discuss here such hypotheses as language refuge zones.

An analysis of all of these words can in theory provide us with rather detailed information about the ecological zone (the intersection of geographic, climatic, floral and other zones) where a protolanguage would have been spoken. It is clear, however, that one cannot expect simply to find this zone on a map. Most environmental features would have been subject to drastic change over the time elapsed from the period of the proto language disintegration. Only extralinguistic data, such as from palaeoclimatology and palaeobotany, would make it possible to connect the reconstructed ecological zone with a particular region on the map at a given time.

An analysis of the cultural protolexicon leads to hypotheses about cultural achievements of the speakers who used the protolanguages, and their contacts with other speech communities. These hypotheses in turn allow us to investigate the spread of cultural influences over geographical areas.

The combination of all such hypotheses gives rise to a linguistic account of prehistoric life in the area.<sup>8</sup> Such an account, based purely on linguistic data obtained through comparative procedures, can be further combined with archaeological and other accounts of prehistory, but in this book I will limit myself to linguistic matters. Our focus is upon linguistic accounts of the prehistory of Southeast Asia.

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<sup>8</sup> More detailed discussion of this notion is provided in some of my papers: Peiros 1994a, 1997a.

## CHAPTER 2 AUSTRO-TAI LANGUAGES

### 2.1 THE KADAI FAMILY

#### 2.1.1 GENERAL INFORMATION

There is no commonly accepted name for the language family which includes languages related to Siamese or Thai. Shafer (1974) used the term 'Daic' for this family, but I prefer to call it 'Kadai', following the suggestion by Haudricourt (1967) accepted by Benedict (1975, 1990).

The total number of the Kadai languages is little more than 40, so the family is relatively small. These languages are spoken in a comparatively restricted area which includes some southern provinces of China, North Vietnam, Laos, Thailand, parts of Burma and a small part of Northeast India. In Thailand and Laos, Siamese (or Thai) and Lao are the respective national languages. Zhuang is extensively used in China as is Shan in Burma, but most of the other Kadai languages are not widely spoken.

The list of primary groups of the family includes:<sup>1</sup>

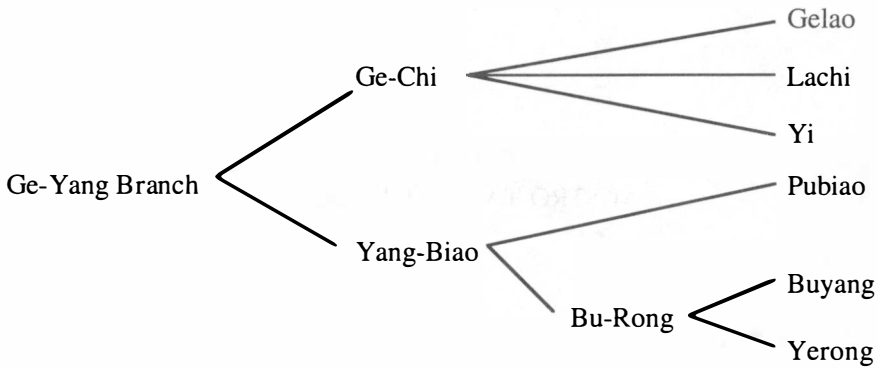
1. Zhuang-Tai (ZhT) group;
2. Kam-Sui (KS) group;
3. Li group;
4. Ong Be (OB) language;
5. Lakkja (Lk) language;
6. Gelao group.

Analysis of the Gelao group is rather difficult. There are several detailed descriptions of languages of this putative group (Materialy 1979; He 1983; Zhang 1993). These descriptions are not consistent with each other, nor with other available data (Zhang 1982; Liang 1990a, 1990c; Bonifacy 1908). A Gelao reconstruction is still missing.

Liang (1990a) believes that the structure of the Gelao group is:

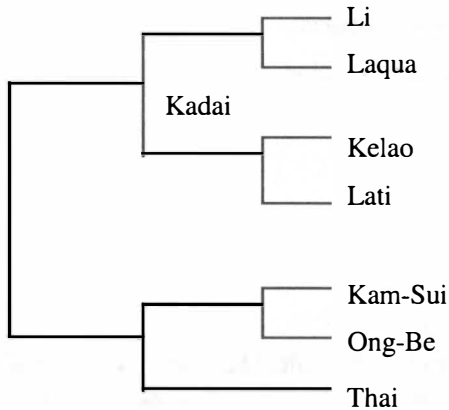
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<sup>1</sup> The position of the recently discovered Biao language (Zhang 1989) is not quite clear.

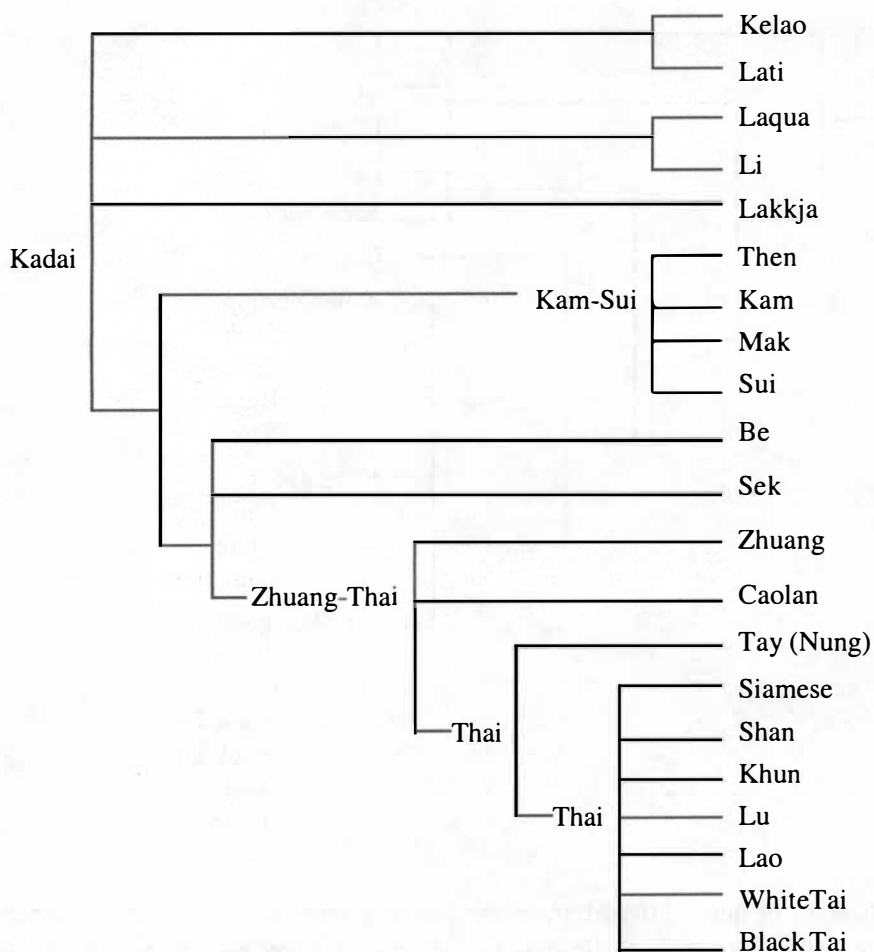


which confirms the hypothesis put forward by Jakhontov (1977b, 1987). It is quite possible, however, that these languages do not form a single group, and could instead be classified into several different groups. Some preliminary discussion of connections between Gelao and the main body of Kadai languages is contained in Edmondson and Thurgood (1992).

Much discussion of the classification of the whole Kadai family has been conducted by two scholars, Benedict and Haudricourt. In 1966 the former suggested the following scheme (Benedict 1975:32), although he provided no motivation for it:

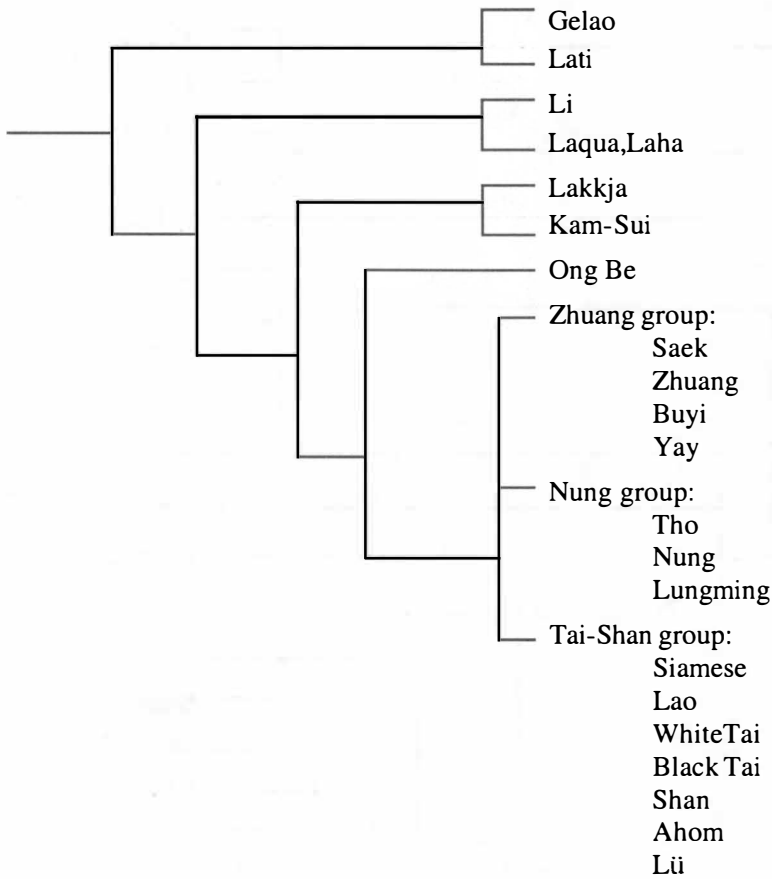


A reinterpretation of the classification is suggested by Haudricourt (1967:182):



On this account, the family is subdivided into four main branches of equal status: Gelao/Lati, Li/Laqua, Lakkja, and a fourth branch containing Kam-Sui, Ong Be, Saek and Zhuang-Tai subbranches. Haudricourt does not provide reasons for the adoption of this particular structure.

Thurgood (1994:362, see also 1985a:3) has published the following revision of Benedict's classification, again without justifications:



This classification is quite different from the previous one, as it postulates a binary structure for the family tree and incorporates Li Fang-kuei's classification of Zhuang-Tai languages (Li 1959, 1977).

Using the standard procedure of glottochronology, Gokhman (1980) hypothesised that the Kadai languages began to disintegrate about 2,700–3,000 years ago, and that the genetic tree of the family consists of four branches of equal status:

Zhuang-Tai  
Kam-Sui  
Ong Be  
Li

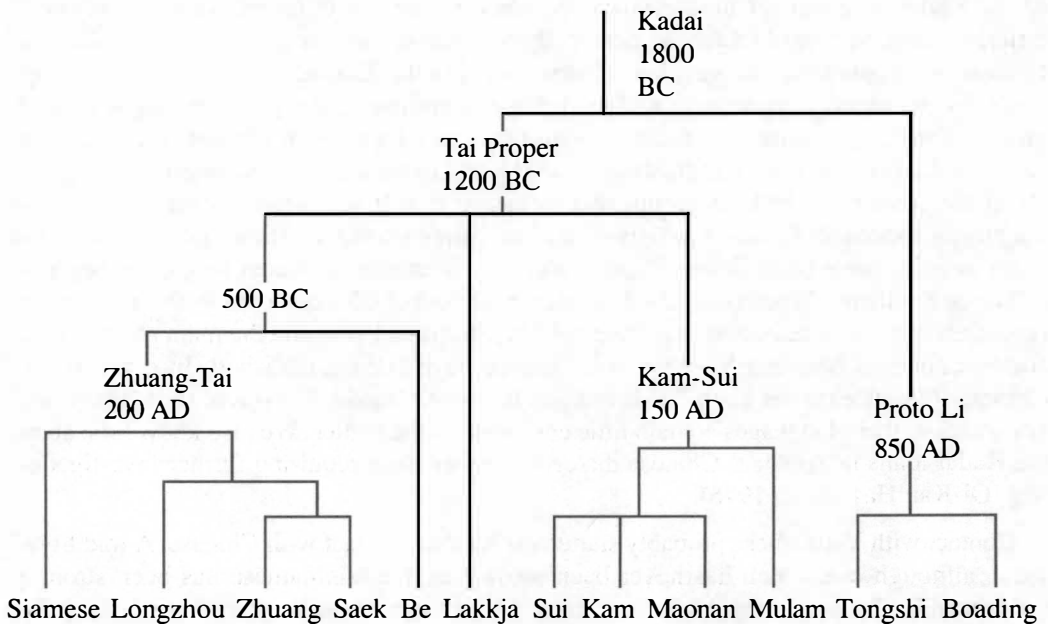
This classification is based on outmoded principles of lexicostatistical and lexicostatistical analysis (see Chapter 1) and requires modification. For a new version of the lexicostatistical classification I have chosen 15 Kadai languages with sufficiently known historical phonologies so that all entry indentifications are formally justifiable. As I am uncertain of the phonological history of the Gelao languages, they are omitted from this classification.

The matrix of percentages obtained from this data is as follows (see Appendix A for the data):



|            | WrS | Lz | Zhu | Sae | Ong | Lak | Mul | Kam | Mao | Sui | Ton | Bao |
|------------|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| WrS        | x   | 77 | 76  | 80  | 60  | 49  | 46  | 56  | 47  | 56  | 46  | 47  |
| Longzhou   | 77  | x  | 84  | 87  | 67  | 56  | 49  | 62  | 56  | 59  | 48  | 49  |
| Zhuang     | 76  | 84 | x   | 92  | 61  | 64  | 54  | 66  | 59  | 61  | 50  | 51  |
| Saek       | 80  | 87 | 92  | x   | 69  | 70  | 57  | 72  | 62  | 67  | 56  | 58  |
| Ong Be     | 60  | 67 | 61  | 69  | x   | 52  | 41  | 52  | 44  | 48  | 46  | 45  |
| Lakkja     | 49  | 56 | 64  | 70  | 52  | x   | 51  | 52  | 48  | 47  | 45  | 44  |
| Mulao      | 46  | 49 | 54  | 57  | 41  | 51  | x   | 76  | 77  | 75  | 33  | 33  |
| Kam        | 56  | 62 | 66  | 72  | 52  | 52  | 76  | x   | 85  | 82  | 39  | 40  |
| Maonan     | 47  | 56 | 59  | 62  | 44  | 48  | 77  | 85  | x   | 81  | 33  | 34  |
| Sui        | 56  | 59 | 61  | 67  | 48  | 47  | 75  | 82  | 81  | x   | 36  | 38  |
| Li Tongshi | 46  | 48 | 50  | 56  | 46  | 45  | 33  | 39  | 33  | 36  | x   | 89  |
| Li Baoding | 47  | 49 | 51  | 58  | 45  | 44  | 33  | 40  | 34  | 38  | 89  | x   |

These results allow the postulation of the following tree (with datings) for the Kadai languages:



A comparison of the classifications suggested by Haudricourt, Benedict/Thurgood and myself reveals the following points:

1. Haudricourt and Benedict/Thurgood discuss the Gelao languages, which are not included in my classification due to lack of data.
2. Haudricourt treats the Li group as equal to other Kadai branches, while Benedict/Thurgood postulate its opposition to the rest of the family. The latter analysis is supported by lexicostatistics.
3. Contra to Haudricourt and Benedict/Thurgood, the lexicostatistical classification identifies a group called here Tai Proper, which includes three branches: Zhuang-Tai/Ong Be, Lakkja and Kam-Sui.
4. No special relationship between Lakkja and Kam-Sui can be postulated on the basis of lexicostatistical data, which contradicts the point of view presented by Benedict/Thurgood (see also discussion in Solnit 1988).
4. According to Benedict/Thurgood, Ong Be and Zhuang-Tai languages form a unit, and this claim is supported by lexicostatistics (see also Hansell 1988:285).
5. Lexicostatistics connects Saek with Zhuang, confirming Li Fang-kuei's (1977) and Gedney's (1969/1989) treatment of the language, which was also accepted by Benedict/Thurgood. This contradicts the classification of Saek proposed by Haudricourt.

Contacts with both Chinese and Vietnamese have played an important role in the history of the Kadai languages. Chinese influence has affected the different Kadai branches in different ways. In Proto Li there are practically no Chinese loans at all, and in the Li dialects, Chinese loans appeared relatively late. Contact between the Zhuang-Tai and Kam-Sui groups and Chinese seems to have begun after the disintegration of the protolanguages of both groups. One may assume that the extensive Chinese influence on Zhuang-Tai languages began in the first centuries AD (Jakhontov 1971), and extended to the Kam-Sui languages at about the same time. In both groups this influence is still very strong, especially for the languages spoken in China. Analysis of lexical correspondences shows quite clearly that loans initially came from Chinese, and it was only later that the Kadai languages began to influence Southern Chinese dialects. Representative lists of Chinese loans in the Zhuang-Tai languages have been collected (e.g. Prapin 1976; Starostin 1979) and the main phonological correspondences between Siamese and Chinese have been established. In contrast, the Chinese influence on the Kam-Sui languages has never been investigated thoroughly, and grammars of these languages contain little comment on the matter. We also know little about the Kadai loans in Southern Chinese dialects, another issue requiring further investigation (e.g. Oi-Kan Hashimoto 1976).

Contact with Vietnamese probably started earlier than contact with Chinese. A traditional view, although one which has never been proven, is that Vietnamese has been strongly influenced by Tai languages. However, I have found Vietnamese loans in Proto Zhuang-Tai and Proto Kam-Sui, and it is possible that they exist also in Proto Li. Such loans are absent from both Proto Kadai and Tai Proper which suggests that the contact began after the disintegration of these protolanguages. In general, the relationship between Kadai and Vietnamese requires additional investigation.

In the reconstruction of Tai Proper or Proto Kadai, we cannot use Zhuang-Tai, Kam-Sui or Li languages without first reconstructing the protolanguages of these groups. Ong Be and

Lakkja, however, are language isolates, and the only option is to use them in their modern forms.

The lexicon of Ong Be, a language spoken in the northern part of Hainan island, is known quite well. The first large-scale collection of lexical data from the language was the dictionary compiled by Savina and published many years later by Haudricourt (Savina 1965). The publication included an external comparison of Ong Be conducted by the editor. Fifteen years later a much larger Ong Be dictionary was published by Hashimoto (1980a), who collected data during 1972 and 1973 in Hong Kong with the help of immigrants from Limkou. The latter dictionary has been used in this book. Liang Min (1981) published a short description of the Limkou dialect which basically supported the data collected by Hashimoto. An Ong Be wordlist is also given in Liang and Zhang (1996). An important feature of the Ong Be lexicon is the great number of modern Chinese loans which have replaced many common Kadai words.

Lakkja is spoken in some villages of the Guangxi province of China. According to the official Chinese classification, Lakkja is used by people of Yao nationality, so all information about this language is contained in two Chinese publications regarding the languages of the Yao community (Anon 1959c; Mao et al. 1982; see also Zhang 1990a). The 1959 word list was later analysed by Haudricourt (1967), the first scholar to understand the importance of the language.

### 2.1.2 ZHUANG-TAI LANGUAGES

It appears that the Zhuang-Tai branch of Kadai may consist of three main language groups, as it was suggested by Li Fang-kuei (1977):

1. Tai-Shan;
2. Nung;
3. Zhuang-Saek.

It is still not clear whether there are other groups which should be included as branches in the Zhuang-Tai branch. Haudricourt (1960) suggested that one such group could be formed by poorly known dialects of the Moncai area in Vietnam, but Strecker (1985) has shown that Haudricourt's data has an alternative explanation.

The Tai-Shan group (Li Fang-kuei's 'Southwestern Tai group') includes all official Kadai languages, and languages with long written traditions such as Siamese, Lao and Ahom (an extinct language from Assam). Also belonging to this group are many modern languages or dialects which are relatively similar to each other and hence difficult to classify. There is no reliable genetic classification of this group. A dialectal Tai-Shan classification has been proposed by Jones (1965), who divided 39 languages and dialects into five branches. Brown (1985) mentions many more members of this group but does not present sufficient linguistic data on them.

The phonological characteristics of all Tai-Shan languages, perhaps with the exception of Ahom, can be explained with the help of the traditional Tai orthography.

Some of the Tai-Shan languages are quite extensively documented. There are many dictionaries and grammars of Siamese (e.g. Pallegoix 1854; Thiengburanathum 1986; Morev 1964a, 1964b; Noss 1964; etc.) and of Lao (e.g. Marcus 1970; Bounmy 1983; Morev et al 1982; Morev et al. 1972, etc.). Shan is also reasonably well documented, largely due to the

works of Cushing (Cushing 1888, 1914; Morev 1983). There are some modern publications on other Tai-Shan languages, such as Lü (Morev 1978, etc.) and Ahom (Weidert 1979). However, there is still little known about many of the other languages and dialects of this group and it is quite possible that some remain to be discovered (see Chamberlain 1991 for a discussion of a new language of this group).

The Nung group (the Central Tai group of Li Fang-kuei) includes several closely related languages or dialects. The best known are the Longzhou dialect (Li 1940; Wei & Dan 1980) and the dialect investigated by Gedney (Hudak 1991b). Other dialects of the group are discussed in publications on Nung (Savina 1924), Thai (Diguët 1895) and Tho (Diguët 1910). There is also a Vietnamese-Nung dictionary which probably includes data from some different dialects (Hoang et al. 1974). The precise distribution and inner classification of these dialects are unknown. However, as many Chinese publications do not differentiate between Nung and Zhuang, it is possible to find information about the distribution of the Nung dialects in the survey of Zhuang dialects (Anon 1959b). For Vietnam and Laos such information is not available.

The Zhuang group (the Northern Tai group of Li Fang-kuei) is mostly composed of dialects from Southern China, which are grouped by Chinese scholars into two different languages: Buyi and Zhuang. This distinction is based on geographical grounds and has not been justified linguistically. There are descriptions of different Zhuang dialects: the dialect of Wuming (Moskaljev 1971; Wei & Dan 1980), a dialect spoken in some villages near Wuming (Li 1956), the Poai dialect (Li 1957, 1977), Gedney's Yay (Hudak 1991b), and the very detailed dialectal survey of that part of the Zhuang area which is included in Buyi (Anon. 1959b). At the same time, we still lack a reliable Zhuang dictionary; the old dictionary of Dioi (Esquirol & Williatte 1908) is phonetically inadequate. The Zhuang-Chinese dictionary (1959) available to me includes Nung as well as Zhuang forms, and so it cannot be regarded as a true Zhuang dictionary.

Saek, a language spoken in some villages of Thailand and Laos, is unfortunately still relatively unknown. The information collected by Haudricourt (1963, 1976) and Gedney (1969) demonstrates the presence of archaic features in Saek phonology, confirming the importance of the language in the historical study of the Kadai family. A short grammar and vocabulary of Saek were published by Morev (1988), and were followed by data collected by Gedney (Hudak 1993).

Several scholars have undertaken comparative study of the Zhuang-Tai group. Wulff (1934) was the first to try to establish phonological correspondences between the Zhuang-Tai languages; his results are now of historical interest only. Haudricourt studied Zhuang-Tai and other Kadai languages for many years (e.g. Haudricourt 1948, 1956), and the results of his research were published as part of Shafer's (1974) 'Introduction to Sino-Tibetan'. Although Haudricourt included many different Kadai groups in his comparisons, he concentrated largely on evidence from Zhuang-Tai languages, and his reconstruction can thus be regarded as a Zhuang-Tai reconstruction. Unfortunately Haudricourt did not have adequate data for many languages, particularly for the Nung and Zhuang groups, so some aspects of his reconstruction are not reliable.

The first detailed and well-grounded Zhuang-Tai reconstruction was published in 1977. It was written by Li Fang-kuei, who was at that time perhaps the leading figure in the field, having already published some very important articles on the reconstruction of Zhuang-Tai, as well as descriptions of other Kadai languages (Li 1940, 1943, 1948, 1957, 1966-68).

The reconstruction was based on a formal comparison of three Zhuang-Tai languages, each representative of one of the three main branches of the group: modern Siamese for the Tai-Shan branch, Longzhou for the Nung branch and Poai for the Zhuang branch. The Longzhou and Poai dialects had been described by Li Fang-kuei himself. In order to avoid mistakes which might arise from the irregular development of forms in the chosen dialects, Li Fang-kuei constantly added data from perhaps all other known Zhuang-Tai languages: Lao, Shan, Ahom, Nung, Tho, Thai, Dioi and others. As Li Fang-kuei did not have sufficient Saek data, information from this language was included only occasionally.

The emphasis on well-documented languages, and the process of thorough comparison, allowed Li Fang-kuei to achieve unique results for South Eastern Asian linguistics: a verifiable set of phonological correspondences between the chosen languages. Three key features of the reconstruction are:

- (1) a comparative Zhuang-Tai lexicon which includes about one thousand roots, almost all of which are represented in all branches of the group;
- (2) well attested phonological correspondences which connect these roots; and
- (3) the first full and non-contradictory reconstruction of the protolanguage. One problematic feature of the reconstruction is Li Fang-kuei's incorrect assumption that the Zhuang-Tai group is genetically related to Chinese. On this basis, Li treated Chinese loans as original roots, and some of his phonological correspondences are derived from these loans. However, the remarkable feature of this work is that it is completely explicit, and one can simply disregard the loans and then reinterpret the system.

Li Fang-kuei's analysis of the tone systems of Zhuang-Tai languages shows that the tones of all modern languages can be traced back to three protolanguage tones: \*A, \*B and \*C. In syllables with final stops, Li reconstructed the tone \*D, representing a neutralisation of the three main tones which occurs only in this particular type of syllables. Tones \*A, \*B and \*C are maintained in the traditional Siamese writing system. The tone \*D is not distinguished there from the tone \*A and neither of them are specially marked. Sagart (1989:89) has proposed the following reconstruction of Zhuang-Tai tones:

| Proto Tone | Proposed reconstruction                          |
|------------|--|
| *A         | Syllables ending in a sonorant, modal voice.     |
| *B         | Syllables ending in a glottal stop, modal voice. |
| *C         | Syllables ending in a sonorant, creaky voice     |
| *D         | Syllables ending in an oral stop, modal voice    |

The difference between voiced and voiceless initial consonants has influenced the development of tones in modern languages (Li 1977). Linguists often speak about two series of tones: one consisting of the tones developed in syllables with voiceless initials (I), and the other corresponding to the tones developed in syllables with voiced initials (II). These series were in complementary distribution while the initial consonants maintained a voiced/voiceless distinction, but when this opposition was lost the tonal variants became contrastive. It is possible that the tone series began to separate in different languages at different times. In traditional Siamese orthography the two series are not distinguished, which suggests that in the period when the script was adopted for the language, the opposition of these series was irrelevant at least phonologically.

According to Li Fang-kuei, the tonal correspondences between Siamese, Longzhou and Poai are:

| Proto ZhT tones | WrS tones | Tonal series | Lz tones | Poai tones |
|-----------------|-----------|--------------|----------|------------|
| *A              | A         | I            | 1        | 1/6        |
|                 |           | II           | 2        | 2          |
| *B              | B         | I            | 5        | 5          |
|                 |           | II           | 6        | 6          |
| *C              | C         | I            | 3        | 3          |
|                 |           | II           | 4        | 4          |
| *D              | D         | I            | 7        | 7          |
|                 |           | II           | 8        | 8          |

In Poai, tone 6 as a reflex of \*A appears in syllables with glottalised initials. Phonetically, Poai has four reflexes of \*D depending on the length of the vowel in the syllable: tone 7 occurs in syllables with short vowels and 9 in syllables with long vowels in series I, and 8 and 10 are the corresponding tones in series II. At the phonological level, however, there is no need to maintain the distinction.

Table 2.1 gives the system of initials for Proto Zhuang-Tai.

TABLE 2.1: PROTO ZHUANG-TAI INITIALS

|      |       |      |       |      |     |     |      |      |     |
|------|-------|------|-------|------|-----|-----|------|------|-----|
| *p   | *ph   | *b   | *?b   | *m   | *hm | *f  | *v   | *w   | *hw |
| *pl  | *phl  | *bl  |       |      |     |     |      |      |     |
|      | *phr  | *br  |       |      |     |     |      |      |     |
|      |       |      | *r-m  |      |     |     |      |      |     |
| *t   | *th   | *d   | *?d   | *n   | *hn | *s  | *z   | *l   | *hl |
| *thr |       | *?dr |       |      |     |     | *r   |      |     |
| *r-t | *r-th | *r-d |       | *r-n |     |     |      | *r-l |     |
| *C-t |       |      |       |      |     |     | *m-l |      |     |
| *P-t |       | *P-d | *P-?d |      |     |     |      |      |     |
| *č   |       | *ž   |       | *ɲ   | *hɲ |     |      | *j   | *?j |
| *k   | *kh   | *g   | *?g   | *ŋ   | *hŋ | *x  | *y   |      |     |
| *kl  | *khl  | *gl  |       |      |     |     |      |      |     |
|      | *khr  | *gr  |       |      |     |     |      |      |     |
|      | *r-kh |      |       |      |     |     |      |      |     |
|      | *khw  | *gw  |       | *ŋw  |     | *xw | *yw  |      |     |
|      | *h    | *?   |       |      |     |     |      |      |     |

The main difference between this reconstruction and that of Li Fang-kuei lies in my analysis of initial clusters with presyllabic *\*r-*, *\*C-* and *\*P-*. Let us first discuss cases with *\*r-*. In Poai (and in all other Zhuang dialects) one finds *\*r-* in positions where Tai-Shan and Nung language have other consonants:

| Proto ZhT    | TS        | Nung       | Zhuang    | Li's reconstruction |
|--------------|-----------|------------|-----------|---------------------|
| <i>*r-t</i>  | <i>*t</i> | <i>*t</i>  | <i>*r</i> | <i>*tʃ</i>          |
| <i>*r-th</i> | <i>*h</i> | <i>*th</i> | <i>*r</i> | <i>*thr</i>         |
| <i>*r-kh</i> | <i>*h</i> | <i>*kh</i> | <i>*r</i> | <i>*xr</i>          |
| <i>*r-n</i>  | <i>*n</i> | <i>*n</i>  | <i>*r</i> | <i>*nʃ/r</i>        |
| <i>*r-l</i>  | <i>*l</i> | <i>*l</i>  | <i>*r</i> | <i>*dl</i>          |

It would be preferable to be able to account for all of these correspondences with one rule. They could be reconstructed with the medial *\*r-* but this would lead us to reconstruct the 'strange' cluster *\*lr-*. For this reason I prefer to postulate a presyllabic *\*r-*, which is maintained in the Zhuang dialects and has been lost in all Tai-Shan and Nung languages. The patterns within the system allow me also to reconstruct the cluster *\*r-m*:

| Proto ZhT   | TS        | Nung      | Zhuang    | Li's reconstruction |
|-------------|-----------|-----------|-----------|---------------------|
| <i>*r-m</i> | <i>*m</i> | <i>*m</i> | <i>*f</i> | <i>*mw</i>          |

Once the presyllabic *\*r-* has been included in the Proto Zhuang-Tai system, other presyllables may be reconstructed to explain other correspondences:<sup>2</sup>

| Proto ZhT reconstruction | Tai-Shan  | Nung         | Zhuang      |           | Li's reconstruction |
|--------------------------|-----------|--------------|-------------|-----------|---------------------|
|                          | WrS       | Lz           | Poai        | Wuming    |                     |
| <i>*P-t</i>              | <i>t</i>  | <i>phj</i>   | <i>t</i>    | <i>r</i>  | <i>*pr</i>          |
| <i>*P-d</i>              | <i>d</i>  | <i>pj II</i> | <i>t II</i> | –         | <i>*vl</i>          |
| <i>*P-ʔd</i>             | <i>ʔd</i> | <i>bj</i>    | <i>n</i>    | <i>ʔd</i> | <i>*ʔbl/r</i>       |
| <i>*C-t</i>              | <i>t</i>  | <i>h</i>     | <i>t</i>    | <i>r</i>  | <i>*tr</i>          |

Reconstruction of a presyllabic *\*P-* is plausible, assuming differences in the development of *\*P-* clusters across the three branches of the Zhuang-Tai family. In the Tai-Shan languages the second element of the clusters has been maintained (*t*, *d* or *ʔd*). In the Nung languages the dental element became medial *-j-* which follows a labial stop. The occurrence of *r-* in the Wuming dialect in the first correspondence presents the possibility of reconstruction of a cluster with a presyllable; however, the evidence of the third correspondence prevents such a reconstruction.

The phonological correspondences between Siamese, Longzhou and Poai have been established by Li Fang-kuei (1977). Longzhou and Poai are given below in the same form as in Li's book. For Siamese I prefer to give transliterations of the words, rather than their modern pronunciations. This idea of using the traditional and very archaic Siamese orthography, instead of modern transcriptions which are aberrant from a historical point of view, goes back to Wulff's (1934) reconstruction of Tai.

<sup>2</sup> II in Lz and Po indicates the second tonal series.

TABLE 2.2: CORRESPONDENCES OF ZHUANG-TAI INITIALS

|     | Proto ZhT | WrS     | Lz    | Po    | Li reconstruction |   |
|-----|-----------|---------|-------|-------|-------------------|---|
| 1.  | *p        | p       | p     | p     | *p                | 4.1   |
| 2.  | *ph       | ph      | ph    | p II  | *ph               | 4.2   |
| 3.  | *b        | b       | p II  | p II  | *b                | 4.3   |
| 4.  | *?b       | ?b      | b     | m     | *?b               | 4.4   |
| 5.  | *pl       | pl      | p     | pj    | *pl               | 5.2   |
| 6.  | *phl      | ph      | phj   | pl    | *phl/r            | 5.4   |
| 7.  | *bl       | br      | pj II | pj II | *br               | 5.5   |
| 8.  | *phr      | ph      | ph    | š II  | *fr               | 5.8   |
| 9.  | *br       | br      | pj II | š II  | *vr               | 5.8   |
| 10. | *m        | m       | m II  | m II  | *m                | 4.5   |
| 11. | *hm       | m       | m     | m     | *hm               | 4.6   |
| 12. | *r-m      | m       | m II  | f II  | *mw               | 4.5.1   |
| 13. | *f        | f       | ph    | f     | *f                | 4.7   |
| 14. | *v        | v       | f II  | f II  | *v                | 4.8   |
| 15. | *w        | w       | v II  | p II  | *w                | 4.9   |
| 16. | *hw       | hw      | v     | v     | *hw               | 4.10  |
| 17. | *t        | t       | t     | t     | *t                | 6.1   |
| 18. | *th       | th      | th    | t II  | *th               | 6.2   |
| 19. | *d        | d       | t II  | t II  | *d                | 6.3   |
| 20. | *?d       | ?d      | d     | n     | *?d               | 6.4 In Saek: d                                  |
| 21. | *thr      | th      | th    | š     | *thl              | 7.4   |
| 22. | *?dr      | ?d      | d     | n     | *?dl/r            | 7.8 In Saek: r                                  |
| 23. | *r-t      | t       | t     | l     | *tl               | 7.2 Proto Zhuang: *hr                           |
| 24. | *r-th     | h       | h(1)  | l     | *thr              | 7.5 Proto Zhuang: *hr                           |
| 25. | *r-d      | r       | l II  | l II  | *dr               | 7.7 Proto Zhuang: *r                            |
| 26. | *C-t      | t       | h     | t     | *tr               | 7.3 In Wuming: r<br>In the Nung<br>dialects: th |
| 27. | *P-t      | t       | phj   | t     | *pr               | 5.3 In Wuming: r                                |
| 28. | *P-d      | d       | pj II | t II  | *vl               | 5.8   |
| 29. | *P-?d     | ?d      | bj    | n     | *?bl/r            | 5.6   |
| 30. | *n        | n       | n II  | n II  | *n                | 6.5   |
| 31. | *hn       | hn      | n     | n     | *hn               | 6.6   |
| 32. | *r-n      | n       | n II  | l II  | *nl/r             | 7.9 Proto Zhuang: *r                            |
| 33. | *l        | l       | l II  | l II  | *l                | 8.1 Proto Zhuang *l                             |
| 34. | *hl       | hl      | l     | l     | *hl               | 8.2 Proto Zhuang *hl                            |
| 35. | *r-l      | l       | l II  | l II  | *dl               | 7.6 Proto Zhuang *r                             |
| 36. | *m-l      | m VI~ml | m II  | mj II | *ml/r             | 5.7   |
| 37. | *r        | r       | ʃ II  | l II  | *r                | 8.3 Proto Zhuang *r                             |
| 38. | *-        |         |       |       | *hr               | 8.4   |



|     |       |           |        |           |      |      |   |
|-----|-------|-----------|--------|-----------|------|------|---|
| 39. | *s    | s         | ʃ      | ʃ         | *s   | 9.1  |   |
| 40. | *z    | z         | ʃ II   | ʃ II      | *z   | 9.2  |   |
| 41. | *č    | č         | č      | š         | *č   | 9.3  |   |
| 42. | *-    |           |        |           | *čh  | 9.4  |   |
| 43. | *ž    | *ž        | č II   | š II      | *j   | 9.5  |   |
| 44. | *ɲ    | j         | j II   | j II      | *ɲ   | 9.6  | In Wuming: ɲ II.                            |
| 45. | *hɲ   | hɲ, hj    | j      | j         | *hɲ  | 9.7  | In Wuming: ɲ                                |
| 46. | *j    | j         | j II   | j II      | *j   | 9.8  | In Wuming: j II                             |
| 47. | *ʔj   | j, hj, ʔj | j      | j         | *ʔj  | 9.9  |   |
| 48. | *k    | k         | k      | k         | *k   | 10.1 |   |
| 49. | *kh   | kh        | kh     | k         | *kh  | 10.2 |   |
| 50. | *g    | g         | k II   | k II      | *g   | 10.3 |   |
| 51. | *ʔg   | gl        | kh     | k         | *kh  | 10.2 |   |
| 52. | *kl   | kl        | kj     | č         | *kl  | 11.1 |   |
| 53. | *khl  | kh        | khj    | č         | *khl | 11.3 |   |
| 54. | *gl   | gl        | kj II  | č II      | *gl  | 11.5 |   |
| 55. | *-    |           |        |           | *kr  | 11.2 |   |
| 56. | *khr  | kh        | khj, h | č         | *khr | 11.4 | In Wuming: r<br>In the Nung<br>dialects: kh |
| 57. | *gr   | gr        | kj II  | -         | *gr  | 11.6 |   |
| 58. | *r-kh | h         | h      | h         | *xr  | 11.8 | In Wuming: r<br>In the Nung<br>dialects: kh |
| 59. | *ŋ    | ŋ         | ŋ II   | ŋ II      | *ŋ   | 10.4 |   |
| 60. | *hŋ   | hŋ        | h      | h         | *hŋ  | 10.5 |   |
| 61. | *-    |           |        |           | *ŋ/r | 11.7 |   |
| 62. | *x    | kh        | kh     | h         | *x   | 10.6 |   |
| 63. | *ɣ    | g         | k II   | h II      | *ɣ   | 10.7 |   |
| 64. | *-    |           |        |           | *kw  | 12.1 |   |
| 65. | *khw  | kh        | ʃ      | kw II     | *khw | 12.2 |   |
| 66. | *gw   | gw        | -      | -         | *gw  | 12.3 | In Wuming: kw II                            |
| 67. | *ɣw   | w         | v II   | ŋ II      | *ɣw  | 12.4 |   |
| 68. | *xw   | khw       | kh     | h/v(2)    | *xw  | 12.5 |   |
| 69. | *ɣw   | gw        | v II   | h/v(2) II | *ɣw  | 12.6 |   |
| 70. | *ʔ    | ʔ         | ʔ      | ʔ         | *ʔ   | 13.1 |   |
| 71. | *h    | h         | h      | h         | *h   | 13.2 |   |

## NOTES:

1. \*th is maintained in some Nung dialects like Tho and Tai.
2. Initials of the Zhuang dialects are in complementary distribution before different vowels.

## EXAMPLES:

- |    |  |  |   |   |   |   |
|----|--|--|---|---|---|---|
| 1. | Proto ZhT<br>'to come'   | * <i>p</i><br>* <i>paj</i> <sup>A</sup>    | WrS<br><i>p</i><br><i>paj</i> <sup>A</sup>  | Lz<br><i>p</i><br><i>paj</i> <sup>l</sup>       | Po<br><i>p</i><br><i>paj</i> <sup>l</sup>                             | Li * <i>p</i> 4.1                                   |
| 2. | Proto ZhT<br>No good examples:<br>'male'<br>and Middle Chinese * <i>pju</i> 'male' | * <i>ph</i><br>* <i>phu</i> <sup>C</sup>   | WrS<br><i>ph</i><br><i>phu</i> <sup>C</sup> | Lz<br><i>ph</i><br><i>phu</i> <sup>3</sup>      | Po<br><i>p</i> II<br><i>pu</i> <sup>4</sup>                           | Li * <i>ph</i> 4.2                                  |
| 3. | Proto ZhT<br>No good examples, but compare:<br>'elder sibling'                     | * <i>b</i><br>* <i>bi</i> <sup>T</sup>     | WrS<br><i>b</i><br><i>bi</i> <sup>B</sup>   | Lz<br><i>p</i> II<br><i>pi</i> <sup>6</sup>     | Po<br><i>p</i> II<br><i>pi</i> <sup>4</sup>                           | Li * <i>b</i> 4.3                                   |
| 4. | Proto ZhT<br>'shoulder'  | * <i>?b</i><br>* <i>?ba</i> <sup>B</sup>   | WrS<br><i>?b</i><br><i>?ba</i> <sup>B</sup> | Lz<br><i>b</i><br><i>ba</i> <sup>5</sup>        | Po<br><i>m</i><br><i>ma</i> <sup>5</sup>                              | Li * <i>?b</i> 4.4                                  |
| 5. | Proto ZhT<br>In Wuming: <i>pl</i> .<br>'fish'                                      | * <i>pl</i><br>* <i>pla</i> <sup>A</sup>   | WrS<br><i>pl</i><br><i>pla</i> <sup>A</sup> | Lz<br><i>pj</i><br><i>pja</i> <sup>l</sup>      | Po<br><i>pj</i><br><i>pja</i> <sup>l</sup> Wm <i>pla</i> <sup>l</sup> | Li * <i>pl</i> 5.2                                  |
| 6. | Proto ZhT<br>In Wuming: <i>pl</i> .<br>'rock'                                      | * <i>phl</i><br>* <i>phla</i> <sup>A</sup> | WrS<br><i>ph</i><br><i>pha</i> <sup>A</sup> | Lz<br><i>phj</i><br><i>phja</i> <sup>l</sup>    | Po<br><i>pj</i><br><i>pja</i> <sup>l</sup>                            | Li * <i>phl/r</i> 5.4<br>Wm <i>pla</i> <sup>l</sup> |
| 7. | Proto ZhT<br>'be separated'  | * <i>bl</i><br>* <i>bla:k</i>              | WrS<br><i>br</i><br><i>bra:k</i>            | Lz<br><i>pj</i> II<br><i>pja:k</i> <sup>8</sup> | Po<br><i>pj</i> II<br><i>pja:k</i> <sup>8</sup>                       | Li * <i>br</i> 5.5                                  |

Li Fang-kuei has reconstructed \**bl* in three other cases:

- 'to slip and fall' WrS *blat*, Lz *pjat*<sup>8</sup>, Po *pjat*<sup>8</sup>. Evidence from these three languages supports such a reconstruction, but the forms of the other languages also given by Li Fang-kuei show that the original word was disyllabic: \**bəlat*: Lao *pha-laat*<sup>7</sup> and Vn *trot* 'fall'.
- The comparison 'to climb' is perhaps erroneous as the Nung dialects show the proto form \**hmen*<sup>B</sup> while the form in the Zhuang dialects could be traced back to \**blen*<sup>A</sup>.
- The third word 'betel' (WrS *blu*<sup>B</sup>) is widely used in different South-East Asian languages (Old Vietnamese *blau*, etc.) and is perhaps a Mon-Khmer loan.

- |    |  |   |  |   |   |                    |
|----|--|---|--|---|---|--------------------|
| 8. | Proto ZhT<br>Only one example:<br>'to tie'<br>but compare Vn <i>buộc</i> , 'id' with a good MK etymology | * <i>phr</i><br>* <i>phru:k</i>           | WrS<br><i>ph</i><br><i>phu:k</i>             | Lz<br><i>ph</i><br><i>phu:k</i> <sup>7</sup>  | Po<br><i>š</i> II<br><i>šu:k</i> <sup>8</sup> | Li * <i>fr</i> 5.8 |
| 9. | Proto ZhT<br>'evening meal'  | * <i>br</i><br>* <i>brau</i> <sup>A</sup> | WrS<br><i>br</i><br><i>brau</i> <sup>A</sup> | Lz<br><i>pj</i> II<br><i>pja</i> <sup>2</sup> | Po<br><i>š</i> II<br><i>šau</i> <sup>2</sup>  | Li * <i>vr</i> 5.8 |

|  |   |                               |                                       |    |  |    |                                       |   |
|--|---|-------------------------------|---------------------------------------|----|--|----|---------------------------------------|---|
| 10. Proto ZhT<br>'yam'   | * <i>m</i><br>* <i>maN<sup>A</sup></i>      | WrS<br><i>man<sup>A</sup></i> | <i>m</i>                              | Lz | <i>m</i> II<br><i>man<sup>2</sup></i>  | Po | <i>m</i> II<br><i>man<sup>2</sup></i> | Li * <i>m</i> 4.5   |
| 11. Proto ZhT<br>'dog'   | * <i>hm</i><br>* <i>hma<sup>A</sup></i>     | WrS                           | <i>hm</i><br><i>hma<sup>A</sup></i>   | Lz | <i>m</i><br><i>ma<sup>1</sup></i>      | Po | <i>m</i><br><i>ma<sup>1</sup></i>     | Li * <i>hm</i> 4.6  |
| 12. Proto ZhT<br>'hand'  | * <i>r-m</i><br>* <i>r-mi<sup>A</sup></i>   | WrS                           | <i>m</i><br><i>mi<sup>A</sup></i>     | Lz | <i>m</i> II<br><i>mi<sup>2</sup></i>   | Po | <i>f</i> II<br><i>fiŋ<sup>2</sup></i> | Li * <i>mw</i> 4.5.1  |
| 13. Proto ZhT<br>'cloud'   | * <i>f</i><br>* <i>f[aj]<sup>C</sup></i>    | WrS                           | <i>f</i><br><i>fa<sup>C</sup></i>     | Lz | <i>ph</i><br><i>pha<sup>3</sup></i>    | Po | <i>f</i><br><i>fi<sup>3</sup></i>     | Li * <i>f</i> 4.7   |
| 14. Proto ZhT<br>'fire'  | * <i>v</i><br>* <i>vaj<sup>A</sup></i>      | WrS                           | <i>v</i><br><i>vaj<sup>A</sup></i>    | Lz | <i>f</i> II<br><i>fai<sup>2</sup></i>  | Po | <i>f</i> II<br><i>fi<sup>2</sup></i>  | Li * <i>v</i> 4.8   |
| 15. Proto ZhT<br>'fan'   | * <i>w</i><br>* <i>wi<sup>A</sup></i>       | WrS                           | <i>w</i><br><i>wi<sup>A</sup></i>     | Lz | <i>v</i> II<br><i>vi<sup>2</sup></i>   | Po | <i>p</i> II<br><i>pi<sup>2</sup></i>  | Li * <i>w</i> 4.9<br>The reality of this initial is dubious, as it is represented mostly in loans. But compare: |
| 16. Proto ZhT<br>A rare initial.<br>'sweet'  | * <i>hw</i><br>* <i>hwa:n<sup>B</sup></i>   | WrS                           | <i>hw</i><br><i>hwa:n<sup>B</sup></i> | Lz | <i>v</i><br><i>va:n<sup>5</sup></i>    | Po | <i>v</i><br><i>va:n<sup>5</sup></i>   | Li * <i>hw</i> 4.10   |
| 17. Proto ZhT<br>'maternal<br>grandmother'   | * <i>t</i><br>* <i>ta<sup>A</sup></i>       | WrS                           | <i>t</i><br><i>ta<sup>A</sup></i>     | Lz | <i>t</i><br><i>ta<sup>1</sup></i>      | Po | <i>t</i><br><i>ta<sup>1</sup></i>     | Li * <i>t</i> 6.1   |
| 18. Proto ZhT<br>'dense'   | * <i>th</i><br>* <i>thi<sup>B</sup></i>     | WrS                           | <i>th</i><br><i>thi<sup>B</sup></i>   | Lz | <i>th</i><br><i>thi<sup>5</sup></i>    | Po | <i>t</i> II<br><i>ti<sup>6</sup></i>  | Li * <i>th</i> 6.2  |
| 19. Proto ZhT<br>'stomach'   | * <i>d</i><br>* <i>do:ŋ<sup>C</sup></i>     | WrS                           | <i>d</i><br><i>do:ŋ<sup>C</sup></i>   | Lz | <i>t</i> II<br><i>to:ŋ<sup>4</sup></i> | Po | <i>t</i> II<br><i>tuf<sup>4</sup></i> | Li * <i>d</i> 6.3   |
| 20. Proto ZhT<br>In Saek: <i>d</i><br>'nose'   | * <i>?d</i><br>* <i>?dag<sup>A</sup></i>    | WrS                           | <i>?d</i><br><i>?dag<sup>A</sup></i>  | Lz | <i>d</i><br><i>dag<sup>1</sup></i>     | Po | <i>n</i><br><i>naŋ<sup>1</sup></i>    | Li * <i>?d</i> 6.4<br>Saek <i>dag<sup>1</sup></i> [M].  |
| 21. Proto ZhT<br>Zhuang dialects show reflexes of * <i>-r-</i> (cf. * <i>phr</i> , * <i>br-</i> ).<br>'to ask' | * <i>thr</i><br>* <i>thra:m<sup>A</sup></i> | WrS                           | <i>th</i><br><i>tha:m<sup>A</sup></i> | Lz | <i>th</i><br><i>tha:m<sup>1</sup></i>  | Po | <i>š</i><br><i>ša:m<sup>1</sup></i>   | Li * <i>thl</i> 7.4   |
| 22. Proto ZhT<br>Saek <i>r</i> .<br>'bone'   | * <i>?dr</i><br>* <i>?dru(:)k</i>           | WrS                           | <i>?d</i><br><i>kra-?du:k</i>         | Lz | <i>d</i><br><i>duk<sup>7</sup></i>     | Po | <i>n</i><br><i>no:k<sup>7</sup></i>   | Li * <i>?dl/r</i> 7.8<br>Saek <i>ro:k<sup>7</sup></i>   |

|     |  |  |                                     |   |                                     |                                   |                     |   |
|-----|--|--|-------------------------------------|---|-------------------------------------|-----------------------------------|---------------------|---|
| 23. | Proto ZhT<br>Proto Zhuang<br>'banana leaf'   | <i>*r-t</i><br><i>*r.</i><br><i>*r-to:ŋ<sup>A</sup></i>  | WrS<br><br><i>to:ŋ<sup>A</sup></i>  | <i>t</i><br><br><i>to:ŋ<sup>A</sup></i>   | Lz<br><br><i>to:ŋ<sup>l</sup></i>   | Po<br><br><i>lo:ŋ<sup>l</sup></i> | Li<br><br>Wm        | <i>*t/</i> 7.2<br><br><i>roŋ<sup>l</sup></i>                              |
| 24. | Proto ZhT<br>Proto Zhuang<br>'head louse'  | <i>*r-th</i><br><i>*r.</i> Some Nung dialects (Tho, Tai) maintain <i>*-th.</i><br><i>*r-thau<sup>A</sup></i> | WrS<br><br><i>hau<sup>A</sup></i>   | <i>h</i><br><br><i>hau<sup>l</sup></i>    | Lz<br><br><i>hau<sup>l</sup></i>    | Po<br><br><i>lau<sup>l</sup></i>  | Li<br><br>Tho       | <i>*thr</i> 7.5<br><br><i>thau<sup>l</sup></i>                            |
| 25. | Proto ZhT<br><i>*r-d</i> differs from <i>*r</i> only through reflexes in Lz.<br>'root' | <i>*r-d</i><br><i>*r-da:k</i>  | WrS<br><br><i>ra:k</i>              | <i>r</i><br><br><i>ra:k</i>               | Lz<br><br><i>la:k<sup>8</sup></i>   | Po<br><br><i>la:k<sup>8</sup></i> | Li                  | <i>*dr</i> 7.7.1  |
| 26. | Proto ZhT<br>In Wuming: <i>r-</i> ; in the Nung dialects: <i>th-</i> .<br>'eye'        | <i>*C-t</i><br><i>*C-ta<sup>A</sup></i>  | WrS<br><br><i>ta<sup>A</sup></i>    | <i>t</i><br><br><i>ta<sup>A</sup></i>     | Lz<br><br><i>ha<sup>l</sup></i>     | Po<br><br><i>ta<sup>l</sup></i>   | Li<br><br>Wm<br>Tho | <i>*tr</i> 7.3<br><br><i>ra<sup>l</sup></i> ,<br><i>tha<sup>l</sup></i>   |
| 27. | Proto ZhT<br>In Wuming: <i>r-</i> .<br>'to expose to the sun'                          | <i>*P-t</i><br><i>*P-ta:k</i>  | WrS<br><br><i>ta:k</i>              | <i>t</i><br><br><i>ta:k</i>               | Lz<br><br><i>phja:k<sup>7</sup></i> | Po<br><br><i>ta:k<sup>7</sup></i> | Li<br><br>Wm<br>Tho | <i>*pr</i> 5.3<br><br><i>ra:k<sup>7</sup></i><br><i>tha:k<sup>7</sup></i> |
| 28. | Proto ZhT<br>Only one example:<br>'ashes'  | <i>*P-d</i><br><i>*P-dau<sup>B</sup></i>   | WrS<br><br><i>dau<sup>B</sup></i>   | <i>d</i><br><br><i>dau<sup>B</sup></i>    | Lz<br><br><i>pjau<sup>6</sup></i>   | Po<br><br><i>tau<sup>6</sup></i>  | Li                  | <i>*vl</i> 5.8  |
| 29. | Proto ZhT<br>'moon'  | <i>*P-?d</i><br><i>*P-?dian<sup>A</sup></i>  | WrS<br><br><i>?dian<sup>A</sup></i> | <i>?d</i><br><br><i>?dian<sup>A</sup></i> | Lz<br><br><i>bi:n<sup>l</sup></i>   | Po<br><br><i>ni:n<sup>l</sup></i> | Li                  | <i>*?bl/r</i> 5.6   |
| 30. | Proto ZhT<br>'to sit'  | <i>*n</i><br><i>*naŋ<sup>B</sup></i>   | WrS<br><br><i>naŋ<sup>B</sup></i>   | <i>n</i><br><br><i>naŋ<sup>B</sup></i>    | Lz<br><br><i>naŋ<sup>6</sup></i>    | Po<br><br><i>naŋ<sup>6</sup></i>  | Li                  | <i>*n</i> 6.5   |
| 31. | Proto ZhT<br>'face'  | <i>*hn</i><br><i>*hna<sup>C</sup></i>  | WrS<br><br><i>hna<sup>C</sup></i>   | <i>hn</i><br><br><i>hna<sup>C</sup></i>   | Lz<br><br><i>na<sup>3</sup></i>     | Po<br><br><i>na<sup>3</sup></i>   | Li                  | <i>*hn</i> 6.6  |
| 32. | Proto ZhT<br>Proto Zhuang<br>'water'   | <i>*r-n</i><br><i>*r.</i><br><i>*r-nam<sup>C</sup></i>   | WrS<br><br><i>nam<sup>C</sup></i>   | <i>n</i><br><br><i>nam<sup>C</sup></i>    | Lz<br><br><i>nan<sup>A</sup></i>    | Po<br><br><i>lam<sup>A</sup></i>  | Li                  | <i>*nl/r</i> 7.9  |
| 33. | Proto ZhT<br>Proto Zhuang<br>'blood'   | <i>*l</i><br><i>*l</i><br><i>*liat</i>   | WrS<br><br><i>liat</i>              | <i>l</i><br><br><i>liat</i>               | Lz<br><br><i>li:t<sup>8</sup></i>   | Po<br><br><i>li:t<sup>8</sup></i> | Li                  | <i>*l</i> 8.1   |

34. Proto ZhT \*hl WrS hl Lz l Po l Li \*hl 8.2  
 Proto Zhuang \*hl.  
 'grandchild' \*hla:n<sup>A</sup> hla:n<sup>A</sup> la:n<sup>l</sup> la:n<sup>l</sup>
35. Proto ZhT \*r-l WrS l Lz l II Po l II Li \*dl 7.6  
 Proto Zhuang \*r.  
 'wind' \*r-lom<sup>A</sup> lom<sup>A</sup> lum<sup>2</sup> lum<sup>2</sup>
36. Proto ZhT \*m-l WrS mVI Lz m II Po mj ~ ɲ II Li \*ml/r 5.7  
 'insect' \*m-lɛ:ŋ<sup>A</sup> ma-lɛ:ŋ<sup>A</sup> me:ŋ<sup>2</sup> ɲe:ŋ<sup>2</sup>
37. Proto ZhT \*r WrS r Lz ʃ II Po l II Li \*r 8.3  
 Proto Zhuang \*r.  
 'long' \*rVj<sup>A</sup> rɪ<sup>A</sup> ʃi<sup>2</sup> lai<sup>2</sup>
38. Proto ZhT \*— Li \*hr 8.4  
 All forms given by Li Fang-kuei are either Chinese or Vietnamese loans.
39. Proto ZhT \*s WrS s Lz ʃ Po ʃ II Li \*s 9.1  
 'pestle' \*sa:k sa:k ʃa:k<sup>7</sup> ʃa:k<sup>7</sup>
40. Proto ZhT \*z WrS z Lz ʃ II Po ʃ II Li \*z 9.2  
 'to wash clothes' \*zak zak ʃak<sup>8</sup> ʃak<sup>8</sup>
41. Proto ZhT \*č WrS č Lz č Po š Li \*č 9.3  
 Only a few examples.  
 'to burn' \*ču(:)t čut čo:t<sup>7</sup> šut<sup>7</sup>
42. Proto ZhT \*— Li \*čh 9.4  
 All forms given by Li Fang-kuei are either Chinese or Vietnamese loans
43. Proto ZhT \*ž WrS ž Lz č II Po š II Li \*j 9.5  
 Only a few examples.  
 'to hate' \*ža:ŋ<sup>A</sup> ža:ŋ<sup>A</sup> ča:ŋ<sup>2</sup> ša:ŋ<sup>2</sup>
44. Proto ZhT \*ɲ WrS j Lz j II Po j II Li \*ɲ 9.6  
 Wuming has ɲ II.  
 'to sew' \*ɲep jep jap<sup>8</sup> jip<sup>8</sup>
45. Proto ZhT \*hɲ WrS hɲ Lz j Po j Li \*hɲ 9.7  
 Wuming has ɲ.  
 'grass' \*hɲV<sup>T</sup> hɲa<sup>C</sup> ja<sup>3</sup> ja<sup>1</sup>, ji<sup>3</sup>

46. Proto ZhT \*j WrS j Lz j II Po j II Li \*j 9.8  
Wuming has j II. Only a few examples.  
'grandmother' \*ja<sup>B</sup> ja<sup>B</sup> – ja<sup>6</sup>
47. Proto ZhT \*ʔj WrS j,hj,ʔj Lz j Po j Li \*ʔj 9.9  
'medicine' \*ʔja<sup>A</sup> ja<sup>A</sup> ja<sup>1</sup> ji<sup>1</sup>
48. Proto ZhT \*k WrS k Lz k Po k Li \*k 10.1  
'first' \*ko:n<sup>B</sup> ko:n<sup>B</sup> ko:n<sup>5</sup> ko:n<sup>5</sup>
49. Proto ZhT \*kh WrS kh Lz kh Po k Li \*kh 10.2  
'horn' \*khau<sup>A</sup> khau<sup>A</sup> – kau<sup>1</sup>
50. Proto ZhT \*g WrS g Lz k II Po k II Li \*g 10.3  
Most forms given by Li Fang-kuei are loans.  
'swollen' \*gai<sup>C</sup> – kai<sup>6</sup> ki<sup>6</sup>
51. Proto ZhT \*ʔg WrS g<sub>1</sub> Lz kh Po k Li \*kh 10.2  
Only a few examples.  
'to kill' \*ʔga<sup>C</sup> gja<sup>C</sup> kha<sup>3</sup> ka<sup>3</sup>
52. Proto ZhT \*kl WrS kl Lz kj Po č Li \*kl 11.1  
'rice seedlings' \*kla<sup>C</sup> kla<sup>C</sup> kja<sup>3</sup> ča<sup>3</sup>
53. Proto ZhT \*khl WrS kh Lz khj Po č Li \*khl 11.3  
*to imprison* \*khlaj<sup>A</sup> khaj<sup>A</sup> – c\*aj<sup>1</sup>  
but cf. WrM *klaj* 'id.'
54. Proto ZhT \*gl WrS gl Lz kj II Po č II Li \*gl 11.5  
Only a few examples.  
'loop' \*glo:ŋ<sup>C</sup> glo:ŋ<sup>C</sup> kjo:ŋ<sup>6</sup> –
55. Proto ZhT \*– Li \*kr 11.2  
Three of Li's examples which attest this correspondence are loans:  
a) 'sieve' WrS *ta-kre:ŋ<sup>A</sup>* from MK > WrK *re:ŋ* 'id.'  
b) 'cage' WrS *kroj<sup>A</sup>* from MK > WrK *kruŋ, druŋ* 'id.'  
c) 'near' WrS *klai<sup>C</sup>* from VM \**k-rajh* > Vn *sây* 'id.'
56. Proto ZhT \*khr WrS kh Lz h, khj Po č Li \*khr 11.3  
Wuming has r.  
'egg' \*khraj<sup>B</sup> khai<sup>B</sup> khjai<sup>5</sup> čai<sup>5</sup>  
cf. PMY \*[k]rai<sup>B</sup> 'id.'  
'top(toy)' \*khra:ŋ<sup>B</sup> kha:ŋ<sup>B</sup> ha:ŋ<sup>5</sup> ča:ŋ<sup>5</sup>

57. Proto ZhT \*gr WrS gr Lz kj II Po – Li \*gr 11.6  
 A rare cluster.  
 ‘mortar’ \*grok grok kjuk<sup>8</sup> –
58. Proto ZhT \*r-kh WrS h Lz h Po l Li \*xr 11.8  
 Wuming has r, the Nung dialects kh.  
 ‘hail’ \*r-kh V[t] hep hat<sup>7</sup> lit<sup>7</sup>
59. Proto ZhT \*ŋ WrS ŋ Lz ŋ II Po ŋ II Li \*ŋ 10.4  
 ‘snake’ \*ŋu<sup>A</sup> ŋu<sup>A</sup> ŋu<sup>2</sup> ŋi<sup>2</sup>
60. Proto ZhT \*hŋ WrS hŋ Lz h Po h Li \*hŋ 10.5  
 ‘moonlight’ \*hŋa:j<sup>A</sup> hŋa:i<sup>A</sup> ha:i<sup>l</sup> ha:i<sup>l</sup>
61. – – Li \*ŋl/r 11.7  
 No reliable examples.
62. Proto ZhT \*x WrS kh Lz kh Po h Li \*x 10.6  
 ‘to ascend’ \*xin<sup>C</sup> khin<sup>C</sup> khin<sup>3</sup> hin<sup>3</sup>
63. Proto ZhT \*y WrS g Lz k II Po h II Li \*y 10.7  
 ‘thatch grass’ \*ya<sup>A</sup> ga<sup>A</sup> ka<sup>2</sup> ha<sup>2</sup>
64. Proto ZhT \*– Li \*kw 12.1  
 No reliable examples (loans or Zhuang forms).
65. Proto ZhT \*khw WrS khw Lz ʔ Po kw II Li \*khw 12.2  
 Only one example:  
 ‘right’ \*khwa<sup>A</sup> khwa<sup>A</sup> ʔa<sup>l</sup> kwa<sup>2</sup>
66. Proto ZhT \*gw WrS gw Lz – Po – Li \*gw 12.3  
 Wuming has kw II. Only one example.  
 ‘to search’ \*gwa<sup>A</sup> gwa<sup>A</sup> – (Wm kwa<sup>2</sup>)
67. Proto ZhT \*ŋw WrS w Lz v II Po ŋ II Li \*ŋw 12.4  
 ‘day’ \*ŋwan<sup>A</sup> wan<sup>A</sup> van<sup>2</sup> ŋon<sup>2</sup>
68. Proto ZhT \*xw WrS khw Lz kh Po h/v Li \*xw 12.5  
 Initials of the Zhuang dialects are in complementary distribution before different vowels.  
 ‘upside down’ \*xwam<sup>C</sup> khwam<sup>C</sup> khum<sup>3</sup> hom<sup>3</sup>

|               |  |                    |    |                   |      |                   |        |                   |
|---------------|--|--------------------|----|-------------------|------|-------------------|--------|-------------------|
| 69. Proto ZhT | *yw  | WrS                | gw | Lz                | v II | Po                | h/v II | Li *yw 12.6       |
|               | Initials of the Zhuang dialects are in complementary distribution before different vowels. |                    |    |                   |      |                   |        |                   |
|               | 'smoke'  | *ywan <sup>A</sup> |    | gwan <sup>A</sup> |      | van <sup>2</sup>  |        | hon <sup>2</sup>  |
|               |  |                    |    |                   |      |                   |        |                   |
| 70. Proto ZhT | *ʔ   | WrS                | ʔ  | Lz                | ʔ    | Po                | ʔ      | Li *ʔ 13.1        |
|               | 'to bathe'   | *ʔa:p              |    | ʔa:p              |      | ʔa:p <sup>7</sup> |        | ʔa:p <sup>7</sup> |
|               |  |                    |    |                   |      |                   |        |                   |
| 71. Proto ZhT | *h   | WrS                | h  | Lz                | h    | Po                | h      | Li *h 13.2        |
|               | 'to give'  | *hVɿ <sup>C</sup>  |    | hai <sup>C</sup>  |      | hi <sup>3</sup>   |        | hai <sup>3</sup>  |

It is not clear why Li Fang-kuei did not reconstruct long and short vowels (Strecker 1983), which are preserved in many Zhuang-Tai languages including WrS. Such a system is considerably simpler:

|     |     |     |  |     |     |     |
|-----|-----|-----|--|-----|-----|-----|
| *i  | *ə  | *u  |  | *i: | *ə: | *u: |
| *e  |     | *o  |  | *e: |     | *o: |
|     | *a  |     |  |     | *a: |     |
| *ia | *ia | *ua |  |     |     |     |

These vowels and diphthongs can be followed by a range of terminals:

|    |    |    |    |
|----|----|----|----|
| *p | *m | *u |    |
| *t | *n | *j | *l |
| *k | *ŋ | *ɿ |    |
| *∅ |    |    |    |

\*l and \*n differ only in Saek, and when forms from this language are absent it is impossible to distinguish these two terminals. Such a situation is marked with \*N.

The Zhuang-Tai vowel correspondences are:

|     | ZhT | WrS | Lz    | Po    | Notes |
|-----|-----|-----|-------|-------|-------|
| 1.  | *a: | a:  | a:    | a:    |       |
| 2.  | *a  | a   | a     | a/ɔ   | 1     |
| 3.  | *o: | o:  | o:    | o:    |       |
| 4.  | *o  | o   | u/ɿ   | ɔ/ɿ   | 2     |
| 5.  | *u: | u:  | u:    | u:/o: | 3     |
| 6.  | *u  | u   | u     | ɔ/u   | 4     |
| 7.  | *i: | i:  | i     | i     |       |
| 8.  | *i  | i   | i     | i     |       |
| 9.  | *e: | ɛ:  | e:    | e:    |       |
| 10. | *e  | e   | i/i/u | i/i/a | 5     |
| 11. | *i: | i:  | i     | i     |       |
| 12. | *i  | i   | i     | i     |       |
| 13. | *ia | ia  | i:    | i:    |       |
| 14. | *ia | ia  | i:    | i:    |       |
| 15. | *ua | ua  | u:    | i/i   | 6     |



## NOTES:

1. The second alternative in Po follows a labial initial.
2. The second alternative in Po follows a labial initial. The second alternative in Lz is followed by a dental terminal *-t* or *-n*.
3. The second alternative is represented in *\*u:t*.
4. The second alternative is followed by a labial terminal.
5.

|            |           |           |           |
|------------|-----------|-----------|-----------|
| ZhT        | WrS       | Lz        | Po        |
| <i>*et</i> | <i>et</i> | <i>it</i> | <i>it</i> |
| <i>*en</i> | <i>en</i> | <i>in</i> | <i>an</i> |
| <i>*em</i> | <i>om</i> | <i>um</i> | <i>am</i> |
6. The second alternative is followed by *-ŋ*.

Examples for all of these vocalic correspondences can be found in Li Fang-kuei's (1977) book.

## 2.1.3 KAM-SUI LANGUAGES

It is only in about the last 50 years that anything has been known of the Kam-Sui languages, spoken in some provinces of Southern China. The first data available on this language group was Li Fang-kuei's (1943) grammar of Mak. Subsequently, information about most of the languages of the group has become available (see, however, Edmonson & Solnit 1988) and thus it is possible to reconstruct Proto Kam-Sui phonology in detail.

The historical investigation of the language family was begun by Li Fang-kuei, who established its main phonological features (Li 1965). Jakhontov (1980, 1984) suggested some interesting modifications, such as the reconstruction of medial *\*i*. My first reconstruction of Proto Kam-Sui was finished in 1982, and was submitted for publication at that time (Peiros 1982b). In 1984 I made some changes to it, and it is this modified reconstruction which is given here. In 1988 Thurgood published a Kam-Sui reconstruction which differs in some aspects from either of mine (Thurgood 1988a). As this book is essentially the translation of a manuscript written before 1988, I do not discuss Thurgood's (1988b) proposals here. Both reconstructions are remarkably similar.

My Kam-Sui reconstruction is based on data from the following sources:

|                      |                                 |
|----------------------|---------------------------------|
| Two dialects of Sui: | Lingam Sui (SL): Li 1965, etc.; |
|                      | Standard Sui (SS): Zhang 1980;  |
| Mak                  | (Ma): Li 1943;                  |
| Maonan               | (Mn): Liang 1980a;              |
| Then                 | (Tn): Li 1966–1968;             |
| Kam or Dong          | (Ka): Anon 1959a; Liang 1980b;  |
| Mulam                | (Mm): Wang and Zheng 1980.      |

Li Fang-kuei has demonstrated that in Proto Kam-Sui there were three tones *\*A*, *\*B*, and *\*C*, and tonal neutralisation (*\*D*) in checked (stop-final) syllables (Li 1965). Later these tones split into two series, in the same way as the tones of Proto Zhuang-Tai. Even-numbered tones in modern Kam-Sui languages originally occurred in syllables with voiced initials, and odd-numbered tones are found in syllables with original voiceless initials. In some Kam-Sui languages *\*D* has two realisations according to the length of the vowel in the

syllable. This is also the case for the Zhuang dialects of Zhuang-Tai. So the general picture for Kam-Sui is: \*A (1–2), \*B (5–6), \*C (3–4), \*D (7–8 and with long vowels: 9–10).

Kam has additional tones 1', 3', 5', 7' and 9', which occur only in syllables with aspirated initials. Tones 1, 3, 5, 7, and 9 are not found in this type of syllable. So in all Kam syllables with 1', 3', 5', 7' and 9', one can assume historically aspirated initials: for example *pha:t*<sup>7'</sup> < *pha:t*<sup>7</sup>, *wa:l*<sup>1'</sup> < *hwa*<sup>l</sup>, *sam*<sup>l</sup> < *hsam*<sup>l</sup>.

Let us discuss the correlation between tones and initials. We can speak about three tonal series: I, II and Ia. Series Ia differs from series I only in tone \*A, which has two reflexes in Mak: 13 in Ia and 24 in I. The latter has merged with the reflex of tone \*C II. For initial labials, we have the following possibilities:

|    | Initials  |           |           | Tonal series |    |     |
|----|-----------|-----------|-----------|--------------|----|-----|
|    | Kam       | Mn        | Mak       | Kam          | Mn | Mak |
| 1. | <i>p</i>  | <i>p</i>  | <i>p</i>  | I            | I  | I   |
| 2. | <i>p</i>  | <i>p</i>  | <i>p</i>  | II           | II | II  |
| 3. | <i>m</i>  | <i>b</i>  | <i>?b</i> | I            | II | I   |
| 4. | <i>ph</i> | <i>ph</i> | <i>ph</i> | I            | I  | Ia  |
| 5. | <i>p</i>  | <i>mb</i> | <i>b</i>  | I            | I  | Ia  |
| 6. | <i>m</i>  | <i>?m</i> | <i>m</i>  | I            | I  | I   |
| 7. | <i>hm</i> | <i>m</i>  | <i>m</i>  | I            | I  | Ia  |
| 8. | <i>m</i>  | <i>m</i>  | <i>m</i>  | II           | II | II  |
| 9. | <i>m</i>  | <i>m</i>  | <i>m</i>  | II           | I  | Ia  |

For stops the reconstruction is:

1. \**p* with series I
2. \**b* with series II
3. \**?b* with series I, but in Mn – II
4. \**ph* with series I, but in Ma – Ia
5. \**mp* with series I, but in Ma – Ia (as for \**ph*)

And for nasals we can reconstruct:

6. \**?m* with series I
7. \**hm* with series I, but in Ma – Ia (as for \**ph*)
8. \**m* with series II
9. \**R-m* with series II in Ka and I in Mn and Ma.

The reconstruction of the presyllabic \**R*- is based on analogy with Zhuang-Tai, where in corresponding roots I reconstructed \**r*-. In principle, instead of \**R-m*, one could reconstruct \**K-m*, \**C<sub>38</sub>-m*, or anything else.

Theoretically, then, the following set of simple initials can be reconstructed for the Proto Kam-Sui labial stops and nasals:

|            |             |            |             |             |              |
|------------|-------------|------------|-------------|-------------|--------------|
| * <i>p</i> | * <i>ph</i> | * <i>b</i> | * <i>?b</i> | * <i>mp</i> |              |
|            | * <i>hm</i> | * <i>m</i> | * <i>?m</i> |             | * <i>R-m</i> |

Some of these possible initials, however, are absent in the data, and more clusters (with presyllables or medial consonants) could be added. Therefore, I reconstruct the following system of Kam-Sui simple initials and initial clusters:

TABLE 2.3: PROTO-KAM-SUI INITIALS

|             |             |             |              |             |             |              |              |                          |                          |                       |                      |
|-------------|-------------|-------------|--------------|-------------|-------------|--------------|--------------|--------------------------|--------------------------|-----------------------|----------------------|
| <i>*p</i>   | <i>*ph</i>  | <i>*ʔb</i>  | <i>*mp</i>   | <i>*hm</i>  | <i>*m</i>   | <i>*ʔm</i>   | <i>*f</i>    |                          |                          |                       |                      |
|             |             |             |              |             |             | <i>*R-m</i>  |              |                          |                          |                       |                      |
|             |             |             |              |             |             |              | <i>*C-f</i>  | <i>*C-v</i>              |                          |                       |                      |
|             |             |             |              |             |             |              | <i>*m-f</i>  | <i>*m-v</i>              |                          |                       |                      |
| <i>*pl</i>  | <i>*phl</i> | <i>*bl</i>  |              | <i>*mpl</i> |             |              |              |                          |                          |                       |                      |
| <i>*t</i>   |             | <i>*d</i>   | <i>*ʔd</i>   | <i>*nt</i>  | <i>*hn</i>  | <i>*n</i>    | <i>*ʔn</i>   | <i>*s(h)</i>             | <i>*z</i>                | <i>*ʔl</i>            | <i>*l</i>            |
|             |             |             |              |             |             | <i>*R-n</i>  |              |                          |                          | <i>*R-l</i>           |                      |
|             |             |             |              |             |             | <i>*C-n</i>  | <i>*C-ʔn</i> |                          |                          | <i>*Cʔl</i>           | <i>*C-l</i>          |
| <i>*m-t</i> |             |             | <i>*m-ʔd</i> |             |             | <i>*m-n</i>  | <i>*m-ʔn</i> |                          |                          | <i>*m-ʔl</i>          |                      |
| <i>*tr</i>  |             | <i>*dr</i>  | <i>*ʔdr</i>  | <i>*ntr</i> |             |              |              | <i>*s(h)<sub>r</sub></i> | <i>*z<sub>r</sub></i>    | <i>*ʔ<sub>r</sub></i> | <i>*<sub>r</sub></i> |
|             |             |             |              |             |             |              |              |                          | <i>*C<sub>1-sr</sub></i> |                       |                      |
|             |             |             |              |             | <i>*hʔ</i>  | <i>*ʔ</i>    | <i>*ʔʔ</i>   | <i>*šh</i>               | <i>*ʒo</i>               | <i>*ʔj</i>            | <i>*j</i>            |
|             |             |             |              |             | <i>*R-ʔ</i> |              |              |                          |                          |                       |                      |
|             |             |             |              |             |             | <i>*C-ʔʔ</i> | <i>*C-š</i>  |                          |                          | <i>*C-ʔj</i>          |                      |
| <i>*k</i>   | <i>*kh</i>  | <i>*g</i>   |              | <i>*ŋk</i>  |             | <i>*ŋ</i>    | <i>*ʔŋ</i>   |                          |                          |                       |                      |
| <i>*kr</i>  | <i>*khr</i> | <i>*gr</i>  |              |             |             |              |              |                          |                          |                       |                      |
| <i>*kl</i>  | <i>*khl</i> |             |              | <i>*ŋkl</i> |             |              |              |                          |                          |                       |                      |
|             |             |             |              |             |             | <i>*R-ŋ</i>  |              |                          |                          |                       |                      |
|             |             |             |              |             |             |              |              |                          | <i>*C<sub>2-x</sub></i>  |                       |                      |
| <i>*kw</i>  | <i>*khw</i> |             |              |             | <i>*hŋw</i> |              |              |                          | <i>*xw</i>               | <i>*y<sub>w</sub></i> |                      |
|             |             |             |              |             |             |              |              |                          | <i>*C<sub>2-xw</sub></i> |                       |                      |
|             |             |             |              |             |             |              |              |                          | <i>*m-xw</i>             |                       |                      |
|             |             | <i>*ʔ</i>   |              |             |             |              |              |                          |                          |                       |                      |
|             |             | <i>*P-ʔ</i> |              |             |             |              |              |                          |                          |                       |                      |

This system is not quite symmetrical and could perhaps be reinterpreted, but I think that the list of reconstructed items is a reasonable representation of the original inventory of Kam-Sui initials. The reconstruction is based on the following correspondences between initial consonants of the languages:

TABLE 2.4: INITIAL CORRESPONDENCES FOR KAM-SUI LANGUAGES

|    | Proto KS   | SL        | Mak          | Mn          | Tn        | Kam       | Mm          |
|----|------------|-----------|--------------|-------------|-----------|-----------|-------------|
| 1. | <i>*p</i>  | <i>p</i>  | <i>p</i>     | <i>p</i>    | <i>p</i>  | <i>p</i>  | <i>p</i>    |
| 2. | <i>*ph</i> | <i>ph</i> | <i>ph</i> Ia | –           | <i>ph</i> | <i>ph</i> | –           |
| 3. | <i>*ʔb</i> | <i>ʔb</i> | <i>ʔb</i>    | <i>b</i> II | <i>m</i>  | <i>m</i>  | <i>m</i>    |
| 4. | <i>*mp</i> | <i>b</i>  | <i>b</i> Ia  | <i>mb</i>   | <i>ʔb</i> | <i>p</i>  | <i>(h)m</i> |
| 5. | <i>*pl</i> | <i>pj</i> | <i>pj</i>    | <i>pj</i>   | <i>p</i>  | <i>pj</i> | <i>pɣ</i>   |

|     |               |                             |               |                         |              |              |                           |
|-----|---------------|-----------------------------|---------------|-------------------------|--------------|--------------|---------------------------|
| 6.  | <i>*phl</i>   | <i>phj</i>                  | <i>phj</i>    | <i>phj</i>              | <i>ph</i>    | <i>ph</i>    | <i>phy</i>                |
| 7.  | <i>*bl</i>    | <i>p</i> II                 | <i>pj</i> II  | <i>pj</i> II            | <i>p</i> II  | <i>p</i> II  | <i>kw</i> II              |
| 8.  | <i>*mpl</i>   | <i>mj</i> II ~ <i>bj</i> II | <i>bj</i> Ia  | <i>mbj</i>              | <i>?b</i> II | <i>mj</i> II | <i>my</i> II              |
| 9.  | <i>*m</i>     | <i>m</i> II                 | <i>m</i> II   | <i>m</i> II             | <i>m</i> II  | <i>m</i> II  | <i>m</i> II               |
| 10. | <i>*hm</i>    | <i>hm</i>                   | <i>m</i> Ia   | <i>m</i>                | <i>m</i>     | <i>hm</i>    | <i>hm</i>                 |
| 11. | <i>*?m</i>    | <i>?m</i>                   | <i>m</i>      | <i>?m</i>               | <i>m</i>     | <i>m</i>     | <i>m</i>                  |
| 12. | <i>*R-m</i>   | <i>m</i>                    | <i>m</i> Ia   | <i>m</i>                | <i>m</i> II  | <i>m</i> II  | <i>m</i> II               |
| 13. | <i>*f</i>     | <i>w</i>                    | <i>v</i>      | <i>v</i>                | <i>w</i>     | <i>p</i>     | <i>f</i>                  |
| 14. | <i>*C-f</i>   | <i>w</i>                    | <i>v</i> Ia   | <i>v</i>                | <i>w</i> II  | <i>p</i>     | <i>f</i>                  |
| 15. | <i>*C-v</i>   | <i>f</i>                    | —             | <i>f</i>                | <i>w</i> II  | <i>hw</i>    | <i>f</i>                  |
| 16. | <i>*m-f</i>   | <i>w</i>                    | <i>v</i> Ia   | <i>v</i>                | <i>w</i>     | <i>p</i>     | <i>hm</i>                 |
| 17. | <i>*m-v</i>   | <i>w</i>                    | <i>v</i> Ia   | <i>v</i>                | <i>w</i> II  | <i>m</i>     | <i>f</i>                  |
| 18. | <i>*t</i>     | <i>t</i>                    | <i>t</i>      | <i>t</i>                | <i>t</i>     | <i>t</i>     | <i>t</i>                  |
| 19. | <i>*tr</i>    | <i>t</i>                    | <i>t</i>      | <i>t</i>                | <i>t</i>     | <i>t</i>     | <i>k(h)γ</i>              |
| 20. | <i>*d</i>     | —                           | <i>t</i> II   | <i>t</i> II             | —            | <i>t</i> II  | <i>t</i> II               |
| 21. | <i>*dr</i>    | —                           | —             | <i>t</i> II             | —            | <i>t</i> II  | <i>ky</i> II              |
| 22. | <i>*?d</i>    | <i>?d</i>                   | <i>?d</i>     | <i>d</i> II             | <i>l</i>     | <i>l</i>     | <i>(h)l</i>               |
| 23. | <i>*?dr</i>   | <i>?d</i>                   | <i>?d</i>     | <i>d</i> II             | <i>z</i>     | <i>(h)l</i>  | <i>hy</i>                 |
| 24. | <i>*nt</i>    | <i>d</i>                    | <i>d</i> Ia   | <i>nd</i>               | <i>?d</i>    | <i>t</i>     | <i>hl</i>                 |
| 25. | <i>*ntr</i>   | <i>d</i>                    | <i>d</i> Ia   | <i>nd</i> ~ <i>d</i> II | <i>z</i>     | <i>t</i>     | <i>hy</i>                 |
| 26. | <i>*m-t</i>   | <i>d</i>                    | <i>d</i> Ia   | <i>nd</i>               | —            | <i>t</i>     | <i>hmy</i>                |
| 27. | <i>*m-?d</i>  | <i>?d</i>                   | —             | <i>d</i> II             | <i>l</i>     | <i>p</i>     | <i>my</i>                 |
| 28. | <i>*n</i>     | <i>n</i> II                 | <i>n</i> II   | <i>n</i> II             | <i>n</i> II  | <i>n</i> II  | <i>n</i> II               |
| 29. | <i>*hn</i>    | <i>hn</i>                   | <i>n</i>      | <i>n</i>                | <i>n</i>     | <i>hn</i>    | <i>hn</i>                 |
| 30. | <i>*?n</i>    | <i>?n</i>                   | <i>n</i>      | <i>?n</i>               | <i>n</i>     | <i>n</i>     | <i>n</i>                  |
| 31. | <i>*R-n</i>   | <i>n</i>                    | <i>n</i> Ia   | <i>n</i>                | <i>n</i> II  | <i>n</i> II  | <i>n</i> II               |
| 32. | <i>*m-n</i>   | <i>n</i> II                 | <i>n</i> II   | <i>n</i> II             | <i>n</i>     | <i>m</i> II  | <i>m</i> II ~ <i>n</i> II |
| 33. | <i>*m-?n</i>  | —                           | —             | <i>n</i>                | —            | <i>n</i>     | <i>m</i>                  |
| 34. | <i>*C-n</i>   | <i>n</i> II                 | <i>n</i> II   | <i>n</i>                | <i>n</i>     | <i>n</i>     | <i>n</i> II               |
| 35. | <i>*C-?n</i>  | <i>?n</i>                   | <i>n</i>      | <i>n</i>                | <i>n</i> II  | <i>n</i>     | <i>n</i>                  |
| 36. | <i>*l</i>     | <i>l</i> II                 | <i>l</i> II   | <i>l</i> II             | <i>l</i> II  | <i>l</i> II  | <i>l</i> II               |
| 37. | <i>*?l</i>    | <i>l</i>                    | <i>?d</i>     | <i>d</i>                | <i>z</i>     | <i>l</i>     | <i>l</i>                  |
| 38. | <i>*R-l</i>   | <i>l</i>                    | <i>l</i> Ia   | <i>l</i>                | <i>z</i> II  | <i>l</i> II  | <i>l</i> II               |
| 39. | <i>*m-?l</i>  | —                           | —             | —                       | —            | <i>l</i>     | <i>m</i>                  |
| 40. | <i>*C-l</i>   | —                           | <i>l</i> I(a) | <i>l</i>                | —            | <i>hl</i>    | <i>hl</i>                 |
| 41. | <i>*C-?l</i>  | <i>?d</i>                   | <i>?d</i>     | <i>d</i> II             | <i>l</i>     | <i>kw</i>    | <i>?γ</i>                 |
| 42. | <i>*s(h)</i>  | <i>h</i>                    | <i>s</i> I(a) | <i>s</i>                | <i>th</i>    | <i>hs</i>    | <i>t</i>                  |
| 43. | <i>*z</i>     | <i>h</i> II/ <i>f</i> II    | <i>z</i> II   | <i>z</i> II             | <i>th</i> II | <i>s</i> II  | <i>t</i> II               |
| 44. | <i>*s(h)r</i> | <i>h/f</i>                  | <i>s</i> Ia   | <i>s</i>                | <i>th</i>    | <i>hs</i>    | <i>khy</i>                |
| 45. | <i>*zr</i>    | <i>h</i> II                 | <i>z</i> II   | <i>z</i> II             | <i>th</i> II | <i>s</i> II  | <i>ky</i> II              |

|     |                     |       |          |       |       |           |                   |
|-----|---------------------|-------|----------|-------|-------|-----------|-------------------|
| 46. | *C <sub>1</sub> -sr | h II  | z Ia     | s     | th II | s         | khγ               |
| 47. | *r                  | r     | z Ia     | j/w   | z II  | j II/w II | y II In SS: r II  |
| 48. | *?r                 | ?r    | j        | ?j/?w | z     | j/w       | ?γ, hγ, γ         |
| 49. | *ɲ                  | ɲ II  | ɲ II     | ɲ II  | ɲj II | ɲ II      | ɲ II              |
| 50. | *hɲ                 | –     | ɲ Ia     | –     | ɲj    | hɲ        | –                 |
| 51. | *?ɲ                 | ?ɲ    | ɲ        | ?ɲ    | ɲj    | ɲ         | ɲ                 |
| 52. | *R-ɲ                | –     | ɲ Ia     | ɲ     | ɲj II | ɲ II      | ɲ II              |
| 53. | *C-?ɲ               | –     | –        | ɲ     | –     | ɲ         | ɲ In SS: ?ɲ       |
| 54. | *j                  | j II  | j II     | –     | zj II | s II      | –                 |
| 55. | *?j                 | ?j    | j        | –     | j     | j         | –                 |
| 56. | *C-?j               | j     | j Ia     | –     | j II  | tj        | c                 |
| 57. | *š(h)               | –     | s Ia     | s     | s     | hc        | s                 |
| 58. | *ž                  | s II  | z II     | z II  | s II  | c II      | –                 |
| 59. | *C-š                | z     | z Ia     | z     | ?z II | thj       | c                 |
| 60. | *k                  | q     | k        | k     | k     | ?         | k                 |
| 61. | *k̄i                | ts    | s        | ts    | ts    | tj        | ts                |
| 62. | *kr                 | k     | tj       | k/c   | k     | k         | ky                |
| 63. | *kl                 | –     | tj       | kj/c  | k     | k         | k                 |
| 64. | *kh̄i               | s     | s I(a)   | s     | tsh   | thj       | sh                |
| 65. | *khw                | khw   | kh(w) Ia | kh(w) | kh    | khw       | khw               |
| 66. | *khr                | qh    | thj      | kh    | kh    | kh        | khγ               |
| 67. | *khl                | h     | l Ia     | kh    | l     | khw       | khγ               |
| 68. | *kw                 | p     | tj       | pj    | p II  | p         | k/c               |
| 69. | *g                  | q II  | –        | c II  | ? II  | ? II      | –                 |
| 70. | *gr                 | –     | –        | c II  | –     | k II      | kγ II In SS: k II |
| 71. | *ɲk                 | R     | g Ia     | ng    | ?     | l II      | hɲ                |
| 72. | *ɲk̄i               | –     | dj Ia    | ndj   | j     | ?         | hɲ                |
| 73. | *ɲkl                | R     | g Ia     | ng    | ?     | ?         | ɲ                 |
| 74. | *ɲ                  | ɲ II  | ɲ II     | –     | ɲ II  | –         | –                 |
| 75. | *?ɲ                 | –     | ɲ        | ?ɲ    | –     | l         | ɲ                 |
| 76. | *R-ɲ                | R     | dj Ia    | –     | –     | –         | ɲγ II             |
| 77. | *hɲw                | hm    | m Ia     | m     | m     | hɲw       | hm ~ ɲw           |
| 78. | *C <sub>2</sub> -x  | h     | h Ia     | h     | x II  | hs        | h                 |
| 79. | *xw                 | –     | w        | –     | xw    | ph        | – In SS: f        |
| 80. | *γw                 | pj II | v II     | –     | xw II | p II      | kw II             |
| 81. | *C <sub>2</sub> -xw | f     | v Ia     | f     | xw II | pj        | kw                |
| 82. | *m-xw               | f     | v        | f     | –     | m         | kw                |
| 83. | *?                  | ?     | ?        | ?     | ?     | ?         | ?                 |
| 84. | *P-?                | ?     | ?        | b II  | j     | j         | ?                 |

The following examples (most of which are also to be found in Thurgood 1988a) illustrate these correspondences :

1. \**p* SL, Ma, Mn, Tn, Ka, Mm *p*:  
'aunt' \**pa*<sup>C</sup>: SS, SL, Mn, Tn, Ka, Mm *pa*<sup>3</sup>
2. \**ph* SL *ph*, Ma *ph* Ia, Mn –, Tn, Ka *ph*, Mm –:  
A rare initial.  
'end', 'tip' \**phe*<sup>A</sup>: SL *phe*<sup>l</sup>, Ma *phe*<sup>la</sup>, Tn, Ka *phe*<sup>l</sup>
3. \**?b* SL, Ma *?b*, Mn *b* II, Tn, Ka, Mm *m*:  
'sky' \**?bur*<sup>A</sup>: SS, Ma *?bən*<sup>l</sup>, Mn *bən*<sup>2</sup>, Tn *men*<sup>l</sup>, Ka, Mm *mən*<sup>l</sup>.
4. \**mp* SL *b*, Ma *b* Ia, Mn *mb*, Tn *?b*, Ka *p*, Mm (*h*)*m*:  
'man', 'male' \**mpa*:*n*<sup>A</sup>: SS *mba:n*<sup>l</sup>, SL *ba:n*<sup>l</sup>, Ma *ba:n*<sup>la</sup>, Mn *mba:n*<sup>l</sup>, Tn *?ba:n*<sup>l</sup>, Ka *pa:n*<sup>l</sup>.
5. \**pl* SL, Ma, Mn *pj*, Tn *p*, Ka *pj*, Mm *pɣ*:  
'rock' \**pla*<sup>A</sup>: SL, Ma, Mn *pja*<sup>l</sup>, Tn *pa*<sup>l</sup>, Ka *pja*<sup>l</sup>, Mm *pya*<sup>l</sup>.
6. \**phl* SL, Ma, Mn *phj*, Tn, Ka *ph*, Mm *phy*:  
One example only:  
'blood' \**phla:t*: SS, SL, Ma, Mn *phja:t*<sup>7</sup>, Tn, Ka *pha:t*<sup>7</sup>, Mm *phya:t*<sup>7</sup>.
7. \**bl* SL *p* II, Ma, Mn *pj* II, Tn, Ka *p* II, Mm *kw* II:  
One example only:  
'to sharpen a knife' \**blan*<sup>A</sup>: SS, SL *pan*<sup>2</sup>, Ma, Mn *pjan*<sup>2</sup>, Tn, Ka *pan*<sup>2</sup>, Mm *kwan*<sup>2</sup>.
8. \**mpl* SL *mj* II ~ *bj* II, Ma *bj* Ia, Mn *mbj*, Tn *?b* II, Ka *mj* II, Mm *my* II:  
'ear of corn' \**mpla:ŋ*<sup>A</sup>: SS *mbja:ŋ*<sup>l</sup>, SL *bja:ŋ*<sup>l</sup>, Ma *bja:ŋ*<sup>la</sup>, Mn *mbja:ŋ*<sup>l</sup>, Tn *?ba:ŋ*<sup>2</sup>, Ka *mjeŋ*<sup>2</sup>, Mm *mya:ŋ*<sup>2</sup>.
9. \**m* SL, Ma, Mn, Tn, Ka, Mm *m* II:  
'tongue' \**ma*<sup>A</sup>: SS, SL, Ma, Mn, Tn, Ka, Mm *ma*<sup>2</sup>.
10. \**hm* SL *hm*, Ma *m* Ia, Mn, Tn *m*, Ka, Mm *hm*:  
to come' \**hma*<sup>A</sup>: SL *hma*<sup>l</sup>, Ma *ma*<sup>la</sup>, Mn, Tn *ma*<sup>l</sup>, Ka, Mm *hma*<sup>l</sup>.
11. \**?m* SL *?m*, Ma *m*, Mn *?m*, Tn, Ka, Mm *m*:  
'vegetables' \**?ma*<sup>A</sup>: SS, SL *?ma*<sup>l</sup>, Ma *ma*<sup>l</sup>, Mn *?ma*<sup>l</sup>, Tn, Ka, Mm *ma*<sup>l</sup>.
12. \**R-m* SL *m*, Ma *m* Ia, Mn *m*, Tn, Ka, Mm *m* II:  
'spirit' \**R-ma:ŋ*<sup>A</sup>: SL *ma:ŋ*<sup>l</sup>, Ma *ma:ŋ*<sup>la</sup>, Mn *ma:ŋ*<sup>l</sup>, Tn *ma:ŋ*<sup>2</sup>.

13. \*f SL w, Ma v, Mn v, Tn w, Ka p, Mm f:  
One example only:  
'wing' \*fa<sup>B</sup>: SS va<sup>5</sup>, SL wa<sup>5</sup>, Ma, Mn va<sup>5</sup>, Tn wa<sup>5</sup>, Ka pa<sup>5</sup>, Mm fa<sup>5</sup>.
14. \*C-f SL w, Ma v Ia, Mn v, Tn w II, Ka p, Mm f:  
'seed' \*C-fan<sup>A</sup>: SS van<sup>l</sup>, SL wan<sup>l</sup>, Ma van<sup>la</sup>, Mn van<sup>l</sup>, Tn wan<sup>2</sup>, Ka pan<sup>l</sup>.
15. \*C-v SL f, Ma –, Mn f, Tn w II, Ka hw, Mm f:  
'to winnow' \*C-van<sup>B</sup>: SL, Mn fan<sup>5</sup>, Tn wan<sup>6</sup>, Ka hwan<sup>5</sup>, Mm fan<sup>5</sup>.
16. \*m-f SL w, Ma v Ia, Mn v, Tn w, Ka p, Mm hm:  
One example only:  
'straw' \*m-fa:ŋ<sup>A</sup>: SS va:ŋ<sup>l</sup>, SL wa:ŋ<sup>l</sup>, Ma voŋ<sup>la</sup>, Mn va:ŋ<sup>l</sup>, Tn wa:ŋ<sup>l</sup>, Ka pa:ŋ<sup>l</sup>,  
Mm hma:ŋ<sup>l</sup>.
17. \*m-v SL w, Ma v Ia, Mn v, Tn w II, Ka m, Mm f:  
'day' \*m-var<sup>A</sup>: SS van<sup>l</sup>, SL wan<sup>l</sup>, Ma van<sup>la</sup>, Mn van<sup>l</sup>, Tn wan<sup>2</sup>, Ka man<sup>l</sup>, Mm fan<sup>l</sup>.
18. \*t SL, Ma, Mn, Tn, Ka, Mm t:  
'liver' \*tap: SS, SL, Ma, Mn, Tn, Ka, Mm tap<sup>7</sup>.
19. \*tr SL, Ma, Mn, Tn, Ka t, Mm k(h)y:  
'louse' \*tri<sup>A</sup>: SS, SL tu<sup>l</sup>, Ma təu<sup>l</sup>, Mn tu<sup>l</sup>, Tn tiu<sup>l</sup>, Ka ta:u<sup>l</sup>, Mm khyo<sup>l</sup>.
20. \*d SL –, Ma, Mn t II, Tn –, Ka, Mm t II:  
A rare initial:  
'blunt' \*dup: Ma, Mn, Ka, Mm təp<sup>8</sup>.
21. \*dr SL –, Ma –, Mn t II, Tn –, Ka t II, Mm ky II:  
One example only:  
'dragon-fly' \*drin<sup>B</sup>: Mn tin<sup>6</sup>, Ka tən<sup>6</sup>, Mm kyən<sup>6</sup>.
22. \*ʔd SL, Ma ʔd, Mn d II, Tn, Ka l, Mm (h)l:  
'to get' \*ʔdai<sup>C</sup>: SS, SL, Ma ʔdai<sup>3</sup>, Mn dai<sup>4</sup>, Tn lai<sup>3</sup>, Ka li<sup>3</sup>, Mm lai<sup>3</sup>.
23. \*ʔdr SL, Ma ʔd, Mn d II, Tn z, Ka (h)l, Mm hy:  
'bone' \*ʔdr[a]:k: SS la:k<sup>7</sup>, SL ʔda:k<sup>7</sup>, Ma ʔdo:k<sup>7</sup> (with irregular vowel), Mn da:k<sup>8</sup>,  
Tn za:k<sup>7</sup>, Ka la:k<sup>7</sup>, Mm hya:k<sup>7</sup>.
24. \*nt SL d, Ma d Ia, Mn nd, Tn ʔd, Ka t, Mm hl:  
A rare initial:  
'eye' \*nta<sup>A</sup>: SS nda<sup>l</sup>, SL da<sup>l</sup>, Ma da<sup>la</sup>, Mn nda<sup>l</sup>, Tn ʔda<sup>l</sup>, Ka ta<sup>l</sup>, Mm hla<sup>l</sup>.

25. \**ntr* SL *d*, Ma *d* Ia, Mn *nd* ~ *d* II, Tn *z*, Ka *t*, Mm *hy*:  
 ‘to buy’ \**ntr**rai*<sup>C</sup>: SS *ndjai*<sup>3</sup>, SL *djai*<sup>3</sup>, Ma *dai*<sup>3</sup>, Mn *ndjai*<sup>3</sup>, Tn *zei*<sup>3</sup>, Ka *tjəi*<sup>3</sup>, Mm *hyai*<sup>3</sup>;  
 ‘low’ \**ntram*<sup>B</sup>: SS *ndam*<sup>5</sup>, SL, Ma *dam*<sup>5</sup>, Mn *djam*<sup>6</sup>, Tn *zam*<sup>5</sup>, Ka *tam*<sup>5</sup>, Mm *hyam*<sup>5</sup>.
26. \**m-t* SL *d*, Ma *d* Ia, Mn *nd*, Tn –, Ka *t*, Mm *hmy*:  
 One example only:  
 ‘fragrant’ \**m-ta*:*ŋ*<sup>A</sup>: SS *nda*:*ŋ*<sup>l</sup>, SL *da*:*ŋ*<sup>l</sup>, Ma *da*:*ŋ*<sup>la</sup>, Mn *nda*:*ŋ*<sup>l</sup>, Ka *ta*:*ŋ*<sup>l</sup>, Mm *hmya*:*ŋ*<sup>l</sup>.
27. \**m-ʔd* SL *ʔd*, Ma –, Mn *d* II, Tn *l*, Ka *p*, Mm *my*:  
 One example only:  
 ‘bile’ \**m-ʔdo*<sup>B</sup>: SL *ʔdo*<sup>5</sup>, Mn *dɔ*<sup>6</sup>, Tn *lo*<sup>5</sup>, Ka *po*<sup>5</sup>, Mm *myɔ*<sup>5</sup> (Strecker 1988:116);  
 Ma *ʔbəi*<sup>l</sup> is a Zhuang loan.
28. \**n* SL, Ma, Mn, Tn, Ka, Mm *n* II:  
 ‘meat’ \**na*:*n*<sup>C</sup>: SS, SL, Ma, Mn, Tn, Ka *na*:*n*<sup>4</sup> ‘meat’, Mm *na*:*n*<sup>4</sup> ‘to hunt’.
29. \**hn* SL *hn*, Ma, Mn, Tn *n*, Ka, Mm *hn*:  
 ‘rat’ \**hno*<sup>C</sup>: SS, SL *hno*<sup>3</sup>, Ma *no*<sup>3</sup>, Mn *nɔ*<sup>3</sup>, Tn *no*<sup>3</sup>, Ka *hno*<sup>3</sup>, Mm *hno*<sup>2</sup>.
30. \**ʔn* SL *ʔn*, Ma *n*, Mn *ʔn*, Tn, Ka, Mm *n*:  
 ‘nose’ \**ʔna*:*ŋ*<sup>A</sup>: SS, SL *ʔna*:*ŋ*<sup>l</sup>, Ma *na*:*ŋ*<sup>l</sup>, Mn *ʔna*:*ŋ*<sup>l</sup>, Tn, Ka, Mm *na*:*ŋ*<sup>l</sup>.
31. \**R-n* SL *n*, Ma *n* Ia, Mn *n*, Tn, Ka, Mm *n* II:  
 ‘water’ \**R-nam*<sup>C</sup>: SS *nam*<sup>3</sup>, SL *ɲam*<sup>3</sup> (irregular initial), Ma, Mn *nam*<sup>3</sup>, Tn, Ka *nam*<sup>4</sup>,  
 Mm *nəm*<sup>4</sup>.
32. \**m-n* SL, Ma, Mn *n* II, Tn *n*, Ka *m* II, Mm *m* II ~ *n* II:  
 ‘bird’ \**m-nok*: SS, SL, Ma *nok*<sup>8</sup>, Mn *nɔk*<sup>8</sup>, Tn *nok*<sup>7</sup>, Ka *mok*<sup>8</sup>, Mm *mɔk*<sup>8</sup>.
33. \**m-ʔn* SL –, Ma –, Mn *n*, Tn –, Ka *n*, Mm *m*:  
 One example only:  
 ‘glow-worm’ \**m-ʔni*:*ŋ*<sup>C</sup>: SS *ʔni*:*ŋ*<sup>3</sup>, Mn, Ka *ni*:*ŋ*<sup>3</sup>, Mm *mi*:*ŋ*<sup>3</sup>.
34. \**C-n* SL, Ma *n* II, Mn, Tn, Ka *n*, Mm *n* II:  
 ‘moon’ \**C-nia*:*n*<sup>A</sup>: SS *njen*<sup>2</sup>, SL *nja*:*n*<sup>2</sup>, Ma *ni*:*n*<sup>2</sup>, Mn *njen*<sup>2</sup>, Tn *nja*:*n*<sup>l</sup>, Ka *ɲa*:*n*<sup>l</sup> (<  
 \**nin*), Mm *njen*<sup>2</sup>.
35. \**C-ʔn* SL *ʔn*, Ma, Mn *n*, Tn *n* II, Ka, Mm *n*:  
 ‘thick’ \**C-ʔna*<sup>A</sup>: SS, SL *ʔna*<sup>l</sup>, Ma, Mn *na*<sup>l</sup>, Tn *na*<sup>2</sup>, Ka, Mm *na*<sup>l</sup>.
36. \**l* SL, Ma, Mn, Tn, Ka, Mm *l* II:  
 ‘child’ \**la*:*k*: SS, SL, Ma, Mn, Tn, Ka, Mm *la*:*k*<sup>8</sup>.



37. \*ʔ/ SL l, Ma ʔd, Mn d, Tn z, Ka, Mm l:

A rare initial:

‘wild pig’ \*ʔla:j<sup>B</sup>: SL la:i<sup>5</sup>, Ma ʔda:i<sup>5</sup>, Mn da:i<sup>5</sup>, Tn za:i<sup>5</sup>, Ka, Mm la:i<sup>5</sup>.

38. \*R-/ SL l, Ma l Ia, Mn l, Tn z II, Ka, Mm l II:

‘wind’ \*R-lum<sup>A</sup>: SS zum<sup>l</sup> (irreg.), SL lum<sup>l</sup>, Ma lum<sup>l a</sup>, Mn ləm<sup>l</sup>, Tn zəm<sup>2</sup>, Ka, Mm ləm<sup>2</sup>.

39. \*m-ʔ/ SL –, Ma –, Mn –, Tn –, Ka l, Mm m:

One example only:

‘to shallow’ \*m-ʔli:n<sup>B</sup>: Ka lin<sup>5</sup>, Mm min<sup>5</sup>.

40. \*C-/ SL –, Ma l I(a), Mn l, Tn –, Ka, Mm hl:

A rare cluster:

‘twilight’ \*C-lap: Ma, Mn lap<sup>7</sup>, Ka, Mm hlap<sup>7</sup>.

41. \*C-ʔ/ SL, Ma ʔd, Mn d II, Tn l, Ka kw, Mm ʔy:

‘name’ \*C-ʔla:n<sup>A</sup>: SS, SL, Ma ʔda:n<sup>l</sup>, Mn da:n<sup>2</sup>, Tn la:n<sup>l</sup>, Ka kwa:n<sup>l</sup>, Mm ʔya:n<sup>l</sup>.

42. \*s(h) SL h, Ma s I(a), Mn s, Tn th, Ka hs, Mm t:

‘root’ \*s(h)a:ŋ<sup>A</sup>: SS, SL ha:ŋ<sup>l</sup>, Mn sa:ŋ<sup>l</sup>, Tn tha:ŋ<sup>l</sup>, Ka hsa:ŋ<sup>l</sup>, Mm ta:ŋ<sup>l</sup>.

43. \*z SL h II/f II, Ma, Mn z II, Tn th II, Ka s II, Mm t II:

‘snake’ \*zuj<sup>A</sup>: SS hui<sup>2</sup>, SL fui<sup>2</sup>, Ma, Mn zui<sup>2</sup>, Tn thui<sup>2</sup>, Ka sui<sup>2</sup>, Mm tui<sup>2</sup>.

44. \*s(h)r SL h/f, Ma s Ia, Mn s, Tn th, Ka hs, Mm khy:

‘sour’ \*s(h)rum<sup>C</sup>: SS hum<sup>3</sup>, SL fum<sup>3</sup>, Ma sum<sup>3</sup>, Mn səm<sup>3</sup>, Tn thəm<sup>3</sup>, Ka hsəm<sup>3</sup>, Mm khyəm<sup>3</sup>.

45. \*zr SL h II, Ma, Mn z II, Tn th II, Ka s II, Mm ky II:

‘medicine’ \*zra<sup>A</sup>: SS, SL ha<sup>2</sup>, Ma, Mn za<sup>2</sup>, Tn tha<sup>2</sup>, Mm kya<sup>2</sup>.

46. \*C<sub>1</sub>-sr SL h II, Ma z, Mn s, Tn th II, Ka s, Mm khy:

‘intestines’ \*C<sub>1</sub>-sra:i<sup>C</sup>: SS, SL ha:i<sup>3</sup>, Ma za:i<sup>3</sup>, Mn sa:i<sup>3</sup>, Tn tha:i<sup>3</sup>, Ka sa:i<sup>3</sup>, Mm khya:i<sup>3</sup>.

47. \*r (SS r II) SL r, Ma z Ia, Mn j/w, Tn z II, Ka j II/w II, Mm y II:

‘house’ \*ra:n<sup>A</sup>: SS ra:n<sup>2</sup>, SL ra:n<sup>l</sup>, Ma za:n<sup>5</sup> (with irreg. tone), Mn ja:n<sup>l</sup>, Tn za:n<sup>2</sup>, Ka ja:n<sup>2</sup>, Mm ya:n<sup>2</sup>.

48. \*ʔr SL ʔr, Ma j, Mn ʔj/ʔw, Tn z, Ka j/w, Mm ʔy, hy, y:

‘long’ \*ʔra:j<sup>C</sup>: SS, SL ʔra:i<sup>3</sup>, Ma ja:i<sup>3</sup>, Mn ʔja:i<sup>3</sup>, Tn za:i<sup>3</sup>, Ka ja:i<sup>3</sup>, Mm ya:i<sup>3</sup>.

49. \*ʔ SL, Ma, Mn ʔ II, Tn ɲj II, Ka, Mm ʔ II:  
 ‘to be’ \*ʔa:u<sup>B</sup>: SS, SL, Ma, Mn ʔa:u<sup>6</sup>, Tn ɲja:u<sup>6</sup>, Ka, Mm ʔa:u<sup>6</sup>.
50. \*hʔ SL –, Ma ʔ Ia, Mn –, Tn ɲj, Ka hʔ, Mm –:  
 A rare initial:  
 ‘wild cat’ \*hʔan<sup>A</sup>: Ma ʔan<sup>1a</sup>, Tn ɲjan<sup>1</sup>, Ka hʔan<sup>1</sup>.
51. \*ʔʔ SL ʔʔ, Ma ʔ, Mn ʔʔ, Tn ɲj, Ka, Mm ʔʔ:  
 ‘evening’ \*ʔʔam<sup>B</sup> SL ʔʔam<sup>5</sup>, Ma ʔam<sup>5</sup>, Mn ʔʔam<sup>5</sup>, Tn ɲjam<sup>5</sup>, Ka ʔam<sup>5</sup>.
52. \*R-ʔ SL –, Ma ʔ Ia, Mn ɲ, Tn ɲj II, Ka, Mm ʔ II:  
 One example only:  
 ‘crab’ \*R-ʔV<sup>A</sup>: Ma ʔu<sup>1a</sup>, Mn ɲi:u<sup>1</sup>, Tn ɲju<sup>2</sup>, Ka ʔo<sup>2</sup>, Mm ʔo<sup>2</sup>.
53. \*C-ʔʔ (SS ʔʔ), SL –, Ma –, Mn ʔ, Tn –, Ka n, Mm ʔʔ:  
 One example only:  
 ‘to cry’ \*C-ʔʔe<sup>C</sup>: SS ʔe<sup>3</sup>, Mn ʔe<sup>3</sup>, Ka ne<sup>3</sup>, Mm ʔe<sup>3</sup>.
54. \*j SL, Ma j II, Mn –, Tn zj II, Ka s II, Mm –:  
 One example only:  
 ‘grandmother’ \*ja<sup>C</sup>: SS, SL, Ma ja<sup>4</sup>, Tn zja<sup>4</sup>, Ka sa<sup>4</sup>.
55. \*ʔj SL ʔj, Ma j, Mn –, Tn, Ka j, Mm –:  
 Only one dubious comparison:  
 ‘to stay, stand’ \*ʔjVn<sup>A</sup>: SS, SL ʔjo:n<sup>1</sup>, Ma jun<sup>3</sup> (irreg. tone), Tn jin<sup>1</sup>, Ka jun<sup>1</sup>.
56. \*C-ʔj SL j, Ma j Ia, Mn –, Tn j II, Ka tj, Mm c:  
 One example only:  
 ‘thatch grass’ \*C-ʔja<sup>A</sup>: SS, SL ja<sup>1</sup>, Ma ja<sup>1a</sup>, Tn ja<sup>2</sup>, Ka tja<sup>1</sup>, Mm ca<sup>1</sup>.
57. \*š(h) SL –, Ma s Ia, Mn, Tn s, Ka hc, Mm s:  
 A rare initial:  
 ‘you’ \*š(h)V<sup>A</sup>: SS sa:u<sup>1</sup>, Ma si<sup>1a</sup>, Mn se<sup>1</sup>, Tn siu<sup>1</sup>, Ka hca:u<sup>1</sup>, Mm sa:u<sup>1</sup>.
58. \*ž SL s II, Ma z II, Mn z II, Tn s II, Ka c II, Mm –:  
 One example only:  
 ‘pus’ \*žok: SS, SL sok<sup>8</sup>, Ma zok<sup>8</sup>, Mn zok<sup>8</sup>, Tn sok<sup>8</sup>, Ka cok<sup>8</sup>, cf. Mm hyak<sup>7</sup> < \*ʔrak.
59. \*C-š SL z, Ma z Ia, Mn z, Tn ʔz II, Ka thj, Mm c:  
 ‘heavy’ \*C-šan<sup>A</sup>: SS, SL zan<sup>1</sup>, Ma zan<sup>1a</sup>, Mn zan<sup>1</sup>, Tn ʔzan<sup>2</sup>, Ka thjan<sup>1</sup>, Mm can<sup>1</sup>.

60. \*k SL q, Ma, Mn, Tn k, Ka ?, Mm k:  
 ‘bitter’ \*kam<sup>A</sup>: SS, SL qam<sup>l</sup>, Ma, Mn, Tn kam<sup>l</sup>, Ka ?am<sup>2</sup> (irreg. tone), Mm kam<sup>l</sup>.
61. \*ki SL ts, Ma s, Mn, Tn ts, Ka tj, Mm ts:  
 ‘to pluck’ \*kip SS, SL tsup<sup>7</sup>, Ma tjup<sup>7</sup> (with irreg. initial), Mn tsəp<sup>7</sup>, Tn tsep<sup>7</sup>,  
 Ka tjəp<sup>7</sup>, Mm tsəp<sup>7</sup>.
62. \*kr SL k, Ma tj, Mn k/c, Tn, Ka k, Mm ky:  
 ‘egg’ \*kraj<sup>B</sup>: SS, SL kai<sup>5</sup>, Ma tjai<sup>5</sup>, Mn, Tn kai<sup>5</sup>, Ka kəi<sup>5</sup>, Mm kyəi<sup>5</sup>.
63. \*kl (SS k), SL –, Ma tj, Mn kj/c, Tn, Ka, Mm k:  
 ‘rice seedlings’ \*kla<sup>C</sup>: SS ka<sup>3</sup>, Ma tji<sup>3</sup>, Tn kja<sup>3</sup>, Ka ka<sup>3</sup>.
64. \*kw SL p, Ma k, Mn p, Tn p II, Ka p, Mm k/c:  
 ‘horn’ \*kwa:u<sup>A</sup>: SS qa:u<sup>l</sup>, SL pa:u<sup>l</sup>, Ma ka:u<sup>l</sup>, Mn ŋa:u<sup>l</sup> (with irreg. initial), Tn pa:u<sup>2</sup>,  
 Ka pa:u<sup>l</sup>, Mm ku<sup>l</sup>.
65. \*khi SL s, Ma s I(a), Mn s, Tn tsh, Ka thj, Mm tsh:  
 ‘ascend’ \*khia<sup>B</sup>: SS, SL, Ma, Mn sa<sup>5</sup>, Tn tsha<sup>5</sup>, Ka thja<sup>5</sup>, Mm tsha<sup>5</sup>.
66. \*khr SL qh, Ma thj, Mn, Tn, Ka kh, Mm khy:  
 ‘ear’ \*khra<sup>A</sup>: SS, SL qha<sup>l</sup>, Ma thja<sup>l a</sup>, Mn, Tn, Ka kha<sup>l</sup>, Mm khy<sup>l</sup>.
67. \*khl SL h, Ma l Ia, Mn kh, Tn l, Ka khw, Mm khy:  
 ‘lazy’ \*khlut: SS khət<sup>7</sup>, SL hət<sup>7</sup>, Ma lut<sup>7</sup>, Mn khət<sup>7</sup>, Tn let<sup>7</sup>, Ka khwət<sup>7</sup>.
68. \*khw SL khw, Ma kh(w) Ia, Mn kh(w), Tn kh, Ka, Mm khw:  
 One example only:  
 ‘road’ \*khwVr<sup>A</sup>: SS khwən<sup>l</sup>, SL khun<sup>l</sup>, Ma khun<sup>l a</sup>, Mn khun<sup>l</sup>, Tn khen<sup>l</sup>,  
 Ka, Mm khwən<sup>l</sup>.
69. \*g SL q II, Ma –, Mn c II, Tn, Ka ? II, Mm –:  
 No good examples:  
 ‘excrement’ \*ge<sup>C</sup>: ~ \*ke<sup>C</sup>: SS, SL qe<sup>4</sup>, (Ma tje<sup>3</sup>), Mn ce<sup>4</sup>, Tn, Ka ?e<sup>4</sup>, (Mm ce<sup>3</sup>).
70. \*gr (SS k II), SL –, Ma –, Mn c II, Tn –, Ka k II, Mm ky II:  
 ‘many’ \*gruŋ<sup>A</sup>: SS kuŋ<sup>2</sup>, Mn coŋ<sup>2</sup>, Ka kuŋ<sup>2</sup>, Mm kyuŋ<sup>2</sup>.
71. \*ŋkl SL R, Ma g Ia, Mn ŋg, Tn ?, Ka l II, Mm hŋ:  
 ‘mushroom’ \*ŋkla<sup>A</sup>: SS, SL Ra<sup>l</sup>, Ma ga<sup>l a</sup>, Mn ŋga<sup>l</sup>, Ka la<sup>2</sup>, Mm hŋa<sup>l</sup>.

72. \**ŋkɪ* SL –, Ma *dj* Ia, Mn *ndj*, Tn *j*, Ka *?*, Mm *hɲ*:  
Only one example:  
'bed-bug' \**ŋkɪŋ*<sup>A</sup>: SS *jɪŋ*<sup>l</sup>, Ma *dji:l*<sup>a</sup>, Mn *ndjɪŋ*<sup>l</sup>, Tn *jɪŋ*<sup>l</sup>, Ka *ʔɪŋ*<sup>l</sup>, Mm *hɲɪŋ*<sup>l</sup>.
73. \**ŋkl* SL R, Ma *g* Ia, Mn *ng*, Tn *?*, Ka *?*, Mm *ŋ*:  
'hemp' \**ŋkla:n*<sup>A</sup>: SL *Ra:n*<sup>l</sup>, Ma *ga:n*<sup>l</sup><sup>a</sup>, Mn *ŋga:n*<sup>l</sup>, Tn, Ka *ʔa:n*<sup>l</sup>, Mm *ŋa:n*<sup>l</sup>.
74. \**ŋ* SL, Ma *ŋ* II, Mn –, Tn *ŋ* II, Ka, Mm –:  
Only one example:  
'breakfast' \**ŋV*<sup>A</sup>: SL *ŋe*<sup>2</sup>, Ma *ŋa*<sup>2</sup>, Tn *ŋe*<sup>2</sup>.
75. \**ʔŋ* SL –, Ma *ŋ*, Mn *ʔŋ*, Tn –, Ka *l*, Mm *ŋ*:  
Only one example:  
'branch' \**ʔŋa*<sup>B</sup>: Ma *ŋa*<sup>5</sup>, Mn *ʔŋa*<sup>5</sup>, Ka *la*<sup>5</sup>, Mm *ŋa*<sup>5</sup>.
76. \**R-ŋ* SL R, Ma *dj* Ia, Mn –, Tn –, Ka –, Mm *ŋy* II  
Only one example:  
'skin' \**R-ŋa*<sup>A</sup>: SL *Ra*<sup>l</sup>, Ma *dja*<sup>l</sup><sup>a</sup>, Mm *ŋya*<sup>2</sup>.
77. \**hɲw* SL *hm*, Ma *m* Ia, Mn, Tn *m*, Ka *hɲw*, Mm *hm* ~ *hɲw*:  
'dog' \**hɲwa*<sup>A</sup>: SS, SL *hma*<sup>l</sup>, Ma *ma*<sup>l</sup><sup>a</sup>, Mn, Tn *ma*<sup>l</sup>, Ka, Mm *hɲwa*<sup>l</sup>.
78. \**C<sub>2</sub>-x* SL *h*, Ma *h* Ia, Mn *h*, Tn *x* II, Ka *hs*, Mm *h*:  
'to kill' \**C<sub>2</sub>-xa*<sup>C</sup>: SS, SL, Ma, Mn *ha*<sup>3</sup>, Tn *xa*<sup>4</sup>, Ka *hsa*<sup>3</sup>.
79. \**xw* (SS *f*) SL –, Ma *w*, Mn –, Tn *xw*, Ka *ph*, Mm –:  
Only one example:  
'pine' \**xwa:k*: SS *fa:k*<sup>7</sup>, Ma *wa:k*<sup>7</sup>, Tn *xwa:k*<sup>7</sup>, Ka *pha:k*<sup>7</sup>.
80. \**ɣw* SL *pj* II, Ma *v* II, Mn –, Tn *xw* II, Ka *p* II, Mm *kw* II:  
Only one example:  
'husk' \**ɣwa*<sup>B</sup>: SS *fa*<sup>6</sup>, SL *pja*<sup>6</sup>, Ma *va*<sup>6</sup>, Tn *xwa*<sup>6</sup>, Ka *pa*<sup>6</sup>, Mm *kwa*<sup>6</sup>.
81. \**C<sub>2</sub>-xw* SL *f*, Ma *v* Ia, Mn *f*, Tn *xw* II, Ka *pj*, Mm *kw*:  
'rain' \**C<sub>2</sub>-xwin*<sup>A</sup>: SS, SL *fən*<sup>l</sup>, Ma *vin*<sup>l</sup><sup>a</sup>, Mn *fin*<sup>l</sup>, Tn *xwen*<sup>2</sup>, Ka *pjən*<sup>l</sup>, Mm *kwən*<sup>l</sup>.
82. \**m-xw* SL *f*, Ma *v*, Mn *f*, Tn –, Ka *m*, Mm *kw*:  
'cloud' \**m-xwa*<sup>C</sup>: SS, SL *fa*<sup>3</sup>, Ma *va*<sup>3</sup>, Mn *fa*<sup>3</sup>, Ka *ma*<sup>3</sup>, Mm *kwa*<sup>3</sup>.
83. \**ʔ* SL, Ma, Mn, Tn, Ka, Mm *ʔ*:  
'to take' \**ʔa:u*<sup>A</sup>: SS, SL, Ma, Mn, Tn, Ka, Mm *ʔa:u*<sup>l</sup>.

## 84. \*P-? SL, Ma ?, Mn b II, Tn, Ka j, Mm ?:

Only one example:

'hunger' \*P-?ia:k: SS, SL ?a:k<sup>7</sup>, Ma ?i:k<sup>7</sup>, Mn bi:k<sup>8</sup>, Tn, Ka ja:k<sup>7</sup>, Mm ?ja:k<sup>7</sup>.

The Proto Kam-Sui system of terminals includes:

|    |    |    |
|----|----|----|
| *p | *m | *u |
| *t | *n | *j |
| *k | *ŋ | *ɔ |

Ten vowels and diphthongs can be reconstructed:

|     |    |    |  |      |
|-----|----|----|--|------|
| *i  | *u |    |  | *u:  |
| *e  |    | *o |  | *e:  |
| *a  |    |    |  | *a:  |
| *ia |    |    |  | *ia: |

The vocalic correspondences are:

|     | Proto KS | SL                   | Ma | Mn   | Tn  | Ka   | Mm   | Notes |
|-----|----------|----------------------|----|------|-----|------|------|-------|
| 1.  | *a       | a                    | a  | a    | a   | a    | a    |       |
| 2.  | *e       | e                    | e  | e    | e,ε | e    | e, ε | 1     |
| 3.  | *i       | depends on terminals |    |      |     |      |      | 2     |
| 4.  | *u       | ə                    | ə  | ə    | e,ə | ə    | ə    | 3     |
| 5.  | *o       | o                    | o  | o,ɔ  | o   | o    | o,ɔ  |       |
| 6.  | *a:      | a:                   | a: | a:   | a:  | a,a: | a:   |       |
| 7.  | *e:      | depends on terminals |    |      |     |      |      | 4     |
| 8.  | *u:      | u:                   | u: | u:,u | u:  | u    | u:   | 5     |
| 9.  | *ia:     | ja:                  | i: | i:   | ja: | ja   | ja:  |       |
| 10. | ia       | ja                   | a  | ja   | ja  | ja   | —    |       |

## NOTES:

## 1. Unusual development of the final \*em:

| Proto KS | SL | Ma | Mn  | Tn  | Ka  | Mm  |
|----------|----|----|-----|-----|-----|-----|
| *em      | —  | —  | jem | jim | jim | jem |

## 2. The development of the vowel depends on the terminal:

| Proto KS | SL     | Ma | Mn | Tn     | Ka | Mm |
|----------|--------|----|----|--------|----|----|
| *it      | jət    | it | it | it, et | ət | —  |
| *in      | ən, in | in | in | en     | ən | ən |
| *ip      | jup    | ip | ip | ip, ep | əp | əp |
| *im      | —      | —  | im | —      | əm | —  |

## 3. Unusual development of the final \*ui:

| Proto KS | SL | Ma | Mn | Tn | Ka | Mm |
|----------|----|----|----|----|----|----|
| *ui      | i  | əi | i  | i  | ui | i  |

4. There are two finals only:

|          |    |     |    |      |     |     |
|----------|----|-----|----|------|-----|-----|
| Proto KS | SL | Ma  | Mn | Tn   | Ka  | Mm  |
| *e:k     | –  | e:k | –  | ja:k | e:k | ε:k |
| *e:ŋ     | –  | eŋ  | εŋ | jaŋ  | eŋ  | ε:ŋ |

5. In Mn *u:* appears only in reflexes of \**u:t* and \**u:n*.

#### 2.1.4 LI DIALECTS

Until recently, little has been known about the Li dialects of Hainan island. The main sources of Li data were Stubel's (1937) lists, which were difficult to interpret, and a dictionary of one dialect published by Savina (1931) in which the phonetics was represented according to the Vietnamese orthography and thus appears rather strange.

In the 1950's the Li dialects were studied intensively by some Chinese scholars, and preliminary results were occasionally published, but only in local publications with a limited circulation (e.g. Anon. 1957a; Anon. 1957b). Later this data was used in writing a sketch grammar of Li (Ouyang & Zheng 1980) and a survey of Li dialects (Ouyang & Zheng 1983).

The Li dialects can be divided into five groups: Ha, Qi, Bengdi, Meifu and Jiamao (Ouyang & Zheng 1983:4). The Jiamao dialect is perhaps the one that is most distantly related, although the available data on this point is inconsistent. There are perhaps more Li languages or dialects not included in the survey by Ouyang and Zheng: 'Cun' speech (Fu 1983; Ouyang & Fu 1988) and Natou (Fu 1990) may fall into this category.

The phonological systems of some Li dialects are known (Ouyang & Zheng 1983). For example, the attested system of the Baoding dialect of the Ha group is:

Initials:

|           |            |           |           |           |           |           |
|-----------|------------|-----------|-----------|-----------|-----------|-----------|
| <i>p</i>  | <i>ph</i>  | <i>?b</i> | <i>m</i>  | <i>v</i>  | <i>f</i>  |           |
| <i>t</i>  | <i>th</i>  | <i>?d</i> | <i>n</i>  | <i>l</i>  | <i>ʈ</i>  | <i>pl</i> |
| <i>c</i>  | <i>ch</i>  |           |           | <i>z</i>  |           | <i>r</i>  |
|           |            |           | <i>ɲ</i>  |           | <i>hj</i> | <i>?j</i> |
| <i>k</i>  | <i>kh</i>  | <i>g</i>  | <i>ŋ</i>  |           |           |           |
| <i>kw</i> | <i>khw</i> | <i>gw</i> | <i>ŋw</i> |           |           |           |
|           |            |           |           | <i>h</i>  |           | <i>?</i>  |
|           |            |           |           | <i>hw</i> |           | <i>?w</i> |

Vowels:

|          |          |          |           |           |           |           |
|----------|----------|----------|-----------|-----------|-----------|-----------|
| <i>i</i> | <i>ɨ</i> | <i>u</i> |           | <i>i:</i> | <i>ɨ:</i> | <i>u:</i> |
| <i>e</i> |          | <i>o</i> |           | <i>e:</i> |           | <i>o:</i> |
|          |          | <i>a</i> |           |           |           | <i>a:</i> |
|          |          |          | <i>ia</i> | <i>ɨa</i> |           | <i>ua</i> |

Terminals:

|           |           |          |
|-----------|-----------|----------|
| <i>p</i>  | <i>m</i>  | <i>u</i> |
| <i>t</i>  | <i>n</i>  | <i>i</i> |
| <i>tj</i> | <i>nj</i> | <i>i</i> |
| <i>k</i>  | <i>ŋ</i>  | <i>o</i> |

Tones: 1 (53) 2 (55) 3(11) 7 = 2

The system of Tongshi (Qi group) is quite similar, but has some differences: initial *hj* and terminal *tj* and *nj* are absent, and the tonal system is more complex:

|        |         |        |        |        |
|--------|---------|--------|--------|--------|
| 1 (33) | 5 (51)  | 3 (55) | 7 = 3  | 9 (43) |
| 4 (11) | 2 (121) | 6 (14) | 8 (13) |        |

The systems of all other dialects are similar to either one or the other of these.

Baoding initials can be divided into three classes, with the initials *k*, *hw* and *l* being members of more than one class:

a) class  $\alpha$ :

|           |           |           |           |           |          |          |          |                     |
|-----------|-----------|-----------|-----------|-----------|----------|----------|----------|---------------------|
| <i>ph</i> | <i>th</i> | <i>ch</i> | <i>kh</i> | <i>hw</i> | <i>h</i> | <i>s</i> | <i>f</i> | <i>t</i>            |
| <i>?b</i> | <i>?d</i> |           |           |           |          |          |          |                     |
|           |           | <i>c</i>  | <i>k</i>  | <i>?w</i> | <i>?</i> |          |          | <i>pl</i> <i>?j</i> |

b) class  $\beta$ :

|          |          |  |          |           |          |          |          |          |
|----------|----------|--|----------|-----------|----------|----------|----------|----------|
|          |          |  |          | <i>hw</i> |          |          |          |          |
|          |          |  | <i>g</i> | <i>gw</i> | <i>z</i> | <i>v</i> | <i>l</i> | <i>r</i> |
| <i>p</i> | <i>t</i> |  | <i>k</i> |           |          |          |          |          |

c) class  $\gamma$ :

|          |          |          |          |           |  |          |
|----------|----------|----------|----------|-----------|--|----------|
| <i>m</i> | <i>n</i> | <i>ɲ</i> | <i>ŋ</i> | <i>ŋw</i> |  | <i>l</i> |
|----------|----------|----------|----------|-----------|--|----------|

These three classes of initials correlate directly with tonal differences in Qiandui and Tongshi of the Qi group:

| Initial class<br>in Bd | PrL<br>tone             | Tones in the Qi dialects |    | Tonal<br>series |
|------------------------|-------------------------|--------------------------|----|-----------------|
|                        |                         | Qd                       | Ts |                 |
| $\alpha$               | *1                      | 1                        | 1  | I               |
| $\beta$                |                         | 4                        | 4  | II              |
| $\gamma$               |                         |                          | 1  | III             |
| $\alpha$               | *2                      | 5                        | 5  | I               |
| $\beta$                |                         | 2                        | 2  | II              |
| $\gamma$               |                         |                          | 5  | III             |
| $\alpha$               | *3                      | 3                        | 3  | I               |
| $\beta$                |                         | 6                        | 6  | II              |
| $\gamma$               |                         |                          | 3  | III             |
| $\alpha$               | in checked<br>syllables | 7                        | 7  | I               |
| $\beta$                |                         | 8                        | 8  | II              |
| $\gamma$               |                         |                          | 7  | III             |

These postulated tonal series in Li are of a different nature to the tonal series in Zhuang-Tai or Kam-Sui languages. The relationship between Li initials and tones can be explained historically, particularly for classes  $\alpha$  and  $\beta$ :

| Initial class | Tonal series | PrL initial |
|---------------|--------------|-------------|
| $\alpha$      | I            | *voiceless  |
| $\beta$       | II           | *voiced     |

Initials of class  $\gamma$  have developed as voiced initials in Qd, but as voiceless initials in Ts, which perhaps indicates that a presyllabic consonant can be reconstructed for this class. Proto Li voiced nasals fall into class b:  $*m > p$ ,  $*n > t$ , etc., so for class g, which contains nasals in modern Baoding, I prefer to reconstruct initial clusters with an unknown presyllable: e.g.  $*C-m$ ,  $*C-n$ .

This reconstruction, based on an interpretation of the tonal/consonant correlation, was suggested in 1983/84. Much later I gained access to Thurgood's (1991) Li reconstruction, which identifies six types of tonal splits:



| PrL tones            | Tonal series | Bd | Xf | Ht | Qd | Ts | Bc | Ym |
|----------------------|--------------|----|----|----|----|----|----|----|
| *1                   | I            | 1  | 1  | 1  | 1  | 1  | 1  | 1  |
|                      | IV           | 1  | 1  | 1  | 1  | 1  | 1  | 4  |
|                      | II           | 1  | 1  | 1  | 4  | 4  | 4  | 4  |
|                      | V            | 1  | 1  | 1  | 4  | 4  | 4  | 1  |
|                      | VI           | 1  | 1  | 1  | 4  | 1  | 1  | 4  |
|                      | III          | 1  | 1  | 1  | 4  | 4  | 1  | 4  |
| *2                   | I            | 2  | 2  | 2  | 5  | 5  | 5  | 5  |
|                      | IV           | 2  | 2  | 2  | 5  | 5  | 5  | 2  |
|                      | II           | 2  | 2  | 2  | 2  | 2  | 2  | 2  |
|                      | V            | 2  | 2  | 2  | 2  | 2  | 2  | 5  |
|                      | VI           | 2  | 2  | 2  | 2  | 5  | 5  | 2  |
|                      | III          | 2  | 2  | 2  | 2  | 2  | 5  | 2  |
| *3                   | I            | 3  | 3  | 3  | 3  | 3  | 3  | 3  |
|                      | IV           | 3  | 3  | 3  | 3  | 3  | 3  | 6  |
|                      | II           | 3  | 3  | 3  | 6  | 6  | 6  | 6  |
|                      | V            | 3  | 3  | 3  | 6  | 6  | 6  | 3  |
|                      | VI           | 3  | 3  | 3  | 6  | 3  | 3  | 6  |
|                      | III          | 3  | 3  | 3  | 6  | 6  | 3  | 6  |
| in checked syllables | I            | 7  | 7  | 9  | 7  | 7  | 7  | 7  |
|                      | IV           | 7  | 7  | 7  | 7  | 7  | 7  | 8  |
|                      | II           | 7  | 7  | 7  | 8  | 8  | 8  | 8  |
|                      | V            | 7  | 7  | 7  | 8  | 8  | 8  | 7  |
|                      | VI           | 7  | 7  | 9  | 8  | 7  | 7  | 8  |
|                      | III          | 7  | 7  | 7  | 8  | 8  | 7  | 8  |



|     |              |         |             |           |             |           |           |           |           |             |              |
|-----|--------------|---------|-------------|-----------|-------------|-----------|-----------|-----------|-----------|-------------|--------------|
| 14. | <i>*pl</i>   | I       | <i>pl</i>   | <i>pl</i> | <i>l</i>    | <i>p</i>  | <i>pl</i> | <i>pl</i> | <i>pl</i> | <i>*pl</i>  | <i>*pl</i>   |
| 15. | <i>*ch</i>   | I       | <i>ch</i>   | <i>ch</i> | <i>ch</i>   | <i>ch</i> | <i>ch</i> | <i>ch</i> | <i>ch</i> | <i>*tsh</i> | <i>*tsh</i>  |
| 16. | <i>*c</i>    | I       | <i>c</i>    | <i>c</i>  | <i>c</i>    | <i>c</i>  | <i>c</i>  | <i>c</i>  | <i>t</i>  | <i>*ts</i>  | <i>*ts</i>   |
| 17. | <i>*ɲ</i>    | I       | <i>c</i>    | <i>c</i>  | <i>c, ɲ</i> | <i>ch</i> | <i>c</i>  | <i>c</i>  | <i>c</i>  | <i>*ndz</i> |              |
| 18. | <i>*hɲ</i>   | special | <i>hj</i>   | <i>ɲ</i>  | <i>h</i>    | <i>z</i>  | <i>z</i>  | <i>z</i>  | <i>ɲ</i>  | <i>hɲ?</i>  | <i>*hy</i>   |
| 19. | <i>*C-ɲ</i>  | III     | <i>ɲ</i>    | <i>ɲ</i>  | <i>ɲ</i>    | <i>ɲ</i>  | <i>ɲ</i>  | <i>ɲ</i>  | <i>ɲ</i>  | <i>*ɲ</i>   | <i>*ɲ</i>    |
| 20. | <i>*s</i>    | I       | <i>t</i>    | <i>s</i>  | <i>t</i>    | <i>t</i>  | <i>t</i>  | <i>t</i>  | <i>ch</i> | <i>*s</i>   | <i>*s</i>    |
| 21. | <i>*z</i>    | II      | <i>z</i>    | <i>z</i>  | <i>z</i>    | <i>ʔ</i>  | <i>ʔ</i>  | <i>ʔ</i>  | <i>c</i>  | <i>*z</i>   | <i>*ly?</i>  |
| 22. | <i>*sw</i>   | I       | <i>f</i>    | <i>f</i>  | <i>ch</i>   | <i>ch</i> | <i>ch</i> | <i>ch</i> | <i>fh</i> | <i>*sr</i>  | <i>*sr</i>   |
| 23. | <i>*zw</i>   | II      | <i>v</i>    | <i>y</i>  | <i>r</i>    | <i>f</i>  | <i>f</i>  | <i>f</i>  | <i>f</i>  | <i>*rr</i>  | <i>*pr?</i>  |
| 24. | <i>*ʔj</i>   | I       | <i>ʔj</i>   | <i>z</i>  | <i>ʔ</i>    | <i>z</i>  | <i>ʔj</i> | <i>z</i>  | <i>z</i>  | <i>*xy</i>  | —            |
| 25. | <i>*j</i>    | II      | <i>z</i>    | <i>z</i>  | <i>z</i>    | <i>z</i>  | <i>z</i>  | <i>z</i>  | <i>z</i>  | <i>*y</i>   | <i>*y</i>    |
| 26. | <i>*kh</i>   | I       | <i>kh</i>   | <i>kh</i> | <i>kh</i>   | <i>kh</i> | <i>kh</i> | <i>kh</i> | <i>kh</i> | <i>*kh</i>  | <i>*kh</i>   |
| 27. | <i>*k</i>    | I       | <i>k</i>    | <i>k</i>  | <i>k</i>    | <i>k</i>  | <i>k</i>  | <i>k</i>  | <i>k</i>  | <i>*k</i>   | <i>*k</i>    |
| 28. | <i>*ŋ</i>    | II      | <i>k</i>    | <i>k</i>  | <i>ŋ</i>    | <i>kh</i> | <i>k</i>  | <i>k</i>  | <i>k</i>  | <i>*ŋg</i>  | <i>*ŋ?</i>   |
| 29. | <i>*C-ŋ</i>  | III     | <i>ŋ</i>    | <i>ŋ</i>  | <i>ŋ</i>    | <i>ŋ</i>  | <i>ŋ</i>  | <i>ŋ</i>  | <i>ŋ</i>  | <i>*ŋ</i>   | <i>*ŋ</i>    |
| 30. | <i>*r</i>    | II      | <i>r</i>    | <i>r</i>  | <i>r</i>    | <i>l</i>  | <i>l</i>  | <i>r</i>  | <i>r</i>  | <i>*r</i>   | <i>*r?</i>   |
| 31. | <i>*ɣ</i>    | II      | <i>g</i>    | <i>y</i>  | <i>g</i>    | <i>h</i>  | <i>h</i>  | <i>g</i>  | <i>kh</i> | <i>*ɣ</i>   | <i>*ɣ?</i>   |
| 32. | <i>*hɣw</i>  | I       | <i>hw</i>   | <i>ŋ</i>  | <i>h</i>    | <i>v</i>  | <i>ŋ</i>  | <i>gw</i> | <i>ŋ</i>  | <i>*hw</i>  | <i>*hɣw?</i> |
| 33. | <i>*C-ɣw</i> | III     | <i>ɣw</i>   | <i>ŋ</i>  | <i>ŋ</i>    | <i>ŋ</i>  | <i>ŋ</i>  | <i>ŋ</i>  | <i>ŋ</i>  | <i>*ɣw</i>  | <i>*ɣw</i>   |
| 34. | <i>*rw</i>   | II      | <i>g</i>    | <i>x</i>  | <i>r</i>    | <i>h</i>  |           | <i>g</i>  | <i>kh</i> | <i>*lʒ</i>  | <i>*lʒ?</i>  |
| 35. | <i>*ɣw</i>   | II      | <i>gw/g</i> | <i>x</i>  | <i>r</i>    | <i>h</i>  | <i>h</i>  | <i>g</i>  | <i>v</i>  | <i>*ɣw</i>  | <i>*ɣw?</i>  |
| 36. | <i>*ʔ</i>    | I       | <i>ʔ</i>    | <i>ʔ</i>  | <i>ʔ</i>    | <i>ʔ</i>  | <i>ʔ</i>  | <i>ʔ</i>  | <i>ʔ</i>  | <i>*ʔ</i>   | <i>*ʔ</i>    |
| 37. | <i>*h</i>    | I       | <i>h</i>    | <i>h</i>  | <i>h</i>    | <i>h</i>  | <i>h</i>  | <i>h</i>  | <i>h</i>  | <i>*x</i>   | <i>*x</i>    |
| 38. | <i>*hw</i>   | I       | <i>f</i>    | <i>y</i>  | <i>p</i>    | <i>f</i>  | <i>f</i>  | <i>f</i>  | <i>f</i>  | <i>*w</i>   | <i>*pr</i>   |
| 39. | <i>*w</i>    | II      | <i>hw</i>   | <i>v</i>  | <i>v</i>    | <i>v</i>  | <i>v</i>  | <i>v</i>  | <i>v</i>  | <i>*xw</i>  | <i>*w</i>    |
| 40. | <i>*ʔw</i>   | I       | <i>ʔw</i>   | <i>y</i>  | <i>ʔ</i>    | <i>v</i>  | <i>ʔw</i> | <i>gw</i> | <i>v</i>  |             | <i>*xw</i>   |

Thurgood's following correspondence is not found in my data:

I    ʔ    z, l    z    ʔ    ʔ    ʔ    ʔ    ʔ    ʔ    \*tʃ

Here are some examples for the above correspondences. More data is given in Matisoff (1988a) and Thurgood (1991):

1. PrL *\*ph* (tonal series I): Bd, Xf, Ht, Qd, Bc, Ts, Ym *ph*  
'sand' *\*phau*<sup>2</sup>: Bd *phou*<sup>2</sup>, Xf, Ht *phau*<sup>2</sup>, Qd *pho*<sup>5</sup>, Bc *pho*<sup>5</sup>, Ts, Ym *phau*<sup>5</sup> [LDY 469].
2. PrL *\*ʔb* (tonal series I): Bd, Xf, Ht, Qd, Bc, Ts, Ym *ʔb*  
'to fly' *\*ʔbenj*<sup>l</sup>: Bd *ʔbenj*<sup>l</sup>, Xf *ʔben*<sup>l</sup>, Ht *ʔbin*<sup>l</sup>, Qd, Bc, Ts, Ym *ʔben*<sup>l</sup> [LDY 403].
3. PrL *\*m* (tonal series II): Bd, Xf *p*, Ht *m*, Qd *ph*, Bc, Ts, Ym *p*  
'dog' *\*ma*<sup>l</sup>: Bd, Xf *pa*<sup>l</sup>, Ht *ma*<sup>l</sup>, Qd *pha*<sup>4</sup>, Bc, Ts, Ym *pa*<sup>4</sup> [LDY 411].

4. PrL \*C-m (tonal series III): Bd, Xf, Ht, Qd, Bc, Ts, Ym m  
 ‘hand’ \*C-me<sup>i</sup>l: Bd, Xf, Ht me<sup>i</sup>l, Qd -mæ<sup>i</sup>4, Bc, Ts mæ<sup>i</sup>l, Ym me<sup>i</sup>l [LDY 476].
5. PrL \*f (tonal series I): Bd, Xf f, Ht p, Qd, Bc, Ts f, Ym fh  
 ‘fire’ \*fei<sup>l</sup>: Bd, Xf fei<sup>l</sup>, Ht pei<sup>l</sup>, Qd, Bc, Ts fei<sup>l</sup>, Ym fhei<sup>l</sup> [LDY 422].
6. PrL \*v (tonal series II): Bd, Xf, Ht, Qd, Bc v, Ts f, Ym v  
 ‘bow’ \*vatj: Bd vatj<sup>7</sup>, Xf vat<sup>7</sup>, Ht vat<sup>9</sup>, Qd var<sup>8</sup>, Bc vat<sup>7</sup>, Ts fat<sup>8</sup>, Ym var<sup>8</sup> [LDY 411].
7. PrL \*th (tonal series I): Bd, Xf, Ht, Qd, Bc, Ts, Ym th  
 ‘short’ \*thatj: Bd thatj<sup>7</sup>, Xf that<sup>7</sup>, Ht the<sup>9</sup>, Qd, Bc, Ts, Ym that<sup>7</sup> [LDY 398].
8. PrL \*ʔd (tonal series I): Bd, Xf, Ht, Qd, Bc, Ts, Ym ʔd  
 ‘face’ \*ʔdag<sup>l</sup>: Bd, Xf ʔdag<sup>l</sup>, Ht ʔdog<sup>l</sup>, Qd, Bc, Ts, Ym ʔdag<sup>l</sup> [LDY 440].
9. PrL \*n (tonal series II): Bd, Xf t, Ht n, Qd th, Bc, Ts, Ym t  
 ‘rat’ \*niu<sup>l</sup>: Bd, Xf tiu<sup>l</sup>, Ht niu<sup>l</sup>, Qd thiu<sup>4</sup>, Bc, Ts tiu<sup>4</sup>, Ym ti:u<sup>4</sup> [LDY 438].
10. PrL \*C-n (tonal series III): Bd, Xf, Ht, Qd, Bc, Ts, Ym n  
 ‘water’ \*C-nom<sup>3</sup>: Bd nom<sup>3</sup>, Xf nam<sup>3</sup>, Ht nom<sup>3</sup>, Qd nam<sup>6</sup>, Bc, Ts nam<sup>3</sup>, Ym nam<sup>6</sup> [LDY 479].
11. PrL \*hl (tonal series I): Bd, Xf t, Ht d, Qd, Bc, Ts, Ym t  
 ‘blood’ \*hla:tj: Bd la:tj<sup>7</sup>, Xf tɔ:t<sup>7</sup>, Ht da:t<sup>7</sup>, Qd, Bc, Ts la:t<sup>7</sup>, Ym lɔat<sup>7</sup> [LDY 505].
12. PrL \*ʔl (tonal series I): Bd, Ht, Qd, Ts, Xf, Bs l  
 A rare initial.  
 ‘to forget’ \*ʔli:m<sup>2</sup>: Bd li:m<sup>2</sup>, Xf lum<sup>2</sup>, Ht li:m<sup>2</sup>, Qd lu:m<sup>5</sup>, Bc, Ts li:m<sup>5</sup>, Ym lim<sup>5</sup> [LDY 493].
13. PrL \*C-l (tonal series III): Bd, Xf, Ht, Qd, Bc, Ts, Ym l  
 ‘fingernail’ \*C-li:p: Bd, Xf, Ht li:p<sup>7</sup>, Qd li:p<sup>8</sup>, Bc, Ts li:p<sup>7</sup>, Ym lip<sup>8</sup> [LDY 522].
14. PrL \*pl (tonal series I): Bd, Xf pl, Ht l, Qd p, Bc, Ts, Ym pl  
 ‘termite’ \*plu:k: Bd plu:k<sup>7</sup>, Xf pluk<sup>7</sup>, Ht lu:ʔ<sup>7</sup>, Qd pua<sup>ʔ7</sup>, Bc, Ts plu:ʔ<sup>7</sup>, Ym pluk<sup>8</sup> [LDY 368].
15. PrL \*ch (tonal series I): Bd, Xf, Ht, Qd, Bc, Ts, Ym ch  
 ‘tree’ \*chai<sup>l</sup>: Bd, Xf, Ht, Qd, Bc, Ts, Ym chai<sup>l</sup> [LDY 477].
16. PrL \*c (tonal series I): Bd, Xf, Ht, Qd, Bc, Ts c, Ym t  
 ‘to sit’ \*coŋ<sup>3</sup>: Bd coŋ<sup>3</sup>, Xf coŋ<sup>3</sup>, Ht cuŋ<sup>3</sup>, Qd coŋ<sup>3</sup>, Bc coŋ<sup>3</sup>, Ts coŋ<sup>3</sup>, Ym tɔŋ<sup>3</sup> [LDY 528].

17. PrL \**ɲ* (tonal series II): Bd, Ht *c*, Qd *ch*, Ts, Xf, Bs *c*  
 A rare initial.  
 ‘ear of grain’ \**ɲe:ɲ<sup>l</sup>*: Bd, Xf, Ht *ce:ɲ<sup>l</sup>*, Qd *che:ɲ<sup>l</sup>*, Bc, Ts *ce:ɲ<sup>l</sup>*, Ym *ciəɲ<sup>l</sup>* [LDY 392].  
 ‘encircle’ \**ɲa:u<sup>3</sup>*: Bd, Xf *ca:u<sup>3</sup>*, Ht *ɲa:u<sup>3</sup>*, Qd *cha:u<sup>6</sup>*, Bc, Ts *za:u<sup>3</sup>* [LDY 389].
18. PrL \**hɲ* (special tonal series ): Bd *hɲ*, Xf *ɲ*, Ht *h*, Qd, Bc, Ts *z*, YM *ɲ*  
 ‘elbow’ \**hɲu:ɲ<sup>2</sup>*: Bd *hɲu:ɲ<sup>2</sup>*, Xf *ɲuɲ<sup>2</sup>*, Ht *hu:ɲ<sup>2</sup>*, Qd *-zuəɲ<sup>5</sup>*, Bc, Ts *-zu:ɲ<sup>5</sup>*, YM *-ɲuɲ<sup>2</sup>* [LDY 524].
19. PrL \**C-ɲ* (tonal series III): Bd, Xf, Ht, Qd, Bc, Ts, Ym *ɲ*  
 ‘moon’ \**C-ɲa:n<sup>l</sup>*: Bd, Xf, Ht *ɲa:n<sup>l</sup>*, Qd *ɲa:n<sup>4</sup>*, Bc, Ts *ɲa:n<sup>l</sup>*, Ym *ɲauəɲ<sup>4</sup>* [LDY 515].
20. PrL \**s* (tonal series I): Bd *t*, Xf *s*, Ht, Qd, Bc, Ts *t*, Ym *ch*  
 ‘bird’ \**satj*: Bd *tətj<sup>7</sup>*, Xf *sət<sup>7</sup>*, Ht *tət<sup>9</sup>*, Qd, Bc, Ts *tət<sup>7</sup>* [LDY 454].
21. PrL \**z* (tonal series II): Bd, Xf, Ht *z*, Qd, Bc, Ts *ʔ*, Ym *c*  
 ‘ear’ \**zai<sup>l</sup>*: Bd, Xf, Ht *zai<sup>l</sup>*, Qd, Bc, Ts *ʔai<sup>4</sup>*, Ym *cai<sup>l</sup>* [LDY 400].
22. PrL \**sw* (tonal series I): Bd, Xf *f*, Ht, Qd, Bc, Ts *ch*, Ym *fh*  
 ‘three’ \**swa<sup>3</sup>*: Bd, Xf *fu<sup>3</sup>*, Ht, Qd, Bc, Ts *chu<sup>3</sup>*, Ym *fhu<sup>3</sup>* [LDY 468].
23. PrL \**zw* (tonal series II): Bd *v*, Xf *y*, Htr, Qd, Bc, Ts, Ym *f*  
 ‘bone’ \**zwi:k*: Bd *vi:k<sup>7</sup>*, Xf *yik<sup>7</sup>*, Ht *ri<sup>7</sup>*, Qd *fiə<sup>8</sup>*, Bc, Ts *fi:<sup>8</sup>*, Ym *fik<sup>8</sup>* [LDY 412].
24. PrL \**?j* (tonal series I): Bd *?j*, Xf *z*, Ht *?*, Qd *z*, Bc *?j*, Ts, Ym *z*  
 ‘to swallow’ \**?jo:m<sup>2</sup>*: Bd *?jo:m<sup>2</sup>*, Xf *zo:m<sup>2</sup>*, Ht *?o:m<sup>2</sup>*, Qd *zo:m<sup>5</sup>*, Bc *?jo:m<sup>5</sup>*, Ts *zo:m<sup>5</sup>*, Ym *zuam<sup>5</sup>* [LDY 489].
25. PrL \**j* (tonal series II): Bd, Xf, Ht, Qd, Bc, Ts, Ym *z*  
 ‘egg’ \**ji:m<sup>l</sup>*: Bd *zi:m<sup>l</sup>*, Xf *zum<sup>l</sup>*, Ht *zi:m<sup>l</sup>*, Qd *zu:m<sup>4</sup>*, Bc *zi:m<sup>l</sup>*, Ts *zi:m<sup>4</sup>*, Ym *zum<sup>l</sup>* [LDY 391].
26. PrL \**kh* (tonal series I): Bd, Xf, Ht, Qd, Bc, Ts, Ym *kh*  
 ‘nose’ \**khat ~ khak*: Bd *khat<sup>7</sup>*, Xf *khak<sup>7</sup>*, Ht *khet<sup>7</sup>*, Qd, Bc, Ts, Ym *khat<sup>7</sup>* [LDY 372].
27. PrL \**k* (tonal series I): Bd, Ht, Qd, Ts, Xf, Bs *k*  
 ‘bed-bug’ \**kɪp*: Bd *kɪp<sup>7</sup>*, Xf *kep<sup>7</sup>*, Ht *kɪp<sup>9</sup>*, Qd *kup<sup>7</sup>*, Bc, Ts *kɪp<sup>7</sup>*, Ym *kop<sup>7</sup>* [LDY 383].
28. PrL \**ɲ* (tonal series II): Bd, Xf *k*, Ht *ɲ*, Qd *kh*, Bc, Ts, Ym *k*  
 ‘needle’ \**ɲutj*: Bd *kutj<sup>7</sup>*, Xf *kot<sup>7</sup>*, Ht *ɲut<sup>7</sup>*, Qd *khut<sup>8</sup>*, Bc, Ts *kut<sup>8</sup>*, Ym *kəθ<sup>8</sup>* [LDY 519].
29. PrL \**C-ɲ* (tonal series III): Bd, Xf, Ht, Qd, Bc, Ts, Ym *ɲ*  
 ‘to cry’ \**C-ɲai<sup>3</sup>*: Bd, Xf *ɲai<sup>3</sup>*, Ht *ɲei<sup>3</sup>*, Qd *ɲai<sup>6</sup>*, Bc, Ts, *ɲai<sup>3</sup>*, Ym *ɲai<sup>6</sup>* [LDY 435].

30. PrL \*r (tonal series II): Bd, Xf, Ht r, Qd, Bc l, Ts, Ym r  
 ‘deer’ \*ro:i<sup>3</sup>: Bd, Xf, Ht ro:i<sup>3</sup>, Qd, Bc lo:i<sup>6</sup>, Ts ro:i<sup>6</sup>, Ym ru:i<sup>6</sup> [LDY 443].
31. PrL \*y (tonal series II): Bd g, Xf y, Ht g, Qd, Bc h, Ts g, Ym kh  
 ‘grove’ \*yop<sup>3</sup>: Bd gop<sup>3</sup>, Xf yop<sup>3</sup>, Ht gup<sup>3</sup>, Qd hop<sup>6</sup>, Bc hup<sup>6</sup>, Ts gup<sup>6</sup>, Ym khop<sup>3</sup> [LDY 386].
32. PrL \*hɲw (tonal series I): Bd hw, Xf ɲ, Ht h, Qd v, Bs ɲ, Ts gw, Ym ɲ  
 ‘mountain’ \*hɲwau<sup>3</sup>: Bd hwou<sup>3</sup>, Xf ɲo<sup>3</sup>, Ht hau<sup>3</sup>, Qd vo<sup>3</sup>, Bc ɲo<sup>3</sup>, Ts go<sup>3</sup>, Ym ɲo<sup>3</sup> [LDY 470].
33. PrL \*C-ɲw (tonal series III): Bd ɲw, Xf, Ht, Qd, Ts, Bs ɲ, Ym ɲ  
 ‘straw’ \*C-ɲwiɲ<sup>3</sup>: Bd ɲwiɲ<sup>3</sup>, Xf ɲen<sup>3</sup>, Ht ɲiɲ<sup>3</sup>, Qd ɲiɲ<sup>6</sup>, Bs, Ts ɲiɲ<sup>3</sup>, Ym ɲen<sup>6</sup> [LDY 392].
34. PrL \*rw (tonal series II): Bd gw Xf y, Ht r, Qd, Bc h, Ts g, Ym v  
 ‘head’ \*rwou<sup>3</sup>: Bd gwou<sup>3</sup>, Xf yo<sup>3</sup>, Ht rau<sup>3</sup>, Qd ho<sup>6</sup>, Bc ho<sup>6</sup>, Ts go<sup>6</sup>, Ym vo<sup>3</sup> [LDY 367].
35. PrL \*yw (tonal series II): Bd gw/g, Xf x, Ht r, Qd, Bc h, Ts g, Ym kh  
 ‘eight’ \*ywou<sup>1</sup>: Bd gou<sup>1</sup>, Xf xou<sup>1</sup>, Ht ru<sup>1</sup>, Qd, Bc hou<sup>4</sup>, Ts gou<sup>4</sup>, Ym khou<sup>1</sup> [LDY 367].  
 ‘fat’ \*ywei<sup>3</sup>: Bd gwei<sup>3</sup>, Xf riu<sup>3</sup>, Ht riu<sup>3</sup>, Qd, Bc hu:i<sup>6</sup>, Ts gui<sup>6</sup>, Ym khui<sup>3</sup> [LDY 403].
36. PrL \*? (tonal series I): Bd, Xf, Ht, Qd, Bc, Ts, Ym ?  
 ‘to wash’ \*?a:p: Bd, Xf ?a:p<sup>7</sup>, Ht ?a:p<sup>9</sup>, Qd, Bc, Ts, Ym ?a:p<sup>8</sup> [LDY 497].
37. PrL \*h (tonal series I): Bd, Xf, Ht, Qd, Bc, Ts, Ym h  
 ‘horn’ \*hau<sup>1</sup>: Bd, Xf, Ht, Qd, Bc, Ts, Ym hau<sup>1</sup> [LDY 427].
38. PrL \*hw (tonal series I): Bd f, Xf y, Ht p, Qd, Bc, Ts, Ym f  
 ‘nine’ \*hwai<sup>3</sup>: Bd fai<sup>3</sup>, Xf yei<sup>3</sup>, Ht pei<sup>3</sup>, Qd, Bc, Ts, Ym fai<sup>3</sup> [LDY 431].<sup>3</sup>
39. PrL \*w (tonal series II): Bd hw, Xf, Ht, Qd, Bc, Ts, Ym v  
 ‘sun’ \*wan<sup>1</sup>: Bd -hwan<sup>1</sup>, Xf -van<sup>1</sup>, Ht ven<sup>1</sup>, Qd, Bc -van<sup>1</sup>, Ts van<sup>4</sup>, Ym van<sup>4</sup> [LDY 482].
40. PrL \*?w (tonal series I): Bd ?w, Xf y, Ht ?, Qd v, Bs ?w, Ts gw, Ym v  
 ‘to rise’ \*?wai<sup>2</sup>: Bd ?wai<sup>2</sup>, Xf yei<sup>2</sup>, Ht ?ei<sup>2</sup>, Qd vai<sup>5</sup>, Bs ?wat<sup>5</sup>, Ts gwa<sup>5</sup>, Ym vai<sup>5</sup> [LDY 460].

<sup>3</sup> I cannot accept the suggestion of Thurgood (1991:10) that this is a borrowing from Chinese or a Tibeto-Burman source. The Proto Sino-Tibetan reconstruction is \*kwəH and it is difficult to connect this with the Proto Li form \*hwai<sup>3</sup> (or, in Thurgood's reconstruction, \*prai<sup>3</sup>).

The vowel system of Proto Li can be reconstructed as follows:

|    |    |    |     |     |     |
|----|----|----|-----|-----|-----|
| *i | *i | *u | *i: | *i: | *u: |
| *e | *ə | *o | *e: |     | *o: |
|    | *a |    |     | *a: |     |

The list of Proto Li terminals includes:

|     |     |    |
|-----|-----|----|
| *p  | *m  | *u |
| *t  | *n  | *j |
| *tj | *nj | *j |
| *k  | *ŋ  | *o |

This system of Proto Li finals is retained in some modern dialects, especially in Bd, and thus I have omitted the list of correspondences (see Thurgood 1991).

Proto Li, unlike Zhuang-Tai or Kam-Sui, was not under strong Chinese influence until recently. Vietnamese loans are known in Li dialects:

PrL *\*hwo:t* 'wind': Bd *hwo:t<sup>7</sup>*, Qd *vo:t<sup>8</sup>*, Xf *vo:k<sup>7</sup>*  
 Vietnamese *hụt* 'a gust of wind'

PrL *\*chom<sup>l</sup>* 'fence' (Bd, Ts *chom<sup>l</sup>*)  
 Vietnamese *chèm* < Proto VM *\*cem* 'wedge'

Sd Li *bóŋ*, Vn *bụng* 'belly'

Unfortunately I still do not know when this contact with Vietnamese began, but it probably postdated the beginning of the disintegration of Proto Li.

### 2.1.5 PROTO KADAI RECONSTRUCTION

The existence of low-level reconstructions for the Zhuang-Tai, Kam-Sui and Li groups allows us to attempt the reconstruction of Proto Kadai. This problem has been discussed by Haudricourt (Shafer 1974) and Benedict (1975, 1990), who have collected Proto Kadai cognates and proposed Proto Kadai pre-reconstructions. The pre-reconstructions are problematic, as they are not based on low level reconstructions (see comments in Gedney 1976). Additional Kadai comparisons can be found in Li Fang-kuei's (1965) Kam-Sui article, in articles by Jakhontov (1984, 1985) and in other publications, including Hansell (1988) and Solnit (1988).

The only conclusive reconstruction has been that of the tone system of the Proto language. There were three tones, which are marked as \*A, \*B, and \*C. In checked syllables the tonal opposition was neutralised; this situation is marked as tone \*D. This system has been adopted by all scholars who work with this language family. The phonetic features of the three Kadai tones are still unknown.

The correspondences for the reconstruction of the tones are:

| Proto Kadai | Proto ZhT | Proto Kam-Sui | Proto Li | Tonal series | Ong Be | Lakkja |
|-------------|-----------|---------------|----------|--------------|--------|--------|
| *A          | *A        | *A            | *1       | I            | 4      | 1      |
|             |           |               |          | II           | 1      | 2      |
| *B          | *B        | *B            | *2       | I            | 2      | 5      |
|             |           |               |          | II           | 3      | 6      |
| *C          | *C        | *C            | *3       | I            | 2      | 3      |
|             |           |               |          | II           | 3      | 4      |
| (*D)        | ∅         | ∅             | ∅        | I            | 2      | 7      |
|             |           |               |          | II           | 1      | 8      |

The reconstruction of the system of Kadai segmental phonemes raises more difficult problems, due to the following factors:

1. The total set of reliable Kadai etymologies which form the basis of my reconstruction is limited to less than three hundred roots. These etymologies were discovered during direct comparison of the reconstructed lexicons of Zhuang-Tai, Kam-Sui and Proto Li, and the vocabularies of Ong Be and Lakkja. Naturally, all reliable etymologies mentioned in the literature are also included. I have not compared the lexicons of the Gelao languages, so it is possible that some etymologies are absent from my list. But as the number of known Gelao forms is limited, it is unlikely that many new etymologies will be found until extensive data on modern Gelao becomes available.

One reason for the shortage of reliable etymologies is that all modern Kadai languages have traces of extensive foreign influence, which has resulted in the loss of many native words. Benedict (1975), for example, claims that the original Kadai numerals are maintained only in Li and Kelao.

2. Within the Kadai language family we can recognise at least two areas of contact between languages. One area includes Lakkja and all Nung, Zhuang and Kam-Sui languages and dialects. From ethnolinguistic data, one can assume that this is an area of extensive Zhuang influence, but it is rather difficult to prove this idea with reference solely to linguistic data. The other area of contact concerns Li and Ong Be. In both groups on Hainan island, there are words which are unlikely to be of Proto Kadai origin, but seem to represent some local interference. The existence of these two areas of contact often makes it difficult to determine the exact chronological level to which a root belongs, and thereby to prove the Kadai origin of the root.

Despite these difficulties, it is possible to reconstruct the following system of Proto Kadai initials:



TABLE 2.7: PROTO KADAI INITIALS

|             |               |               |              |             |              |              |              |              |              |             |             |
|-------------|---------------|---------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|
| <i>*p</i>   | <i>*?b</i>    | <i>*mp</i>    | <i>*mb</i>   | <i>*m</i>   | <i>*C-m</i>  | <i>*C-?m</i> |              | <i>*f</i>    | <i>*v</i>    |             |             |
| <i>*pl</i>  |               | <i>*mpl</i>   | <i>*mbl</i>  | <i>*ml</i>  |              |              |              |              |              |             |             |
| <i>*R-p</i> |               |               | <i>*R-m</i>  |             |              |              |              |              |              |             |             |
| <i>*t</i>   | <i>*?d</i>    |               | <i>*nd</i>   | <i>*n</i>   | <i>*?n</i>   | <i>*C-n</i>  | <i>*C-?n</i> | <i>*l</i>    | <i>*C-?l</i> | <i>*s</i>   |             |
| <i>*tr</i>  | <i>*?dr</i>   | <i>*ntr</i>   | <i>*ndr</i>  |             |              |              |              | <i>*r</i>    | <i>*?r</i>   | <i>*xr</i>  | <i>*zr</i>  |
| <i>*R-t</i> | <i>*R-d</i>   |               | <i>*R-n</i>  |             |              |              |              | <i>*R-l</i>  |              | <i>*R-s</i> | <i>*R-z</i> |
|             | <i>*I-?d</i>  | <i>*I-nt</i>  | <i>*I-nd</i> | <i>*I-n</i> |              |              |              |              |              |             |             |
|             | <i>*P-?d</i>  |               | <i>*P-nd</i> |             | <i>*m-n</i>  | <i>*P-?n</i> | <i>*m-l</i>  | <i>*P-?l</i> |              |             |             |
|             | <i>*P-?dr</i> | <i>*P-ntr</i> |              |             |              |              | <i>*m-r</i>  | <i>*P-?r</i> |              |             |             |
|             |               |               |              | <i>*ɲ</i>   | <i>*C-ɲ</i>  | <i>*C-?ɲ</i> | <i>*j</i>    | <i>*?j</i>   | <i>*ʂ</i>    |             |             |
| <i>*kh</i>  | <i>*k</i>     | <i>*ɣk</i>    | <i>*ɣ</i>    | <i>*?ɣ</i>  |              |              |              |              | <i>*x</i>    |             |             |
| <i>*khr</i> |               |               |              |             |              |              |              |              |              |             |             |
| <i>*khl</i> | <i>*kl</i>    |               |              |             |              |              |              |              |              |             |             |
| <i>*khw</i> | <i>*kw</i>    |               | <i>*ɲw</i>   |             | <i>*C-ɲw</i> |              |              |              | <i>*xw</i>   | <i>*yw</i>  |             |
|             | <i>*?</i>     |               |              |             |              |              |              |              |              |             |             |

The system includes several initial clusters. In most cases I do not have sufficient evidence to reconstruct their phonological features. That is why I do not, for example, reconstruct a *\*k*-prefix instead of *\*C*, as was suggested by Edmondson and Yang (1988).

This system has been reconstructed on the basis of the following correspondences:

TABLE 2.8: PROTO KADAI INITIAL CORRESPONDENCES

|     | Proto Kd    | ZHt          | KS           | OB             | Lk            | PrL             |
|-----|-------------|--------------|--------------|----------------|---------------|-----------------|
| 1.  | <i>*p</i>   | <i>*p</i>    | <i>*p</i>    | <i>b</i>       | <i>p</i>      | <i>*f, *ph</i>  |
| 2.  | <i>*?b</i>  | <i>*?b</i>   | <i>*?b</i>   | ( <i>v</i> II) | <i>?b</i>     | <i>*?b</i>      |
| 3.  | <i>*mp</i>  | <i>*p</i>    | <i>*mp</i>   | <i>v</i> II    | <i>p</i>      | —               |
| 4.  | <i>*mb</i>  | <i>*b</i>    | <i>*mp</i>   | —              | —             | —               |
| 5.  | <i>*pl</i>  | <i>*pl</i>   | <i>*ph</i>   | <i>b</i>       | <i>phl</i>    | <i>*hl</i>      |
| 6.  | <i>*mpl</i> | <i>*pl</i>   | <i>*mpl</i>  | —              | —             | <i>*z</i>       |
| 7.  | <i>*mbl</i> | <i>*br</i>   | <i>*mpl</i>  | —              | <i>?bl</i> II | <i>*hl</i>      |
| 8.  | <i>*R-p</i> | <i>*phl</i>  | <i>*pl</i>   | —              | <i>kj</i> II  | <i>*n</i>       |
| 9.  | <i>*t</i>   | <i>*t</i>    | <i>*t</i>    | <i>d</i>       | <i>t</i>      | —               |
| 10. | <i>*?d</i>  | <i>*?d</i>   | <i>*?d</i>   | <i>l</i>       | <i>l</i>      | —               |
| 11. | <i>*nd</i>  | <i>*d</i>    | <i>*nt</i>   | <i>h</i> II    | <i>t</i> II   | —               |
| 12. | <i>*tr</i>  | <i>*r-th</i> | <i>*tr</i>   | <i>?</i>       | —             | <i>*sw, *ch</i> |
| 13. | <i>*?dr</i> | <i>*?dr</i>  | <i>*?dr</i>  | <i>l</i>       | —             | <i>*zw</i>      |
| 14. | <i>*ntr</i> | <i>*t</i>    | <i>*ntr</i>  | <i>d</i>       | —             | —               |
| 15. | <i>*ndr</i> | <i>*r-d</i>  | <i>*ntr</i>  | <i>l</i> II    | <i>t</i>      | <i>*zw</i>      |
| 16. | <i>*R-t</i> | <i>*r-t</i>  | <i>*t(r)</i> | <i>d</i>       | <i>kj</i>     | <i>*th</i>      |
| 17. | <i>*R-d</i> | <i>*r-d</i>  | <i>*?dr</i>  | <i>l</i> II    | —             | <i>*zw</i>      |

|     |        |       |              |         |          |           |
|-----|--------|-------|--------------|---------|----------|-----------|
| 18. | *I-t   | *C-t  | *t           | d       | pl       | —         |
| 19. | *I-?d  | *?d   | *?d          | l       | —        | *c        |
| 20. | *I-nt  | *C-t  | *nt          | d       | pl       | *ch       |
| 21. | *P-?d  | *P-?d | *m-?d        | l       | ?bl      | *?d       |
| 22. | *P-nd  | *P-d  | —            | d       | pl II    | *s        |
| 23. | *P-?dr | *P-?d | *?d          | (m II)  | —        | *zw       |
| 24. | *P-ntr | *P-t  | ntr          | —       | —        | *n        |
| 25. | *kh    | *x    | *kh          | —       | ? II     | *kh       |
| 26. | *k     | *k    | *k           | k, h    | k        | *kh, *h   |
| 27. | *ɣk    | *y    | *ɣk          | ɣ(?)    | —        | *h        |
| 28. | *khr   | *r-kh | *khr         | s       | j II     | *z        |
| 29. | *khl   | —     | *C-š         | kx      | kj       | *kh       |
| 30. | *kl    | *kl   | *kl          | l       | —        | *C-l      |
| 31. | *khw   | *h    | *khw         | s       | —        | *k        |
| 32. | *kw    | *kh   | *kw          | v II    | k II     | *h        |
| 33. | *?     | *?    | *?           | ?       | ?        | (*?)      |
| 34. | *m     | *m    | *m           | m II    | m II     | *m, *C-m  |
| 35. | *R-m   | *r-m  | *R-m         | m II    | m II     | *m, *C-m  |
| 36. | *C-m   | *hm   | *hm          | (n)     | —        | *m        |
| 37. | *C-?m  | *hm   | *?m          | (v II)  | k~       | *C-m      |
| 38. | *ml    | *hm   | *m-n         | —       | pl II    | —         |
| 39. | *n     | *n    | *n           | n II    | n II     | (*C-)n    |
| 40. | *R-n   | *r-n  | *R-n         | n II    | n II     | *C-n      |
| 41. | *C-n   | *hn   | *hn          | n       | kj       | *n        |
| 42. | *C-?n  | *hn   | *C-?n        | n       | kj~, ts~ | *C-n      |
| 43. | *?n    | *?d   | *?n          | l       | n, l     | *?d       |
| 44. | *m-n   | *r-n  | *m-n         | n II    | ml       | —         |
| 45. | *P-?n  | *P-?d | *C-n         | (?)     | ?b       | *C-ɲ      |
| 46. | *I-n   | *n    | *n           | s II    | —        | *c        |
| 47. | *ɲ     | *ɲ    | *ɲ           | ʒ II    | —        | *C-ɲ      |
| 48. | *C-ɲ   | *hɲ   | *hɲ          | (n)     | —        | —         |
| 49. | *C-?ɲ  | *hɲ   | *C-?ɲ, *C-?j | (ɲ)     | —        | *hɲ, *C-ɲ |
| 50. | *ɲ     | *ɲ    | (*ɲ)         | ɲ II    | ɲ II     | *C-ɲ      |
| 51. | *?ɲ    | *ɲ    | *?ɲ          | —       | —        | *?        |
| 52. | *ɲw    | *ɲw   | *m-v         | v, v II | w II     | *w        |
| 53. | *C-ɲw  | *hm   | *hɲw         | m       | kh~      | *m        |
| 54. | *l     | *l    | *l           | l II    | l II     | *hl       |
| 55. | *R-l   | *r-l  | *R-l         | l II    | (j II)   | —         |
| 56. | *C-?l  | *hl   | *khl         | l       | hj       | —         |
| 57. | *P-l   | *l    | *phl         | b       | l II     | *hl       |

|     |                       |             |                          |      |           |                       |
|-----|-----------------------|-------------|--------------------------|------|-----------|-----------------------|
| 58. | <i>*m-l</i>           | <i>*m-l</i> | <i>*C-n</i>              | –    | –         | –                     |
| 59. | <i>*r</i>             | <i>*r</i>   | <i>*r</i>                | l II | –         | <i>*r</i>             |
| 60. | <i>*ʔr</i>            | <i>*r</i>   | <i>*ʔr</i>               | l    | ? II      | –                     |
| 61. | <i>*P-ʔr</i>          | <i>*phl</i> | <i>*ʔr</i>               | s    | j         | <i>*y<sub>w</sub></i> |
| 62. | <i>*m-r</i>           | <i>*r</i>   | <i>*mpl</i>              | (ŋ)  | kj        | <i>*ɲ</i>             |
| 63. | <i>*j</i>             | <i>*j</i>   | <i>*j</i>                | –    | –         | <i>*c</i>             |
| 64. | <i>*ʔj</i>            | <i>*j</i>   | <i>*ʔj</i>               | ʒ    | (k)j      | <i>*c</i>             |
| 65. | <i>*s</i>             | <i>*s</i>   | <i>*s(h)</i>             | h    | –         | <i>*ch</i>            |
| 66. | <i>*š</i>             | <i>*s</i>   | <i>*šh</i>               | –    | –         | <i>*s</i>             |
| 67. | <i>*sr</i>            | <i>*s</i>   | <i>*C<sub>1</sub>sr</i>  | t    | –         | <i>*ch</i>            |
| 68. | <i>*zr</i>            | <i>*j</i>   | <i>*zr</i>               | ʒ    | j         | <i>*j</i>             |
| 69. | <i>*C-s</i>           | <i>*s</i>   | <i>*s(h)r</i>            | –    | khj       | –                     |
| 70. | <i>*C-z</i>           | <i>*s</i>   | <i>*C<sub>1</sub>-sr</i> | s    | kj        | <i>*r</i>             |
| 71. | <i>*x</i>             | <i>*ʔg</i>  | <i>*C<sub>2</sub>-x</i>  | k    | h, (? II) | kh                    |
| 72. | <i>*f</i>             | <i>*f</i>   | <i>*f</i>                | v II | –         | <i>*f</i>             |
| 73. | <i>*v</i>             | <i>*v</i>   | <i>*C-f</i>              | v II | p         | <i>*f</i>             |
| 74. | <i>*m-f</i>           | <i>*f</i>   | <i>*m-xw</i>             | b II | f         | <i>*f</i>             |
| 75. | <i>*xw</i>            | <i>*f</i>   | <i>*C<sub>2</sub>-xw</i> | ph   | f         | <i>*f</i>             |
| 76. | <i>*y<sub>w</sub></i> | <i>*v</i>   | –                        | b II | w II      | <i>*w</i>             |

A few examples from Peiros (1990b) are:

1. Proto Kd *\*p*: ZhT *\*p*, KS *\*p*, OB *b*, Lk *p*, PrL *\*f*  
*\*pa(:)j<sup>A</sup>* ‘to go’ [H 457; LK 172; Li 57; Ben 342]:  
 ZhT *\*pa<sup>A</sup>*: WrS *pai<sup>A</sup>*, Lz, Po *pai<sup>l</sup>* [LFK]; Saek *paj<sup>l</sup>* [M];  
 KS *\*pa:j<sup>A</sup>*: SS, SL, Ma, Mn, Tn, Ka, Mm *pa:j<sup>l</sup>*;  
 OB *boi<sup>4</sup>*;  
 Lk *pai<sup>l</sup>*;  
 PrL *\*fei<sup>l</sup>*: Bd, Xf *fei<sup>l</sup>*, Ht *pei<sup>l</sup>*, Qd, Bc, Ts *fei<sup>l</sup>*, Ym *fhei<sup>l</sup>* [LDY 527].

*\*pa:k* ‘mouth’ [H 457; Li 265; Ben 341]:  
 ZhT *\*pa:k*: WrS *pa:k*, Lz, Po *pa:k<sup>7</sup>* [LFK];  
 KS *\*pa:k*: SS, SL, Ma, Mn, Tn, Ka, Mm *pa:k<sup>7</sup>*;  
 OB *bak<sup>2</sup>*;  
 PrL *\*fa:k* > Sd *pə*.

*\*pi:k* ‘wing’:  
 ZhT *\*pi:k*: WrS *pi:k*, Lz *pi:k<sup>7</sup>* [LFK]; cf. Po *fi<sup>t8</sup>*, Saek *viat<sup>5</sup>* [M]  
 OB *bik<sup>2</sup>*;  
 PrL *\*phi:k*: Bd *phi:k<sup>7</sup>*, Xf *phik<sup>7</sup>*, Ht *phi:<sup>ʔ</sup>*, Qd *phia<sup>ʔ</sup>*, Bc *phiak<sup>7</sup>*, Ts *phia<sup>ʔ</sup>*, Ym *phi<sup>ʔ</sup>*  
 [LDY 382].

2. Proto Kd *\*ʔb*: ZhT *\*ʔb*, KS *\*ʔb*, OB (vII), Lk *ʔb*, PrL *\*ʔb*  
*\*ʔbVj<sup>A</sup>* ‘to fly’ [H 486; LK 172; Ben 394]:

ZhT *\*ʔbi<sup>A</sup>*: WrS *ʔbin<sup>A</sup>*, Lz *bin<sup>l</sup>*, Po *min<sup>l</sup>*, Saek *ʔbil<sup>l</sup>* [LFK];  
 OB *vin<sup>l</sup>*;

PrL *\*ʔbenj<sup>l</sup>*: Bd *benj<sup>l</sup>*, Xf *ben<sup>l</sup>*, Ht *bin<sup>l</sup>*, Qd *ben<sup>l</sup>*, Bc *bin<sup>l</sup>*, Ts, Ym, *ben<sup>l</sup>* [LDY 403].

◊ Lk *pon<sup>5</sup>* is irregular.

*\*ʔba:n<sup>C</sup>* ‘village’ [H 460; LK 173; Ben 416]:

ZhT *\*ʔba:n<sup>C</sup>*: WrS *ʔba:n<sup>C</sup>*, Lz *ba:n<sup>3</sup>*, Po *ma:n<sup>3</sup>* [LFK], Saek *ba:n<sup>3</sup>* [M];

KS *\*ʔba:n<sup>C</sup>*: SS, SL, Ma *ʔba:n<sup>3</sup>*, Mn *ba:n<sup>4</sup>*, Tn, Mm *ma:n<sup>3</sup>*;

Lk *ʔba:n<sup>3</sup>*.

◊ PrL *\*fan<sup>3</sup>* (Qd, Bc, Ts *fa:n<sup>3</sup>*, Ym *fuan<sup>l</sup>*) indicates initial *\*hw*.

Vn *bǎn* is can be a Kd loan.

*\*ʔbiV* ‘to pluck’ [Li 282; Ben 355]:

ZhT *\*ʔbit*: WrS *ʔbit*, Lz *bit<sup>7</sup>*, Po *mit<sup>7</sup>* [LFK];

KS *\*ʔbVt*: SS *ʔbjot<sup>7</sup>*, SL, Ma *ʔbit<sup>7</sup>*, Mn *bit<sup>8</sup>*, Tn *mit<sup>7</sup>*, Mm *mju:t<sup>7</sup>*;

*\*ʔbe:k* ‘carry on shoulder’:

ZhT *\*ʔbe:k*: WrS *ʔbe:k*, Lz *be:k<sup>7</sup>* [LFK];

PrL *\*ʔbi:k* ‘a load’: Bd *bi:k<sup>7</sup>*, Xf, Ht *bi:k<sup>7</sup>*, Qd *bia<sup>ʔ7</sup>*, Bc *biak<sup>7</sup>*, Ts *bia<sup>ʔ7</sup>*, Ym *bi<sup>ʔ7</sup>* [LDY436].

3. Proto Kd *\*mp*: ZhT *\*p*, KS *\*mp*, OB vII, Lk *p*, PrL –  
*\*mpVj<sup>A</sup>* ‘year’ [H 483; LK 172; Li 59]:

ZhT *\*pi<sup>A</sup>*: WrS *pi<sup>A</sup>*, Lz, Po *pi<sup>l</sup>* [LFK]; Saek *pi<sup>l</sup>* [M];

KS *\*mpe<sup>A</sup>*: SS *mbe<sup>l</sup>*, SL *be<sup>l</sup>*, Ma *be<sup>lA</sup>*, Mn *mbe<sup>l</sup>*, Tn *ʔbe<sup>l</sup>*, Ka *pe<sup>l</sup>*, Mm *me<sup>l</sup>*;

OB *vəi<sup>l</sup>*;

Lk *pei<sup>l</sup>*.

◊ Cf. PrL *\*mou<sup>2</sup>* [LDY 454].

4. Proto Kd *\*mb*: ZhT *\*b*, KS *\*mp*, OB –, Lk – PrL –  
*\*mbe:ŋ<sup>A</sup>* ‘expensive’ [H; LK; Li; Ben ]:

ZhT *\*be:ŋ<sup>A</sup>*: WrS *bē:ŋ<sup>A</sup>*, Lz, Po *pe:ŋ<sup>2</sup>* [LFK];

KS *\*mpig<sup>A</sup>*: SS *mbig<sup>l</sup>*, SL *big<sup>l</sup>*, Ma *big<sup>lA</sup>*, Mn *mbig<sup>l</sup>*, Mm *hmig<sup>l</sup>*.

5. Proto Kd *\*pl*: ZhT *\*pl*, KS *\*ph*, OB *b*, Lk *phl*, PrL *\*hl*, *\*pl*  
*\*pla<sup>A</sup>* ‘fish’ [H 470; LK 172]:

ZhT *\*pla<sup>A</sup>*: WrS *pla<sup>A</sup>*, Lz, Po *pja<sup>l</sup>* [LFK]; Saek *pla<sup>l</sup>* [M];

OB *ba<sup>4</sup>*;

Lk *phla<sup>l</sup>*;

PrL *\*hla<sup>l</sup>*: Bd, Xf *ta<sup>l</sup>*, Ht *da<sup>l</sup>*, Qd, Bc, Ts, Ym *ta<sup>l</sup>* [LDY 514].

◊ Ka *pa<sup>l</sup>* can be a ZhT loan

\**plVj*<sup>A</sup> ‘end’, ‘point’ [H 461; Li 58]:

ZhT \**plaj*<sup>A</sup>: WrS *plaj*<sup>A</sup>, Lz, Po *pja:i*<sup>l</sup> [LFK]; Saek *plaj*<sup>l</sup> [M];

KS \**phe*<sup>A</sup>: SL *phe*<sup>l</sup>, Ma *phe*<sup>la</sup>, Tn, Ka *phe*<sup>l</sup>;

OB *boi* [H].

6. Proto Kd \**mpl*: ZhT \**pl*, KS \**mpl*, OB –, Lk –, PrL \**z*

\**mplij*<sup>A</sup> ‘leech’:

ZhT \**plij*<sup>A</sup>: WrS *plij*<sup>A</sup>, Lz, Po *plij*<sup>l</sup> [LFK]; Saek *plij*<sup>l</sup> [M];

KS \**mplij*<sup>A</sup>: Mn *mbij*<sup>l</sup>, Tn ?*big*<sup>2</sup>, Ka *mji*<sup>2</sup>, Mm *mi*<sup>2</sup>;

PrL \**zi*<sup>l</sup>: Bd *zi*<sup>l</sup>, Xf *zen*<sup>l</sup>, Ht *zi*<sup>l</sup>, Qd, Bc, Ts *ti*<sup>4</sup>, Ym *cen*<sup>4</sup> [LDY 445].

<> Ma *pi*<sup>l</sup> can be a ZhT loan. Cf. Khmer *ghlaəŋ* ‘leech’ with a possible Mon-Khmer etymology.

7. Proto Kd \**mb*: ZhT \**br*, KS \**mpl*, OB –, Lk ?*bl* II, PrL \**hl*

\**mb**la*(:)*u*<sup>A</sup> ‘evening meal’ [Li 137]:

ZhT \**brau*<sup>A</sup>: WrS *brau*<sup>A</sup>, Lz *pjau*<sup>2</sup>, Po *šau*<sup>2</sup> [LFK];

KS \**mpla:u*<sup>A</sup>: SL *mja:u*<sup>l</sup>, Ma *bja:u*<sup>la</sup>, Tn ?*ba:u*<sup>2</sup>;

Lk ?*blau*<sup>2</sup> ~ ?*bau*<sup>l</sup>.

\**mbli:N*<sup>A</sup> ‘to wake up’:

Lk ?*blen*<sup>2</sup>;

PrL \**hli:n*<sup>l</sup>: Bd *ti:n*<sup>l</sup>, Xf *ti*<sup>l</sup>, Ht *di:n*<sup>l</sup>, Qd, Ts *ti:n*<sup>l</sup>, Ym *ti*<sup>l</sup> [LDY 503].

8. Proto Kd \**R-p*: ZhT \**phl*, KS \**pl*, OB –, Lk *kj* II, PrL \**n*

\**R-pVm*<sup>A</sup> ‘hair’ [H 506; LK 171; Li 79; Ben 307]:

ZhT \**phlom*<sup>A</sup>: WrS *phom*<sup>A</sup>, Lz *phjum*<sup>l</sup>, Po *pjom*<sup>l</sup> [LFK];

KS \**plam*<sup>A</sup>: SS, SL, Ma, Mn *pjam*<sup>l</sup>, Tn *pem*<sup>l</sup>, Ka *pjam*<sup>l</sup>, Mm *pyam*<sup>l</sup>;

Lk *kjom*<sup>2</sup>.

PrL \**nom*<sup>l</sup>: Ht *nom*<sup>l</sup> [LDY 488]. Cf. PrL \**rom*<sup>l</sup> : Xf *rom*<sup>l</sup> [LDY 488].

9. Proto Kd \**t*: ZhT \**t*, KS \**t*, OB *d*, Lk *t*, PrL (\**th*)

\**tap* ‘liver’ [H 481; LK 172; Li 286; Ben 332]:

ZhT \**tap*: WrS *tap*, Lz, Po *tap*<sup>7</sup> [LFK]; Saek *tap*<sup>4</sup> [M];

KS \**tap*: SS, SL, Ma, Mn, Tn, Ka, Mm *tap*<sup>7</sup>;

OB *dop*<sup>2</sup>;

Lk *tap*<sup>7</sup>.

10. Proto Kd \**?d*: ZhT \**?d*, KS \**?d*, OB *l*, Lk *l*, PrL –

\**?daj*<sup>C</sup> ‘to get’ [H 459; LK 173; Li 230]:

ZhT \**?daj*<sup>C</sup>: WrS ?*dai*<sup>C</sup>, Lz *dai*<sup>3</sup>, Po *nai*<sup>3</sup> [LFK]; Saek *day*<sup>3</sup> [M];

KS \**?daj*<sup>C</sup>: SS, SL, Ma ?*dai*<sup>3</sup>, Mn *dai*<sup>4</sup>, Tn *lai*<sup>3</sup>, Ka *li*<sup>3</sup>, Mm *lai*<sup>3</sup>;

OB *lai*<sup>2</sup> [Hansell 1988:257];

Lk *li*<sup>3</sup>.

11. Proto Kd \**nd*: ZhT \**d*, KS \**nt*, OB *h* II, Lk *t* II, PrL –

\**ndam*<sup>A</sup> ‘pond’ [Li 85]:

ZhT > Po *tam*<sup>2</sup> [LFK]; Lz *thum*<sup>1</sup> is irregular;

KS \**ntam*<sup>A</sup>: SS *ndam*<sup>1</sup>, SL *dam*<sup>1</sup>, Ma *dam*<sup>1a</sup>, Mn *ndam*<sup>1</sup>, Tn ?*dam*<sup>1</sup>, Ka *tam*<sup>1</sup>, Mm *hlam*<sup>1</sup>;  
OB *hom*<sup>1</sup>;

Lk *tam*<sup>2</sup>.

\**ndau*<sup>A</sup> ‘aquatic moss’:

ZhT \**dau*<sup>A</sup>: WrS *dau*<sup>A</sup>, Nung *tan*<sup>2</sup>, Po *tau*<sup>2</sup> [LFK];

KS \**ntau*<sup>A</sup>: Ma *dau*<sup>1a</sup>, Tn ?*dau*<sup>1</sup>, Ka *tau*<sup>1</sup>.

<> Cf. Middle Chinese *daj* ‘id.’

12. Proto Kd \**tr*: ZhT \**r-th*, KS \**tr*, OB ?, Lk –, PrL \**sw*, \**ch*

\**trau*<sup>A</sup> ‘louse’ [H 523; Li 86; Ben 334]:

ZhT \**r-thau*<sup>A</sup>: WrS *hau*<sup>A</sup>, Lz *hau*<sup>1</sup>, Tho *thau*<sup>1</sup>, Po *lau*<sup>1</sup> [LFK]; Saek *raw*<sup>2</sup> [M]

KS \**triu*<sup>A</sup>: SS, SL *tu*<sup>1</sup>, Ma *təu*<sup>1</sup>, Mn *tu*<sup>1</sup>, Tn *tiu*<sup>1</sup>, Ka *ta:u*<sup>1</sup>, Mm *khyl*<sup>1</sup>;

PrL \**swau*<sup>1</sup>: Bd, Xf *fou*<sup>1</sup>, Ht, Qd, Bc *chou*<sup>1</sup>, Ym *fhou*<sup>1</sup> [LDY 488].

\**tra:p* ‘to carry on a pole’ [H 477; Li 268]:

ZhT \**r-tha:p*: WrS *ha:p*, Lz *ha:p*<sup>7</sup>, Tho *tha:p*<sup>7</sup>, Po *la:p*<sup>7</sup> [LFK], Saek *ra:p*<sup>2</sup> [M];

KS \**tra:p*: SS, SL, Ma, Mn, Tn, Ka *ta:p*<sup>7</sup>, Mm *kya:p*<sup>7</sup>;

OB *hap*<sup>2</sup>;

PrL \**cha:p* ‘yoke, carrying pole’: Bd, Xf, Ht, Qd, Bc, Ts, *cha:p*<sup>7</sup> [LDY 485].

\**trak* ‘to break’, ‘be broken’ [Ben 241]:

ZhT \**r-thak*: WrS *te:k*, Lz *phe:k*<sup>7</sup>, Po *te:k*<sup>7</sup> [LFK]

KS \**t(r)ak*: SS, SL, Ma, Tn, Ka *tak*<sup>7</sup>;

OB *dak*<sup>2</sup> [Han 262];

PrL \**chVk*: Bd *cho:k*<sup>7</sup>, Sd *syc*.

13. Proto Kd \**dr*: ZhT \**dr*, KS \**dr*, OB *l*, Lk –, PrL \**zw*

\**drVk* ‘bone’ [H 489; LK 268; Ben 238]:

ZhT \**dru(:)k*: WrS *kra-?dru:k*, Lz *duk*<sup>7</sup>, Po *no:k*<sup>7</sup> [LFK]; Saek *ro:k*<sup>6</sup> [M];

KS \**dr[ɑ:]k*: SS *la:k*<sup>7</sup>, SL ?*da:k*<sup>7</sup>, Ma ?*do:k*<sup>7</sup>, Mn *da:k*<sup>8</sup>, Tn *za:k*<sup>7</sup>, Ka *la:k*<sup>7</sup>, Mm *hya:k*<sup>7</sup>;

OB *lək*<sup>2</sup> ‘marrow’;

PrL \**zwi:k*: Bd *vi:k*<sup>7</sup>, Xf *yik*<sup>7</sup>, Ht *ri*<sup>7</sup>, Qd *fiə*<sup>8</sup>, Bc, Ts *fi*<sup>8</sup>, Ym *fik*<sup>8</sup> [LDY 412].

14. Proto Kd \**ntr*: ZhT \**t*, KS \**ntr*, OB *d*, Lk –, PrL –

\**ntram*<sup>B</sup> ‘low’ [H 482; Li 178]:

ZhT \**tam*<sup>B</sup>: WrS *tam*<sup>B</sup>, Lz, Po *tam*<sup>5</sup> [LFK]; Saek *tam*<sup>6</sup> [M];

KS \**ntram*<sup>B</sup>: SS *dam*<sup>5</sup>, SL *ndam*<sup>5</sup>, Ma *dam*<sup>5</sup>, Mn *djam*<sup>6</sup>, Tn *zam*<sup>5</sup>, Ka *tam*<sup>5</sup>, Mm *hyam*<sup>5</sup>;

OB *dom*<sup>2</sup>.

15. Proto Kd \**ndr*: ZhT \**r-d*, KS \**ntr*, OB / II, Lk *t*, PrL \**zw*  
 \**ndra*(:)*u*<sup>A</sup> ‘we (incl.)’:  
 ZhT \**[r-d]au*<sup>A</sup>: WrS *rau*<sup>A</sup>, Lz, Po *lau*<sup>2</sup> [LFK]; Saek *ru*<sup>A</sup> [M];  
 KS \**ntra*:*[u]*<sup>A</sup>: SS *nda*:*u*<sup>1</sup>, Ma *da*<sup>1a</sup>, Mn *nda*:*u*<sup>1</sup>, Tn *za*:*u*<sup>1</sup>, Ka *ta*:*u*<sup>1</sup>, Mm *hya*:*u*<sup>1</sup>;  
 Lk *tau*<sup>1</sup>;  
 PrL \**zwau*<sup>1</sup>: Xf *fau*<sup>1</sup>, Ht *rou*<sup>1</sup>, Qd *fau*<sup>1</sup>, Bc *fou*<sup>1</sup>, Ts *fau*<sup>1</sup>, Ym *fəi*<sup>7</sup> (irreg.) [LDY 495].
16. Proto Kd \**R-t*: ZhT \**r-t*, KS \**t*(*r*), OB *d*, Lk *kj*, PrL \**th*  
 \**R-tot* ‘fart’ [H 505; LK 178; Li 287]:  
 ZhT \**r-tot*: WrS *tot*, Nung *tat*<sup>7</sup>, Po *lot*<sup>7</sup> [LFK];  
 KS \**t*(*r*)*ut*: SL *tət*<sup>7</sup>, Ma *tut*<sup>7</sup>, Tn *tet*<sup>7</sup>, Ka *tət*<sup>7</sup>;  
 OB *du*<sup>2</sup>;  
 Lk *kjo*:*t*<sup>7</sup>;  
 PrL \**thu*:*t*<sup>7</sup>: Bd *thu*:*t*<sup>7</sup>, Xf *thut*<sup>7</sup>, Ht, Qd, Bc, Ts *thu*:*t*<sup>7</sup>, Ym *thut*<sup>7</sup> [LDY 458].
17. Proto Kd \**R-d*: ZhT \**r-d*, KS \**?dr*, OB / II, Lk –, PrL \**zw*  
 \**R-dia*<sup>A</sup> ‘boat’ [H 516; Ben 237]:  
 ZhT \**r-dia*<sup>A</sup>: WrS *ria*, Lz *lɿ*<sup>2</sup>, Po *lu*<sup>2</sup> [LFK];  
 KS \**?dria*<sup>A</sup>: SS, Ma *?dwa*<sup>1</sup>, Tn *zja*<sup>1</sup>, Ka *lo*<sup>1</sup>;  
 OB *lua*<sup>1</sup>  
 PrL \**zwa*<sup>1</sup>: Bd *va*<sup>1</sup>, Xf *ya*<sup>1</sup>, Ht *ra*<sup>1</sup>, Qd *fā*<sup>4</sup> [LDY 385]
18. Proto Kd \**I-t*: ZhT \**C-t*, KS \**t*, OB *d*, Lk *pl*, PrL –  
 \**I-ta*(:)*j*<sup>A</sup> ‘to die’ [H 518; LK 172; Li 62; Ben 283]:  
 ZhT \**C-ta*:*j*<sup>A</sup>: WrS *ta*:*i*<sup>A</sup>, Lz *ha*:*i*<sup>1</sup>, Po *ta*:*i*<sup>1</sup>, Wm *ra*:*i*<sup>1</sup> [LFK]; Saek *pra*:*j*<sup>1</sup> – *tsa*:*j*<sup>1</sup> [M]  
 KS \**taj*<sup>A</sup>: SS, SL, Ma, Mn, Tn, Ka, Mm *tai*<sup>1</sup>;  
 OB *da*<sup>4</sup>;  
 Lk *plɛ*<sup>1</sup>.
19. Proto Kd \**I-?d*: ZhT \**?d*, KS \**?d*, OB *l*, Lk –, PrL \**c*  
 \**I-?dVp* ‘to extinguish’ [Li 290]:  
 ZhT \**?dap*: WrS *?dap*, Lz *dap*<sup>7</sup>, Po *nap*<sup>7</sup>, Saek *?dap*<sup>7</sup> [LFK];  
 KS \**?dap*: SL, Ma *?dap*<sup>7</sup>, Ka *lap*<sup>7</sup>;  
 OB *lap*<sup>2</sup> [Han 257];  
 PrL \**cVp*: Bd *cop*<sup>7</sup>, Xf *cap*<sup>7</sup>, Qd *cap*<sup>7</sup>, Bc *cep*<sup>8</sup>, Ts *cop*<sup>7</sup>, Ym *tap*<sup>7</sup> [LDY 496];  
 cf. \**[z]op* ‘id.’: Bd, Xf *rop*<sup>7</sup>, Ht *zop*<sup>7</sup> [LDY 496].
20. Proto Kd \**I-nt*: ZhT \**C-t*, KS \**nt*, OB *d*, Lk *pl*, PrL \**ch*  
 \**I-nta*<sup>A</sup> ‘eye’ [H 470; LK 172; Li 69; Ben 283]:  
 ZhT \**C-ta*<sup>A</sup>: WrS *ta*<sup>A</sup>, Lz *ta*<sup>1</sup>, Po *ta*<sup>1</sup>, Wm *ra*<sup>1</sup>, Saek *pra*<sup>1</sup> [LFK];  
 KS \**nta*<sup>A</sup>: SS *nda*<sup>1</sup>, SL *da*<sup>1</sup>, Ma *da*<sup>1a</sup>, Mn *nda*<sup>1</sup>, Tn *?da*<sup>1</sup>, Ka *ta*<sup>1</sup>, Mm *hla*<sup>1</sup>;  
 OB *da*<sup>4</sup>;

Lk *pla*<sup>1</sup>;

PrL *\*cha*<sup>1</sup>: Bd, Xf, Ht, Qd, Bc, Ts, Ym *cha*<sup>1</sup> [LDY 507].

21. Proto Kd *\*P-ʔd*: ZhT *\*P-ʔd*, KS *\*m-ʔd*, OB I, Lk *ʔbl*, PrL *\*ʔd*

*\*P-ʔdV(j)ʔ* ‘bile’ [Li 173]:

ZhT *\*P-ʔdVj<sup>A</sup>*: WrS *ʔdi<sup>A</sup>*, Lao *ʔbi<sup>l</sup>*, Lz *di<sup>l</sup>*, Po *ni<sup>l</sup>*, Wm *ʔboi<sup>l</sup>* [LFK];

KS *\*m-ʔdo<sup>B</sup>*: SL *ʔdo<sup>5</sup>*, Mn *dɔ<sup>6</sup>*, Ta *lo<sup>5</sup>*, Ka *po<sup>5</sup>*, Mm *mɣɔ<sup>5</sup>* [Strecker 1988:116];

OB *lo<sup>ʔ</sup>*, *da<sup>ʔ</sup>*;

Lk *ʔblai<sup>l</sup>*;

PrL *\*ʔdai<sup>l</sup>*: Bd, Xf, Ht, Qd, Bc, Ts, Ym *dai<sup>l</sup>* [LDY 391].

22. Proto Kd *\*P-d*: ZhT *\*P-d*, KS –, OB *d*, Lk *pl* II, PrL *\*s*

*\*P-dau<sup>B</sup>* ‘ashes’ [H 522; LK 172; Ben 223]:

ZhT *\*P-dau<sup>B</sup>*: WrS *dau<sup>B</sup>*, Lz *pja<sup>6</sup>*, Po *tau<sup>6</sup>* [LFK];

OB *dou<sup>3</sup>*;

Lk *pleu<sup>4</sup>*;

PrL *\*sau<sup>3</sup>*: Bd *tau<sup>3</sup>*, Xf *sau<sup>3</sup>*, Ht *tou<sup>3</sup>*, Qd, Bc, Ts *tau<sup>3</sup>*, Ym *chau<sup>3</sup>* [LDY 379].

23. Proto Kd *\*P-ʔdr*: ZhT *\*P-ʔd*, KS *\*ʔd*, OB (*m* II), Lk –, PrL *\*zw*

*\*P-ʔdrVj<sup>A</sup>* ‘navel’ [Li 65]:

ZhT *\*P-ʔdj<sup>A</sup>*: WrS *sa-ʔdj<sup>A</sup>*, Lao *ʔbi<sup>l</sup>*, Nung *ʔdi<sup>l</sup>*, Po *ni<sup>l</sup>* [LFK];

KS *\*ʔdV<sup>A</sup>*: SS *ʔdwa<sup>l</sup>*, SL *ʔda<sup>l</sup>*, Ma *ʔdwa<sup>l</sup>*, Mn *do<sup>2</sup>*, Tn *lja<sup>l</sup>*, Ka *ljo<sup>l</sup>*, Mm *lwa<sup>l</sup>*;

possibly: OB *ma<sup>l</sup>*;

PrL *\*zwei<sup>l</sup>*: Bd *vei<sup>l</sup>*, Xf *yei<sup>l</sup>*, Ht *rei<sup>l</sup>*, Qd, Bc, Ts *fei<sup>ʔ</sup>*, Ym *fhei<sup>2</sup>* (irreg. tone) [LDY 398].

24. Proto Kd *\*P-ntr*: ZhT *\*P-t*, KS *\*ntr*, OB –, Lk –, PrL *n*

*\*P-ntrak* ‘grasshopper’ [Li 289]:

ZhT *\*[P-t]jak*: WrS *tak-*, Thai *thak<sup>7</sup>*, Po *tak<sup>7</sup>*, Wm *rak<sup>7</sup>* [LFK];

KS *\*ntriak*: SS *ndjak<sup>7</sup>*, SL *djak<sup>7</sup>*, Ma *dak<sup>7</sup>*, Mn *djak<sup>8</sup>*, Tn *zjak<sup>7</sup>*, Ka *tjak<sup>7</sup>*, Mm *hyak<sup>8</sup>*;

PrL *\*ni:k*: Ht *ni:ʔ*, Qd *thia<sup>ʔ8</sup>*, Bc, Ts *ti:ʔ8*, Ym *ti<sup>ʔ8</sup>* [LDY 517].

25. Proto Kd *\*kh*: ZhT *\*x*, KS *\*kh*, OB –, Lk *ʔ* II, PrL *kh*

*\*kh(i)a:m<sup>C</sup>* ‘cross, step across’ [LK 171; Li 51]:

ZhT *\*xa:m<sup>C</sup>*: WrS *kha:m<sup>C</sup>*, Lz *kha:m<sup>3</sup>*, Po *ha:m<sup>3</sup>* [LFK];

KS *\*khia:m<sup>C</sup>*: SS, SL, Ma *sa:m<sup>3</sup>*, Mn *sja:m<sup>3</sup>*, Tn *thja:m<sup>3</sup>*, Mm *tsha:m<sup>3</sup>*;

Lk *ʔa:m<sup>4</sup>*;

*\*kha:u<sup>A</sup>* ‘white’ [H 523]:

ZhT *\*xa:u<sup>A</sup>*: WrS *kha:u<sup>A</sup>*, Lz *kha:u<sup>l</sup>*, Po *ha:u<sup>l</sup>* [LFK];

PrL *\*kha:u<sup>l</sup>*: Bd, Xf, Ht, Qd, Bc, Ts, Ym *kha:u<sup>l</sup>* [LDY 368].



26. Proto Kd \*k: ZhT \*k, KS \*k, OB k, h, Lk k, PrL \*kh, \*h  
 \*ko:n<sup>B</sup> ‘first, beforehand’ [Li 184]:  
 ZhT \*ko:n<sup>B</sup>: WrS ko:n<sup>B</sup>, Lz, Po ko:n<sup>5</sup> [LFK]; Saek ko:n<sup>6</sup> [M];  
 KS \*kun<sup>B</sup>~ \*krun<sup>B</sup>: SS, SL kon<sup>5</sup>, Ma kun<sup>5</sup>, Mn, Tn ku:n<sup>5</sup>, Ka ?un<sup>5</sup>, Mm kun<sup>5</sup>;  
 PrL \*hu:n<sup>2</sup>: Bd hu:n<sup>2</sup>, Ht hu:n<sup>2</sup>, Ts hu:n<sup>5</sup> [LDY 498]  
 or \*khu:n<sup>2</sup>: Bd khu:n<sup>2</sup>, Xf khuŋ<sup>2</sup>, Ht khu:n<sup>2</sup>, Qd, Bc khu:n<sup>5</sup>, Ym khun<sup>5</sup> [LDY 498].
- \*kVu<sup>A</sup> ‘I’ [H 457]:  
 ZhT \*kVu<sup>A</sup>: WrS ku<sup>A</sup>, Lz kau<sup>1</sup>, Po ku<sup>1</sup> [LFK];  
 OB hau<sup>4</sup>;  
 PrL \*hou<sup>1</sup>: Bd, Xf, Ht, Qd, Bc, Ts hou<sup>1</sup>, Ym hou<sup>7</sup> (irreg.) [LDY 495].
27. Proto Kd \*ɣk: ZhT \*ɣ, KS \*ɣk, OB ɣ (?), Lk –, PrL \*h  
 \*ɣka:ɣ<sup>A</sup> ‘chin’ [H 473; Li 159; Ben 321]:  
 ZhT \*ɣa:ɣ<sup>A</sup>: WrS ga:ɣ<sup>A</sup>, Lz ka:ɣ<sup>1</sup>, Po ha:ɣ<sup>1</sup> [LFK];  
 KS \*ɣka:ɣ<sup>A</sup>: SL Ra:ɣ<sup>1</sup>, Ma ga:ɣ<sup>1a</sup>, Tn ?a:ɣ<sup>1</sup>, Ka la:ɣ<sup>2</sup>;  
 OB ngáng [H].  
 PrL \*he:ɣ<sup>1</sup>: Bd, Xf he:ɣ<sup>1</sup>, Ht ha:ɣ<sup>1</sup>, Qd, Bc, Ts, Xhe:ɣ<sup>1</sup>, Ym hiaŋ<sup>1</sup> [LDY 498].
28. Proto Kd \*khr: ZhT \*r-kh, KS \*khr, OB s, Lk j II, PrL \*z  
 \*r-khV<sup>A</sup> ‘ear’ [H 488; Lk 177]  
 ZhT \*r-khV<sup>A</sup>: WrS hu<sup>A</sup>, Lz hu<sup>1</sup>, Nung khiu<sup>1</sup>, xu<sup>1</sup>, Po i<sup>2</sup> [LFK]  
 KS \*khra<sup>A</sup>: SS, SL qha<sup>1</sup>, Ma thja<sup>1a</sup>, Mn, Tn, Ka kha<sup>1</sup>, Mm khya<sup>1</sup>;  
 OB sa<sup>4</sup>;  
 Lk ja<sup>2</sup>;  
 PrL \*zai<sup>1</sup>: Bd, Xf, Ht zai<sup>1</sup>, Qd, Bc, Ts ʔai<sup>4</sup>, Ym cai<sup>4</sup> [LDY 400].
29. Proto Kd \*khl: ZhT –, KS \*C-š, OB kx, Lk kj, PrL \*kh  
 \*khla(i)<sup>C</sup> ‘easy’ [LK 178]:  
 KS \*C-ša<sup>C</sup>: SS, SL za<sup>3</sup>, Tn ?za<sup>4</sup>, Mm ca<sup>3</sup> [Li 48];  
 OB kxo<sup>2</sup>;  
 Lk kje<sup>3</sup>;  
 PrL \*khai<sup>3</sup>: Bd khai<sup>3</sup>, Xf khei<sup>3</sup>, Ht, Qd, Bc, Ts, Ym khai<sup>3</sup> [LDY 463].
30. Proto Kd \*kl: ZhT \*kl, KS \*kl, OB l, Lk –, PrL \*C-l  
 \*klVj<sup>A</sup> ‘far’ [H 520]:  
 ZhT \*klaj<sup>A</sup>: WrS klai<sup>A</sup>, Lz kwa<sup>1</sup>, Po čai<sup>1</sup> [LFK];  
 KS \*klVj<sup>A</sup>: Ma tʃəi<sup>1</sup>, Mn ci<sup>1</sup>, Tn ke<sup>1</sup>, Ka ka:i<sup>1</sup>, Mm ce<sup>1</sup>;  
 OB loj<sup>4</sup>;  
 PrL \*C-lai<sup>1</sup>: Bd, Xf, Ht lai<sup>1</sup>, Qd la<sup>4</sup>, Bc, Ts lai<sup>1</sup>, Ym lai<sup>4</sup> [LDY 515].

31. Proto Kd *\*khw*: ZhT *\*h*, KS *\*khw*, OB *s*, Lk –, PrL *\*k*  
*\*khwVn<sup>A</sup>* ‘road’ [Li 101]:  
 ZhT *\*hoN<sup>A</sup>*: WrS *hon<sup>A</sup>*, Po *hɔn<sup>l</sup>*, Wm *hon<sup>l</sup>* [LFK];  
 KS *\*khwVn<sup>A</sup>*: SS *khwən<sup>l</sup>*, SL *khun<sup>l</sup>*, Ma *khun<sup>lA</sup>*, Mn *khun<sup>l</sup>*, Tn *khen<sup>l</sup>*, Ka, Mm  
*khwən<sup>l</sup>*;  
 OB *sun<sup>l</sup>*;  
 PrL *\*ku:n<sup>l</sup>*: Bd *ku:n<sup>l</sup>*, Xf *kuŋ<sup>l</sup>*, Ht, Qd, Bc, Ts *ku:n<sup>l</sup>*, Ym *kun<sup>5</sup>* (irreg.) [LDY 443].
32. Proto Kd *\*kw*: ZhT *\*kh*, KS *\*kw*, OB *v* II, Lk *k* II, PrL *\*h*  
*\*kwa(:)u<sup>A</sup>* ‘horn’ [H 522; LK 171; Li 105]:  
 ZhT *\*khau<sup>A</sup>*: WrS *khau<sup>A</sup>*, Po *kau<sup>l</sup>* [LFK];  
 KS *\*kwa:u<sup>A</sup>*: SS *qa:u<sup>l</sup>*, SL *pa:u<sup>l</sup>*, Ma *ka:u<sup>l</sup>*, Mn *ŋa:u<sup>l</sup>* (with irreg. init.), Tn *pa:u<sup>2</sup>*,  
 Ka *pa:u<sup>l</sup>*, Mm *ku<sup>l</sup>*;  
 OB *vau<sup>l</sup>*;  
 Lk *kou<sup>2</sup>*;  
 PrL *\*hau<sup>l</sup>*: Bd, Ht, Qd, Ts, Xf, Bs *hau<sup>l</sup>* [LDY 427].
33. Proto Kd *\*ʔ*: ZhT *\*ʔ*, KS *\*ʔ*, OB *ʔ*, Lk *ʔ*, PrL *\*ʔ*  
*\*ʔo:k* ‘to go out’ [H 509; Li 280]:  
 ZhT *\*ʔo:k*: WrS *ʔo:k*, Lz, Po *ʔo:k<sup>7</sup>* [LFK];  
 KS *\*ʔu:k*: SS, SL, Ma, Mn *ʔuk<sup>7</sup>*, Tn, Ka *ʔu:k<sup>7</sup>*, Mm *ʔuk<sup>7</sup>*;  
 OB *ʔuk<sup>2</sup>*;  
 Lk *ʔuk<sup>7</sup>*.
34. Proto Kd *\*m*: ZhT *\*m*, KS *\*m*, OB *m* II, Lk *m* II, PrL *\*m*, *\*C-m*  
*\*maN<sup>A</sup>* ‘yam’, ‘potato’ [H 481; Li 127]:  
 ZhT *\*maN<sup>A</sup>*: WrS *man<sup>A</sup>*, Lz, Po *man<sup>2</sup>* [LFK];  
 KS *\*man<sup>A</sup>*: SS, SL, Ma, Mn, Tn, Ka, Mm *man<sup>2</sup>*;  
 OB *man<sup>l</sup>* [Hansell 1988:251];  
 PrL *\*C-mVn<sup>l</sup>*: Bd *man<sup>l</sup>*, Xf, Bs *maŋ<sup>l</sup>*, Qd *muaj<sup>l</sup>*, Bc, Ts *mu:ŋ<sup>l</sup>*, Ym *man<sup>l</sup>* [LDY 407].
- \*mVm<sup>B</sup>* ‘beard’, ‘moustache’ [H 492; Ben 308]:  
 ZhT *\*mum<sup>B</sup>*: Lz, Po *mun<sup>6</sup>* [LFK];  
 OB *mum<sup>3</sup>*;  
 PrL *\*mi:m<sup>3</sup>*: Bd *pi:m<sup>3</sup>*, Xf *pum<sup>2</sup>* (irreg. tone), Ht *mi:m<sup>3</sup>*, Qd *phu:n<sup>6</sup>*, Bc, Ts *pi:n<sup>6</sup>*, Ym  
*pi:n<sup>6</sup>* [LDY 418].
- \*m[ai]<sup>A</sup>* ‘you’ [H 525]  
 ZhT *\*m[ai]<sup>A</sup>* ~ *\*miŋ<sup>A</sup>*: WrS *miŋ<sup>A</sup>*, Shan *mi<sup>2</sup>*, Lz *ma<sup>2</sup>*, Po *miŋ<sup>2</sup>* [LFK];  
 OB *mə<sup>2</sup>*;  
 Lk *ma<sup>2</sup>*;  
 PrL *\*mei<sup>l</sup>*: Bd, Xf *mei<sup>l</sup>*, Ht *mi<sup>l</sup>*, Qd *mei<sup>4</sup>*, Bc, Ts *mei<sup>l</sup>*, Ym *mei<sup>8</sup>* (irreg.) [LDY 453].

35. Proto Kd \*R-m: ZhT \*r-m, KS \*R-m, OB m II, Lk m II, PrL \*C-m  
 \*R-mV<sup>i</sup>A ‘hand’ [H 465; LK 174; Li 146; Ben 220]:  
 ZhT \*r-m<sup>i</sup>A: WrS m<sup>i</sup>A, Lz m<sup>i</sup>2, Po fiŋ<sup>3</sup> [LFK];  
 KS \*R-m<sup>i</sup>A: SS, SL mja<sup>l</sup>, Ma mi<sup>l</sup>a, Tn, Ka mja<sup>2</sup>, Mm nja<sup>2</sup>;  
 OB mo<sup>l</sup>;  
 Lk mie<sup>2</sup>;  
 PrL \*C-me<sup>i</sup>l: Bd, Xf, Ht me<sup>i</sup>l, Qd me<sup>i</sup>4, Bc, Ts me<sup>i</sup>l, Ym me<sup>i</sup>4 [LDY 476].
36. Proto Kd \*C-m: ZhT \*hm, KS \*hm, OB (n), Lk –, PrL m  
 \*hmV(i)<sup>A</sup> ‘to come’ (H 465; Li 147)  
 ZhT \*ma ~ \*hma<sup>A</sup>: WrS ma<sup>A</sup>, Lz ma<sup>2</sup>, Po ma<sup>l</sup>[LFK]  
 KS \*hma<sup>A</sup>: SL hma<sup>l</sup>, Ma ma<sup>l</sup>a, Mn, Tn ma<sup>l</sup>, Ka, Mm hma<sup>l</sup>;  
 OB nia<sup>4</sup>.  
 PrL \*mV<sup>i</sup>l: Bd pe<sup>i</sup>l; Hi me<sup>i</sup>l, Qd phe<sup>i</sup>4; Ts pai<sup>4</sup>; Ym pai<sup>l</sup> [LDY 432]
37. Proto Kd \*C-?m: ZhT \*hm, KS \*?m, OB (v II), Lk k~, PrL \*C-m  
 \*C-?mV<sup>j</sup>A ‘k.o. bear’ [H 484; Li 174]:  
 ZhT \*hmV<sup>j</sup>A: WrS hmi<sup>A</sup>, Lz mi<sup>l</sup>, Po mu:i<sup>l</sup>[LFK];  
 KS \*?mV<sup>j</sup>A ~ \*hmoj<sup>A</sup>: SS ?mi<sup>l</sup>, Ma mui<sup>l</sup>a, Mn moi<sup>l</sup>, Tn mi<sup>2</sup> (irreg. tone), Ka me<sup>l</sup>,  
 Mm me<sup>l</sup>;  
 OB vui<sup>l</sup>;  
 Lk kui<sup>l</sup>;  
 PrL \*C-mui<sup>l</sup>: Bd, Xf, Ht mui<sup>l</sup>, Qd mu<sup>r</sup>4, Bc, Ts, mui<sup>l</sup>, Ym mou<sup>4</sup> [LDY 504].
38. Proto Kd \*ml: ZhT \*hm, KS \*m-n, OB –, Lk pl II, PrL –  
 \*mluat ‘beard’ [H 503; LK 302; Ben 289]:  
 ZhT \*hmuat > WrS hmuat [LFK];  
 KS \*m-n(i)u:t. SS, SL nju<sup>t</sup>8, Ma nut<sup>8</sup>, Mn ju:t<sup>8</sup>, Tn nu:t<sup>7</sup>, Ka mu:t<sup>7</sup>, Mm mut<sup>8</sup>;  
 Lk plu:t<sup>8</sup>.
39. Proto Kd \*n: ZhT \*n, KS \*n, OB n II, Lk n II, PrL (\*C-)n  
 \*no(:)ŋ<sup>C</sup> ‘child’ [H 509; LK 174]:  
 ZhT \*n[(:)ŋ<sup>C</sup>: WrS no:ŋ<sup>4</sup>, Lz no:ŋ<sup>4</sup>, Po nu:ŋ<sup>4</sup> [LFK];  
 KS \*noŋ<sup>C</sup>: Mn, Tn nuŋ<sup>4</sup>, Ka noŋ<sup>4</sup>, Mm nuŋ<sup>4</sup>;  
 Lk nuŋ<sup>4</sup>;  
 PrL \*C-nOŋ<sup>2</sup> > Xf, Bs noŋ<sup>2</sup> [LDY 394].
40. Proto Kd \*R-n: ZhT \*r-n, KS \*R-n, OB n II, Lk n II, PrL \*C-n  
 \*R-nam<sup>C</sup> ‘water’ [H 482; LK 174; Li 260]:  
 ZhT \*r-nam<sup>C</sup>: WrS nam<sup>C</sup>, Lz nan<sup>4</sup>, Po lam<sup>4</sup> Wm ram<sup>4</sup> [LFK];  
 KS \*R-nam<sup>C</sup>: SS nam<sup>3</sup>, SL jiam<sup>3</sup> (with irreg. init.), Ma, Mn nam<sup>3</sup>, Tn, Ka nam<sup>4</sup>,  
 Mm nəm<sup>4</sup>;  
 OB nam<sup>3</sup>;

Lk *num*<sup>4</sup>;

PrL \**C-nom*<sup>3</sup>: Bd *nom*<sup>3</sup>, Xf *nam*<sup>3</sup>, Ht *nom*<sup>3</sup>, Qd *nam*<sup>6</sup>, Bc, Ts *nam*<sup>3</sup>, Ym *nam*<sup>6</sup> [LDY 479].

41. Proto Kd \**C-n*: ZhT \**hn*, KS \**hn*, OB *n*, Lk *kj*, PrL \**n*

\**C-n(i)u*<sup>T</sup> ‘rat’ [H 488; LK 175; Li 168]:

ZhT \**hnu*<sup>A</sup>: WrS *hnu*<sup>A</sup>, Lz, Po *nu*<sup>l</sup> [LFK];

KS \**hno*<sup>C</sup>: SS, SL *hno*<sup>3</sup>, Ma *no*<sup>3</sup>, Mn *no*<sup>3</sup>, Tn *no*<sup>3</sup>, Ka *hno*<sup>3</sup>, Mm *hno*<sup>3</sup>;

OB *nu*<sup>4</sup>;

Lk *kji:u*<sup>3</sup>;

PrL \**niu*<sup>l</sup>: Bd, Xf *tiu*<sup>l</sup>, Ht *niu*<sup>l</sup>, Qd *thiu*<sup>4</sup>, Bc, Ts *tiu*<sup>4</sup>, Ym *tiu*<sup>4</sup> [LDY 438].

42. Proto Kd \**C-?n*: ZhT \**hn*, KS \**C-?n*, OB *n*, Lk *kj*~, *ts*~, PrL \**C-n*

\**C-?na*<sup>A</sup> ‘thick’ [H 471; LK175; Li 89]:

ZhT \**hna*<sup>A</sup>: WrS *hna*<sup>A</sup>, Lz, Po *na*<sup>l</sup> [LFK];

KS \**C-?na*<sup>A</sup>: SS, SL *?na*<sup>l</sup>, Ma, Mn *na*<sup>l</sup>, Tn *na*<sup>2</sup>, Ka, Mm *na*<sup>l</sup>;

OB *na*<sup>4</sup>;

Lk *tsā*<sup>l</sup>;

PrL \**C-na*<sup>l</sup>: Bd, Xf, Ht *na*<sup>l</sup>, Qd *na*<sup>4</sup>, Bc, Ts *na*<sup>l</sup>, Ym *na*<sup>4</sup> [LDY 418].

\**C-?na*<sup>C</sup> ‘face’ [H 471; LK174; Li 232]:

ZhT \**hna*<sup>C</sup>: WrS *hna*<sup>C</sup>, Lz, Po *na*<sup>3</sup> [LFK];

KS \**C-?na*<sup>C</sup>: SS, SL *?na*<sup>3</sup>, Ma, Mn *na*<sup>3</sup>, Tn *na*<sup>4</sup>, Ka, Mm *na*<sup>3</sup>;

OB *na*<sup>3</sup>;

Lk *kjei*<sup>3</sup>.

43. Proto Kd \**?n*: ZhT \**?d*, KS \**?n*, OB *l*, Lk *n* ~ *l*, PrL \**?d*

\**?naŋ*<sup>A</sup> ‘nose’ [H 479; LK 173; Li 71]:

ZhT \**?daŋ*<sup>A</sup>: WrS *?daŋ*<sup>A</sup>, Lz *daŋ*<sup>l</sup>, Po *naŋ*<sup>l</sup> [LFK];

KS \**?naŋ*<sup>A</sup>: SS, SL *?naŋ*<sup>l</sup>, Ma *naŋ*<sup>l</sup>, Mn *?naŋ*<sup>l</sup>, Tn, Ka, Mm *naŋ*<sup>l</sup>;

OB *log*<sup>4</sup>;

Lk *naŋ*<sup>l</sup>;

PrL \**?daŋ*<sup>l</sup> ‘face’: Bd, Xf *daŋ*<sup>l</sup>, Ht *doŋ*<sup>l</sup>, Qd, Bc, Ts *daŋ*<sup>l</sup>, Ym *doŋ*<sup>l</sup> [LDY 440].

\**?nam*<sup>T</sup> ‘black’ [H 482; LK 173; Li 70]:

ZhT \**?dam*<sup>A</sup>: WrS *?dam*<sup>A</sup>, Lz *dam*<sup>l</sup>, Wm *?dam*<sup>l</sup> [LFK];

KS \**?nam*<sup>A</sup>: SS, SL *?nam*<sup>l</sup>, Ma *nam*<sup>l</sup>, Mn *?nam*<sup>l</sup>, Tn, Ka, Mm *nam*<sup>l</sup>;

OB *lam*<sup>4</sup>;

Lk *lam*<sup>l</sup>;

PrL \**?d[a]m*<sup>C</sup>: Bd *dom*<sup>2</sup> (irreg. tone), Xf *dam*<sup>3</sup>, Ht *dom*<sup>3</sup>, Qd *dam*<sup>3</sup>, Bc *dəm*<sup>3</sup>, Ts, Ym *dam*<sup>3</sup> [LDY 417].

44. Proto Kd *\*m-n*: ZhT *\*r-n*, KS *\*m-n*, OB *n* II, Lk *ml*, PrL –  
*\*m-nok* ‘bird’ [H 464; LK 174; Li 314; Ben 233]:  
 ZhT *\*r-nok*: WrS *nok*, Lz *nuk*<sup>δ</sup>, Po *lok*<sup>δ</sup>, Wm *rok*<sup>δ</sup> [LFK];  
 KS *\*m-nok*: SS, SL, Ma *nok*<sup>δ</sup>, Mn *nok*<sup>δ</sup>, Tn *nok*<sup>7</sup>, Ka *mok*<sup>δ</sup>, Mm *nok*<sup>δ</sup>;  
 OB *nok*<sup>1</sup>;  
 Lk *mlok*<sup>7</sup>.
45. Proto Kd *\*P-?n*: ZhT *\*P-?d*, KS *\*C-n*, OB –, Lk *?b*, PrL *\*C-?n*  
*\*P-?nian*<sup>A</sup> ‘moon’ [H 468; LK 173; Li 125; Ben 423]:  
 ZhT *\*P-?dian*<sup>A</sup>: WrS *?dian*<sup>A</sup>, Lz *bi:n*<sup>1</sup>, Po *ni:n*<sup>1</sup> [LFK]; Saek *blian*<sup>1</sup> [M]  
 KS *\*C-nia:n*<sup>A</sup>: SS *njen*<sup>2</sup>, SL *nja:n*<sup>2</sup>, Ma *ni:n*<sup>2</sup>, Mn *njen*<sup>2</sup>, Tn *nja:n*<sup>1</sup>, Ka *nja:n*<sup>1</sup>, Mm  
*njen*<sup>2</sup>;  
 Lk *?bien*<sup>1</sup>;  
 PrL *\*C-?na:n*<sup>1</sup>: Bd, Xf, Ht *?na:n*<sup>1</sup>, Qd *?na:n*<sup>4</sup>, Bc, Ts *?na:n*<sup>1</sup>, Ym *?nau*<sup>4</sup> [LDY 515].
46. Proto Kd *\*I-n*: ZhT *\*n*, KS *\*n*, OB *s* II, Lk –, PrL *\*c*  
*\*I-no:n*<sup>A</sup> ‘sleep’ [H 511; Li 129; Ben 383]:  
 ZhT *\*no:n*<sup>A</sup>: WrS *no:n*<sup>A</sup>, Lz *no:n*<sup>2</sup>, Po *nin*<sup>2</sup> [LFK]; Saek *nu:n*<sup>4</sup> [M];  
 KS *\*nu:n*<sup>A</sup>: SS, SL, Ma *nun*<sup>2</sup>, Mn *nu:n*<sup>2</sup>, Tn, Ka, Mm *nun*<sup>2</sup>;  
 OB *suan*<sup>1</sup>;  
 PrL *\*con*<sup>1</sup>: Bd *co:n*<sup>1</sup>, Xf *co:ŋ*<sup>1</sup>, Ht *co:n*<sup>1</sup>, Qd, Bc *co:n*<sup>1</sup>, Ts *co:n*<sup>1</sup>, Ym *tun*<sup>1</sup> [LDY 479].
47. Proto Kd *\*j*: ZhT *\*j*, KS *\*j*, OB *z* II, Lk –, PrL *\*j*, *\*C-j*  
*\*ju(:)ŋ*<sup>A</sup> ‘mosquito’ [H 490; Mat 312]:  
 ZhT *\*juŋ*<sup>A</sup>: WrS *juŋ*<sup>A</sup>, Lz, Po *juŋ*<sup>2</sup>, Wm *juŋ*<sup>2</sup> [LFK];  
 KS > Mm *juŋ*<sup>2</sup>;  
 OB *zuŋ*<sup>7</sup>;  
 PrL *\*C-ju:ŋ*<sup>1</sup>: Bd *ju:ŋ*<sup>1</sup>, Xf *juŋ*<sup>1</sup>, Ht *ju:ŋ*<sup>1</sup>, Qd *nuŋ*<sup>4</sup>, Bc, Ts *ju:ŋ*<sup>1</sup>, Ym *juŋ*<sup>4</sup> [LDY 494].
48. Proto Kd *\*C-j*: ZhT *\*hj*, KS *\*hj*, OB (*n*), Lk –, PrL –  
*\*C-jVh*<sup>A</sup> ‘wild cat’, ‘weasel’ [H 492]:  
 ZhT *\*hjVh*<sup>A</sup>: WrS *-hen*<sup>A</sup>, Lz *hin*<sup>1</sup>, Po *jen*<sup>1</sup>, Wm *jan*<sup>1</sup> [LFK]; Saek *jel*<sup>T</sup> [H];  
 KS *\*hjpan*<sup>A</sup>: Ma *jan*<sup>1a</sup>, Tn *ŋjan*<sup>1</sup>, Ka *jan*<sup>1</sup>;  
 OB *nien* [H];
49. Proto Kd *\*C-?j*: ZhT *\*hj*, KS *\*C-?j* ~ *\*C-?j*, OB (*ŋ*), Lk –, PrL (*\*hj*,) *\*C-ŋ*  
*\*C-?jVj*<sup>C</sup> ‘weep’ [Ben 421]:  
 KS *\*C-?je*<sup>C</sup>: SS *?je*<sup>3</sup>, Mn *je*<sup>3</sup>, Ka *ne*<sup>3</sup>, Mm *je*<sup>3</sup>;  
 ? OB *ŋai*<sup>2</sup>;  
 PrL *\*C-?jai*<sup>3</sup>: Bd, Xf *ŋai*<sup>3</sup>, Ht *ŋei*<sup>3</sup>, Qd *ŋai*<sup>6</sup>, Bc, Ts *ŋai*<sup>3</sup>, Ym *ŋai*<sup>6</sup> [LDY 435].

\*C-ʔna<sup>T</sup> ‘grass’:

ZhT \*h<sub>ɲ</sub>V<sup>T</sup>: WrS h<sub>ɲ</sub>a<sup>C</sup>, Lz ja<sup>l</sup>, Po ji<sup>3</sup>~ja<sup>l</sup>, Wm ɲi<sup>l</sup> [LFK];

KS \*C-ʔja<sup>A</sup>: SS, SL ja<sup>l</sup>, Ma ja<sup>la</sup>, Tn ja<sup>2</sup>, Ka tja<sup>l</sup>, Mm ca<sup>l</sup>

50. Proto Kd \*ɣ: ZhT \*ɣ, KS (\*ɣ), OB ɣ II, Lk ɣ II, PrL \*ɣ, \*C-ɣ

\*ɣV<sup>A</sup> ‘snake’ [H 463; LK 177; Ben 387]:

ZhT \*ɣu<sup>A</sup>: WrS ɣu<sup>A</sup>, Lz ɣu<sup>2</sup>, Po ɣi<sup>2</sup> [LFK];

OB ɣia<sup>l</sup>;

Lk ɣje<sup>2</sup>.

<> KS \*zu<sup>jA</sup> and PrL \*za<sup>2</sup>, belong to other roots.

\*ɣa:m<sup>T</sup> ‘fork’ [H 463]:

ZhT \*ɣa:m<sup>T</sup>: WrS ɣa:m<sup>B</sup>, Po ɣa:m<sup>2</sup> [LFK];

PrL \*C-ɣa:m<sup>2</sup>: Bd,Xf,Ht ɣa:m<sup>2</sup>, Qd ɣa:m<sup>2</sup> (irreg. tone), Bs, Ts ɣa:m<sup>5</sup>, Ym ɣam<sup>2</sup> [LDY 380].

51. Proto Kd \*ʔɣ: ZhT \*ʔɣ, KS \*ʔɣ, OB –, Lk –, PrL \*ʔ

Kd \*ʔa<sup>B</sup> ‘branch’, ‘fork’ [Ben 240]

ZhT \*ʔa<sup>B</sup>: WrS ʔa<sup>B</sup>, Po ʔa<sup>5</sup> [LFK];

KS \*ʔa<sup>B</sup>: Ma ʔa<sup>5</sup>, Mn ʔa<sup>5</sup>, Ka la<sup>5</sup>, Mm ʔa<sup>5</sup>;

PrL > Sd a<sup>2</sup>.

52. Proto Kd \*ɣw: ZhT \*ɣw, KS \*m-v, OB v, v II, Lk w II, PrL \*Ów

\*ɣwan<sup>A</sup> ‘day’, ‘sun’ [H 418; LK 177; Li 148; Ben 266]:

ZhT \*ɣwan<sup>A</sup>: WrS wan<sup>A</sup>, Lz van<sup>2</sup>, Po ɣon<sup>2</sup> [LFK]; Saek ɲen<sup>A</sup> [M];

KS \*m-van<sup>A</sup>: SS van<sup>l</sup>, SL wan<sup>l</sup>, Ma van<sup>la</sup>, Mn van<sup>l</sup>, Tn wan<sup>2</sup>, Ka man<sup>l</sup>, Mm fan<sup>l</sup>;

OB vən<sup>l</sup> ~ vən<sup>2</sup>;

Lk wan<sup>2</sup>;

PrL \*wan<sup>l</sup>: Bd -hwan<sup>l</sup>, Xf -vaɣ<sup>l</sup>, Ht ven<sup>l</sup>, Qd, Bc -van<sup>l</sup>, Ts van<sup>A</sup>, Ym van<sup>A</sup> [LDY 482].

53. Proto Kd \*C-ɣw: ZhT \*hm, KS \*hɣw, OB m, Lk kh(w)~, PrL \*m

\*C-ɣwV<sup>(A)</sup> ‘pig’ [H 465; LK 174; Li 165]:

ZhT \*hmu<sup>A</sup>: WrS hmu<sup>A</sup>, Lz, Po mu<sup>l</sup> [LFK];

KS \*hɣwVu<sup>B</sup>: SS, SL hmu<sup>5</sup>, Ma mu<sup>l</sup> (a loan ?), Mn mu<sup>5</sup>, Tn məu<sup>5</sup>, Ka hɣu<sup>5</sup>, Mm hmu<sup>5</sup>;

OB mou<sup>A</sup>;

Lk khū<sup>l</sup>;

PrL \*mau<sup>l</sup>: Bd pou<sup>l</sup>, Xf pau<sup>l</sup>, Ht mau<sup>l</sup>, Qd phau<sup>A</sup>, Bc pou<sup>A</sup>, Ts, Ym pau<sup>A</sup> [LDY 524].

\*C-ɣwa<sup>A</sup> ‘dog’ [H 465; LK 174; Li 81]:

ZhT \*hma<sup>A</sup>: WrS hma<sup>A</sup>, Lz, Po ma<sup>l</sup> [LFK];

KS \*hɣwa<sup>A</sup>: SS, SL hma<sup>l</sup>, Ma ma<sup>la</sup>, Mn, Tn ma<sup>l</sup>, Ka, Mm hɣwa<sup>l</sup>;

OB ma<sup>A</sup>;

Lk khwō<sup>l</sup>;

PrL \*ma<sup>l</sup>: Bd, Xf pa<sup>l</sup>, Ht ma<sup>l</sup>, Qd pha<sup>A</sup>, Bc, Ts, Ym pa<sup>A</sup> [LDY 411].

54. Proto Kd *\*l*: ZhT *\*l*, KS *\*l*, OB / II, Lk / II, PrL *\*hl*  
*\*lV*k ‘child’ [H 486; LK 173; Li 310; Ben 250–251]:  
 ZhT *\*l[u:]k*: WrS *lu:k*, Lz *luk*<sup>8</sup>, Po *lik*<sup>8</sup> [LFK];  
 KS *\*la:k*: SS, SL, Ma, Mn, Tn, Ka, Mm *la:k*<sup>8</sup>;  
 OB *lək*<sup>1</sup>;  
 Lk *lak*<sup>8</sup> ‘person’;  
 PrL *\*hlV*k: Bd *li:k*<sup>7</sup>, Xf *li?*<sup>7</sup>, Ht *di:?*<sup>7</sup>, Qd *lia?*<sup>7</sup>, Ts *tak*<sup>7</sup>, Ym *tik*<sup>7</sup> [LDY 400].
55. Proto Kd *\*R-l*: ZhT *\*r-l*, KS *\*R-l*, OB / II, Lk (j II), PrL –  
*\*R-lum*<sup>A</sup> ‘wind’ [H 507; LK 177; Li 154]:  
 ZhT *\*r-lum*<sup>A</sup>: WrS *lum*<sup>A</sup>, Lz, Po *lum*<sup>2</sup>, Wm *rum*<sup>2</sup> [LFK];  
 KS *\*R-lum*<sup>A</sup>: SS *zum*<sup>1</sup> (irreg. init.), SL *lum*<sup>1</sup>, Ma *lum*<sup>1a</sup>, Mn *ləm*<sup>1</sup>, Tn *zem*<sup>2</sup>, Ka, Mm  
*ləm*<sup>2</sup>;  
 Lk *jom*<sup>2</sup>.
56. Proto Kd *\*C-ʔl*: ZhT *\*hl*, KS *\*khl*, OB I, Lk *khj*, PrL –  
*\*C-ʔlan*<sup>A</sup> ‘grandchild’ [H 477; LK 175; Li 183; Ben 137]:  
 ZhT *\*hlan*<sup>A</sup>: WrS *hlan*<sup>A</sup>, Lz, Po *lan*<sup>1</sup> [LFK]; Saek *lan*<sup>2</sup> [M];  
 KS *\*khlan*<sup>A</sup>: SS *khan*<sup>1</sup>, SL *lan*<sup>1</sup>, Ma *lan*<sup>1a</sup>, Mn *khan*<sup>1</sup>, Tn *lan*<sup>1</sup>, Ka *khwan*<sup>1</sup>,  
 Mm *khyan*<sup>1</sup>;  
 OB *lan*<sup>4</sup>;  
 Lk *khjan*<sup>1</sup>.
57. Proto Kd *\*P-l*: ZhT *\*l*, KS *\*phl*, OB b, Lk / II, PrL *\*hl*  
*\*P-liat* ‘blood’ [H 517; LK 173]:  
 ZhT *\*liat*: WrS *liat*, Lz, Po *li:t*<sup>8</sup> [LFK];  
 KS *\*phla:t*: SS, SL, Ma, Mn *phja:t*<sup>7</sup>, Tn, Ka *pha:t*<sup>7</sup>, Mm *phya:t*<sup>7</sup>;  
 OB *ba?*<sup>1</sup>;  
 Lk *liet*<sup>8</sup>;  
 PrL *\*hla:tj*: Bd *ta:tj*<sup>7</sup>, Xf *to:t*<sup>7</sup>, Ht *da:t*<sup>7</sup>, Qd, Bc, Ts *ta:t*<sup>7</sup>, Ym *tuat*<sup>7</sup> [LDY 505].
58. Proto Kd *\*m-l*: ZhT *\*m-l*, KS *\*C-n*, OB –, Lk –, PrL –  
*\*m-lV*<sup>A</sup> ‘louse’:  
 ZhT *\*m-lV*<sup>A</sup>: WrS *len*<sup>A</sup>, Lz *min*<sup>2</sup>, Po *nan*<sup>2</sup> [LFK]; Saek *mle*<sup>4</sup> [M];  
 KS *\*C-nan*<sup>A</sup>: SS, Ma, Mn *nan*<sup>2</sup>, Tn, Ka *nan*<sup>1</sup>, Mm *nan*<sup>2</sup>;  
 <> OB *don*<sup>1</sup> and PrL *\*than*<sup>1</sup> [LDY 474] do not belong to this root.
59. Proto Kd *\*r*: ZhT *\*r*, KS *\*r*, OB / II, Lk –, PrL (*\*y*)  
*\*r(i)an*<sup>A</sup> ‘house’ [H 517; Li 155]:  
 ZhT *\*r(i)an*<sup>A</sup>: WrS *rian*<sup>A</sup>, Lz *hi:n*<sup>2</sup>, Po *lan*<sup>2</sup> [LFK]; Saek *ran*<sup>4</sup> [M];  
 KS *\*ra:n*<sup>A</sup>: SS *ra:n*<sup>2</sup>, SL *ra:n*<sup>1</sup>, Ma *za:n*<sup>5</sup> (irreg. tone), Mn *ja:n*<sup>1</sup>, Tn *za:n*<sup>2</sup>, Ka *ja:n*<sup>2</sup>,  
 Mm *ya:n*<sup>2</sup>;

OB *lan<sup>l</sup>*;

PrL *\*[r/ɣw]i:n<sup>l</sup>* > Ht *ri:n<sup>l</sup>* [LDY402]; Sd *durɔn*.

60. Proto Kd *\*ʔr*: ZhT *\*r*, KS *\*ʔr*, OB / I, Lk *ʔII*, PrL –

*\*ʔrVj<sup>T</sup>* ‘long’ [H 484; LK 171]:

ZhT *\*rVj<sup>A</sup>*: WrS *ri<sup>A</sup>*, Lz *ti<sup>2</sup>*, Po *lai<sup>2</sup>* [LFK]; Saek *ra:i<sup>4</sup>* [M];

KS *\*ʔra:j<sup>C</sup>*: SS, SL *ra:i<sup>3</sup>*, Ma *ja:i<sup>3</sup>*, Mn *ʔja:i<sup>l</sup>*, Tn *za:i<sup>3</sup>*, Ka *ja:i<sup>3</sup>*, Mm *ya:i<sup>3</sup>*;

OB *loi<sup>4</sup>*;

Lk *ʔai<sup>2</sup>*;

61. Proto Kd *\*P-ʔr*: ZhT *\*phl*, KS *\*ʔr*, OB *s*, Lk *j*, PrL *\*ɣ w*

*\*P-ʔrV<sup>k</sup>* ‘tarō’ [H 516; LK 177; Li 217]:

ZhT *\*phliak*: WrS *phiak*, Lz *phi:k<sup>7</sup>*, Po *pi:k<sup>7</sup>*, Wm *pliak<sup>7</sup>* [LFK];

KS *\*ʔra:k*: SS, SL *ʔra:k<sup>7</sup>*, Mn *ʔjek<sup>7</sup>*, Tn *zja:k<sup>7</sup>*, Ka *ja:k<sup>7</sup>*, Mm *ʔya:k<sup>7</sup>*;

OB *sak<sup>2</sup>*;

Lk *ja:k<sup>7</sup>*;

PrL *\*ɣwe:k*: Bd *ge:k<sup>7</sup>*, Ht *ra:ʔ<sup>7</sup>*, Qd, Bc *he:ʔ<sup>8</sup>*, Ts *ge:ʔ<sup>8</sup>* [LDY 514].

62. Proto Kd *\*m-r*: ZhT *\*r*, KS *\*mpl*, OB (*ŋ*), Lk *kj*, PrL *\*ŋ*

*\*m-rVŋ<sup>A</sup>* ‘ear of corn’ [H 503; LK 178; Li 143]:

ZhT *\*ruaŋ<sup>A</sup>*: WrS *ruaŋ<sup>A</sup>*, Lz *tu:ŋ<sup>2</sup>*, Po *liŋ<sup>l</sup>* [LFK];

KS *\*mpla:ŋ<sup>A</sup>*: SS *mbja:ŋ<sup>l</sup>*, SL *bja:ŋ<sup>l</sup>*, Ma *bja:ŋ<sup>lα</sup>*, Mn *mbja:ŋ<sup>l</sup>*, Tn *ʔba:ŋ<sup>2</sup>*, Ka *mjeŋ<sup>2</sup>*,

Mm *mya:ŋ<sup>2</sup>*;

OB *ŋuŋ* [H];

Lk *kjeŋ<sup>l</sup>*;

PrL *\*ŋe:ŋ<sup>l</sup>*: Bd, Xf, Ht *ce:ŋ<sup>l</sup>*, Qd *che:ŋ<sup>l</sup>*, Bc, Ts *ce:ŋ<sup>l</sup>*, Ym *ciaŋ<sup>l</sup>* [LDY 392].

63. Proto Kd *\*j*: ZhT *\*j*, KS *\*j*, OB –, Lk –, PrL *\*c*

*\*ja(i)<sup>T</sup>* ‘father’s mother’ [H 470; LK 219; Ben 339]:

ZhT *\*ja<sup>B</sup>*: WrS *ja<sup>B</sup>*, Po *ja<sup>6</sup>* [LFK];

KS *\*ja<sup>C</sup>*: SS, SL, Ma *ja<sup>4</sup>*, Tn *zja<sup>4</sup>*, Ka *sa<sup>4</sup>*;

PrL *\*cai<sup>3</sup>*: Bd *cai<sup>3</sup>*, Xf, Ht *cei<sup>3</sup>*, Qd *cai<sup>3</sup>*, Bc *cei<sup>3</sup>*, Ts *cai<sup>3</sup>*, Ym *tei<sup>3</sup>* [LDY 527].

64. Proto Kd *\*ʔj*: ZhT *\*j*, KS *\*ʔj*, OB *ʒ*, Lk (*k*)*j*, PrL *\*c*

*\*ʔjVN<sup>A</sup>* ‘stand’ [LK 177; Li 118; Ben 396]:

ZhT *\*jVN<sup>A></sup>*: WrS *ji:n<sup>A</sup>* [LFK];

KS *\*ʔjVn<sup>A</sup>*: SS, SL *ʔjon<sup>l</sup>*, Ma *jun<sup>3</sup>* (irreg. tone), Tn *jin<sup>l</sup>*, Ka *jun<sup>l</sup>*;

OB *ʒun<sup>4</sup>*;

Lk *ju:n<sup>l</sup>*;

PrL *\*cu:n<sup>l</sup>*: Bd *cu:n<sup>l</sup>*, Xf *cuŋ<sup>l</sup>*, Ht, Qd, Bc, Ts *cu:n<sup>l</sup>*, Ym *tun<sup>l</sup>* [LDY 518].



65. Proto Kd \*s: ZhT \*s, KS \*s(h), OB *h*, Lk –, PrL (\**ch*)  
 \*sa:k ‘pestle’ [Li 274]:  
 ZhT \*sa:k: WrS sa:k, Lz, Po *ta:k*<sup>7</sup> [LFK];  
 KS \*s(h)(r)a:k: SL *ha:k*<sup>7</sup>, Ma *sa:k*<sup>7</sup>, Ka *hsa:k*<sup>7</sup>;  
 OB *hak*.
66. Proto Kd \*š: ZhT \*s, KS \*šh, OB –, Lk –, PrL \*s  
 \*šVu<sup>A</sup> ‘you’:  
 ZhT \*su<sup>A</sup>: WrS su<sup>A</sup>, Po *tu*<sup>l</sup> [LFK];  
 KS \*š(h)VA: SS sa:u<sup>l</sup>, Ma si<sup>la</sup>, Mn se<sup>l</sup>, Tn siu<sup>l</sup>, Ka hca:u<sup>l</sup>, Mm sa:u<sup>l</sup>;  
 PrL \*sa[u]<sup>l</sup>: Bd ta<sup>l</sup>, Xf sau<sup>l</sup>, Qd, Bc, Ts tau<sup>l</sup> [LDY 453].
67. Proto Kd \*sr: ZhT \*s, KS \*C<sub>1</sub>-sr, OB *t*, Lk –, PrL \**ch*  
 \*sr[ut] ‘tail’, ‘tip’ [Ben 405]:  
 ZhT \*sVt ‘tip’ > WrS sut;  
 KS \*C<sub>1</sub>-srut: SS hæ<sup>ø</sup>, SL zæ<sup>ø</sup>, Ma zæt<sup>7</sup> ~ zut<sup>7</sup>, Mn sæt<sup>7</sup>, Tn the<sup>ø</sup>, Ka sæt<sup>7</sup>, Mm khyæt<sup>7</sup>;  
 OB tu<sup>ø</sup>;  
 PrL \*chutj: Bd chutj<sup>7</sup>, Xf chot<sup>7</sup>, Ht, Qd chut<sup>7</sup>, Bc chit<sup>7</sup>, Ts chut<sup>7</sup>, Ym chæt<sup>7</sup> [LDY 493].
68. Proto Kd \*zr: ZhT \*ʔj, KS \*zr, OB *ʒ*, Lk *j*, PrL \**j*  
 \*zra<sup>A</sup> ‘medicine’ [H 470; LK 177; Li 45]:  
 ZhT \*ʔj[a]<sup>A</sup>: WrS ja<sup>A</sup>, Lz ja<sup>l</sup>, Po ji<sup>l</sup> [LFK];  
 KS \*zra<sup>A</sup>: SS, SL ha<sup>2</sup>, Ma, Mn za<sup>2</sup>, Tn tha<sup>2</sup>, Mm kya<sup>2</sup>;  
 OB ʒia<sup>4</sup>;  
 Lk jie<sup>l</sup> ~ ie<sup>l</sup>;  
 PrL \*ja<sup>l</sup>: Bd, Xf, Ht za<sup>l</sup>, Qdza<sup>l</sup>, Bcza<sup>l</sup>, Ts za<sup>4</sup>, Ym za<sup>2</sup> (irreg. tone) [LDY 508].
69. Proto Kd \*R-s: ZhT \*s, KS \*shr, OB –, Lk *khj*, PrL –  
 \*R-som<sup>C</sup> ‘sour’ [H 506; Li 225; Ben 389]:  
 ZhT \*som<sup>C</sup>: WrS som<sup>C</sup>, Lz *lum*<sup>3</sup>, Po *lom*<sup>3</sup> [LFK];  
 KS \*s(h)rom<sup>C</sup>: SS hum<sup>3</sup>, SL fum<sup>3</sup>, Ma sum<sup>3</sup>, Mn səm<sup>3</sup>, Tn them<sup>3</sup>, Ka hsəm<sup>3</sup>,  
 Mm khyəm<sup>3</sup>;  
 Lk khjom<sup>3</sup>.
70. Proto Kd \*R-s: ZhT \*s, KS \*C<sub>1</sub>-sr, OB *s*, Lk *kj*, PrL \**r*  
 \*R-sa:j<sup>C</sup> ‘intestine’ [H 521; LK 178; Li 253]:  
 ZhT \*saj<sup>C</sup>: WrS sai<sup>C</sup>, Lz, Po *tai*<sup>3</sup> [LFK];  
 KS \*C<sub>1</sub>-sra:j<sup>C</sup>: SS, SL ha:i<sup>4</sup>, Ma za:i<sup>3</sup>, Mn sa:i<sup>3</sup>, Tn tha:i<sup>4</sup>, Ka sa:i<sup>3</sup>, Mm khya:i<sup>3</sup>;  
 Lk kja:i<sup>3</sup>;  
 PrL \*ra:i<sup>3</sup>: Bd, Xf, Ht ra:i<sup>3</sup>, Qd, Bc la:i<sup>6</sup>, Ts ra:i<sup>6</sup>, Ym ruai<sup>6</sup> [LDY 381].

71. Proto Kd \*x: ZhT \*ʔg, KS \*C<sub>2</sub>-x, OB k, Lk ʔII, PrL –  
\*xa<sup>C</sup> ‘kill’ [H 469; LK 171; Li 241]:

ZhT \*ʔga<sup>C</sup>: WrS g<sub>1</sub>a<sup>C</sup>, Lz kha<sup>3</sup>, Po ka<sup>3</sup> [LFK];

KS \*C<sub>2</sub>-xa<sup>C</sup>: SS, SL, Ma, Mn xa<sup>3</sup>, Tn xa<sup>4</sup>, Ka hsa<sup>3</sup>;

OB ka<sup>2</sup>;

Lk ʔa<sup>4</sup>.

<> Cf. PrL \*hau<sup>3</sup> [LDY 469].

\*xVn<sup>T</sup> ‘ascend’, ‘rise’ [H514; Ben 252]

ZhT \*xi:n<sup>C</sup> ‘ascend’, ‘rise’: WrS khi:n<sup>C</sup>, Lz khin<sup>3</sup>, Po hin<sup>3</sup> [LFG]; Saek hin [H 514];

OB kən<sup>2</sup>;

Lh hjien<sup>1</sup>;

PrL \*kha:n<sup>1</sup>: Bd kha:n<sup>1</sup>, Xf kha:n<sup>1</sup>, Ht kha:n<sup>1</sup>, Qd, Bc, Ts kha:n<sup>1</sup>, Ym khuan<sup>1</sup> [LDY 471].

72. Proto Kd \*f: ZhT \*f, KS \*f, OB v II, Lk –, PrL \*f

\*fan<sup>A</sup> ‘dream’:

ZhT \*fan<sup>A</sup>: WrS fan<sup>A</sup>, Po fan<sup>1</sup> [LFK]; Saek van<sup>2</sup> [M];

KS \*fian<sup>A</sup>: SS vjan<sup>1</sup>, Ma vin<sup>1a</sup>, Mn vjen<sup>1</sup>, Tn jan<sup>2</sup>, Ka pjan<sup>1</sup>;

OB von<sup>1</sup>;

PrL \*fan<sup>1</sup>: Bd fan<sup>1</sup>, Xf faŋ<sup>1</sup>, Ht phen<sup>1</sup>, Qd, Bc, Ts fan<sup>1</sup>, Ym fhan<sup>1</sup> [LDY 449].

73. Proto Kd \*v: ZhT \*v, KS \*C-f, OB v II, Lk p, PrL \*f

\*vVj<sup>A</sup> ‘fire’ [H 521; LK 172; Li 151; Ben 290]:

ZhT \*vaj<sup>A</sup>: WrS vai<sup>A</sup>, Lz fai<sup>2</sup>, Po fi<sup>2</sup> [LFK];

KS \*C-fVj<sup>A</sup>: SS vi<sup>1</sup>, SL wi<sup>1</sup>, Ma vəi<sup>1a</sup>, Mn vi<sup>1</sup>, Tn wi<sup>2</sup>, Ka pui<sup>1</sup>, Mm fi<sup>1</sup>;

OB vəi<sup>1</sup>;

Lk pu:i<sup>1</sup>;

PrL \*fei<sup>1</sup>: Bd, Xf fei<sup>1</sup>, Ht pei<sup>1</sup>, Qd, Ts, Bc fei<sup>1</sup>, Ym fhei<sup>1</sup> [LDY 422].

\*vaN<sup>A</sup> ‘tooth’ [H480; LK 177; Li 150]:

ZhT \*vaN<sup>A</sup>: WrS van<sup>A</sup>, Lz, Wm fan<sup>2</sup> [LFK];

KS C-fan<sup>A</sup>: SS vjan<sup>1</sup>, SL wjan<sup>1</sup>, Tn wen<sup>2</sup>, Ka pjan<sup>1</sup>, Mm fan<sup>1</sup>;

Lk wan<sup>2</sup> (a loan?);

PrL \*fan<sup>1</sup>: Bd fan<sup>1</sup>, (Xf sen<sup>1</sup>), Ht phen<sup>1</sup>, Qd, Bc, Ts fan<sup>1</sup>, Ym fhan<sup>1</sup> [LDY 506].

74. Proto Kd \*m-f: ZhT \*f, KS \*m-xw, OB b II, Lk f, PrL –

\*m-f[a]<sup>C</sup> ‘cloud’ [H 515; LK 177; Li 226]:

ZhT \*f[a]<sup>C</sup>: WrS fa<sup>C</sup>, Lz pha<sup>3</sup>, Po fi<sup>3</sup> [LFK];

KS \*m-xwa<sup>C</sup>: SS, SL fa<sup>3</sup>, Ma va<sup>3</sup>, Mn fa<sup>3</sup>, Ka ma<sup>3</sup>, Mm kwa<sup>3</sup>;

OB ba<sup>3</sup>;

Lk fa<sup>3</sup>

PrL \*fa<sup>3</sup>: Bd, Xf fa<sup>3</sup>, Ht fa<sup>3</sup>, Ts fa<sup>3</sup>, Ym fha<sup>3</sup> [LDY 515].

75. Proto Kd \*xw: ZhT \*f, KS \*C<sub>2</sub>-xw, OB *ph*, Lk *f*, PrL \*f  
 \*xwin<sup>A</sup> 'rain' [H 505; LK 177; Li 82; Ben 360]:  
 ZhT \*[f*i*]n<sup>A</sup>: WrS *for*<sup>A</sup>, Lz *phin*<sup>l</sup>, Po *hin*<sup>l</sup> [LFK]; Saek *vin*<sup>l</sup> [M];  
 KS \*C<sub>2</sub>-xwin<sup>A</sup>: SS, SL *fən*<sup>l</sup>, Ma *vin*<sup>l</sup><sup>a</sup>, Mn *fin*<sup>l</sup>, Tn *xwen*<sup>2</sup>, Ka *pjən*<sup>l</sup>, Mm *kwən*<sup>l</sup>;  
 OB *phun*<sup>4</sup>;  
 Lk *fen*<sup>l</sup>;  
 PrL \**fun*<sup>l</sup>: Bd *fun*<sup>l</sup>, Xf *fəŋ*<sup>l</sup>, Ht *pun*<sup>l</sup>, Qd, Bc, Ts *fun*<sup>l</sup>, Xf, Ym *fhəŋ*<sup>l</sup> [LDY 514].

76. Proto Kd \*ɣw: ZhT \*v, KS –, OB *b* II, Lk *w* II, PrL \*w  
 \*wVt 'wing' [LK 177]:  
 ZhT > Po *fi*t<sup>δ</sup> [LFK]; Saek *viat*<sup>δ</sup> [M];  
 OB *bit*<sup>l</sup>;  
 Lk *wiet*<sup>δ</sup>;  
 PrL \*[w/v]i:t 'fin' > Xf *vet*<sup>7</sup> [LDY 514].

The system of Proto Kadai finals is made up of ten terminals and 20 vowels and diphthongs. The list of terminals includes:

|    |    |         |    |
|----|----|---------|----|
| *p | *m | *u (=u) |    |
| *t | *n | *j (=i) | *l |
| *k | *ŋ | *i      |    |
| *∅ |    |         |    |

The correspondences for the terminals are:

|     | Proto Kd | ZhT | KS | OB       | Lk       | PrL    | Notes |
|-----|----------|-----|----|----------|----------|--------|-------|
| 1.  | *p       | *p  | *p | <i>p</i> | <i>p</i> | *p     |       |
| 2.  | *m       | *m  | *m | <i>m</i> | <i>m</i> | *m     |       |
| 3.  | *-u      | *u  | *u | <i>u</i> | <i>u</i> | *u     | 1     |
| 4.  | *t       | *t  | *t | ?/t      | <i>t</i> | *t/*tj | 2     |
| 5.  | *n       | *n  | *n | <i>n</i> | <i>n</i> | *n/*nj | 2     |
| 6.  | *l       | *l  | *n | <i>n</i> | <i>n</i> | *n/*nj | 2, 3  |
| 7.  | *-j      | *j  | *j | <i>i</i> | <i>i</i> | *j     | 4     |
| 8.  | *k       | *k  | *k | <i>k</i> | <i>k</i> | *k     |       |
| 9.  | *ŋ       | *ŋ  | *ŋ | <i>ŋ</i> | <i>ŋ</i> | *ŋ     |       |
| 10. | *i       | *j  | *i | ∅        | ∅        | *i     | 5     |
| 11. | *∅       | *∅  | *∅ | ∅        | ∅        | *∅     |       |

NOTES:

1. Exceptional development in the final \*əu.
2. Terminals \*tj and \*nj occur only in finals with \*i.
3. Exceptional development in the final \*ai.
4. The reconstruction of \*l is based on Saek data only.
5. Specific development in the finals \*ai and \*əi.

The Proto Kadai system of vowels and diphthongs includes:

|    |    |     |     |      |      |     |
|----|----|-----|-----|------|------|-----|
| *j | *ɨ | *u  |     | *j:  | *ɨ:  | *u: |
| *e | *ə | *o  |     | *e:  |      | *o: |
|    | *a |     |     |      | *a:  |     |
|    |    | *ua | *ie | *ia  | *ia  |     |
|    |    |     |     | *ia: | *ia: |     |

\*ə occurs only in finals with glides: \*əu, \*əi and \*əɨ.

Terminal \*ɨ occurs only in two finals: \*əɨ and \*aɨ.

\*u and \*o are not followed by the terminal \*u.

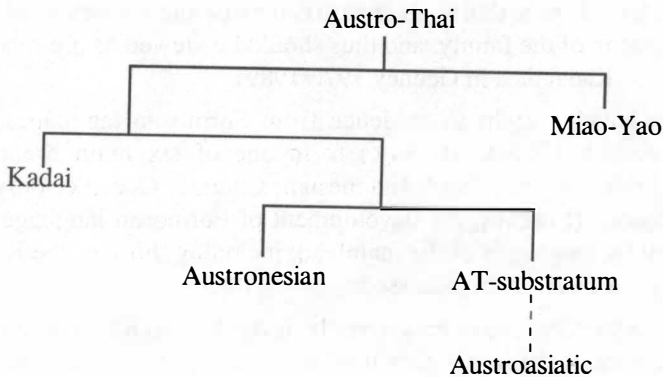
The vowel correspondences are:

|     | Proto Kd | ZhT   | KS       | OB    | Lk   | PrL          |
|-----|----------|-------|----------|-------|------|--------------|
| 1.  | *j:      | *j:   | *j:      | i     | i:   | *i:, *e:     |
| 2.  | *j       | *j    | *j       | i     | i    | *j           |
|     | *j(+∅)   | *j    | *e       | ə,əi  | i,eɨ | *j, *e       |
| 3.  | *e:      | *e:   | *i:, *j  | e     | —    | *e, *j       |
| 4.  | *e       | *e    | *e, *a   | i,e   | e    | *e           |
| 5.  | *ɨ:      | *ɨ:   | *a:      | ə     | e    | *ɨ, *a:      |
| 6.  | *j       | —     | *a       | o     | e    | *j           |
| 7.  | *ə(+i)   | *əi   | *a:      | oi    | ai   | *ai          |
|     | *ə(+ɨ)   | *ɨ    | *ia, *əa | o     | ie   | *eɨ          |
|     | *ə(+u)   | *au   | *au      | au,ou | au   | *au          |
| 8.  | *a:      | *a:   | *a:      | a     | a:   | *a:          |
|     | *a:i     | *a:i  | *e       | ai,eɨ | eɨ,ɛ | *o:i, *uɨ    |
| 9.  | *a       | *a    | *a       | o     | a    | *a           |
|     | *aɨ      | *aɨ   | *a       | a,ə   | a    | *aɨ, *ɨ      |
| 10. | *u:      | *u:   | *u:      | u     | —    | *u:          |
| 11. | *u       | *u    | *u       | u     | ∅    | *ɨ, *o       |
|     | *u∅      | *u    | *o       | u     | u    | —            |
| 12. | *o:      | *o:   | *u:      | u     | u    | *o           |
| 13. | *o       | *o    | *o, *u   | o     | o    | *o           |
| 14. | *ua      | *ua   | *u:      | u     | —    | *u:          |
| 15. | *ie      | *ie   | *e, *j:  | —     | —    | (*j)         |
| 16. | *ia:     | *ja   | *e:      | —     | —    | *e:, *e, *j: |
| 17. | *ia      | *i(a) | *e       | ia    | ?    | ?            |
| 18. | *ia:     | *i(a) | *ia      | a     | a:,e | *e:          |
| 19. | *ia      | *a    | *ia      | o     | —    | *a, *j       |
|     | *ia∅     | *ja   | *əa      | ua    | e    | *eɨ          |
| 20. | *iaɨ     | *iaɨ  | *ju      | eu    | au   | *ju, *j:u    |

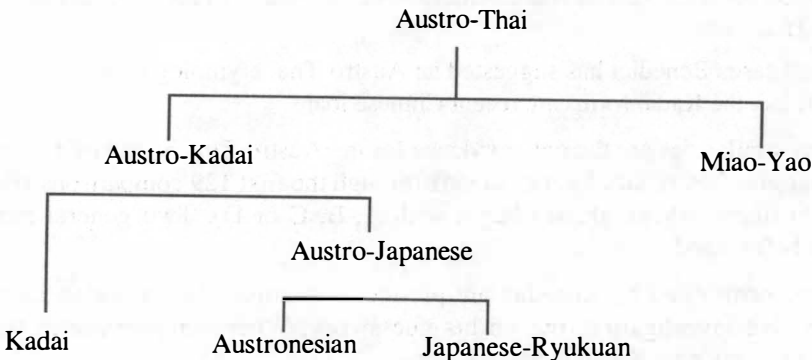
There have been no detailed attempts to discuss the problems of historical interpretation of Kadai linguistic data. We can suggest that the Kadai homeland was located north of the tropics, because the language does not contain 'tropical' roots (note, however, that the list of Proto Kadai roots is very limited). The language also contains no words associated with the sea or the coast, so one can hypothesise that the homeland may have been located somewhere in mainland China, perhaps to the north of the Yangtze valley. Compare, however, Jakhontov's (1977b:102, 1987) alternative opinion.

## 2.2 THE AUSTRO-THAI HYPOTHESIS

The Austro-Thai hypothesis was first explicitly formulated<sup>4</sup> in 1942 by Benedict, who suggested that Kadai languages are genetically related to Austronesian. In the following years the hypothesis was modified first to include Miao-Yao languages (Benedict 1973:485):



and then Japanese (Benedict 1990:1):



It seems, however, that the evidence for an Altaic origin of Japanese is much stronger (cf. Starostin 1991 and discussion of his data in Vovin 1994).

<sup>4</sup> It is quite possible that Wulff, the author of the first Zhuang-Tai reconstruction, had also arrived at idea of a relationship between Zhuang-Tai and Austronesian languages in the last years of his life (Wulff 1942; see discussion in Egerod 1976).

Here I would like to evaluate the Austro-Thai hypothesis in its narrow sense, as the idea of a genetic relationship between the Austronesian and Kadai families (Benedict 1942). The connections of Miao-Yao and Austroasiatic languages with Kadai and Austronesian will be discussed below in §3.3.

The Austro-Thai genetic claim is not yet proved. The only evidence available is a list of lexical similarities between the families, included in Benedict's 1975 book on the problem.<sup>5</sup> We have neither a detailed set of phonological correspondences connecting the two protolanguages, nor a well-founded reconstruction of the Austronesian and Kadai proto-language. Therefore, at present the Austro-Thai hypothesis must be regarded as a series of interesting proposals, rather than a product of the rigorous procedure of historical reconstruction.

Benedict's list of lexical similarities has some features which weaken its value:

- (1) Proto Kadai data is used without preliminary independent reconstruction. Benedict's forms are not based on a thorough investigation of the historical phonology or comparative lexicon of the family, and thus should be viewed as pre-reconstructions (see discussion of Kadai data in Gedney 1976/1989).
- (2) Benedict gives much weight to evidence from Formosan languages, which, he believes (Benedict 1975:XVIII–XIX) form one of six main branches of the Austronesian family together with Indonesian, Chamic, Oceanic, Polynesian and South-East Papuan. However, the development of Formosan languages may have been influenced by languages of the mainland, including those of the Kadai family. This possibility has never been discussed.
- (3) Benedict makes extensive use of data from the lesser known Kadai languages. Lachi, Laqua, and other languages are widely used in AT comparisons, despite the absence of detailed synchronic descriptions of the languages, or any reliable historical information about their development. The possibility of recent connections with Austronesian languages cannot be excluded. Such contact could provide an alternative explanation for some lexical resemblances which Benedict treats as reflexes of Proto Austro-Thai roots.
- (4) In several cases Benedict has suggested an Austro-Thai etymology for comparisons, where in fact the Kadai forms are recent Chinese loans.

As the lexical similarities are the only evidence for the Austro-Thai hypothesis, it is very important to examine their reliability. Let us look through the first 129 comparisons given in Benedict (1975) (those whose glosses begin with A, B, C or D). Two general remarks should be made beforehand:

- (i) All protoforms cited by Benedict are pre-reconstructions, based not on thorough comparative investigation, but on his guesswork. Wherever possible in the list below, I use my own Kadai reconstructions.
- (ii) In most cases stratification of these pre-reconstructions remains unclear, so the label 'Austronesian' does not necessarily mean that the root belongs to the Proto Austronesian level. Cases where an An form is supported only by Formosan data are not discussed below.

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<sup>5</sup> Benedict (1990) contains practically no new Kadai–Austronesian comparisons.

## 1. 'ant' [Ben 219]

Kd *\*[m]ot* 'ant' [H 505]: ZhT *\*mot* [LFK]; KS *\*mrut* (with a unique *\*mr-* cluster); OB *muʔ*; Lk *motʔ*; PrL *\*patj*.

An *\*t'əmut* 'ant'

A local root, found only in some western Austronesian languages, therefore probably a Mon-Khmer loan: WrK *srəmaoc* 'id.', Munda *\*moʒ* 'id.' [Pin. V-130]

Possible loans cannot be used to prove a genetic relationship.

## 2. 'angle', 'elbow' [Ben 219]

ZhT forms: WrS *zo:k* [H 509], and so on are Chinese loans. [CHAR1]

An *\*t'əluk* 'angle'.

Possible loans cannot be used to prove a genetic relationship.

## 3. 'appear', 'arrive', 'come' [Ben 219–220]

Kd forms: WrS *tau<sup>C</sup>*, and so on have been borrowed from Chinese: MC *\*təw* 'id.' [CHAR2]

An *\*bətʉ* 'appear'.

Thus the comparison cannot be accepted.

## 4. 'areca' [Ben 220]

ZhT forms are not found in my primary sources;<sup>6</sup> see also Gedney (1976:70).

An *\*pinəŋ* 'areca palm'.

The comparison cannot be accepted, as the Zhuang-Tai data is not reliable.

## 5. 'arm', 'hand', 'shoulder', 'wing' [Ben 220]

Zhuang *\*fiŋ<sup>A</sup>* 'hand' goes back to Kd *\*R-mVɿ<sup>A</sup>*.

An *\*ləŋən* 'forearm'.

The differences in forms require us to reject this comparison.

## 6. 'arrow', 'shoot' [Ben 221]

ZhT *\*pɿ:n<sup>A</sup>* 'arrow' is perhaps a loan from Khmer (WrK *bruəŋ* 'id.' with *\*ɿ:* < *\*r*) or a local root.

An *\*pana* 'shoot', 'weapon'.

Words from the cultural lexicon cannot be used to prove a genetic relationship.

## 7. 'arum', 'taro', 'yam', 'sweet potato' [Ben 221]

Kd *\*P-ʔrVk* 'taro' (No.61 in §2.1.5).

An *\*biyaq* 'an edible root' [Dahl 1981].

A good comparison, unless it doesn't belong to cultural lexicon.

<sup>6</sup> My sources include Li (1977), and several publications by Haudricourt, and as well as my comparative lists (Peiros 1990b)

8. 'ashes', 'dust', 'flour', 'gray', 'white' [Ben 221–222]

Kd *\*kha:u<sup>A</sup>* 'white' (No.25 in §2.1.5).

An *\*abu* 'ashes', *\*lɔbu* 'dust'.

The semantic correspondence is not convincing. Compare another possibility: Kd *\*P-dau<sup>B</sup>* suggested below.

9. 'ashes', 'dust', 'flour', 'powder', 'sand', 'gray' [Ben 222]

KS *\*xwV<sup>k</sup>* ~ *\*y<sup>w</sup>V<sup>k</sup>* 'ashes': SS, Ma, Mn *vuk<sup>7</sup>*, Tn *xwuk<sup>8</sup>*, Ka *phu:k<sup>7</sup>*.

An *\*abuk* 'dust', *\*apuk* 'dust', 'sawdust', *\*yabuk* 'ashes', 'dust', 'gray'.

An acceptable comparison.

10. 'assemble', 'confine', 'shut up', 'coop up' [Ben 223]

ZhT *\*khlaj<sup>A</sup>* 'to imprison' [LFK], but cf. Mon form (WrM *klaj* 'id.') which could be the source of a loan.

An *\*ka[ɺ]aj* 'assemble' (I cannot find a reconstruction with this meaning in the main Austronesian comparative sources).

Benedict's Austronesian form does not match semantically the Zhuang-Tai form, which seems to be a borrowing. The comparison cannot be accepted.

11. 'axe' [Ben 223]

TP *\*KwAn<sup>A</sup>*(?) 'kind of axe':

ZhT *\*xwa:n<sup>A</sup>*: WrS *khwa:n<sup>A</sup>*, Nung *khoa<sup>l</sup>*, Po *va:n<sup>l</sup>*[LFK];

KS *\*Kwan<sup>A</sup>*: SL *kwan<sup>l</sup>*, Ma *kwan<sup>l</sup>*, Tn *van<sup>2</sup>*, Ka *kwan<sup>l</sup>* (initial correspondence is irreg);

Lk *kuən<sup>2</sup>*.

An *\*bali[j]uŋ* 'adze'.

The comparison is not acceptable for phonological reasons, even if one assumes that the Kadai forms are original and not loaned from a Sino-Tibetan source (*\*gwa:r* 'axe' > WrB *khwan*).

12. 'back', 'behind' [Ben 223–224]

TP \*?

ZhT > WrS *hlai<sup>C</sup>* 'shoulder';

KS *\*R-la:i<sup>A</sup>* 'back': SL *la:i<sup>l</sup>*, Mn *la:i<sup>l</sup>*, Ka *la:i<sup>2</sup>*, Mm *la:i<sup>2</sup>*;

OB *loi<sup>l</sup>* 'behind';

Lk *hlai<sup>l</sup>* 'behind'.

An *\*liku<sup>D</sup>* 'the back'.

Theoretically acceptable comparison, but forms found in Tai Proper cannot be traced back to a single reconstruction.

13. 'bag', 'sack', 'basket' [Ben 224]

ZhT forms, reconstructed by Benedict as *\*day* 'bag', are recent Chinese loans into several languages of this group.[CHAR3]

Possible loans cannot be used to prove a genetic relationship.



14. ‘bamboo’, ‘withé’, ‘spear’ [Ben 224–225]

TP *\*P-ntrUk* ‘bamboo strips’:

ZhT *\*P-to:k*: WrS *to:k*, Lz *phjo:kʔ*, Po *tukʔ* [LFK];

KS *\*nt[r]uk*: SL *djukʔ*, Ma *dukʔ*.

An *\*buluq* ‘bamboo’ [Dahl 1981].

TP forms may be borrowed from Chinese: MC *\*tük* < OC *\*truk* ‘bamboo’ [CHAR3a], which makes the comparison unreliable.

15. ‘banana’ [Ben 225]

ZhT *\*pliʰA* ~ *\*bliʰA* ‘banana flowers’: WrS *pliʰA*, Lz *piʰ*, Po *pi²* [LFK]

An *\*pun[t]i* ‘banana’

Semantic and formal resemblance with An is doubtful.

16. ‘bark’, ‘rind’, ‘skin’, ‘pod’, ‘husk’ [Ben 225]

Kd *\*fak* ‘scabbard’, ‘pod’:

ZhT *\*fak*: WrS *fak*, Nung *phacʔ*, Po *fakʔ* [LFK];

KS *\*(C-)fak*: SS *wakʔ*, Ma *vakʔ*, Ka *pakʔ*;

PrL > Sd *phə*.

An *\*u(m)pak* ‘bark’.

An acceptable comparison.

17. ‘barter’, ‘buy’, ‘sell’ [Ben 226]

TP *\*kwa:jʰA* ‘sell’ [H 518; LK 173]

ZhT *\*kha:jʰA*: WrS *kha:jʰA*, Lz *kha:iʰ*, Po *ka:iʰ* [LFK];

KS *\*kweʰA*: SS *qeʰ*, SL *peʰ*, Ma *tjeʰ*, Mn *pjeuʰ*, Tn *pe²*, Ka *peʰ*, Mm *ceʰ*;

Lk *pleʰ*.

An *\*tukaf[!]* ‘barter’.

An acceptable comparison.

18. ‘basis’, ‘trunk (of tree, body)’, ‘buttocks’, ‘heel’ [Ben 226]

Kd *\*s(r)Vn<sup>C</sup>* ‘back’, ‘rump’ [H481]

ZhT *\*son<sup>C</sup>* ‘heel’, ‘rump’: WrS *son<sup>C</sup>*, Lz *tin³*, Po *ton³* [LFK]

KS > Ma *san<sup>la</sup>*.

PrL *\*chunj³* ‘back’: Bd *chunj³*, Xf *chon³*, Ht *chun³*, Qd *chun³*, Bc *chin³*, Tschun³ [LDY 371].

An *\*pahun* ‘trunk’.

The comparison is doubtful semantically.

19. ‘basket’, ‘sack’ [Ben 226]

ZhT *\*khIV:ŋ<sup>T</sup>* ‘a kind of basket’ (WrS *kho:ŋ<sup>C</sup>*, Lz *khi:ŋ³*, Po *čo:ŋ<sup>5</sup>* [LFK]) is a Mon-Khmer loan: WrK *klaj* and so on.

An *\*kaluj* ‘sack’.

Possible loans cannot be used to prove a genetic relationship.

20. ‘bast’, ‘hemp’ [Ben 226]

ZhT *\*pa:n<sup>B</sup>*: WrS *pa:n<sup>B</sup>*, Lz *pa:n<sup>5</sup>* [LFK]

An *\*be(nN)be(nN)* ‘plant used in weaving’ [Blust 1973].

An acceptable comparison.

21. ‘bat’, ‘fox (flying-), ‘squirrel’ [Ben 226–227]

Kd –

TS *\*ro:k* ‘squirrel’ > WrS *kəro:k*, etc. [H 508];

PrL *\*ɣwɪ:k* ‘bat’.

An *\*kalu’əŋ* ‘bat’.

The Tai-Shan forms have been borrowed from MK: WrK *kəmpruk* ‘squirrel’, VM *\*p-rhok* > Vn *sóc* ‘id.’

The connection between PrL and An forms is doubtful.

22. ‘beat’, ‘drive in’, ‘flutter’, ‘wing’ [Ben 227–228]

Kd *\*pi:k* ‘wing’ (No.1 in §2.1.5).

An *\*kapak* ‘wings’, ‘flutter’; *\*pakpak* ‘beat’, ‘beat wings’.

An acceptable comparison.

23. ‘beat’, ‘drive in’, ‘pound’, ‘strike’ [Ben 228]

ZhT *\*to:k* ‘to hammer in’ [LFK], *\*top* ‘beat or slap’ [H 506] and others.

All these forms are of the descriptive type, so they cannot be used as evidence of genetic relationship.

24. ‘beat’, ‘hit’, ‘strike’, ‘hammer’ [Ben 228]

ZhT *\*yo:[l]ʃ<sup>C</sup>*: WrS *go:n<sup>C</sup>* ‘mallet’, Lz *ko:n<sup>6</sup>* ‘to beat’, Wm *xon<sup>6</sup>* ‘to beat’ [LFK];

Saek *gɔ:l-mək* ‘mallet’ [Ben].

An *\*pu(ŋ)kul* ‘throw’, ‘beat’.

The semantic relation is not quite convincing.

25. ‘beat’, ‘strike’, ‘pound’, ‘wing’ [Ben 228]

ZhT *\*dap* ‘beat’, ‘strike’, ‘fight’.

An *\*tabtab* ‘beat’.

Forms of this type are probably of a descriptive nature.

26. ‘behind’, ‘back’, ‘buttocks’ [Ben 230]

ZhT *\*kUN<sup>T</sup>* ‘anus’, ‘buttocks’: WrS *kon<sup>C</sup>*, Lz *kun<sup>3</sup>*, Po *kum<sup>5</sup>* [LFK].

An *\*puŋku[!]* ‘tail’.

An acceptable comparison.

27. ‘belly’ [Ben 230]

ZhT *\*do:ŋ<sup>C</sup>* ‘stomach’: WrS *do:ŋ<sup>C</sup>*, Lz *to:ŋ<sup>5</sup>*, Po *tuŋ<sup>5</sup>* [LFK]. KS *\*loŋ<sup>A</sup>* does not belong to the same root.

An *\*bə(n)təŋ* ‘belly’.

An acceptable comparison.

28. ‘belly’ [Ben 230–231]

WrS *buŋ* ‘belly’

Sd Li *bóŋ* ‘id.’ are loans from Vn *bụng* ‘id.’

An *\*kəmpuŋ* ‘belly’.

Loans cannot be used to prove a genetic relationship.

29. ‘bend/bent’, ‘arched’ [Ben 231–232]

Words with this meaning and with forms like *\*kVŋ* or *\*kuk* are represented in many unrelated languages all over the world, and thus their occurrence in Kadai and Austronesian cannot be used as evidence of a genetic relationship.

30. ‘beseech’, ‘beg pardon’ [Ben 232]

No Kd forms can be found in reliable comparative sources.

An *\*puhun* ‘beg pardon’.

31. ‘between (part)’, ‘middle’ [Ben 232]

ZhT *\*kla:ŋ<sup>A</sup>* ‘middle’: WrS *kla:ŋ<sup>A</sup>*, Lz *kja:ŋ<sup>I</sup>*, Po *ča:ŋ<sup>I</sup>* [LFK]; cf. MC *ṭiŋ* < OC *\*truŋ* ‘id.’ [CHAR4]

An *\*kalaŋ* ‘support’, ‘part between’.

The semantic correspondence is not satisfactory.

32. ‘big’, ‘long’ [Ben 233]

Kd *\*?rVj<sup>T</sup>* ‘long’ (No.60 in §2.1.5).

An *\*ma-Raya* ‘big’ [Blust 1981].

An acceptable comparison.

33. ‘bind’ [Ben 233]

ZhT *\*mat* ~ *\*mhat*. WrS *mat*, Tho *mat<sup>δ</sup>* ‘bundle’, Dioi *mat<sup>7</sup>* [LFK].

An *\*kV(ŋ)bat* ‘tie’ [Blust 1981].

An acceptable comparison.

34. ‘bind’, ‘tie’, ‘knot’ [Ben 233]

ZhT *\*rat* ‘to fasten tightly’, ‘tighten’: WrS *rat*, Lz *ṭat<sup>δ</sup>* [LFK].

An *\*t<sup>i</sup>[!]*at ‘tie (knot) on’.

An acceptable comparison.

35. ‘bird’ [Ben 233]

Kd *\*m-nok* ‘bird’ (No.44 in §2.1.5).

An *\*manuk* ‘bird’.

An acceptable comparison.

## 36. 'bird', 'bird of prey' [Ben 234]

Tai-Shan forms like \**ruŋ* 'bird of prey' given by Haudricourt [H 490] can be related to Vn *sung* 'kite', 'falcon' < \**kruŋ*.

An \**buɭuŋ* 'bird'

Limited distribution in Kadai and the possible connection to Vn make the comparison not quite reliable.

## 37. 'bite', 'gnaw' [Ben 234]

ZhT \**kat* 'to bite'; WrS *kat*, Lz, Po *kat*<sup>7</sup> [LFK]. KS \**kat* 'to cut' is not necessarily related to ZhT form.

An \**kayat* 'gnaw', 'bite'.

An acceptable comparison.

## 38. 'bile' [Ben 235]

Kd \**P-ʔdV(j)T* 'bile' (No.21 in §2.1.5).

An \**a(m)pəni* 'bile', not represented in major An sources.

A possible comparison is with An \**qa(N)pəg'u* 'bile' [Dahl 1981].

## 39. 'blind' [Ben 235]

TP \**ʔbVt* 'blind' [Li 277].

ZhT \**ʔbo:t* WrS *ʔbo:t*, Lz *ʔbo:t*<sup>7</sup> [LFK];

KS \**ʔbit* ~ \**mit*: SL *ʔmut*<sup>7</sup>, Ma *ʔbət*<sup>7</sup>, Tn *met*<sup>7</sup>.

An \**butaH* 'blind' [Zorc 1981].

An acceptable comparison.

## 40. 'blow', 'whistle', 'wind' [Ben 235]

Two comparisons can be identified in this set:

a.

Benedict gives the ZhT reconstruction \**phiw* 'whistle' which he connects with PrL \**viu* 'wind'.

An \**[!]iyup* 'blow'

Forms like *phiw*, *thiw* and so on for 'whistle' are of descriptive origin and thus cannot be used to prove a genetic claim.

b.

KS \**[]zup* 'blow' (in my reconstruction \**zup*).

An \**tiyup* 'blow'.

A possible comparison.

## 41. 'blow', 'wind' [Ben 236]

a.

ZhT \**phu* 'blow'.

An \**puput* 'blow'.

Forms like *phu* ‘blow’ are of descriptive origin, so any resemblance with Austronesian is irrelevant for the genetic claim.

b.

WrS *wu:t* ‘blow up’ without any connections in the main Kadai sources. PrL *hwo:t* ‘wind’ is a Vn borrowing.

An *\*həmbut* ‘blow’.

Not a reliable comparison.

42. ‘boat’ [Ben 237]

a.

Kd *\*R-dia<sup>A</sup>* ‘boat’ (No.17 in §2.1.5)

An *\*pa<sup>h</sup>ahu* ‘boat’.

Cf. however Russian *parohod* ‘steamer’ (*par* ‘steam’, *hod* ‘move’), which makes the comparison doubtful.

b.

ZhT *\*?ba:ŋ*, mentioned by Benedict is not represented in major Kadai sources.

An *\*baŋka[?]* ‘boat’ (see Pawley & Pawley 1994).

Not a reliable comparison.

43. ‘body’ [Ben 238]

ZhT *\*?da:ŋ* ‘body’ (see 44 below).

An *\*ba<sup>h</sup>aŋ* ‘corpse’.

A possible comparison.

44. ‘body’, ‘flesh’ [Ben 238]

ZhT *\*r-da:ŋ<sup>B</sup>* ~ *\*?d(r)a:ŋ<sup>A</sup>* ‘body’: WrS *ra:ŋ<sup>B</sup>*, Lz *da:ŋ<sup>l</sup>*, Po *na:ŋ<sup>l</sup>* [LFK].

An *\*dagiŋ* ‘meat’, ‘flesh’ (cf. Wolff 1981 regarding proto An *\*g*, which can be an indication of later origin of the form).

The comparison is not reliable because of the unusual correspondence of syllabic structures and the presence of *\*g* in An. Compare 43.

45. ‘bone’ [Ben 238–239]

Kd *\*?drV<sup>k</sup>* ‘bone’ (No.13 in §2.1.5).

An *\*[t]ulaŋ* ‘bone’.

It would be better to connect the Kadai form with An *\*ta(n)duk* ‘horn’.

46. ‘bore’, ‘pierce’, ‘tube’ [Ben 239]

The semantic relationship between the meaning ‘tube’, ‘pipe’ in Zhuang-Tai and ‘to perforate’ in Austronesian seems doubtful.

47. ‘borrow’, ‘loan’ [Ben 239–240]

Kd ‘loan’

ZhT *\*?ji: m*: WrS *ji: m*, Lz *jim<sup>l</sup>*, Wm *?jum<sup>l</sup>* ‘hire’ [LFG].

KS \*ʔia:m SS ʔjam<sup>l</sup>, Tn, Ka ja:m<sup>l</sup>, Ma thji:m<sup>l</sup> is a loan.

An \*Siə(N)Zam ‘loan’ [Dahl 1981].

A cultural word, perhaps a borrowing; cf. WrK pəŋca:m ‘to pawn’.

48. ‘bow’ [Ben 240]

ZhT \*son mentioned by Benedict is not represented in the main Kadai sources and may be borrowed from Khmer (WrK so:r ‘bow’)

49. ‘branch’ [Ben 240]

Kd \*ʔŋa<sup>B</sup> ‘branch’, ‘fork’ (No.50 in §2.1.5).

An \*[d, d]ahan ‘branch’.

The comparison is doubtful due to dissimilarity of forms.

50. ‘branch’, ‘brow’ [Ben 241]

The semantic relationship between the meaning ‘branch’ in ZhT and ‘eyebrow’ in Austronesian is not convincing.

51. ‘breadfruit’, ‘jackfruit’ [Ben 241]

ZhT \*la:ŋ ‘jackfruit’ mentioned by Benedict is not represented in the major Kadai sources.

52. ‘break’, ‘smash’, ‘split’ [Ben 241–242]

Kd \*trak ‘to break’, ‘be broken’ (No.12c in §2.1.5).

An \*bəʔak ‘split’

An acceptable comparison, but \*tektek ‘chop off’ [Blust 1981] seems to be a better resemblance.

53. ‘breast’ [Ben 242]

ZhT \*hnu ‘breast’ mentioned by Benedict is not represented in the major Kadai sources.

54. ‘breathe’, ‘spirit’, ‘ghost’ [Ben 242]

TP \*R-ma(:)ŋ<sup>A</sup> ‘spirit’ [H 474]:

ZhT \*r-ma:ŋ<sup>A</sup>: Po fa:ŋ<sup>2</sup>, Saek ma:ŋ<sup>2</sup> [LFK];

KS \*R-maŋ<sup>A</sup>: SL ma:ŋ<sup>l</sup>, Ma ma:ŋ<sup>l</sup>a, Mn ma:ŋ<sup>l</sup>, Tn ma:ŋ<sup>2</sup>;

OB maŋ<sup>l</sup>.

An \*t'umaŋəʔ ‘spirit’ (Tb, Mal) is perhaps an old infixated form of \*t'əŋəʔ (?); this makes the comparisons not acceptable.

55. ‘spring’, ‘well’ [Ben 243]

Kd \*ʔba:n<sup>C</sup> ‘village’ (No.2c in §2.1.5)

An \*bual ‘spring’, ‘well’ [Blust 1981]

An acceptable comparison if Vn bân is a Kd loan.

56. 'buffalo' [Ben 243]

An *\*kəbaw* 'buffalo' doesn't belong to the protolanguage level.

57. 'burn', 'blaze' [Ben 244]

TS *\*glo:k* 'to burn': WrS *glo:k* [LFK]

An *\*galak* 'to blaze'; *\*cilak* 'to shine, of heavenly bodies' [Blust 1980]

The semantic connection is not straightforward, but the comparison is otherwise acceptable.

58. 'burn', 'light', 'shine' [Ben 244]

ZhT *\*hmai<sup>C</sup>* 'burn', 'be burnt' > WrS *\*hmai<sup>C</sup>*.

An *\*D<sub>2</sub>amaR* 'torch', 'light', 'resin'.

The semantic relation between 'burn' and 'torch', 'light', 'resin' is not simple enough to make the comparison self-evident.

59. 'bury', 'grave' [Ben 245]

Kd –

ZhT *\*dim* 'place for depositing a corpse' is not known from major Kadai sources;

OB *dəm* 'bury' cited by Benedict;

PrL > Sd *dòm* 'bury'.

An *\*pəŋdem* 'bury'.

The root has a rather limited distribution in Western An languages. This, together with very limited distribution of forms in Kadai, makes the comparison not quite reliable. Also, one cannot ignore its cultural nature.

60. 'butterfly', 'caterpillar' [Ben 245]

ZhT *\*buŋ<sup>C</sup>* 'caterpillar': WrS *buŋ<sup>C</sup>* [H 489]

An *\*b(ae)le(ŋ)baŋ~\*kalibaŋbaŋ* 'butterfly' [Blust 1973]

An acceptable comparison if not of descriptive nature.

61. 'call (of birds/ animals)' [Ben 245–246]

Forms like *\*kuk/\*guk* with this meaning are usually onomatopoeic.

62. 'carry', 'accompany' [Ben 246]

ZhT forms like *\*soŋ* are Chinese loans, as Benedict admits [CHAR5].

63. 'carry on back' [Ben 246]

ZhT forms like WrS *ba<sup>A</sup>* [LFK] are Chinese loans: OC *\*baʔ* 'carry on the back' [CHAR7].

64. 'carry (on shoulder)', 'shoulder load' [Ben 247]

ZhT *\*go:N<sup>A</sup>* 'to carry something by means of a stick on the shoulder' (WrS *go:n<sup>A</sup>*, Lz *ko:n<sup>2</sup>*, Dioi *kon<sup>2</sup>* [LFK]) and KS *\*ʔu:n<sup>A</sup>* 'carry' (SS *ʔun<sup>1</sup>*, Ma *ʔun<sup>1</sup>*, with irregular initial, Mn, Tn *ʔu:n<sup>1</sup>*, Ka *ʔun<sup>1</sup>*) are unrelated.

An *\*pikul* ‘shoulder load’ which is represented only in a restricted area.  
This is an acceptable comparison if we judge that it does not belong to the cultural lexicon.

## 65. ‘cat’, ‘tiger’ [Ben 247]

TP *\*sia<sup>A</sup>* ‘tiger’ [H 516]:

ZhT *\*sia<sup>A</sup>*: WrS *sia<sup>A</sup>*, Lz *tɨ<sup>l</sup>* [LFK];

OB *ʒua<sup>l</sup>*.

An *\*put’ah* ‘cat’

The restricted distribution of the word in both families makes its Austro-Thai origin doubtful.

## 66. ‘cattle’ [Ben 247]

Benedict’s Proto Nung *\*mua* ‘ox’ (Nung *mo<sup>2</sup>* in LFK) may be a Chinese borrowing: OC *\*ɣuə* > MC *ɣəw* ‘cattle’ [CHAR8].

An *\*lambu* does not belong to the protolanguage level, as is indicated by the limited distribution of its reflexes.

## 67. ‘cattle’, ‘buffalo’ [Ben 248]

ZhT *\*[t]h[r]ij* ‘buffalo’ mentioned by Benedict is not represented in the main Kadai sources.

An *\*bantij* ‘wild cattle’ is perhaps a local, rather than a Proto An, root.

The very limited distribution of these forms means that we cannot accept the comparison as evidence for genetic relationship.

## 68. ‘centipede’ [Ben 248]

Kd *\*(kh-)rVp* ‘centipede’ [Ben 248]:

ZhT *\*kh(r)ep*: WrS *ta-khep*, Lz *khi:p<sup>7</sup>* [LFK];

KS *\*khVp*: SS *khup<sup>7</sup>*, Mn *chap<sup>7</sup>*, Ka *khəp<sup>7</sup>*, Mm *khyap<sup>7</sup>*;

PrL *\*ri:p*: Bd, Ht *ri:p<sup>7</sup>*, Qd, Bc *ri:p<sup>8</sup>*, Ts *li:p<sup>8</sup>*, Ym *rip<sup>8</sup>*.

An *\*lipan* ‘centipede’

The comparison is not quite reliable, as the Kadai forms can be compared with Khmer *kəʔε:p* ‘centipede’.

## 69. ‘change’, ‘exchange’, ‘buy’ [Ben 248]

ZhT *\*rian* ‘buy (a field)’ given by Benedict is not represented in the main Kadai sources.

An *\*liyan* ‘to be changed’.

The semantic relation is not simple enough to be used in a genetic claim.

## 70. ‘chest’, ‘body’ [Ben 249]

ZhT forms like WrS *ʔok* ‘chest’ are Chinese loans: MC *\*ʔək* [CHAR9].

An *\*’avak* ‘body’.

## 71/72. ‘chew’ [Ben 249–250]

ZhT forms like *mam*, *ɲam* or An *\*mamaq* ‘chew’ are likely to be descriptive. Compare Russian *njam-njam* ‘chew (children’s language)’, WrK *ɲa:m* ‘eat (about own children)’.



73. 'chief', 'master' [Ben 250]

ZhT forms like \**caw* 'master', 'lord' are Chinese loans [CHAR10]

74. 'child' [Ben 250]

Kd \**IVk* 'child' (No.54 in §2.1.5)

An \**aNak* 'child' < \**atak*; cf. also *laki* 'man'.

An acceptable comparison.

75. 'choose' [Ben 251]

ZhT forms like WrS *liak* 'choose' are borrowed from Chinese [CHAR11].

76. 'citrus' [Ben 251]

ZhT \**na:w* 'citrus', 'lemon' mentioned by Benedict is not represented in the main Kadai sources.

An \**limaw* 'citrus'.

The comparison presents an interesting problem, but there is no reason to use it as evidence in a genetic claim.

77. 'climb', 'ascend', 'mount', 'ride', 'lift', 'above' [Ben 251–253]

a.

KS \**cha<sup>B</sup>* 'ascend' [Li 52];

b.

An \**t'akay* 'climb', 'mount'.

c.

ZhT \**yay* 'lift', 'rise' (not in the main Kadai sources).

d.

ZhT \**[q]i/\*[q]iat* 'reach', 'attain' (not in the main Kadai sources).

An \**anjkat* 'lift'.

The semantic relationship is too distant for the comparison to be accepted.

e.

Kd \**xVn<sup>T</sup>* 'ascend', 'rise' (No.71 in §2.1.5)

f.

Various Kadai forms meaning 'ride horse', like WrS *khi<sup>B</sup>*, Ma *se<sup>S</sup>*, are loans from Vietnamese *curōi* or directly from Chinese [CHAR12].

It is impossible to identify a reliable comparison from these data.

78. 'close eyes', 'sleep' [Ben 253]

TP \**C-?lap* [H 482]

ZhT \**hlap*: WrS *hlap*, Lz, Po *lap<sup>7</sup>* [LFK];

KS \**khlap*: SS *khap<sup>7</sup>*, Ma *lap<sup>7</sup>*, Mn *khap<sup>7</sup>*, Tn *lap<sup>7</sup>*, Mm *khyap<sup>7</sup>*;

OB *dop<sup>2</sup>* (irreg. initial).

cf. Ka *hnap<sup>7</sup>* and PrL \**nap* (Bd *nap*) 'sleep'.

An *\*inəp* < *\*qi[ɫ,n]əp* ‘close eyes’, ‘sleep’.

An acceptable comparison.

79. ‘clothes’, ‘skirt’ [Ben 253]

The Kd forms mentioned by Benedict are not represented in my major Kadai sources.

An *\*tapi?* ‘apron’.

Even if the forms are reliable, this is clearly a cultural comparison which cannot be used to prove a genetic claim.

80. ‘coconut’ [Ben 254]

The root is absent in ZhT: the Shan form given by Benedict is a Burmese loan. PrL evidence is not enough, as it can represent late contact.

An *\*niyay* ‘coconut’.

81. ‘cold’ [Ben 254]

TP *\*hnVu<sup>A</sup>* [H 524]

ZhT *\*hna:u<sup>A</sup>*: Wr *hna:u<sup>A</sup>*, Tay *nao<sup>l</sup>*, Po *na:u<sup>l</sup>* [LFK]

KS *\*hno<sup>A</sup>*: SS, Tn, Ka *hno<sup>l</sup>*.

An *\*gənow* is known only from the Philippine languages.

The comparison is acceptable provided that the An form can be traced back to the proto-language level.

82. ‘color’, ‘striped’, ‘variegated’, ‘mark’ [Ben 255]

TP *\*R-laVj<sup>A</sup>* ‘line’, ‘variegated’:

ZhT *\*r-la:j<sup>A</sup>*: WrS *la:j<sup>A</sup>*, Lz, Po *la:i<sup>l</sup>* [LFK];

KS *\*R-le<sup>A</sup>* ‘line’: SS *le<sup>l</sup>*, Ma *le<sup>la</sup>*, Tn *ze<sup>l</sup>*, Ka *le<sup>l</sup>* ‘book’.

An *\*ku<sup>l</sup>ay* ‘colour’

The proposal of common semantics is not convincing.

83. ‘cold’, ‘cool’ [Ben 255]

Kd ?ZhT *\*?jen<sup>A</sup>* ‘cool’, ‘fresh’: WrS *jen<sup>A</sup>*, Tho *yεn<sup>l</sup>* [LFK]

PrL *\*yan<sup>l</sup>* (Qd *gan<sup>l</sup>*, Bs *xəŋ<sup>l</sup>*) is not related to ZhT.

An *\*dijin* ‘cool’, ‘cold’.

An acceptable comparison.

84. ‘come’ [Ben 255]

Kd *\*hmV(i)<sup>A</sup>* ‘come’ (No.36 in §2.1.5).

An *\*mayi* ‘hither’.

The semantic relationship between the protoforms is doubtful.

85. ‘come’, ‘arrive’ [Ben 255–256]

TP – ‘come’, ‘arrive’

ZhT *\*dVŋ<sup>A</sup>*: WrS *thiŋ<sup>A</sup>*, Lz *thiŋ<sup>l</sup>*, Po *taŋ<sup>2</sup>* [LFK];

KS *\*taŋ<sup>A</sup>*: SS, SL, Ma, Mn, Te, Mm *taŋ<sup>l</sup>*;

OB *doŋ<sup>l</sup>*;

Lk *taŋ<sup>2</sup>* ‘arrive’.

An *\*datəŋ* ‘come’.

The comparison is doubtful, as the TP forms may be loans from Chinese: OC *\*toŋ<sup>?</sup>* ‘go to, frequently visit’ [CHAR13].

86. ‘cook (in bamboo container)’ [Ben 256]

ZhT *\*hlam<sup>A</sup>* ‘cook (in bamboo container)’: WrS *hla:m<sup>A</sup>*, Lz *la:m<sup>l</sup>* [LFK]. Not found in the Zhuang dialects.

An *\*ləməŋ* ‘id.’ A root of restricted distribution.

A culture-related comparison.

87. ‘cook (with steam)’, ‘roast’, ‘singe’ [Ben 256]

TP ? ‘cook’, ‘boil’:

ZhT *\*r-thuŋ<sup>A</sup>*: WrS *huŋ<sup>A</sup>*, Lz *huŋ<sup>l</sup>*, Po *luŋ<sup>l</sup>* [LFK];

KS *\*tu:ŋ<sup>A</sup>*: Ma, Mn *tuŋ<sup>l</sup>*, Tn *tu:ŋ<sup>l</sup>*, Ka, Mm *tuŋ<sup>l</sup>*;

OB *huŋ<sup>l</sup>*.

An *\*da(ŋ)daŋ* ‘to heat’.

The comparison is doubtful due to problems with the Kadai forms, some of which may be Vietnamese borrowings: Vn *hông* ‘cook (with steam)’.

88. ‘copper’, ‘brass’ [Ben 256–257]

Kd forms (WrS *do:ŋ<sup>A</sup>*) are independent loans from Chinese: MC *\*duŋ* < OC *\*[l]o:ŋ* ‘bronze’ [CHAR14]. The relationship of this Chinese root to An (local) *\*luyəŋ* ‘brass’ requires additional investigation. This is another example of the Chinese-Austronesian lexical similarity discussed in Chapters 4 and 5.

89. ‘cord’, ‘string’, ‘rope’ [Ben 257]

TP *\*C-za:i<sup>A</sup>* ‘sash’, ‘cord’ [H 519]

ZhT *\*sa:i<sup>A</sup>*: WrS *sa:i<sup>A</sup>*, Lz, Po *ʔa:i<sup>l</sup>* [LFK];

KS *\*C<sub>1</sub>-sre<sup>A</sup>*: Ma *ze<sup>la</sup>*, Tn *the<sup>2</sup>*, Ka *se<sup>l</sup>*;

OB *səi<sup>l</sup>*;

Lk *kjei<sup>l</sup>*.

An *\*talih* ‘cord’, ‘rope’ [Blust 1981]

The comparison is doubtful, as the same root is represented in Mon-Khmer languages (WrK *khəse:*, etc.), and it is possible that the TP forms are borrowed from there.

90. ‘cough’, ‘spit’ [Ben 257]

Forms like *\*khak* ‘cough’ are likely to be descriptive.

## 91. 'cover', 'roof' [Ben 257–258]

The connection between 'to cover' (ZhT) and 'ridgepole' (An) is not easily justifiable.

## 92. 'cover', 'turn upside down', 'lid', 'hat' [Ben 258–259]

a.

ZhT and other Kd forms like *kup* 'cover' are Chinese loans: MC \*ɣʌp 'close', 'shut' < OC \*gə:p [CHAR15].

The connection of this Chinese form with An \*kəbkəb 'cover' requires additional discussion.

b.

The connection of ZhT \*klup [LFK] and KS \*krup 'rain hat' with An \*kəbkəb 'cover' is not acceptable.

## 93. 'crocodile' [Ben 259–260]

ZhT \*khe<sup>C</sup> 'crocodile': WrS *khe<sup>C</sup>*, Tho *khe<sup>3</sup>* [H 494]. Not found in the Zhuang dialects.

An \*b/uh/aJa 'crocodile'.

There is no reason why the forms should be treated as related.

## 94. 'crustacean', 'shrimp' [Ben 260]

Benedict gives forms from OB *zoaŋ* and Qd Li *fe:ŋ<sup>2</sup>* which are perhaps unrelated. These forms (both from Hainan) do not have cognates in other Kadai languages. Local forms cannot be used to prove a genetic relationship.

## 95. 'cultivate (field)', 'field', 'work' [Ben 261]

Tp \*hVt 'do', 'work':

ZhT *het*: WrS *het*, Lz *hit<sup>7</sup>* [LFK];

OB *huk* [H 492];

(PrL \*wVk 'work': Bd *vu:k<sup>7</sup>*, Qd *vok<sup>8</sup>*, Ts *vo:ʔ<sup>8</sup>*.)

An \*bu'at 'do', 'create'.

An acceptable comparison.

## 96. 'cultivate (field)', 'field', 'work', 'yam', 'sweet potato' [Ben 261–262]

The connection of meanings 'yam' (Kd \*mAn<sup>A</sup>) and 'garden' (An \*quma) is rather doubtful. Both meanings belong also to the cultural lexicon.

## 97. 'cup', 'bowl' [Ben 262]

ZhT forms (Benedict's reconstruction is \*ko:k 'cup') are Chinese loans: MC \*kuk < OC \*kok 'barrow' [CHAR16].

An \*maŋkuk 'barrow' is perhaps the loan from the same source (see Chapter 5).

## 98. 'cut' [Ben 262]

ZhT \*tat 'to cut off', 'sever': WrS *tat*, Lz, Po *tat<sup>7</sup>* [LFK].

An *kətat* 'cut' [Blust 1973: \*ke(Ct)as].

An acceptable comparison.

## 99. 'cut' [Ben 263]

There is no clear reason why the meanings 'to cut' (ZhT) and 'to strike with a crash' (An) should be considered related.

## 100. 'cut' [Ben 263]

The proposed semantic connection between 'to break down', 'fall into ruins' (ZhT) and 'to cut down/off', 'fell' (An) is not quite convincing.

## 101. 'cut off', 'break off', 'castrate', 'short' [Ben 263–264]

ZhT forms, reconstructed by Benedict as *\*to:n* 'castrate' (LFK: *\*do:n<sup>A</sup>* 'cut down' are Chinese loans: MC *\*dwân* 'cut off' < OC *\*do:n?* [CHAR17].

## 102. 'cut off' [Ben 264]

An *\*ta(ŋ)pat* 'cut off' is a metathesis from *\*pV(ŋ)tat* with the same root as in *\*kətat*, *\*rəntat*, etc.

## 103. 'dark', 'black', 'shade' [Ben 264–265]

Kd *\*?nam<sup>T</sup>* 'black' (No.43 in §2.1.5).

An *\*DəDəm* 'dark' < *\*Dələm*, cf. *\*kələm*, *\*lələm* 'id.'

An acceptable comparison.

## 104. 'dark', 'fog/mist', 'gloomy', 'shade/shady', 'black', 'night' [Ben 265]

ZhT forms reconstructed by Benedict as *\*rom* are Vietnamese borrowings: *râm* 'shade', 'obscure'.

An *\*maləm* 'night'.

## 105. 'dark', 'night', 'evening', 'black', 'red', purple' [Ben 265]

Kd — 'dark (red)':

ZhT *\*klam<sup>B</sup>*: WrS *klam<sup>B</sup>*, Nung *kam<sup>5</sup>*, Wm *klam<sup>5</sup>* [LFK];

KS *\*kam<sup>B</sup>*: SL *qam<sup>5</sup>*, Ma *kam<sup>5</sup>*, Ka *am<sup>5</sup>*.

An *\*kələm* 'dark'.

The Kadai words seem to be borrowed from Vietnamese: *săm*, *săm* 'dark'.

## 106. 'day', 'sun', 'sky' [Ben 266]

Kd *\*ŋwAN<sup>A</sup>* 'day', 'sun' (No.52 in §2.1.5).

An *\*waRi* 'day' [Blust 1981].

An acceptable comparison.

## 107. 'deaf' [Ben 267–268]

TP (?) *\*[hn]juak* 'deaf' [H 502]

ZhT *\*hnuak*: WrS *hnuak*, Lz *nu:k<sup>7</sup>*, Po *nuk<sup>7</sup>* [LFK].

OB *mak<sup>l</sup>*.

All other forms: KS *\*?dak*, Lk *jak* and others are perhaps Vn loans: *điếc* 'deaf'.

An *\*tuli* ‘ear wax’, ‘deaf’.

It is rather difficult to accept the formal similarity of these words.

108. ‘deep’ [Ben 267]

ZhT *\*?dam* ‘deep’ mentioned by Benedict is not represented in comparative sources.

An *\*daləm* ‘id.’

109. ‘deer’, ‘cattle’, ‘buffalo’ [Ben 267]

ZhT *\*kwa:ŋ* ‘a kind of deer’ given by Benedict is not represented in the main Kadai sources.

An *\*(?)nuəŋ* used by Benedict is also absent from major sources.

110. ‘den’, ‘lair’ [Ben 268]

ZhT *\*muŋ* given by Benedict is not represented in the main Kadai sources.

An *\*yumuŋ* ‘den’, ‘lair’.

111. ‘desire’ [Ben 268]

ZhT *\*khrəŋ* ‘according to the desire’ given by Benedict is not represented in the main Kadai sources.

An *\*kələŋ* given by Benedict is not represented in the main sources.

112. ‘desire’, ‘hungry’ [Ben 268]

TP *\*(P-)?ia:k* ‘hungry’ [H 473]

ZhT *\*?ja:k*: WrS *?ja:k*, Lz *ja:k<sup>7</sup>*, Po *ji:k<sup>7</sup>* [LFK];

Kd *\*P-?ia:k*: SS, SL *?a:k<sup>7</sup>*, Ma *?i:k<sup>7</sup>*, Mn *bi:k<sup>8</sup>*, Tn, Ka *ja:k<sup>7</sup>*, Mm *?ja:k<sup>7</sup>*.

OB *ziak*.

An *\*pi|yja* ‘desire’ is found only in the Oceanic languages, which makes the comparison not convincing.

113. ‘dew’, ‘frost’, ‘snow’ [Ben 268–269]

TP *\*C-?nVj<sup>A</sup>* ‘snow’ [LK 175]:

ZhT *\*naj<sup>A</sup>* ~ *\*hnaj<sup>A</sup>*: Shan *nai<sup>2</sup>*, Tien-pao *na:i<sup>1</sup>*, Po *nwai<sup>1</sup>* [LFK];

KS *\*C-?nu:j<sup>A</sup>*: SS *?nui<sup>1</sup>*, Ma *nui<sup>1</sup>*, Tn *nu:i<sup>2</sup>*, Ka, Mm *nui<sup>1</sup>*;

Lk *kjāi<sup>1</sup>*.

An *\*lamuy* ‘dew’.

An acceptable comparison.

114. ‘die’, ‘kill’ [Ben 269]

Kd *\*I-ta(:)j<sup>A</sup>* ‘die’ (No.18 in §2.1.5).

An *\*matəj* ‘dead’ [Blust 1981].

An acceptable comparison.

## 115. 'difficult' [Ben 270]

ZhT *\*ja:k* ~ *\*ʔja:k* 'difficult', 'bad': WrS *ja:k*, Po *ja:k*<sup>7</sup> [LFK].

(PrL *\*ze:k* > Bd *re:k* [LDY 420] is not related.)

An *\*pajah* 'difficult' (perhaps a local root).

Limited distribution prevents acceptance of the comparison.

## 116. 'dig into', 'thrust into', 'plant', 'garden' [Ben 270]

ZhT *suaN<sup>A</sup>* 'garden': WrS *suaN<sup>A</sup>*, Lz *tu:n<sup>l</sup>*, Po *ti:n<sup>l</sup>* [LFK];

KS *\*-:*: SL *fjan<sup>l</sup>*, Ma *fi:n<sup>lA</sup>*, Tn *wja:n<sup>2</sup>*, Ka *hjaN<sup>l</sup>*;

OB *ʒuAn<sup>2</sup>*.

All these forms are perhaps borrowed from Chinese: MC *\*wan* < OC *\*wan* 'garden' [CHAR18].

An *\*t'uwān* 'digging stick'.

The words belong to the cultural lexicon and thus cannot be used to prove a genetic claim.

## 117. 'dip', 'dampen', 'soak' [Ben 2701]

ZhT forms, reconstructed by Benedict as *\*com* 'to immerse', are, perhaps, borrowings: Vn *tòm* 'to immerse'.

An *\*k'əmk'əm* 'dampen' (cf. Wolff 1981 about *\*k*).

## 118. 'dip', 'dipper', 'gourd', 'bottle' [Ben 271]

Benedict's ZhT reconstruction *\*taw* 'gourd' may be a Chinese borrowing: OC *\*tew* 'vessel' [CHAR19].

An *\*tabu* 'dipper'.

This could be another example of the Chinese-Austronesian lexical similarity discussed in Chapters 4 and 5.

## 119. 'disgust', 'nausea' [Ben 272]

ZhT *\*phɨay* 'disgust' given by Benedict is not represented in the main Kadai sources, but compare ZhT *ʔbia<sup>B</sup>* 'id.': WrS *bia<sup>B</sup>*, Lz *bi<sup>5</sup>*, Po *mi<sup>5</sup>* [LFK].

An *\*ibay* 'nausea'.

The semantic relation is not close enough.

## 120. 'divide', 'distribute' [Ben 272]

ZhT *\*ʔbiak*, *\*ʔbe:ŋ* 'divide' given by Benedict is not represented in the main Kadai sources.

An *\*bijak*, *\*pijak* 'to be divided'.

## 121. 'dog' [Ben 272–273]

Kd *\*C-ŋwə<sup>A</sup>* 'dog' (No.53 in §2.1.5)

An *\*at'u* 'dog' [Blust 1981: *\*asu*]

Words of the protolanguages are not related. Compare, however, Proto Miao-Yao *\*klu<sup>C</sup>* 'dog' (§3.2 No.100).

122. 'door' [Ben 273]

TP \**tu*<sup>A</sup> 'door' [H488; LK 173]

ZhT \**tu*<sup>A</sup>: WrS *pra-tu*<sup>A</sup>, Lz, Po *tu*<sup>l</sup> [LFK];

KS \**tu*<sup>A</sup>: SL, Ma *to*<sup>l</sup>, Mn *to*<sup>l</sup>, Tn, Ka *to*<sup>l</sup>, Mm *to*<sup>l</sup>;

OB *dau* [H];

Lk *to*<sup>l</sup>.

An \**pin*[*tju*] 'door'.

An acceptable comparison.

123. 'dove', 'pigeon' [Ben 273]

ZhT \**baw* 'dove' given by Benedict is not represented in the main Kadai sources.

An \**punay* 'dove'.

124. 'dream' [Ben 274]

Kd \**far*<sup>A</sup> 'dream' (No.72 in §2.1.5).

An \**Səpi* 'dream' [Blust 1981].

There is no evidence that these words are related.

125. 'drink', 'sip', 'suck in' [Ben 274]

ZhT \**to:m* 'suck in' given by Benedict is not represented in the main Kadai sources.

An \**təmi* 'drink', 'sip'.

126. 'drunk' [Ben 275]

TP \**R-mVj*<sup>A</sup> 'drunk' [H 523]

ZhT \**r-mVj*<sup>A</sup>: WrS *mau*<sup>A</sup>, Lz *mau*<sup>l</sup>, Po *fi*<sup>l</sup> [LFK];

KS \*(*R-*)*me*<sup>A</sup> > Tn *me*<sup>2</sup>;

OB *mui*<sup>l</sup>;

An \**mabuk* 'psychic abnormality'.

It is not clear why the forms should be connected in one comparison.

127. 'dry' [Ben 275]

TP \**R-IVŋ*<sup>C</sup> 'draught' [H465]

ZhT \**r-le:ŋ*<sup>C</sup>: WrS *le:ŋ*<sup>C</sup>, Lz, Po *le:ŋ*<sup>4</sup> [LFK];

KS \**R-liŋ*<sup>C</sup>: SS, SL, Ma *liŋ*<sup>3</sup>, Tn *liŋ*<sup>4</sup> [Li];

OB *daŋ*<sup>3</sup> [Hansell 1988:262].

An \**kəyiŋ*/*\*kəyaŋ*/*\*kəyiŋ* 'dry' has restricted distribution, thus the comparison is not quite reliable.

128. 'dry', 'hoarse' [Ben 275–276]

ZhT and KS forms like \**hra:w* 'dry' given by Benedict are Vietnamese loans: Vn *ráo* 'dry' with a good Mon-Khmer etymology.

An \**payau* 'hoarse'.



129. 'duck' [Ben 276]

Kd \**pet* ~ \**?bet* 'duck' [H492]

ZhT \**pet*: WrS *pet*, Lz Po *pit* [LFK];

KS > Ka *pət*;

OB *bit*;

Lk *pet*;

PrL \**?bet(j)*: Qd, Bc, Ts *bet*<sup>7</sup> [LDY 505].

An \**balivit* 'wild duck'

An acceptable comparison if the last syllable of the An word is the old root.

As we can see, many of these comparisons should be rejected as evidence for genetic relatedness, but there are some which cannot be eliminated so easily. These include cases which:

- a) belong to the core rather than the cultural lexicon, and thus are unlikely to be easily borrowed from one language group into another;
- b) are represented in the main branches of both families, a situation which excludes any recent local interference. (I have discussed above mainly the Kadai component of the comparisons, but the same procedure can be applied to the Austronesian component as well);
- c) are not found in Chinese, and therefore cannot have been borrowed from it.

A review of all Benedict's comparisons will thus provide us with a list of possible lexical similarities between Kadai (or Tai Proper) and Austronesian languages, which are potentially reliable as they meet these conditions. At the same time, we still do not know how to separate ancient loans from words of common origin, so some of these comparisons may be based on borrowings.

The following list gives lexical comparisons between Kadai and Austronesian languages, which are reliable (primarily from the Kadai point of view):<sup>7</sup>

1. 'go' [Ben 342]

Kd \**pa(:)j<sup>A</sup>* 'go' (No.1 in §2.1.5);

An \**sapaj* 'reach'.

2. 'mouth' [Ben 341]

Kd \**pa:k* 'mouth' (No.1 in §2.1.5);

An \**baqbaq* 'mouth', 'opening' [Dahl 1981].

3. 'wing' [Ben 227]

Kd \**pi:k* 'wing' (No.1 in §2.1.5);

An \**kapak* 'wing'.

<sup>7</sup> Ulo Sirk has discussed the Austronesian data with me and I use this opportunity to express my deep gratitude to him. Needless to say, all the decisions and mistakes here are mine alone.

## 4. 'pluck' [Ben 355]

Kd *\*?bit* 'pluck' (No.2 in §2.1.5);An *\*butbut*, *\*putput* 'pluck'; *\*bitbit* 'hold with fingers' (a Western An word).<> cf. however, Vn *bɯt* 'pluck'.

## 5. 'carry on shoulder'

Kd *\*?be:k* 'carry on shoulder' (No.2 in §2.1.5);An *\*ba(q)ba(q)* 'carry on shoulder'.

## 6. 'insane', 'mad'

TP *\*mba:k* 'insane', 'mad' (possibly a local root)ZhT *\*ba:k*: Nung *pac*<sup>8</sup>, Po *pa:k*<sup>8</sup> [LFK];KS *\*mpa:k*: Ma *ba:k*<sup>7</sup>, Mn *mba:k*<sup>7</sup>, Tn *?ba:k*<sup>7</sup>;Lk *fa:k*<sup>7</sup>.An *\*mabuk* 'insane' (of limited distribution).

## 7. 'you' [Ben 208]

Kd *\*m[ai]<sup>A</sup>* 'you' (No.34 in §2.1.5);An *\*kamu* 'you (pl.)' [Blust 1981].

## 8. 'hand' [Ben 309]

Kd *\*R-mV<sup>ɹ</sup>A* 'hand' (No.35 in §2.1.5);An *\*qa-li:ma* 'hand' [Blust 1981].

## 9. 'tooth' [Ben 411–412]

Kd *\*van<sup>A</sup>* 'tooth' (No.73 in §2.1.5);An *\*(C)ipan* 'tooth' [Blust 1981].

## 10. 'fire' [Ben 290]

Kd *\*vVj<sup>A</sup>* 'fire' (No.73 in §2.1.5)An *\*Sapuj* 'fire' [Blust 1981].

## 11. 'liver' [Ben 332]

TP *\*[t]a[i]<sup>A</sup>* 'liver', 'gizzard':ZhT *\*tai<sup>A</sup>*: WrS *ta<sup>ɹ</sup>A*, Nung *tou<sup>l</sup>*, Po *ta<sup>l</sup>* [LFK];KS *\*t(r)a<sup>A</sup>*: Ma, Tn *ta<sup>l</sup>*;OB *da<sup>l</sup>*.An *\*qatəj* 'liver' [Blust 1981]

12. 'door' [Ben 273]

TP \**tu*<sup>A</sup> 'door' [H488; LK 173]

ZhT \**tu*<sup>A</sup>: WrS *pra-tu*<sup>A</sup>, Lz, Po *tu*<sup>l</sup> [LFK];

KS \**tu*<sup>A</sup>: SL, Ma *to*<sup>l</sup>, Mn *to*<sup>l</sup>, Tn, Ka *to*<sup>l</sup>, Mm *to*<sup>l</sup>;

OB *dau* [H];

Lk *to*<sup>l</sup>.

An \**pin*[*t*]u 'door'.

13. 'to die' [Ben 269]

Kd \**I-ta*(:)<sup>A</sup> 'to die' (No.17 in §2.1.5);

An *matəj* 'to die'.

14. 'louse' [Ben 333–334]

Kd \**trau*<sup>A</sup> 'louse' (No.12 in §2.1.5);

An \**kutu*(*H*) 'louse'.

15. 'ashes'

Kd \**P-dau*<sup>B</sup> 'ashes' (No.22 in §2.1.5);

An \**qabu* 'ashes' [Blust 1981].

16. 'green', 'alive' [Ben 332]

Kd \**?drip* ~ \**?dip* 'green', 'alive' [H 459; Li 291]:

ZhT \**?drip*: WrS *?drip*, Lz *dip*<sup>7</sup>, Po *nip*<sup>7</sup>, Saek *rip*<sup>7</sup> [LFK];

KS \**?dip*: SS, SL *?djup*<sup>7</sup>, Ma *?dip*<sup>7</sup>, Mn *dip*<sup>8</sup>, Tn *lip*<sup>7</sup>;

OB *lip*<sup>2</sup>;

PrL \**zwi:p*: Bd *vi:p*<sup>7</sup>, Xf *yip*<sup>7</sup>, Ht *ri:p*<sup>7</sup>, Qd, Bc, Ts *fi:p*<sup>8</sup>, Ym *fi:p*<sup>8</sup> [LDY 473].

An \**hundip* 'live'.

17. 'bone'

Kd \**?drVk* 'bone' (No.13 in §2.1.5).

An \**tanduk* 'horn' (perhaps a West Austronesian root).

18. 'eye' [Ben 283]

Kd \**I-nta*<sup>A</sup> 'eye' (No.20 in §2.1.5).

An \**mata* 'eye' [Blust 1981].

19. 'jungle' [Ben 296]

Kd \**[tr]V*<sup>B</sup> 'jungle':

ZhT \**thial*<sup>B</sup>: WrS *thian*<sup>B</sup>, Lz *thi:n*<sup>5</sup>, Po *tin*<sup>6</sup> [LFK];

PrL \**[ch]un*<sup>2</sup> > Sd *sun*.

An \**qutan* 'jungle' [Blust 1981] < \**quta*[*n,t*].

## 20. 'fart' [Ben 285]

Kd \**R-tot* 'fart' (No.16 in §2.1.5)An \**qə(n)tut* 'fart'.

Possibly of a descriptive nature.

## 21. 'water' [Ben 420]

Kd \**R-nam<sup>C</sup>* 'water' (No.40 in §2.1.5)An \**danum* 'water'.

## 22. 'black' [Ben 265]

Kd \*?*nam<sup>T</sup>* 'black' (No.43 in §2.1.5).An \**qitəm* 'black' [Blust 1981].

## 23. 'child', 'person' [Ben 1981]

Kd \**Vk* 'child' (No.54 in §2.1.5).An \**aʔak* 'person' [Dahl 1981].

## 24. 'yellow' [Ben 427]

Kd \**[C-]liar<sup>A</sup>* 'yellow' [H 517]:ZhT \**hliar<sup>A</sup>*: WrS *hliar<sup>A</sup>*, Lz *li:ŋ<sup>l</sup>* [LFK];OB *lar<sup>A</sup>*;PrL \**ze:ŋ<sup>l</sup>*: Bd, Xf, Ht *ze:ŋ<sup>l</sup>*, Qd, Bc, Ts *te:ŋ<sup>A</sup>* [LDY 420].An \**ku[n,t]iŋ* 'yellow'.Compare, however, WrK *liəŋ* 'yellow' which could be a source of Kadai forms. Another option will be discussed in §3.3 below.

## 25. 'sleep' [Ben 253]

TP \**C-lap* 'to close eyes' [H 482; Li 292]:ZhT \**hlap*: WrS *hlap*, Lz, Po *lap<sup>7</sup>* [LFK];KS \**khlap*: SL *khap<sup>7</sup>*, Ma *lap<sup>7</sup>*, Mn *khap<sup>7</sup>*, Ta *lap<sup>7</sup>*, Mm *khyap<sup>7</sup>*;An \**inəp* 'to sleep', 'close eyes' [Blust 1981] < \**i[n,t]əp*.

## 26. 'sour' [Ben 388–389]

Kd \**R-som<sup>C</sup>* 'sour' (No.69 in §2.1.5).An \**qalsəm* 'sour' [Blust 1981].

## 27. 'I' [Ben 203]

Kd \**kVu<sup>A</sup>* 'I' (No.26 in §2.1.5).An \**aku* 'I' [Blust 1981].

28. 'excrement' [Ben 282–283]

Kd \*KVj<sup>C</sup> 'excrement' [H 483; LK 171; Li 251]:

ZhT \*xVj<sup>C</sup> ~ \*<sub>γ</sub>Vj<sup>C</sup>: WrS khi<sup>C</sup>, Lz khi<sup>3</sup>, Po hai<sup>3</sup> [LFK];

KS \*ge<sup>C</sup> ~ \*ke<sup>C</sup>: SS, SL qe<sup>4</sup>, Ma tje<sup>3</sup>, Mn ce<sup>4</sup>, Ta, Ka ?e<sup>4</sup>, Mm ce<sup>3</sup>;

OB kái<sup>3-2</sup>.

Lk kwei<sup>4</sup>;

PrL \*ha:i<sup>3</sup>: Bd, Xf, Ht, Qd, Bc, Ts, Xf ha:i<sup>3</sup>, Ym huai<sup>3</sup> [LDY 476].

An \*t<sup>2</sup>aqi 'excrement' [Dahl 1981] < \*taqi or An \*daki 'dirt of skin' [Blust 1981].

29. 'weep' [Ben 421]

Kd \*C-?ŋVj<sup>C</sup> 'weep' (No.49 in §2.1.5).

An \*taŋis 'weep' [Blust 1981].

30. 'jaw', 'chin' [Ben 321]

Kd \*ŋka:ŋ<sup>A</sup> 'chin' (No.27 in §2.1.5).

An \*bayəŋ 'molar'.

All these comparisons are based on the same correspondence of syllabic structures: the Kadai forms correspond to the second syllable (the ultima) of the Austronesian words. The first syllables of Austronesian forms have no counterparts in Proto Kadai, and Proto Kadai presyllables do not have clear correspondences in Austronesian. This is the main type of syllabic correspondences found for the Austro-Thai languages (Jakhontov 1977a).

There are, however, several other types of syllabic correspondences. In one type, the Proto Kadai form retains the first and the last consonants of the Proto Austronesian word:

31. 'twist'

Kd \*PVt ~ \*?mVt 'twist':

ZhT \*?bit: WrS ?bit, Tho ?bet<sup>7</sup>, Wm ?bit<sup>7</sup> [LFK];

KS > Tn mit<sup>7</sup>;

OB mit (H);

PrL \*phatj: Bd phatj<sup>7</sup>, Xf, Ht, Qd, Bc, Ts, Ym phat<sup>7</sup> [LDY 387].

An \*bəlit 'twist', but cf. a related form \*lilit 'to wrap', which permits the assumption that the root is \*-lit and that the similarity with Kadai is thus accidental.

32. 'knife' [Ben 323]

TP \*mi:t 'knife' [H 485; Li 311]:

ZhT \*mi:t: WrS mi:t, Po mit<sup>8</sup> [LFK];

KS \*mi:t: SS, SL, Ma, Mn mit<sup>8</sup>, Tn, Ka mi:t<sup>8</sup>, Mm mit<sup>8</sup>;

OB mit<sup>1</sup>.

An \*malat 'id.' [Blust 1973], but with rather limited distribution (Mahdi 1994:178).

## 33. 'plait', 'twist'

TP \*sa:N<sup>A</sup> 'plait', 'twist' [H 486; LK 173; Li 72]:

ZhT \*sa:N<sup>A</sup>: WrS sa:n<sup>A</sup>, Lz, Po *lan*<sup>l</sup> [LFK];

KS \*s(r)a:n<sup>A</sup>: SL ha:n<sup>l</sup>, Ma sa:n<sup>lq</sup>, Tn tha:n<sup>l</sup>, Ka hsa:n<sup>l</sup>.

An \*d'alín 'to tie'. According to Wolff (1981) \*z (= \*d') should not be reconstructed for Proto Austronesian, so the comparison is not quite reliable.

## 34. 'eat' [Ben 278]

Kd \*kiVn<sup>A</sup> 'eat' [H 486; LK 173; Li 72]:

ZhT \*kVn<sup>A</sup>: WrS kin<sup>A</sup>, Lz kin<sup>l</sup>, Po kin<sup>l</sup> [LFK];

KS \*kia:n<sup>A</sup>: SL tsja:n<sup>l</sup>, Ma si:n<sup>l</sup>, Tn tsin<sup>l</sup>, Ka tja:n<sup>l</sup>, Mm tsa:n<sup>l</sup>;

OB kon<sup>4</sup>;

Lk tsen<sup>l</sup> (a loan?);

PrL \*khan<sup>l</sup> > Qd, Bc khan<sup>l</sup> [LDY 382].

An \*kaʔən 'eat' [Blust 1981].

## 35. 'spring', 'well' [Ben 243]

Kd \*ʔba:n<sup>C</sup> 'village' (No.2c in §2.1.5)

An \*bual 'spring', 'well' [Blust 1981]

An acceptable comparison if Vn *bán* is a Kd loan.

In another type of syllabic correspondence, the consonants of the Kadai form correspond also with the middle consonant of the Austronesian word:

## 36. 'plant', 'bury' [Ben 355]

TP \*ʔdram<sup>A</sup> 'transplant rice' [H 482; Li 67]:

ZhT \*ʔdram<sup>A</sup>: WrS ʔdam<sup>A</sup>, Lz dam<sup>l</sup>, Po nam<sup>l</sup>, Saek tram<sup>l</sup> [LFK];

KS \*ʔdram<sup>A</sup>: SL, Ma ʔdam<sup>l</sup>, Tn zam<sup>l</sup>, Ka hlam<sup>l</sup>;

OB zam (H).

An \*taʔəm 'to plant', 'bury' [Dahl 1981].

<> The semantic correspondence is not exact. Compare also WrK *ʔam* 'to plant' with a good AA etymology.

## 37. 'an edible root'

Kd \*P-ʔrV<sup>k</sup> 'taro' (No.58 in §2.1.5).

An \*biyaq 'an edible root' [Dahl 1981].

## 38. 'skin', 'scale' [Ben 370]

Kd \*kIV<sup>p</sup> 'skin', 'scale'

ZhT \*kli:p: WrS kli:p, Nung klip<sup>7</sup>, Po kjap<sup>7</sup> [LFK];

PrL \*lo:p: Bd, Xf lo:p<sup>7</sup>, Ht lap<sup>7</sup>, Qd, Bc lo:p<sup>8</sup>, Ts lo:p<sup>7</sup>, Ym luap<sup>8</sup> [LDY 441].

An \*hunap 'scale' < \*(C)u[n,t]ap.

In a few cases, the Kadai form corresponds to the first syllable of the Austronesian word:

39. 'blind' [Ben 235]

TP *\*ʔbVt* 'blind' [Li 277]

ZhT *\*ʔbo:t*: WrS *ʔbo:t*, Lz *ʔbo:tʔ* [LFK];

KS *\*ʔbit* ~ *\*mit*: SL *ʔmutʔ*, Ma *ʔbətʔ*, Tn *metʔ*.

An *\*butaH* 'blind'.

40. 'day' [Ben 266]

Kd *\*ɲwan<sup>A</sup>* 'day', 'sun' (No.50 in §2.1.5).

An *\*waRi* 'day' [Blust 1981].

And finally, a group of Proto Kadai words with labialised initials reveal their own type of syllabic correspondence:

41. 'moon' [Ben 453]

Kd *\*P-ʔnian<sup>A</sup>* 'moon' (No.45 in §2.1.5).

An *\*bulaʔ* 'moon'.

42. 'rain' [Ben 360]

Kd *\*xwin<sup>A</sup>* 'rain' (No.75 in §2.1.5)

An *\*Rabun* 'precipitation' [Blust 1981].

43. 'pig' [Ben 353–354]

Kd *\*C-ɲwV<sup>A</sup>ʔ* 'pig' (No.53 in §2.1.5).

An *\*babuj* 'pig'.

44. 'thread', 'rope' [Ben 427]

Kd *\*[C-ɲw]Vj<sup>A</sup>* 'thread', 'rope' [H 521; LK 174]:

ZhT *\*hmaj<sup>A</sup>*: WrS *hmaj<sup>A</sup>* 'silk', Lz, Po *mai<sup>l</sup>* [LFK];

(Ma *mai<sup>la</sup>* is a Zhuang loan);

OB *moj<sup>ʔ</sup>*;

Lk *kūj<sup>l</sup>*;

PrL *\*C-mej<sup>l</sup>* > Xf *mej<sup>l</sup>* [LDY 499].

An *\*labaj* 'thread' (a Western An root); cf. *\*lambu* 'fibre'.

It is absolutely clear that this list of 44 comparisons (if we accept all of them) is not sufficient to establish a genetic relationship between the Kadai and Austronesian families. My own attempts to enlarge the list, through finding Austronesian parallels to the reconstructed Proto Kadai and Tai Proper roots, have failed, since I could not find additional good comparisons.

It is quite possible that more lexical similarities with Proto Austronesian can be found in daughter Kadai languages. Benedict gives the following examples for Proto Li:

|       | Proto Li                    | Proto An        |
|-------|-----------------------------|-----------------|
| soft  | * <i>put</i>                | * <i>lambut</i> |
| wide  | * <i>ben<sup>l</sup></i>    | * <i>banban</i> |
| leaf  | * <i>van<sup>3</sup></i>    | * <i>Davən</i>  |
| nine  | * <i>fai<sup>3</sup></i>    | * <i>siva</i>   |
| seven | * <i>thou<sup>l</sup></i>   | * <i>pitu</i>   |
| right | * <i>C-nenj<sup>2</sup></i> | * <i>vanan</i>  |
| six   | * <i>C-nom<sup>l</sup></i>  | * <i>qənəm</i>  |
| hut   | * <i>plog<sup>3</sup></i>   | * <i>baṽuŋ</i>  |

Some of these Proto Li words can be also found in Gelao ('six' *nan*<sup>33</sup>, 'nine' *səi*<sup>24</sup>). On this basis Benedict attributes them to the Proto Austro-Thai level. However, no data about the history of Gelao languages or their connections with Li and other Kadai groups is available. It is thus quite possible that such similarities reveal non-genetic connections. For this reason, such comparisons are not incorporated in the list, which connects only better known Kadai forms.

These 44 comparisons (most of which belong to the core vocabulary) are quite good from both the semantic and the formal point of view, and they require some explanation. One can suggest the following interpretations of the list:

- (i) that it simply contains chance similarities, and that if one chose another pair of protolanguages, the results would be the same. However, attempts to connect Kadai languages with Sino-Tibetan or Mon-Khmer have failed to produce lists of such quality as that for Kadai and Austronesian;
- (ii) that it includes words borrowed into one or both language families;
- (iii) that it represents traces of common origin of the languages.

The idea of borrowing has recently been discussed and supported by Thurgood (1994). His arguments can be summarised as follows:

Those roots most frequently put forth in the literature as the strongest evidence of a genetic relationship – largely on the basis of their obvious similarity to An forms – often behave just as one expects borrowings to behave. That is, in a great number of cases, these forms have unique TK [that is, Kd] corresponding patterns, patterns not shared with other TK forms, a feature that is consistent with the thesis that they are borrowings. (Thurgood 1994:360)

Let us discuss this position. As was mentioned in Chapter 1, it is worthwhile to distinguish two notions. Regular correspondences include all phonological correspondences which are supported by a sufficient number of examples, regardless of whether they occur in words of common origin or in borrowings. Systematic correspondences, in contrast, are found only in words of common origin, and are traces of phonological distinctions of the protolanguage. There is no need for systematic correspondences to be regular: some of them may be supported by numerous examples, while others will be found only in a couple of good comparisons. To show that a correspondence is systematic, one needs to include it in the phonological reconstruction. In dealing with borrowings one would expect that correspondences found in them would not be systematic.

It is true that Kadai initials in comparisons like 'moon', 'eye' and some others do not reveal typical (i.e. regular) correspondences. Their correspondences, however, are treated as



systematic in the Kadai reconstruction presented above, which leads me to reconstruct protoforms such as *\*P-ʔnɪan<sup>A</sup>* ‘moon’, *\*I-nta<sup>A</sup>* ‘eye’, and *\*I-ta(:)j<sup>A</sup>* ‘die’. These reconstructions were based only on interpretation of internal Kadai data with no support from Austronesian evidence. They therefore have the following characteristics:

- (i) they belong to the Proto Kadai level;
- (ii) their forms are reconstructed with the help of phonological correspondences identified as systematic;
- (iii) there is no Kadai evidence to support the claim that they are borrowings at any level associated with the reconstructions;
- (iv) most of them belong to the core lexicon.

I believe that these features are not typical of situations of borrowing. Thus, my conclusion is that the comparisons do suggest that Kadai languages are related to the Austronesian family, but that we need much more data before this suggestion is proved. At the same time, there is no adequate explanation for the brevity of the list, nor for the failure of attempts to enlarge it. I do not think that the great depth of Proto Austro-Thai unity (approximately eight thousand years before present, or the sixth millennium BC) could be solely responsible for that. Other reasons need to be suggested.

CHAPTER 3  
MIAO-AUSTROASIATIC LANGUAGES

3.1 AUSTROASIATIC LANGUAGES

The Austroasiatic family includes twelve primary groups (cf. Parkin 1991):<sup>1</sup>

1. The Khmer group is formed by the genetically isolated Khmer language, which has a long written tradition going back to the middle of the first millennium AD. Khmer is quite well known synchronically: there are for example, good dictionaries and phonological descriptions of the language (Headley et al. 1977; Gorgonijev 1966, 1984). The history of Khmer has also been discussed in some detail (Jenner & Pou 1980–81; Jacob 1960, 1976). A dictionary of Old Khmer is also available (Pou 1992), but the absence of closely related languages hinders to some extent the comparison of Khmer with the rest of the family.

Khmer data, usually based on an interpretation of archaic traditional Khmer orthography, is widely used in all Austroasiatic studies.

2. The Mon group includes two branches: Mon and Nyakur. The lexicon of Mon in its written and spoken forms is represented in several dictionaries (Halliday 1922; Shorto 1962 and others). Many Old Mon inscriptions (the earliest dating back to the sixth century AD) have been published and translated (see details in Diffloth 1984). The lexicon of these inscriptions is represented in Shorto's dictionary of Old Mon (Shorto 1971) which includes abundant information about the historical development of words: Old, Middle, and Modern Mon spellings and pronunciations as well as etymologies. The phonological history of the languages has been discussed by Ferlus (1983) and from a historical point of view Mon is now perhaps the best known Austroasiatic language.

A comparative dictionary of some Nyakur dialects has been published (Thongkum 1984) and Diffloth (1984) uses these data for his very interesting Proto Monic reconstruction and comparative dictionary.

3. The Bahnaric group is divided into three main subgroups (Thomas & Headly 1970; Thomas 1979):
  - a) Northern: Bahnar, Sedang, Halang, Jeh, etc.;
  - b) Western: Lowen or Jru, Niahen or Pru, Brao, etc.
  - c) Southern: Central Mnong, Southern Mnong, Eastern Mnong, Stieng, Keho, Chrau, etc.

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<sup>1</sup> Mang and Paliu, described in Yan and Zhou (1995), probably form two additional groups, but this possibility is yet to be investigated.

The position of Bahnar in the group is not quite clear, and it is possible that the language forms a separate fourth subgroup (Gregerson et al. 1976).

A two-volume Bahnar-French dictionary was published about 35 years ago (Guilleminet 1959) and another vocabulary of a Bahnar dialect provides us with extensive lexical data (Banker et al. 1979). There are vocabularies of Sedang (Smith 1967), Chrau (Thomas & Tho 1966), Keho and some other languages and dialects, and information about their grammatical systems is also available (Smith 1979). However these publications cover only the Northern and Southern subgroups. At present little is known about the Western languages.

The history of the Bahnaric languages has been investigated to some extent. There are reconstructions of Proto languages for two Bahnaric subbranches formed by closely related languages: Jeh-Halang (Thomas & Smith 1967) and Mnong (Blood 1966). The latter publication also includes comparisons with other South Bahnaric languages, and a South-Bahnaric reconstruction which unfortunately does not include any explicit phonological correspondences. The South-Bahnaric reconstruction is also discussed in a book by Efimov (1990).

Smith (1972) proposed a North Bahnaric reconstruction based on comparison of Bahnar with the above-mentioned reconstruction of Proto Jeh-Halang and with Common Sedang, the language obtained through a comparison of Sedang dialects. The author has established clear phonological correspondences between languages, reconstructed the phonological system of the protolanguage, and compiled a comparative vocabulary of about 500 roots.

4. The Katuic group is formed by Katu, Pakoh, Kui, Bru and some other languages.

The lexicons of some languages of the group are represented in dictionaries of considerable length (Costello 1971; Prasert Srivises 1978; Watson et al. 1979; Thongkum & See Puengpa 1980). However, the phonological and grammatical information available to date has been inadequate.

The history of the group has been discussed by some authors (Thomas 1967; Diffloth 1982; Efimov 1983). The first comparative study of the Katuic group was a MA thesis by Thomas (1967), in which several Katuic languages were represented by word lists collected mostly by linguists associated with SIL. Thomas' lexical comparisons are extremely useful, although the phonological reconstruction is unfortunately not reliable. Efimov's (1983) thesis is based on the analysis of five languages (Katu, Suoi, Bru, Pakokh and Kui). Of these, only Katu was represented in a consolidated vocabulary, the forms for the other languages being extracted from a variety of sources. However, Efimov found more than 400 roots which he assumed to represent Proto Katu. Interestingly, Efimov included the Ksinmul or Puok language (Materialy 1990) usually regarded as Khmuic in his Katu group. According to Efimov, the development of Ksinmul phonology can be explained with the help of his Proto Katuic reconstruction, but it is notable that the Ksinmul lexicon shares only common Mon-Khmer roots with Katuic languages, while specific Katuic roots are absent in the language.

Diffloth (1982) tries to explain registers in Katuic languages as variant developments of the protolanguage's vowels. It is possible, however, to connect register distinctions with prefixes of Proto Katuic. Such a reconstruction, together with a comparative Katuic dictionary, is given in Peiros (1996).

5. The Pearic group (Pear, Samre, Angrak, etc.) is only superficially known. Just one vocabulary is in print (Headley 1978) and there is no sufficient data for the internal analysis of the group (cf. however Headley 1985).

6. The Palaung-Wa languages are spoken to the north of other Austroasiatic groups. According to Diffloth (1980) this group includes:

a) the Wa languages: proper Wa (e.g. Kawa, Praok and Wa), Lawa (e.g. Umihai and Bo Luang), Samtao and some others.

Until recently, most of these languages and dialects were poorly described. The best data was that collected by Mitani (1966, 1972), and a Wa reconstruction based on this data was proposed by Diffloth (1980). The situation changed at the beginning of the 1980's when Chinese scholars published a dictionary of Parauk-Wa (Yan et al. 1981), and a sketch grammar of the same language (Zhou & Yan 1981), which also includes a brief comparison of three mutually incomprehensible dialects: Parauk, Lawa and Va proper. The Bulang or Samatao dialect is now also represented in a short grammar and a word list published by Chinese linguists (Li et al. 1986); its comparison with two closely related dialects has been conducted by Paulsen (1989).

b) the Rumi languages (e.g. Palaung, Pale and Darung) known mainly from the Milne's Palaung dictionary (Milne 1931) which is widely used in comparative studies. A description of Deang has also been published in China (Chen et al. 1986).

c) Riang, mentioned in some short publications by Luce (1965, 1972).

d) practically unknown Lamet dialects (Mitani 1965; Lindell et al. 1978; Svantesson 1988).

e) Angku dialects; until recently there was only one short description of U (Svantesson 1988). However, Yan and Zhou (1995) have since presented much needed additional information about two dialects of this group.

f) the Danaw language, which is already or nearly extinct. Some information about Danaw is contained in an article by Luce (1965).

The relationships between these subgroups are not clear to Diffloth (1980, 1989), but he assumes that the Rumi and Riang subgroups are related to each other.<sup>2</sup>

The history of the Palaung-Wa group has been investigated by Schmidt (1905) and is discussed in an article by Shafer (1952). One can find additional etymologies in Luce's (1965) article on Danaw, in Svantesson's (1988) study of U and in Diffloth's (1980) reconstruction of Proto-Wa, but many gaps remain in our understanding of Proto Palaung-Wa.

7. Some languages or dialects of the Khmu group are represented in some publications of a general nature (Smalley 1961; Svantesson 1983; etc.) and dictionaries and word lists of several Khmu dialects (e.g. Lindell 1974; Preisig 1994). No full-scale comparative study of these sources has been conducted.

It is highly possible that Thin, Mlabri (Rischel 1995) and some other poorly known languages should be grouped together with Khmuic (Diffloth 1985).

8. The Viet-Muong group consists of Vietnamese and numerous other languages and dialects. According to Ferlus (1991) this group includes:

<sup>2</sup>

Svantesson (1988) mentions another classification of Palaungic (= Palaung-Wa) presented in an unpublished paper by Diffloth: (i) West Palaungic (Rumi, Riang and Danaw) and (ii) East Palaungic (Lamet, Angkuic and Waic).

## I. Phon-Chut branch

1. Arem
2. Sach, Ruc, May
3. Pakatan, Malieng
4. Thavung
5. Pong, Hung and others

## II. Viet-Muong branch

6. Muong
7. Vietnamese

Published data is not available for most Viet-Muong languages (Barker 1993). With the exception of Vietnamese, only one Muong dialect has been described in any detail (Materialy 1987). There are short dictionaries of Ruc (Nguyen et al. 1988) and Thavung (Ferlus 1979). Nonetheless the history of the group has been the subject of intensive investigation, and numerous reconstructions have already been proposed (Barker 1963, 1966; Barker & Barker 1970; Thompson 1976; Ferlus 1975, 1991).

An important feature of Vietnamese is its close connection with Chinese. The Vietnamese lexicon is full of Chinese words. Most were borrowed from Middle Chinese when the Chinese language and script were adopted in Vietnam. These loans, known as Sino-Vietnamese, are widely used for the reconstruction of Middle Chinese phonology, hence the fundamental rules connecting the Sino-Vietnamese and Middle Chinese phonological systems are well established (Maspero 1912; Karlgren 1954). However, it is well known that the Chinese influence actually began much earlier, and sometimes Archaic Chinese features are found in Vietnamese forms. The situation thus requires additional investigation.

The relationship of Vietnamese and the whole Viet-Muong family to the Kadai languages has not been investigated.

Vietnamese forms are sometimes included in Mon-Khmer comparisons (e.g. Gage 1985), but they are usually used without Proto Viet-Muong reconstructions. Hence the results are of preliminary interest only.

9. Khasi forms a separate branch of the Austroasiatic family. The language is described in several publications (e.g. Singh 1906; Rabel 1961; Henderson 1976). Schmidt (1904) discussed the history of Khasi on the basis of data available at the turn of the century, but more recent data remains to be interpreted (see however Henderson 1976).
10. Some of the Nicobarese dialects or languages are represented in old dictionaries (e.g. Man 1889) to which we can now add some other publications (Das 1977; Radhakrishnan 1981). However, as information on other Nicobarese languages is absent, there is still no prospect for a Proto Nicobarese reconstruction. Modern Nicobarese languages have undergone quite varied phonological changes, and their direct use in comparisons is consequently complicated.
11. The Austroasiatic languages of Central Malacca form the three Aslian subgroups (Benjamin 1976a; Diffloth 1976):
  - a) Northern (Jehai): for example Kensiu, Kitak Bong, Jehai, Mendrik (Benjamin 1976a:64);

- b) Central (Senoi): for example: Sabum, Temiar, Semai, Jeh Hut (Benjamin 1976a:59);
- c) Southern (Semelai): Mah Meri (Besis), Semak Beri, Semelai and Temor (Benjamin 1976a:59).

The only Aslian languages to have been described are a few belonging to the Central subgroup (e.g. Carey 1961; Benjamin 1976b; Diffloth 1976). Diffloth has published some important remarks about their history (e.g. Diffloth 1977) but information about most other Aslian subgroups and about the protolanguage is still lacking.

12. The Munda group is perhaps the largest in the family. It has three subgroups:

- a) Northern, which subdivides into two: Kherwari and Kurku. The Kherwari branch includes such important languages as Santali (e.g. Bodding 1929–36) and Mundari (Hoffman 1930–78; Osada 1992), and many small poorly understood languages and dialects (Birhor, Aruri, etc.). Information about the Kurku language, the only known representative of the Kurku branch, is also lacking (see, however, Girard n.d.)
- b) The Central subgroup, consisting of two languages: Kharia and Juang. Only the former has been investigated in any detail (e.g. Pinnow 1959; Biligiri 1965). The information about Juang is limited (Matson 1964)
- c) The South-Eastern subgroup including Sora (e.g. Ramamutri 1931, 1938), Bonda or Remo (Bhattacharya 1968), Gutob, Gurum and others.

The suggestion has been made that the Central and South-Eastern languages are somehow closer to each other than to the Northern group (Zide & Stampe 1976), but at the present stage of knowledge the apparent similarities could be explained as archaic features maintained in both subgroups.

The history of the Munda languages has been discussed in a variety of publications, but the most important reference is still Pinnow (1959). Contrary to its narrow title *Versuch einer historischen Lautlehre der Kharia-Sprache*, the book actually investigates a wide range of Austroasiatic problems: the reconstruction of Proto Munda, the analysis of other Austroasiatic branches and their comparison with Proto Munda, the Proto Austroasiatic lexicon and so on. The book is therefore regarded as a good source of information about Proto Munda and its external connections.

When I re-evaluated Pinnow's Proto Munda reconstruction I came up with a different solution. There are two main reasons for this. Firstly, Pinnow did not have adequate descriptions of many of the languages. But more importantly, he did not discover or did not pay attention to the accentual features of some of the languages.

The authors of the Santali, Mundari, Sora and Kharia grammars used by Pinnow mentioned the presence of stress oppositions in those languages. In the Santali and Mundari descriptions the stress was regarded as secondary and was therefore not marked. Pinnow did analyse the stress patterns in Sora and Kharia, and assumed that in both cases the position of the stress is determined by the structure of the root, and is therefore unimportant (Pinnow 1959:429–440).

However, my analysis of Sora (based on Pinnow's data) shows a correlation between stress and vowel length in the language. This correlation is very important because long

vowels in Sora are the main source of Pinnow's Proto Munda long vowels. Three patterns are common in the simple roots of Sora:<sup>3</sup>

- a) root structure (C)V(C)C'V(C): stress on the ultima: *asár* 'dry', *sanáj* 'door', *rapád* 'break':
- b) root structure (C)'V(C)CV:(C): stress on the penultima: *tánku*: 'stone of fruit', *úma*: 'to bath', *bónte:l* 'buffalo';
- c) root structure (C)V(C)C'V:(C): stress on ultima: *əlá:n* 'thatch', *əsú*: 'ill'.

In type (c), one of two vowels (*a* or *ə*) must occur in the penultima syllable. I propose that they are both reflexes of the old \**ə*. From this, one can assume that the stress in Sora never falls on penultima \**ə*, Hence structural type (c) is in complementary distribution with type (b) which includes roots without penultima \**ə*. Types (a) and (b/c) are then distinguished by stress or by vowel length connected with the stress. It appears that for a certain period of Sora history, we need to reconstruct stress placement as a contrastive feature, and explain modern vowel length as a phonological development governed by this placement. There are some other sources of vowel length in Sora (e.g. final \**L*), so it is quite possible that the length in all cases developed relatively late. Long vowels also occur in other South-Eastern Munda languages, and they usually correspond to Sora long vowels (stress in these languages is not marked in Pinnow's data). The conclusion is that long vowels in all of the South-Eastern Munda languages are of secondary origin.

The idea of stress shift from penultima \**ə* helps to account for the system of accent correspondences between Sora and Kharia: the correspondences are simple, except for the cases where Sora shows a stress shift due to penultima \**ə*. There is no correlation between stress and any peculiarities of Kharia root structure. This fact justifies the assumption that stress is an archaic feature, relevant to the Proto Munda level, and that in some languages its position resulted in the appearance of long vowels.

A knowledge of the original position of stress in the root helps in the reconstruction of some segmental phonemes which have different reflexes in stressed and unstressed syllables. For example, having found their different reflexes in Sora and Kherwari, Pinnow reconstructed an opposition of velars and uvulars in Proto Munda. However, I can show that in Sora the reflex of Pinnow's \**q* only occurs in unstressed syllables, whereas in stressed syllables the reflex of \**k* always occurs. As the same rule explains the difference between Pinnow's \**g* and \**G*, there is no reason to reconstruct an opposition.

Pinnow's reconstruction permits more changes, but further reinterpretation is not useful at present. Some Munda languages evidence very complicated vocalic and supersegmental features which have no counterparts (or simply were not discovered) in the languages providing Pinnow's data. Historical interpretation of these phenomena (Kurku tones: Zide 1966; Gutob-Remo vocalism: Zide 1965) do not include adequate lists of forms, so it is difficult to make judgements about their nature and external reflexes. Only the publication of phonologically adequate vocabularies of various Munda languages will enable us to take the next step in the reconstruction of Proto Munda. At the current level our knowledge is limited to general features of the protolanguage, and some ideas about phonological correspondences between the daughter languages. Such knowledge is insufficient for the detailed reconstruction of protoforms and for the discussion of connections with other language families.

<sup>3</sup> Type C'VCV:C with stress on penultima is not recorded among simple roots.

Some hundreds of Munda roots have been collected by Pinnow. Additional comparisons are listed in publications by Kuiper (1962, 1965) and Bhattacharya (e.g. 1966, 1975), but the information provided is often inadequate for discovering whether a root does belong to the protolanguage level, or for proving that it is not a loan from one Munda language to another.

The problems of localisation of a Munda homeland have not been addressed. As all Munda languages are presently spoken in the North-Eastern part of India one can suppose that this area was the original Munda homeland. A possible source of support for this hypothesis is the investigation of contacts with other South Asian language families. It is well known that Munda languages are now in contact with Indo-Arian and Dravidian languages, but it is unclear when these contacts began. Some scholars (e.g. Kuiper 1948) argue that Munda borrowings can be found in Sanskrit, but according to Emeneau (1980) all such comparisons are unreliable. There are no firm ideas about the beginnings of Munda-Dravidian contact. Clearly, any progress in this field will require a detailed account of Munda historical linguistics. Current proposals concerning the Indian localisation of the Munda homeland are based on speculations.

The Nakhali language is sometimes connected with the Munda family. Kuiper (1966) distinguished several different strata in the Nakhali lexicon: Dravidian borrowings, roots which are common with Munda, other loans and some roots which are attested in the Sino-Tibetan languages of the Himalayas. A lot of important roots, many of which belong to the core lexicon, have no known etymology. Resemblances for Nakhali-Munda correspondences cannot be found in other Austroasiatic languages, so one can assume that Nakhali does not belong to the Austroasiatic family (Jakhontov pers. comm.). Shafer may have been correct in his suggestion that Nakhali is a remnant of the Indian languages spoken before the Indo-Arian (and Dravidian) migration (Shafer 1954).

With the exception of the position of Nakhali, the characteristics of the Austroasiatic family are well established. Many Austroasiatic groups had already been identified by Schmidt (e.g. 1904). Haudricourt (1953) later added Vietnamese, proving an old hypothesis about its Austroasiatic origin (Logan 1852–56; Forbes 1881).

The relationship of different Austroasiatic branches to each other has been the subject of extensive discussion in the literature. The most recent classification is that of Diffloth (1989) who proposes that the genetic tree of Mon-Khmer (Austroasiatic without Munda) can be represented as follows:

I. Northern:

1. Khasi
2. Palaung-Wa:
  - a) Palaung-Riang
  - b) Wa
  - c) Angku
  - d) Lamet
3. Khmu

II. Eastern

4. Viet-Muong
5. Katu
6. Bahnaric:
  - a) Western Bahnaric
  - b) Eastern Bahnaric
  - c) Southern Bahnaric
  - d) Bahnar



- 7. Khmer
- 8. Pearic

### III. Southern

- 9. Monic
- 10. Aslian
- 11. Nikobaric

Diffloth's classification is based on an analysis of some lexical innovations.

The relationship between the Munda group and other groups has been discussed by Pinnow, who suggested that the Austroasiatic family consists of two main branches:

Western (Munda and Nakhali);

Eastern, which includes all other languages of the family.

Pinnow gave a detailed classification of his Eastern (Mon-Khmer) group, but his subdivisions are now outdated. For example, in Pinnow's classification Viet-Muong languages are omitted, Stieng and Keho are placed in different subgroups, while the Aslian languages are treated as three independent groups.

There have been some attempts at lexicostatistical classification of Mon-Khmer languages, but all have been based on non-standard lists (Thomas 1966; Thomas & Headly 1970; Huffman 1976) with no support from comparative phonology.

Despite the long history of comparative study of the Austroasiatic family, dating back to the beginning of the century,<sup>4</sup> conclusive results remain rare. It is very difficult even to extract information about the phonological system of the protolanguage or the main phonological correspondences between its daughter languages.

Clearly, this absence of Proto Mon-Khmer and Proto Austroasiatic data hinders the development of Southeast Asian linguistics. Realising this, I undertook as a first step a direct comparison of five Mon-Khmer languages: Khmer, Mon, Chrau, Vietnamese and Wa. For the purposes of the comparison, it was vital that the histories of the chosen languages were relatively well known. There is historical data for Khmer and Mon, and low-rank reconstructions are available for Mon (Proto Mon: Diffloth 1984), Chrau (Proto South-Bahnaric: Blood 1966; Smith 1972; Efimov 1990), Vietnamese (Proto Viet-Muong: Sokolovskaja n.d) and Wa (Proto Wa: Diffloth 1980 and Proto Palaung-Wa: Peiros 1989b). Dictionaries of other languages were unavailable to me in Moscow. In my comparative work I collected more than 1,500 cognates, most of which are not mentioned in the literature, and worked out a preliminary account of the Mon-Khmer historical phonetics (Peiros n.d.). Due to the unfortunate absence of adequate data from the Munda and Nicobaric languages, the continuation of this work should be directed at first towards including other Mon-Khmer languages rather than towards the Austroasiatic reconstruction itself.

The study of these five languages, together with information about other Austroasiatic groups and languages, has enabled me to carry out a lexicostatistical classification of the family. Part of the lexicostatistical matrix is given in Table 3.1.

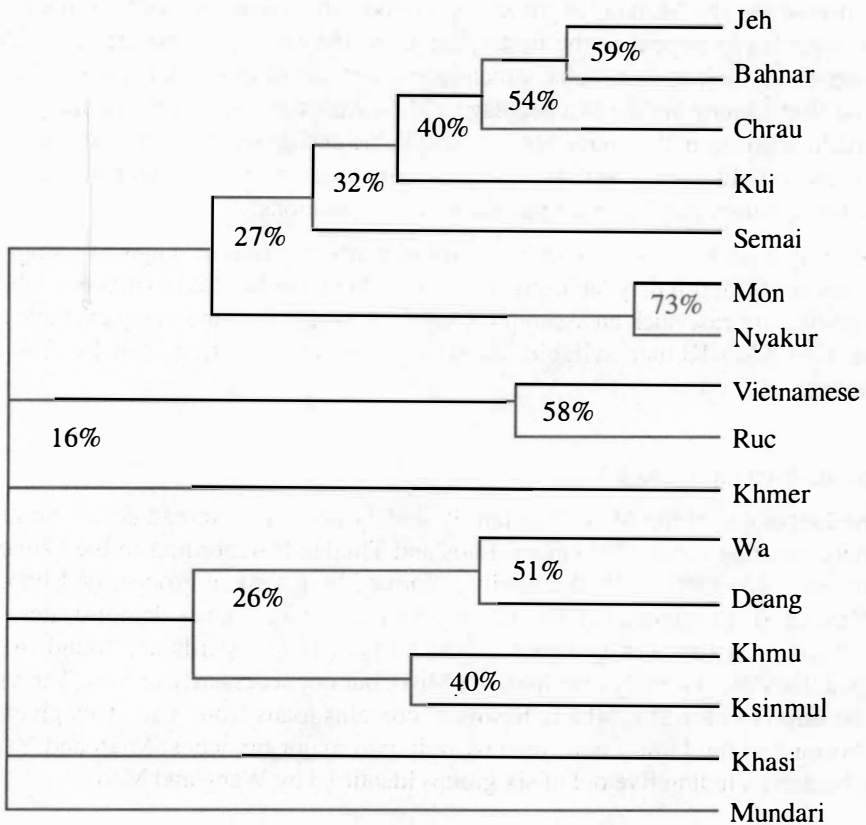
<sup>4</sup> See Schmidt (1901, 1904, 1905) and surveys of Austroasiatic or Mon-Khmer studies by Sebeok (1942), Thomas (1964) and Efimov (1983).

TABLE 3.1: LEXICOSTATISTICAL MATRIX OF SIXTEEN MON-KHMER LANGUAGES

|            | Jeh | Bah | Chr | Kui | Smi | Mon | Nya | Vie | Ruc | Wa | Dea | Kmu | Kml | Kmr | Kha | Mun |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|
| Jeh        | x   | 59  | 54  | 40  | 34  | 28  | 28  | 32  | 33  | 27 | 22  | 25  | 25  | 22  | 23  | 25  |
| Bahnar     | 59  | x   | 55  | 41  | 34  | 30  | 31  | 29  | 30  | 24 | 20  | 26  | 26  | 24  | 20  | 27  |
| Chrau      | 54  | 55  | x   | 43  | 32  | 37  | 37  | 30  | 35  | 30 | 25  | 30  | 33  | 27  | 26  | 27  |
| Kui        | 40  | 41  | 43  | x   | 33  | 28  | 33  | 30  | 32  | 27 | 23  | 27  | 28  | 29  | 23  | 26  |
| Semai      | 34  | 34  | 32  | 33  | x   | 27  | 29  | 24  | 24  | 24 | 24  | 22  | 26  | 22  | 19  | 16  |
| Mon        | 28  | 30  | 37  | 28  | 27  | x   | 73  | 26  | 26  | 28 | 24  | 25  | 26  | 24  | 22  | 24  |
| Nyakur     | 28  | 31  | 37  | 33  | 29  | 73  | x   | 24  | 26  | 31 | 28  | 23  | 30  | 24  | 24  | 24  |
| Vietnamese | 32  | 29  | 30  | 30  | 24  | 26  | 24  | x   | 58  | 20 | 22  | 27  | 21  | 19  | 22  | 24  |
| Ruc        | 33  | 30  | 35  | 32  | 24  | 26  | 26  | 58  | x   | 26 | 25  | 28  | 25  | 23  | 26  | 29  |
| Wa         | 27  | 24  | 30  | 27  | 24  | 28  | 31  | 20  | 26  | x  | 51  | 32  | 34  | 22  | 23  | 21  |
| Deang      | 22  | 20  | 25  | 23  | 24  | 24  | 28  | 22  | 25  | 51 | x   | 31  | 26  | 23  | 21  | 19  |
| Khmu       | 25  | 26  | 30  | 27  | 22  | 25  | 23  | 27  | 28  | 32 | 31  | x   | 40  | 19  | 22  | 21  |
| Ksinmul    | 25  | 26  | 33  | 28  | 26  | 26  | 30  | 21  | 25  | 34 | 26  | 40  | x   | 17  | 21  | 21  |
| Khmer      | 22  | 24  | 27  | 29  | 22  | 24  | 24  | 19  | 23  | 22 | 23  | 19  | 17  | x   | 23  | 17  |
| Khasi      | 23  | 20  | 26  | 23  | 19  | 22  | 24  | 22  | 26  | 23 | 21  | 22  | 21  | 23  | x   | 23  |
| Mundari    | 25  | 27  | 27  | 26  | 16  | 24  | 24  | 24  | 29  | 21 | 19  | 21  | 21  | 17  | 23  | x   |

The matrix allows us to build the genetic tree given in Table 3.2

TABLE 3.2: A LEXICOSTATISTICAL CLASSIFICATION OF AUSTROASIATIC LANGUAGES



This tentative classification reveals several important features. It lacks any clear distinction between Mundari of the Munada branch and the rest of the languages traditionally included in the Mon-Khmer family. Instead six equal groups have been identified:

1. Central, which if formed by:
  - Bahnaric: Jeh, Bahnar, Chrau
  - Katuic: Kui
  - Aslian: Semai
  - Monic: Mon, Nyakur
2. Vietic: Vietnamese, Ruc
3. Northern:
  - Palaung-Wa: Wa, Deang
  - Khmuic: Khmu, Ksinmul
4. Khmer
5. Khasi
6. Munda: Mundari.

No specific relations between any of these primary groups can be suggested.

Glottochronology suggests that the disintegration of Proto Austroasiatic started around 6000 BP.

The phonological systems of the modern Austroasiatic languages differ considerably. At one extreme are the Munda languages, with disyllabic roots and without restrictions as to which vowels can appear in the first syllable. At the other extreme are some Viet-Muong languages with their monosyllabic structure and well-developed tonal systems. Typologically close to Viet-Muong are the Wa languages. Most Austroasiatic languages and groups take an intermediate position: they have both monosyllabic and disyllabic roots, but only  $\emptyset$  can occur in the first syllable of a disyllabic root. In some cases there are also phonation or register oppositions, which may have simple historical explanations.

One may wish to interpret such diversity in terms of different stages of a single historical development from full disyllabic structures (maintained in Munda) to monosyllabic forms. In the Viet-Muong case such an assumption seems to be correct, and many examples of the loss of the first Mon-Khmer syllable, or other types of reduction, can be found in these languages.

### 3.2 MIAO-YAO LANGUAGES

The languages of the Miao-Yao family mainly occur in a spread across Southern China and neighbouring areas of Vietnam, Laos and Thailand. According to the Chinese sources (Wang and Mao 1991:2–3)<sup>5</sup> the family is formed by six equal groups: (i) Miao, (ii) Bunu, (iii) Pahung, (iv) Jiongnai, (v) She and (vi) Yao. Lexical evidence demonstrates, however, a clear distinction between groups (i)–(v) and (vi). If the words are found in Pahung or Jiongnai, they are normally also found in Miao, but not necessarily in Yao. The same pattern is to be observed for She, which, however, contains loans from Yao. This gives rise to the conclusion that the family is formed by only two major branches, Miao and Yao, with the Miao branch including five out of six groups identified by Wang and Mao.

#### 3.2.1 PROTO MIAO

Wang Fushi has presented a classification of Miao languages dividing them into dialects, subdialects and local varieties (Wang 1985; Wang and Mao 1995:2):

I. East Guizhou Dialectal Group:

Northern variety (=Hmu)

Southern variety

Eastern variety

II. West Hunan Dialectal Group:

Eastern variety (=Xx)

Western variety

<sup>5</sup> This book was brought to my attention too late to be incorporated in the text. It contains lexical data from 23 languages/dialects of the Miao-Yao family. These data have been completely investigated by me and included in my Proto Miao-Yao reconstruction. The new material, however, has not changed significantly the suggested phonological reconstruction, as most of the phonological correspondences have been introduced earlier (see, for example, Wang 1985). To the contrary, the lexical information is extensive and allows us to enrich the suggested etymologies. At the same time it is practically impossible to discover in these data new Miao-Yao etymologies. I plan to present the extensive analysis of Wang and Mao (1995) elsewhere.

### III. Sichuan, Guizhou and Yunnan Dialectal Group:

#### Sichuan, Guizhou and Yunnan Subdialect

First variety (= Hmong)

Second variety

#### Subdialect of North-western Yunnan (Yn)

##### Guiyang Subdialect

Northern variety

North-eastern variety (5)

Southern variety

##### Huishui Subdialect

Northern variety (6)

South-western variety

Central variety

Eastern variety

##### Mashan Subdialect

Central variety (7)

Northern variety

Western variety

Southern variety

##### Lobojiang Subdialect (=Lb)

##### Zhong'anjiang Subdialect (9)

The Miao dialectal data available so far is primarily a list of words similar to the nine dialects investigated by Wang Fushi (Wang 1985; Wang and Mao 1995). This makes it impossible to check the suggested classification.

Data sufficient for a lexicostatistical analysis is available only for four Miao languages: Hmu, the dialect of Western Hunan == Xx (Xiang 1992), Hmong, known from various sources such as Anon. 1958a, Bunu (Moskaljev 1978; Mao et al. 1982), She (Mao & Meng 1986) and a Yao dialect (Lombard 1968). For other Miao languages/dialects, even those included in Anon. 1985 or Wang and Mao 1995, reliable lexicostatistical lists cannot be extracted.

The reality of Wang's dialectal group III is questionable, because Miao historical phonology lacks any feature which could support this grouping. The Lobojiang dialect, for example, seems very archaic and may remain in opposition to the rest of the dialects, which all share some common features although it is unclear whether they are innovations or of local origin.

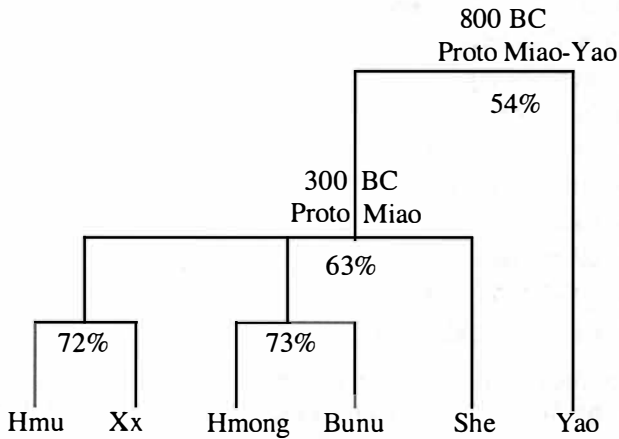
There are at least two representatives of the Miao group which are not included in Wang's classification. Bunu (Moskaljev 1978) genetically a Miao language is spoken by a community which Chinese scholars traditionally include in the Yao nationality. Hence the description of Bunu is to be found in a survey of Yao languages (Mao et al. 1982). The She language is another member of the Miao group (Mao & Meng 1986).

A lexicostatistical analysis of data for four Miao and one Yao languages (see Appendix D) allows me to suggest a genetic classification of them. The classification is based on the following matrix of percentages:

TABLE 3.3: LEXICOSTATISTICAL MATRIX OF SIX MIAO-YAO LANGUAGES

|       | Hmu | XX | Hmong | Bunu | She | Yao |
|-------|-----|----|-------|------|-----|-----|
| Hmu   | x   | 72 | 69    | 66   | 66  | 57  |
| Xx    | 72  | x  | 65    | 63   | 63  | 54  |
| Hmong | 69  | 65 | x     | 73   | 65  | 56  |
| Bunu  | 66  | 63 | 73    | x    | 64  | 56  |
| She   | 66  | 63 | 65    | 64   | x   | 58  |
| Yao   | 57  | 54 | 56    | 56   | 58  | x   |

Glottochronological datings and classification obtained from the matrix are:



The historical phonology of Miao has been discussed in some publications by Chang Kun (1972, 1976) who has reconstructed the tonal system of the protolanguage and outlined the main oppositions in the consonant system. A good and well-grounded reconstruction of initials has been proposed by Wang Fushi (1980, etc.), who also established the main correspondences for finals, but has not yet suggested a reconstruction for them. Jakhontov (1981) has made his own reconstruction of some finals. Additional proposals about Proto Miao can be found in an article by Haudricourt (1951) and in Purnell's (1970) thesis, but due to very restricted data these works are of limited use.

The tonal system of Proto Miao consists of three tones, \*A, \*B and \*C, with tonal neutralisation in checked syllables (\*D); a common pattern in Southeast Asia. The three tones are preserved in the Lobojiang dialect, where their reflexes are falling (31 < \*A), level (55 < \*B) and rising (35 < \*C) tones. In all other Miao dialects the three tones and \*D have divided into two series depending on the laryngeal character of the initials.

Beginning with the Lobojiang data one can establish nine sets of correspondences for initial stops and nasals:

|    | Lb   | Yn   | Hmu | Xx  | Hmong<br>Bunu | She | Tonal<br>series |
|----|------|------|-----|-----|---------------|-----|-----------------|
| 1. | v    | bfi  | p   | p   | p             | ph  | II              |
| 2. | p    | p    | p   | p   | p             | p   | I               |
| 3. | ph   | ph   | ph  | ph  | ph            | ph  | I               |
| 4. | mp   | mbfi | m   | m   | mp            | p   | II              |
| 5. | m?p  | mp   | p   | mp  | mp            | p   | I               |
| 6. | m?ph | mph  | ph  | mph | mph           | ph  | I               |
| 7. | m    | mfi  | m   | m   | m             | m   | II              |
| 8. | ?m   | m    | m   | m   | m             | m   | I               |
| 9. | hm   | mh   | hm  | hm  | hm            | m   | I               |

There are several possibilities for reconstructing these nine correspondences. If we suggest that the original system was similar to that of the Yunnan dialect (Yn) we can reconstruct:

- |         |          |         |
|---------|----------|---------|
| 3. *ph  | 1. *bfi  | 2. *?p  |
| 6. *mph | 4. *mbfi | 5. *m?p |
| 9. *mh  | 7. *mfi  | 8. *?m  |

Voiced aspirates are found in Yn, whilst glottalised initials are found in Lb. Hence it can be assumed that in Proto Miao there were two types of oppositions: glottalised versus aspirated, and voiced aspirated versus unvoiced aspirated. The same system can be also represented as:

- |        |        |         |
|--------|--------|---------|
| 3. *p  | 1. *b  | 2. *?p  |
| 6. *mp | 4. *mb | 5. *m?p |
| 9. *mh | 7. *m  | 8. *?m  |

However, I prefer to accept a reconstruction which follows that suggested by Wang Fushi:

- |         |        |        |
|---------|--------|--------|
| 3. *ph  | 1. *b  | 2. *p  |
| 6. *mph | 4. *mb | 5. *mp |
| 9. *mh  | 7. *m  | 8. *?m |

I began to collect data for a comparative Miao dictionary before having access to Wang's publications. My sources were different Chinese publications of the 50s, including the survey of Miao-Yao languages (Anon 1959c) and two dictionaries of Hmu and Hmong (Anon 1958a; Anon 1958b), as well as some English dictionaries of Hmong (Heimbach 1969; Lyman 1974). For Bunu I used a handwritten vocabulary compiled by Moskaljev.<sup>6</sup> This approach enabled me to compile a reasonably representative list of cognates (about 1,200 words) and to suggest a phonological reconstruction for Proto Miao. However, Wang's publications showed that my reconstruction failed to distinguish some important features, as they were absent from the languages I used. Hence I now accept the Wang Fushi's reconstruction with some minor changes.

<sup>6</sup> I'd like to use this opportunity to express my gratitude to Aleksej Alekseevich Moskaljev for his help in my Miao studies.

The system of Proto Miao initials includes:

|            |             |             |             |              |              |            |            |            |             |            |             |
|------------|-------------|-------------|-------------|--------------|--------------|------------|------------|------------|-------------|------------|-------------|
| <i>*p</i>  | <i>*b</i>   | <i>*ph</i>  | <i>*mp</i>  | <i>*mb</i>   | <i>*mph</i>  | <i>*?m</i> | <i>*m</i>  | <i>*hm</i> | <i>*?v</i>  | <i>*v</i>  | <i>*hv</i>  |
| <i>*pj</i> | <i>*bj</i>  | <i>*phj</i> | <i>*mpj</i> | <i>*mbj</i>  |              |            |            |            | <i>*?vj</i> | <i>*vj</i> | <i>*hvj</i> |
| <i>*pl</i> |             |             | <i>*mpl</i> | <i>*mbl</i>  | <i>*mphl</i> |            | <i>*ml</i> |            |             |            |             |
| <i>*pr</i> |             | <i>*phr</i> |             | <i>*mbr</i>  |              |            | <i>*mr</i> |            |             |            |             |
| <i>*t</i>  | <i>*d</i>   |             | <i>*nt</i>  | <i>*nd</i>   | <i>*nth</i>  | <i>*?n</i> | <i>*n</i>  | <i>*hn</i> | <i>*?l</i>  | <i>*l</i>  | <i>*hl</i>  |
| <i>*tl</i> | <i>*dl</i>  |             |             | <i>*ndl</i>  |              |            |            |            |             | <i>*lj</i> |             |
| <i>*tr</i> | <i>*dr</i>  |             | <i>*ntr</i> | <i>*ndr</i>  | <i>*nthr</i> |            |            |            | <i>*?r</i>  | <i>*r</i>  | <i>*š</i>   |
| <i>*c</i>  | <i>*ʒ</i>   | <i>*ch</i>  | <i>*nc</i>  | <i>*nʒ</i>   | <i>*nch</i>  |            |            |            |             |            |             |
| <i>*ć</i>  | <i>*ʒ̣</i>  | <i>*cḥ</i> | <i>*nć</i>  |              | <i>*ncḥ</i> |            |            |            |             |            |             |
| <i>*č</i>  | <i>*ʒ̣̣</i> |             | <i>*nč</i>  | <i>*nʒ̣̣</i> |              | <i>*?ɲ</i> | <i>*ɲ</i>  | <i>*hɲ</i> | <i>*?j</i>  | <i>*j</i>  | <i>*hj</i>  |
| <i>*k</i>  | <i>*g</i>   | <i>*kh</i>  | <i>*ŋk</i>  | <i>*ŋg</i>   | <i>*ŋkh</i>  |            |            |            |             |            |             |
| <i>*kj</i> | <i>*gj</i>  | <i>*khj</i> | <i>*ŋkj</i> | <i>*ŋgj</i>  |              |            |            |            |             |            |             |
| <i>*kl</i> | <i>*gl</i>  |             |             | <i>*ŋgl</i>  |              |            |            |            |             |            |             |
| <i>*kr</i> |             |             |             |              |              |            |            |            | <i>*?</i>   |            | <i>*h</i>   |

TABLE 3.4: INITIAL CORRESPONDENCES OF MIAO LANGUAGES

|     | Proto Miao   | Tonal series | Hmu        | Xx          | Hmong        | Bunu       | She       | Wang's reconstruction | Notes |
|-----|--------------|--------------|------------|-------------|--------------|------------|-----------|-----------------------|-------|
| 1.  | <i>*p</i>    | I            | <i>p</i>   | <i>p</i>    | <i>p/c</i>   | <i>p</i>   | <i>p</i>  | <i>*p, *pʒ̣</i>       | 1     |
| 2.  | <i>*b</i>    | II           | <i>p</i>   | <i>p</i>    | <i>p/-</i>   | <i>p</i>   | <i>ph</i> | <i>*b</i>             | 1     |
| 3.  | <i>*ph</i>   | I            | <i>ph</i>  | <i>ph</i>   | <i>ph/ch</i> | <i>ph</i>  | –         | <i>*ph, *phʒ̣</i>     | 1     |
| 4.  | <i>*mp</i>   | I            | <i>p</i>   | <i>mp</i>   | <i>mp/nc</i> | <i>mp</i>  | <i>p</i>  | <i>*mp, *mpʒ̣</i>     | 1     |
| 5.  | <i>*mb</i>   | II           | <i>m</i>   | <i>m</i>    | <i>mp/nc</i> | <i>mp</i>  | <i>p</i>  | <i>*mb, *mbʒ̣</i>     | 1     |
| 6.  | <i>*mph</i>  | I            | <i>ph</i>  | <i>mph</i>  | <i>-/nch</i> | <i>mph</i> | <i>ph</i> | <i>*mph, *mphʒ̣</i>   | 1     |
| 7.  | <i>*pj</i>   | I            | <i>c</i>   | <i>pr</i>   | <i>ć</i>     | <i>c</i>   | <i>pj</i> | <i>*pr</i>            |       |
| 8.  | <i>*bj</i>   | II           | <i>c</i>   | –           | <i>ć-</i>    | –          | –         | <i>*br</i>            | 2     |
| 9.  | <i>*phj</i>  | I            | <i>ch</i>  | –           | <i>ćh</i>    | –          | –         | <i>*phr</i>           | 2     |
| 10. | <i>*mpj</i>  | I            | <i>z</i>   | <i>mr</i>   | <i>nć</i>    | <i>nc</i>  | –         | <i>*mpr</i>           | 2, 3  |
| 11. | <i>*mbj</i>  | II           | <i>z</i>   | <i>mr</i>   | <i>nć</i>    | <i>nc</i>  | <i>pj</i> | <i>*mbr</i>           |       |
| 12. | <i>*pl</i>   | I            | <i>hl</i>  | <i>pr/p</i> | <i>pl</i>    | <i>tl</i>  | <i>p</i>  | <i>*pl</i>            | 4     |
| 13. | <i>*mpl</i>  | I            | <i>hl</i>  | –           | <i>mpl</i>   | <i>tl</i>  | –         | <i>*mpl</i>           | 2     |
| 14. | <i>*mbl</i>  | II           | <i>n</i>   | <i>n</i>    | <i>mpl</i>   | <i>ntl</i> | <i>pj</i> | <i>*mbl</i>           |       |
| 15. | <i>*mphl</i> | I            | –          | –           | <i>mphl</i>  | –          | –         | <i>*mphl</i>          | 2     |
| 16. | <i>*pr</i>   | I            | <i>hlj</i> | <i>p</i>    | <i>pl</i>    | <i>tl</i>  | <i>p</i>  | <i>*plj</i>           | 2     |
| 17. | <i>*phr</i>  | I            | <i>hɲ</i>  | –           | <i>phl</i>   | –          | –         | <i>*phl</i>           | 2     |
| 18. | <i>*mbr</i>  | II           | <i>ɲ</i>   | <i>mj</i>   | <i>mpl</i>   | <i>ntl</i> | <i>p</i>  | <i>*mblʒ̣</i>         | 2     |
| 19. | <i>*?m</i>   | I            | <i>m</i>   | <i>m</i>    | <i>m</i>     | <i>m</i>   | <i>m</i>  | <i>*?m</i>            |       |
| 20. | <i>*m</i>    | II           | <i>m</i>   | <i>m</i>    | <i>m</i>     | <i>m</i>   | <i>m</i>  | <i>*m</i>             |       |
| 21. | <i>*hm</i>   | I            | <i>hm</i>  | <i>hm</i>   | <i>hm</i>    | <i>hm</i>  | –         | <i>*mh</i>            |       |
| 22. | <i>*ml</i>   | II           | <i>m</i>   | <i>n</i>    | <i>n</i>     | –          | –         | <i>*ml</i>            | 2     |
| 23. | <i>*mr</i>   | II           | –          | –           | <i>n,ml</i>  | –          | –         | <i>*mr</i>            | 2, 5  |



|     |       |    |     |      |     |     |      |         |      |
|-----|-------|----|-----|------|-----|-----|------|---------|------|
| 24. | *?v   | I  | v   | w    | v   | v   | —    | —       | 2    |
| 25. | *v    | II | v   | w    | v/j | v   | v    | *w, *wz | 1, 2 |
| 26. | *hv   | I  | h   | s    | s   | ph  | f    | *s      |      |
| 27. | *?vj  | I  | v   | —    | z   | —   | —    | —       | 2    |
| 28. | *vj   | II | v   | z    | z   | r   | z    | —       | 2    |
| 29. | *hvj  | I  | fh  | pr   | h   | f   | —    | *wh     | 2    |
| 30. | *t    | I  | t   | t    | t   | t   | t    | *t      |      |
| 31. | *d    | II | t   | t    | t   | t   | th   | *d      |      |
| 32. | *nt   | I  | t   | nt   | nt  | nt  | t    | *nt     |      |
| 33. | *nd   | II | n   | n    | nt  | nt  | t    | *nd     |      |
| 34. | *nth  | I  | th  | nt   | nth | nth | —    | *nth    |      |
| 35. | *tl   | I  | tj  | t    | t   | t   | k    | *t!     | 6    |
| 36. | *dl   | II | tj  | t    | t   | t   | kh   | *d!     | 6    |
| 37. | *ndl  | II | ɲ   | ɲ    | nt  | nt  | (tj) | *ndl    | 6    |
| 38. | *tr   | I  | tj  | t    | t   | —   | —    | *t      | 6    |
| 39. | *dr   | II | tj  | t    | t   | t   | —    | *d      | 6    |
| 40. | *ntr  | I  | tj  | nt   | nt  | nt  | —    | *nt     | 2, 6 |
| 41. | *ndr  | II | ɲ   | ɲ    | nt  | nt  | —    | *nd     | 6    |
| 42. | *nthr | I  | thj | nth  | nth | —   | —    | *nth    | 6    |
| 43. | *?n   | I  | n   | n    | n   | n   | —    | *?n     |      |
| 44. | *n    | II | n   | n    | n   | n   | n    | *n      |      |
| 45. | *hn   | I  | hn  | hn   | hn  | hn  | n    | *nh     |      |
| 46. | *?r   | I  | r   | z    | z   | r   | ɲ, z | *?r     |      |
| 47. | *r    | II | r   | z    | z   | r   | ɲ, z | *r      |      |
| 48. | *š    | I  | h   | ś    | ś   | h   | h    | —       |      |
| 49. | *?l   | I  | l   | l    | l   | l   | n    | *?l     |      |
| 50. | *l    | II | l   | l    | l   | l   | n    | *l      |      |
| 51. | *hl   | I  | hl  | hl   | hl  | hl  | n    | *lh     |      |
| 52. | *lj   | II | lj  | lj   | lj  | l   | n    | *l      | 2    |
| 53. | *c    | I  | s   | —    | c   | —   | —    | *ts     | 2    |
| 54. | *z    | II | s   | —    | c   | —   | —    | *dz     | 2    |
| 55. | *ch   | I  | sh  | s    | ch  | —   | s    | *tsh    | 2    |
| 56. | *nc   | I  | s   | nc   | nc  | nc  | c    | *nts    | 2    |
| 57. | *nɟ   | II | s   | nc   | nc  | —   | c    | *ndz    | 2    |
| 58. | *nch  | I  | sh  | nch  | nch | —   | c    | *ntsh   | 2    |
| 59. | *c    | I  | ć   | ć    | ć   | ć   | cj   | *ts     | 2    |
| 60. | *zɔ   | II | ć   | ć    | ć   | ś   | ch   | *dź     | 2    |
| 61. | *ch   | I  | ch  | ć    | ch  | ć   | ś    | *tsh    |      |
| 62. | *nc   | I  | ć   | nc   | nc  | nc  | c    | *nts    |      |
| 63. | *nch  | I  | ch  | nch  | nch | nch | s    | *ntsh   |      |
| 64. | *č    | I  | č   | c, č | č   | c   | k    | *tč     | 2    |
| 65. | *ž    | II | č   | č    | č   | c   | kh   | *dž     |      |

|     |      |    |        |      |     |     |       |      |   |
|-----|------|----|--------|------|-----|-----|-------|------|---|
| 66. | *nč  | I  | c      | nc   | nc  | nc  | (tj)  | *ntč | 2 |
| 67. | *nž  | II | ɲ      | ɲ    | nc  | nc  | tj    | *ndž | 2 |
| 68. | *ʔɲ  | I  | ɲ      | ɲ    | ɲ   | ɲ   | ɲj    | *ʔɲ  |   |
| 69. | *ɲ   | II | ɲ      | ɲ    | ɲ   | ɲ   | ɲj    | *ɲ   |   |
| 70. | *hɲ  | I  | hɲ     | hɲ   | hɲ  | hɲ  | ɲj    | *ɲh  |   |
| 71. | *ʔj  | I  | j      | j    | j   | j   | –     | *ʔž  |   |
| 72. | *j   | II | j      | j    | j   | j   | z     | *ž   |   |
| 73. | *hj  | I  | hj     | h    | h   | h   | z     | –    | 2 |
| 74. | *k   | I  | q      | q    | q   | k   | k, kw | *q   |   |
| 75. | *g   | II | k      | q    | q   | k   | kh    | *G   |   |
| 76. | *kh  | I  | qh     | qh   | qh  | kh  | kh    | *qh  |   |
| 77. | *ɲk  | I  | q      | ɲq   | nq  | ɲk~ | –     | *Nq  | 2 |
| 78. | *ɲg  | II | ɲ      | ɲ, ɲ | ɲq  | ɲk  | k     | *NG  |   |
| 79. | *ɲkh | I  | qh     | –    | ɲkh | ɲkh | kh    | *Nqh | 2 |
| 80. | *kj  | I  | k, č   | k    | k   | c   | kj    | *k   |   |
| 81. | *gj  | II | k, č   | k    | k   | c   | khj   | *g   | 2 |
| 82. | *khj | I  | kh, čh | –    | kh  | –   | –     | *kh  | 2 |
| 83. | *ɲkj | I  | k, č   | ɲk   | –   | –   | –     | –    | 2 |
| 84. | *ɲgj | II | ɲ      | ɲ    | ɲk  | nc  | kj    | *ɲg  |   |
| 85. | *kl  | I  | hl     | qu   | tl  | tl  | kj    | *ql  |   |
| 86. | *gl  | II | hl     | qu   | tl  | tl  | –     | *Gl  | 2 |
| 87. | *ɲgl | II | n      | n    | ntl | ntl | (n)   | *NGl | 7 |
| 88. | *kr  | I  | hlj    | qu   | tl  | tl  | –     | *Nql | 2 |
| 89. | *ʔ   | I  | ∅      | ∅    | ∅   | ∅   | ∅     | *ʔ   |   |
| 90. | *h   | I  | h      | h    | h   | h   | h     | *h   |   |

## NOTES:

1. In Hmong an affricate appears before \*e.
2. A rare and not entirely trustworthy correspondence.
3. Tonal series II in Hmong.
4. In Xx p occurs before i.
5. In the Hmong dictionary by Lyman (1974) one finds forms with ml-.
6. The opposition between \*-r- and \*-l- is maintained in the Yn dialect:

| Proto Miao | Yn   | Proto Miao | Yn    |
|------------|------|------------|-------|
| *tr        | t    | *tl        | tl    |
| *dr        | dh'  | *dl        | dh'l  |
| *ndr       | ndh' | *ndl       | ndh'l |

In all of the other dialects the reflexes of \*-r- and \*-l- have merged.

7. Traces of the velar initial can also be found in some other dialects such as Lb.

The reconstruction of Proto Miao finals is a difficult problem. Only one previous attempt has been made at such a reconstruction (Jakhontov 1981). Jakhontov's main source was the survey of Miao-Yao languages (Miao 1959) which provides only a limited amount of data. Adding Wang Fushi's data, I can reconstruct the following set of Proto Miao finals:

|            |             |             |            |             |            |
|------------|-------------|-------------|------------|-------------|------------|
|            | <i>*ə</i>   | <i>*a</i>   | <i>*u</i>  | <i>*o</i>   | <i>*ɔ</i>  |
| <i>*eQ</i> | <i>*əQ</i>  | <i>*aQ</i>  | <i>*uQ</i> | <i>*oQ</i>  | <i>*ɔQ</i> |
| <i>*eN</i> | <i>*əN</i>  | <i>*aN</i>  | <i>*uN</i> | <i>*oN</i>  | <i>*ɔN</i> |
| <i>*ei</i> | <i>*əi</i>  | <i>*ai</i>  | <i>*ui</i> | <i>*oi</i>  | <i>*ɔi</i> |
|            | <i>*əiN</i> | <i>*aiN</i> |            | <i>*oiN</i> |            |
|            | <i>*əi</i>  | <i>*ai</i>  |            |             |            |
|            |             | <i>*aiN</i> |            |             |            |

*Q* – unknown final stop;

*N* – unknown final nasal.

The differences between Jakhontov's reconstruction and the system adopted here are minimal:

|     | Jakhontov  | Here       |     | Jakhontov  | Here            |
|-----|------------|------------|-----|------------|-----------------|
| 1.  | <i>*a</i>  | <i>*a</i>  | 7.  | <i>*i</i>  | <i>*əi</i>      |
| 1a. | <i>*aq</i> | <i>*aQ</i> | 8.  | <i>*i</i>  | <i>*aiN</i>     |
| 2.  | <i>*ε</i>  | <i>*əi</i> | 9.  | <i>*u</i>  | <i>*ai</i>      |
| 2a. | <i>*εq</i> | –          | 10. | <i>*ai</i> | <i>*ai</i>      |
| 3.  | <i>*e</i>  | <i>*ə</i>  | 11. | <i>*ei</i> | <i>*oi</i>      |
| 3a. | <i>*eq</i> | <i>*əQ</i> | 12. | <i>*oi</i> | <i>*ɔi</i>      |
| 4.  | ?          | <i>*u</i>  | 13. | <i>*aN</i> | <i>*aN</i>      |
| 4a. | ?          | <i>*uQ</i> | 14. | ?          | <i>*oN</i>      |
| 5.  | <i>*o</i>  | <i>*ɔ</i>  | 15. | <i>*eN</i> | <i>*əN, *eN</i> |
| 5a. | <i>*oq</i> | <i>ɔQ</i>  | 16. | ?          | <i>*aiN</i>     |
| 6.  | ?          | <i>*ui</i> | 17. | ?          | <i>*uN</i>      |
| 6a. | ?          | <i>oQ</i>  | 18. | <i>*oN</i> | <i>*ɔN</i>      |

Only correspondences 2a and 8 require comment. In 2a Jakhontov reconstructs the final stop *\*q* with the help of external comparisons, while in the Miao data there are no traces of such a stop: the words do not have tones going back to *\*D*, and most of the comparisons here are loans. In 8, my reconstruction reflects the fact that Hmu has a final *N* in this correspondence.

The vocalic phonological correspondences are given in Table 3.5.

TABLE 3.5: VOCALIC CORRESPONDENCES OF MIAO LANGUAGES

| Proto Miao | Hmu       | Xx          | Hmong      | Bunu            | She          | No. of Wang's correspondence | Note |
|------------|-----------|-------------|------------|-----------------|--------------|------------------------------|------|
| <i>*a</i>  | <i>a</i>  | <i>a</i>    | <i>i/e</i> | <i>u</i>        | <i>i</i>     | 3                            | 1    |
| <i>*aQ</i> | <i>a</i>  | <i>ei/i</i> | <i>i</i>   | <i>u</i>        | <i>i, e</i>  | 3                            | 2, 3 |
| <i>*ə</i>  | <i>ei</i> | <i>a</i>    | <i>ai</i>  | <i>a</i>        | <i>e</i>     | 6                            |      |
| <i>*əQ</i> | <i>ei</i> | <i>a</i>    | <i>ai</i>  | <i>a</i>        | <i>e</i>     | 6                            | 3    |
| <i>*e</i>  | <i>i</i>  | <i>a</i>    | <i>ai</i>  | <i>a</i>        | <i>ui, i</i> | 6                            |      |
| <i>*eQ</i> | <i>i</i>  | <i>a</i>    | <i>ai</i>  | <i>a</i>        | <i>ui, i</i> | 6                            | 3    |
| <i>*u</i>  | <i>u</i>  | <i>ə</i>    | <i>eu</i>  | <i>u</i>        | <i>ə, u</i>  | 18                           |      |
| <i>*uQ</i> | <i>u</i>  | <i>u</i>    | <i>eu</i>  | <i>o, u, əu</i> | –            | 18                           | 3    |
| <i>*o</i>  | <i>u</i>  | <i>u, ɔ</i> | <i>ou</i>  | <i>əu</i>       | <i>ɔ</i>     | 15, 17                       |      |

|      |         |         |    |        |         |        |      |
|------|---------|---------|----|--------|---------|--------|------|
| *oQ  | u, ə    | o, ɔ, u | ou | əu     | ɔ       | 15, 17 | 3    |
| *ɔ   | o/ə     | o       | o  | o      | u       | 13     | 2    |
| *ɔQ  | ə       | o       | o  | o      | u       | 13     | 3    |
| *aN  | aN      | ei/i    | aN | əN     | i/un    | 26     | 2, 4 |
| *əN  | aN, ei  | ɛ       | a  | əN     | iN, oN  | 21, 22 |      |
| *eN  | i       | ɛ       | a  | iN     | uN      | 21, 22 |      |
| *uN  | u, ə    | u       | oN | aN     | ɔN, ɔ   | 32     |      |
| *oN  | aN      | aN      | au | i      | uN, aN  | 25     |      |
| *ai  | a       | a       | a  | o      | a       | 10     |      |
| *əi  | a       | a       | a  | ai     | (ui)    | 11     |      |
| *ei  | i       | u       | e  | e      | a       |        |      |
| *ui  | u       | ei, i   | ou | a      | i, e    | 16     |      |
| *oi  | o/ə     | o, ɔ    | a  | au     | u       | 12     | 2    |
| *ɔi  | ɛ, i    | ə       | u  | au     | u, e, ɔ | 19     |      |
| *aiN | eN      | i       | i  | i      | i       | 2      |      |
| *əiN | eN      | a, i    | ou | ai     | ai      | –      |      |
| *oiN | eN      | i       | ua | i      | –       | –      |      |
| *aɨ  | o       | ɨ       | a  | au     | u       | 8      |      |
| *əɨ  | a, ɛ, i | ɨ, u    | e  | e      | a       | 4      | 5    |
| *aɨN | ɛ, i    | e       | o  | uN, əN | aN      | 23     | 2    |

## NOTES:

1. *e*- occurs after uvular initials;
2. second variant occurs after palatals;
3. occurs in tone of \*D series;
4. second variant *i* in She occurs after labials;
5. in Hmu *ɛ* occurs after \*-r-  
*i* occurs after palatals  
*a* occurs elsewhere;  
in Xx *u* occurs after labials  
*ɨ* occurs elsewhere.

It is obvious that this reconstruction of finals is quite arbitrary.

All correspondences presented here between the five Miao dialects or languages are based on my comparative dictionary, which includes about 1,200 roots (some of which could, however, be Chinese loans). The dictionary is still unpublished, but examples for all correspondences can be found in the publications of Wang Fushi (1980, 1981) and especially in Wang and Mao (1995).

## 3.2.2 PROTO YAO

The Yao languages form three major groups (Mao et al. 1982:62):

## 1. Yao:

- a) Mien dialects: e.g. Mien, Tompengzhu, Kugongzhu;
- b) Biaomon and Chimun;
- c) Kimmun and Kemdimun;

## 2. Biaoming:

- a) Biaoming;
- b) Jiaokomeng;

## 3. Zaomin.

The available data for the Biaoming and Zaomin branches are given in Wang and Mao (1995) and the group therefore cannot be included in this study. The Yao branch with its three dialects, is described in a few publications. Mien and Kimmun (Kn) fall into two subbranches of Yao in the Chinese classification. The Mien dialect is quite well known, with a dictionary (Lombard 1968), grammatical description (Mao et al. 1982) and some other publications devoted to it. The Kn dialect is represented only in the dictionary by Savina (1926), which also includes a list of about 500 words of the third dialect, Taipan (Tp). It is unclear whether one can identify Taipan with the Biaomon dialect of the Chinese classification. Mien and Tp are relatively closer to each other than to Kn (Purnell 1970, I:137).

There are adequate descriptions of Mien phonology (Mao et al. 1982), but problems arise with the phonological systems of the other two dialects. Savina used Vietnamese orthography in transcribing Kimmun and Taipan, and thus some features of these dialects, especially the tones, remain obscure. Purnell (1970) discusses these problems in his thesis, and I follow his interpretation.

Two scholars, Chang Kun and Purnell, are responsible for most of the discussion of Proto Yao reconstruction. Chang Kun has reconstructed the tonal system of Proto Yao and connected it with the three tones of Proto Miao (Chang 1966), while Purnell attempted to reconstruct the entire phonological system (Purnell 1970).

Purnell's reconstruction draws on a representative comparative dictionary, containing forms extracted from Savina's work, as well as from some other sources. The following interpretation of Proto Yao phonology is based on Purnell's lexical comparisons.

Purnell found eight different tonal correspondences between the three Yao dialects:

| Correspondence | Dialects |        |        |
|----------------|----------|--------|--------|
|                | Mien     | Tp     | Kn     |
| 1              | 1        | 1      | 1      |
| 3              | 3        | 3      | 3      |
| 3a             | 3        | 3      | 6      |
| 5              | 5        | 4/5    | 3      |
| 5a             | 5        | 4/5    | 4      |
| 7              | ʔ6       | ʔ3, ʔ7 | ʔ7     |
| 2              | 2        | 2      | 2      |
| 4              | 4        | 4/5    | 4      |
| 6              | 6        | 6      | 6      |
| 8              | ʔ6       | ʔ6     | ʔ6, ʔ7 |

Eight Proto Yao tones were reconstructed on the basis of these correspondences. However, the aspirated initials of Mien occur only in tones 1, 3a, 5a and 7, and are not found with tones 3 and 5. Thus one can divide the tonal correspondences into three series,  $\alpha$  (1, 3, 5 and 7),  $\beta$  (1, 3a, 5a and 7) and  $\gamma$  (2, 4, 6 and 8), which are somehow connected with aspiration of the initial consonant:

| Mien initials | Tonal series |         |          |
|---------------|--------------|---------|----------|
|               | $\alpha$     | $\beta$ | $\gamma$ |
| <i>p</i>      | +            | -       | +        |
| <i>b</i>      | +            | -       | +        |
| <i>ph</i>     | -            | +       | -        |

Keeping in mind the distinction between these series, we can reconstruct:

| Proto Yao   | Mien      | Tonal series |
|-------------|-----------|--------------|
| * <i>p</i>  | <i>p</i>  | $\alpha$     |
| * <i>b</i>  | <i>p</i>  | $\gamma$     |
| * <i>ph</i> | <i>ph</i> | $\beta$      |
| * <i>mp</i> | <i>b</i>  | $\alpha$     |
| * <i>mb</i> | <i>b</i>  | $\gamma$     |

One could reconstruct several other features instead of prenasalisation, which is chosen simply by analogy with Proto Miao initials. As will be shown below, one can also reconstruct Proto Yao \**mph*, the reflex of which in Mien has merged with the reflex of \**mp*.

The system of initials of Proto Yao includes:

|             |             |              |              |              |               |              |             |             |              |             |             |             |
|-------------|-------------|--------------|--------------|--------------|---------------|--------------|-------------|-------------|--------------|-------------|-------------|-------------|
| * <i>p</i>  | * <i>b</i>  | * <i>ph</i>  | * <i>mp</i>  | * <i>mb</i>  | * <i>mph</i>  | * <i>?m</i>  | * <i>m</i>  | * <i>hm</i> | * <i>?v</i>  | * <i>v</i>  |             |             |
| * <i>pj</i> | * <i>bj</i> | * <i>phj</i> | * <i>mpj</i> | * <i>mbj</i> |               | * <i>?mj</i> | * <i>mj</i> |             |              |             |             |             |
| * <i>pl</i> | * <i>bl</i> |              | * <i>mpl</i> |              | * <i>mbl</i>  |              |             |             |              |             |             |             |
| * <i>t</i>  | * <i>d</i>  | * <i>th</i>  | * <i>nt</i>  | * <i>nd</i>  | * <i>nth</i>  | * <i>?n</i>  | * <i>n</i>  | * <i>hn</i> | * <i>?r</i>  | * <i>r</i>  | * <i>hr</i> |             |
|             |             |              | * <i>ntj</i> |              |               |              |             |             | * <i>?rj</i> | * <i>rj</i> |             |             |
|             |             |              |              |              |               |              |             |             |              | * <i>l</i>  | * <i>hl</i> |             |
| * <i>c</i>  | * <i>ʒ</i>  | * <i>ch</i>  | * <i>nc</i>  | * <i>nʒ</i>  |               |              |             |             |              |             |             |             |
|             |             |              | * <i>ncj</i> |              | * <i>nchj</i> | * <i>?ɲ</i>  | * <i>ɲ</i>  |             | * <i>?j</i>  | * <i>j</i>  | * <i>hs</i> | * <i>s</i>  |
| * <i>k</i>  | * <i>g</i>  | * <i>kh</i>  | * <i>ɲk</i>  |              | * <i>ɲkh</i>  | * <i>?ŋ</i>  | * <i>ŋ</i>  |             |              |             |             | * <i>sj</i> |
| * <i>kj</i> | * <i>gj</i> |              |              |              |               |              |             |             |              |             |             |             |
| * <i>kl</i> | * <i>gl</i> |              |              |              |               |              |             |             |              |             |             |             |
|             |             |              |              |              |               |              |             |             | * <i>?</i>   | * <i>f</i>  | * <i>h</i>  |             |

The phonological correspondences underlying the reconstruction are taken from Purnell (1970).

TABLE 3.6: INITIAL CORRESPONDENCES OF YAO LANGUAGES

|     | PY          | Tonal series | Mien       | Tp            | Kn           |
|-----|-------------|--------------|------------|---------------|--------------|
| 1.  | <i>*p</i>   | I            | <i>p</i>   | <i>p</i>      | <i>p, f</i>  |
| 2.  | <i>*b</i>   | II           | <i>p</i>   | <i>p</i>      | <i>p, f</i>  |
| 3.  | <i>*ph</i>  | II           | <i>ph</i>  | –             | <i>ph</i>    |
| 4.  | <i>*mp</i>  | I            | <i>b</i>   | <i>b</i>      | <i>b</i>     |
| 5.  | <i>*mb</i>  | II           | <i>b</i>   | <i>b</i>      | <i>b</i>     |
| 6.  | <i>*mph</i> | I            | <i>b</i>   | <i>bh</i>     | <i>b</i>     |
| 7.  | <i>*pj</i>  | I            | <i>pj</i>  | <i>pj</i>     | <i>pj</i>    |
| 8.  | <i>*bj</i>  | II           | <i>pj</i>  | <i>pj</i>     | <i>f</i>     |
| 9.  | <i>*phj</i> | I            | <i>phj</i> | –             | <i>phj</i>   |
| 10. | <i>*mpj</i> | I            | <i>bj</i>  | <i>bj</i>     | <i>bj</i>    |
| 11. | <i>*mbj</i> | II           | <i>bj</i>  | <i>bj</i>     | <i>bj</i>    |
| 12. | <i>*pl</i>  | I            | <i>pj</i>  | –             | <i>pl</i>    |
| 13. | <i>*bl</i>  | II           | <i>pj</i>  | <i>pj</i>     | <i>pl</i>    |
| 14. | <i>*mpl</i> | I            | <i>bj</i>  | –             | <i>bl</i>    |
| 15. | <i>*mbl</i> | II           | <i>bj</i>  | <i>bj</i>     | <i>bl</i>    |
| 16. | <i>*?m</i>  | I            | <i>m</i>   | <i>m</i>      | <i>m</i>     |
| 17. | <i>*m</i>   | II           | <i>m</i>   | <i>m</i>      | <i>m</i>     |
| 18. | <i>*hm</i>  | I            | <i>hm</i>  | <i>hm</i>     | <i>m</i>     |
| 19. | <i>*?mj</i> | I            | <i>mj</i>  | –             | <i>m</i>     |
| 20. | <i>*mj</i>  | II           | <i>mj</i>  | <i>mj</i>     | <i>m</i>     |
| 21. | <i>*?v</i>  | I            | <i>w</i>   | <i>v</i>      | <i>v</i>     |
| 22. | <i>*v</i>   | II           | <i>w</i>   | <i>v</i>      | <i>v</i>     |
| 23. | <i>*t</i>   | I            | <i>t</i>   | <i>t</i>      | <i>t</i>     |
| 24. | <i>*d</i>   | II           | <i>t</i>   | <i>t</i>      | <i>t</i>     |
| 25. | <i>*th</i>  | I            | <i>th</i>  | <i>th</i>     | <i>th</i>    |
| 26. | <i>*nt</i>  | I            | <i>d</i>   | <i>d</i>      | <i>d</i>     |
| 27. | <i>*nd</i>  | II           | <i>d</i>   | <i>d</i>      | <i>d</i>     |
| 28. | <i>*nth</i> | I            | <i>d</i>   | <i>dh</i>     | <i>d</i>     |
| 29. | <i>*ntj</i> | I            | <i>dj</i>  | <i>dj</i>     | <i>gj</i>    |
| 30. | <i>*?n</i>  | I            | <i>n</i>   | <i>n</i>      | <i>n</i>     |
| 31. | <i>*n</i>   | II           | <i>n</i>   | <i>n</i>      | <i>n</i>     |
| 32. | <i>*hn</i>  | I            | <i>hn</i>  | <i>hn</i>     | <i>n</i>     |
| 33. | <i>*?r</i>  | I            | <i>l</i>   | <i>l</i>      | <i>g</i>     |
| 34. | <i>*r</i>   | I            | <i>l</i>   | <i>l</i>      | <i>g</i>     |
| 35. | <i>*hr</i>  | I            | <i>hl</i>  | <i>hl</i>     | <i>g</i>     |
| 36. | <i>*?rj</i> | I            | <i>lj</i>  | <i>lj</i>     | <i>gj</i>    |
| 37. | <i>*rj</i>  | II           | <i>lj</i>  | <i>lj</i>     | <i>gj</i>    |
| 38. | <i>*l</i>   | II           | <i>l</i>   | <i>l</i>      | <i>l</i>     |
| 39. | <i>*hl</i>  | I            | <i>hl</i>  | <i>hl</i>     | <i>l</i>     |
| 40. | <i>*c</i>   | I            | <i>ts</i>  | <i>ts, tc</i> | <i>tc, s</i> |

|     |       |    |     |         |       |
|-----|-------|----|-----|---------|-------|
| 41. | *ʒ    | II | ts  | ts, tc  | tc, s |
| 42. | *ch   | I  | tsh | ts'     | ts'   |
| 43. | *nc   | I  | dz  | dz      | d     |
| 44. | *nʒ   | II | dz  | dz, z   | d     |
| 45. | *ncj  | I  | dzj | dj      | dj    |
| 46. | *nchj | I  | dzj | h'j     | s'    |
| 47. | *s    | I  | s   | s       | s     |
| 48. | *hs   | I  | f   | f       | s     |
| 49. | *sj   | I  | sj  | sj      | s, s' |
| 50. | *ʔɲ   | I  | ɲ   | ɲ       | ɲ     |
| 51. | *ɲ    | II | ɲ   | ɲ       | ɲ     |
| 52. | *ʔj   | I  | j   | j       | j     |
| 53. | *j    | II | j   | j       | j     |
| 54. | *k    | I  | k   | k       | k     |
| 55. | *g    | II | k   | k       | k     |
| 56. | *kh   | I  | kh  | kh      | kh    |
| 57. | *ŋk   | I  | g   | g       | g     |
| 58. | *ŋkh  | I  | g   | gh      | g     |
| 59. | *kj   | I  | tc  | tcj, kj | kj    |
| 60. | *gj   | II | tc  | kj      | kj    |
| 61. | *kl   | I  | tc  | kl      | kl    |
| 62. | *gl   | II | tc  | kl      | kl    |
| 63. | *ʔŋ   | I  | ŋ   | ŋ       | ŋ     |
| 64. | *ŋ    | II | ŋ   | ŋ       | ŋ     |
| 65. | *ʔ    | I  | ʔ   | ʔ       | ʔ     |
| 66. | *h    | I  | h   | h       | h     |
| 67. | *fi   | II | h   | h       | h     |

Here are some comparisons which illustrate the above correspondences:

|    | PY | tonal series | Mien | Tp | Kn   |
|----|----|--------------|------|----|------|
| 1. | *p | I            | p    | p  | p, f |

'give' \*pun<sup>A</sup>: Mien *pun*<sup>1</sup>, Tp *pun*<sup>1</sup>, Kn *fon*<sup>1</sup>;

'full' \*pwaŋ<sup>C</sup>: Mien *pwaŋ*<sup>3</sup>, Tp *pwoŋ*<sup>3</sup>, Kn *poŋ*<sup>3</sup>.

|    | PY | tonal series | Mien | Tp | Kn   |
|----|----|--------------|------|----|------|
| 2. | *b | II           | p    | p  | p, f |

'hand' \*bua<sup>C</sup>: Mien *pua*<sup>4</sup>, Tp *pua*<sup>2</sup>, Kn *pu*<sup>4</sup>;

'see' \*bwat: Mien *pwa*<sup>6</sup>, Tp *pwa*<sup>6</sup>, Kn *fo*<sup>7</sup>.



|    | PY         | tonal series | Mien      | Tp | Kn        |
|----|------------|--------------|-----------|----|-----------|
| 3. | <i>*ph</i> | II           | <i>ph</i> | –  | <i>ph</i> |

‘handful’ *\*phwaŋ<sup>C</sup>*: Mien *phwaŋ<sup>3</sup>*, Kn *phɔŋ<sup>6</sup>*;  
‘split’ *\*pha:i<sup>B</sup>*: Mien *pha:i<sup>5</sup>*, Kn *pha:i<sup>4</sup>*.

|    | PY         | tonal series | Mien     | Tp       | Kn       |
|----|------------|--------------|----------|----------|----------|
| 4. | <i>*mp</i> | I            | <i>b</i> | <i>b</i> | <i>b</i> |

‘name’ *\*mpua<sup>B</sup>*: Mien *bua<sup>5</sup>*, Tp *bua<sup>4/5</sup>*, Kn *bu<sup>3</sup>*;  
‘monkey’ *\*mpig<sup>A</sup>*: Mien *big<sup>1</sup>*, Tp *big<sup>1</sup>*, Kn *big<sup>1</sup>*.

|    | PY         | tonal series | Mien     | Tp       | Kn       |
|----|------------|--------------|----------|----------|----------|
| 5. | <i>*mb</i> | II           | <i>b</i> | <i>b</i> | <i>b</i> |

‘daughter-in-law’ *\*mbwaŋ<sup>C</sup>*: Mien *bwaŋ<sup>4</sup>*, Tp *bwaŋ<sup>4/5</sup>*, Kn *boŋ<sup>4</sup>*;  
‘stride’ *\*mbia<sup>B</sup>*: Mien *bia<sup>6</sup>*, Tp *bia<sup>4/5</sup>*, Kn *ba<sup>6</sup>*.

|    | PY          | tonal series | Mien     | Tp        | Kn       |
|----|-------------|--------------|----------|-----------|----------|
| 6. | <i>*mph</i> | I            | <i>b</i> | <i>bh</i> | <i>b</i> |

‘noise’ *\*mphui<sup>A</sup>*: Mien *bui<sup>1</sup>*, Tp *bhui<sup>1</sup>*, Kn *bui<sup>1</sup>*;  
‘cracked’ *\*mphɛŋ<sup>A</sup>*: Mien *bɛŋ<sup>1</sup>*, Tp *bhɛŋ<sup>1</sup>*, Kn *bɛŋ<sup>1</sup>*.

|    | PY         | tonal series | Mien      | Tp        | Kn        |
|----|------------|--------------|-----------|-----------|-----------|
| 7. | <i>*pj</i> | I            | <i>pj</i> | <i>pj</i> | <i>pj</i> |

‘hair’ *\*pjei<sup>A</sup>*: Mien *pjei<sup>1</sup>*, Tp *pjei<sup>1</sup>*, Kn *pjei<sup>1</sup>*;  
‘house’ *\*pjau<sup>C</sup>*: Mien *pjau<sup>3</sup>*, Tp *pjau<sup>3</sup>*, Kn *pjau<sup>3</sup>*.

|    | PY         | tonal series | Mien      | Tp        | Kn       |
|----|------------|--------------|-----------|-----------|----------|
| 8. | <i>*bj</i> | II           | <i>pj</i> | <i>pj</i> | <i>f</i> |

‘flower’ *\*bja:ŋ<sup>A</sup>*: Mien *pja:ŋ<sup>2</sup>*, Tp *pjaŋ<sup>2</sup>*, Kn *fa:ŋ<sup>2</sup>*.

|    | PY          | tonal series | Mien       | Tp | Kn         |
|----|-------------|--------------|------------|----|------------|
| 9. | <i>*phj</i> | I            | <i>phj</i> | –  | <i>phj</i> |

‘move’ *\*phjen<sup>A</sup>*: Mien *phjen<sup>1</sup>*, Kn *phjen<sup>4</sup>*.  
Only one example in my data.

|     | PY          | tonal series | Mien      | Tp        | Kn        |
|-----|-------------|--------------|-----------|-----------|-----------|
| 10. | <i>*mpj</i> | I            | <i>bj</i> | <i>bj</i> | <i>bj</i> |

‘right’ *\*mpja:u<sup>C</sup>*: Mien *bja:u<sup>3</sup>*, Tp *bja:u<sup>3</sup>*, Kn *bja:u<sup>2</sup>*.  
Only one example in my data.

|     | PY          | tonal series | Mien      | Tp        | Kn        |
|-----|-------------|--------------|-----------|-----------|-----------|
| 11. | <i>*mbj</i> | II           | <i>bj</i> | <i>bj</i> | <i>bj</i> |

‘fish’ *\*mbjau<sup>C</sup>*: Mien *bja<sup>4</sup>*, Tp *bja<sup>4/5</sup>*, Kn *bja<sup>4</sup>*;  
‘tongue’ *\*mbjet*: Mien *bjet<sup>6</sup>*, Tp *bjet<sup>6</sup>*, Kn *bjet<sup>7</sup>*.

|     | PY          | tonal series | Mien      | Tp | Kn        |
|-----|-------------|--------------|-----------|----|-----------|
| 12. | * <i>pl</i> | I            | <i>pj</i> | –  | <i>pl</i> |

‘overgrown’ \**pla:p*: Mien *pja:p*<sup>3</sup>, Kn *plap*<sup>7</sup>.

Only one example in my data.

|     | PY          | tonal series | Mien      | Tp        | Kn        |
|-----|-------------|--------------|-----------|-----------|-----------|
| 13. | * <i>bl</i> | II           | <i>pj</i> | <i>pj</i> | <i>pl</i> |

‘flower’ \**bloŋ*<sup>A</sup>: Mien *plŋ*<sup>2</sup>, Tp *pjŋ*<sup>2</sup>, Kn *plŋ*<sup>4</sup> (irreg. tone).

Only one example in my data.

|     | PY           | tonal series | Mien      | Tp | Kn        |
|-----|--------------|--------------|-----------|----|-----------|
| 14. | * <i>mpl</i> | I            | <i>bj</i> | –  | <i>bl</i> |

‘blunt’ \**mpjŋ*<sup>A</sup>: Mien *bjŋ*<sup>1</sup>, Kn *blun*<sup>1</sup>.

Only one example in my data.

|     | PY          | tonal series | Mien      | Tp        | Kn        |
|-----|-------------|--------------|-----------|-----------|-----------|
| 15. | * <i>mb</i> | II           | <i>bj</i> | <i>bj</i> | <i>bl</i> |

‘rice’ \**mbjau*<sup>A</sup>: Mien *bjau*<sup>2</sup>, Tp *bjau*<sup>2</sup>, Kn *blau*<sup>2</sup>;

‘mucus’ \**mblut*: Mien *bjut*<sup>6</sup>, Tp *bjut*<sup>6</sup>, Kn *blut*<sup>7</sup>.

|     | PY          | tonal series | Mien     | Tp       | Kn       |
|-----|-------------|--------------|----------|----------|----------|
| 16. | * <i>?m</i> | I            | <i>m</i> | <i>m</i> | <i>m</i> |

‘green’ \**?meŋ*<sup>A</sup>: Mien *meŋ*<sup>1</sup>, Tp *meŋ*<sup>1</sup>, Kn *meŋ*<sup>1</sup>;

‘pain’ \**?mun*<sup>C</sup>: Mien *mun*<sup>3</sup>, Tp *mun*<sup>2</sup>, Kn *mun*<sup>1</sup>.

|     | PY         | tonal series | Mien     | Tp       | Kn       |
|-----|------------|--------------|----------|----------|----------|
| 17. | * <i>m</i> | II           | <i>m</i> | <i>m</i> | <i>m</i> |

‘go’ \**miŋ*<sup>A</sup>: Mien *miŋ*<sup>2</sup>, Tp *miŋ*<sup>1</sup>, Kn *miŋ*<sup>1</sup>;

‘look at’ \**ma:ŋ*<sup>B</sup>: Mien *ma:ŋ*<sup>6</sup>, Tp *ma:ŋ*<sup>6</sup>, Kn *ma:ŋ*<sup>6</sup>.

|     | PY          | tonal series | Mien      | Tp        | Kn       |
|-----|-------------|--------------|-----------|-----------|----------|
| 18. | * <i>hm</i> | I            | <i>hm</i> | <i>hm</i> | <i>m</i> |

‘fat’ \**hmei*<sup>A</sup>: Mien *hmei*<sup>1</sup>, Kn *mei*<sup>4</sup>;

‘night’ \**hmwa:ŋ*<sup>B</sup>: Mien *hmwa:ŋ*<sup>5</sup>, Tp *hmwa:ŋ*<sup>4/5</sup>.

|     | PY           | tonal series | Mien      | Tp | Kn       |
|-----|--------------|--------------|-----------|----|----------|
| 19. | * <i>?mj</i> | I            | <i>mj</i> | –  | <i>m</i> |

‘spirit’ \**mjVn*<sup>C</sup>: Mien *mjen*<sup>3</sup>, Kn *ma:n*<sup>6</sup>.

Only one example in my data.

|     |     |              |      |    |    |
|-----|-----|--------------|------|----|----|
|     | PY  | tonal series | Mien | Tp | Kn |
| 20. | *mj | II           | mj   | mj | m  |

‘person’ \*mjen<sup>A</sup>: Mien mjen<sup>2</sup>, Tp mjen<sup>2</sup>, Kn mum<sup>1</sup>.  
Only one example in my data.

|     |     |              |      |    |    |
|-----|-----|--------------|------|----|----|
|     | PY  | tonal series | Mien | Tp | Kn |
| 21. | *?v | I            | w    | v  | v  |

‘water’ \*?vom<sup>A</sup>: Mien wom<sup>1</sup>, Tp vom<sup>1</sup>, Kn vam<sup>1</sup>.  
‘son-in-law’ \*?vei<sup>C</sup>: Mien wei<sup>3</sup>, Kn vei<sup>3</sup>.

|     |    |              |      |    |    |
|-----|----|--------------|------|----|----|
|     | PY | tonal series | Mien | Tp | Kn |
| 22. | *v | II           | w    | v  | v  |

‘necklace’ \*va:n<sup>A</sup>: Mien wa:n<sup>2</sup>, Tp va:n<sup>3</sup>;  
‘soul’ \*von<sup>A</sup>: Mien won<sup>2</sup>, Kn van<sup>2</sup>.

|     |    |              |      |    |    |
|-----|----|--------------|------|----|----|
|     | PY | tonal series | Mien | Tp | Kn |
| 23. | *t | I            | t    | t  | t  |

‘tail’ \*twei<sup>C</sup>: Mien<sup>3</sup>, Tp twei<sup>3</sup>, Kn tei<sup>3</sup>;  
‘pair’ \*toi<sup>B</sup>: Mien toi<sup>5</sup>, Tp toi<sup>4/5</sup>, Kn toi<sup>3</sup>.

|     |    |              |      |    |    |
|-----|----|--------------|------|----|----|
|     | PY | tonal series | Mien | Tp | Kn |
| 24. | *d | II           | t    | t  | t  |

‘come’ \*da:i<sup>A</sup>: Mien ta:i<sup>2</sup>, Tp ta:i<sup>1</sup>, Kn ta:i<sup>2</sup>;  
‘animal’ \*dau<sup>A</sup>: Mien tau<sup>2</sup>, Tp tau<sup>1</sup>, Kn tau<sup>2</sup>.

|     |     |              |      |    |    |
|-----|-----|--------------|------|----|----|
|     | PY  | tonal series | Mien | Tp | Kn |
| 25. | *th | I            | th   | th | th |

‘add to’ \*thim<sup>A</sup>: Mien thim<sup>1</sup>, Tp thim<sup>1</sup>, Kn them<sup>1</sup>;  
‘rub’ \*thek: Mien thek<sup>3</sup>, Tp thek<sup>3</sup>.

|     |     |              |      |    |    |
|-----|-----|--------------|------|----|----|
|     | PY  | tonal series | Mien | Tp | Kn |
| 26. | *nt | I            | d    | d  | d  |

‘deep’ \*nto<sup>A</sup>: Mien do<sup>1</sup>, Tp du<sup>3</sup>, Kn du<sup>7</sup>;  
‘skin’ \*ntop: Mien dop<sup>3</sup>, Tp dop<sup>3</sup>, Kn dop<sup>7</sup>.

|     |     |              |      |    |    |
|-----|-----|--------------|------|----|----|
|     | PY  | tonal series | Mien | Tp | Kn |
| 27. | *nd | II           | d    | d  | d  |

‘ahead’ \*nda:ŋ<sup>B</sup>: Mien da:ŋ<sup>6</sup>, Tp da:ŋ<sup>4/5</sup>, Kn da:ŋ<sup>6</sup>;  
‘yam’ \*ndoi<sup>A</sup>: Mien doi<sup>2</sup>, Tp doi<sup>2</sup>, Kn doi<sup>2</sup>.

|     |      |              |      |    |    |
|-----|------|--------------|------|----|----|
|     | PY   | tonal series | Mien | Tp | Kn |
| 28. | *nth | I            | d    | dh | d  |

‘to fly’ \*nthai<sup>B</sup>: Mien dai<sup>5</sup>, Tp dhai<sup>4/5</sup>, Kn dai<sup>4</sup>.

|     | PY   | tonal series | Mien | Tp | Kn |
|-----|------|--------------|------|----|----|
| 29. | *ntj | I            | dj   | dj | gj |

'tree' \*ntja(:)ŋ<sup>B</sup>: Mien djaŋ<sup>5</sup>, Tp dja:ŋ<sup>4/5</sup>, Kn gja:ŋ<sup>3</sup>.  
Only one example in my data.

|     | PY  | tonal series | Mien | Tp | Kn |
|-----|-----|--------------|------|----|----|
| 30. | *?n | I            | n    | n  | n  |

'snake' \*?na:ŋ<sup>A</sup>: Mien na:ŋ<sup>l</sup>, Tp na:ŋ<sup>l</sup>, Kn na:ŋ<sup>l</sup>;  
'short' \*?nVŋ<sup>C</sup>: Mien naŋ<sup>3</sup>, Tp niŋ<sup>3</sup>, Kn niŋ<sup>3</sup>.

|     | PY | tonal series | Mien | Tp | Kn |
|-----|----|--------------|------|----|----|
| 31. | *n | II           | n    | n  | n  |

'ear', 'leaf' \*nɔm<sup>A</sup>: Mien nɔm<sup>2</sup>, Tp nɔm<sup>l</sup>, Kn nɔm<sup>2</sup>;  
'rob' \*nim<sup>B</sup>: Mien niŋ<sup>6</sup>, Tp niŋ<sup>4/5</sup>, Kn niŋ<sup>5</sup>.

|     | PY  | tonal series | Mien | Tp | Kn |
|-----|-----|--------------|------|----|----|
| 32. | *hn | I            | hn   | hn | n  |

'rice' \*hna:ŋ<sup>B</sup>: Mien hna:ŋ<sup>5</sup>, Tp hna:ŋ<sup>4/5</sup>, Kn na:ŋ<sup>3</sup>;  
'heavy' \*hnia<sup>C</sup>: Mien hnia<sup>3</sup>, Tp hnia<sup>3</sup>, Kn ni<sup>6</sup>.

|     | PY  | tonal series | Mien | Tp | Kn |
|-----|-----|--------------|------|----|----|
| 33. | *?r | I            | l    | l  | g  |

'vegetable' \*?rai<sup>A</sup>: Mien lai<sup>l</sup>, Tp lai<sup>l</sup>, Kn gjai<sup>l</sup>.

|     | PY | tonal series | Mien | Tp | Kn |
|-----|----|--------------|------|----|----|
| 34. | *r | I            | l    | l  | g  |

'sky' \*ruŋ<sup>A</sup>: Mien luŋ<sup>2</sup>, Tp luŋ<sup>2</sup>, Kn guŋ<sup>2</sup>;  
'nest' \*rau<sup>C</sup>: Mien lau<sup>4</sup>, Tp lau<sup>4/5</sup>, Kn gau<sup>4</sup>;

|     | PY  | tonal series | Mien | Tp | Kn |
|-----|-----|--------------|------|----|----|
| 35. | *hr | I            | hl   | hl | g  |

'measure' \*hra:u<sup>A</sup>: Mien hla:u<sup>l</sup>, Tp hla:u<sup>3</sup>, Kn ga:u<sup>l</sup>.

|     | PY   | tonal series | Mien | Tp | Kn |
|-----|------|--------------|------|----|----|
| 36. | *?rj | I            | lj   | lj | gj |

'field' \*?rjaŋ<sup>B</sup>: Mien ljaŋ<sup>5</sup>, Tp ljaŋ<sup>4/5</sup>, Kn gja:ŋ<sup>3</sup>;  
'shallow' \*?rjaŋ<sup>C</sup>: Mien ljaŋ<sup>3</sup>, Tp ljaŋ<sup>3</sup>, Kn gjaŋ<sup>2</sup>.

|     | PY  | tonal series | Mien | Tp | Kn |
|-----|-----|--------------|------|----|----|
| 37. | *rj | II           | lj   | lj | gj |

'soak' \*rjem<sup>A</sup>: Mien ljem<sup>2</sup>, Tp ljem<sup>2</sup>, Kn gjam<sup>2</sup>.  
Only one example in my data.

|     | PY | tonal series | Mien | Tp | Kn |
|-----|----|--------------|------|----|----|
| 38. | *j | II           | l    | l  | l  |

‘look for’ \**lɔ*<sup>C</sup>: Mien *lɔ*<sup>4</sup>, Tp *lɔ*<sup>4/5</sup>, Kn *lɔ*<sup>4</sup>;

‘son-in-law’ \**la*:*ŋ*<sup>A</sup>: Mien *la*:*ŋ*<sup>2</sup>, Tp *la*:*ŋ*<sup>2</sup>, Kn *la*:*ŋ*<sup>2</sup>.

|     | PY  | tonal series | Mien | Tp | Kn |
|-----|-----|--------------|------|----|----|
| 39. | *hl | I            | hl   | hl | l  |

‘bamboo’ \**hlau*<sup>C</sup>: Mien *hlau*<sup>3</sup>, Tp *hlau*<sup>3</sup>, Kn *lau*<sup>6</sup>;

‘moon’ \**hla*<sup>B</sup>: Mien *hla*<sup>5</sup>, Tp *hla*<sup>4/5</sup>, Kn *la*<sup>4</sup>.

|     | PY | tonal series | Mien | Tp     | Kn    |
|-----|----|--------------|------|--------|-------|
| 40. | *c | I            | ts   | ts, tc | tc, s |

‘stink’ \**cwei*<sup>B</sup>: Mien *tswei*<sup>5</sup>, Tp *tcwor*<sup>4/5</sup>, Kn *sei*<sup>3</sup>;

‘tasteless’ \**ca*:*m*<sup>C</sup>: Mien *tsa*:*m*<sup>3</sup>, Tp *tsa*:*m*<sup>3</sup>, Kn *sa*:*m*<sup>3</sup>.

|     | PY | tonal series | Mien | Tp     | Kn    |
|-----|----|--------------|------|--------|-------|
| 41. | *ʒ | II           | ts   | ts, tc | tc, s |

‘firewood’ \**ʒa*:*ŋ*<sup>A</sup>: Mien *tsa*:*ŋ*<sup>2</sup>, Tp *tsa*:*ŋ*<sup>2</sup>, Kn *sa*:*ŋ*<sup>2</sup>;

‘few’ \**ʒok*: Mien *tso*<sup>6</sup>, Tp *tsu*<sup>6</sup>, Kn *so*<sup>6</sup>.

|     | PY  | tonal series | Mien | Tp  | Kn  |
|-----|-----|--------------|------|-----|-----|
| 42. | *ch | I            | tsh  | ts’ | ts’ |

‘pull out’ \**chun*<sup>A</sup>: Mien *tshun*<sup>1</sup>, Tp *tsun*<sup>1</sup>, Kn *tsut*<sup>7</sup> (irreg. form);

‘rice’ \**chuk*: Mien *tshu*<sup>3</sup>, Kn *tsu*<sup>7</sup>.

|     | PY  | tonal series | Mien | Tp | Kn |
|-----|-----|--------------|------|----|----|
| 43. | *nc | I            | dz   | dz | d  |

‘salt’ \**nca*:*u*<sup>C</sup>: Mien *dza*:*u*<sup>3</sup>, Tp *dza*<sup>3</sup>, Kn *dau*<sup>3</sup>;

‘wash’ \**nco*<sup>B</sup>: Mien *dzo*<sup>5</sup>, Tp *dzu*<sup>4/5</sup>, Kn *do*<sup>4</sup>.

|     | PY  | tonal series | Mien | Tp    | Kn |
|-----|-----|--------------|------|-------|----|
| 44. | *nʒ | II           | dz   | dz, z | d  |

‘salty’ \**nʒa*:*i*<sup>A</sup>: Mien *dza*:*i*<sup>2</sup>, Tp *dza*:*i*<sup>2</sup>, Kn *da*:*i*<sup>2</sup>;

‘warm oneself’ \**nʒa*:*u*<sup>B</sup>: Mien *dza*:*u*<sup>6</sup>, Tp *za*:*u*<sup>4/5</sup>, Kn *dau*<sup>3</sup>.

|     | PY   | tonal series | Mien | Tp | Kn |
|-----|------|--------------|------|----|----|
| 45. | *ncj | I            | dzj  | dj | dj |

‘wind’ \**ncja*:*u*<sup>B</sup>: Mien *dzja*:*u*<sup>5</sup>, Tp *dja*:*u*<sup>4/5</sup>, Kn *dja*:*u*<sup>3</sup>;

‘afraid’ \**ncja*<sup>B</sup>: Mien *dzja*<sup>5</sup>, Kn *dja*<sup>4</sup>.

|     | PY            | tonal series | Mien       | Tp         | Kn        |
|-----|---------------|--------------|------------|------------|-----------|
| 46. | * <i>nchj</i> | I            | <i>dzj</i> | <i>h̥j</i> | <i>ṣ</i> |

'blood' \**nchja:m*<sup>C</sup>: Mien *dzja:m*<sup>3</sup>, Tp *h̥'ja:m*<sup>3</sup>, Kn *sá:m*<sup>6</sup>.

|     | PY         | tonal series | Mien     | Tp       | Kn       |
|-----|------------|--------------|----------|----------|----------|
| 47. | * <i>s</i> | I            | <i>s</i> | <i>s</i> | <i>s</i> |

'stand' \**sou*<sup>C</sup>: Mien *sou*<sup>3</sup>, Tp *sou*<sup>3</sup>, Kn *sau*<sup>6</sup>;  
 'arm' \**sei*<sup>A</sup>: Mien *sei*<sup>1</sup>, Kn *sei*<sup>1</sup>.

|     | PY          | tonal series | Mien     | Tp       | Kn       |
|-----|-------------|--------------|----------|----------|----------|
| 48. | * <i>hs</i> | I            | <i>f</i> | <i>f</i> | <i>s</i> |

'five' \**hsei*<sup>B</sup>: Mien *fei*<sup>5</sup>, Tp *feɪ*<sup>4/5</sup>, Kn *sei*<sup>3</sup>;  
 'near' \**hsat*: Mien *fat*<sup>3</sup>, Tp *fat*<sup>3</sup>, Kn *sat*<sup>7</sup>.

|     | PY          | tonal series | Mien      | Tp        | Kn           |
|-----|-------------|--------------|-----------|-----------|--------------|
| 49. | * <i>sj</i> | I            | <i>sj</i> | <i>sj</i> | <i>s, ṣ</i> |

'beard' \**sja:m*<sup>A</sup>: Mien *sja:m*<sup>1</sup>, Tp *sja:m*<sup>1</sup>, Kn *som*<sup>1</sup>;  
 'smoke' \**sjou*<sup>B</sup>: Mien *sjou*<sup>5</sup>, Tp *sjau*<sup>4/5</sup>, Kn *sou*<sup>4</sup>.

|     | PY          | tonal series | Mien     | Tp       | Kn       |
|-----|-------------|--------------|----------|----------|----------|
| 50. | * <i>ʔn</i> | I            | <i>ɲ</i> | <i>ɲ</i> | <i>ɲ</i> |

'cry' \**ʔnem*<sup>C</sup>: Mien *ɲem*<sup>3</sup>, Tp *ɲem*<sup>3</sup>, Kn *ɲim*<sup>3</sup>;  
 'scratch' \**ʔɲa:i*<sup>C</sup>: Mien *ɲa:i*<sup>3</sup>, Tp *ɲa:i*<sup>3</sup>, Kn *ɲa:i*<sup>3</sup>.

|     | PY         | tonal series | Mien     | Tp       | Kn       |
|-----|------------|--------------|----------|----------|----------|
| 51. | * <i>ɲ</i> | II           | <i>ɲ</i> | <i>ɲ</i> | <i>ɲ</i> |

'eat' \**ɲVn*<sup>B</sup>: Mien *ɲan*<sup>6</sup>, Tp *ɲen*<sup>6</sup>, Kn *ɲin*<sup>6</sup>.

|     | PY          | tonal series | Mien     | Tp       | Kn       |
|-----|-------------|--------------|----------|----------|----------|
| 52. | * <i>ʔj</i> | I            | <i>j</i> | <i>j</i> | <i>j</i> |

'dwell' \**ʔjem*<sup>A</sup>: Mien *jem*<sup>1</sup>, Tp *jem*<sup>1</sup>, Kn *jam*<sup>1</sup>;  
 'I' \**ʔja*<sup>T</sup>: Mien *jia*<sup>1</sup>, Tp *ja*<sup>2</sup>, Kn *ja*<sup>7</sup>.

|     | PY         | tonal series | Mien     | Tp       | Kn       |
|-----|------------|--------------|----------|----------|----------|
| 53. | * <i>j</i> | II           | <i>j</i> | <i>j</i> | <i>j</i> |

'walk' \**ja*<sup>A</sup>: Mien *jaŋ*<sup>2</sup>, Tp *ga:ŋ*<sup>3</sup>, Kn *jaŋ*<sup>2</sup>.

|     | PY         | tonal series | Mien     | Tp       | Kn       |
|-----|------------|--------------|----------|----------|----------|
| 54. | * <i>k</i> | I            | <i>k</i> | <i>k</i> | <i>k</i> |

'worm' \**keŋ*<sup>A</sup>: Mien *keŋ*<sup>1</sup>, Tp *keŋ*<sup>1</sup>, Kn *keŋ*<sup>1</sup>;  
 'speak' \**koŋ*<sup>C</sup>: Mien *koŋ*<sup>3</sup>, Tp *koŋ*<sup>3</sup>, Kn *koŋ*<sup>3</sup>.

|     |    |              |      |    |    |
|-----|----|--------------|------|----|----|
|     | PY | tonal series | Mien | Tp | Kn |
| 55. | *g | II           | k    | k  | k  |

‘forest’ \*gem<sup>A</sup>: Mien kem<sup>2</sup>, Tp kim<sup>2</sup>, Kn kim<sup>2</sup>;

‘door’ \*geg<sup>A</sup>: Mien keg<sup>2</sup>, Tp keg<sup>2</sup>, Kn keg<sup>2</sup>.

|     |     |              |      |    |    |
|-----|-----|--------------|------|----|----|
|     | PY  | tonal series | Mien | Tp | Kn |
| 56. | *kh | I            | kh   | kh | kh |

‘forget’ \*khuk: Mien khu<sup>3</sup>, Tp khu<sup>3</sup>, Kn kho<sup>7</sup>;

‘hole’ \*khwo<sup>t</sup>: Mien khwo<sup>t3</sup>, Tp khut<sup>3</sup>, Kn kho<sup>t7</sup>.

|     |     |              |      |    |    |
|-----|-----|--------------|------|----|----|
|     | PY  | tonal series | Mien | Tp | Kn |
| 57. | *ŋk | I            | g    | g  | g  |

‘head’ \*ŋkəŋ<sup>C</sup>: Mien gəŋ<sup>3</sup>, Tp gəŋ<sup>3</sup>;

‘cockcomb’ \*ŋkun<sup>A</sup>: Mien gun<sup>l</sup>, Kn gəŋ<sup>l</sup>.

|     |      |              |      |    |    |
|-----|------|--------------|------|----|----|
|     | PY   | tonal series | Mien | Tp | Kn |
| 58. | *ŋkh | I            | g    | gh | g  |

‘dry’ \*ŋkha:i<sup>A</sup>: Mien ga:i<sup>l</sup>, Tp gha:i<sup>l</sup>, Kn ga:i<sup>l</sup>.

|     |     |              |      |         |    |
|-----|-----|--------------|------|---------|----|
|     | PY  | tonal series | Mien | Tp      | Kn |
| 59. | *kj | I            | tc   | tcj, kj | kj |

‘horn’ \*kjəŋ<sup>A</sup>: Mien tcəŋ<sup>l</sup>, Tp tcjəŋ<sup>l</sup>, Kn kjəŋ<sup>l</sup>;

‘a bear’ \*kjop: Mien tcep<sup>3</sup>, Tp kjop<sup>3</sup>, Kn kjop<sup>7</sup>.

|     |     |              |      |    |    |
|-----|-----|--------------|------|----|----|
|     | PY  | tonal series | Mien | Tp | Kn |
| 60. | *gj | II           | tc   | kj | kj |

‘thin’ \*gjai<sup>B</sup>: Mien tcaj<sup>6</sup>, Tp kja<sup>4/5</sup>, Kn kja<sup>6</sup>.

|     |     |              |      |    |    |
|-----|-----|--------------|------|----|----|
|     | PY  | tonal series | Mien | Tp | Kn |
| 61. | *kl | I            | tc   | kl | kl |

‘neck’ \*kla:ŋ<sup>A</sup>: Mien tca:ŋ<sup>l</sup>, Tp kla:ŋ<sup>l</sup>, Kn kla:ŋ<sup>l</sup>;

‘dog’ \*klu<sup>C</sup>: Mien tcu<sup>3</sup>, Tp klu<sup>3</sup>, Kn klo<sup>3</sup>.

|     |     |              |      |    |    |
|-----|-----|--------------|------|----|----|
|     | PY  | tonal series | Mien | Tp | Kn |
| 62. | *gl | II           | tc   | kl | kl |

‘round’ \*glun<sup>A</sup>: Mien tcun<sup>2</sup>, Tp klun<sup>2</sup>, Kn klun<sup>2</sup>;

‘pestle’ \*glui<sup>A</sup>: Mien tcui<sup>2</sup>, Kn klui<sup>2</sup>.

|     |     |              |      |    |    |
|-----|-----|--------------|------|----|----|
|     | PY  | tonal series | Mien | Tp | Kn |
| 63. | *?ŋ | I            | ŋ    | ŋ  | ŋ  |

‘bent’ \*?ŋau<sup>A</sup>: Mien ŋau<sup>l</sup>, Tp ŋou<sup>l</sup>, Kn ŋou<sup>l</sup>.

|     |  |              |      |    |    |
|-----|--|--------------|------|----|----|
|     | PY   | tonal series | Mien | Tp | Kn |
| 64. | *ŋ   | II           | ŋ    | ŋ  | ŋ  |
|     | 'hard' *ŋɛŋ <sup>B</sup> : Mien ŋɛŋ <sup>ɔ̄</sup> , Tp ŋɛŋ <sup>2</sup> , Kn ŋɛŋ <sup>ɔ̄</sup> ; |              |      |    |    |
|     | 'cattle' *ŋoŋ <sup>A</sup> : Mien ŋoŋ <sup>2</sup> , Tp ŋoŋ <sup>l</sup> , Kn ŋoŋ <sup>2</sup> . |              |      |    |    |

|     |  |              |      |    |    |
|-----|--|--------------|------|----|----|
|     | PY   | tonal series | Mien | Tp | Kn |
| 65. | *ʔ   | I            | ʔ    | ʔ  | ʔ  |
|     | 'meat' *ʔo <sup>C</sup> : Mien ʔo <sup>3</sup> , Tp ʔo <sup>3</sup> , Kn ʔa <sup>3</sup> ;       |              |      |    |    |
|     | 'bitter' *ʔim <sup>A</sup> : Mien ʔim <sup>l</sup> , Tp ʔim <sup>3</sup> , Kn ʔim <sup>l</sup> . |              |      |    |    |

|     |   |              |      |    |    |
|-----|---|--------------|------|----|----|
|     | PY  | tonal series | Mien | Tp | Kn |
| 66. | *h  | I            | h    | h  | h  |
|     | 'rotten' *hu <sup>C</sup> : Mien hu <sup>3</sup> , Tp hu <sup>3</sup> , Kn hu <sup>ɔ̄</sup> ; |              |      |    |    |
|     | 'drink' *hop: Mien hop <sup>3</sup> , Tp hop <sup>ɔ̄</sup> , Kn hɔp <sup>7</sup> ;            |              |      |    |    |

|     |  |              |      |    |    |
|-----|--|--------------|------|----|----|
|     | PY   | tonal series | Mien | Tp | Kn |
| 67. | *ɦ   | II           | h    | h  | h  |
|     | 'thick' *ɦo <sup>C</sup> : Mien hɔ <sup>4</sup> , Tp hua <sup>4/5</sup> , Kn hu <sup>4</sup> ; |              |      |    |    |
|     | 'easy' *ɦei <sup>B</sup> : Mien he <sup>ɔ̄</sup> , Kn he <sup>ɔ̄</sup> .                       |              |      |    |    |

With the help of Purnell's data one can reconstruct the following set of vowels and diphthongs:

|    |     |     |     |     |
|----|-----|-----|-----|-----|
| *j | *u  |     |     |     |
| *e | *o  |     | *e: | *o: |
| *a |     |     | *a: |     |
|    | *ua | *ia |     |     |

The Mien system (Mao et al. 1982) also includes *i:*, but reflexes of this vowel have not yet been discovered in all the other dialects.

The vocalic correspondences between the Yao dialects are given in Table 3.7:

TABLE 3.7: VOCALIC CORRESPONDENCES OF YAO LANGUAGES

|     | Proto Yao | Mien | Tp   | Kn   |
|-----|-----------|------|------|------|
| 1.  | *j        | i    | i    | i    |
| 2.  | *e:       | e:   | ɛ    | ɛ    |
| 3.  | *e        | e    | e    | e    |
| 4.  | *a:       | a:   | a:   | a:   |
| 5.  | *a        | a    | a    | a    |
| 6.  | *u        | u    | u    | u    |
| 7.  | *o:       | o:   | o    | o    |
| 8.  | *o        | o    | o    | o    |
| 9.  | *ua       | ua   | u    | o    |
| 10. | *ia       | ia   | i, a | i, a |



The system of terminals includes:

|           |           |           |
|-----------|-----------|-----------|
| <i>*p</i> | <i>*m</i> | <i>*u</i> |
| <i>*t</i> | <i>*n</i> | <i>*i</i> |
| <i>*k</i> | <i>*ŋ</i> | <i>*0</i> |

The correspondences for terminals are very simple. Only for *\*k* can one suggest different sets of reflexes:

|            |          |          |          |                                 |
|------------|----------|----------|----------|---------------------------------|
| Proto Yao  | Mien     | Tp       | Kn       |                                 |
| <i>*-k</i> | ?        | ∅        | ∅        | (after <i>a</i> and <i>a:</i> ) |
|            | <i>k</i> | <i>k</i> | <i>k</i> | (elsewhere)                     |

Examples supporting the vowels and terminal correspondences can be found in Purnell (1970).

### 3.2.3 PROTO MIAO-YAO

Comparative Miao-Yao has been investigated by Chang Kun and Purnell. Chang Kun (Chang 1972) has reconstructed the system of tones for the protolanguage. Purnell (1970) discusses the whole problem of Miao-Yao reconstruction, but as his Miao data was insufficient, his results are unfortunately not very reliable.

For Proto MY we can reconstruct three tones, *\*A*, *\*B* and *\*C*, as suggested by Chang Kun. These tones are maintained in both branches of the family. In syllables ending with stops the opposition of tones has been neutralised.

I have reconstructed the following system of Proto MY initials:

|             |             |             |            |            |              |             |            |           |            |                      |
|-------------|-------------|-------------|------------|------------|--------------|-------------|------------|-----------|------------|----------------------|
|             | <i>*p</i>   | <i>*ph</i>  | <i>*b</i>  | <i>*mp</i> |              | <i>*?m</i>  | <i>*hm</i> | <i>*m</i> | <i>*?v</i> | <i>*v</i>            |
|             | <i>*pj</i>  | <i>*phj</i> | <i>*bj</i> |            |              | <i>*mbj</i> |            |           |            | <i>*vj</i>           |
|             | <i>*pl</i>  |             | <i>*bl</i> |            | <i>*mphi</i> | <i>*mbl</i> |            |           |            |                      |
|             | <i>*pr</i>  |             |            |            | <i>*mphi</i> | <i>*mbr</i> |            |           |            |                      |
| <i>*Ct</i>  | <i>*t</i>   |             | <i>*d</i>  |            | <i>*nd</i>   | <i>*?n</i>  | <i>*hn</i> | <i>*n</i> |            | <i>*hl</i>           |
|             | <i>*l</i>   |             |            |            |              |             |            |           |            |                      |
|             | <i>*tr</i>  |             |            |            | <i>*ndr</i>  |             |            |           |            |                      |
| <i>*Ctl</i> | <i>*tl</i>  |             | <i>*dl</i> |            | <i>*ndl</i>  |             |            |           |            |                      |
|             | <i>*hlj</i> |             |            |            |              |             |            |           |            |                      |
|             |             | <i>*ch</i>  |            |            | <i>*nch</i>  |             |            |           |            |                      |
| <i>*Cć</i>  |             | <i>*ch</i>  |            | <i>*nc</i> | <i>*nch</i>  | <i>*?ŋ</i>  | <i>*hŋ</i> | <i>*ŋ</i> | <i>*?j</i> | <i>*s'</i>           |
| <i>*Cč</i>  |             |             |            |            | <i>*nčh</i>  |             |            |           |            |                      |
|             |             |             |            |            |              | <i>*ŋkh</i> |            |           | <i>*?r</i> | <i>*hr</i> <i>*r</i> |
|             | <i>*kj</i>  |             |            |            |              |             |            |           |            |                      |
|             | <i>*kl</i>  |             |            |            |              |             |            |           |            |                      |
|             | <i>*kr</i>  |             |            |            |              |             |            |           |            |                      |
|             | <i>*?</i>   | <i>*h</i>   |            |            |              |             |            |           |            |                      |

The reconstruction is based on the list of correspondences given in Table 3.8.

TABLE 3.8: INITIAL CORRESPONDENCES OF MIAO-YAO LANGUAGES

|     | PMY   | PM       | PY        |
|-----|-------|----------|-----------|
| 1.  | *p    | *p       | *p        |
| 2.  | *ph   | *ph      | *ph       |
| 3.  | *b    | *b       | *b        |
| 4.  | *mp   | *mp      | *mp       |
| 5.  | *pj   | *pj      | *pj       |
| 6.  | *phj  | *hvj     | *pj       |
| 7.  | *bj   | *bj      | *bj       |
| 8.  | *mbj  | *mbj     | *mbj      |
| 9.  | *pl   | *pl      | *pj       |
| 10. | *bl   | *bl      | *bl       |
| 11. | *mphl | *mph     | *nch(j)   |
| 12. | *mbl  | *mbl     | *mbl      |
| 13. | *pr   | *pr      | *pj       |
| 14. | *mphr | *mphr    | *s        |
| 15. | *mbr  | *mbl     | *mbj      |
| 16. | *?m   | *?m      | *?m       |
| 17. | *hm   | *hm      | *hm       |
| 18. | *m    | *m       | *m        |
| 19. | *?v   | *?v      | *?v       |
| 20. | *v    | *v       | *-/h (+o) |
| 21. | *vj   | *vj      | *wj       |
| 22. | *t    | *t       | *t        |
| 23. | *d    | *d       | *d        |
| 24. | *nt   | *nt      | *nt       |
| 25. | *nd   | *nd      | *nd       |
| 26. | *Ct   | *t       | *nt       |
| 27. | *tr   | *tr      | *c        |
| 28. | *ndr  | *nd[r,l] | *nɣ       |
| 29. | *tl   | *tl      | *kl       |
| 30. | *dl   | *dl      | *gl       |
| 31. | *ndl  | *mbl     | *n        |
| 32. | *Ctl  | *n       | *mbl      |
| 33. | *?n   | *?n      | *?n       |
| 34. | *hn   | *hn      | *hn       |
| 35. | *n    | *n/*ɲ    | *n        |
| 36. | *hl   | *hl      | *hl       |
| 37. | *l    | *l       | *l        |
| 38. | *hlj  | *hlj     | *hl       |
| 39. | *ch   | *ch      | *s        |

|     |              |              |                  |
|-----|--------------|--------------|------------------|
| 40. | * <i>nch</i> | * <i>nch</i> | * <i>nch</i>     |
| 41. | * <i>čh</i>  | * <i>čh</i>  | * <i>s</i>       |
| 42. | * <i>nc</i>  | * <i>ć</i>   | * <i>nc</i>      |
| 43. | * <i>nčh</i> | * <i>nc</i>  | * <i>nch</i>     |
| 44. | * <i>nčh</i> | * <i>nčh</i> | * <i>nčhj</i>    |
| 45. | * <i>ś</i>   | * <i>ś</i>   | * <i>s</i>       |
| 46. | * <i>Cč</i>  | * <i>č</i>   | * <i>nc(h)</i>   |
| 47. | * <i>Cč</i>  | * <i>č</i>   | * <i>ncj</i>     |
| 48. | * <i>?ɲ</i>  | * <i>?ɲ</i>  | * <i>?ɲ</i>      |
| 49. | * <i>hɲ</i>  | * <i>hɲ</i>  | * <i>hɲ</i>      |
| 50. | * <i>ɲ</i>   | * <i>ɲ</i>   | * <i>ɲ</i>       |
| 51. | * <i>?j</i>  | * <i>?j</i>  | * <i>?j</i>      |
| 52. | * <i>ɲkh</i> | * <i>ɲkh</i> | * <i>ɲkh</i>     |
| 53. | * <i>kj</i>  | * <i>kj</i>  | * <i>kj</i>      |
| 54. | * <i>kl</i>  | * <i>kl</i>  | * <i>kl</i>      |
| 55. | * <i>kr</i>  | * <i>kr</i>  | * <i>kj</i>      |
| 56. | * <i>?r</i>  | * <i>?r</i>  | * <i>?r</i>      |
| 57. | * <i>hr</i>  | * <i>š</i>   | * <i>h[r, l]</i> |
| 58. | * <i>r</i>   | * <i>r</i>   | * <i>r</i>       |
| 59. | * <i>?</i>   | * <i>?</i>   | * <i>?</i>       |
| 60. | * <i>h</i>   | * <i>h</i>   | * <i>h</i>       |

The list of examples includes:

| l | PMY        | PM         | PY         |
|---|------------|------------|------------|
|   | * <i>p</i> | * <i>p</i> | * <i>p</i> |

1. \**pej<sup>A</sup>* ‘know’ [P 484]

PM \**pui<sup>A</sup>*: Hmu *pu<sup>l</sup>*, Hmong *pou<sup>l</sup>*, Bunu *pa<sup>l</sup>*, She *pe<sup>l</sup>*;

PY \**pej<sup>A</sup>*: Mien, Kn *pei<sup>l</sup>*.

2. \**pua<sup>A</sup>* ‘three’ [P 948]

PM \**pəi<sup>A</sup>*: Hmu *pi<sup>l</sup>*, Xx *pu<sup>l</sup>*, Hmong *pe<sup>l</sup>*, Bunu *pe<sup>l</sup>*, She *pa<sup>l</sup>*;

PY \**pua<sup>A</sup>*: Mien *pua<sup>l</sup>*, TɁ *pua<sup>3</sup>*, Kn *po<sup>7</sup>*.

◁ WrK *pi*: ‘three’; Chrau *pe*: ‘three’ and others

3. \**paŋ<sup>3</sup>* ‘full’ [P 375]

PM \**pai<sup>NC</sup>*: Hmu *pe<sup>3</sup>*, Xx *pe<sup>3/7</sup>*, Hmong *po<sup>3</sup>*, She *pa<sup>N3</sup>*;

PY \**paŋ<sup>C</sup>*: Mien *paŋ<sup>3</sup>*, TɁ *paŋ<sup>3</sup>*, Kn *paŋ<sup>3</sup>*.

◁ WrK *bəŋ* ‘full’, WrM *peŋ* ‘full’, Chrau *bəŋ* ‘full’ and others [Ja 71].

4. \*pon<sup>C</sup> ‘to shoot’ [P 799]PM \*pon<sup>C</sup>: Hmu paN<sup>3</sup>, Xx paN<sup>3</sup>, Hmong pau<sup>3</sup>, Bunu pi<sup>3</sup>;PY \*pon<sup>C</sup>: Mien pwon<sup>3</sup>, Tp pon<sup>3</sup>, Kn fon<sup>3</sup>.<> WrK pa:ɲ<sup>1</sup> ‘to shoot’, WrM pan ‘to shoot’, Chrau paɲ ‘to shoot’, Vn bắn ‘to shoot’.5. \*poi<sup>B</sup> ‘sleep’ [P 825]PM \*poi<sup>B</sup>: Hmu pi<sup>5</sup>, Xx pə<sup>5</sup>, Hmong pu<sup>5</sup>, Bunu pau<sup>5</sup>, She pɔ<sup>5</sup>;PY \*poi<sup>B</sup>: Mien pwei<sup>5</sup>, Tp pwoi<sup>4/5</sup>, Kn fei<sup>3</sup>.

|   |     |     |     |
|---|-----|-----|-----|
| 2 | PMY | PM  | PY  |
|   | *ph | *ph | *ph |

6. \*pha:i<sup>B</sup> ‘cut’ [P 829]PM \*phau<sup>B</sup>: Hmu pha<sup>5</sup>, Xx pha<sup>5</sup>, Hmong phua<sup>5</sup>, Bunu pho<sup>5</sup>;PY \*pha:i<sup>B</sup>: Mien pha:i<sup>5</sup>, Kn pha:i<sup>4</sup>.<> Cf. Kadai \*pha<sup>B</sup> ‘cut’.7. \*phaŋ<sup>C</sup> ‘handful’ [P 404]PM \*phu<sup>N</sup>C > Hmong phoN<sup>3</sup>;PY \*phuŋ<sup>C</sup>: Mien phwaŋ<sup>3</sup>, Kn phoŋ<sup>6</sup>.<> WrK kəmpaŋ<sup>1</sup> ‘hand’, ‘handful’, Chrau ləpa:ŋ ‘palm of hand’.

|   |     |    |    |
|---|-----|----|----|
| 3 | PMY | PM | PY |
|   | *b  | *b | *b |

## 8. \*bat ‘see’ [P 774]

PM \*boQ: Hmu poN<sup>8</sup> (with unclear -N), Hmong pɔ<sup>8</sup>, She phə<sup>6</sup>;PY \*buat: Mien pwa<sup>8</sup>, Tp pwa<sup>6</sup>, Kn fo<sup>7</sup>.9. \*bua<sup>B</sup> ‘hatch’ [P 410]PM \*boi<sup>B</sup>: Hmu pə<sup>6</sup>, Hmong pua<sup>6</sup>, Bunu pəu<sup>6</sup>, She phu<sup>4</sup>;PY \*bua<sup>B</sup>: Mien pwo<sup>6</sup>, Kn pu<sup>6</sup>.

|   |     |     |     |
|---|-----|-----|-----|
| 4 | PMY | PM  | PY  |
|   | *mp | *mp | *mp |

10. \*mpei<sup>B</sup> ‘dream’ [P 247]PM \*mpui: Hmu pu<sup>5</sup>, Xx mpei<sup>5</sup>, Hmong mpou<sup>5</sup>, Bunu mpa<sup>5</sup>;PY \*mp(h)ei<sup>B</sup>: Mien bei<sup>5</sup>, Kn bei<sup>7</sup>.

&lt;&gt; Proto An \*Sepi ‘to dream’ [Blust 1981]. Comparison given by Benedict [Ben 274].

11. \*mpan<sup>B</sup> ‘snow’PM \*mpəi<sup>NB</sup>: Hmu pɛ<sup>5</sup>, Xx mpe<sup>5</sup>, Hmong mpo<sup>5</sup>, Bunu mpuN<sup>5</sup>, She paN<sup>5</sup>;PY \*mpuan<sup>B</sup> > Mien bwan<sup>5</sup>.12. \*mpua<sup>B</sup> ‘name’ [P 594]PM \*mpəi<sup>B</sup>: Hmu pi<sup>5</sup>, Xx mpu<sup>5</sup>, Hmong mpe<sup>5</sup>, Bunu mpe<sup>5</sup>;PY \*mpua<sup>B</sup>: Mien bwo<sup>5</sup>, Tp bua<sup>4/5</sup>, Kn bu<sup>3</sup>.◁ Haudricourt [1966:55] compares the root with WrK *zhəmo:h* ‘name’.

|   |     |     |     |
|---|-----|-----|-----|
| 5 | PMY | PM  | PY  |
|   | *pj | *pj | *pj |

13. \*pja<sup>A</sup> ‘five’ [P 324]PM \*pja<sup>A</sup>: Hmu ca<sup>1</sup>, Xx pra<sup>1</sup>, Hmong cí<sup>1</sup>, Bunu cu<sup>1</sup>, She pi<sup>1</sup>;PY \*pja<sup>A</sup>: Mien, Tp pja<sup>1</sup>, Kn pja<sup>7</sup>.◁ Can be possibly compared with WrK *pram* ~ *pəʔam* ‘five’ or ST \*lɣa ‘five’ [Ja].14. \*pja<sup>iC</sup> ‘house’ [P 440]PM \*pja<sup>iC</sup>: Hmu ce<sup>3</sup>, Xx pri<sup>3</sup>, Hmong cé<sup>3</sup>, Bunu ce<sup>3</sup>;PY \*pjau<sup>C</sup>: Mien, Tp, Kn pjau<sup>3</sup>.◁ Cf. Kd \*ʔja(:)u<sup>C</sup> ‘house’ or (which is less probable) An \*balaj.15. \*pje<sup>LC</sup> ‘fruit’ [P 356]PM \*pjei<sup>NC</sup> ~ pei<sup>NC</sup>: Hmu ceN<sup>3</sup>, Xx pi<sup>3/7</sup>, Hmong ci<sup>3</sup>, Bunu pi<sup>3</sup>, She pi<sup>3</sup>;PY \*pjou<sup>C</sup>: Mien, Tp, Kn pjou<sup>3</sup>.◁ WrK *phle*: ‘fruit’, Chrau *plaj* ‘fruit’, Vn *trái, lái* ‘fruit’.

|   |      |      |     |
|---|------|------|-----|
| 6 | PMY  | PM   | PY  |
|   | *phj | *hvj | *pj |

16. \*phjei<sup>C</sup> ‘head’ [P 419]PM \*hvju<sup>iC</sup>: Hmu hf<sup>u3</sup>, Xx prei<sup>3/7</sup>, Bunu fa<sup>3</sup>;PY \*pjei<sup>C</sup>: Mien, Kn pjei<sup>3</sup>.◁ Possible external comparisons are quite obscure. Benedict [Ben 311] compares Proto Miao with Austronesian \*qulu ‘head’ and Zhuang-Tai forms like WrS *hau<sup>A</sup>* and Tho *thua<sup>1</sup>*, which are relatively recent Chinese borrowings: OC \*dho: > MC \*dɿw [CHAR1].

|   |            |          |           |
|---|------------|----------|-----------|
| 7 | PMY<br>*bj | PM<br>*b | PY<br>*bj |
|---|------------|----------|-----------|

17. \*bja:ŋ<sup>A</sup> ‘flower’ [P 339]

PM \*baN<sup>A</sup>: Hmu paN<sup>2</sup>, Xx pei<sup>2</sup>, Hmong paN<sup>2</sup>, Bunu peN<sup>2</sup>, She phuN<sup>2</sup>;

PY \*bja:ŋ<sup>A</sup>: Mien, Tp pja:ŋ<sup>2</sup>, Kn fa:ŋ<sup>2</sup>.

<> Vn bông ‘flower’

|   |             |            |            |
|---|-------------|------------|------------|
| 8 | PMY<br>*mbj | PM<br>*mbj | PY<br>*mbj |
|---|-------------|------------|------------|

18. \*mbja:t ‘peppery’ [P 660]

PM \*mbjaQ: Hmu za<sup>8</sup>, Xx mre<sup>i4/8</sup>, Hmong nci<sup>8</sup>, Bunu ncu<sup>8</sup>, She pi<sup>8</sup>;

PY \*mbja:t: Mien bja:t<sup>5</sup>, Kn bja:t<sup>5</sup>.

<> A local word.

19. \*mbjai<sup>B</sup> ‘bamboo shoots’ [P 40]

PM \*mbjai<sup>B</sup>: Hmu za<sup>6</sup>, Xx mza<sup>6</sup>, Hmong ncu<sup>6</sup>, Bunu nco<sup>6</sup>;

PY \*mbjai<sup>B</sup>: Mien bja<sup>6</sup>, Tp bja<sup>i4/5</sup>, Kn bja<sup>6</sup>.

20. \*mbjai<sup>C</sup> ‘fish’ [P 327]

PM \*mbjai<sup>C</sup>: Hmu ze<sup>4</sup>, Xx mri<sup>4/8</sup>, Hmong nce<sup>4</sup>, Bunu nce<sup>4</sup>, She pja<sup>4</sup>;

PY \*mbjai<sup>C</sup>: Mien, Tp, Kn bja<sup>4</sup>

<> Cf. Proto Kadai \*pla<sup>A</sup> ‘fish’ (No.5 in §2.1.5).

21. \*mbjai<sup>B</sup> ‘nose’ [P 620]

PM \*mbjai<sup>B</sup>: Hmu ze<sup>6</sup>, Xx mr<sup>6</sup>, Hmong ncu<sup>6</sup>, Bunu ncau<sup>6</sup>;

PY \*mbjai<sup>B</sup> ~ \*mblui<sup>B</sup>: Mien bja<sup>6</sup>, Kn blui<sup>6</sup>.

<> Cf. WrK crəmu<sup>h</sup> ‘nose’, WrM mu<sup>h</sup> ‘nose’, Vn mui ‘nose’ and many other Austroasiatic forms.

|   |            |           |           |
|---|------------|-----------|-----------|
| 9 | PMY<br>*pl | PM<br>*pl | PY<br>*pj |
|---|------------|-----------|-----------|

22. \*plei<sup>A</sup> ‘four’ [P 355]

PM \*plu<sup>A</sup>: Hmu hlu<sup>1</sup>, Xx prei<sup>1</sup>, Hmong plou<sup>1</sup>, Bunu tla<sup>1</sup>, She pi<sup>6</sup>;

PY \*pjei<sup>A</sup>: Mien, Tp, Kn pjei<sup>1</sup>.

<> Cf. Proto Sino-Tibetan \*(p-)lij ‘four’ (a comparison suggested by Jakhontov).

|    |     |     |     |
|----|-----|-----|-----|
| 10 | PMY | PM  | PY  |
|    | *bl | *bl | *bl |

23. \*bl[o:]ŋ<sup>A</sup> ‘forehead’ [P 347]

PM \*bləN<sup>A</sup> > Hmong *pla*<sup>2</sup>;

PY \*blo:ŋ<sup>A</sup>: Mien *pjo:ŋ*<sup>2</sup>, Tp *pjoŋ*<sup>2</sup>, Kn *plɔŋ*<sup>4</sup>.

<> Cf. WrK *kəmpħliəŋ* ‘cheek’, VN *trán* ‘forehead’.

|    |       |      |         |
|----|-------|------|---------|
| 11 | PMY   | PM   | PY      |
|    | *mphl | *mph | *nch(j) |

24. \*mphləiL<sup>C</sup> ‘ant’ [P20, 22]

PM \*mphəiN<sup>C</sup>: Hmu *pheN*<sup>3</sup>, Xx *mpha*<sup>3/7</sup>, Bunu *mpha*<sup>3</sup>, She *phui*<sup>3</sup>;

PY \*nch(j)ou<sup>C</sup>: Mien *zjou*<sup>3</sup>, Kn *šou*<sup>6</sup>.

|    |      |      |      |
|----|------|------|------|
| 12 | PMY  | PM   | PY   |
|    | *mbl | *mbl | *mbl |

25. \*mblai<sup>A</sup> ‘rice plant’ [P 722]

PM \*mbləi<sup>A</sup>: Hmu *na*<sup>2</sup>, Xx *ni*<sup>2</sup>, Hmong *mple*<sup>2</sup>, Bunu *ntle*<sup>2</sup>, She *pja*<sup>2</sup>;

PY \*mblau<sup>A</sup>: Mien, Tp *bjau*<sup>2</sup>, Kn *blau*<sup>2</sup>.

<> The etymology is obscure. One can compare the root with OC \*lu<sup>?</sup> ‘rice plant’ [CHAR2].

Another possibility is An \*pag’aj ‘rice’ [Ja].

26. \*mblVt ‘glutenous’, ‘sticky’ [P 366]

PM \*mbləQ: Hmu *nə*<sup>8</sup>, Xx *nu*<sup>8</sup>, Hmong *mplou*<sup>8</sup>;

PY \*mblut: Mien *bjut*<sup>8</sup>, Kn *blət*<sup>7</sup>.

<> Cf. An \*pulut ‘glue’ [Ben 300].

|    |     |     |     |
|----|-----|-----|-----|
| 13 | PMY | PM  | PY  |
|    | *pr | *pr | *pj |

27. *prei*<sup>A</sup> ‘hair’ [P 397]

PM \*pru<sup>A</sup>: Hmu *hlju*<sup>1</sup>, Xx *pi*<sup>1</sup>, Hmong *plou*<sup>1</sup>, Bunu *tla*<sup>1</sup>, She *pi*<sup>1</sup>;

PY \*pje<sup>A</sup>: Mien, Tp, Kn *pje*<sup>1</sup>.

|    |       |      |    |
|----|-------|------|----|
| 14 | PMY   | PM   | PY |
|    | *mphr | *mph | *s |

28. \*mphrak ‘daughter’ [P 213, 214]

PM \*mpheQ: Hmu *phi*<sup>7</sup>, Xx *mpha*<sup>3/7</sup>, Hmong *nchai*<sup>7</sup>, Bunu *mpha*<sup>7</sup>, She *phui*<sup>6</sup>;

PY \*[si]ak: Mien *sje*<sup>7</sup>, Tp *sia*<sup>6</sup>, Kn *ša*<sup>3</sup>.

|    |             |            |            |
|----|-------------|------------|------------|
| 15 | PMY<br>*mbr | PM<br>*mbl | PY<br>*mbj |
|----|-------------|------------|------------|

29. \*mbret 'tongue' [P 963]

PM \*mbləQ: Hmu ni<sup>8</sup>, Xx mja<sup>4/8</sup>, Hmong mplai<sup>8</sup>, Bunu ntlə<sup>8</sup>, She pɿ<sup>6</sup>;

PY \*mbjet: Mien, Tp bjet<sup>6</sup>, Kn bjet<sup>5</sup>.

⟨⟩ Cf. WrK kənlaət 'uvula' [Ja 66].

|    |            |           |           |
|----|------------|-----------|-----------|
| 16 | PMY<br>*ʔm | PM<br>*ʔm | PY<br>*ʔm |
|----|------------|-----------|-----------|

30. \*ʔmin<sup>A</sup> 'pain' [P 645]

PM \*ʔmVN<sup>A</sup>: Hmu, Xx moN<sup>1</sup>, Hmong mao<sup>1</sup>, Bunu muN<sup>1a</sup>;

PY \*ʔmur<sup>A</sup>: Mien mun<sup>1</sup>, Tp mun<sup>2</sup>, Kn mun<sup>1</sup>.

|    |            |           |           |
|----|------------|-----------|-----------|
| 17 | PMY<br>*hm | PM<br>*hm | PY<br>*hm |
|----|------------|-----------|-----------|

31. \*hma:ŋ<sup>B</sup> 'night' [P 283]

PM \*hmoN<sup>B</sup>: Hmu hmaN<sup>5</sup>, Xx hmaN<sup>5</sup>, Hmong hmau<sup>5</sup>, Bunu hmi<sup>5</sup>;

PY \*Hmua:ŋ<sup>B</sup>: Mien hmwa:ŋ<sup>5</sup>, Tp hmwa:ŋ<sup>4/5</sup>.

⟨⟩ Cf. Chrau maŋ, naŋ 'night', Bahnar maŋ 'night' [Ja 68].

|    |           |          |          |
|----|-----------|----------|----------|
| 18 | PMY<br>*m | PM<br>*m | PY<br>*m |
|----|-----------|----------|----------|

32. \*ma:i<sup>A</sup> 'have' [P 411]

PM \*mV(N)<sup>A</sup>: Hmu me<sup>2</sup>, Xx me<sup>2</sup>, Hmong mua<sup>2</sup>, Bunu moN<sup>2</sup>, She ma<sup>2</sup>;

PY \*ma:i<sup>A</sup>: Mien, Tp ma:i<sup>2</sup>, Kn na:i<sup>2</sup>.

⟨⟩ Cf. WrK ma:n 'have', 'possess' or Kd \*mi<sup>A</sup> 'have'.

33. \*m[ej]<sup>B</sup> 'eye' [P 292]

PM \*mVN<sup>B</sup>: Hmu me<sup>6</sup>, Xx me<sup>6</sup>, Hmong mua<sup>6</sup>, Bunu moN<sup>6</sup>;

PY \*mwei<sup>B</sup>: Mien mwei<sup>6</sup>, Tp mwoi<sup>2</sup>, Kn me<sup>6</sup>.

⟨⟩ Cf. WrM mat 'eye'. The root is represented in many other AA and An languages.

34. \*mua<sup>B</sup> 'sister' [P 812]

PM \*mV<sup>B</sup>: Hmu mu<sup>6</sup> 'maternal brother's wife', Hmong mua<sup>6</sup> 'sister';

PY \*mua<sup>B</sup> 'sister': Mien mwo<sup>6</sup>, Kn mu<sup>6</sup>.

⟨⟩ Cf. (possibly) WrK miŋ 'mother's or father's younger sister'.



35. \**mVi*<sup>A</sup> ‘you’ [P 1062 ]

PM \**mV(N)*<sup>A</sup> ‘thou’: Hmu *moN*<sup>2</sup>, Xx *mɿ*<sup>2</sup>, She *muN*<sup>2</sup>;

or PM \**mVN*<sup>A</sup> ‘you’: Hmu *maN*<sup>2</sup>, Xx, Hmong *me*<sup>2</sup>, Bunu *mi*<sup>2</sup>;

PY \**mi*<sup>A</sup>: Mien *mei*<sup>2</sup>, Tp *mwoi*<sup>2</sup>, Kn *mei*<sup>2</sup>.

<> Cf. AA \**me* ‘thou’ reconstructed by Pinnow (1965).

|    |             |             |             |
|----|-------------|-------------|-------------|
| 19 | PMY         | PM          | PY          |
|    | * <i>ʔv</i> | * <i>ʔv</i> | * <i>ʔv</i> |

36. \**ʔvej*<sup>C</sup> ‘son-in-law’ [P 853]

PM \**ʔvui*<sup>C</sup>: Hmong *vou*<sup>3</sup> ‘son-in-law’, Bunu *va*<sup>3</sup> ‘daughter-in-law’;

PY \**ʔvej*<sup>C</sup>: Mien, Kn *vei*<sup>3</sup>.

37. \**ʔvom*<sup>A</sup> ‘water’ [P 1019]

PM \**ʔvVN*<sup>A</sup>: Hmu *ʔə*<sup>l</sup>, Xx *ʔu*<sup>l</sup>, Hmong *ʔoN*<sup>l</sup>, Bunu *ʔaN*<sup>l</sup>, She *ʔoN*<sup>l</sup>;

PY \**ʔvom*<sup>A</sup>: Mien, Tp *vom*<sup>l</sup>, Kn *vam*<sup>l</sup>.

<> Cf. Khasi *u:m*, Khmu *ə̀m* ‘water’ and forms from some other Mon-Khmer languages [Ja 69]. One can also try to include the root in the Austro-Thai comparison ‘water’: Kd \**R-nam*<sup>C</sup> ‘water’ and An \**danum* ‘water’ (B 420; No.21 in §2.2)

|    |            |            |           |
|----|------------|------------|-----------|
| 20 | PMY        | PM         | PY        |
|    | * <i>v</i> | * <i>v</i> | *-/h (+o) |

38. \**vou*<sup>B</sup> ‘tuber’, ‘root’

PM \**vu*<sup>B</sup>: Hmu *vu*<sup>6</sup>, Xx *wə*<sup>6</sup>, Hmong *veu*<sup>6</sup>, Bunu *vu*<sup>6</sup>, She *vu*<sup>4</sup>;

PY \**hou*<sup>B</sup> > Mien *hou*<sup>6</sup>.

<> Cf. WrM *kwa:j* ‘yam’.

|    |             |             |             |
|----|-------------|-------------|-------------|
| 21 | PMY         | PM          | PY          |
|    | * <i>vj</i> | * <i>vj</i> | * <i>wj</i> |

39. \**vje*<sup>C</sup> ‘urine’

PM \**vja*<sup>C</sup>: Hmu *va*<sup>4</sup>, Xx *zɑ*<sup>4/8</sup>, Hmong *zi*<sup>4</sup>, Bunu *ɣu*<sup>4</sup>, She *zi*<sup>4</sup>;

PY \**wje*<sup>C</sup> > Mien *jwe*<sup>4</sup>.

|    |            |            |            |
|----|------------|------------|------------|
| 22 | PMY        | PM         | PY         |
|    | * <i>t</i> | * <i>t</i> | * <i>t</i> |

40. \**tag*<sup>B</sup> ‘tear’

PM \**taɿNB*: Hmu *tə*<sup>5</sup>, Xx *tə*<sup>5</sup>, Hmong *to*<sup>5</sup>, Bunu *tuN*<sup>7</sup>, She *taN*<sup>5</sup>;

PY \**tag*<sup>B</sup> > Mien *tag*<sup>5</sup>.

41. \**tam*<sup>C</sup> ‘louse’ [P 540]

PM \**tai*<sup>NC</sup>: Hmu *te*<sup>3</sup>, Xx *te*<sup>3</sup>, Hmong *to*<sup>3</sup>, Bunu *tuN*<sup>3a</sup>, She *taN*<sup>3</sup>;

PY \**tam*<sup>C</sup>: Mien, Kn *tam*<sup>3</sup>.

⟨ Cf. An \**tuma* ‘louse’ [Ben 334].

42. \**taj*<sup>B</sup> ‘kill’ [P 476]

PM \**taj*<sup>B</sup>: Hmu *ta*<sup>5</sup>, Xx *ta*<sup>5</sup>, Hmong *tua*<sup>5</sup>, Bunu *to*<sup>5</sup>, She *ta*<sup>5</sup>;

PY \**taj*<sup>B</sup>: Mien *tai*<sup>5</sup>, Tp *tai*<sup>3</sup>, Kn *tai*<sup>7</sup>.

⟨ Cf. Kd \**I-ta(:)i*<sup>A</sup> and An \**mataj* ‘kill’ [Ben 269].

43. \**to:n*<sup>A</sup> ‘son’ [P 849]

PM \**tai*<sup>NA</sup>: Hmu *te*<sup>l</sup>, Xx *te*<sup>l</sup>, Hmong *to*<sup>l</sup>, Bunu *tuN*<sup>la</sup>, She *taN*<sup>l</sup>;

PY \**to:n*<sup>A</sup>: Mien *to:n*<sup>l</sup>, Tp, Kn *tɔn*<sup>l</sup>.

44. \**toi*<sup>C</sup> ‘tail’.

PM \**toi*<sup>C</sup>: Hmu *te*<sup>3</sup>, Xx *tə*<sup>3</sup>, Hmong *tu*<sup>3</sup>, Bunu *tau*<sup>3</sup>, She *tə*<sup>3</sup>;

PY \**toi*<sup>C</sup> > Mien *twei*<sup>3</sup>.

⟨ Cf. WrK *kənduj* ‘tail’, Vn *đuôđi* ‘tail’.

|    |            |            |            |
|----|------------|------------|------------|
| 23 | PMY        | PM         | PY         |
|    | * <i>d</i> | * <i>d</i> | * <i>d</i> |

45. \**da:i*<sup>A</sup> ‘go’, ‘come’ [P 189, 286]

PM \**d[a,ə]i*<sup>A</sup> ‘go’: Hmu *ta*<sup>2</sup>, Hmong *tua*<sup>2</sup>;

PY \**da:i*<sup>A</sup> ‘come’: Mien *ta:i*<sup>2</sup>, Tp *ta:i*<sup>l</sup>, Kn *ta:i*<sup>2</sup>.

⟨ Cf. ZhT \**tai*<sup>A</sup> ‘go’, follow’ [LFK]

46. \**dai*<sup>B</sup> ‘die’ [P 228]

PM \**dai*<sup>B</sup>: Hmu *ta*<sup>6</sup>, Xx *ta*<sup>6</sup>, Hmong *tua*<sup>6</sup>, Bunu *to*<sup>6</sup>, She *tha*<sup>4</sup>;

PY \**dai*<sup>B</sup>: Mien *tai*<sup>6</sup>, Tp *ta*<sup>4</sup>, Kn *tai*<sup>6</sup>.

⟨ Cf. No.42.

47. \**dou*<sup>C</sup> ‘fire’ [P 319]

PM \**du*<sup>C</sup>: Hmu *tu*<sup>4</sup>, Xx *tə*<sup>4</sup>, Hmong *teu*<sup>4</sup>, Bunu *tu*<sup>4</sup>, She *thɔ*<sup>4</sup>;

PY \**dou*<sup>C</sup>: Mien *tou*<sup>4</sup>, Tp *tou*<sup>2</sup>, Kn *tou*<sup>4</sup>.

⟨ Cf. WrK *ɬaw* ‘fire’ [Ja 66].

|    |            |           |           |
|----|------------|-----------|-----------|
| 24 | PMY<br>*nt | PM<br>*nt | PY<br>*nt |
|----|------------|-----------|-----------|

48. \*nta(:)ŋ<sup>A</sup> ‘fragrance’  
 PM \*ntaiN<sup>A</sup>: Hmu tɛ<sup>l</sup>, Bunu ntəN<sup>l</sup>;  
 PY \*nta:ŋ<sup>A</sup> > Mien da:ŋ<sup>l</sup>.  
 <> Cf. Vn thəm ‘id.’

49. \*nta:i<sup>C</sup> ‘long’ [P 533]  
 PM \*ntəi<sup>C</sup>: Hmu ta<sup>3</sup>, Xx ntɪ<sup>3</sup>, Hmong, Bunu nte<sup>3</sup>, She ta<sup>3</sup>;  
 PY \*nta:u<sup>C</sup>: Mien, Tp, Kn da:u<sup>3</sup>.  
 <> Cf. WrK rətaj ‘id.’, Vn dài ‘id.’

50. \*ntat ‘loom’, ‘weave’ [P 539]  
 PM \*ntəQ ‘loom’: Hmu to<sup>7</sup>, Xx nto<sup>7</sup>, Hmong, Bunu nto<sup>7</sup>;  
 PY \*ntat ‘weave’: Mien dat<sup>7</sup>, Kn dat<sup>7</sup>.  
 <> Cf. WrM tut ‘weave’ [Ja 66]. The cultural nature of the comparison reduces its reliability.

51. \*ntVŋ<sup>B</sup> ‘tree’, ‘wood’ [P 967]  
 PM \*ntuN<sup>B</sup>: Hmu tə<sup>5</sup>, Xx ntu<sup>5</sup>, Hmong ntoN<sup>5</sup>, Bunu ntaN<sup>5</sup>, She təN<sup>5</sup>;  
 PY \*ntja(:)ŋ<sup>B</sup>: Mien, Tp djaŋ<sup>5</sup>, Kn gja:ŋ<sup>3</sup>.  
 <> Cf. WrM ta:ŋ ‘tree’ and other MK forms.

52. \*ntut ‘navel’ [P 599]  
 PM \*ntuQ: Hmu tu<sup>7</sup>, Xx ntu<sup>7</sup>, Hmong nteu<sup>7</sup>;  
 PY \*nt(h)ut > Kn dut<sup>7</sup>. Cf. Mien, Tp nut<sup>3</sup> < \*nut.

53. \*ntoŋ<sup>B</sup> ‘hat’ [P 1027]  
 PM \*ntuN<sup>B</sup>: Hmu tə<sup>5</sup>, Xx ntu<sup>5</sup>, Hmong ntoN<sup>5</sup>, Bunu ntaN<sup>5</sup>, She təN<sup>5</sup>;  
 PY \*nt(h)oŋ<sup>B</sup>: Mien doŋ<sup>5</sup>, Kn doŋ<sup>3</sup>.  
 <> Cf. WrK ʈuən ‘type of hat’, WrM paḍun, baḍun ‘wear on one’s head’, Chrau duon ‘hat’,  
 Vn nón < \*?ton? ‘hat’. Another comparison of possible cultural origin.

54. \*nto:n<sup>A</sup> ‘wet’ [P 1030]  
 PM \*ntaiN<sup>A</sup>: Xx nte<sup>l</sup>, Hmong nto<sup>l</sup>;  
 PY \*nto:n<sup>A</sup>: Mien do:n<sup>l</sup>, Tp, Kn dən<sup>l</sup>.

|    |            |           |           |
|----|------------|-----------|-----------|
| 25 | PMY<br>*nd | PM<br>*nd | PY<br>*nd |
|----|------------|-----------|-----------|

55. \*ndu<sup>B</sup> ‘rami’  
 PM \*ndoi<sup>B</sup>: Hmu, Xx no<sup>6</sup>, Hmong ntua<sup>6</sup>;  
 PY \*ndu<sup>B</sup> > Mien du<sup>6</sup>.

56. \**ndaɪ<sup>B</sup>* 'lay (eggs)' [P 496]

PM \**ndaɪ<sup>B</sup>*: Hmu *na<sup>6</sup>*, Hmong *nte<sup>6</sup>*, Bunu *nte<sup>6</sup>*, She *ta<sup>4</sup>*;

PY \**ndau<sup>B</sup>* > Mien *dau<sup>6</sup>*.

|    |             |            |             |
|----|-------------|------------|-------------|
| 26 | PMY         | PM         | PY          |
|    | * <i>Ct</i> | * <i>t</i> | * <i>nt</i> |

57. \**Cta:t* 'wing' [P 1040]

PM \**taQ*: Hmu *ta<sup>7</sup>*, Xx *tei<sup>3/7</sup>*, Hmong *ti<sup>7</sup>*, Bunu *tu<sup>7</sup>*, She *te<sup>6</sup>*;

PY \**nt(h)a:t*: Mien, Kn *da:i<sup>7</sup>*.

58. \**Cta<sup>A</sup>* 'earth' [P 268]

PM \**tə<sup>A</sup>*: Hmu *ta<sup>l</sup>*, Xx *tɪ<sup>l</sup>*, Hmong *te<sup>l</sup>*, Bunu *te<sup>l</sup>*, She *ta<sup>l</sup>*;

PY \**ntau<sup>A</sup>*: Mien *dau<sup>l</sup>*, Kn *dau<sup>3</sup>* (with irreg. tone).

<> Cf. WrK *ti*: 'id.', WrM *ti* 'id.', etc. [Ja 67].

59. \**Ctu<sup>A</sup>* 'deep' [P 222]

PM \**tə<sup>A</sup>*: Hmu, Xx *to<sup>l</sup>*, Hmong *to<sup>l</sup>*, Bunu *to<sup>l</sup>*;

PY \**ntu<sup>A</sup>*: Mien *du<sup>l</sup>*, Tp *du<sup>3</sup>*, Kn *du<sup>7</sup>*.

|    |             |             |            |
|----|-------------|-------------|------------|
| 27 | PMY         | PM          | PY         |
|    | * <i>tr</i> | * <i>tr</i> | * <i>c</i> |

60. \**tro:ŋ<sup>A</sup>* 'mountain' [P 575]

PM \**truN<sup>A</sup>* > Hmong *toN<sup>l</sup>*;

PY \**co:ŋ<sup>A</sup>*: Mien *co:ŋ<sup>l</sup>*, Tp *soŋ<sup>l</sup>*, Kn *tcəŋ<sup>3</sup>* (irreg. tone).

<> Cf. Vn *nóng* 'id.'

|    |              |                  |             |
|----|--------------|------------------|-------------|
| 28 | PMY          | PM               | PY          |
|    | * <i>ndr</i> | * <i>nd[r,l]</i> | * <i>ŋʒ</i> |

61. \**ndru<sup>A</sup>* 'drum' [P 252]

PM \**nd[r,l]oi<sup>C</sup>*: Hmu *ŋə<sup>4</sup>*, Xx *ŋə<sup>4</sup>*, Hmong *ŋua<sup>4</sup>*, Bunu *ŋəu<sup>4</sup>*;

PY \**ŋzu<sup>C</sup>*: Mien *zu<sup>4</sup>*, Tp *zu<sup>7</sup>*, Kn *dju<sup>4</sup>*.

<> Cf. WrK *dra* 'violin', WrM *draw*, *graw* 'id.'.

|    |             |             |             |
|----|-------------|-------------|-------------|
| 29 | PMY         | PM          | PY          |
|    | * <i>tl</i> | * <i>tl</i> | * <i>kl</i> |

62. \**tIVt* 'laugh' [P 494]

PM \**tloQ*: Hmu *tjə<sup>7</sup>*, Xx *to<sup>3/7</sup>*, Hmong *to<sup>7</sup>*, Bunu *to<sup>7</sup>*, She *kə<sup>6</sup>*;

PY \**klat*: Mien *cat<sup>7</sup>*, Tp *kja<sup>3</sup>*, Kn *kjet<sup>7</sup>*.

|    |            |           |           |
|----|------------|-----------|-----------|
| 30 | PMY<br>*dl | PM<br>*dl | PY<br>*gl |
|----|------------|-----------|-----------|

63. \*dle:ŋ<sup>A</sup> ‘door’ [P 244]

PM \*dluN<sup>A</sup>: Hmu tʃə<sup>2</sup>, Xx tʃu<sup>2</sup>, Hmong tɔN<sup>2</sup>, Bunu tʃa<sup>2</sup>, She khɔN<sup>2</sup>;

PY \*g(l)ɛ:ŋ<sup>A</sup>: Mien ɛ:ŋ<sup>2</sup>, Tp, Kn kɛŋ<sup>2</sup>.

64. \*dlun<sup>B</sup> ‘thick’, ‘fleshy’.

PM \*dloN<sup>B</sup>: Hmu tʃa<sup>6</sup>, Xx tʃa<sup>6</sup>, Hmong tʃau<sup>6</sup>, Bunu tʃ<sup>6</sup>, She khuN<sup>4</sup>;

PY \*glun<sup>B</sup> > Mien ɛun<sup>6</sup>.

<> Cf. WrK srəlan ‘fat (person)’.

|    |             |            |          |
|----|-------------|------------|----------|
| 31 | PMY<br>*ndl | PM<br>*mbl | PY<br>*n |
|----|-------------|------------|----------|

65. \*ndlo:m<sup>A</sup> ‘ear’, ‘leaf’ [P 500]

PM \*mbluN<sup>A</sup>: Hmu nə<sup>2</sup>, Xx nu<sup>2</sup>, Hmong mɸloN<sup>2</sup>, Bunu ntləN<sup>2a</sup>, She ɸloN<sup>2</sup>;

PY \*no:m<sup>A</sup>: Mien no:m<sup>2</sup>, Tp nəm<sup>1</sup>, Kn nəm<sup>2</sup>.

|    |             |          |            |
|----|-------------|----------|------------|
| 32 | PMY<br>*Ctɿ | PM<br>*n | PY<br>*mbl |
|----|-------------|----------|------------|

66. \*Ctɿŋ<sup>B</sup> ‘rain’ [P 699]

PM \*nɔN<sup>B</sup>: Hmu, Xx noN<sup>6</sup>, Hmong naN<sup>6</sup>, Bunu noN<sup>6</sup>, She nuN<sup>4</sup>;

PY \*mbluŋ<sup>B</sup>: Mien bluŋ<sup>6</sup>, Tp bjuŋ<sup>2</sup>, Kn buŋ<sup>6</sup>.

|    |            |           |           |
|----|------------|-----------|-----------|
| 33 | PMY<br>*ʔn | PM<br>*ʔn | PY<br>*ʔn |
|----|------------|-----------|-----------|

67. \*ʔna:ŋ<sup>A</sup> ‘snake’ [P 480]

PM \*ʔnaN<sup>A</sup>: Hmu naN<sup>1</sup>, Xx nei<sup>1</sup>, Hmong naN<sup>1</sup>, Bunu nəN<sup>1</sup>;

PY \*ʔna:ŋ<sup>A</sup>: Mien, Tp, Kn na:ŋ<sup>1</sup>.

68. \*ʔn[a:]m<sup>B</sup> ‘cool’, ‘cold’ [P 184]

PM \*ʔn[o]N<sup>B</sup>: Xx noN<sup>5</sup>, Hmong nau<sup>5</sup>, Bunu nuN<sup>5</sup>;

PY \*ʔna:m<sup>B</sup>: Mien na:m<sup>5</sup>, Tp nam<sup>4/5</sup>, Kn na:m<sup>3</sup>.

|    |            |           |           |
|----|------------|-----------|-----------|
| 34 | PMY<br>*hn | PM<br>*hn | PY<br>*hn |
|----|------------|-----------|-----------|

69. \*hnom<sup>C</sup> ‘hear’ [P 420]

PM \*hnoN<sup>C</sup>: Hmu hnaN<sup>3</sup>, Xx hnaN<sup>3/7</sup>, Hmong hnau<sup>3</sup>;

PY \*hnom<sup>C</sup> ‘smell’: Mien hnom<sup>3</sup>, Tp hnum<sup>3</sup>.

70. \*hno:i<sup>A</sup> ‘day’, ‘sun’ [P 217]

PM \*hnaiN<sup>A</sup>: Hmu hne<sup>l</sup>, Xx hne<sup>l</sup>, Hmong hno<sup>l</sup>, Bunu hnoN<sup>l</sup>;

PY \*hno:i<sup>A</sup>: Mien hno:i<sup>l</sup>, Tp hno<sup>i2</sup>, Kn no<sup>i</sup>l.

◁ Cf. WrK thəpaj ‘day’, WrM tɣay ‘sun’ [Ja 71].

71. \*hnVC ‘heavy’ [P 424]

PM \*hnoNC: Hmu hɲoN<sup>3</sup>, Hmong hɲa<sup>N3</sup>, Bunu hɲoN<sup>3</sup>;

PY \*hnia<sup>C</sup>: Mien, Tp hnia<sup>3</sup>, Kn ni<sup>3</sup>.

72. \*hnVC ‘bow’ [P 204]

PM \*hnVNC: Hmu hne<sup>3</sup>, Hmong hneN<sup>3</sup>;

PY \*hna<sup>C</sup>: Mien hna<sup>3</sup>, Kn na<sup>6</sup>.

◁ The root is widely spread in different language families of Southeast Asia and its origins are still unclear.

|    |     |       |    |
|----|-----|-------|----|
| 35 | PMY | PM    | PY |
|    | *n  | *n/*ɲ | *n |

73. \*nim<sup>B</sup> ‘steal’ [P 738]

PM \*ɲəN<sup>B</sup>: Hmu ɲa<sup>N6</sup>, Xx ɲe<sup>6</sup>, Hmong ɲa<sup>6</sup>, Bunu ɲiN<sup>6</sup>, She ɲiN<sup>4</sup>;

PY \*nim<sup>B</sup>: Mien nim<sup>6</sup>, Tp nim<sup>4/5</sup>, Kn nim<sup>6</sup>.

74. \*n[ai]<sup>B</sup> ‘ask’ [P 31]

PM \*naiN<sup>B</sup>: Hmu ne<sup>6</sup>, Xx ne<sup>6</sup>, Hmong no<sup>6</sup>;

PY \*na:i<sup>B</sup>: Mien, Kn na:i<sup>6</sup>.

◁ (possibly) Cf. WrK ɲe: ‘explain’.

75. \*n[a:i]<sup>C</sup> ‘rat’ [P 701]

PM \*naNC: Hmu naN<sup>4</sup>, Xx ne<sup>r4/8</sup>, Hmong naN<sup>4</sup>, Bunu nəN<sup>4</sup>, She n<sup>r4</sup>;

PY \*na:u<sup>C</sup>: Mien na:u<sup>4</sup>, Tp na:u<sup>3</sup>.

◁ Cf. WrM kni ‘rat’, Chrau kəŋe: ‘id.’

|    |     |     |     |
|----|-----|-----|-----|
| 36 | PMY | PM  | PY  |
|    | *hl | *hl | *hl |

76. \*hl[ai]<sup>C</sup> ‘bamboo’ [P 36]

PM \*hlo<sup>C</sup>: Hmu, Xx, Bunu hlo<sup>3</sup>;

PY \*hlau<sup>C</sup>: Mien, Tp hlau<sup>3</sup>, Kn lau<sup>6</sup>.

◁ Cf. WrK ghlay ‘type of bamboo’, Chrau glɛ: ‘id.’, Vn tray ‘id.’

77. \*hla<sup>B</sup> ‘moon’ [P 572]

PM \*hla<sup>B</sup>: Hmu hla<sup>5</sup>, Xx hla<sup>5</sup>, Hmong hli<sup>5</sup>, Bunu hlu<sup>5</sup>, She ne<sup>5</sup>;

PY \*hla<sup>B</sup>: Mien hla<sup>5</sup>, Tp hla<sup>4/5</sup>, Kn la<sup>4</sup>.

◊ The root could be borrowed from ST \*(s-)laH ‘id.’ [Ja], or be connected with An \*bulat ‘id.’

|    |     |    |    |
|----|-----|----|----|
| 37 | PMY | PM | PY |
|    | *l  | *l | *l |

78. \*[a:]n<sup>A</sup> ‘classifier for persons’ [P 663]

PM \*lVn<sup>A</sup>: Hmu le<sup>2</sup>, Xx le<sup>2</sup>, Hmong laN<sup>2</sup>, She naN<sup>1</sup>;

PY \*la:n<sup>A</sup> > Mien la:n<sup>2</sup>.

|    |      |      |     |
|----|------|------|-----|
| 38 | PMY  | PM   | PY  |
|    | *hlj | *hlj | *hl |

79. \*hljV<sup>A</sup> ‘big’ [P 73]

PM \*hljo<sup>A</sup>: Hmu hljə<sup>1</sup>, Hmong hlo<sup>1</sup>;

PY \*hlV<sup>A</sup>: Mien hlo<sup>1</sup>, Tp hlua<sup>1</sup>, Kn lu<sup>7</sup>.

|    |     |     |    |
|----|-----|-----|----|
| 39 | PMY | PM  | PY |
|    | *ch | *ch | *s |

80. \*chuj<sup>C</sup> ‘bone’ [P 90]

PM \*chəN<sup>C</sup>: Hmu shoN<sup>3</sup>, Xx soN<sup>3</sup>, Hmong chaN<sup>3</sup>, Bunu θəN<sup>3a</sup>, She suN<sup>3</sup>;

PY \*[s]uj<sup>C</sup> > Kn suj<sup>3</sup>.

◊ Cf. WrK chəʔij ‘id.’, Vn xương ‘id.’ [Ja 69].

|    |      |      |      |
|----|------|------|------|
| 40 | PMY  | PM   | PY   |
|    | *nch | *nch | *nch |

81. \*ncha:u<sup>B</sup> ‘wash’

PM \*nchuo<sup>B</sup>: Hmu sho<sup>5</sup>, Xx ncho<sup>5</sup>, Hmong nchua<sup>5</sup>;

PY \*nc(h)a:u<sup>B</sup> > Mien ʒa:u<sup>5</sup>.

◊ Cf. ZhT \*zau<sup>A</sup> ‘id.’ [Ben 419].

|    |     |     |    |
|----|-----|-----|----|
| 41 | PMY | PM  | PY |
|    | *čh | *čh | *s |

82. \*čh[a:]i<sup>C</sup> ‘ashes’

PM \*čhui<sup>C</sup>: Hmu čhu<sup>3</sup>, Xx čí<sup>3</sup>, Hmong čhou<sup>3</sup>, Bunu ča<sup>3</sup>, She si<sup>3</sup>;

PY \*[s]a:i<sup>C</sup>: Mien sa:i<sup>3</sup>, Tp ša:i<sup>3</sup>, Kn ša:r<sup>6</sup>.

83. \**čhui*<sup>A</sup> 'sour'PM \**čhu*<sup>A</sup>: Hmu *ču*<sup>l</sup>, Xx *čo*<sup>l</sup>, Bunu *ču*<sup>l</sup>, She *so*<sup>l</sup>;PY \**sui*<sup>A</sup>: Mien *sui*<sup>l</sup>, Kn *su*<sup>l</sup>.<> Cf. Vn *chua* 'id.'

|    |             |             |             |
|----|-------------|-------------|-------------|
| 42 | PMY         | PM          | PY          |
|    | * <i>nč</i> | * <i>nč</i> | * <i>nc</i> |

84. \**nčai*<sup>C</sup> 'salt' [P 756]PM \**nčai*<sup>C</sup>: Hmu *či*<sup>3</sup>, Xx *ŋtci*<sup>3</sup>, Hmong *nče*<sup>3</sup>, Bunu *nce*<sup>3</sup>, She *ca*<sup>3</sup>;PY \**nc(h)au*<sup>C</sup>: Mien *zau*<sup>3</sup>, Kn *dau*<sup>3</sup>.<> A comparison with Kd \**kli*<sup>A</sup> 'id.' is not quite reliable.

|    |              |             |              |
|----|--------------|-------------|--------------|
| 43 | PMY          | PM          | PY           |
|    | * <i>nčh</i> | * <i>nč</i> | * <i>nch</i> |

85. \**nčhei*<sup>C</sup> 'head lice'PM \**nčhui*<sup>C</sup>: Hmu *ču*<sup>3</sup>, Xx *nčhi*<sup>3</sup>, Hmong *nčhou*<sup>3</sup>, Bunu *nčhau*<sup>l/3</sup>;PY \**nc(h)ei*<sup>C</sup> > Mien *zei*<sup>3</sup>.<> Cf. WrK *caj* 'id.', WrM *can* 'id.', etc. [Ja 69].

|    |               |              |               |
|----|---------------|--------------|---------------|
| 44 | PMY           | PM           | PY            |
|    | * <i>nčhj</i> | * <i>nčh</i> | * <i>nčhj</i> |

86. \**nčhja:m*<sup>C</sup> 'blood' [P 80]PM \**nčhaN*<sup>C</sup>: Hmu *ča*<sup>N3</sup>, Xx *nčhi*<sup>3/7</sup>, Hmong *nčhaN*<sup>3</sup>, Bunu *nchəN*<sup>3</sup>, She *sji*<sup>3</sup>;PY \**nchja:m*<sup>C</sup>: Mien *zja:m*<sup>3</sup>, Tp *h'jam*<sup>3</sup>, Kn *ša:m*<sup>6</sup>.<> Cf. WrK *zha:m* 'id.', WrM *chim* 'id.', etc. [Ja 68].

|    |            |            |            |
|----|------------|------------|------------|
| 45 | PMY        | PM         | PY         |
|    | * <i>ś</i> | * <i>ś</i> | * <i>s</i> |

87. \**śou*<sup>C</sup> 'stand' [P 873]PM \**śu*<sup>C</sup>: Hmu *ču*<sup>3</sup>, Xx *cə*<sup>3/7</sup>, Hmong *sei*<sup>3</sup>, Bunu *ču*<sup>3</sup>, She *sə*<sup>3</sup>;PY \**sou*<sup>C</sup>: Mien, Tp *sou*<sup>3</sup>, Kn *sau*<sup>6</sup>.

|    |             |            |                |
|----|-------------|------------|----------------|
| 46 | PMY         | PM         | PY             |
|    | * <i>Cč</i> | * <i>č</i> | * <i>nc(h)</i> |

88. \**Cčuŋ*<sup>A</sup> 'worm'PM \**čəN*<sup>A</sup>: Hmu *čoN*<sup>l</sup>, Xx *coN*<sup>l</sup>, Hmong *čaN*<sup>l</sup>, Bunu *coN*<sup>l a</sup>, She *zuN*<sup>l</sup>;PY \**nc(h)uŋ*<sup>A</sup> > Mien *zuŋ*<sup>l</sup>.



47      PMY      PM      PY  
          \*Cəj      \*č      \*ncj

89. \*CəjuL<sup>B</sup> ‘wind’ [P 1038–1039]

PM \*čoiN<sup>B</sup>: Hmu čeN<sup>5</sup>, Xx ci<sup>5</sup>, Hmong čua<sup>5</sup>, Bunu ci<sup>5</sup>, She ki<sup>5</sup>;

PY \*ncja:u<sup>B</sup>: Mien zja:u<sup>5</sup>, Tp dja:u<sup>4/5</sup>, Kn dja:u<sup>3</sup>.

<> Cf. WrK *khjal* ‘id.’, WrM *kya* ‘id.’, Chrau *chal* ‘id.’, Vn *gió* ‘id.’ [Ja 67].

48      PMY      PM      PY  
          \*ʔɲ      \*ʔɲ      \*ʔɲ

90. \*ʔɲem<sup>C</sup> ‘cry’ [P 203]

PM \*ʔɲəN<sup>C</sup>: Hmu ɲaN<sup>3</sup>, Xx ɲe<sup>3</sup>, Hmong ɲa<sup>3</sup>, She ɲiN<sup>3</sup>;

PY \*ʔɲem<sup>C</sup>: Mien, Tp ɲem<sup>3</sup>, Kn nim<sup>3</sup>.

<> Cf. WrK *jam* ‘cry’, WrM *ya:m* ‘id.’, Chrau *ɲi:m* ‘id.’ [Ja 68].

91. \*ʔɲa:m<sup>A</sup> ‘daughter-in-law’ [P 215]

PM \*ʔɲam<sup>A</sup>: Hmu ɲaN<sup>l</sup>, Xx ɲi<sup>l</sup>, Hmong ɲaN<sup>l</sup> ‘daughter-in-law’, Bunu ɲəN<sup>l</sup> ‘son-in-law’;

PY \*ʔɲa:m<sup>A</sup>: Mien, Kn ɲa:m<sup>l</sup>.

49      PMY      PM      PY  
          \*hɲ      \*hɲ      \*hɲ

92. \*hɲou<sup>C</sup> ‘intestine’, ‘mind’ [P 462]

PM \*hɲVN<sup>C</sup>: Xx hɲuN<sup>3</sup>, Hmong hɲo<sup>3</sup>, Bunu hɲuN<sup>3</sup>, She ɲjo<sup>3</sup>;

PY \*hɲou<sup>C</sup>: Mien, Tp hɲou<sup>3</sup>, Kn ɲjou<sup>6</sup>.

50      PMY      PM      PY  
          \*ɲ      \*ɲ      \*ɲ

93. \*ɲem<sup>C</sup> ‘raw’ [P 703]

PM \*ɲuN<sup>C</sup>: Hmu, Xx ɲu<sup>4</sup>, Hmong ɲoN<sup>4</sup>, Bunu ɲaN<sup>4</sup>, She ɲjɔ<sup>4</sup>;

PY \*ɲem<sup>C</sup>: Mien ɲem<sup>4</sup>, Tp ɲem<sup>4/5</sup>, Kn ɲim<sup>4</sup>.

51      PMY      PM      PY  
          \*ʔɲ      \*ʔɲ      \*ʔj

94. \*ʔɲem<sup>A</sup> ‘located’, ‘dwell’ [P 529, 530]

PM \*ʔɲVN<sup>A</sup>: Hmu ɲaN<sup>l</sup>, Xx ɲi<sup>l</sup>, Hmong ɲau<sup>l</sup>, Bunu ɲi<sup>l</sup>;

PY \*ʔɲem<sup>A</sup>: Mien, Tp ɲem<sup>l</sup>, Kn jam<sup>l</sup>.

|    |             |            |            |
|----|-------------|------------|------------|
| 52 | PMY<br>*ŋkh | PM<br>*ŋkh | PY<br>*ŋkh |
|----|-------------|------------|------------|

95. \*ŋkhai<sup>A</sup> 'dry' [P 254]

PM \*ŋkh[a,ə]i<sup>A</sup>: Hmu qha<sup>l</sup>, Hmong ŋqhua<sup>l</sup>;

PY \*ŋkha:i<sup>A</sup>: Mien ga:i<sup>l</sup>, Tp gha:i<sup>l</sup>, Kn ga:i<sup>l</sup>.

|    |            |           |           |
|----|------------|-----------|-----------|
| 53 | PMY<br>*kj | PM<br>*kj | PY<br>*kj |
|----|------------|-----------|-----------|

96. \*kjai<sup>C</sup> 'road' [P 735]

PM \*kjəi<sup>C</sup>: Hmu ki<sup>3</sup>, Xx ki<sup>3</sup>, Hmong ke<sup>3</sup>, Bunu ce<sup>3</sup>, She ka<sup>3</sup>;

PY \*kjau<sup>C</sup>: Mien tcau<sup>3</sup>, Tp, Kn kjau<sup>3</sup>.

|    |            |           |           |
|----|------------|-----------|-----------|
| 54 | PMY<br>*kl | PM<br>*kl | PY<br>*kl |
|----|------------|-----------|-----------|

97. \*kla:ŋ<sup>A</sup> 'neck', 'throat' [P 602]

PM \*klaN<sup>A</sup>: Hmong tlaN<sup>l</sup>, Bunu tləN<sup>l</sup>a;

PY \*kla:ŋ<sup>A</sup>: Mien tca:ŋ<sup>l</sup>, Tp kla:ŋ<sup>l</sup>, Kn kla:ŋ<sup>l</sup>.

⟨ Cf. Sino-Tibetan \*Kro:ŋ 'neck'.

98. \*kla:ŋ<sup>C</sup> 'eagle', 'hawk' [P 263]

PM \*klaN<sup>C</sup>: Hmu hlaN<sup>3</sup>, Xx quei<sup>3/7</sup>, Hmong tlaN<sup>3</sup>, Bunu tloN<sup>3</sup>;

PY \*kla:ŋ<sup>C</sup> ~ \*gla:ŋ<sup>C</sup>: Mien tca:ŋ<sup>3</sup>, Kn kla:ŋ<sup>2</sup>.

⟨ Cf. WrK khle:ŋ 'id.', WrM lanəŋ, lanəŋ 'id.', Chrau khla:ŋ 'id.' [Ja] and Sino-Tibetan \*laŋ/lak [Shafer 1974:179; Benedict 1972a].

99. \*klai<sup>C</sup> 'waist' [P 475]

PM \*klai<sup>C</sup>: Hmu hla<sup>3</sup>, Xx qua<sup>3/7</sup>, Hmong tlua<sup>3</sup>, Bunu tlo<sup>3</sup>;

PY \*kla:i<sup>C</sup>: Mien tca:i<sup>3</sup>, Tp, Kn kla:i<sup>3</sup>.

100. \*klu<sup>C</sup> 'dog' [P 243]

PM \*kləi<sup>C</sup>: Hmu hla<sup>3</sup>, Xx qwi<sup>3/7</sup>, Hmong tle<sup>3</sup>, Bunu tle<sup>3</sup>, She kja<sup>3</sup>;

PY \*klu<sup>C</sup>: Mien tcu<sup>3</sup>, Tp klu<sup>3</sup>, Kn klo<sup>0</sup>.

⟨ Cf. WrM kluiw 'dog' [Ja 67] or Kd \*C-ŋwa<sup>A</sup> 'dog'.

101. \*klop 'a bear' [P 47]

PM \*kləQ: Hmu hli<sup>7</sup>, Hmong tlai<sup>7</sup>, Bunu tla<sup>7</sup>;

PY \*klop: Mien tcop<sup>7</sup>, Tp kjop<sup>3</sup>, Kn kjop<sup>7</sup>.

|    |     |     |     |
|----|-----|-----|-----|
| 55 | PMY | PM  | PY  |
|    | *kr | *kr | *kj |

102. \*[k]rai<sup>B</sup> 'egg' [P 275]

PM \*krei<sup>B</sup> ~ kei<sup>B</sup>: Hmu ki<sup>5</sup>, Hmong qe<sup>5</sup>, Bunu ce<sup>5</sup>, She ka<sup>5</sup>;

PY \*kjau<sup>B</sup>: Mien tcau<sup>5</sup>, (Tp), Kn kjau<sup>3</sup>.

<> Perhaps the different Kadai forms which can be traced back to ZhT \*khrai<sup>B</sup> and KS \*krai<sup>B</sup> with irregular initial correspondence are borrowed from PMY. However, it is also possible that MY forms are borrowed from a Kadai source.

|    |     |     |     |
|----|-----|-----|-----|
| 56 | PMY | PM  | PY  |
|    | *ʔr | *ʔr | *ʔr |

103. \*ʔrun<sup>C</sup> 'young' [P 1068]

PM \*[ʔr]oN<sup>B</sup> > Hmu raN<sup>5</sup>;

PY \*ʔrun<sup>B</sup>: Mien lun<sup>5</sup>, Tp lun<sup>4/5</sup>, Kn gun<sup>3</sup>.

104. \*ʔrai<sup>A</sup> 'vegetables' [P 989]

PM \*ʔru<sup>A</sup>: Hmu ru<sup>l</sup>, Xx ze<sup>l</sup>, Hmong zou<sup>l</sup>, Bunu ra<sup>l</sup>, She zi<sup>l</sup>;

PY \*ʔrai<sup>A</sup>: Mien, Tp lai<sup>l</sup>, Kn gjai<sup>l</sup>.

|    |     |    |         |
|----|-----|----|---------|
| 57 | PMY | PM | PY      |
|    | *hr | *š | *h[r,l] |

105. \*hra:n<sup>A</sup> 'liver', 'heart'

PM \*šəN<sup>A</sup> 'heart': Hmu hi<sup>l</sup>, Xx šeN<sup>l</sup>, Hmong sa<sup>l</sup>, She hiN<sup>l</sup>;

PY \*h[l,r]a:n<sup>A</sup> > Mien hla:n<sup>l</sup>.

|    |     |    |    |
|----|-----|----|----|
| 58 | PMY | PM | PY |
|    | *r  | *r | *r |

106. \*ra:ŋ<sup>C</sup> 'village' [P 994]

PM \*roN<sup>C</sup>: Hmu raN<sup>4</sup>, Xx zaN<sup>4/8</sup>, Hmong zau<sup>4</sup>, She zaN<sup>4</sup>;

PY \*ra:ŋ<sup>C</sup>: Mien la:ŋ<sup>4</sup>, Tp la:ŋ<sup>3</sup> (with irreg. tone), Kn gjaj<sup>4</sup> (irreg. length).

107. \*rau<sup>C</sup> 'nest' [P 608]

PM \*rei<sup>C</sup>: Hmu ri<sup>4</sup>, Hmong ze<sup>4</sup>;

PY \*rau<sup>C</sup>: Mien lau<sup>4</sup>, Tp lau<sup>4/5</sup>, Kn gau<sup>4</sup>.

|    |     |    |    |
|----|-----|----|----|
| 59 | PMY | PM | PY |
|    | *ʔ  | *ʔ | *ʔ |

108. \*ʔimA ‘bitter’ [P 77]

PM \*ʔieN<sup>A</sup>: Hmu *i*<sup>l</sup>, Xx *ɛ*<sup>l</sup>, Hmong *a*<sup>l</sup>, Bunu *iN*<sup>l</sup>, She *ɔN*<sup>l</sup>;

PY \*ʔim<sup>A</sup>: Mien *im*<sup>l</sup>, Tp *im*<sup>3</sup> (irreg. tone), Kn *im*<sup>l</sup>.

<> WrK ʔɛ:m ‘sweet’.

109. \*ʔom<sup>B</sup> ‘swell’ [P 904]

PM \*ʔəN<sup>B</sup>: Hmu, Xx *aN*<sup>5</sup>, Hmong *au*<sup>5</sup>;

PY \*ʔom<sup>B</sup>: Mien *om*<sup>5</sup>, Tp *om*<sup>3</sup> (irreg. tone), Kn *ɔm*<sup>3</sup>.

<> Cf. WrK *haəm* ‘id.’

110. \*ʔVA ‘one’ [P 631–632]

PM \*ʔVA: Hmu *i*<sup>l</sup>, Xx *zɑ*<sup>l</sup>, Hmong *i*<sup>l</sup>, Bunu *i*<sup>lɑ</sup>;

PY \*ʔa<sup>A</sup> > Mien *a*<sup>l</sup>.

111. \*ʔVA ‘two’ [P 979–980]

PM \*ʔau<sup>A</sup>: Hmu *o*<sup>l</sup>, Xx *i*<sup>l</sup>, Hmong *au*<sup>l</sup>, Bunu *au*<sup>l</sup>, She *u*<sup>l</sup>;

PY \*ʔi<sup>A</sup>: Mien *i*<sup>l</sup>, Tp ʔi<sup>4/7</sup> (irreg. tone), Kn *i*<sup>7</sup> (irreg. tone).

|    |     |    |    |
|----|-----|----|----|
| 60 | PMY | PM | PY |
|    | *h  | *h | *h |

112. \*hop ‘drink’ [P 250]

PM \*huQ: Hmu *hə*<sup>7</sup>, Xx *hu*<sup>3/7</sup>, Hmong *hou*<sup>7</sup>, Bunu *həu*<sup>7</sup>, She *hɔ*<sup>6</sup>;

PY \*hop: Mien *hop*<sup>7</sup>, Tp *hop*<sup>6</sup>, Kn *həp*<sup>7</sup>.

<> Cf. WrK *hu:p* ‘eat’.

All reliable cognates between Proto Miao and Proto Yao are included in the list above. Because of the limited number of cognates, the reconstruction is not proven beyond doubt.

A provisional version of Proto MY finals (based mainly on Proto Yao evidence) is given in Table 3.9.

TABLE 3.9: CORRESPONDENCES OF PROTO MIAO-YAO FINALS

|     | PMY           | PM                        | PY            |     | PMY          | PM                          | PY            |
|-----|---------------|---------------------------|---------------|-----|--------------|-----------------------------|---------------|
| 1.  | * <i>im</i>   | * <i>əN</i>               | * <i>im</i>   | 21. | * <i>ai</i>  | * <i>əi</i>                 | * <i>au</i>   |
| 2.  | * <i>e:ŋ</i>  | * <i>aN</i> , * <i>əN</i> | * <i>e:ŋ</i>  | 22. | * <i>u:i</i> | * <i>o</i>                  | * <i>ui</i>   |
| 3.  | * <i>e</i>    | * <i>a</i>                | * <i>we</i>   | 23. | * <i>u</i>   | * <i>oi</i> , * <i>əi</i>   | * <i>u</i>    |
| 4.  | * <i>et</i>   | * <i>əQ</i>               | * <i>et</i>   | 24. | * <i>uŋ</i>  | * <i>əN</i>                 | <i>uŋ</i>     |
| 5.  | * <i>em</i>   | * <i>uN</i> , * <i>əN</i> | * <i>em</i>   | 25. | * <i>ut</i>  | * <i>uQ</i>                 | * <i>ut</i>   |
| 6.  | * <i>ei</i>   | * <i>ui</i> , * <i>əi</i> | * <i>ei</i>   | 26. | * <i>un</i>  | * <i>əN</i>                 | * <i>un</i>   |
| 7.  | * <i>a:ŋ</i>  | * <i>aN</i> , * <i>əN</i> | * <i>a:ŋ</i>  | 27. | * <i>ui</i>  | * <i>oi</i> , * <i>əi</i>   | * <i>ui</i>   |
| 8.  | * <i>a:t</i>  | * <i>aQ</i>               | * <i>a:t</i>  | 28. | * <i>o:ŋ</i> | * <i>uN</i> , * <i>aiŋ</i>  | * <i>o:ŋ</i>  |
| 9.  | * <i>a:n</i>  | * <i>əN</i>               | * <i>a:n</i>  | 29. | * <i>o:t</i> | * <i>oQ</i>                 | * <i>o:t</i>  |
| 10. | * <i>a:p</i>  | * <i>əQ</i>               | * <i>a:p</i>  | 30. | * <i>o:n</i> | * <i>aiN</i>                | * <i>o:nm</i> |
| 11. | * <i>a:m</i>  | * <i>aN</i>               | * <i>a:</i>   | 31. | * <i>o:p</i> | * <i>oQ</i>                 | * <i>o:p</i>  |
| 12. | * <i>ai</i>   | * <i>ai</i> , * <i>ui</i> | * <i>ai</i>   | 32. | * <i>o:m</i> | * <i>uN</i>                 | * <i>o:m</i>  |
| 13. | * <i>ai</i>   | * <i>oi</i> , * <i>əi</i> | * <i>o:u</i>  | 33. | * <i>on</i>  | * <i>əN</i>                 | * <i>on</i>   |
| 14. | * <i>ai:u</i> | * <i>uo</i>               | * <i>ai:u</i> | 34. | * <i>op</i>  | * <i>əQ</i> , * <i>oQ</i>   | * <i>op</i>   |
| 15. | * <i>a</i>    | * <i>a</i>                | * <i>a</i>    | 35. | * <i>om</i>  | * <i>uN</i> , * <i>əN</i>   | * <i>om</i>   |
| 16. | * <i>aŋ</i>   | * <i>aiN</i>              | * <i>aŋ</i>   | 36. | * <i>ou</i>  | * <i>u</i>                  | * <i>ou</i>   |
| 17. | * <i>at</i>   | * <i>əQ</i>               | * <i>at</i>   | 37. | * <i>oi</i>  | * <i>əi</i>                 | * <i>oi</i>   |
| 18. | * <i>an</i>   | * <i>aiN</i>              | * <i>an</i>   | 38. | * <i>aC</i>  | * <i>oiN</i>                | * <i>a:u</i>  |
| 19. | * <i>am</i>   | * <i>aiN</i>              | * <i>am</i>   | 39. | * <i>eC</i>  | * <i>eiN</i> , * <i>əiN</i> | * <i>ou</i>   |
| 20. | * <i>ai</i>   | * <i>ai</i> , * <i>ui</i> | * <i>ai</i>   | 40. | * <i>ua</i>  | * <i>əi</i> , * <i>oi</i>   | * <i>ua</i>   |

The absence of several finals can be attributed to a lack of data.

The correlation between the reconstructed Proto MY system and the phonological systems of Proto Yao and Proto Miao is of interest. It appears that the system of initials was retained to a greater degree in Proto Miao, while the system of finals was preserved in Proto Yao. Reasons for the occurrence of this phenomenon are unknown.

The whole complex problem of the historical interpretation of Miao-Yao reconstructions remains to be investigated.

### 3.3 THE MIAO-AUSTROASIATIC AND AUSTRIC HYPOTHESES

The question of the genetic affiliations of the Miao-Yao family has not yet been answered conclusively. In the literature one can find proposals of a variety of genetic relationships: with Sino-Tibetan, with Austro-Tai, and with the Austroasiatic family. Robert Shafer, one of the leading Sino-Tibetan specialists of his time, put forward the first hypothesis, but never proved it in detail (Shafer 1964). Benedict (1975, 1990) is perhaps the only proponent of the hypothesis that Miao-Yao languages belong to the Austro-Thai family. The third proposal, of a relationship with Austroasiatic languages, is supported by Haudricourt (1966) and Jakhontov (1977b)

My list of Proto Miao-Yao roots, which includes most of the good comparisons now known, can be compared with the lexicons of other protolanguages. This process reveals connections between the Miao-Yao and Austroasiatic families, as illustrated by the following list of comparisons (most of which were discovered by Haudricourt and Jakhontov). The

comparison sets here include forms from my Mon-Khmer reconstructions. I do not attempt to prove these reconstructions in this book (and thus they can be treated as ‘pre-reconstructions’), but I do pay special attention to comparisons which include Khmer forms. This allows direct comparison between Khmer and Proto Miao-Yao, providing additional support for the hypothesis.

The Miao-Yao comparisons with Mon-Khmer languages include:

1. ‘three’ [Ja 67]

PMY \**pu*<sup>A</sup> ‘three’ [P 948] (No.2 in §3.2.3)

PM \**pəi*<sup>A</sup>: Hmu *pi*<sup>l</sup>, Xx *pu*<sup>l</sup>, Hmong *pe*<sup>l</sup>, Bunu *pe*<sup>l</sup>, She *pa*<sup>l</sup>;

PY \**pua*<sup>A</sup>: Mien *pua*<sup>l</sup>, Tp *pua*<sup>3</sup>, Kn *po*<sup>7</sup>.

AA: MK \**pV* ‘three’: WrK *pi*: ‘three’, Chrau *pe*:, etc., Proto Munda \**pε* [Pin 134].

2. ‘full’ [Ja 71]

PMY \**paŋ*<sup>3</sup> ‘full’ [P 375] (No.3 in §3.2.3)

PM \**pai*<sup>NC</sup>: Hmu *pe*<sup>3</sup>, Xx *pe*<sup>3/7</sup>, Hmong *po*<sup>3</sup>, She *paN*<sup>3</sup>;

PY \**paŋ*<sup>C</sup>: Mien *pwaŋ*<sup>3</sup>, Tp *pwoŋ*<sup>3</sup>, Kn *poŋ*<sup>3</sup>.

PMK \*[*b*]iŋ: WrK *bəŋ*, WrM *peŋ*, Chrau *beŋ*, etc. [Ja 71].

3. ‘to shoot’

PMY \**pon*<sup>C</sup> ‘to shoot’ [P 799] (No.4 in §3.2.3)

PM \**po*<sup>NC</sup>: Hmu *paN*<sup>3</sup>, Xx *paN*<sup>3</sup>, Hmong *pau*<sup>3</sup>, Bunu *pi*<sup>3</sup>;

PY \**pon*<sup>C</sup>: Mien *pwoŋ*<sup>3</sup>, Tp *pon*<sup>3</sup>, Kn *fon*<sup>3</sup>.

PMK \**paŋ*: WrK *pa:ŋ*’, WrM *pan*, Chrau *paŋ*, Vn *băn*.

4. ‘fruit’ [Ja 67]

PMY \**pje*<sup>LC</sup> ‘fruit’ [P 356] (No.15 in §3.2.3)

PM \**pjei*<sup>NC</sup> ~ \**pei*<sup>NC</sup>: Hmu *ceN*<sup>3</sup>, Xx *pi*<sup>3/7</sup>, Hmong *ci*<sup>3</sup>, Bunu *pi*<sup>3</sup>, She *pi*<sup>3</sup>;

PY \**pjou*<sup>C</sup>: Mien, Tp, Kn *pjou*<sup>3</sup>.

PMK \**plaj*: WrK *phle*: ‘fruit’, Chrau *plaj*, Vn *trái, lái* < VM \*(*p*-)lhaj?<sup>7</sup>.

5. ‘chin’, ‘cheek’

PMY \**p[ui]*<sup>A</sup> ‘chin’, ‘cheek’

PM \**p{uo}*<sup>A</sup> > Hmong *pua*<sup>l</sup> ‘chin’;

PY \**pu*<sup>A</sup> ‘cheek’: Mien, Tp *pui*<sup>l</sup>.

PMK > WrK *thba:l*’ ‘cheek’.

6. ‘handful’, ‘palm of hand’

PMY \**phaŋ*<sup>C</sup> ‘handful’ [P 404] (No.7 in §3.2.3)

PM \**phu*<sup>NC</sup> > Hmong *phoN*<sup>3</sup>;

PY \**phaŋ*<sup>C</sup>: Mien *phwaŋ*<sup>3</sup>, Kn *phoŋ*<sup>3</sup>.

PMK \**CəpVŋ* ‘palm of hand’: WrK *kəmpaŋ*’ ‘hand’, ‘handful’, Chrau *ləpa:ŋ* ‘palm of hand’.

## 7. 'flower', 'to blossom'

PMY \**bja:ŋ<sup>A</sup>* 'flower' [P 339] (No.17 in §3.2.3)

PM \**baN<sup>A</sup>*: Hmu *pa<sup>2</sup>*, Xx *pei<sup>2</sup>*, Hmong *paN<sup>2</sup>*, Bunu *peN<sup>2</sup>*, She *phuN<sup>2</sup>*;

PY \**bja:ŋ<sup>A</sup>*; Mien, Tp *pja:ŋ<sup>2</sup>*, Kn *fa:ŋ<sup>2</sup>*.

PMK \**Cəba:ŋ*: Vn *bông* 'flower' < VM \**poŋ*.

## 8. 'forehead'

PMY \**bl[o:]ŋ<sup>A</sup>* 'forehead' [P 347] (No.23 in §3.2.3)

PM \**bləN<sup>A</sup>* > Hmong *pla<sup>2</sup>*;

PY \**blo:ŋ<sup>A</sup>*: Mien *pjo:ŋ<sup>2</sup>*, Tp *pjoŋ<sup>2</sup>*, Kn *pləŋ<sup>4</sup>*;

PMK \**CəIVŋ*: WrK *kəmphliəŋ* 'cheek', Vn *trán* 'forehead'.

## 9. 'nose'

PMY \**mbju<sup>B</sup>* 'nose' [P 620] (No.21 in §3.2.3)

PM \**mbjo<sup>B</sup>*: Hmu *ze<sup>6</sup>*, Xx *mrə<sup>6</sup>*, Hmong *ncu<sup>6</sup>*, Bunu *ncat<sup>6</sup>*;

PY \**mbju<sup>B</sup>* ~ \**mblui<sup>B</sup>*: Mien *bju<sup>6</sup>*, Kn *blu<sup>6</sup>*

PMK \**Cəmu[l]h*: WrK *crəmu<sup>h</sup>*, WrM *muh*, Vn *mũi* < VM \**mulh*; Proto Munda \**mu(?)* [Pin 175].

## 10. 'tongue' [Ja 66]

PMY \**mbret* 'tongue' [P 963] (No.29 in §3.2.3)

PM \**mbləQ*: Hmu *ni<sup>8</sup>*, Xx *mja<sup>4/8</sup>*, Hmong *mpla<sup>8</sup>*, Bunu *ntla<sup>8</sup>*, She *p<sup>8</sup>*;

PY \**mbjet*: Mien, Tp *bjet<sup>6</sup>*, Kn *bjet<sup>5</sup>*;

PMK \**CəIVt*: WrK *kənləət* 'uvula'.

## 11. 'you'

PMY \**mV<sup>A</sup>* 'you' (No.35 in §3.2.3)

PM \**mV(N)<sup>A</sup>* 'thou': Hmu *moN<sup>2</sup>*, Xx *mu<sup>2</sup>*, She *muN<sup>2</sup>*;

PM \**mVN<sup>A</sup>* 'you': Hmu *maN<sup>2</sup>*, Xx, Hmong *me<sup>2</sup>*, Bunu *mi<sup>2</sup>*;

PY \**m<sup>A</sup>*: Mien *mei<sup>2</sup>*, Tp *mwoi<sup>2</sup>*, Kn *mei<sup>2</sup>*;

AA \**me* 'thou' reconstructed by Pinnow (1965) > WrK *mi:*, Vn *may*, etc. Diffloth (1994:319) gives this form as \**m(i:)?*. Compare however, Proto Kadai \**m[ai]<sup>A</sup>* 'you' (No.35 in §2.1.5, a comparison suggested by Benedict [Ben 208]).

## 12. 'tail' [Ja 68]

PMY \**toi<sup>C</sup>* 'tail' (No.44 in §3.2.3).

PM \**toi<sup>C</sup>*: Hmu *tə<sup>3</sup>*, Xx *tə<sup>3</sup>*, Hmong *t<sup>3</sup>*, Bunu *tau<sup>3</sup>*, She *tə<sup>3</sup>*;

PY \**toi<sup>C</sup>* > Mien *twei<sup>3</sup>*;

PMK \**Cəduj*: WrK *kənduj*, Vn *đuôi*.

## 13. 'fire' [Ja 66]

PMY \**dou*<sup>C</sup> 'fire' [P 319] (No.47 in §3.2.3)

PM \**du*<sup>C</sup>: Hmu *tu*<sup>4</sup>, Xx *tə*<sup>4</sup>, Hmong *teu*<sup>4</sup>, Bunu *tu*<sup>4</sup>, She *thə*<sup>4</sup>;

PY \**dou*<sup>C</sup>: Mien *tou*<sup>4</sup>, Tp *tou*<sup>2</sup>, Kn *tou*<sup>4</sup>;

PMK > WrK *taw*.

## 14. 'long'

PMY \**nta:i*<sup>C</sup> 'long' [P 533] (No.49 in §3.2.3)

PM \**ntəi*<sup>C</sup>: Hmu *ta*<sup>3</sup>, Xx *nti*<sup>3</sup>, Hmong, Bunu *nte*<sup>3</sup>, She *ta*<sup>3</sup>;

PY \**nta:u*<sup>C</sup>: Mien, Tp, Kn *da:u*<sup>3</sup>;

PMK \**Cəta:j*: WrK *rətaj*, Vn *dài*.

## 15. 'hat'

PMY \**ntoŋ*<sup>B</sup> 'hat' [P 1027] (No.53 in §3.2.3)

PM \**ntuN*<sup>B</sup>: Hmu *tə*<sup>5</sup>, Xx *ntu*<sup>5</sup>, Hmong *ntoN*<sup>5</sup>, Bunu *ntaN*<sup>5</sup>, She *təN*<sup>5</sup>;

PY \**nt(h)oŋ*<sup>B</sup>: Mien *doŋ*<sup>5</sup>, Kn *doŋ*<sup>3</sup>;

PMK \**t'uəŋ*: WrK *təuən* 'type of hat', WrM *pađun*, *bađun* 'wear on one's head', Chrau *duo:n* 'hat', Vn *nón* < \**?ton*? 'hat'.

## 16. 'earth' [Ja 67]

PMY \**Ctai*<sup>A</sup> 'earth' [P 268] (No.58 in §3.2.3)

PM \**təi*<sup>A</sup>: Hmu *ta*<sup>1</sup>, Xx *tɪ*<sup>1</sup>, Hmong *te*<sup>1</sup>, Bunu *te*<sup>1</sup>, She *ta*<sup>1</sup>;

PY \**ntau*<sup>A</sup>: Mien *dau*<sup>1</sup>, Kn *dau*<sup>3</sup> (with irreg. tone);

PMK \**ti(j)*: WrK *ti:*, WrM *ti*, etc.

## 17. 'day', 'sun' [Ja 71]

PMY \**hno:i*<sup>A</sup> 'day', 'sun' [P 217] (No.70 in §3.2.3)

PM \**hnaiN*<sup>A</sup>: Hmu *hne*<sup>1</sup>, Xx *hne*<sup>1</sup>, Hmong *hno*<sup>1</sup>, Bunu *hnoN*<sup>1</sup>;

PY \**hno:i*<sup>A</sup>: Mien *hno:i*<sup>1</sup>, Tp *hnoi*<sup>2</sup>, Kn *nɔi*<sup>1</sup>

PMK \**təŋaj*: WrK *thəŋaj* 'day', WrM *tŋaj* 'sun', Vn *ngàỳ* 'day'.

## 18. 'bamboo'

PMY \**hl[ai]*<sup>C</sup> 'bamboo' [P 36] (No.76 in §3.2.3)

PM \**hlo*<sup>C</sup>: Hmu, Xx, Bunu *hlo*<sup>3</sup>;

PY \**hlau*<sup>C</sup>: Mien, Tp *hlau*<sup>3</sup>, Kn *lau*<sup>6</sup>

PMK \**Cəlaj* 'k.o. bamboo': WrK *ghlaj*, Chrau *glɛ:*, Vn *tray*.

## 19. 'bone' [Ja 69]

PMY \**chuŋ*<sup>C</sup> 'bone' [P 90] (No.80 in §3.2.3)

PM \**chəN*<sup>C</sup>: Hmu *shoN*<sup>3</sup>, Xx *soN*<sup>3</sup>, Hmong *chaN*<sup>3</sup>, Bunu *θoN*<sup>3a</sup>, She *suN*<sup>3</sup>;

PY \**[s]uŋ*<sup>C</sup> > Kn *suŋ*<sup>3</sup>;

PMK \**cə?iŋ*: WrK *chə?iŋ*, Vn *xuong*. Proto Munda \**zəŋ* [Pin 76].



20. 'louse' [Ja 69]  
 PMY \**nčhei*<sup>C</sup> 'head lice' (No.85 in §3.2.3)  
 PM \**nčhui*<sup>C</sup>: Hmu *čhu*<sup>3</sup>, Xx *nčhi*<sup>3</sup>, Hmong *nčhou*<sup>3</sup>, Bunu *nčhau*<sup>1/3</sup>;  
 PY \**nc(h)ei*<sup>C</sup> > Mien *zei*<sup>3</sup>;  
 PMK \**caj*<sup>?</sup>: WrK *caj*, WrM *can*. Proto Munda \**se*<sup>?</sup> [Pin 162].
21. 'blood' [Ja 68]  
 PMY \**nčha:m* 'blood' [P 80] (No.86 in §3.2.3)  
 PM \**nčhaN*<sup>C</sup>: Hmu *čhaN*<sup>3</sup>, Xx *nčhi*<sup>3/7</sup>, Hmong *nčhaN*<sup>3</sup>, Bunu *nchəN*<sup>3</sup>,  
 She *sji*<sup>3</sup>;  
 PY \**nchja:m*<sup>C</sup>: Mien *zja:m*<sup>3</sup>, Tp *h'jam*<sup>3</sup>, Kn *ša:m*<sup>6</sup>;  
 PMK \**Cəha:m*: WrK *zha:m*, WrM *chim*. Proto Munda \**-jam* [Pin 152].
22. 'wind' [Ja 67]  
 PMY \**CćuL*<sup>B</sup> 'wind' [P 1038–1039] (No.89 in §3.2.3)  
 PM \**ćoiN*<sup>B</sup>: Hmu *ćeN*<sup>5</sup>, Xx *ci*<sup>5</sup>, Hmong *ćua*<sup>5</sup>, Bunu *ci*<sup>5</sup>, She *ki*<sup>5</sup>;  
 PY \**ncja:u*<sup>B</sup>: Mien *zja:u*<sup>5</sup>, Tp *dja:u*<sup>4/5</sup>, Kn *dja:u*<sup>3</sup>;  
 PMK \**kja:l*: WrK *khjal'*, WrM *kya*, Chrau *chal*, Vn *gió*. Proto Munda \**kojo* [Pin 111].
23. 'cry' [Ja 68]  
 PMY \**ʔnem*<sup>C</sup> 'cry' [P 203] (No.90 in §3.2.3)  
 PM \**ʔnəN*<sup>C</sup>: Hmu *naN*<sup>3</sup>, Xx *ne*<sup>3</sup>, Hmong *na*<sup>3</sup>, She *ɲiN*<sup>3</sup>;  
 PY \**ʔnem*<sup>C</sup>: Mien, Tp *nem*<sup>3</sup>, Kn *nim*<sup>3</sup>;  
 PMK \**ʔn VM*: WrK *jam*, WrM *ya:m*, Chrau *ni:m*. Proto Munda \**jam* [Pin 74].
24. 'eye' [Ja 67]  
 PMY \**m[ei]*<sup>B</sup> 'eye' [P 292] (No.33 in §3.2.3)  
 PM \**mVN*<sup>B</sup>: Hmu *me*<sup>6</sup>, Xx *me*<sup>6</sup>, Hmong *muə*<sup>6</sup>, Bunu *moN*<sup>6</sup>;  
 PY \**mwei*<sup>B</sup>: Mien *mwei*<sup>6</sup>, Tp *mwoi*<sup>2</sup>, Kn *me*<sup>6</sup>;  
 PMK \**mat*: WrK *mat* 'mouth', WrM *mat* 'eye', Chrau *mat* 'eye', Vn *măt* 'eye' < VM  
 \**mhat*; Munda \**mət*.
25. 'tree'  
 PMY \**ntVɲ*<sup>B</sup> 'tree', 'wood' [P 967] (No.51 in §3.2.3)  
 PM \**ntuN*<sup>B</sup>: Hmu *tə*<sup>5</sup>, Xx *ntu*<sup>5</sup>, Hmong *ntoN*<sup>5</sup>, Bunu *ntaN*<sup>5</sup>, She *təN*<sup>5</sup>;  
 PY \**ntja(:)ɲ*<sup>B</sup>: Mien, Tp *djaɲ*<sup>5</sup>, Kn *gja:ɲ*<sup>3</sup>;  
 PMK > WrK *daŋ* 'fruit stem', WrM *ta:ɲ* 'tree'.

An interesting comparison without WrK form is:

## 26. 'dog' [Ja 67].

PMY \**klu*<sup>C</sup> 'dog' [P 243]

PM \**kləi*<sup>C</sup>: Hmu *hla*<sup>3</sup>, Xx *qwi*<sup>3/7</sup>, Hmong *tle*<sup>3</sup>, Bunu *tle*<sup>3</sup>, She *kja*<sup>3</sup>;

PY \**klu*<sup>C</sup>: Mien *tcu*<sup>3</sup>, Tp *klu*<sup>3</sup>, Kn *klo*<sup>9</sup>;

PMK > WrM *kluiw*, but it is not clear if this form represents a Proto Mon-Khmer root.

Noting that most of these comparisons belong to the core lexicon, I believe that the list supports (although it does not prove) the existence of a genetic relationship between Miao-Yao and the Mon-Khmer (and thus Austroasiatic) family, as Haudricourt and Jakhontov proposed. Additional support is found in the observation that some Mon-Khmer forms are also attested in Munda languages, which again suggests their Austroasiatic origin. The Miao-Yao family, it seems, is not a branch of Austroasiatic, but forms with it a genetic unit which could be called the 'Miao-Austroasiatic' (macro)family. Glottochronological analysis dates the separation of the two branches as having occurred, roughly, by the sixth millennium BC.

In the list of Proto Miao-Yao comparisons in §3.2.3 there are several comparisons which indicate similarities with language families other than Mon-Khmer. One can find comparisons with Sino-Tibetan languages:<sup>7</sup>

PMY \**plei*<sup>A</sup> 'four' [P 355] (No.22 in §3.2.3)

PM \**plui*<sup>A</sup>: Hmu *hlu*<sup>1</sup>, Xx *prei*<sup>1</sup>, Hmong *plou*<sup>1</sup>, Bunu *tlə*<sup>1</sup>, She *pi*<sup>6</sup>;

PY \**pjei*<sup>A</sup>: Mien, Tp, Kn *pjei*<sup>1</sup>;

ST \*(p-) \**lij* 'id.'

PMY \**hla*<sup>B</sup> 'moon' [P 572] (No.77 in §3.2.3)

PM \**hla*<sup>B</sup>: Hmu *hla*<sup>5</sup>, Xx *hla*<sup>5</sup>, Hmong *hli*<sup>5</sup>, Bunu *hlu*<sup>5</sup>, She *ne*<sup>5</sup>;

PY \**hla*<sup>B</sup>: Mien *hla*<sup>5</sup>, Tp *hla*<sup>4/5</sup>, Kn *la*<sup>4</sup>;

ST \*(s-) *laH* 'id.'

Another possible etymology here could be a comparison with An \**bulat* 'four', with the regular loss of the first syllable (see below) and the development of \*-l > ∅ (I have only this example of loss of final \*f).

PMY \**kla*:*ŋ*<sup>A</sup> 'neck', 'throat' [P 602] (No.97 in §3.2.3)

PM \**klaN*<sup>A</sup>: Hmong *tləN*<sup>1</sup>, Bunu *tləN*<sup>1a</sup>;

PY \**kla*:*ŋ*<sup>A</sup>: Mien *tca*:*ŋ*<sup>1</sup>, Tp *kla*:*ŋ*<sup>1</sup>, Kn *kla*:*ŋ*<sup>1</sup>;

ST \**lǎij* 'neck'.

It is quite possible that some of these words have been independently borrowed into Miao and Yao branches, as happened with the words 'six', 'eight', and some others:

'eight': PM \**j[a]Q*: Hmu *ja*<sup>8</sup>, Xx *zi*<sup>4/8</sup>, Hmong *ji*<sup>8</sup>, Bunu *ju*<sup>8</sup>;

PY \**[j]jet*: Mien *jhet*<sup>6</sup>, Tp *jhet*<sup>6</sup>, Kn *jet*<sup>7</sup>;

from ST \**rjiat* 'eight'.

The same explanation can be suggested for cases where a Proto Miao-Yao root has a Chinese parallel:

PMY \**rai* 'sharp'

OC \**rij-s* 'sharp' [CHAR1].

<sup>7</sup>

The following comparisons are given in Jakhontov (1981).

These MY forms are Chinese loans but, as in the case of other ST borrowings, it is rather difficult to prove that these forms were borrowed into the protolanguage, rather than into later daughter languages.

It is much more difficult to explain similarities between Miao-Yao and Kadai languages. In order to discuss them one needs to evaluate the Austric hypothesis. The narrow version of the Austric hypothesis claims that the relationship between the Austroasiatic and Austronesian families is a genetic one. This understanding does not contradict the Austro-Thai and Miao-Austroasiatic hypotheses, and their combination leads towards the expanded Austric hypothesis, which suggests that the four major languages families of Southeast Asia – Miao-Yao, Kadai, Austroasiatic and Austronesian – are genetically related (Peiros 1984a, 1989a).

As evidence for a genetic relationship between Austroasiatic and Austronesian languages, scholars (Schmidt 1906; Pou & Jenner 1974a; Shorto 1976b) usually cite lexical similarities. Unfortunately, most comparisons found in the literature are not fully reliable. Diffloth (1994) identified the following list of ‘probable or possible’ comparisons:<sup>8</sup>

- (1) ‘dog’ (Pou & Jenner 1974a):

MK *\*ʔa-c(uə)ʔ*;

An *\*asu*.

- (2) ‘fish’ (Schmidt 1906, No.4):

MK *\*ʔa-ka:ʔ*;

> Malay *ikan*.

- (3) ‘centipede’ (Diffloth 1994):

MK *\*k-əl-ʔe:p*;

> Malay (*ka*)*ip-an*.

- (4) ‘wood’ (Schmidt 1906, No.132):

MK *\*kəjh(u:)?*;

An *\*kaSiw*.

- (5) ‘millet’ (Shorto 1976b):

> WrK *skuej* ‘Coix lacryma job’, also attested in other Mon-Khmer languages;

> Malay *sekoj*.

- (6) ‘sugarcane’ (Schmidt 1906, No.106; Pou & Jenner 1974a, No.19):

> WrK *\*ʔəmbaw*; also attested in other Mon-Khmer languages;

An *\*təbuS*.

- (7) ‘bran’ (Pou & Jenner 1974a, No.43):

MK > WrK *kəndok* ‘rice bran’, also attested in the Bahnaric languages;

An *\*dədək*.

- (8) ‘eye’ (Schmidt 1906, No.129):

MK *\*mat*;

An *\*mata*.

<sup>8</sup> In these examples the Proto Mon-Khmer forms are Diffloth’s (pre-)reconstructions.

- (9) 'bone' (Diffloth 1994):  
 MK \*j-l-ʔa:ŋ;  
 > Malay *tulang*.
- (10) 'hair' (Diffloth 1994):  
 MK \*s(o)k;  
 > Tagalog *buhog*.
- (11) 'lick' (Schmidt 1906, No.178):  
 MK \*l-mp-(iə)t;  
 > Malay *jilat*.
- (12) 'navel' (Schmidt 1906, No.206):  
 > WrK *phcit*.  
 > Malay *pusat*.
- (13) 'molar' (Shorto 1976b):<sup>9</sup>  
 >WrK *thka:m*, Vn *hàm*, Jah-Hut *təŋʔəm*.  
 > Malay *gerham*.
- (14) 'stone' (Diffloth 1994):  
 MK \*təm(o:)?;  
 An \*batu.
- (15) 'iron' (Schmidt 1906, No.200):  
 > Proto-Monic \*prsay;  
 > Malay *besi*.
- (16) 'ashes' (Schmidt 1906, No.107):  
 > Stieng *buh*  
 An \*qabu [Blust 1980]

All of these comparisons, excluding 'stone' (14), are characterised by transparent phonological similarities between the Mon-Khmer and Austronesian forms. This suggests that the comparison 'stone' should not be accepted at the current stage of investigation: its justification requires too many assumptions.

A number of the other comparisons also appear doubtful for the following reasons:

- (i) several comparisons belong to the cultural lexicon, and thus may reflect cultural influence rather than common origin. These are: 'millet' (5), 'sugarcane' (6) and 'iron' (15).
- (ii) some comparisons represent later contacts between the groups rather than common genetic origin: 'centipede' (3), 'navel' (12), 'molar' (13) and 'ashes' (16). There is not sufficient evidence to attribute them to the protolanguage level.
- (iii) other possible comparisons can be suggested for 'bran' (7) and 'bone' (9).

<sup>9</sup> Diffloth's Mon-Khmer comparison here includes forms of different origin, as Vn *hàm* is a Chinese loan: OC \*ghə:m [CHAR2] 'chin', 'lower jaw' > MC *yâm* > Vn. WrK *thka:m* should be compared with Vn *câm* 'molar'.

The comparison ‘fish’ is also not completely convincing, as the Austronesian form may be a derivation from the root *\*ka* ‘eat’: *\*i-ka-n*. This leaves us with five possible acceptable comparisons: ‘dog’ (1), ‘wood’ (4), ‘eye’ (8), ‘hair’ (10) and ‘lick’ (11). It is possible, however, to find more similarities between Austroasiatic (or Mon-Khmer) and Austronesian languages. Here are some of them (including the five remaining from Diffloth’s list):<sup>10</sup>

1. ‘dog’ [Pou & Jenner 1974a]

MK *\*cu:ʔ*: Chrau *sə:*, Wa *soʔ*, Vn *chó*. (WrK *chəke:* may be also related);  
An *\*asu* [Blust 1981].

2. ‘wood’ [Schmidt 1906]

MK *\*CəhVʔ*: WrK *zhaə*, Proto-Mon *\*chu:ʔ*, maybe also Vn *hèò* ‘stick’.  
An *\*kaSiw* [Blust 1981].

3. ‘eye’ [Schmidt 1906]64

MK *\*mat*: WrK *mat* ‘mouth’, WrM *mat* eye’, Chrau *mat* eye’, Vn *mắ́t* ‘eye’ < VM  
*\*mhat*; Munda *\*mət*;  
An *\*mata* [Blust 1981].  
Kd *\*I-nta<sup>A</sup>*.

4. ‘hair’ [Diffloth 1994]

MK *\*sVk*: WrK *sak*’, WrM *swok*, Chrau *soʔ*, Wa *haik*, Vn *tóc* < VM *\*sok*;  
An *\*buSek*/*\*buSuk* [Blust 1981].

5. ‘tongue’, ‘lick’ [Schmidt 1906]

MK *\*CəIVt*: WrK *kənləət* ‘uvula’, Proto Katuic *\*[h/ɣ]əliət ~ \*[p/b]əliət* ‘lick’;  
MY *\*mbljet* ‘tongue’;  
An *\*zilət ~ \*zilap* ‘lick’.

This comparison may be rejected on the grounds of its sound symbolic or universal nature.

6. ‘bamboo’

MK *\*pə(N)IVŋ* ‘bamboo’, ‘bamboo shoots’: WrK *bəmluŋ* ‘bamboo shoots’, Wa *plaiŋ*  
‘bamboo shoots’, Vn *giang* ‘bamboo’ < *\*plaiŋ<sup>A</sup>* or *\*jaŋ<sup>A</sup>*.  
An *\*qəliŋ* ‘type of bamboo’ [Blust 1980].

7. ‘near’

MK *\*kəpVr*: WrK *kəpɛ:r*, Vn *vè* ‘to come near’;  
An *\*hampi!* ‘near’.

<sup>10</sup> The Mon-Khmer forms given here are pre-reconstructions, supported by my unpublished comparative phonology of this family.

## 8. 'ulcer', 'skin disease'

MK \**mərVɲ* 'ulcer', 'inflammation': WrK *mɾɛ:ɲ* 'ulcer', WrM *mr an* 'small pox',  
Vn *rân* 'an inflammation with pimples';

An \**bilij* 'a skin disease'.

The Austronesian form has a rather limited distribution.

## 9. 'afraid'

MK \*(*tə*)*kVt* 'afraid': WrK *ko:t* 'respect', 'afraid', WrM *takuit, lakuit* 'afraid', Vn *ghét*  
< \**t-ke*t 'afraid';

An \**[t]jakut* 'id.' [Blust 1981].

## 10. 'throw'

MK \**CəvVɲ* 'throw': WrK *grəvɛ:ɲ* 'throw, throw away', Vn *vǎng* 'throw';

An \**buvəɲ* 'throw away'.

The Austronesian form has a rather limited distribution.

## 11. (?) 'throw', 'shoot'

MK \**pəɲ* 'throw', 'shoot' WrK *pəɲ*, WrM *pə:ɲ*, Chrau *pəɲ*, Wa *puiɲ*, Vn *bắn* < VM  
\**pan?* or \**peɲ?*

An \**panaɲ* 'to shoot' [Blust 1981].

Possibly a local word represented in other language families.

## 12. 'wash'

MK \**kəbVl* 'wash, wash off': WrK *khbul*, WrM *kəbau*;

An \**buli* 'wash'.

## 13. 'full'

MK \**PVɲ* 'full': WrK *bə:ɲ*, WrM *peɲ*, Chrau *be:ɲ*.

PMY \**pəɲ<sup>B</sup>* 'full';

An \**pənuh* 'full'.

## 14. 'bone', 'horn'

AA: MK \**cəʔiɲ* 'bone': WrK *chəʔiɲ*, Vn *xương*. Munda \**zəɲ* [Pin 76].

PMY \**chuɲ<sup>C</sup>* 'bone';

An \**t'uju* 'horn' (with wide distribution of the root).

## 15. 'see', 'look'

MK \*(*C-*)*IVk* 'see', 'look': WrK *kreʔə:k* 'to look, stare', Vn *liếc* 'to spy' < VM \**lhiek*.

An \**tilik* 'glance, glimpse'.

## 16. 'see', 'look'

MK \**ɲa:c* 'see': WrK *səmɲa:c* 'to show', WrM *ɲa:t* (Old Mon *ɲac*) 'see';

An \**təɲuk* 'look'.

17. 'mountain', 'elevation'  
 MK *\*dVI* 'mountain': WrK *duəl* 'hill', WrM *duiw* (Old Mon *dal*) 'mountain', Vn *núi* 'mountain';  
 An *an[t]al* 'elevation' (not well represented in the family).
18. 'bitter', 'hot'  
 MK *\*(Cə)hVt* 'hot taste': WrK *prəha:t* 'bitter and salted', WrM *hot* 'taste hot';  
 An *\*pahit* 'bitter'. Possibly a Western Austronesian word.
19. 'shoots, springs'  
 MK *\*(Cə)[m]bVŋ* 'shoots, springs': WrK *dəmba:ŋ*, Chrau *dəbaŋ*, Vnmǎng;  
 An *\*[ə]buŋ* 'shoots, springs'.
20. 'trunk'  
 MK *\*(tə)gol* 'stump', 'trunk': WrK *gal*, WrM *daguiw*, Vn *cội*;  
 An *\*paŋkal* 'trunk', 'root'. Possibly a Western Austronesian word.
21. 'house'  
 MK *\*t'Vk* 'house': WrM *tuik, gaduik*;  
 An *\*puŋduk* 'hut'. Possibly a Western Austronesian word.  
 A cultural word. It is also unclear whether the word can be attributed to the protolanguage level.
22. 'take', 'size'  
 MK *\*[t']Vŋ*: WrM *duŋ* 'get', 'receive', Chrau *tu:ŋ* 'carry';  
 An *\*taŋtaŋ* 'seize'. Possibly a Western Austronesian word.
23. 'tail', 'back'  
 MK *\*(kə)dVj* 'tail', 'back': WrK *kənduj* 'tail', WrM *du* 'behind', Vn *đuôi* 'tail' < VM *\*təoj*.  
 MY *\*[o]jB* 'tail'  
 An *\*hudi* 'buttocks'.
24. 'smell'  
 MK *\*CəŋVt* 'smell': WrK *chŋit* 'strong smell', Wa *ŋhit* 'smell', Vn *ngát* 'fragrant';  
 An *\*t'ŋit* 'to stink'. Possibly a Western Austronesian word.
25. 'skin', 'peel'  
 MK *\*(Cə)IVt* 'to peel': WrK *la:t*, WrM *khalot*, Vn *lột*;  
 An *\*kulit* 'skin'.

26. 'mollusc'  
 MK *\*(kəm)bV[h/?]* 'prawn': WrK *kəmbɨs*, Chrau *kəmbih* (? < WrK), Vn *və* < ?  
*\*C-po?/\*wo?*;  
 An *\*i(m)baw* 'mollusc' [Blust 1980].
27. 'lip'  
 MK *\*(pə)pV:r* 'lip': WrK *bəbi:r*, *pəpu:r*, Chrau *bərbe?*, Vn *môi*;  
 An *\*bibiy* 'lip'.
28. 'nose'  
 MK *\*Cəmu[l]h* 'nose': WrK *crəmuh*, WrM *muh*, Chrau *muh*, Wa *muih*, Vn *mūi* <  
 VM *\*mulh*; Munda *\*mu(?)*;  
 PMY *\*mbr[u]i<sup>C</sup>* 'nose';  
 An *\*dumul* 'snout' [Blust 1973].
29. 'soft'  
 MK *\*CəbVt* 'soft': WrK *sbo:t* 'flabby', 'soft'. WrM *kyat* 'soft', 'young';  
 An *\*ləmbut* 'soft'; cf. PrL *\*pu:t* 'soft'.
30. 'louse'  
 MK *\*caj?* 'louse': WrK *caj*, WrM *cay*, Chrau *si:*, Vn *chāy* < VM *\*cVj?*, Munda *\*se?*;  
 PMY *\*nchei<sup>B</sup>* 'louse';  
 An *\*li(ɲ)t'a* 'nit'.
31. 'reed', 'bamboo'  
 MK *\*(Cə)tVŋ* 'cane', 'reed': Chrau *rətie:ŋ* 'reed', Vn *đâng* 'thatching grass';  
 An *\*patuŋ*, *\*bətūŋ* 'sp. of bamboo' [Blust 1980].
32. 'grass'  
 MK *\*kəŋp'Vt* 'grass': WrK *kəmpu:t* 'grass', WrM *kamat*, *kamot* (Old Mon *kambat*)  
 'grass', Vn *mót* 'sp. of reed';  
 An *\*lumpu't* 'grass'. Possibly a Western Austronesian word.
33. 'man'  
 MK *\*Cə[n]ak* 'man': WrK *məna:k* 'man', 'classifier for people', WrM *kma:k* 'male',  
 Katu *nak* 'male';  
 An *\*aʔak* 'person' [Dahl 1981];  
 Kd *\*IVk* 'child' [Ben 250].
34. 'turtle'  
 MK *\*CərV(h)* 'turtle': WrK *kra:s*, Wa *rwih*, Vn *rùa* < *\*(V)ruo*.  
 An *\*ku[l]a* 'tortoise'. Possibly a Western Austronesian word.  
 Limited distribution of An forms reduces the reliability of the comparison.



## 35. 'yellow'

MK \**IVŋ* 'yellow': WrK *liəŋ* 'yellow', Wa *lhəŋ* 'yellow', Vn *trắng* 'white' < VM \**k-lhəŋ?*;

An \**ku[n,t]iŋ* 'yellow';

Kd \**[C-]liəŋ<sup>A</sup>* 'yellow' [Ben 427].

## 36. 'rub'

MK \**zu:t* 'rub': WrK *zu:t* 'rub', WrM *zuit* 'rub', Chrau *zu:t* 'rub' (? < WrK), Vn *chuồn* 'polish';

An \**'ug'ut* 'rub'.

## 37. 'hat'

MK \**t'uəŋ* 'hat': WrK *tuəŋ*, WrM *phađun*, Chrau *duo:n*, Vn *nón* < VM \**?ton?*

PMY \**nto:ŋ<sup>C</sup>* 'hat';

An \**pađun*, \**tudun* 'head covering'.

A cultural word?

## 38. 'sting'

MK \**CəŋVc* 'sting', 'thorn': Wa *pik* 'sting', Vn *nọc* 'thorn';

An \**t'əŋət* 'sting'.

## 39. 'belly'

MK \**buŋ* 'belly': WrM *buŋ*, Khmu *po:ŋ*, Vn *bụng*;

An \**kəmpuŋ* 'belly'.

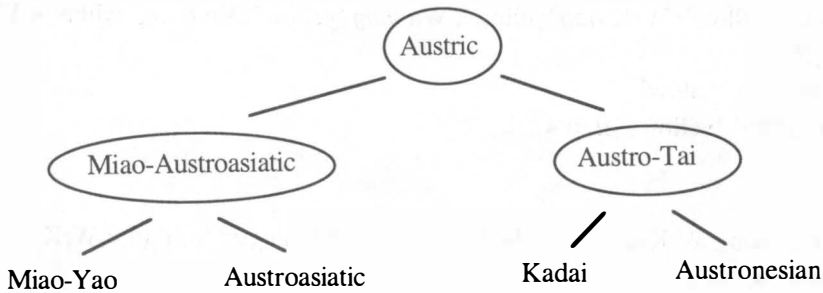
## 40. 'finger', 'hand'

MK \**(tə)ŋan?* 'finger': WrM *taŋan*, Vn *ngón* < VM \**ŋhon?*;

An \**taŋan* 'hand'.

The list of comparisons is by no means complete, and additional investigation will discover more lexical similarities. A characteristic feature of the list is that most of its comparisons reveal a strict correspondence of syllabic structure between the Mon-Khmer and Austronesian protolanguages. Usually, the only corresponding syllable is the last syllable of the root. There are also some correlations between first syllables, but they are less regular. Other types of syllabic correspondences are rare.

As most of the above comparisons belong to the core lexicon, I believe that there is evidence (albeit inconclusive) for the suggestion that the Mon-Khmer and Austronesian families are genetically related. Some Mon-Khmer words have Austroasiatic or Miao-Austroasiatic origins; also, one can find Austro-Thai etymologies for some Austronesian words. On this basis, we can postulate the existence of an extended Austric macrofamily. Trying to combine the hypotheses discussed above, I assume that the macrofamily can be represented as:



The disintegration of the Austritic macrofamily can be dated by glottochronology to some time between the ninth and eighth millennia BC, although this dating is not reliable.

Unfortunately, at present I cannot add more detail to this suggestion about the genetic affiliations of the four language families of Southeast Asia. Much time-consuming work is necessary before the existence of the Austritic macrofamily can be proved according to the formal procedures of historical linguistics. Reliable reconstructions and representative comparative dictionaries of all families under consideration are required in order to begin a thorough investigation of the problem.

If the Miao-Yao and Kadai languages are genetically related, as suggested here, one would expect to find in their lexicons words of the same origin. There are some words in Proto MY which are similar to reconstructed Proto Kd forms:

|    |                            |             |    |                                |               |
|----|----------------------------|-------------|----|--------------------------------|---------------|
| MY | * <i>prau</i> <sup>C</sup> | 'house'     | Kd | * <i>C-ja(:)u</i> <sup>C</sup> | 'house, barn' |
|    | * <i>ma:j</i> <sup>A</sup> | 'have'      |    | * <i>mɪ</i> <sup>A</sup>       |               |
|    | * <i>Ckaj</i> <sup>C</sup> | 'excrement' |    | * <i>kh Vj</i> <sup>C</sup>    |               |
|    | * <i>?ap</i>               | 'duck'      |    | * <i>?iap</i>                  |               |

Currently there is no means by which words of common origin can be distinguished from ancient loans, so it is difficult to be certain of the nature of these word pairs. Comparisons such as (B 334):

|    |                           |         |    |               |
|----|---------------------------|---------|----|---------------|
| MY | * <i>tum</i> <sup>C</sup> | 'louse' | An | * <i>tuma</i> |
|----|---------------------------|---------|----|---------------|

and some others could also theoretically belong to the common Austritic lexicon.

Reid (1994) discusses similarities among several grammatical features of Mon-Khmer and Austronesian languages. His starting point is the grammar of one Nicobarese dialect (Nancowry) which shares remarkable similarities with certain Austronesian grammatical constructions. According to Reid, the same constructions, employing similar affixes, can be detected in other Mon-Khmer languages. This leads to the suggestion that they can be traced back to common Austritic morphological distinctions. Reid's examples are quite convincing, but at the current stage of investigation we have no reliable Proto Mon-Khmer morphological reconstruction, and similarities between modern Mon-Khmer languages and Austronesian reconstructions may have explanations other than common origin.

CHAPTER 4  
SINO-TIBETAN LANGUAGES

Modern Sino-Tibetan languages are distributed across vast areas of East and Southeast Asia, and the northern mountains of South Asia. Most of the languages are spoken only by relatively small communities, but the family also includes such widely spoken languages as Chinese, Burmese, and Tibetan. The total number of Sino-Tibetan languages is not known but is estimated at about 100–150;<sup>1</sup> only a quarter or so of these are sufficiently described.

Research in Sino-Tibetan linguistics is much more difficult than that in any other family of East and Southeast Asia. Three main factors contribute to this:

- (i) the great diversity of modern languages, and the obscurity of the connections between them;
- (ii) the shortage of good descriptions and dictionaries, which prevents linguists from conducting full-scale research in the area;
- (iii) the very complex linguistic history of Chinese, one of the major languages of the family. A reconstruction of its historical phonology presents a real challenge to linguists. I believe that only a small number of linguists (excluding myself) are capable of fruitful and professional study of Old Chinese, and only a few of these are interested in the study of other languages of the family. As a result, Chinese data remain obscure.

The Sino-Tibetan languages differ considerably from each other lexically, grammatically and phonologically. However, they clearly constitute a genetic unit, and there is wide agreement as to the dimensions of the family. Until recently, there were doubts about whether Chinese and the Kadai languages are related to the Sino-Tibetan family. New reconstructions of Old Chinese and their comparison with other Sino-Tibetan languages allow us to prove a genetic relationship in the case of Chinese (Benedict 1972a; Peiros & Starostin 1977; Starostin 1989).<sup>2</sup> In contrast, it is clear now that the connection of the Kadai languages with the Sino-Tibetan family was erroneous (see Chapters 2 and 5). Lexical coincidences between Kadai and Chinese, which fuelled this hypothesis, include items which do not belong to the core vocabulary and can be explained as the result of intensive borrowing from Chinese, mostly in the Middle Chinese period.

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<sup>1</sup> Bradley (1996) identifies nearly 250 Sino-Tibetan languages, but this figure includes different dialects of such languages as Tibetan.

<sup>2</sup> I will provide considerations against Sagart's Chinese-Austronesian hypothesis below.

The internal relationships among the Sino-Tibetan languages are not well established. One can distinguish more than 20 groups of the lowest rank. Some of these groups include dozens of languages and have rather complicated structures, while others consist of only a few languages or language isolates. I discuss the main groups (I–XXIV) briefly below.

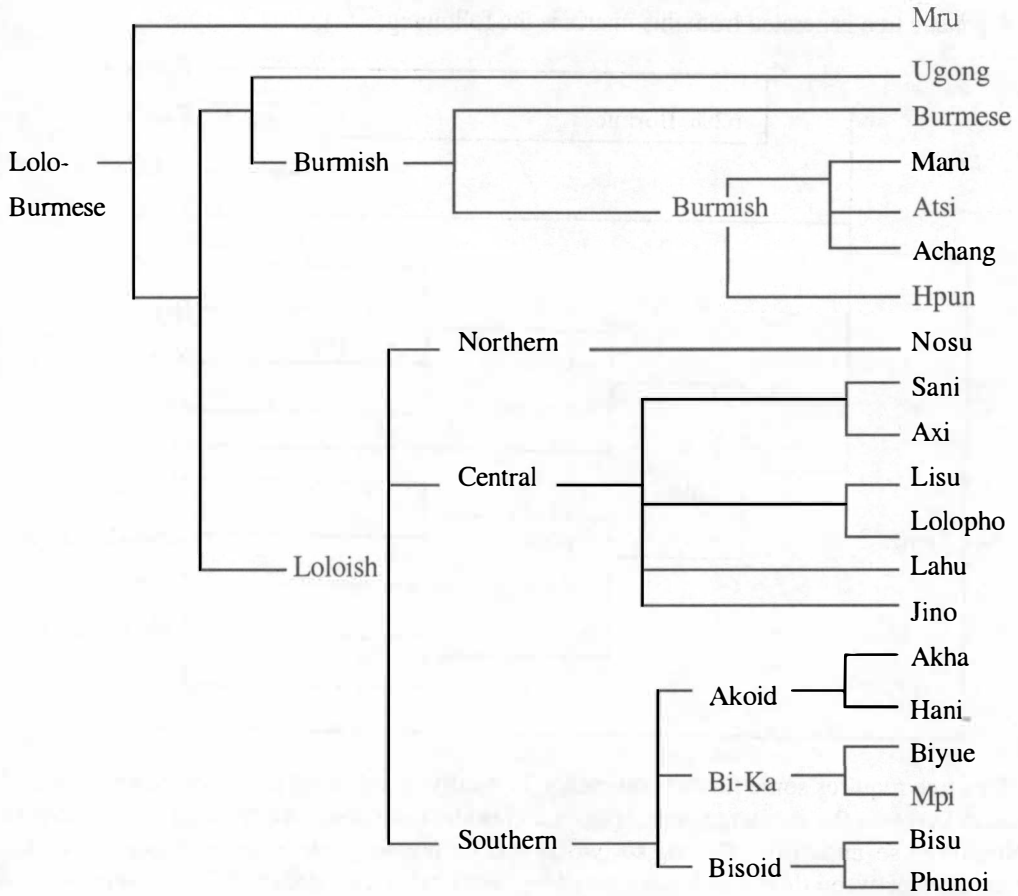
#### LANGUAGE GROUP I

Linguistic data about modern Lolo-Burmese languages is much more substantial than about most other Sino-Tibetan groups. There are descriptions of main languages of this family, including detailed dictionaries (Matisoff 1973; Chen et al. 1985 and many others). At the same time it can hardly be said that the group is known in sufficient detail. The list of Lolo-Burmese languages is still being extended, as linguistic trips to South-West China or neighbouring areas result in discovery of new languages such as Jino (Gai 1986) or Ugong (Bradley 1989).

The known Lolo-Burmese languages and dialects form the following subgroups:

1. Atsi-Burmese: Burmese, Achang, Phun, Atsi, Maru, and others;
2. Lisu and Lolopho dialects;
3. Sani, Ahi and related dialects;
4. Northern dialects: e.g. Nosu;
5. Lahu dialects;
6. Nusu;
7. Akha dialects;
8. Bisu-Phunoi dialects;
9. Jino;
10. Mpi;
11. Moso-Naxi dialects.

Several Lolo-Burmese classifications have been proposed (Matisoff 1972; Thurgood 1982 and others). Bradley (1996) suggests that the languages can be grouped as in the tree on the following page. The classification includes Mru, a language spoken in Bangladesh, but excludes Naxi which, according to Bradley, is only remotely related to the Lolo-Burmese family. Bradley gives no formal justification of this classification.

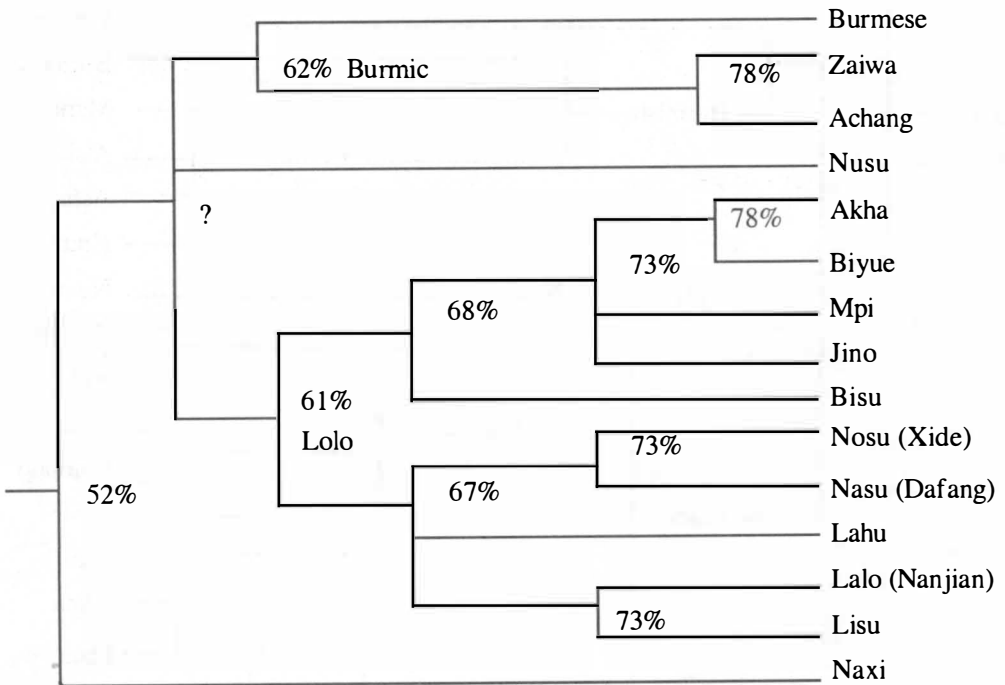


The lexicostatistical matrix for several Lolo-Burmese languages is given in Table 4.1. The actual data for this matrix is given in the Appendix.

TABLE 4.1: LEXICOSTATISTICAL MATRIX FOR FIFTEEN LOLO-BURMESE LANGUAGES

|     | BUR | ZAI | ACH | NUS | AKH | BIY | MPI | JIN | BIS | XID | DAF | LAH | NAN | LIS | NAX |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| BUR | x   | 62  | 65  | 62  | 57  | 57  | 58  | 59  | 53  | 52  | 58  | 55  | 53  | 57  | 54  |
| ZAI | 62  | x   | 70  | 65  | 63  | 63  | 62  | 60  | 50  | 57  | 61  | 60  | 55  | 61  | 53  |
| ACH | 65  | 70  | x   | 63  | 61  | 66  | 64  | 59  | 53  | 60  | 61  | 60  | 59  | 64  | 55  |
| NUS | 62  | 65  | 63  | x   | 60  | 64  | 61  | 64  | 59  | 62  | 61  | 58  | 55  | 64  | 54  |
| AKH | 57  | 63  | 61  | 60  | x   | 78  | 73  | 73  | 69  | 63  | 65  | 69  | 68  | 73  | 61  |
| BIY | 57  | 63  | 66  | 64  | 78  | x   | 77  | 76  | 70  | 69  | 67  | 74  | 75  | 74  | 61  |
| MPI | 58  | 62  | 64  | 61  | 73  | 77  | x   | 74  | 68  | 61  | 62  | 66  | 68  | 69  | 59  |
| JIN | 59  | 60  | 59  | 64  | 73  | 76  | 74  | x   | 70  | 65  | 66  | 67  | 69  | 68  | 53  |
| BIS | 53  | 50  | 53  | 59  | 69  | 70  | 68  | 70  | x   | 59  | 57  | 63  | 59  | 61  | 55  |
| XID | 52  | 57  | 60  | 62  | 63  | 69  | 61  | 65  | 59  | x   | 73  | 67  | 70  | 68  | 57  |
| DAF | 58  | 61  | 61  | 61  | 65  | 67  | 62  | 66  | 57  | 73  | x   | 70  | 69  | 70  | 56  |
| LAH | 55  | 60  | 60  | 58  | 69  | 74  | 66  | 67  | 63  | 67  | 70  | x   | 71  | 71  | 62  |
| NAN | 53  | 55  | 59  | 55  | 68  | 75  | 68  | 69  | 59  | 70  | 69  | 71  | x   | 73  | 59  |
| LIS | 57  | 61  | 64  | 64  | 73  | 74  | 69  | 68  | 61  | 68  | 70  | 71  | 73  | x   | 61  |
| NAX | 54  | 53  | 55  | 54  | 61  | 61  | 59  | 53  | 55  | 57  | 56  | 62  | 59  | 61  | x   |

A genetic tree generated from this matrix is the following:



This tree requires some further comments. Formally interpreting the percentages of shared lexicon between the languages one obtains a classification with two main branches: Proper Lolo-Burmese and Naxi. But these two branches are very close to each other and the differences between them can be explained by insufficient knowledge of Naxi, which has no close relatives among the Lolo-Burmese languages. If such an assumption is correct the Lolo-Burmese tree would consist of some independent branches: Burmic, Lolo, Naxi and perhaps Nusu. As I have no proof of this assumption I prefer to use the first variant of the classification (with two main branches), but such a decision is not well grounded.

A comparison of the lexicostatistical classification with that of Bradley reveals the following points:

- (1) The classifications are based on different sets of languages, but where a language is included in both classifications, it usually occupies the same position in the two genetic trees.
- (2) Mru and Ugong are not included in the lexicostatistical classification, but my very limited list of Mru forms (not sufficient for lexicostatistical analysis) does not support the idea that this language should be connected to Lolo-Burmese.
- (3) Naxi is included in the lexicostatistical classification, although according to Bradley it does not belong to this family.
- (4) Nusu (not included in Bradley's classification) is treated in the lexicostatistical classification as the third branch of Lolo-Burmese proper, equal in status to Burmic and Lolo;

- (5) The main difference is in the treatment of the Lolo languages. Both classifications identify Northern and Southern Lolo branches, but lexicostatistics does not support the existence of a Central group.

A comparative study of Lolo-Burmese has begun in the 1960s with the publication of the first Proto Lolo-Burmese reconstruction by Burling (1967). Later, several other versions of the phonological reconstruction have been published (Matisoff 1969, 1972; Bradley 1979; Thurgood 1982 and some others). As a result one can say that all significant phonological correspondences between investigated languages are now well established and the differences between reconstructions mainly concern the interpretation of existing phonological correspondences, rather than the establishment of new correspondences or the collection of additional data. Decisive points are:

- problems of tonal/atonal explanation of the tonal systems of the modern languages;
- reconstruction of the initial consonant system and possible initial clusters.

The tonal system usually reconstructed for Proto Lolo-Burmese (Burling 1967; Matisoff 1969) consists of three tones in unchecked syllables (tones \*1, \*2, and \*3),<sup>3</sup> and two tones (\*Low and \*High) in checked syllables (syllables ending in *-p*, *-t*, *-k*).

Matisoff's Lolo-Burmese reconstruction is a good example of the state of affairs in comparative research on this family. In talking about Proto Lolo-Burmese checked syllables with stop initials, Matisoff (1972:23) suggests the following set of correspondences:

TABLE 4.2: MATISOFF'S TONAL CORRESPONDENCES FOR CHECKED SYLLABLES

|    | PTB                             | PLB              | WrB         | Loloish<br>tone class | Lahu                    | Lisu                                       | Akha         | Nasu                     | Luquan                    |
|----|---------------------------------|------------------|-------------|-----------------------|-------------------------|--|--------------|--------------------------|---------------------------|
| 1. | <i>*bak</i>                     | <i>*bak</i>      | <i>pak</i>  | LOW                   | <i>pa<sup>53</sup></i>  | <i>ba<sup>6</sup></i>                      | <i>ba LS</i> | <i>ba<sup>55</sup></i>   | <i>ba<sup>55c</sup></i>   |
| 2. | <i>*pak</i>                     | <i>*p(h)ak</i>   | <i>phak</i> | HIGH                  | <i>pha<sup>21</sup></i> | <i>pha<sup>2</sup></i>                     | <i>pa HS</i> | <i>pha<sup>32s</sup></i> | <i>pha<sup>22</sup></i>   |
| 3. | <i>*C-bak</i>                   | <i>*C-bak</i>    | <i>pak</i>  | LOW                   | <i>pa<sup>53</sup></i>  | <i>ba<sup>6</sup></i>                      | <i>ba LS</i> | <i>ba<sup>55</sup></i>   | <i>ba<sup>55c</sup></i>   |
| 4. | <i>*C-pak</i>                   | <i>*C-p(h)ak</i> | <i>phak</i> | LOW                   | <i>pha<sup>53</sup></i> | <i>pha<sup>6</sup></i>                     | <i>pa LS</i> | <i>pha<sup>55</sup></i>  | <i>pha<sup>55c</sup></i>  |
| 5. | <i>*N-bak</i>                   | <i>*mbak</i>     | <i>pak</i>  | LOW                   | <i>ba<sup>53</sup></i>  | <i>ba<sup>6</sup></i>                      | <i>ba LS</i> | <i>bva<sup>55</sup></i>  | <i>mpva<sup>55c</sup></i> |
| 6. | <i>*N-pak</i>                   | <i>*mp(h)ak</i>  | <i>pak</i>  | HIGH                  | <i>ba<sup>21</sup></i>  | <i>ba<sup>3</sup></i>                      | <i>ba HS</i> | <i>bva<sup>32s</sup></i> | <i>mpva<sup>22s</sup></i> |
| 7. | <i>*s-bak</i><br><i>/*H-bak</i> | <i>*?bak</i>     | <i>phak</i> | LOW                   | <i>pa<sup>33</sup></i>  | <i>pa<sup>3</sup> ~<br/>pa<sup>2</sup></i> | <i>pa LS</i> | <i>pa<sup>55</sup></i>   | <i>pa<sup>55c</sup></i>   |
| 8. | <i>*s-pak</i><br><i>/*H-pak</i> | <i>*?pak</i>     | <i>phak</i> | HIGH                  | <i>pa<sup>21</sup></i>  | <i>pa<sup>3</sup> ~<br/>pa<sup>2</sup></i> | <i>pa HS</i> | <i>pa<sup>32s</sup></i>  | <i>pa<sup>22s</sup></i>   |

The following information can be obtained from this table:

- WrB distinguishes two initials (*p* and *ph*) with no tonal oppositions in this type of syllable (three tones are found in other types of syllables).
- Lahu has three initials (*p*, *ph* and *b*) and three tones (*â?*, *â?* and *â*), but combinations *\*bâ* and *\*phâ* are not permitted.
- Lisu also has three initials (*p*, *ph* and *b*) and three tones (6, 2 and 3) with three non-accepted combinations: *\*pa<sup>6</sup>*, *\*pha<sup>3</sup>* and *\*ba<sup>2</sup>*.
- Akha distinguishes two initials (*p* and *b*) and two tones (*LS* and *HS*) which are acceptable in any of their possible combinations.

<sup>3</sup> Tone \*3 is perhaps of secondary origin and should not be attributed to the protolanguage level.

- Nasu has four stop initials (*p*, *ph*, *b* and *b'* = *bh*) and two tones (55 and 32s). Most of the possible combinations are permitted, with the exception of *\*ba*<sup>32s</sup>.
- Luquan, a language closely related to Nasu, reveals the same picture: four stop initials (*p*, *ph*, *b* and *mph*) and two tones (55c and 22s) with the absence of the *\*ba*<sup>22s</sup> combination.

Matisoff's interpretation of the data leads him to the reconstruction of eight initial simple consonants and clusters, with no tonal distinctions in checked syllables:

- |       |                    |                   |                |
|-------|--------------------|-------------------|----------------|
| (i)   | <i>*b</i> (1)      | <i>*mb</i> (5)    | <i>*ʔb</i> (7) |
| (ii)  | <i>*ph</i> (2)     | <i>*mp(h)</i> (6) |                |
| (iii) | <i>*ʔp</i> (8)     |                   |                |
| (iv)  | <i>*C-p(h)</i> (4) | <i>*C-b</i> (3)   |                |

There are a number of problems with this reconstruction. One issue is that the Proto Tibeto-Burman initials in Table 4.2 are taken from Benedict (1972a), where their identification is not based on a precise set of phonological correspondences. They are 'pre-reconstructed' units rather than proven reconstructions, and as such should not be used in the process of formal reconstruction. It is important also that according to the procedure of comparative linguistics, data from more ancient stages (Tibeto-Burman) should not be used in reconstruction of more modern periods (Lolo-Burman).

Another problem is that the two Loloish tone classes in checked syllables (*\*Low* and *\*High*) are traced back to the two tones reconstructed for Proto Lolo-Burmese, with no correlation to tones reconstructed in other syllables.

Additionally, Table 4.2 actually represents only seven different phonological correspondences: lines 1 and 3 cannot be separated, as in both of them the reflexes of the five recorded languages are identical. The reconstruction *\*C-b* (3) is therefore not supported by any independent Lolo-Burmese phonological correspondence.

Matisoff's reconstruction leaves three questions unanswered:<sup>4</sup>

- how can one explain the development of tones in modern Lolo languages: why, for example, have syllables with initial *\*ʔb* and *\*ʔp* developed differently?
- why do modern languages not permit certain combinations of initial and tone?
- why should we reconstruct an atonal situation for checked syllables, in opposition to three tones for other types of syllables? Is it simply because that is what we have for WrB?

These and other considerations led me to another version of Proto Lolo-Burmese (Peiros 1985a).<sup>5</sup> The first problem to deal with is the history of Lolo-Burmese tones. All linguists accept two facts:

- the existence of a correlation between initials and tones in unchecked syllables, and
- the existence of three main tonal phonological correspondences.

<sup>4</sup> In 1991 Matisoff published another article, in which he discusses the tonal development of checked syllables in Burmish languages (Achang, Zaiwa, Maru and Bola) and Naxi. He also includes Jingphaw, following his earlier attempts to connect this language to Lolo-Burmese (Matisoff 1974). However, in this discussion he does not alter his treatment of the Lolo data.

<sup>5</sup> My book on Proto Lolo-Burmese was submitted for publication in 1985, but for various non-linguistic reasons it still remains unpublished.



On this basis three tones (\*1, \*2 and \*3) are usually reconstructed.<sup>6</sup> Golovastikov (1977, 1989) has identified a connection between two Burmese tones (written as ‘:’ and ‘.’), and segmental features in some Archaic Burmese inscriptions, which were marked with letters for *-h* and *-ʔ*. Drawing on this connection, one can also explain corresponding tones in the other Lolo-Burmese languages as reflexes of two protolanguage suffixes,<sup>7</sup> *\*-x* and *\*-ʔ*, in different phonological environments. In the history of most of the languages these suffixes were lost, with compensatory development of tones.

No connection was established between \*Low and \*High tones in checked syllables and tones of unchecked syllables. I believe, however, that the two tones of checked syllables are correlated with the presence or absence of the suffix *\*-x*. The suffix *\*-ʔ* either did not occur in checked syllables in the protolanguage, or the opposition between *\*-x* and *\*-ʔ* was neutralised after a final stop. Following this approach, I reconstruct the following syllable endings for Proto LB:

|             |             |
|-------------|-------------|
| <i>*-K</i>  | <i>*-N</i>  |
| <i>*-Kx</i> | <i>*-Nx</i> |
|             | <i>*-Nʔ</i> |

-where *K* represents either *\*-p*, *\*-t*, or *\*-k*; and *-N* - is any other final consonant or  $\emptyset$ .

Usually eight different sets of phonological correspondences are distinguished for any phonological class:

|         | 1         | 2         | 3        | 4        | 5         | 6         | 7        | 8         |
|---------|-----------|-----------|----------|----------|-----------|-----------|----------|-----------|
| Burmese | <i>ph</i> | <i>ph</i> | <i>p</i> | <i>p</i> | <i>mh</i> | <i>mh</i> | <i>m</i> | <i>m</i>  |
| Atsi    | <i>ph</i> | <i>p_</i> | <i>p</i> | <i>p</i> | <i>m</i>  | <i>m_</i> | <i>m</i> | <i>m</i>  |
| Bisu    | <i>ph</i> | <i>ph</i> | <i>p</i> | <i>p</i> | <i>mh</i> | <i>mh</i> | <i>m</i> | <i>mb</i> |
| Lahu    | <i>ph</i> | <i>p_</i> | <i>p</i> | <i>b</i> | <i>m</i>  | <i>m_</i> | <i>m</i> | <i>m</i>  |

The symbol *\_* after a consonant indicates in Atsi that the syllable is pronounced with creaky (or tense) voice; in Lahu the tonal reflexes of *p\_* and *m\_* differ from the tonal reflexes of *p* and *m* in other types of syllables, but the consonants themselves are always pronounced identically.

I assume that these eight sets of correspondences reflect the following protosystem:

|              |   |             |   |              |   |             |   |
|--------------|---|-------------|---|--------------|---|-------------|---|
| <i>*ph</i>   | 1 | <i>*p</i>   | 3 | <i>*mh</i>   | 5 | <i>*m</i>   | 7 |
| <i>*C-ph</i> | 2 | <i>*C-p</i> | 4 | <i>*C-mh</i> | 6 | <i>*C-m</i> | 8 |

Combinations of the prefix *\*C* with aspirated initials are attested in specific pronunciations of syllables in Atsi and sometimes in Lahu. Combinations of the prefix with non-aspirated stops are reflected as voiced stops in Lahu, and clusters *\*C* plus nasal are attested as prenasalised stops in Bisu.

In many languages the development of initial and final clusters is relatively complicated. The examples of Lahu and Sani are given in Tables 4.3 and 4.4 respectively.

<sup>6</sup> Tone \*3 is perhaps of secondary origin and should not be attributed to the protolanguage level.

<sup>7</sup> I use words ‘suffix’ and ‘prefix’ in their usual Sino-Tibetan sense to designate additional non-obligatory parts of the root after or before the obligatory syllable.

TABLE 4.3: THE DEVELOPMENT OF INITIALS AND TONES IN LAHU<sup>8</sup>

| PLB initials \ PLB terminals | <i>*ph</i>              | <i>*p</i>              | <i>*C-ph</i>           | <i>*C-p</i>            |
|------------------------------|-------------------------|------------------------|------------------------|------------------------|
| <i>*-Kx</i>                  | <i>pha<sup>21</sup></i> | <i>pa<sup>21</sup></i> | <i>pa<sup>35</sup></i> | <i>ba<sup>21</sup></i> |
| <i>*-N</i>                   | <i>pha<sup>33</sup></i> | <i>pa<sup>33</sup></i> | <i>pa<sup>33</sup></i> | <i>ba<sup>21</sup></i> |
| <i>*-N?</i>                  | <i>pha<sup>33</sup></i> | <i>pa<sup>33</sup></i> | <i>pa<sup>33</sup></i> | <i>ba<sup>33</sup></i> |
| <i>*-Nx</i>                  | <i>pha<sup>53</sup></i> | <i>pa<sup>53</sup></i> | <i>pa<sup>11</sup></i> | <i>ba<sup>53</sup></i> |
| <i>*-K</i>                   | <i>pha<sup>53</sup></i> | <i>pa<sup>53</sup></i> | <i>pa<sup>53</sup></i> | <i>ba<sup>53</sup></i> |

*-K* – final consonants *\*-p*, *\*-t* or *\*-k*

*-N* – any other final consonant or  $\emptyset$ .

Tone 11 is found only in forms which are traced back to the Proto Lolo-Burmese syllable *\*C-phaNx*. If *\*C-* also had some kind of aspiration, then the combination of *\*C-*, *\*-h-* and *\*-x* in one syllable could create a unique combination of features for such a syllable which later became associated with a particular tone, not found elsewhere.

TABLE 4.4: THE DEVELOPMENT OF INITIALS AND TONES IN SANI

| PLB initials \ PLB terminals | <i>*ph</i>              | <i>*C-ph</i>           | <i>*p</i> , <i>*C-p</i> |
|------------------------------|-------------------------|------------------------|-------------------------|
| <i>*-Kx</i>                  | <i>pha<sup>2</sup></i>  | <i>pa<sup>55</sup></i> | <i>ba<sup>2</sup></i>   |
| <i>*-N</i>                   | <i>pha<sup>33</sup></i> | <i>pa<sup>44</sup></i> | <i>pa<sup>33</sup></i>  |
| <i>*-N?</i>                  | <i>pha<sup>33</sup></i> | <i>pa<sup>33</sup></i> | <i>ba<sup>33</sup></i>  |
| <i>*-Nx</i>                  | <i>pha<sup>11</sup></i> | <i>pa<sup>55</sup></i> | <i>ba<sup>11</sup></i>  |
| <i>*-K</i>                   | <i>pha<sup>44</sup></i> | <i>pa<sup>44</sup></i> | <i>ba<sup>44</sup></i>  |

*-K* - final consonants *\*-p*, *\*-t* or *\*-k*

*-N* - any other final consonant or  $\emptyset$ .

The development of tones in Sani can be described with the help of four rules:

- (1) loss of the distinction between Proto Lolo-Burmese initials *\*p* and *\*C-p*;
- (2) occurrence of tone 44 in all reflexes of Proto Lolo-Burmese syllables ending in *\*-Kx*;
- (3) loss of the distinction between *\*-N* and *\*-N?* in reflexes of Proto Lolo-Burmese syllables with initial *\*ph-*;
- (4) for reflexes of Proto Lolo-Burmese syllables with initial *\*ph-*, merger of the tonal reflexes of syllables ending in *\*-K* and *\*-Nx*, and in *\*-Kx* and *\*-N*.

<sup>8</sup> All correspondences in Table 4.3 were established by Matisoff (1969).

The Lolo-Burmese lexicon is known mostly thanks to Bradley (1979). My Lolo-Burmese reconstruction (Peiros 1985a) is based on a comparative dictionary which includes about 500 Proto Lolo-Burmese roots, many of them identical to Bradley's. New lexical data is available (Jin 1984; Matisoff 1988b and many others) but has not yet been investigated.

Burmese material is widely used in all Sino-Tibetan comparative work, but sometimes in isolation from Proto Lolo-Burmese reconstructions (Benedict 1972; Luce 1981 and others).

## LANGUAGE GROUP II

The Tangut (Xixia) language is known only from texts of the twelfth to thirteenth centuries written in the Tangut script. The procedure of deciphering and interpreting Tangut texts is very complicated, but some reliable results have been obtained. Following the publication of Nevskij (1960), other grammars and articles were issued (Nishida 1964–66; Sofronov 1968; Keping 1985). A very important Tangut dictionary, *Wenhai* 'Ocean of Characters', was first translated into Russian (Keping et al. 1969) and later into Chinese (Shi et al. 1983). A reconstruction of Tangut phonology suggested by Sofronov (1968) with reinterpretations by Starostin (n.d) allows us to obtain readings of most of the characters of the *Wenhai* dictionary.<sup>9</sup> In many cases, however, we can establish neither the standard nor the original reading of a character which is attested in the dictionary in a variety of different forms (in different rhymes and sometimes even in different cycles). This and other specific features of the dictionary (such as disyllabic words and graphic variants) show that this source requires further investigation. Of some help are vocabularies of published texts (Kolokolov & Kychanov 1966; Keping 1979) but because of their nature, these sources lack many roots which are important from a comparative point of view.

In 1916 Laufer proposed that the Tangut language is closely related to the Lolo-Burmese branch (Laufer 1916) and additional material supporting this hypothesis is given in Nishida (1973:257–273).

## LANGUAGE GROUP III

Qiang languages or dialects are spoken in some mountainous areas of the Chinese province Sichuan. They form two subgroups: Northern, which includes more archaic languages, and Southern. The latter were investigated in the 1940s by Wen Yu, who published descriptions of some of the dialects (e.g. Wen 1943, 1945) and short vocabularies, of about 900 words each, for two of them (Wen 1950, 1951).

Chang Kun (1967) discussed the history of the southern subgroup, establishing phonological correspondences between six dialects. It is interesting to note that the phonological system of the protolanguage is identical with the system of the Jungjiing dialect which is represented in a dictionary by Wen Yu (1950). A description of two dialects (one northern and one southern) was published in Beijing (Sun 1981), but neither this data nor word lists included in Anon. (1991) and Huang (1992) have not yet been interpreted by historical linguists.

<sup>9</sup> I have a copy of the Russian edition of *Wenhai* with handwritten readings of most of its entries given by Starostin.

Jakhontov (1979) suggests that the Qiang dialects are closely related to Tangut and form with it a group specifically connected to the Lolo-Burmese languages.

Bradley (1996) mentions the possibility of grouping the Qiang languages with Zaba, Muya, Tosu, Pumi and some other languages of Sichuan and Northern Yunnan (Anon. 1991; Huang 1992).

#### LANGUAGE GROUP IV

The Jiarung group consists of some poorly known dialects of Sichuan province. An English–Jiarung dictionary published in the 1930s deserves no credit (Edgar 1932; Shafer 1974:119). A few authors discuss Proto Jiarung reconstructions, but the lists of roots in their publications are unfortunately too short to allow comparison with other Sino-Tibetan languages (Chang & Chang 1975; Nagano 1978, 1979a, 1979b). New data from Anon. (1991) and Huang (1991) are not yet incorporated in comparative Sino-Tibetan studies.

Sometimes Jiarung is connected with the Tibetan group (Shafer 1974) but lexicostatistics does not support this classification (Jakhontov 1979a; Peiros & Starostin 1986).

#### LANGUAGE GROUP V

The Tibetan group is represented by various modern dialects. Bradley (1996) distinguishes four main dialectal groups: Western (e.g. Balti, Ladakhi), Central (with several subgroups: Spiti, Lhasa, Sherpa, Tromova, Danjonkia and others), Amdo, and Kham. The study of modern data on Tibetan dialects (Qu & Tan 1983) is one of the most important tasks of contemporary Tibetology. Written Classical Tibetan occupies a central position in the group, since it maintains, in orthography and grammar, many archaic features. The hypothesis that all phonological peculiarities of modern dialects result from divergent developments of the phonological system preserved in Tibetan orthography is accepted as a matter of course.

Written Tibetan forms are widely used in all Sino-Tibetan comparisons.

It is possible that Tibetan is specifically related to Cuona Menba (described in Sun et al. 1980 and Lu 1986) and some other languages and dialects which Bradley includes in his East Bodish group. This hypothesis has not been investigated in detail.

#### LANGUAGE GROUP VI

Tsangla is another language sometimes grouped with Tibetan. Modern data (Das Gupta 1968; Zhang 1986), however, do not support such a relationship.

#### LANGUAGE GROUP VII

Kaika (Hale 1973), which was erroneously considered a Tibetan dialect (Glover 1974:13), forms a separate group without close affiliations to other Tibeto-Burman languages. Bradley includes this language together with Gurung and Thakali in his West Bodish group.

#### LANGUAGE GROUP VIII

Languages of the Gurung group (Gurung, Tamang, etc.) spoken in Nepal are now relatively well known. There is a grammar and dictionary of Gurung (Glover 1974; Glover et al. 1971) and some data on Tamang and Thakali (for example Hale 1973; Mazaudon 1973).

All languages of the group are influenced by Tibetan, and ancient Tibetan loans probably can be found in Proto Gurung as well. This fact perhaps explains why the languages are often connected with Tibetan. Bradley includes them in his West Bodish together with Kaike.

My reconstruction of Proto Gurung, based on word lists collected in the survey of Nepal languages (Hale 1973), is still unpublished (Peiros 1978a).

#### LANGUAGE GROUP IX

The dialects of Nung group such as Nung, Rawang and Trung are spoken in a small area on either side of the Chinese-Burmese frontier (Morse 1989). Modern Nung data is not incorporated in comparative studies (Sun 1982; Anon. 1991; Huang 1992).

#### LANGUAGE GROUP X

Kham is spoken in the western part of Nepal. A good grammatical description (Hale 1973) and a vocabulary (Watters & Watters 1973) demonstrate the archaic character of the language and its importance for Sino-Tibetan reconstruction. A remarkable set of coincidences exists between the tonal systems of Kham and Tangut (Peiros 1982a).

#### LANGUAGE GROUP XI

The Chepang-Magari group is marked by interesting phonological developments, alongside archaic features. Some descriptions have been published (Hale & Pike 1970; Hale 1973), but dictionaries of both languages are still lacking, and the phonological history of the group is not fully understood.

#### LANGUAGE GROUP XII

The Karenic group includes numerous languages and dialects spoken in Central and South Burma, their exact number and pattern of relationships being still unknown. Jones (1961) discussed six Karenic dialects forming three subgroups, but perhaps a more detailed division is needed (Bradley 1996). The phonological systems (especially the tones and vowels) of the Karen languages are rather complicated and the use of old dictionaries and word lists is therefore not straightforward. Any Proto Karenic reconstruction based mainly on Jones' lists will not fully represent the phonological system of the protolanguage (Burling 1969; Peiros 1989c). New dialectal data is needed (see, however, Suriya 1986).

Karenic dialects have undergone considerable phonological change, and their modern forms often do not resemble the protoforms. Thus it is very difficult to compare these dialects directly with other Sino-Tibetan languages. Without a Proto Karenic reconstruction one would come to various incorrect conclusions, such as that the Karenic group forms a very remote branch of the family.

#### LANGUAGE GROUP XIII

The Kuki-Chin languages are spoken mostly in mountainous areas of the India-Burma-Bangladesh border. The group is not fully documented, as most of the languages are represented only by short word lists or by old and incomplete accounts (see, however, Lorrain 1940; Henderson 1965; Bhat 1969; Reichle 1981 and some others).

Shafer has investigated the history of the Kuki-Chin group and his results form a considerable part of his book on Sino-Tibetan (Shafer 1974). He has shown that some Southern Kuki-Chin languages maintain Proto Kuki-Chin and possibly Proto Sino-Tibetan prefixes. Unfortunately, the information available for many languages of the group is not sufficient for a well-grounded reconstruction of these prefixes. Shafer's Proto Kuki-Chin reconstruction is based mostly on data from Lushai, which is taken to be very similar to the system of the protolanguage. A reinterpretation of this reconstruction is possible, though it will not be given here.

The development of tones in Kuki-Chin languages is of some interest (Golovastikov 1989), but again the available data is too scant for thorough investigation.

It seems that the Kuki-Chin languages may fall into two subgroups: Luhupa (including Tankhur and other languages), and Chin, which contains at least four subbranches:

1. Southern: Sho, Khami and others;
2. Lakher: Mara, Sabeu and others;
3. Old Kiki: Bete, Aimal and others;
4. Lushai: Lushai, Tiddim, Siyin and others.

Lushai data is widely used in Sino-Tibetan comparative studies.

It is often suggested that the Kuki-Chin languages are specifically related to Naga languages (Ao, Lhota, Sema and others) (Shafer 1974; Bradley 1996). The Naga languages are not yet described in sufficient detail, but it is clear that they underwent numerous and serious phonological changes. Naga data used for comparative purposes are extracted from old and perhaps phonologically inadequate publications. Word lists published by the Nagaland Society have not yet been incorporated into analyses, so it is rather difficult to estimate the diversity of the group and its external affiliations. We still do not know the history of these languages, and it is very difficult to prove that they are members of the same group with distinct borders. For all these reasons, no comparative study has been yet been conducted to test the claim of genetic relationship between Kuki-Chin and Naga languages.

#### LANGUAGE GROUP XIV

Mikir is spoken in some parts of Assam. There are some dictionaries and grammars, including Grtissner (1978). Shafer (1974) put the language in his Naga-Kuki-Chin group and gave some Mikir etymologies, which need to be tested against more reliable modern data.

## LANGUAGE GROUP XV

Manipuri is spoken in the area close to the Naga and Kuki-Chin territories. The language is described in some publications to which I have not had access. Shafer (1974) includes Manipuri (Meithei) in his Naga-Kuki-Chin group.

## LANGUAGE GROUP XVI

The Bodo-Garo languages (Bodo or Boro, Dimasa, Mech and others) are mainly spoken in the mountains of Assam. Apart from unclear early publications (e.g. Skrefsrud 1889; Dundas 1908), we have one description of the Garo language, and there exist some dictionaries of Garo and Bodo (e.g. Bhat 1968). Burling has published a short article (Burling 1959) on the phonological reconstruction of the group, showing that these languages have drastically reduced the original root structure. It is obvious that a detailed Bodo-Garo reconstruction is needed; this work can now be carried out with the help of modern dictionaries and the reinterpretation of old data.

A lexicostatistical classification of the Bodo-Garo group has been published (Burling & Bhattacharya 1956), but the procedure used in determining the classification differs in many aspects from the method used in this book, so the results are not compatible with those given below.

It is possible that Bodo-Garo is specifically related to the Northern Naga group formed by various languages of the mountains of North-East India such as Moshang, Banpara, Tamlu and Chang. Marrison (1967) and French (1983) discuss these languages, pointing out the complexity of the linguistic situation in the region. Some Northern Naga word lists were published by the Linguistic Society of Nagaland, but it is difficult to include all this data in Sino-Tibetan comparative investigation.

## LANGUAGE GROUP XVII

The Luish group is represented by some poorly known languages of the India-Burma border: Andro, Cak, Katu, etc. Data is available only for the Cak language (Bernot 1967). It is often connected to Bodo-Garo and Northern Naga.

## LANGUAGE GROUP XVIII

The Jingphaw or Kachin language is spoken in northern parts of Burma and in the Yunnan Province of China. There are some modern descriptions of its grammar (e.g. Liu 1984), and some dictionaries. Hanson's (1906) dictionary is the largest, but unfortunately its transcription is not adequate: tones and the final glottal stop are not marked. Chinese dictionaries (Xu et al. 1983 and others) give forms in proper transcription but do not include many of the interesting roots recorded by Hanson.

Since Hanson's dictionary represents the Kachin lexicon quite well, one can find in it many Sino-Tibetan roots which are absent in dictionaries of most other languages simply because those dictionaries are not so detailed. Benedict (1972a), however, has interpreted this situation as evidence of the central position of Kachin in the Sino-Tibetan family.

On the basis of several striking lexical similarities, such as common words for 'sun', 'fire' and a few others, Berling (1982) has suggested that Kachin should be grouped together with Bodo-Garo, Northern Naga and Luish as a branch of Sino-Tibetan. As there is no convincing evidence that these words represent genetic affiliation rather than local features, more evidence is needed to support this suggestion.

#### LANGUAGE GROUP XIX

The Newari language is spoken in many parts of Nepal. The differences between its modern dialects are insignificant, but they differ considerably from the traditional written language. There is a grammar and a dictionary of written Newari (Jørgenson 1936, 1941) and two vocabularies of modern dialects (Hale 1973; Hashimoto 1980b).

The phonological changes in Newari are rather complicated and it is sometimes difficult to identify common Sino-Tibetan roots. The role of Newari in Sino-Tibetan comparative linguistics is therefore not major, despite the language's long written history.

#### LANGUAGE GROUP XX

Lepcha is spoken in some areas of Nepal and India. The language's lexicon is known relatively well. A large modern dictionary (Tamsang n.d.) supports evidence of the dictionary published in the last century (Mainwaring 1898), but grammatical information on Lepcha is not quite sufficient. Some modern data on its phonetics is also available (e.g. Sprigg 1966).

Lepcha seems to be a very archaic Sino-Tibetan language, and its forms are often used in comparative works. The language exhibits no specific affiliations with other Sino-Tibetan languages, although Shafer (1974) erroneously connected it with the Kuki-Chin group.

#### LANGUAGE GROUP XXI

The Abor-Miri group consists of minor languages spoken near the Tibeto-Indian border, such as Abor, Apa-Tanang and Miri (Marrison 1989). They are described in books both old and new (e.g. Hamilton 1900; Lorrain 1909; Das 1963; Simon 1976; Sun et al. 1980). There has been no reconstruction of the protolanguage, and in many cases the etymological analysis of Miri forms is rather difficult.

#### LANGUAGE GROUP XXII

The East-Himalayan group consists of three subgroups:

1. Limbu languages: Limbu, Yakha and others;
2. Thulung-Khaling languages: Thulung, Bontawa and others;
3. Bahing-Sunwar languages.

Languages of this group are spoken in the Central Himalayas. There are good grammars, phonetic descriptions and dictionaries for some of these languages (Hale 1973; Allen 1975; van Driem 1987; Weidert & Subba 1985), but most are still not fully described.



The phonological history of these languages is obscure, and their comparison with other Sino-Tibetan groups has not been well grounded. Starostin's (1985) phonological reconstruction of the group provides a basis for more accurate comparative work.

#### LANGUAGE GROUP XXIII

Until recently, Kanauri was the only West Himalayish language known to linguists. The situation has improved, mostly thanks to work by Sharma (e.g. 1989b, 1990, 1992), and the group is now seen as having five major branches (Bradley 1996):

- Lahuli: Pattani, Chamba-Lahuli and others;
- Kanauri;
- Kanashi;
- Almora: Darmiya, Rangkas and others;
- Thami.

The languages have been strongly influenced by Tibetan, and their lexicons include many Tibetan loans. A belief among linguists that these languages should be grouped together with Tibetan has probably been prompted by these loans.

#### LANGUAGE GROUP XXIV

The Chinese language group consists of many modern languages traditionally called 'dialects'. These dialects, according to Jakhontov (1966), can be grouped as follows:

1. a) Mandarin, Wu, Xiang, Gan;
- b) Yue, Hakka;
2. c) Minnan; Mindong.

As some of these dialects are not mutually intelligible, one can consider them to be different, though closely related, languages. In contrast to other Sino-Tibetan groups, the Chinese group is well documented. There are synchronic descriptions of many dialects, dictionaries of some, and reconstructions of protolanguages for dialectal groups such as Mandarin, Yue and Min.

Middle Chinese of the six to ninth centuries AD is also well known. We owe our knowledge to Medieval Chinese scholars who compiled rhyme dictionaries and phonological tables classifying the phonological oppositions of Middle Chinese. Through the comparison of modern dialects and of Chinese loans in Japanese, Korean and Vietnamese, these oppositions have been assigned phonetic interpretations. All modern reconstructions of Middle Chinese are based on classical research by Karlgren (e.g. 1923); the differences are mainly in the interpretation of phonological oppositions (Li Rong 1956; Pulleyblank 1984, 1991; Starostin 1989b; Baxter 1992). The lexicon of Middle Chinese, represented in some medieval dictionaries, is also well known. Most modern dialects go back to Middle Chinese, although the Min group separated some centuries earlier.

Old Chinese existed in the first half of the first millennium BC. The first scholar to invent methods for its reconstruction and apply them to the available data was Karlgren (1940, 1954, 1957). The procedure he developed is perhaps the most complicated ever applied to the study of a language's history. However, Karlgren's reconstruction provides only a vague

impression of the actual Old Chinese forms. For this reason, comparison of Karlgren's Old Chinese with other Sino-Tibetan languages was not completely successful. Only a few good comparisons were identified, and as a result, the hypothesis that Chinese is only remotely related to the other Sino-Tibetan languages came to be widely accepted (Benedict 1972a).

Karlgren's reconstruction has been discussed and improved by such scholars as Pulleyblank (1962), Li Fang-kuei (1971), Jakhontov (1959–60), Baxter (1992). Starostin's version of the Old Chinese reconstruction (Starostin 1989b) is adopted in this book.

Usually, many Middle Chinese and even more Old Chinese phonological features have merged to form any particular Modern Chinese feature. The pattern of phonological changes from Old to Middle and Modern Chinese is very complex, and it is impossible to predict an Old Chinese form solely on the basis of a modern one. In many cases, even the Middle Chinese form will not be predictable from a modern one. A comparison of Chinese with other Sino-Tibetan languages requires the use of reliable Old Chinese forms obtained through the standard procedure of reconstruction, rather than speculative forms based on intuitions about the possible development of the lexemes under consideration.

Evidence of Chinese genetic relationship to Tibetan, Burmese and other Sino-Tibetan languages meets the four obligatory conditions of a complete genetic claim:

- (i) it is supported by a significant number of lexical similarities, contained in various publications: Shafer 1974; Benedict 1972a, 1976; Peiros and Starostin 1977; Bodman 1980; Luce 1981; Coblin 1986; Starostin 1989 (based on material later published as Peiros & Starostin 1996) and some others. The comparisons included in these publications are of varying quality due to their reliance on various, often imprecise, Old Chinese reconstructions.
- (ii) Chinese forms are represented in a sufficient number of comparisons from the lexicostatistical lists.<sup>10</sup> For three languages, Burmese, Tibetan and Chinese, we have:<sup>11</sup>

|          | Burmese         | Tibetan          | Chinese      |
|----------|-----------------|------------------|--------------|
| 1. die   | <i>ssij</i>     | <i>ãchi</i>      | <i>ij?</i>   |
| 2. ear   | <i>nna:</i>     | <i>rna</i>       | <i>hə?</i>   |
| 3. fire  | <i>smi:</i>     | <i>me</i>        | <i>mə:j?</i> |
| 4. fish  | <i>ŋŋa:</i>     | <i>ŋa</i>        | <i>ha</i>    |
| 5. kill  | <i>ssat</i>     | <i>gsod</i>      | <i>ra:t</i>  |
| 6. long  | <i>dhrap</i>    | <i>riŋ</i>       | <i>raŋ</i>   |
| 7. name  | <i>m?a.-maŋ</i> | <i>miŋ</i>       | <i>heŋ</i>   |
| 8. short | <i>ttui</i>     | <i>thuŋ-thuŋ</i> | <i>o:n?</i>  |
| 9. sun   | <i>nnij</i>     | <i>ŋi-ma</i>     | <i>it</i>    |
| 10. two  | <i>nhnac</i>    | <i>ŋpis</i>      | <i>ij-s</i>  |

<sup>10</sup> Here I compare words chosen according to the procedure accepted for compiling lists for lexicostatistical analysis: each form listed is the main word whose meaning is precisely the same as that represented in the basic list.

<sup>11</sup> Starostin's Old Chinese reconstructions represent Mandarin words. Lhasa Tibetan and Standard Burmese forms are given in their traditional orthography. Most of the comparisons are well known (Shafer 1974; Benedict 1972a; Peiros and Starostin 1996).

|     |        | Burmese           | Tibetan         |
|-----|--------|-------------------|-----------------|
| 1.  | black  | <i>nak</i>        | <i>nag</i>      |
| 2.  | bone   | <i>?a.rui:</i>    | <i>rus</i>      |
| 3.  | dog    | <i>khuj:</i>      | <i>khi</i>      |
| 4.  | eat    | <i>ca:</i>        | <i>za</i>       |
| 5.  | eye    | <i>mjak.ci.</i>   | <i>mjig</i>     |
| 6.  | hand   | <i>lak</i>        | <i>lag</i>      |
| 7.  | heavy  | <i>lij:</i>       | <i>lžid</i>     |
| 8.  | know   | <i>si.</i>        | <i>šes</i>      |
| 9.  | liver  | <i>?a.sap:</i>    | <i>mčin</i>     |
| 10. | meat   | <i>?a.-sa:</i>    | <i>ša</i>       |
| 11. | moon   | <i>la.</i>        | <i>zla</i>      |
| 12. | nail   | <i>lak-sap:</i>   | <i>sen-mo</i>   |
| 13. | near   | <i>ni:</i>        | <i>thag-ŋe</i>  |
| 14. | neck   | <i>lap-paŋ:</i>   | <i>mdriŋ</i>    |
| 15. | nose   | <i>hna-khaŋ:s</i> | <i>na-khug</i>  |
| 16. | no     | <i>ma.</i>        | <i>ma</i>       |
| 17. | road   | <i>lam:</i>       | <i>lam-kha</i>  |
| 18. | salt   | <i>cha:</i>       | <i>chwa</i>     |
| 19. | snake  | <i>mruj</i>       | <i>sbrul</i>    |
| 20. | star   | <i>kraj</i>       | <i>kar-ma</i>   |
| 21. | tongue | <i>hlja</i>       | <i>lče</i>      |
| 22. | tooth  | <i>swa:</i>       | <i>so</i>       |
| 23. | tree   | <i>sac-paŋ</i>    | <i>šiq-sdoŋ</i> |

|    |        | Burmese       | Chinese      |
|----|--------|---------------|--------------|
| 1. | dry    | <i>khrauk</i> | <i>ka:r</i>  |
| 2. | horn   | <i>khjui</i>  | <i>kro:k</i> |
| 3. | new    | <i>sac</i>    | <i>sin</i>   |
| 4. | night  | <i>ŋa</i>     | <i>lia-s</i> |
| 5. | sand   | <i>saj:</i>   | <i>sra:j</i> |
| 6. | stone  | <i>kjauk</i>  | <i>diak</i>  |
| 7. | tail   | <i>mri:</i>   | <i>məj?</i>  |
| 8. | year   | <i>hnac</i>   | <i>nhi:n</i> |
| 9. | yellow | <i>wa</i>     | <i>waŋ</i>   |

|    |       | Tibetan     | Chinese      |
|----|-------|-------------|--------------|
| 1. | I     | <i>ŋa</i>   | <i>ŋha:j</i> |
| 2. | louse | <i>srig</i> | <i>srit</i>  |
| 3. | mouth | <i>kha</i>  | <i>kho:?</i> |
| 4. | this  | <i>ādi</i>  | <i>te</i>    |
| 5. | water | <i>čhu</i>  | <i>tuj?</i>  |

TABLE 4.5: THE NUMBER OF COMPARISONS BETWEEN BURMESE, TIBETAN AND CHINESE

|         | Burmese | Tibetan | Chinese |
|---------|---------|---------|---------|
| Burmese | x       | 10+23   | 10+9    |
| Tibetan | 10+23   | x       | 10+5    |
| Chinese | 10+9    | 10+5    | x       |

These core comparisons support the genetic claim, because:

- (i) there is a significant number of them and this number cannot be explained as a result of pure chance;
- (ii) there are comparisons including forms from all three languages, as well as from any pair of them.<sup>12</sup>
- (iii) a set of phonological correspondences connects the languages (Starostin 1989b; Peiros and Starostin 1996).
- (iv) these correspondences are based on lexical comparisons.

There is a strong case, then, that Chinese is genetically related to other Sino-Tibetan languages. Recently, Sagart (1993a, 1993b, 1994) has proposed the Sino-Austronesian theory, advocating that Chinese belongs to the Austronesian language family. This position has attracted some support from other linguists (Xing 1991a, 1991b, 1991c).

Sagart presents two types of arguments, morphological and lexical, in support of his claim. His morphological evidence is based on three instances of similarity between reconstructed Proto Austronesian and Old Chinese affixes:<sup>13</sup>

- (1) Proto An infix *\*-ar-* and OC 'distributed action/object' infix *\*-r-*.
  - The Proto An infix is reconstructed by Sagart on the basis of forms from Formosan and Western An languages (Sagart 1994:275–276).
  - The OC infix is found, according to Sagart (1993c), in pairs like:  
*\*sij?* 'wash' [CHAR1] // *\*srijx* 'sprinkle', 'cleanse' [CHAR2]  
*\*gop* 'join (two things together)' [CHAR3] // *\*grop* 'unite (more than two things)' [CHAR4]
- (2) Proto An *\*-in-* 'patient nominalising' infix and OC *\*-j-* 'non-agent nominalising' infix.
  - The Proto An infix was reconstructed by Starosta et al. (1982) with the meaning 'the N affected by V-ing'.
  - The OC infix is found by Sagart in pairs like:  
*\*kat* 'to cut', 'castrate' [CHAR5] // *\*kjat* 'gelded sheep' [CHAR6]  
*\*mej* 'inscribe', 'engrave', 'inscription' [CHAR7] // *\*mjej* 'written word', 'name' [CHAR8]  
*\*baŋ* 'side' [CHAR9] // *\*bjaŋ* 'side-room' [CHAR10]  
*\*hmoj?* 'fire' [CHAR11] // *\*hmjoj?* 'land cleared by fire' [CHAR12]

<sup>12</sup> Tibetan and Burmese are closer to each other than either of them are to Chinese, and this is reflected in the different numbers of comparisons found between the languages.

<sup>13</sup> Following Sagart the OC forms are given in Baxter's (1992) reconstruction rather than in the reconstruction by Starostin (1989b) accepted in this book.

(3) Proto An *\*ma-* 'stative/intransitive verb prefix' and OC *\*N-* 'stative/intransitive verb prefix'.

- The OC infix *\*N-* is reconstructed by Sagart on the basis of pairs like:  
*\*kens* 'to see' [CHAR13] // *\*gens* 'to appear' [CHAR14]  
*\*kop* 'to put together' [CHAR15] // *\*gop* 'to agree' [CHAR16]  
*\*trjuŋs* 'hit the centre' [CHAR17] // *\*drjuŋs* 'to be in the middle' [CHAR18]

The voiced initials in Old Chinese forms are interpreted by Sagart as traces of an ancient prefix with the phonological value *\*N-*. Sagart claims that this reconstruction is supported by phonological patterns among borrowings in Yao dialects (see Downer 1973); in Mien Yao, Chinese loans form pairs with plain and prenasalised initials:

*khɔiʔ* (< PY *\*kh-*) 'open (tr.)' // *gɔiʔ* (< PY *\*ŋkh-*) 'to open (intr.)'

Both of these are borrowed from OC *\*khoj* 'open' [CHAR19].

This morphological evidence is open to challenge on several counts. At a lexical or semantic level, some of Sagart's proposals are controversial – an example is his treatment of the word 'name'<sup>14</sup> as a derivation from 'inscribe', 'engrave', 'inscription'. Even putting these objections aside, there are problems with the affixes reconstructed by Sagart.

The reconstruction of OC *\*N-* is based on two considerations:

- (i) alternation of voiced and voiceless initial consonants in OC; and
- (ii) interpretation of the voiced consonants as showing the existence of a nasal prefix *\*N-*.

The existence of the alternations is well-known in Old Chinese. However, the interpretation proposed by Sagart seems unconvincing, because nothing within the Chinese data indicates the existence of a nasal consonant here. The nasal is reconstructed by Sagart on the basis of a parallel with loans into the unrelated Mien Yao, a language which synchronically distinguishes only voiceless and voiced initials. At the Proto Yao level one may postulate an additional opposition which is associated with prenasalisation; the nasalisation is not, however, represented in the spoken Yao languages, but is reconstructed for Proto Yao by analogy with Proto Miao (see §3.2.2 for discussion of this problem). If we also note that it is not clear when the Chinese words were borrowed into Yao, it is apparent that the reconstruction of *\*N-* is not well supported. One can reconstruct instead *\*d-*, *\*ɣ* or any other voiced consonant, or any syllable whose vowel could cause the voicing of the initials. In such cases it is difficult to find any formal similarity to Proto An *\*ma-*.

The two OC infixes proposed by Sagart also create objections, but of another type. In reconstructing medials *\*-r-* and *\*-j-* Sagart follows Baxter (1992), but reinterprets them as infixes. The only reliable evidence for *\*-r-* and *\*-j-* comes from the Middle Chinese *deng* distinction: OC syllables which gave rise to MC syllables in *deng* II are reconstructed by Baxter with *\*-r-*, while OC syllables which gave rise to MC syllables in *deng* III are reconstructed with *\*-j-*. Starostin also reconstructs *\*-r-* as the source of the *deng* II distinction, but his Old Chinese system does not have a *\*-j-* medial at all. Instead, the syllables of MC *deng* III are treated as developments from Old Chinese syllables with short

<sup>14</sup> This is a good ST word, known in many languages of the family (Shafer 1974:38; Benedict 1972a, No.83). Starostin reconstructs the form as *\*mej* with no medial.

vowels, whereas Old Chinese syllables with long vowels are seen to have developed into *deng* I syllables of Middle Chinese (Starostin 1989b).<sup>15</sup>

The actual phonetic correlate of the symbol \*-r- in Old Chinese remains obscure, and several hypotheses of equal probability can be suggested:

- (i) it represents a second element (medial) \*-r- occurring in initial clusters, the loss of which evoked the *deng* distinction;
- (ii) it represents a prefix whose loss led to a different pronunciation of the whole syllable, reflected in the MC *deng* distinction. Instead of \*-r- in \**srijx* 'sprinkle', 'cleanse' (a derivation from \**sij?* 'wash') for example, one can reconstruct \**rə-sij?*; \**kra-sij?*, \**trak-sij?* and many other equally unsupported initial syllables.
- (iii) it corresponds to various prefixes which have an identical *deng* reflection and thus cannot be separated at this stage of Old Chinese studies.

Clearly, the internal Chinese data does not provide us with any basis for a proper choice, and it is simply a convention in OC reconstructions to use medial \*-r- to represent all these options. This being so, Sagart's reconstructed Old Chinese affixes are not convincing, and the connections with Austronesian morphemes are doubtful.

Sagart provides lexical as well as morphological arguments in favour of his Sino-Austronesian claim. He lists 56 comparisons, which can be sorted into five groups:<sup>16</sup>

#### COMPARISON GROUP I

Twenty-six comparisons in which Old Chinese forms have Sino-Tibetan etymologies:

##### 1. 'head'

AN \**qulu* 'head'

OC \**hlu?* 'head' [CHAR20]

The OC form regularly corresponds to Lsh *lu* 'head'. The Austronesian – Sino-Tibetan comparison is from Peiros and Starostin (1984).

##### 2. 'brain'

\**punuq* 'brain', head', 'forehead' (only from Formosan languages)

OC \**nu?* 'brain' [CHAR21]

The OC form belongs to a well-known Sino-Tibetan etymology, connected in Peiros and Starostin (1984) with An \**unəg* 'marrow'.

##### 3. 'neck', 'gullet'

Proto An \**l[i]qeR* 'neck'

OC \**?in* 'gullet' [CHAR22]

The OC belongs to a Sino-Tibetan etymology: WrT *mgrin* 'neck', throat', Lsh *ir* 'a part of the breast or throat above the sternum'.

<sup>15</sup> The Old Chinese length distinction is a retention of a Proto ST opposition (see below).

<sup>16</sup> A number in front of a comparison is that from Sagart's article.

## 4. 'breast', 'milk'

(possibly) Proto An *\*nunuH1* 'breast', 'milk'

OC *\*njo?* 'nipple', 'milk', 'suckle' [CHAR23]

The OC form belongs to a well-known Sino-Tibetan etymology (B No.419): WrT *nu* 'to suck'; WrB *nəw?* 'breast', 'milk', 'suckle'.

## 7. 'think'

Proto An *\*nemnem* 'think'

OC *\*nims* 'think' [CHAR24]

The comparison from Peiros and Starostin (1984). The OC form is compared with WrT *ɲam* 'soul', 'mind'; *sɲim* 'to think', 'suppose'.

## 9. 'flow', 'water(s)'

Proto An *\*aluR* /*\*aliR* 'to flow'

OC *\*hljuj?* 'water' [CHAR25]

The OC form, reconstructed by Starostin as *\*tuj?*, is compared with WrT *čhu* 'water', Lsh *tui* 'water' and Jnp *màdi* 'water'. This weakens the An comparison.

## 11. 'cloud', 'cloudy'

Sagart suggest a Proto An pre-reconstruction *\*qem* 'cloud', 'cloudy'

OC *\*?(r)jum* 'cloudy', 'dark', 'shade' [CHAR26]

The OC form, reconstructed by Starostin as *\*ʔəm*, is related to WrB *ʔum* 'be overcast', 'cloudy'.

## 12. 'snake'

Proto An *\*SulaR* 'snake'

OC *\*ljaj* 'snake' [CHAR27]

The OC form has a Sino-Tibetan etymology: Lsh *hlai-ba* 'a sp. of snake', Jnp *pəlai* 'a sp. of iguana'.

## 15. 'beak', 'peck'

Proto An *\*tuktuk* 'beak of a bird', 'to peck'

OC *\*tuk/ \*trok* 'to peck up' [CHAR28]

The OC form has a Sino-Tibetan etymology: Proto Lolo-Burmese *\*thuk* 'to peck', Jnp *thòk* 'to peck'. Descriptive nature of the root is not excluded.

## 16. 'edible fern'

Proto An *\*lukut* 'parasitic plant sp.'

OC *\*kjot* 'an edible fern' [CHAR29]

The OC form has a parallel in WrT *skjas, skjes* 'fern'.

## 21. 'broad'

A root of unclear stratification, possibly Proto AN: *\*-baŋ* 'broad'

OC *\*baŋ* 'broad', 'wide', *\*bjaŋ* 'side-room' [CHAR30]

OC 'broad', reconstructed by Starostin as *\*ba:ŋ* can be compared with Lsh *va:ŋ* 'be broad', 'wide' and Jnp *awuŋ*, *awawŋ* 'be wide'. OC 'side-room', reconstructed by Starostin as *\*baŋ* and related to WrT *baŋ* 'store-room', 'store-house'.

## 22. 'salty'

Proto An *\*qasiN* 'salt'

OC *\*sjin* 'hot-tasting', 'pungent', 'bitter' [CHAR31]

The OC form has a Sino-Tibetan etymology: WrT *mčin* 'liver', WrB *saŋh* 'liver' < Proto Lolo-Burmese *\*[s]iŋh*, Lsh *thin* 'liver', 'heart', Jnp *məsìn* 'liver'. This excludes a comparison with AN.

## 24. 'bent'

Proto An *\*-kuk* 'bent' cooked'

OC *\*kh(r)jok* 'bend', 'bent' [CHAR32]

The OC form, reconstructed by Starostin as *\*kh(r)ok*, belongs to a well-known Sino-Tibetan etymology: WrT *āgug* 'to bend', WrB *kauk* 'bent' (< Proto Lolo-Burmese *\*kukx*), *khauk* 'bend', Jnp *məgò?* 'bend'. In fact, words of this type are quite common in Southeast Asia and the comparison can be also included in group III.

## 27. 'to ascend'

Proto An *\*a(n)Dak* 'ascend'

OC *\*trjik* 'ascend' [CHAR33]

The OC form, reconstructed by Starostin as *\*trək*, has a Sino-Tibetan etymology: WrT *thag* 'what is uppermost', 'roof', 'above', WrB *tak* 'ascend' (< Proto Lolo-Burmese *\*tak*), *thak* 'above' (< Proto Lolo-Burmese *\*thak*), Lsh *čhak* 'the east', 'be higher up', Jnp *thà?* 'above'.

## 31. 'enclosure', 'contain'

Proto An *\*-kem* 'enclose', 'cover', 'grasp'

OC *\*kh(r)jim* 'coverlet' [CHAR34]

The OC form has a Sino-Tibetan etymology: WrT *grum-ce* 'a thick woollen blanket', WrB *khrum* 'cover (with blanket)'. This makes a comparison with Proto An unlikely.

## 35. 'scrape'

Proto An *\*kuSkuS* 'scrape'

OC *\*krot* 'scrape' [CHAR35]

The OC form is related to WrT *bgrad* 'scratch' and, perhaps, WrB *khraç* (< Proto Lolo-Burmese *\*khrít(x)*), which makes the comparison with Proto An unreliable.



## 36. 'close', 'shut'

Proto An *\*kupit* 'close', 'shut'

OC *\*pit* 'shut', 'close' [CHAR36]

The OC form is included in a Sino-Tibetan etymology: WrB *pit* 'close', Jnp *kəpat* 'close' (Hanson), Trung *əpit'* 'close a door', Kanauri *pid-* (given by Shafer).

## 37. 'slip off', 'loose'

Proto An *\*-lus* 'slip off'

OC *\*lot*, *\*hlot* 'peel off' [CHAR37]

The OC form, reconstructed by Starostin as *\*čo:t*, *\*žo:t* 'pull off', 'let loose', is related to WrT *lhod* 'loose', 'relaxed', WrB *lwat* 'be free', Jnp *tāt* 'to liberate' (cf. B No.209).

## 40. 'chew'

Proto An *\*paqpaq* 'chew'

OC *\*baʔs* 'chew', 'have food in the mouth' [CHAR38]

The OC form is included in a Sino-Tibetan etymology: WrB *wah* 'chew', Jnp *gəwà* 'bite' (cf. B No.424).

## 41. 'braid'

Proto An *\*-pid* 'braid', 'wind together'

OC *\*p[e/i]nʔ* 'braids of hemp or wheat stalks', *\*p[e/i]nʔ* 'plait (the hair)', *\*b[e/i]nʔ* 'plait the hair into braids' [CHAR39].

The OC forms are included in the following Sino-Tibetan etymology: WrT *ābjar*, *ābjor* 'stick to', 'adhere to', Lsh *phiar* 'knot', 'plait' (cf. B No.178) which makes the comparison with Proto An less probable.

## 42. 'gather', 'be together', 'all'

Proto An *\*puluŋ* 'gather', 'together'

OC *\*loŋ* 'be the same', 'join', 'unite' [CHAR40]

The OC form, in Starostin's reconstruction *\*lo:ŋ*, is included in a Sino-Tibetan etymology: WrT *joŋs* 'all', 'whole', Jnp *jàwŋ* 'all', 'whole'. This indicates that the Proto Sino-Tibetan form was *\*jo:ŋ* and thus weakens the comparison with AN.

## 44. 'chop'

Proto An *\*saksak* 'hack', 'chop into pieces'

OC *\*tsrjak* 'to cut off' [CHAR41]

The OC form is included in a Sino-Tibetan etymology: WrT *āchog* 'to hew', 'chop', 'cut', Lsh *če:k* 'chop or hack with axe', 'to hoe'.

## 45. 'stick into', 'pierce'

Proto An *\*-sek* 'insert', 'stick into a soft surface'

OC *\*tshjek*, *\*tshjeks* 'pierce', 'prod', 'stab' [CHAR42]

One can connect the OC form with WrT *āzugs*, *zug* ‘to prick’, stick into’, WrB *cəuk* ‘to plant’, ‘put upright’, Lsh *fuk* ‘be erect’ (B No.360), which all indicate Proto Sino-Tibetan \**u* or \**ə*.

## 48. ‘suck’

Proto An \**-sep* ‘sip’, ‘suck’

OC \**ts[i/u]p* ‘sting and suck, as mosquitoes’ [CHAR43]

The OC form is included in a Sino-Tibetan etymology: WrT *āžib(s)* ‘suck’, WrB *cup* ‘suck’, Lsh *fa:wp* ‘kiss’, ‘suck’, Jnp *čup* ‘suck (as through a straw)’. (Cf. Shafer 1974:54; B No.69). The Sino-Tibetan connections of the OC form are mentioned by Sagart.

## 50. ‘tie’

Proto An \**Siket* ‘tie’, ‘attach to’

OC \**kit* ‘tie’, ‘knot’ [CHAR44]

The OC form has a Sino-Tibetan etymology: WrB *kjac* ‘plait’, Proto Kuki-Chin (Shafer) \**khit* ‘bind’ and possibly Jnp *makjit* ‘tie’, ‘bind’ (Shafer 1974:419; B No.484).

## 56. ‘torch’, ‘fire’

Proto An \**D<sub>2</sub>amaR* ‘torch’

OC \**hmij?* ‘fire’ [CHAR45]

The OC form belongs to a well-known Sino-Tibetan etymology: WrT *me* ‘fire’, WrB *mih* ‘fire’ (< Proto Lolo-Burmese \**m[e]lh*), Lsh *mei* ‘fire’, Jnp *mji* ‘fire’ (Shafer 1974:38, 124; B No.290). The Sino-Tibetan connections of the OC form are mentioned by Sagart. The comparison is associated with cultural ideas and thus, perhaps, belongs to group IV. Compare, however, ZhT \**hmai<sup>C</sup>* ‘burn’, ‘be burnt’ which can be related to An (see §2.1.2 above).

## COMPARISON GROUP II

Eighteen OC forms without Sino-Tibetan etymologies:

## 6. ‘sleep’

Proto An \**tuDuR* ‘to sleep’

OC \**djojs* ‘to sleep’ [CHAR46]

## 8. ‘earth’

Proto An \**buRtaq* ‘mud’, ‘earth’, ‘ground’

OC \**tha?* ‘soil’ [CHAR47]

## 10. ‘salt’

Proto An \**qasiRa* ‘salt’

OC \**ra?* ‘salt’ [CHAR48]

13. 'worm'  
 Proto An *\*[julej* 'worm'  
 OC *\*ljin?* 'earth-worm' [CHAR49]
14. 'egg'  
 Proto An *\*qitelur* 'egg'  
 OC *\*lon?* 'egg' [CHAR50]
19. 'opposite', 'that'  
*\*-pa[r]* 'opposite side'. A root of unclear stratification, possibly not from the Proto An level.  
 OC *\*pāj?* 'far demonstrative', 'he', 'him', 'that'. [CHAR51]

The semantic connection is not absolutely convincing.

20. 'high'  
 Proto An *\*-kaw* 'high', 'tall'  
 OC *\*kaw* 'high' [CHAR52]
26. 'bent'  
 Proto An *\*-kut* 'hunched', bent over'  
 OC *\*khjut* 'bend' [CHAR53]
28. 'to strike'  
 Proto An *\*basbas* 'hit', 'strike'  
 OC *\*bjat* 'to strike', 'hew', 'cut', 'attack' [CHAR54]

29. 'to pull out', 'uproot'  
 Proto An *\*-but* 'weed', 'pluck', pull out'  
 OC *\*brots* 'pull up', 'uproot' [CHAR55]

Similar forms are found in the Kadai languages, where they are probably borrowed from Chinese.

30. 'grasp', 'catch'  
 Proto An *\*-gem* 'grasp in the fist'  
 OC *\*gj[ɨ/u]m* 'catch' [CHAR56]

This is possibly related to No.31 in group above.

33. 'encircle', 'wrap around'  
 Proto An *\*-kes* 'encircle', 'wrap firmly around'  
 OC *\*ket, \*get* 'to wrap a cord around an object and measure it' [CHAR57]

## 34. 'scrape'

Proto An *\*kiSkiS* 'scrape off'

OC *\*khr[i/e]t* 'scratch', 'scrape' [CHAR58]

This is perhaps the same as No.35 from group above.

## 38. 'gnaw'

Proto An *\*ɲitɲit* 'gnaw'

OC *\*ɲet* 'gnaw', 'crunch in the teeth' [CHAR59]

## 43. 'rise'

Proto An *\*sakat* 'rise', 'climb up'

OC *\*kjat, \*krjat, \*grjat* 'rise', 'raise', 'lift' [CHAR60]

## 46. 'cramp', 'stop up'

Proto An *\*-sek* 'cram', 'crowd'

OC *\*sik* 'stop up', 'block' [CHAR61]

## 47. 'insert'

Proto An *\*selsei* 'insert', 'cram in'

OC *\*tsjins* 'insert' [CHAR62]

## 51. 'tremble', 'shake'

Proto An *\*-ter* 'shiver', 'tremble'

OC *\*tjin(s)* 'shake' [CHAR63]

## COMPARISON GROUP III

Six possible regional words:

## 18. 'this'

Proto An *\*iniH* 'this'

OC *\*njij?* 'this' [CHAR64]

A regional root, represented also in AA and Kadai languages: WrK *nə:h*, WrS *ni<sup>A</sup>* 'this'.

## 23. 'overcast'

Proto An *\*-Dem* 'dark', 'overcast'

OC *\*[d/l]rj[i/u]m* 'long spell of overcast weather' [CHAR65]

Both forms belong, perhaps, to the group of words which mean 'black', 'dim', 'dark', and so on, found in various languages of the area: Vn *dām*, WrS *?dam<sup>A</sup>* 'black'.

## 25. 'bent'

Proto An *\*-kul* 'curl', 'bend'

OC *\*grjon?* 'bent', 'curved' [CHAR66]

The word is also known in the Mon-Khmer languages: WrK *?əŋkul*, Vn *cui* 'be bent'.

32. 'embrace', 'grasp', 'clasp'  
 Proto An *\*-kep* 'seize', 'grasp', 'embrace'  
 OC *\*gep/\*tsep* 'grasp', 'hold' [CHAR67]

The comparison belongs to the group of forms represented in many languages of the region: Vn *cưóp*, WrK *trəkəp* 'take'.

39. 'to shoot'  
 Proto An *\*panaq* 'to shoot'  
 OC *\*na?* 'crossbow' [CHAR68]

The comparison has been discussed by Benedict (1975) and Peiros and Starostin (1984). A word found in several Southeast Asian languages, which is obviously culturally motivated and thus could also be put in group IV.

49. 'wash'  
 Proto An *\*SawSaw* 'wash', 'rinse'  
 OC *\*tsaw?* 'wash' [CHAR69]

Vn *xố* 'wash off' indicates that the comparison is of a regional type.

#### COMPARISON GROUP IV

Four possible cultural words:

17. 'husk', 'chaff'  
 A root of unclear stratification, possibly not Proto An *\*epa* 'husk', 'chaff'  
 OC *\*phja* 'husk', 'chaff of wheat' [CHAR70]

53. 'rice gruel', 'cooked rice'  
 Possibly a Proto An *\*-buR* 'rice gruel'  
 OC *\*bj[a/o]n?* 'cooked rice or millet' [CHAR71]

54. 'rice as food'  
 AN *\*imay* 'rice'. Mahdi (1994: 440) believes the form to be a loan.  
 OC *\*mij?* 'peeled grain', 'rice' [CHAR72]

The OC form is connected with data from other Sino-Tibetan languages (Benedict 1972a:65, 128, 149). The comparison is also discussed in Peiros and Shnirelman (1989).

55. 'house'  
 Proto An *\*Rumaq* 'house' (Blust 1981)  
 OC *\*mja?* 'large house' [CHAR73]

#### COMPARISON GROUP V

Two possibly descriptive comparisons:

## 5. 'vomit', 'spit out'

Proto An *\*u(n)taq* 'vomit'OC *\*tha?* 'to eject from the mouth' [CHAR74].

Possibly of a descriptive nature.

## 52. 'hammer', 'pound'

Proto An *\*tuqtuq* 'hammer', 'pound', 'crush'OC *\*tu?* 'to hammer' [CHAR75]

A descriptive comparison.

Only groups I and II provide reliable evidence in support of a genetic claim. This gives us altogether 44 comparisons. In 26 of them, Old Chinese forms are included in Sino-Tibetan etymologies. It is possible to demonstrate the Sino-Tibetan origin of many hundreds of Chinese forms (see, for example, Peiros & Starostin 1996), while the whole set of Chinese–An comparisons is less than a hundred. Clearly, the evidence for a Chinese link with Sino-Tibetan is much more substantial than that for a Chinese-Austronesian link.

Additional evidence against Chinese-Austronesian relationship comes from the study of comparisons from the core lexicon. Applying the same procedure to Malay as we did to Chinese, Tibetan and Burmese above, the results are the following:

## (1) Comparisons found in three or more languages:

|   |      | Chinese       | Tibetan    | Burmese     | Malay          |
|---|------|---------------|------------|-------------|----------------|
| 3 | long | <i>*draŋ</i>  | <i>riŋ</i> | <i>hraŋ</i> | <i>paŋjang</i> |
| 5 | sand | <i>*sra:j</i> |            | <i>saj:</i> | <i>pasir</i>   |

Both of these comparisons are probably due to chance, as are the comparisons included in the next group.

## (2) Comparisons between Tibetan and Malay:

|   |       | Tibetan      | Malay        |
|---|-------|--------------|--------------|
| 1 | belly | <i>grod</i>  | <i>perut</i> |
| 2 | sit   | <i>bsdad</i> | <i>duduk</i> |
| 3 | stone | <i>rdo</i>   | <i>batu</i>  |

No comparisons solely between Burmese and Malay are found. The comparisons with Chinese are more interesting.

## (3) Comparisons between Chinese and Malay:

|   |       | Chinese       | Malay         |
|---|-------|---------------|---------------|
| 1 | cloud | <i>*wən</i>   | <i>awan</i>   |
| 2 | egg   | <i>*ro:n?</i> | <i>telur</i>  |
| 3 | foot  | <i>*kak</i>   | <i>kaki</i>   |
| 4 | hair  | <i>*pat</i>   | <i>rambut</i> |
| 5 | root  | <i>*kə:r</i>  | <i>akar</i>   |
| 6 | salt  | <i>*lam</i>   | <i>garam</i>  |
| 7 | sleep | <i>*duj</i>   | <i>tidur</i>  |
| 8 | snake | <i>*liaj</i>  | <i>ular</i>   |

The combined number of correspondences is given in Table 4.6.

TABLE 4.6: THE NUMBER OF COMPARISONS BETWEEN BURMESE, TIBETAN, CHINESE AND MALAY

|         | Burmese | Tibetan | Chinese | Malay |
|---------|---------|---------|---------|-------|
| Burmese | x       | 10+23   | 10+9    | 1+0   |
| Tibetan | 33      | x       | 10+5    | 1+3   |
| Chinese | 19      | 15      | x       | 2+8   |
| Malay   | 1       | 4       | 10      | x     |

The only possible interpretation of the matrix is that Malay is not related to the other languages, but reveals traces of contact with Chinese, exactly as proposed in Peiros and Starostin (1984) (see also Chapter 5). Any other interpretation, such as the Sino-Austronesian hypothesis, forces us to reject the clear indications of the matrix. As we have seen already, the morphological considerations in favour of this hypothesis are also not self-evident. The conclusion is that the whole hypothesis has no reliable support, and that it is better to explain the comparisons as evidence of contacts.

The foregoing discussion of main Sino-Tibetan groups reveals a rather unfortunate situation. Sufficient synchronic data are available only for the Chinese and Lolo-Burmese groups; the other groups are represented only by descriptions of one or two languages. Phonological correspondences between the protolanguages of the main groups have not yet been established. Low level reconstructions are scarce, and there is no comparative dictionary of any group apart from Chinese. The comparative study of the Sino-Tibetan family is still in its infancy. Nevertheless, there are a number of competing views of the history of the family, and approaches to its analysis.

Two main classifications of the family underlie the discussion of Sino-Tibetan in modern literature: Shafer's (1974) and Benedict's (1972a). All others are modifications of them (Voegelin & Voegelin 1975; Ruhlen 1987 and others). Recently, Bradley (1996) has proposed a new Sino-Tibetan classification which bridges the main two.

Let us discuss these classifications, paying attention to the following two parameters:

- (i) the major branches of the family proposed by the classifications;
- (ii) the position of 32 languages also used for a lexicostatistical classification (Peiros & Starostin 1986), discussed below.

According to Shafer, the Sino-Tibetan family consists of five main divisions (he erroneously considers the Kadai languages to form a sixth group). These divisions in turn are composed of sections, branches, and groups:<sup>17</sup>

<sup>17</sup> Numbers in brackets are references to the low level groups discussed above.

A. Sinitic division (XXIV);

B. Bodic division:

Bodish Section:

Bodish Branch (V): Tibetan dialects

Rgyarong Branch (IV): Jarung

Gurung Branch (VIII): Gurung, Tamang

West Himalayish Section (XXIII):

NW Branch: Kanauri

West Central Himalayish Section:

Vayu (XXII); Chepang, Magari (XI), Kham (X)

East Himalayish Section (XXII):

Western Branch: Thulung

Eastern Branch: Limbu

C. Burmic division:

Burmish Section:

Burma Branch: Burmese, Maru, Achang (I);

Lolo Branch: Akha, Lahu and others (I);

Hsihsia Branch: Tangut (II)

Nungish Section (IX): Nung

Kachinish Section (XVII): Jingphaw

Kukish Section:

Central Branch: Lushai (XIII)

Luhupa Branch: Tankhur (XIII)

Lepcha (XX);

Mikir Branch (XIV);

D. Baric division:

Barish Section (XVI):

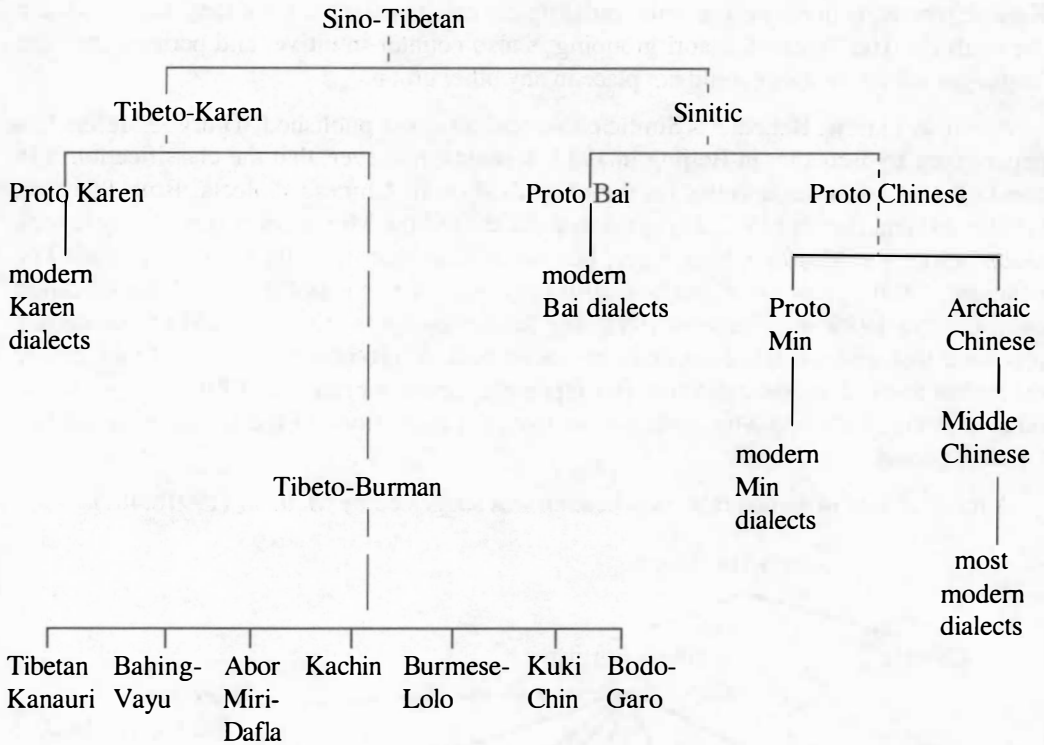
Western Branch: Bodo

E. Karenic division(XII): Sgaw.

Some languages such as Newari (XVIII) or Qiang (III) have no precise place in this classification. Shafer gives no accompanying comments or explanations, and the reasons for his classificatory decisions are often unclear. It is therefore difficult to discuss the classification in detail. In some cases, however, it appears that the geographic position of the languages was the motivation for the classification. The Sinitic division is to the north-east of the Sino-Tibetan area, Bodic to the west and north-west, Burmic in the centre and Karenic to the south. The Baric division is located between the Bodic and Burmic divisions. In spite of this apparent geographical basis, most of the low level groupings established by Shafer are quite reliable.

The latest version of Benedict's Sino-Tibetan classification is presented by Thurgood (1985a:10):





Three of the five main divisions of Shafer's classification (Bodic, Burmic and Baric) are united by Benedict to form the Tibeto-Burman family, which he subdivides as follows:

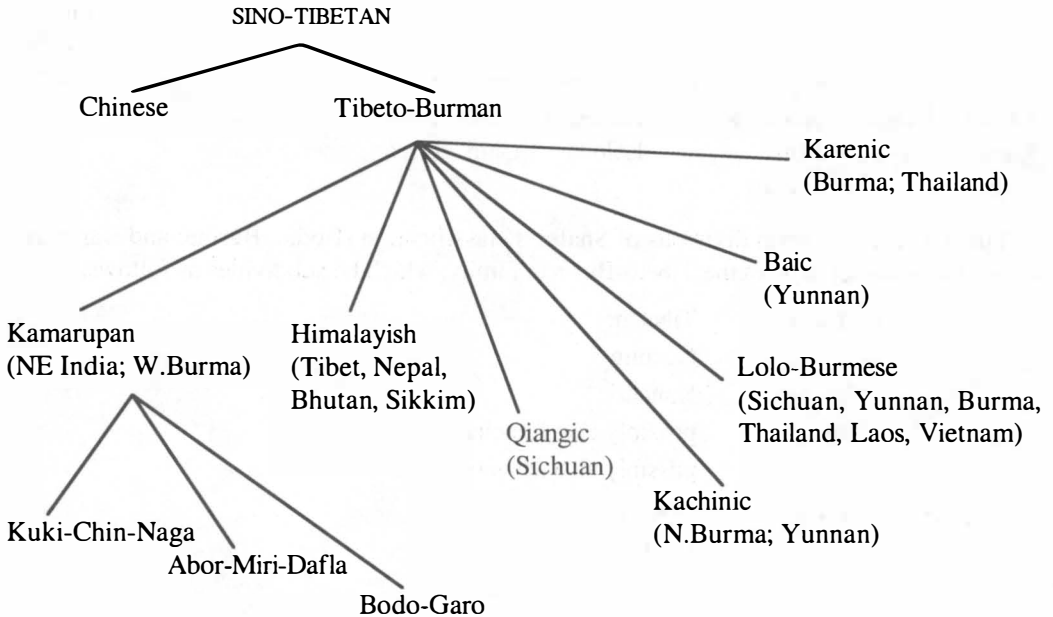
1. Tibetan-Kanauri: Tibetan  
Gurung  
Kanauri  
possibly also Lepcha  
possibly also Magari
2. Bahing-Vayu: Sunwar  
Limbu  
possibly also Newari
3. Abor-Miri
4. Burmese-Lolo: Burmese  
Lahu  
possibly also Nung
5. Kachin: Jingphaw
6. Kuki-Chin: Lushai
7. Bodo-Garo: Bodo

The reasoning behind Benedict's proposal is unclear (Benedict 1972a:6), but his binary branching structure (Chinese versus Tibeto-Karenic and Karenic versus Tibeto-Burman) results from the use of comparisons without internal reconstructions. Old Chinese and Proto

Karenic reconstructions are available, and different results are obtained if they are included in the analysis. The Tibeto-Kanauri grouping is also counter-intuitive, and perhaps includes languages which Benedict could not place in any other group.

As far as I know, Benedict's Sinitic classification is not published; Thurgood refers to a paper given by Benedict in Beijing in 1982. It seems, however, that the classification is in contradiction to modern views on the classification of Chinese dialects. Both Starostin (1989b:49) and Baxter (1992:25) agree that the split of the Min dialects from Chinese took place before the Middle Chinese era, but much later than the Old Chinese period. The position of Bai is less clear, but Starostin (as a part of our lexicostatistical classification completed in 1986, see Starostin 1995) and Jakhontov (pers. comm. 1986) independently proposed that original Bai forms can be traced back to protoforms found in Old Chinese reconstructions. This indicates that Bai represents another branch of Chinese, opposed to other dialects (including Min), which split from the main stock of the family after the Old Chinese period.

A modification of Benedict's classification was suggested by Matisoff (1991b:481):



Matisoff's Himalayish group includes Tibetan, Lepcha, Newari, Gurung, Kham, Magari, Chepang, Sunwar and Kiranti languages (Matisoff 1991b:483). His Qiangic group is formed by Qiang, Baima, Gyarong, Tosu, Pumi and other Sino-Tibetan languages of Sichuan. According to my knowledge, no justification of the tree's structure has been published.

The most recent classification of the Sino-Tibetan languages is that of Bradley (1996). According to this classification, the Tibeto-Burman languages (that is, Sino-Tibetan without Chinese) form four major branches: Western or Bodic, Sal, South-eastern and North-eastern.

## 1. Western:

|                 |                 |                  |
|-----------------|-----------------|------------------|
| Bodish:         | West Bodish:    | Gurung, Tamang   |
|                 | Central Bodish: | Tibetan dialects |
| West Himalayan: |                 | Kanauri          |
| Himalayan:      | Central:        | Magar            |
|                 |                 | Chepang          |
|                 |                 | Kham             |
|                 |                 | Newari           |
|                 | Kiranti:        | Sunwar           |
|                 |                 | Thulung          |
|                 |                 | Khaling          |
|                 |                 | Limbu            |

## 2. Sal:

|                         |                   |                 |
|-------------------------|-------------------|-----------------|
| Bodo-Garo-Northern Naga | Bodo-Garo:        | Bodo and others |
|                         | Jingphaw:         | Jingphaw        |
|                         | ? Kuki-Chin-Naga: | Lushai          |
|                         |                   | Tankhur         |
|                         |                   | Mikir           |

## 3. Central:

|              |        |
|--------------|--------|
| Lepcha:      | Lepcha |
| Adi-Mishing: | Miri   |
| Nungish:     | Nung   |

## 4. North-eastern:

|             |                  |
|-------------|------------------|
| Tangut:     | Tangut (= Xixia) |
| Core Qiang: | Jarong           |
|             | Qiang            |
|             | Pumi             |
| Other:      | Bai              |
|             | Naxi             |

## 5. South-eastern:

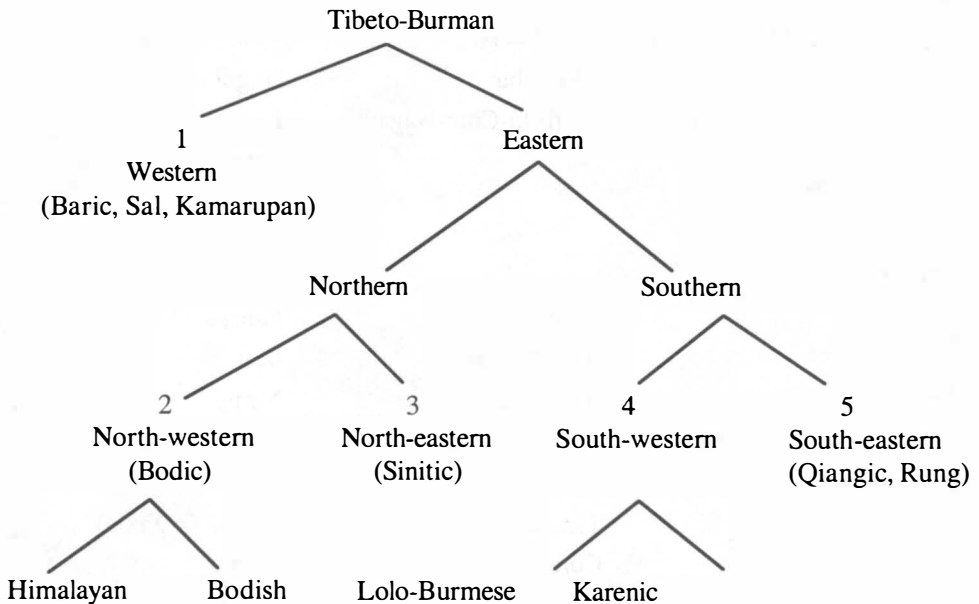
|               |         |
|---------------|---------|
| Lolo-Burmese: | Burmese |
|               | Lahu    |
| Karenic:      | Sgaw    |

The main differences from Shafer's classification are:

- (i) the split of the Burmic division into:
  - Central (including Lepcha, Adi-Mishing and Nungish);
  - North-eastern (Tangut and some other languages); and
  - South-eastern (Lolo-Burmese and Karenic).
- (ii) the position of Karenic in the same group as Lolo-Burmese.
- (iii) the acceptance of the Sal group, which includes Shafer's Barish and some of his Burmic languages.

Bradley does not provide us with the formal reasons for his classification, but it is quite probable that geographical, typological and other considerations were used along with comparative evidence.

Practically the same major groups are identified by Driem (1995:253), who also presents his understanding of the branching of the family which he calls Tibeto-Burman:



Data available to me does not permit any evaluation of this classification, but I cannot accept the specific relation of Sinitic and Bodic, contra my similar claim made more than twenty years ago (Peiros 1975).

Jakhontov (1964) was the first to apply lexicostatistics to the Sino-Tibetan family. A lexicostatistical classification is also given in Glover's (1974) Gurung grammar. Starostin and I (1986) have enlarged the list of languages, and with the help of our phonological correspondences (discussed below), have formulated another version of the classification. The phonological correspondences do not extend to all of the languages under consideration, but as the history of most of these languages is known to some degree, the results are of value. The following list classifies the languages included in our lexicostatistical matrix:

## Sino-Tibetan

- I. Tibeto-Burman
  - 1. Central:
    - 1.1. Sichuan-Burmese: Lolo-Burmese (Burmese, Lahu, Naxi);  
Qiang;  
Tangut;<sup>18</sup>  
Jiarung
    - 1.2. Tibetan: Lhasa,  
Sherpa
    - + 1.3. Chepang-Magari: Chepang  
Magari
    - 1.4. Nung
    - + 1.5. Kham
    - + 1.6. Kaike
  - 2. Kuki-Chin:
    - 2.1. Lushai
    - 2.2. Tankhur
  - 3. Mikir
  - 4. Karenic: Sgaw
- + II. East Himalayan: Limbu  
Sunwar  
Thulung
- + III. Bodo-Garo: Bodo
- + IV. Kanauri
- + V. Min
- + VI. Lepcha
- VII. Kachin (Jingphaw)
- + VIII. Newari
- IX. Sinitic:
  - 1. Chinese: Beijing  
Fuzhou
  - 2. Bai.

(+ - languages spoken only in South Asia.)

The data available for most Sino-Tibetan languages is not sufficient to allow their inclusion in the classification.<sup>19</sup> However, the above list still provides some idea of the shape of the Sino-Tibetan genetic tree. At the first level, one can divide the family into at least ten groups, which separated from the protolanguage perhaps simultaneously.

<sup>18</sup> I am grateful to Ksenija Borisovna Keping for her compilation of the 100-item list for Tangut.

<sup>19</sup> Anon. (1991) and Huang (1992) were not accessible at the time of this lexicostatistical study.

(Glottochronological calculations indicate that the disintegration of the Proto Sino-Tibetan could not have begun later than the fourth millennium BC). It is notable that Sinitic forms one such first-level group and is neither considerably different from other groups, nor more closely related to Tibetan than to any other languages. We need to postulate a Tibeto-Burman group which includes most of the languages of the classification. However, this group is different from groups with the same name postulated in other classifications. The other groups in our classification generally consist of only a few languages or language isolates. Most of these isolated groups tend to be quite archaic and are often connected by reliable phonological correspondences.

This classification has some interesting features, particularly the position of Chinese as one of many first-level groups of equal status. Another important feature is that most of the major branches of the family – the first-level groups listed above – are spoken only in South Asia. The only exceptions are the Sinitic and Kachin groups, which are absent from the area, and the Tibeto-Burman group which extends further to the East. These geographical facts have implications for the localisation of the Sino-Tibetan homeland (see below).

The main achievement of Sino-Tibetan comparative linguistics to date has been the collection of lexical comparisons between the languages of different groups. Some of these comparisons are perhaps attributable to the Proto Sino-Tibetan level. An extensive comparative lexicon is included in Shafer (1974), but unfortunately the structure of the book prevents easy access to the data: one has to examine the whole text in order to determine the language groups in which a particular root existed. Although rich, Shafer's data can only be easily used after considerable reorganisation.

Benedict (1972a) also identifies a number of Sino-Tibetan roots, along with their protoforms. The data are presented in a format which is easy to work with, but the list of roots is relatively small and most of them are more thoroughly represented in Shafer's book. All protoforms included in Benedict (1972a) are pre-reconstructions, often rather treacherous as they are not based on a complete set of phonological correspondences between the languages.

About twenty years ago Matisoff (1978a, 1978b, 1985 and others) began to develop his theory of the Sino-Tibetan lexicon and the ways to study it. The logic of this approach can be represented thus:

- (i) Word families “are groups of forms which bear a non-fortuitous phonological and semantic relationship to each other...In many cases the synchronically observable intra- or inter-lingual allofamy [that is, alternating forms] follows no particular pattern that repeats itself elsewhere. This situation may result from conflicting or overlapping morphological processes that obscure each other's outputs, unsystematic or sporadic increments to roots, interference or contamination from genetically unrelated forms, dialect mixture...” (Matisoff 1978a:18).

English words *gold*, *gild*, *gilt*, *yellow*, *yolk* and *jaundice* belong to the same word family (Matisoff 1978a:15).

“Allofams [that is, forms which belong to the same word family] of a true word-family must show both a phonological and semantic resemblance that is due to a common genetic heritage” (Matisoff 1978a).

“Cognacy is a special case of inter-lingual allofamy, such that the cognates can be traced back not only to the same proto-word family, but to one and the same proto-allofam [that is, protoform] in that proto-family” (Matisoff 1978a:17).

“Allofamic variation in Sino-Tibetan follows certain well-established patterns. The recognition of phonological and semantic variation is not an invitation to promiscuity in cognate identification, nor does it imply a disrespect for ‘sound laws’” (Matisoff 1985a:421).

Among the alternations typical to Sino-Tibetan languages one can observe:

- final homorganic stops and nasals (Matisoff 1978a:23).
- final vowel and final consonant (Matisoff 1978a:25)
- changes in position of articulation (Matisoff 1978a:29)
- variation of medial glides (Matisoff 1978a:33)
- variations of nuclear vowels (Matisoff 1978a:36)
- variations in syllable-initial position: voicing, aspiration, and prefixation (Matisoff 1978a:47).
- tonal variations (Matisoff 1978a:57).

- (ii) “Compounding is a pervasive TB morphological process...Words (especially nouns, but also verbs) very often have two syllables, and three-syllable nouns are by no means uncommon” (Matisoff 1978a:58). “As in all languages, there is a multidimensional continuum of transparency in TB compounds” (Matisoff 1978a:59) ranging from the most transparent cases to situations “where a syllable in a compound may become totally opaque, in that it has no meaning of its own in isolation. These pitiful entities I have called ‘morphants (‘orphan morphes’). The TB languages abound in these morphemes, as of course does English” (Matisoff 1978a:61). An example of a morphant is *-tril* in the English word *nostril*.

Such a situation allows one to talk about “unpredictability of semantic source-fields in compound-formation” (Matisoff 1978a:67).

“Different languages (even closely related ones) are quite likely to make different selections from the proto-lexicon in forming compounds. A given compound is liable to reflect an idiosyncratic combination of several different proto-etyma” (Matisoff 1985a:421).

- (iii) Words are related to each other also through various semantic links which can be represented in diagrams. “We call these diagrams metastatic flowcharts, since they are designed to reflect the complex and unpredictable ways in which the meanings of words ‘metastatise’ from one point in semantic space to the other” (Matisoff 1978a:193). Two words (from one or two different semantic fields) included in a metastatic flowchart can be related through a semantic association (Matisoff 1978a:194). Some times such association can be created via compounding. In other cases their relationship can be based on antonymic oppositions.

Accepting such a strategy, Matisoff (1985a:422) identifies protoroots with the help of ‘pan-allofamic formula’ that represents the whole range of its phonological variations. For example one of protoroots for ‘arm’, ‘hand’ identified by Matisoff (1985a:423) is represented as:

$$\left. \begin{array}{c} d- \\ g- \\ p- \end{array} \right\} \begin{array}{l} l \quad ak \\ y \end{array} \quad \text{or} \quad \left. \begin{array}{c} d- \\ g- \\ p- \end{array} \right\} lYak$$

In Matisoff's view these three elements of his approach should be used in the comparative study of the Sino-Tibetan family.

Let us discuss now these assumptions in some detail.

(i) *Word families*

In Germanic and other Indo-European (IE) languages the attitude to word families is different from what is presented by Matisoff. Here an identification of a word family leads to the study of reasons of its origins, rather than to the study of this word family. Dealing, for example, with the word family *gold*, *gild*, and so on, a linguist can tell us that *gild* and *gilt* are different forms of the same Old English verb (*gyld-an* and *ge-gyld*), which is a derivation from Proto Germanic *\*zulþam* 'gold' with another Modern English reflex *gold* (< OE *gold*). The word *yolk* was in OE a derivation from the word *yellow*: *geolu* > *geol(o)ca*. The words *gold* and *yellow* are related to each other only at the Indo-European level: *\*gh̥ltom* 'gold' and *\*ghelwo* 'yellow'. The word *jaundice* is an Old French borrowing, where it is a development of the Latin word *galbus* 'yellow'. This Latin word is genetically related to the English word, as they both are reflexes of the same IE root.

The English word family thus includes words which are various derivations of the same ancient IE root. It would be wrong to study them as a single group: their relationship can be understood only with the help of the precise stratification:

- in Modern English we have *gold*, *gild/gilt*, *yellow*, *yolk* and *jaundice*;
- three different roots were presumably represented in Old English: *gold*, *gyld-en*, *geolu* (with no French loans);
- two different roots were presumably represented in Proto North-West Germanic: *\*zulþum* and *\*gelwa*;
- at the Proto IE level *\*gh̥ltom* and *\*ghelwo* were related to each other.

This stratification actually makes the whole idea of the word family quite useless and even misleading. The usual IE practice is not to deal with such groups of words as if they are something normal and typical, but rather to attribute them to certain chronological levels and explain them with the help of already known phonological and morphological reconstructions.

The idea of word families is much more popular in Sino-Tibetan linguistics, where it was originally applied to a particular situation found in Old and Middle Chinese. Here several reconstructed words could have more or less similar but not identical meanings and forms. Their differences can have various explanations. They can, among other cases, be:

- derivations from the same root;
- dialectal or other doublets found in Chinese sources, but not used in a particular variant of the language;
- the same word represented by several characters, which readings are reconstructed differently.



It seems, however, that in many cases a word family includes words which historically have the same root, and their differences could be due to different sets of affixes attached to this root. One can guess if these derivations were associated:

- (i) with prefixes which gave rise to various alternations of initials,
- (ii) with suffixes found as traces in tonal alternations or in pairs of related words with different final consonants, so typical for Old Chinese, or
- (iii) with unknown segmental features which caused vowel alternations, differences in medials and other similar things.

But the whole problem of word derivation in Old Chinese is yet to be investigated.

Without a clear understanding of the rules of word formation, an identification of a word family is merely the recognition of the lack of our knowledge, and one would expect, that with the development of Chinese historical morphology and word formation studies, we would be able to identify roots and groups of words, derived from these roots.

It comes as no surprise that forms now included in a Sino-Tibetan word family reveal various alternations. If the forms are found in the same language they perhaps represent some morphological features of the language. See, for example, the discussion of word families in Limbu (Michailovsky 1985). One would expect to find the same situation in Old Chinese. If the forms included in a word family are from different languages, several explanations are possible: (a) the differences can be due to regular phonological development of the languages from the same protoform; or (b) the differences can represent the fact that these forms can be traced back to different derivations from the same root of the protolanguage. In both cases to connect the forms, we need a good knowledge of comparative phonology and not just an assumption that the forms are members of the same word family. Instead of talking for respect to the sound laws, we need to establish such laws and to discover regular patterns of languages' development rather than to substitute this work through the study of language families. Studies of various groups of Sino-Tibetan languages (Lolo-Burmese, Karenic and some other) have demonstrated that proper comparative study can be conducted for this family.

## (ii) *Compounding*

The idea of ancient compounds advocated by Matisoff is also misleading as a guideline in the comparative procedure. It is true that, in modern languages, compounds are used often and many of them are quite transparent as the constituting morphemes have their meanings and often can be used independently. This alone suggests that the compounds can be very ancient. If we add to this the fact that in ancient Chinese texts one can hardly find compounds other than personal names, the whole compound hypothesis seems to be not well supported. The danger, however, is not in the hypothesis itself, but in the conclusion drawn from it: 'unpredictability of semantic source-fields in compound-formation'. This in its turn leads to an even stronger assumption: one should not expect to find regular relationships between the forms from a word family as these forms have originated from various compounds with different first or second parts. During the process of historical changes the ancient compounds have contracted in various monosyllabic structures which only slightly resemble each other. That is why a scholar who accepts such a theory may say: "Yes, I respect sound laws, but they cannot be used in my research because of the specific nature of the languages". This leads, as we have seen already, to the rejecting of one of the main

postulates of comparative linguistics, the assumption of regularity of changes. It is interesting that, in the two reconstructions dealing with a limited number of languages published by Matisoff, he does not completely follow this 'compound logic'. In both his Proto Lolo-Burmese reconstruction (1972, 1973) and in comparison of Jingphaw with Lolo-Burmese (1974) he tries to follow the standard logic of comparative linguistics. Only later, when he switched to simultaneous study of many lesser known languages, had Matisoff to introduce compound-logic to explain the lack of regularity in his data. It seems, however, that a thorough study of the languages could provide us with the needed regular pattern, thus eliminating the necessity of compound-based explanation.

(iii) *Semantic links*

It seems to me that Matisoff needs his third idea, 'metastatic flowcharts', also to justify the lack of semantic strictness and rigorous approach in his search for Sino-Tibetan comparisons. Simply by including two meanings in one chart I gain the right to include the corresponding words in one comparison. Using one of Matisoff's charts (Matisoff 1978a:229) one can connect 'hair' and 'blood', 'belly' and 'brain' (p.229) or 'ashamed' with 'shoulder' and 'bird' with 'carry'. It is not totally impossible that these meanings can be found in an etymology, but to justify such connections we need first of all a good comparative phonology, which is not found in Matisoff's recent studies. If instead we use also the compound-logic, we would be able to connect practically any two words in monosyllabic languages. However – and I freely admit this – most of Matisoff's real comparisons do not violate semantics too much.

Let us discuss now a particular word family studied by Matisoff (1985a): ARM/HAND/WING, which 'pan-allofamic formula', according to the author, is:

$$\left\{ \begin{array}{c} d- \\ g- \\ p- \end{array} \right\} \begin{array}{l} l \\ y \end{array} \quad ak \quad \text{or} \quad \left\{ \begin{array}{c} d- \\ g- \\ p- \end{array} \right\} \quad lYak$$

This formula is based on the following data:

1.1 with simple (unprefixed) sonorant initial:

1.11 \*lak

- A. Proto Lolo-Burmese \*lak 'hand' > WrB (and many other LB languages) lak;  
 B. [Himalayish] WrT lag-pa, Sherpa 'lak-pā, Jirel lāk-pā; Kaike laḡ; Thulung Rai loa.

*Comments:*

- (i) -pa is a grammatical suffix in WrT and Sherpa. In Jirel, which is not specifically related to Tibetan, it may indicate a Tibetan loan;  
 (ii) without a historical phonology of Kaike, the origins of laḡ; and its relationship to the Tibetan forms, remain obscure. There is no comparative reason to believe that Kaike is a Tibetan language, but like Jirel it contains many Tibetan loans;  
 (iii) Thulung is not specifically related to Tibetan and one can only speculate as to whether lao is directly related to other forms given here.

C. [Abor-Miri-Dafla] Abor-Miri *a-lâk*, Miri *əlak*, Gallong *alak*, Dafla *əla* (also *al* ‘foot’)

*Comment:*

- (i) all forms here have an initial vowel, which may be a prefix.

D. [Luish] Chairel *lak*, Lui *lök*

E. [Kachinic] Jingphaw *lə-* (unstressed prefix in words like *ləphà?* ‘shoulders’, *ləphùm* ‘forearm’, ‘arm above the elbow’; also in *ləphùt* ‘knee’, *ləgō* ‘foot and leg’, *ləkhàt* ‘kick with heel or hoof’).

*Comment:*

- (i) it is not clear semantically why this prefix should be the trace of a HAND root.<sup>20</sup>

F. [Naga] Tamlu *lak*, Yacham-Tengsa *lakpa*

*Comment:*

- (i) *lakpa* – another Tibetan loan?

G. [Chinese] *\*liək/liək* ‘strong’, ‘strength’, ‘force’ [CHAR76].

*Comment:*

- (i) The connection is based on the suggestion that ‘the graph seems to depict an arm with a hand’. In fact, the reading of this character is *\*rək* (Starostin) or *\*C-rjik* (Baxter) which makes the comparison unacceptable.

### 1.121 *\*yak*

A. [Himalayish] Tamang *yā* ‘hand’, Thakali *yā*, Gurung *yo*.

Newary *yāk-wa* ‘armpit’, Lepcha *yak* ‘tickle’.

*Comments:*

- (i) initial *\*l* does not exist in Proto Gurung (common ancestor of Tamang, Thakali and Gurung) and *y* could be a regular reflex of the Proto Sino-Tibetan initial represented in this root.
- (ii) it is not obvious that the semantics of Newary and Lepcha can be connected directly with the meaning ‘hand’. In Newary we also have *lha(t)* ‘hand’, which could be related to the Sino-Tibetan form.

B. [Naga] Konyak *yak* ‘hand’, ‘arm’ (also *ya* ‘foot’), Tsangsa *yak* and forms from other languages.

*Comment:*

- (i) the historical phonology of these languages is not known; the *y*-initial in all could be a regular reflex of the Proto Sino-Tibetan initial.

C. [Murish] Mru *yāk* ‘armpit’.

*Comment:*

- (i) this word should be grouped with Newary and Lepcha.

D. [Barish] Dimasa *yau* ‘arm’ (also *ya* ‘foot’).

<sup>20</sup> In Peiros and Starostin (1996) the root is *\*lak* with Jingphaw reflex *taʔ*.

E. [Lolish] Lahu *yá* ‘tickle’.

*Comments:*

- (i) the meaning is similar to that of Mru, Newary and Lepcha;
- (ii) see Lahu *lâʔ-šɛ* ‘hand’ included in 1.11.A. Different forms often indicate different protoforms.

### 1.122 \*zak

A. [Kuki-Chin-Naga] Lushai *zak* ‘armpit’.

*Comment:*

- (i) the meaning is similar to that of Lahu, Mru, Newary and Lepcha.

B. [Chinese] \**ziǎk* ‘armpit’. [CHAR77]

*Comment:*

- (i) the reconstruction of this character is \*[*l*]*j*iak (Starostin).
- (ii) the meaning is similar to that of Lahu, Mru, Newary and Lepcha.

## 1.2 with dental prefix

### 1.21 \*d-lak

A. [Kachinic] Jingphaw *lətáʔ* ‘hand’ with metathesis of dental prefix with the lateral initial

*Comment:*

- (i) in many cases Jingphaw *t* is a regular correspondence to WrT *l* and WrB *l*; see for example as in ‘slip off’, ‘loose’ in the discussion of Chinese-Austronesian relationship above.

B. Tangut \**lda* ‘hand’.

*Comment:*

- (i) Tangut had at least two different laterals, reconstructed by Sofronov (1968) as \**l* and \**ld*, so it could be a regular correspondence of \**l*.

### 1.22 \*d-yak

A. [Chinese] \**giək* ‘wing’ in Benedict’s reinterpretation \**diək*. [CHAR78]

*Comment:*

- (i) the reconstruction is \**lak* (Peiros & Starostin 1996)

### 1.23 \*d-[ ]ak

A. [Naga] Nocte *dak* ‘hand’ (alongside *da* ‘foot’)

*Comment:*

- (i) the historical phonology of Nocte is not known and its initial *d* may be a regular correspondence to WrT *l* and WrB *l*.

## 1.3 with velar prefix

## 1.31 \*g-lak

## A. [Chinese] \*k'lâk 'armpit' [CHAR79]

*Comment:*

- (i) the Old Chinese reconstruction is \*liak (Peiros & Starostin 1996).
- (ii) the meaning is similar to that of Lahu, Mru, Newary and Lepcha.

B. Gyarung *tekhlye* 'upper arm'.*Comment:*

- (i) the form is very obscure and, is perhaps a compound, but without Gyarung comparative phonology it is difficult to connect it with other forms.

## 1.32 \*g-yak and \*g-ya

## 1.321

## A. Chinese \*kiak 'leg', 'foot' [CHAR80]

*Comment:*

- (i) the reconstruction is \*kak (Starostin), which makes the connection with \*g-yak quite improbable.

## 1.322

A. WrB *gyak-kəli* 'armpit' also recorded as *chak-kəli* and *lak-kəli*.

## 1.4 with fused (affricated) initial

1.41 \*džak < \*\*  $\left. \begin{array}{c} g \\ d \end{array} \right\} -yak$ A. [Barish] Garo \*džak 'arm' (also \*dža 'foot'), Atong *cak* 'hand', 'arm'.B. [Naga] Banpara *tsak* 'arm', 'hand'.C. [Himalayish] Lepcha *jak*, *yak* 'tickle'.D. [Loloish] Lahu *jâ?* 'cubit', 'length from elbow to fingertips' < PLB \*Nkyak, \*?kyak (Matisoff 1972:49).*Comment:*

- (i) the form and meaning indicate that this word is not related to the others.

## 1.6 with labial stop: \*p-yak

A. Tibetan *phyak* 'hand' (respect language).

## B. Chinese \*piek 'arm'. [CHAR81]

*Comment:*

- (i) the Old Chinese reconstruction is \*peh.

C. Lepcha *a-ka pek* 'forearm'.

D. Limbu *phuk-bek* 'forearm'.

From a semantic point of view, we can identify three groups of meanings from this mass of data:

- (i) 'hand', 'arm', 'wing';
- (ii) 'armpit', 'tickle';
- (iii) 'foot', 'leg'.

Following this simple semantics we need to distinguish at least four groups of potential cognates:

1. 'hand', 'arm', 'wing':

Proto Lolo-Burmese *\*lak* 'hand' > WrB (and other LB languages) *lak*;

WrT *lag-pa*, Sherpa *ak-pā*, (Jirel *lāk-pā*), Kaike *l̥ḁ*; (?) Thulung Rai *loa*.

Abor-Miri *a-lāk*, Miri *əlak*, Gallong *alak*, Dafla *əla*.

Chairel *lak*, Lui *lök*.

Tamlu *lak*, (Yacham-Tengsa *lakpa*).

Tamang *yā*, Thakali *yā*, Gurung *yo*.

Konyak *yak*, Tsangsa *yak* and forms from other languages.

Dimasa *yau*.

Jingphaw *lətá?*

Tangut *\*lda*.

Chinese *\*lak*.

Nocte *dak*.

The Sino-Tibetan root represented in this comparison is reconstructed as *\*lāk* (Peiros & Starostin 1996; cf. Shafer 1974:138, 409, 435; Benedict 1972a, No.86) with regular reflexes in Chinese, WrT, WrB (and Lolo-Burmese) and Jingphaw (other languages are not included in this reconstruction).

The following forms also may potentially be connected with this reconstruction:

Garo *dzæk*, Atong *cak*.

Banpara *tsák*.

However, our knowledge of their history does not allow us to prove this.

2. 'armpit', 'tickle':

Newary *yāk-wa* 'armpit', Lepcha *yak* 'tickle'.

Mru *yāk* 'armpit'.

Lahu *yá* 'tickle'.

Lushai *zak* 'armpit'.

Chinese *\*[l]jiak*.

WrB *gyak-kəli*, *chak-kəli*, *lak-kəli* 'armpit'.

Lepcha *jak*, *yak* 'tickle'.

The Chinese, Burmese and Lushai forms are regular reflexes of Proto Sino-Tibetan \**jāk* ‘armpit’, ‘tickle’ (Peiros & Starostin 1996; cf. Shafer 1974:160; Benedict 1972a:34).

3. ‘foot’, ‘leg’:

Abor *al* ‘foot’.

Konyak *ya* ‘foot’.

Dimasa *ya* ‘foot’.

Nocte *da* ‘foot’.

Garó *dža* ‘foot’

Adding WrT *brla* ‘thigh’ to this list, we are tentatively able to identify another Sino-Tibetan root. The WrT evidence is not sufficient for a reliable reconstruction, and reflexes of the root are not found in other languages with well-understood phonological histories (Chinese \**kak* ‘leg’, ‘foot’ does not belong here). Therefore I can suggest only a very preliminary pre-reconstruction of the root: \**La*.

4. ‘arm’, ‘forearm’:

Tibetan *phyak* ‘hand’ (respect language).

Chinese \**peh* ‘arm’.

Lepcha *a-ka pek* ‘forearm’.

Limbu *phuk-bek* ‘forearm’.

The WrT and Chinese forms are reflexes of Proto Sino-Tibetan \**Piak*. Jingphaw *kəphà?* ‘arm’ also belongs to this root. Without a proper comparative phonology, it is difficult to decide whether the Lepcha and Limbu words also belong here.

In summary, the word family created and studied by Matisoff includes reflexes of at least four different roots, which show no evidence that they should be connected at the protolanguage level. More reliable and significant results would be attained by simply applying the strict comparative procedure to Sino-Tibetan data.

In all, about 800 roots probably belonging to Proto Sino-Tibetan have been discovered by linguists using the traditional comparative method. No one has tried to compare any two languages in detail; for example, there is no complete list of comparisons between Tibetan and Burmese, although these languages have been compared with each other for over one hundred years. A direct comparison of Chinese with Burmese and Tibetan was attempted by Luce (1981), but his list – which includes many interesting comparisons – is far from exhaustive.

As a step towards compiling a Sino-Tibetan etymological dictionary, Starostin and I (1996) conducted a direct comparison of several Sino-Tibetan languages: Chinese (in the form of the Old Chinese reconstruction by Starostin), Tibetan, Burmese (with additions from my Lolo-Burmese reconstruction), Lushai (with a reinterpretation of Shafer’s Proto Kuki-Chin reconstruction), and Kachin. The list does not include Sino-Tibetan languages from South Asia and it is therefore possible that our results represent not a common Sino-Tibetan level but, for example, an East Asian Sino-Tibetan level. However, as we included all published comparisons, such a possibility seems improbable. The published version of the

dictionary includes about 2,000 roots which belong to two different levels: Sino-Tibetan and Tibeto-Burman (as defined in our lexicostatistical classification).

The systematic study of Sino-Tibetan historical phonology began in California in 1934 with the commencement of the Sino-Tibetan comparative project. The data and sources used in the project have not yet been published, and for this reason it is rather difficult to evaluate the results. Some years after the project started, Shafer, who obviously drew upon data from the project, began to publish his articles on the history of the Sino-Tibetan family. For many years he was the leading specialist in the field, conducting independent reconstructions of different Sino-Tibetan branches and comparing these reconstructions. Shafer's most significant findings are collected in the book *Introduction to Sino-Tibetan*. The use of an enormous volume of data, sometimes poorly recorded, makes these results a little unreliable, but they are still of great importance.

Benedict's book, published in 1972, also drew heavily on data from the Californian project. Benedict chose about 20 languages from different Sino-Tibetan groups and concentrated his attention on the relationships between them. This approach, more selective than that of Shafer, in principle allows a more accurate discussion of the data. Unfortunately the principle of completeness was not applied to the process of comparison, and no two languages are connected by a full set of correspondences.

Another attempt to reconstruct Proto Sino-Tibetan phonology was made by Starostin and myself (1996). The limited set of languages in our comparative vocabulary did not allow us to fully reconstruct the Proto Sino-Tibetan system, but we believe that all items (or phonemes) which we reconstructed did exist in the protolanguage. It is possible that data from other languages may result in the addition of new phonemes to our list, but the main features of the system are already apparent.

The structure of each reconstructed Proto Sino-Tibetan root complies with strict phonotactic rules, which are still current in most modern languages. Each root consisted of at least one major syllable with three obligatory parts: initial consonant (initial), vowel, and final consonant (terminal). In some roots, initial clusters are reconstructed as consisting of an initial and a medial consonant.

Besides the major obligatory syllable, a Sino-Tibetan root could also include a prefix and/or a suffix. In our understanding Sino-Tibetan 'prefixes' and 'suffixes' did not necessarily carry any semantic load, and often were probably optional structural elements of the root. Prefixes consisted of one consonant or a consonant plus  $\emptyset$ . Suffixes were formed only by single consonants. The maximal structure of the Sino-Tibetan root was therefore:

$$C_p - \emptyset - C_i - C_m - V - C_t - C_s$$

- $C_p$  - prefixed consonant (optional)
- $\emptyset$  - prefixed vowel (optional)
- $C_i$  - initial consonant (obligatory)
- $C_m$  - medial consonant (optional)
- $V$  - main vowel (obligatory)
- $C_t$  - final consonant (obligatory)
- $C_s$  - suffix (optional).



Some reconstructed prefixes and suffixes may originally have been associated with morphological distinctions, but these distinctions are not yet recognisable in the reconstructions.

In the Proto ST reconstruction, the system of final consonants is established quite reliably. It includes:

|     |     |     |     |     |     |    |
|-----|-----|-----|-----|-----|-----|----|
| *-p | *-m | *-w |     |     |     |    |
| *-t | *-n | *-j | *-r | *-l | *-ʃ | -s |
| *-k | *-ŋ |     |     |     |     |    |
| *∅  |     |     |     |     |     |    |

\*ʃ is reconstructed in the cases where Tibetan *-l* corresponds to Old Chinese final *\*n*, rather than to *\*l*, which is considered a reflex of Proto ST *\*l*.

Benedict suggested (1972a:70) that in Proto Sino-Tibetan there existed an opposition between long and short vowels. This was further supported by Starostin (1979:126–131, 1989b) who showed that the length distinction which he postulated for Old Chinese has clear correspondences in modern Lushai, where long and short vowels are still contrastive in most positions.

The reconstructed system of Proto Sino-Tibetan vowels and diphthongs is:

| Short |    |     | Long |     |     |
|-------|----|-----|------|-----|-----|
| *i    |    | *u  | *i:  |     | *u: |
| *e    | *ə | *o  | *e:  | *ə: | *o: |
| *ɛ    | *a | *ɔ  | *ɛ:  | *a: | *ɔ: |
|       |    | *ia |      | *ua |     |

The reconstruction of initials is more complex. Many aspects of this problem are still unclear, but the number and nature of local sound classes has been established. There were certainly labial, dental and velar stops as well as an affricate series (Benedict 1972a:17). Peiros and Starostin (1996) add to this a set of palatal affricates (maintained in Tibetan and Proto Lolo-Burmese) as well as dental laterals (maintained in Old Chinese and in Lushai), labiovelars (maintained in Old Chinese and Proto Lolo-Burmese), uvulars and labio-uvulars:

\*p    \*t    \*c    \*č    \*ĉ    \*k    \*k<sup>w</sup>    \*q    \*q<sup>w</sup>

Benedict (1972a:20) reconstructs an opposition between voiced and voiceless initial stops, while Shafer (1974) speaks about voiced, voiceless and aspirated stops, basing this on the Tibetan language where voiceless and aspirated stops are in complimentary distribution. Starostin and I distinguish two oppositions, voiced/unvoiced and aspirated/unaspirated:

\*p    \*ph    \*b    \*bh

However, such a reconstruction requires additional confirmation.

The problem of reconstructing prefixes and suffixes has not yet been solved. Shafer reconstructs six prefixes (*\*p-*, *\*t-*, *\*k-*, *\*m-*, *\*r-*, and *\*ŋ-*) mainly on the basis of Tibetan and Southern Chin data, although traces of the system do occur in some other languages. Benedict also identifies six prefixes, but he eliminates Shafer's *\*ŋ-* and adds *\*s-*. In our reconstruction the problem is not satisfactorily solved. The prefixes of Tibetan and Kachin

do not correspond well to each other, nor to those of Proto Lolo-Burmese. Data from South Chin and other prefixing languages were inaccessible to us.

Benedict reconstructed some suffixes, but only \*-s is supported by his data. We assume two suffixes, \*-ʔ and \*-H, but it is clear that such a system is not sufficient to explain all the complexities of the data from modern languages.

The problem of Proto Sino-Tibetan prefixes and suffixes is closely connected with problems of Sino-Tibetan tonogenesis. Many modern languages of the family have tones, ranging in number from two to nine. Rich tonal systems are usually attested in languages with relatively small sets of consonants and with seriously altered syllable structures, such as Lolo-Burmese and Karenic languages. Few firm historical conclusions are available from analysis of tones in Sino-Tibetan languages and the tonal character of the protolanguages is currently under discussion.

Benedict (1972a, 1972b) reconstructs two Proto Sino-Tibetan tones – \*A and \*B – reflexes of which he finds in Chinese, Lolo-Burmese, Karenic, Kachin and some other languages. Internal analysis allows us to trace the origin of these tones to segmental phonemes as has been demonstrated for Chinese (Pulleyblank 1962) and for Lolo-Burmese (Golovastikov 1977, 1989; Peiros 1985a). It appears now that Chinese and Proto Lolo-Burmese tones have developed from two Sino-Tibetan suffixes \*-ʔ and \*-H which are included in our Sino-Tibetan reconstruction. Kachin tones, which correspond in some manner to Lolo-Burmese tones (Matisoff 1974), are also related to these segmental features (Peiros 1978b).

Some Sino-Tibetan languages (such as Classical Tibetan) are atonal, which suggests that Proto Sino-Tibetan was also an atonal language. At the same time, the origins of tones in many languages (e.g. Karenic) are unknown. There are also some correlations between the tones of Kham (group X) and the reconstructed Tangut tonal system (Peiros 1982b). All of these facts require explanation if one wishes to assert the atonal character of Proto Sino-Tibetan.

Proto Sino-Tibetan morphology and syntax are practically unknown. The theories of earlier authors (e.g. Conrady 1896; Wolfenden 1929) were not based on adequate historical phonology, and are not reliable. Of some interest are the results of morphological comparisons made by Bauman (e.g. 1975, 1979) who has investigated the problems of subject-object conjugation in some Sino-Tibetan languages. Recently, morphological reconstruction has attracted the attention of Driem (1993a, 1993b).

Semantic analysis of some lexical groups has been carried out by Matisoff (e.g. 1978a, 1978b, 1985a), who has discovered some interesting Proto Sino-Tibetan semantic phenomena.

The issue of the location of the Proto Sino-Tibetan homeland remains open. It is widely believed that the disintegration of the Sino-Tibetan family took place in China, possibly in Sichuan (e.g. Jakhontov 1977b; Krjukov et al. 1983). Driem (n.d.) argues that “the Tibeto-Burman [that is, Sino-Tibetan] protohomeland lay approximately in the language family’s present geographical centre of gravity, i.e. in Sichuan and Yunnan, [and] the first migration of Tibeto-Burmans [that is, Sino-Tibetans] out of this area would, on historical linguistic grounds, have been the Western Tibeto-Burman migration to the fluvial plains of the lower Brahmaputra and the surrounding hill tracts”. On this account, other languages would have been brought to the west later, presumably in several successive waves.

It is problematic to assume that Yunnan and Sichuan are the “language family’s present geographical centre of gravity”, because only some branches of the Sino-Tibetan family are represented there. Modern languages of the Southern branch of the family (in Driem’s terms) do have a long history in the area, but Northeastern (Sinitic) languages are not autochthonous to the region, having arrived there relatively recently. No linguistic evidence supports the idea of migrations of several waves of Sino-Tibetan speakers to Nepal or other parts of Northern South India.

Accepting the lexicostatistical classification, it appears that the greatest diversity of Sino-Tibetan groups of the first level occurs in South Asia, indicating a possible location of the homeland in the territories south of the Himalayas. Here one can now find most of the high-level Sino-Tibetan groups apart from Chinese and Jingphaw, and some Tibeto-Burman languages spoken to the east. The exceptions are easily explained as the result of later migration.

This hypothesis as to the location of the homeland is based on language distributions and the lexicostatistical classification of the family. Further proof is needed from linguistic data and interdisciplinary investigation. However, I know of no facts which contradict the hypothesis. In 1984 I wrote about possible contacts between the Sino-Tibetan and Austronesian protolanguages, which I believed at the time to have taken place in China (Peiros 1984a). Additional analysis of the data has now allowed me to show that there were no loans from Proto Austronesian into Proto Sino-Tibetan (see Chapter 5). Contacts between these language families took place long after the Proto Sino-Tibetan disintegration began, and thus do not contradict my proposed location of the Sino-Tibetan homeland.

## CHAPTER 5

### SOUTHEAST ASIA: MAIN FEATURES OF LINGUISTIC PREHISTORY

A linguistic account of Southeast Asian prehistory is a description of prehistoric events in the region, constructed purely on the basis of linguistic evidence. It may differ markedly from the prehistoric accounts suggested by archaeologists, anthropologists, and representatives of other disciplines. The task of synthesising such diverse accounts is very complex, and has never been attempted in full detail for the Southeast Asian region (see, however, several recent publications, particularly Bellwood 1991 and 1994).

In creating a linguistic account of the prehistory of a region, one needs to consider:

- the genetic relationships of languages spoken in the area (language families and their affiliations);
- the homelands of the relevant language families;
- absolute and relative linguistic datings available for the area;
- hypotheses about language spread, and migrations of speakers; and
- data about prehistoric contacts between local languages.

More specifically, any linguistic account of Southeast Asian prehistory must consider the interactions and relationships among the five language families represented in the region: Sino-Tibetan, Kadai, Austronesian, Miao-Yao and Austroasiatic. It is highly probable that languages unrelated to these five families also existed in Southeast Asia in the remote past; currently, however, no information on such languages is available.

The Sino-Tibetan family is not genetically related to other local language families, and claims of its genetic affiliation with other Southeast Asian languages are not based on solid evidence (see Chapter 4). The other four language families do appear to be genetically related, forming the Austric macro-family (Chapter 3.3). However, the evidence supporting the hypothesis is limited, leaving space for speculation.

The classification and distribution of modern Sino-Tibetan languages allow me to assume that their homeland was located somewhere in the Sub-Himalayan region, where most groups of the family are still represented. There are no indications that these Sino-Tibetan languages of South Asia arrived in the area in the process of a single migration: there are no traces of specific contacts nor of a common substratum. The disintegration of Proto Sino-Tibetan therefore appears connected with the northern parts of South Asia: it is simpler to assume that languages of the various branches of the family are still spoken near the original territory, rather than to assume many unrelated migrations to South Asia from other territories. I believe that some Sino-Tibetan groups were later transferred eastwards from their original territory in South India, so that Chinese, Jingphaw and some Tibeto-Burman languages (mostly Sichuan-Burmese and Karenic) are now spoken in Southeast Asia. There

is no evidence to indicate specific relations between these 'eastern' groups, which supports the hypothesis that they were introduced to Southeast Asia through independent migrations in different periods. It is possible that Sino-Tibetan languages reached East and Southeast Asia in the early or mid third millennium BC, while the split of Proto Sino-Tibetan somewhere in the Sub-Himalayan region began at least a thousand years earlier.

Before the migrations of Sino-Tibetan speakers into Southeast Asia, Austric languages were spoken in the area. We do not have positive data for the location of Proto Austric, but the following considerations provide some clues:

- (1) Localisation of the Proto Austronesian homeland has been discussed in the literature for over a hundred years, with Kern (1889), Dyen (1971) and others believing that the homeland was located in a tropical coastal environment. Nowadays, however, the idea of a non-tropical coastal homeland is supported by the majority of the specialists. Blust (1984–85, 1988) and Sirk (1984, 1987) have presented a very impressive list of Proto Austronesian terms for wet subtropical vegetation, pointing to the conclusion that the homeland was associated with territories north of the tropical zone. Both Blust and Sirk accept that the Austronesian homeland existed somewhere around the Taiwan Strait, with localisation to the island supported by Blust, and to the mainland by Sirk.<sup>1</sup> However, in the Middle Holocene the climate was warmer and the homeland could have been located further to the north, probably in the coastal areas of Jiangsu or Shandong (Peiros & Shnirelman 1989).
- (2) Localisation of the Austroasiatic homeland has been discussed by Blust (n.d.) who refers to Diffloth's unpublished opinion that the homeland was situated in the Burma-Yunnan border region, perhaps in the middle Salween basin: 'There is almost universal agreement that the first split within AA separated the Munda languages of central and eastern India on the one hand from the MK languages of mainland SEA on the other, and the Burmese-Yunnan border is roughly midway between these two geographical areas'. No discussion of data supporting such a localisation is known to me. Blust also claims that "AA has the longest record of settlement in mainland SEA south of China, well antedating the expansion of Tibeto-Burman, Tai-Kadai, Austronesian and Hmong-Mien [that is, Miao-Yao] into this area". Blust believes that Proto Austroasiatic was probably spoken 7000–7500 BP,<sup>2</sup> a millennium earlier than Proto Austronesian.

The locations of the Proto Kadai and Proto Miao-Yao homelands remain unknown. As none of the protolanguages reveal any clear connections with the tropics, one can assume that the Proto Austric homeland was located somewhere to the north of the tropics, not necessarily in a coastal area. The disintegration of the protolanguage could be dated at approximately the eighth to ninth millennium BC, while the Austro-Thai and Miao-Austroasiatic branches started to disintegrate about the sixth millennium BC. All such hypotheses about Proto Austric location and datings are highly preliminary.

Sino-Tibetan speakers, who migrated to Southeast Asia from the west, came into contact with local populations speaking various Austric languages of the Kadai, Austronesian,

<sup>1</sup> Bellwood (1988, 1994) argues for an Austro-Thai homeland on the mainland, and an Austronesian homeland on Taiwan.

<sup>2</sup> Glottochronology (see §3.1) suggests 6200 BP as the starting point of the disintegration of Proto Austroasiatic.

Austroasiatic and Miao-Yao families. Linguistic evidence provides us with information about these contacts.

According to my data there were no contacts between Sino-Tibetan and the Proto Kadai (or even Proto Tai Proper) languages. All the available data suggest that separate branches of the Kadai family came into contact with the Chinese language during the first centuries of the first millennium AD (Jakhontov 1971). There is no trace of any mutual influence before this period.

A set of lexical coincidences between Sino-Tibetan and Austronesian languages attests the occurrence of ancient contacts. These coincidences may be divided into four groups according to the type of structural correspondence that holds between the forms (cf. different interpretation of the same data in Peiros & Starostin 1984):

## I

1. ST *\*Kuak* 'k.o. vessel': OC *\*kok* 'barrow' [CHAR1], *\*kok* 'tray' [CHAR2]; WrT *khog* 'pot', 'earthen vessel'; WrB *khwak* 'k.o. vessel'; Jnp *siŋgaw* 'k.o. cooking pot'.

An *\*mankuk* 'cup'

2. ST *\*qho*: 'to rob': OC *\*khu:h* 'to rob', 'robber' [CHAR3]; WrT *rku* (perf. (b)*rkus*, fact. *brku*, imp. *rkus*) 'to steal', 'to rob'; WrB *khəw*: < LB *\*khəwx* 'to steal'; Lsh *ru* (*ru:k*) 'id.'; Jnp *ləgu<sup>3</sup>* 'id.'

An *\*takaw* 'id.' [Blust 1981].

3. ST *\*cəhə:k* 'robber': OC *\*ʒə:k* 'murder', 'bandit', 'villain' [CHAR4]; WrT *ʒag* 'robbing', 'robbery'.

An *\*mu(p)t'uh* ~ *\*mət'ah* 'enemy'.

4. ST *\*no:k/\*(s-)no:ŋ*: 'pus' OC *\*nuŋ* 'id.' [CHAR5]; WrT *rnag/snag* 'id.'

An *\*nanaq* 'id.' [Dahl 1981].

5. ST *\*lam* 'fathom': OC *\*ləm* 'a measure of 8 chi' [CHAR6]; WrT *ādom(s)* 'a fathom'; WrB *lam* 'id.' < \*LB *\*lam*; Lsh *hlam* 'id.' Jnp *ləlam<sup>3</sup>* 'id.'

An *\*kilan* 'span' [Blust 1980].

6. ST *\*lam* 'road': WrT *lam*, WrB *lam*:, Lsh *lam*, Jnp *lam<sup>l</sup>*.

An *\*Zalan* [Blust 1981].

7. ST *\*Cam* 'bridge': WrT *zam*, LB *\*cam*. Proto Gurung *\*cam*, Trung *dzam<sup>l</sup>*, and others.

An *\*(ha)Rezan/\*(Sa)Rezan* 'ladder' [Blust 1976].

8. ST *\*ʒa:j* 'sand': OC *\*sraj* 'sand' [CHAR7]; WrT *sa* 'earth', *rʒa* 'clay'; WrB *saj*: 'sand'; Jingphaw *zai<sup>3</sup>-bru<sup>3</sup>* 'id.'

An *\*pat'iy* 'id.'

9. ST \**Pa:k* ‘leather’, ‘skin’: OC \**pha:k* ‘hide soaked in rain’ [CHAR8], \**pa:k* ‘leather strap’ [CHAR9]; WrT *pags*, *lpags* ‘skin’, ‘hide’, ‘the peel’.

An \**u(m)pak* ‘bark’.

10. ST \**kha:ŋ* ‘boat’: OC \**ga:ŋ* ‘to go by boat’ [CHAR10]; Jnp *khaŋ* ‘to steer, as boat’ [Hanson], Trung *guŋ<sup>3</sup>-çil<sup>1</sup>* ‘boat’.

An \**vaŋkaŋ* ‘boat’, but cf. \**baŋka[h]* ‘id.’. See discussion in Pawley and Pawley (1994).

11. ST \**nam* ‘to weave’, ‘cloth’: OC \**nəm*, \**nrəm* ‘to weave’ [CHAR11]; WrT *snam* ‘woollen cloth’.

An \**[ʼ]aŋam* ‘to plait’.

See Benedict (1975:115).

12. ST \**gər* ‘flag’: OC \**gər* ‘flag’ [CHAR12]; WrB *tə-khwan* ‘pendant’, ‘weathercock’; Jnp *dawŋ-khwan* ‘a sail’, ‘flag’ [Hanson] < ? Burmese.

An \**tuŋgul* ‘banner’, ‘flag’.

13. ST \**toH* (~*k*) ‘chief’, ‘to rule’: OC \**to?* ‘master’, ‘lord’, ‘host’ ‘principal’ [CHAR13]; WrT *thu* ‘a chief’, ‘an elder brother’; Jnp *mədu<sup>2</sup>* ‘have rule and authority over’.

An \**datu* ‘chief’ [Blust 1972a].

14. ST \**Pək* ‘garment’: OC \**bək* ‘garment’, ‘robe’, ‘to wear’ [CHAR14]; WrT *ābog* ‘k.o. upper garment’; LB \**Xpuk* > Lahu *bò?* ‘blanket’; Trung *jo<sup>1</sup> bə<sup>2</sup>!* ‘blanket’.

An \**t’abuk* ‘loincloth’.

15. ST \**çh(r)a:m* ‘sharp’: OC \**çra:m* ‘sharp’ [CHAR15]; Jnp *ncam* ‘id.’

An \**tad’əm* ~ \**tad’im* ‘sharp’.

16. ST \**ta-* ‘sign’: WrT *brda* ‘sign’, ‘gesture’; Jnp *da* ‘to cast lots’ [Hanson].

An \**ta(n)Da* ‘sign’.

17. ST \**Pot* ‘hair’: OC \**pat* ‘hair’ [CHAR16]; WrT *phud* ‘hair-knot’, ‘tuft of hair’; WrB *phwat-mri*: ‘hair plait’.

An \**d’[aə](m)but* ‘hairy’.

18. ST \**h(r)o:ŋ* ‘to see’, ‘to look at’: OC \**thra:ŋ* ‘to look straight at’, ‘to stare’ [CHAR18]; WrT *mthoŋ* ‘to see’; Kanauri *tag-* ‘id.’

An \**pand[aə]ŋ* ‘to look’.

19. ST \**š[ja]k* ‘to break’, ‘to cleave’: OC \**se:k* ‘to cleave’, ‘to split’ [CHAR19]; WrT *āčheg* ‘to break’, ‘to split’, *āčhag* ‘to cleave’, ‘to split’.

An \**pisaq* ‘to break’ [Blust 1973].

20. ST \*qhwa(ŋ) 'yellow': OC \*wa:ŋ 'yellow' [CHAR20]; WrB wa 'yellow', waŋh 'bright yellow'; Lsh eŋ 'yellow'; Trung gwar<sup>2</sup> 'id.'

An \*iyəŋ 'bright yellow', \*æiyəŋ 'dark', \*yah 'red'.

21. ST \*[b]u:k 'house': WrT ābogs (perf. phog, fact. dbog, dbag, imp. phog) 'to fit up a dwelling'; Lsh bu:k 'a temporary house'; Jnp bu, nbu 'dwelling-place, abode, home'.

An \*kubu' 'hut'.

22. ST \*mV:H 'rice': OC \*mi:jʔ 'rice' [CHAR21]; Jnp man 'paddy'; etc. [Benedict 1972a:65].

An \*imaj 'rice'.

Comparison from Benedict (1975:103).

## II

23. ST \*phria[-s] 'k.o. grain', 'rice': OC \*breh 'good grain' [CHAR22]; WrT ābras 'rice'.

An \*bəyat 'husked rice'.

A well-known comparison.

24. ST (\*r-)wak 'pig': WrT phag 'pig'; WrB wak < LB \*wak 'pig', Lsh rwak 'domesticated pig'; Jnp wa<sup>2</sup> 'pig'.

An \*bəyək 'id.' [Blust 1976].

25. ST \*gwaj 'to make': OC \*waj 'to make', 'to do', 'to set' [CHAR23]; WrT bgjid (perf. bgjis, fact. bgji, imp. gjis) 'to make, to manufacture', 'to do', 'to act', bgji-ba 'action', 'deed'; WrB wij 'to divide', 'to distribute'.

An \*gavaj ~ \*gava[h] 'to work'.

26. ST \*qwra:ŋ 'horn': OC \*kwra:ŋ 'drinking horn', 'k.o. ritual vessel' [CHAR24]; Jnp nruŋ 'horn'; Lepcha aróŋ.

An \*(q)uReŋ 'horn' [Blust 1973].

27. ST \*druaŋ 'middle': OC \*truŋ 'middle' [CHAR25]; WrT gžuŋ 'the middle', 'midst'; WrB əwaŋ: 'inner part'; Lsh cəhu:ŋ 'inside'; Trung a<sup>3</sup> duŋ<sup>l</sup> 'middle' [B No.390].

An \*teleŋ 'middle'.

28. ST \*Krij- 'knife': WrT gri 'knife'; LB > Moso ŋge<sup>l</sup> 'sword'; Lsh hrei 'an axe', 'hatchet'; Jnp nkji 'a small knife' [Hanson]. Compare \*krijH 'brass' [Shafer 1974:184, etc.; B No.39].

An \*kə[L]it' 'dagger'.



29. ST *\*tlaj* 'exchange': OC *\*tlaj* 'to transfer', 'change', 'alter' [CHAR26]; WrT *rže* (perf. *bržes*, fact. *brže*, imp. *bržes*) 'to barter'; WrB *laj*: 'to exchange', *hlaj* 'change' < LB *\*lajx/\*slajx*; Lsh *lei* 'to buy', 'purchase'; Trung *klai<sup>l</sup>* 'change'; Jnp *məlai<sup>3</sup>* 'to change' [B No.283].

An *\*beli* 'to buy' [Blust 1981].

### III

30. ST *\*PVI* 'hair': OC *\*phəj* 'thin wool' [CHAR27]; WrT *bal* 'wool; Chepang *mik pul?* 'eyebrow'; etc.

An *\*bulu* 'hair' [Blust 1981].

31. ST *\*ro(:)p* 'hungry': OC *\*b(r)ap* 'to lack', 'exhaust' [CHAR28]; WrT *spribs*, *srebs* 'be hungry'; Lsh *ra:wp* 'to have a strong desire or strong craving for animal food'.

An *\*lapay* 'hungry'.

32. ST *\*tjeŋ* 'centre', 'the aim': OC *\*teŋ* 'centre of a target' [CHAR29]; WrT *āžijŋ* 'the middle'; Jnp *gintheŋ* 'a destination', 'the point aimed at'.

An *\*teŋaq* 'middle', 'half'.

33. ST *\*ruap* 'to break': OC *\*rə:p* 'to break' [CHAR30]; Jnp *əgrawp* 'id.'

An *\*lapuh* 'id.'

34. ST *\*p(h)aŋH* 'deaf': WrB *paŋ*: < LB *\*paŋx* 'deaf'; Lu *paŋ* 'foolish'; Jnp *ləphaŋ* 'deaf'; Trung *də<sup>3</sup> baŋ<sup>l</sup>* 'mute' [Shafer 1974:49]

An *\*bəŋəl* 'deaf'.

35. ST *\*tap* 'fire-place': WrT *thab* 'fire-place', 'hearth', 'stove'; Lsh *tap* 'Lushai fire-place', 'hearth'; Jnp *dap* 'ashes', 'fire-place' [Hanson].

An *\*dapuy* 'hearth'.

36. ST *\*dhol* 'to conquer': WrT *ādul* (perf. *bətul*, *thul*) 'to tame', 'to break in', 'to subdue', 'to conquer'; Lsh *dawl* 'be defeated', 'conquer'.

An *\*[t]al[u']* 'id.'

### IV

37. ST *\*pVm* 'mind', 'peace', 'comfort' > OC *\*nəm* 'to think' [CHAR31]; WrT *nam* 'soul', 'mind', *snam* 'to think', 'suppose'.

An *\*nemnem* 'id.' [Blust 1981], but compare *\*DemDem* 'id.'

38. ST \**cuk* 'to stick into': WrT *āzug/zug* (perf. *bcugs/zugs*, fact. *gzugs*, imp. *zug(s)*) 'to prick', 'to stick into', 'to set', 'to plant', 'to bore', *āchugs* (perf. *chugs*) 'to go into', 'to penetrate by boring'; WrB *cəuk* 'to plant', 'to erect'; Lsh *fuk* 'be erected'.

An \**suksuk* 'to insert' [Blust 1981].

These comparisons reveal several types of correspondences between the word structures of the Sino-Tibetan and Austronesian forms:

- (i) correspondence of the final Austronesian syllable to the entire Sino-Tibetan form (class I comparisons);
- (ii) correspondence of the first Austronesian syllable to the entire Sino-Tibetan form (class III comparisons); and
- (iii) an intermediate type, in which all three consonants of the Austronesian form are represented in the Sino-Tibetan word (class II comparisons). This type is, however, restricted to words with medial \**r*, \**l*, or \**w*.

Forms included in the above comparisons are marked as Sino-Tibetan and Austronesian, as if they belong to the lexicons of these protolanguages. In fact, the chronological level of the comparisons requires further discussion. There are two ways in which the chronology might be investigated. The first involves the use of glottochronology to obtain absolute datings in the classifications of both families. The second possibility is connected with relative datings, and it is this method which is pursued here.

The Sino-Tibetan forms given above can be divided into several chronological levels:

1. Forms which can be regarded as Proto Sino-Tibetan. These are forms which are attested in many different languages of both the 'Eastern' and the 'South Asian' zones of the family (e.g. comparisons 8, 18 and 24).
2. Forms represented in Eastern Sino-Tibetan languages only, but which do occur in primary branches of the family, such as Chinese and Jingphaw (e.g. comparisons 13, 14 and 15).
3. Forms attested solely in the Tibeto-Burman languages (e.g. comparisons 7 and 38) and thus formally attributable to this level only. At least some of these forms may, however, be of more archaic origin.
4. Forms attested in Old Chinese and Tibetan only. These forms are of various origins. Some represent Sino-Tibetan roots (e.g. comparison 23), but others may be ancient Chinese loans into Tibetan, which at our current level of knowledge are indistinguishable from real Sino-Tibetan roots. Similar to this group are comparisons where an Old Chinese word is the only Sino-Tibetan form present:

- |   |                                   |
|---|-----------------------------------|
| 39. OC * <i>ʃoŋ</i> 'mortar' [CHAR32]   | An * <i>lət'uŋ</i> 'id.' [Ben 95] |
| 40. OC * <i>l(h)i:m?</i> 'mat' [CHAR33] | An * <i>tiləm</i> 'id.'           |
| 41. OC * <i>kre:c</i> 'scales' [CHAR34] | An * <i>kulit</i> 'skin'          |
| 42. OC * <i>bra:k</i> 'white' [CHAR36]  | An * <i>pilak</i> 'silver'        |

The Chinese form in comparison 42 has the Sino-Tibetan etymon \*(*r*-)*bə:k* 'white' [B:181], but the Austronesian forms resemble only the Old Chinese.

It is difficult to determine the chronological level of the Austronesian forms. Some are represented in Oceanic languages as well as in languages of Western Austronesia (e.g.

comparisons 2 and 13) and hence may be assumed to belong to the protolanguage level. Others are attested in the languages of Western Austronesia only, and their chronological level is unclear. At least some of the latter group, such as the word meaning 'silver' are not of Proto Austronesian origin.

More importantly, the list does not include reliable Austro-Thai comparisons. Only for comparison 41 is a possible Proto Kadai form known (Benedict 1975:318), but the same root is also represented in Mon-Khmer languages, such as Proto Viet-Muong *\*(C-)lat* > Vn *lật* 'skin', 'peel', or WrK *lat* 'to peel', which suggests that it is an Austric or a local root.

The conclusions to be drawn from these observations is that the comparisons listed above can be explained as a result of contacts between Sino-Tibetan and Austronesian languages, but not as traces of common origin of the two families (see discussion in Chapter 4). The absence of Austro-Thai comparisons indicates that the contacts occurred after the break-up of the Austro-Thai family.

It is likely that Sino-Tibetan languages were the sources of most of the borrowings. This suggestion is based on the existence of Sino-Caucasian etymologies for some of the Sino-Tibetan words.<sup>3</sup> If a word has a Sino-Caucasian etymology, it is implausible to propose that the word has been borrowed from an Austronesian, or Proto Austronesian source. The absolute and relative chronology of the families, as well as common views about possible locations of the North Caucasian and Sino-Tibetan homelands, would contradict such a proposal.

There are no Sino-Tibetan/Austronesian comparisons in which Sino-Tibetan forms are attested only in 'South Asian' languages, despite the fact that the comparative lexicon contains many etymologies known only from these languages. For this reason, one can assume that these Sino-Tibetan branches were not involved in contacts with the Austronesian family. The contacts which did occur must then have taken place after the disintegration of Proto Sino-Tibetan, when languages of the Chinese, Jingphaw and Tibeto-Burman branches were transferred to the east. The direction of such borrowings was from Sino-Tibetan into Austronesian languages.

Borrowings from Austronesian sources could be found only in Chinese, but not in Tibetan or other Sino-Tibetan languages.

As some of the Austronesian roots in the above comparisons belong to the protolanguage, while others belong to later levels it appears that the contacts between the speakers started before the protolanguage disintegration, and continued after it. This suggestion contradicts the hypotheses put forward by Benedict (1967, 1975).

Ancient Sino-Tibetan languages were also in contact with Mon-Khmer languages. The following comparisons support this claim:

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<sup>3</sup> The theory of the Sino-Caucasian affiliation of Sino-Tibetan was suggested by Starostin (1984, 1988) who connected Northern Caucasian, Sino-Tibetan and Enisean languages in one macro-family. This theory is based on independently reconstructed Northern Caucasian (Nikolaev & Starostin 1994), Sino-Tibetan and Proto Enisean (Starostin 1984). The validity of the Sino-Caucasian hypothesis is discussed in Pejros (1997b).

1. ST *\*(k-)rimH* ‘afraid’: OC *\*rəm?* ‘full of fear’, ‘respectful’ [CHAR36]; WrB *krimh* ‘be terrified’; Jnp *akhrim* ‘to threaten’, ‘to alarm as with a threat’, *məkrim* ‘to set the teeth on edge’ [Hanson], Dimasa *migrim* ‘to fear’ [B No.379].

MK *\*(kəm)ram* ‘afraid’: WrK *gəmra:m* ‘to threaten’; WrM *ram* ‘to respect’; Vn *ròm* ‘confused’.

2. ST *\*khom* ‘to fear’: WrT *āgam* ‘to threaten’; Jnp *kawn* ‘to fear’ [Hanson]

MK *\*kVm* ‘shame’, ‘fear’: WrK *Gam* ‘to threaten’; Vn *gòm* ‘to fear’.

3. ST *\*suak* ‘quick’: OC *\*so:k* ‘rapid’, ‘quick’ [CHAR37]; WrB *swak* ‘id.’; Trung *dzjo?* ‘quick’.

MK *\*kəSak* ‘quick’: WrK *khəsa:k*; Chrau *zak*; Vn *tóc*.

4. ST *\*čə:H* ‘to rule’, ‘ruler’: OC *\*cə:?* ‘steward’, ‘minister’ [CHAR38]; WrT *rže, žo* ‘lord’, ‘master’; WrB *cəw:* ‘to rule’; Jnp *žau* ‘id.’ [Hanson] < ? WrB.

MK *\*caw* ‘ruler’: WrK *caw* ‘lord’, ‘master’; WrM *cau* ‘ruler’.

5. ST *\*nemH* ‘year’, ‘season’: OC *\*nim?* ‘harvest’, ‘year’ [CHAR39]; Jnp *lənam* ‘the rainy season’.

MK *\*cəna(:)m* ‘year’: WrK *chnam*; WrM *cna:m*; Wa *num*; Vn *năm*. Cf. Munda *\*nVm* ‘id.’

6. ST *\*rə:ŋ* ‘road’, ‘path’: OC *\*kra:ŋ* ‘road’ [CHAR40], *\*gra:ŋ* ‘street’, ‘road’ [CHAR41]; WrT *sraŋ* ‘street’, *āphraŋ* ‘a foot-path’; WrB *kraugh* ‘line’, ‘road’, ‘path’.

MK *\*CəRVŋ* ‘road’, ‘path’: WrM *glaŋ*; Chrau *trə:ŋ*.

7. ST *\*rit/\*rot* ‘cricket’: OC *\*srit-srut* ‘id.’ [CHAR42]; WrB *pu?-rac* ‘cicada’; Jnp *kərawt* ‘a sp. of cricket’ [Hanson]; Trung *ćə<sup>3</sup> ret<sup>l</sup>*.

MK *\*cərit* ‘cricket’, ‘cicada’: WrK *cəgrit* ‘cricket’; WrM *caŋrit, taorit* ‘cicada’; Chrau *tre:t* ‘cricket’.

8. ST *\*kro:ŋ* ‘river’: OC *\*kro:ŋ* ‘river’ [CHAR43]; WrT *klug* ‘river’; WrB *khjaug:* (Old Burm. *khloŋ*) ‘river’, ‘creek’; Jnp *ləgjawŋ* ‘ravine’.

MK *\*CəRuŋ* ‘river’: WrM *kruŋ*; Wa *kləŋ*; Vn *sông* < VM *\*k-rəŋ*.

This comparison is known in the literature (Norman & Mei 1978).

9. ST *\*bhroŋ* ‘wild cattle’: OC *\*p(r)oŋ* ‘cattle’ [CHAR44]; WrT *ābroŋ* ‘wild yak’; WrB *praug* ‘buffalo’; Lsh *bo:ŋ* ‘bull’, ‘ox’. [Shafer 51; B 136]

MK *\*Cəraŋ* ‘wild cattle’: WrK *kəpcaŋ* ‘cow’, ‘ox’; WrM *preŋ, praŋ* ‘wild ox’ (Shorto 1962).

10. ST *sa:w* ‘dry’: OC *\*sa:w?* [CHAR45], Lsh *thu*.

MK *\*(Cə)saoh* ‘dry’: WrK *rəmso:h* ‘to dry’; Chrau *səh* ‘dry’.

11. ST *\*[x]la:H* 'tiger': OC *\*x(l)a:?* [CHAR46]; WrB *kjah*'.

MK *\*kəla*: 'tiger': WrK *khla*.; WrM *kla*. The root is widely represented in the family [Shorto 1962; Pinnow 1959:281].

This comparison is known in the literature (Norman & Mei 1978).

12. ST *\*raj* 'evil spirit': OC *\*s-raj* 'a k.o. demon' [CHAR47]; WrT *gre* 'a species of demon', *ādre* 'goblin', 'devil', 'gnome', Lsh *tai* 'to exorcise by the use of incantation'; Jnp *kərai* 'evil spirit' (cf. Matisoff 1985a:62).

MK *\*Cəra:j* 'an evil spirit': WrK *bra:j*; WrM *sara:j, craj*.

These comparisons, even if reliable, do not allow a precise dating for the contacts. One can suggest, however, that the two protolanguages were in contact with each other. The contacts seem to have begun before the disintegration of Proto Sino-Tibetan and Proto Mon-Khmer, but possibly after the disintegration of Proto Austroasiatic. In order to discuss this problem fully, we need much more information, especially about the Proto Austroasiatic and Mon-Khmer lexicons. Still, the existence of these contacts between language families is an essential part of the general picture of language relations in Ancient Southeast Asia.

Unfortunately, the problem of contacts between ancient Austronesian and Austroasiatic languages has never been discussed in detail. We know that such contacts take place in modern Vietnam and that they can be traced back to the Medieval period, since Austronesian borrowings are represented in Khmer and Mon. The more ancient situation remains obscure, as we cannot separate original Austric roots from early borrowings. At the same time, there is no reason to accept Benedict's (1975:485) hypothesis that all similarities between these two families are borrowings, representing an Austro-Thai substratum in the Austroasiatic languages. The true picture was more complicated than this.

APPENDICES  
DATA FOR LEXICOSTATISTICAL CLASSIFICATIONS

The diagnostic list for lexicostatistical analysis includes 100 items, representing certain clearly defined basic meanings. For each language included in the analysis, precise unmarked translations of these meanings are found, and the corresponding words are included in the language's lexicostatistical list. The next stage of the procedure involves comparison of words with the same meanings from different lists, in order to identify genetically related words (marked below with identical positive numbers) or loans (marked below with negative numbers). The results of the procedure for each item on the diagnostic list will be a set of forms, coded numerically. Words identified with the same number have a common history: they can be traced back to the same protoform, or to the same source of borrowing.

For example, for the entry PERSON we have the following set of forms:

| Language | Form           | Code |
|----------|----------------|------|
| A        | <i>mapa</i>    | -1   |
| B        | <i>kuaj</i>    | 1    |
| C        | <i>ku:j</i>    | 1    |
| D        |                | 0    |
| E        | <i>man</i>     | 2    |
| F        | <i>mon</i>     | 2    |
| G        | <i>mon-kuj</i> | 1 2  |

The numbers here indicate that:

- the form from language A is a borrowing, marked with a negative number;
- languages B and C have genetically related forms which bear the same positive number; these forms can be traced back to the same source in the protolanguage;
- no form from language D is not found for this entry (0);
- the forms of language E and F are genetically related, and thus are marked with the same positive number. These two forms are not related to the forms from languages B and C, and their coding (2) demonstrates this.
- the word of language G consists of two morphemes. The first one is related to morphemes of languages B and C and thus has code (1); the second morpheme is related to forms of E and F and thus codes with the (2).

## APPENDIX A: KADAI DATA

|            |   |    |            |   |    |
|------------|---|----|------------|---|----|
|            | ALL                                     |    |            | BELLY                                     |    |
| Siamese    | <i>daŋ-pha:k</i>                        | 1  | Siamese    | <i>tho:ŋ<sup>C</sup></i>                  | 1  |
| Longzhou   | <i>tu<sup>l</sup></i>                   | -1 | Longzhou   | <i>muk<sup>7</sup></i>                    | 2  |
| Zhuang     | <i>ɕuŋ<sup>3</sup></i>                  | 2  | Zhuang     | <i>tuŋ<sup>4</sup></i>                    | 1  |
| Saek       | ==                                      | 0  | Saek       | <i>thuŋ<sup>6</sup></i>                   | 1  |
| Sui        | <i>pu<sup>3</sup></i>                   | 3  | Sui        | <i>loŋ<sup>2</sup></i>                    | 1  |
| Mulao      | <i>mən<sup>3</sup></i>                  | 4  | Mulao      | <i>loŋ<sup>2</sup></i>                    | 1  |
| Kam        | <i>lət<sup>7</sup>, ɕet<sup>9</sup></i> | 5  | Kam        | <i>loŋ<sup>2</sup></i>                    | 1  |
| Maonan     | <i>ju:n<sup>3</sup></i>                 | 6  | Maonan     | <i>loŋ<sup>2</sup></i>                    | 1  |
| Ong Be     | <i>in<sup>l</sup> in<sup>4</sup></i>    | 7  | Ong Be     | <i>bo<sup>7</sup></i>                     | 3  |
| Lakkja     | <i>ɿ<sup>4</sup>-kha:i<sup>3</sup></i>  | 8  | Lakkja     | <i>kja:i<sup>3</sup>-po:ŋ<sup>2</sup></i> | 4  |
| Li Tongshi | <i>the<sup>5</sup></i>                  |    | Li Tongshi | <i>pok<sup>7</sup></i>                    | 2  |
|            | <i>za<sup>3</sup></i>                   | 9  | Li Baoding | <i>pok<sup>7</sup></i>                    | 2  |
| Li Baoding | <i>rɿ<sup>3</sup>, ŋan<sup>l</sup></i>  | 9  |            |   |    |
|            | ASHES                                   |    |            | BIG                                       |    |
| Siamese    | <i>dau<sup>B</sup></i>                  | 1  | Siamese    | <i>hūai<sup>B</sup></i>                   | 1  |
| Longzhou   | <i>pjaʊ<sup>6</sup></i>                 | 1  | Longzhou   | <i>ka:i<sup>3</sup></i>                   | 2  |
| Zhuang     | <i>taʊ<sup>6</sup></i>                  | 1  | Zhuang     | <i>huŋ<sup>l</sup></i>                    | -1 |
| Saek       | <i>thaw<sup>5</sup></i>                 | 1  | Saek       | <i>byk<sup>4</sup></i>                    | 4  |
| Sui        | <i>vuk<sup>7</sup>-ja<sup>l</sup></i>   | 2  | Sui        | <i>la:ʊ<sup>4</sup></i>                   | 3  |
| Mulao      | <i>pu<sup>l</sup></i>                   | 3  | Mulao      | <i>lo<sup>4</sup></i>                     | 3  |
| Kam        | <i>phuk<sup>9</sup></i>                 | 2  | Kam        | <i>la:ʊ<sup>4</sup></i>                   | 3  |
| Maonan     | <i>vuk<sup>7</sup></i>                  | 2  | Maonan     | <i>la:ʊ<sup>4</sup></i>                   | 3  |
| Ong Be     | <i>dou<sup>3</sup></i>                  | 1  | Ong Be     | <i>ʒo<sup>2</sup></i>                     | 1  |
| Lakkja     | <i>pɛʊ<sup>4</sup></i>                  | 1  | Lakkja     | <i>bok<sup>7</sup></i>                    | 4  |
| Li Tongshi | <i>fu:ŋ<sup>3</sup></i>                 | 4  | Li Tongshi | <i>loŋ<sup>l</sup></i>                    | -1 |
| Li Baoding | <i>tsi<sup>3</sup>-tau<sup>3</sup></i>  | 1  | Li Baoding | <i>loŋ<sup>l</sup></i>                    | -1 |
|            | cf. Vn <i>tro</i>                       |    |            | cf. Vn <i>lộng ~ giộng</i> <              |    |
|            |   |    |            | MK  |    |
|            | BARK                                    |    |            | BIRD                                      |    |
| Siamese    | <i>'hnaŋ<sup>A</sup></i>                | 1  | Siamese    | <i>nok</i>                                | 1  |
| Longzhou   | ==                                      | 0  | Longzhou   | <i>nuk<sup>8</sup></i>                    | 1  |
| Zhuang     | ==                                      | 0  | Zhuang     | <i>ʏok<sup>8</sup></i>                    | 1  |
| Saek       | <i>pla:k<sup>2</sup></i>                | 2  | Saek       | <i>nok<sup>6</sup></i>                    | 1  |
| Sui        | ==                                      | 0  | Sui        | <i>nok<sup>8</sup></i>                    | 1  |
| Mulao      | ==                                      | 0  | Mulao      | <i>nok<sup>8</sup></i>                    | 1  |
| Kam        | ==                                      | 0  | Kam        | <i>mok<sup>8</sup></i>                    | 1  |
| Maonan     | ==                                      | 0  | Maonan     | <i>nok<sup>8</sup></i>                    | 1  |
| Ong Be     | ==                                      | 0  | Ong Be     | <i>nok<sup>l</sup></i>                    | 1  |
| Lakkja     | ==                                      | 0  | Lakkja     | <i>mlok<sup>7</sup></i>                   | 1  |
| Li Tongshi | ==                                      | 0  | Li Tongshi | <i>tat<sup>7</sup></i>                    | 2  |
| Li Baoding | ==                                      | 0  | Li Baoding | <i>tat<sup>7</sup></i>                    | 2  |

## BITE

|            |                          |    |
|------------|--------------------------|----|
| Siamese    | <i>khop</i>              | -1 |
| Longzhou   | <i>khup<sup>7</sup></i>  | -1 |
| Zhuang     | <i>hap<sup>8</sup></i>   | -1 |
| Saek       | <i>gat<sup>6</sup></i>   | 1  |
| Sui        | <i>tit<sup>8</sup></i>   | -2 |
| Mulao      | <i>cət<sup>8</sup></i>   | -2 |
| Kam        | <i>kit<sup>10</sup></i>  | -2 |
| Maonan     | <i>ci<sup>8</sup></i>    | -2 |
| Ong Be     | <i>kap<sup>1</sup></i>   | -1 |
| Lakkja     | <i>kat<sup>7</sup></i>   | 1  |
| Li Tongshi | <i>ka:n<sup>6</sup></i>  | -2 |
| Li Baoding | <i>ka:nj<sup>3</sup></i> | -2 |

## BLACK

|            |                         |   |
|------------|-------------------------|---|
| Siamese    | <i>?dam<sup>A</sup></i> | 1 |
| Longzhou   | <i>dam<sup>1</sup></i>  | 1 |
| Zhuang     | <i>dam<sup>1</sup></i>  | 1 |
| Saek       | <i>ram<sup>1</sup></i>  | 1 |
| Sui        | <i>?nam<sup>1</sup></i> | 1 |
| Mulao      | <i>nam<sup>1</sup></i>  | 1 |
| Kam        | <i>nam<sup>1</sup></i>  | 1 |
| Maonan     | <i>nam<sup>1</sup></i>  | 1 |
| Ong Be     | <i>lam<sup>4</sup></i>  | 1 |
| Lakkja     | <i>lam<sup>1</sup></i>  | 1 |
| Li Tongshi | <i>dam<sup>3</sup></i>  | 1 |
| Li Baoding | <i>dom<sup>3</sup></i>  | 1 |

## BLOOD

|            |                           |   |
|------------|---------------------------|---|
| Siamese    | <i>liat</i>               | 1 |
| Longzhou   | <i>lɛ:t<sup>8</sup></i>   | 1 |
| Zhuang     | <i>li:t<sup>8</sup></i>   | 1 |
| Saek       | <i>luat<sup>5</sup></i>   | 1 |
| Sui        | <i>phja:t<sup>7</sup></i> | 1 |
| Mulao      | <i>phya:t<sup>7</sup></i> | 1 |
| Kam        | <i>pha:t<sup>9</sup></i>  | 1 |
| Maonan     | <i>phja:t<sup>7</sup></i> | 1 |
| Ong Be     | <i>ba<sup>2</sup></i>     | 1 |
| Lakkja     | <i>lie:t<sup>8</sup></i>  | 1 |
| Li Tongshi | <i>ʔa:t<sup>7</sup></i>   | 1 |
| Li Baoding | <i>ʔa:tj<sup>7</sup></i>  | 1 |

## BONE

|            |                          |   |
|------------|--------------------------|---|
| Siamese    | <i>kra.-?du:k</i>        | 1 |
| Longzhou   | <i>duk<sup>7</sup></i>   | 1 |
| Zhuang     | <i>do:k<sup>7</sup></i>  | 1 |
| Saek       | <i>ro:k<sup>6</sup></i>  | 1 |
| Sui        | <i>la:k<sup>7</sup></i>  | 1 |
| Mulao      | <i>hya:k<sup>7</sup></i> | 1 |
| Kam        | <i>la:k<sup>9</sup></i>  | 1 |
| Maonan     | <i>da:k<sup>8</sup></i>  | 1 |
| Ong Be     | <i>ua<sup>7</sup></i>    | 2 |
| Lakkja     | <i>kwot<sup>7</sup></i>  | 2 |
| Li Tongshi | <i>fi:<sup>7</sup></i>   | 1 |
| Li Baoding | <i>vi:k<sup>7</sup></i>  | 1 |

## BREAST

|            |                        |   |
|------------|------------------------|---|
| Siamese    | <i>nom<sup>A</sup></i> | 1 |
| Longzhou   | ==                     | 0 |
| Zhuang     | ==                     | 0 |
| Saek       | <i>tsu<sup>3</sup></i> | 2 |
| Sui        | ==                     | 0 |
| Mulao      | ==                     | 0 |
| Kam        | ==                     | 0 |
| Maonan     | ==                     | 0 |
| Ong Be     | ==                     | 0 |
| Lakkja     | ==                     | 0 |
| Li Tongshi | ==                     | 0 |
| Li Baoding | ==                     | 0 |

## BURN (v.t.)

|            |                          |   |
|------------|--------------------------|---|
| Siamese    | <i>phau<sup>A</sup></i>  | 1 |
| Longzhou   | ==                       | 0 |
| Zhuang     | ==                       | 0 |
| Saek       | <i>phraw<sup>2</sup></i> | 1 |
| Sui        | ==                       | 0 |
| Mulao      | ==                       | 0 |
| Kam        | ==                       | 0 |
| Maonan     | ==                       | 0 |
| Ong Be     | ==                       | 0 |
| Lakkja     | ==                       | 0 |
| Li Tongshi | ==                       | 0 |
| Li Baoding | ==                       | 0 |



## CLOUD

|            |  |    |
|------------|--|----|
| Siamese    | <i>me:kh</i>                           | -1 |
| Longzhou   | <i>pha<sup>3</sup></i>                 | 1  |
| Zhuang     | <i>fɿ<sup>3</sup></i>                  | 1  |
| Saek       | <i>via<sup>3</sup></i>                 | 1  |
| Sui        | <i>fa<sup>3</sup></i>                  | 1  |
| Mulao      | <i>kwa<sup>3</sup></i>                 | 1  |
| Kam        | <i>ma<sup>3</sup></i>                  | 1  |
| Maonan     | <i>fa<sup>3</sup></i>                  | 1  |
| Ong Be     | <i>ba<sup>3</sup></i>                  | 1  |
| Lakkja     | <i>fa<sup>3</sup></i>                  | 1  |
| Li Tongshi | <i>fe:ʔ<sup>7</sup>-fa<sup>3</sup></i> | 1  |
| Li Baoding | <i>de:k<sup>7</sup>-fa<sup>3</sup></i> | 1  |

## DIE

|            |                          |   |
|------------|--------------------------|---|
| Siamese    | <i>ta:i<sup>A</sup></i>  | 1 |
| Longzhou   | <i>ha:i<sup>l</sup></i>  | 1 |
| Zhuang     | <i>ta:i<sup>l</sup></i>  | 1 |
| Saek       | <i>pra:j<sup>l</sup></i> | 1 |
| Sui        | <i>tai<sup>l</sup></i>   | 1 |
| Mulao      | <i>tai<sup>l</sup></i>   | 1 |
| Kam        | <i>təi<sup>l</sup></i>   | 1 |
| Maonan     | <i>tai<sup>l</sup></i>   | 1 |
| Ong Be     | <i>dai<sup>l</sup></i>   | 1 |
| Lakkja     | <i>plei<sup>l</sup></i>  | 1 |
| Li Tongshi | <i>ʔu:i<sup>ʔ</sup></i>  | 2 |
| Li Baoding | <i>ʔa:u<sup>2</sup></i>  | 3 |

## COLD

|            |                         |   |
|------------|-------------------------|---|
| Siamese    | ==                      | 0 |
| Longzhou   | ==                      | 0 |
| Zhuang     | ==                      | 0 |
| Saek       | <i>nek<sup>4</sup></i>  | 2 |
| Sui        | ==                      | 0 |
| Mulao      | ==                      | 0 |
| Kam        | ==                      | 0 |
| Maonan     | <i>ja:m<sup>5</sup></i> | 3 |
| Ong Be     | <i>pfon<sup>l</sup></i> | 4 |
| Lakkja     | ==                      | 0 |
| Li Tongshi | ==                      | 0 |
| Li Baoding | ==                      | 0 |

## DOG

|            |                         |   |
|------------|-------------------------|---|
| Siamese    | <i>hma<sup>A</sup></i>  | 1 |
| Longzhou   | <i>ma<sup>l</sup></i>   | 1 |
| Zhuang     | <i>ma<sup>l</sup></i>   | 1 |
| Saek       | <i>ma<sup>2</sup></i>   | 1 |
| Sui        | <i>hma<sup>l</sup></i>  | 1 |
| Mulao      | <i>hɣwa<sup>l</sup></i> | 1 |
| Kam        | <i>ɣwa<sup>l</sup></i>  | 1 |
| Maonan     | <i>ma<sup>l</sup></i>   | 1 |
| Ong Be     | <i>ma<sup>4</sup></i>   | 1 |
| Lakkja     | <i>khwō<sup>l</sup></i> | 1 |
| Li Tongshi | <i>pa<sup>4</sup></i>   | 1 |
| Li Baoding | <i>pa<sup>l</sup></i>   | 1 |

## COME

|            |                         |    |
|------------|-------------------------|----|
| Siamese    | <i>ma<sup>A</sup></i>   | 1  |
| Longzhou   | <i>ma<sup>2</sup></i>   | 1  |
| Zhuang     | <i>tau<sup>3</sup></i>  | -1 |
| Saek       | <i>ma<sup>4</sup></i>   | 1  |
| Sui        | <i>taŋ<sup>l</sup></i>  | -2 |
| Mulao      | <i>taŋ<sup>l</sup></i>  | -2 |
| Kam        | <i>ma<sup>l</sup></i>   | 1  |
| Maonan     | <i>taŋ<sup>l</sup></i>  | -2 |
| Ong Be     | <i>nia<sup>l</sup></i>  | 1  |
| Lakkja     | <i>taŋ<sup>2</sup></i>  | -2 |
| Li Tongshi | <i>pi:n<sup>l</sup></i> | -3 |
| Li Baoding | <i>pi:n<sup>l</sup></i> | -3 |

cf. Vn *đéng* < VM \**têŋ*?

## DRINK

|            |                          |    |
|------------|--------------------------|----|
| Siamese    | <i>ʔdi:m<sup>B</sup></i> | 1  |
| Longzhou   | <i>kin<sup>l</sup></i>   | 2  |
| Zhuang     | <i>dot<sup>7</sup></i>   | 3  |
| Saek       | ==                       | 0  |
| Sui        | <i>ɣum<sup>4</sup></i>   | 4  |
| Mulao      | <i>hɣop<sup>7</sup></i>  | 5  |
| Kam        | <i>ʔi<sup>l</sup></i>    | 2  |
| Maonan     | <i>na<sup>4</sup></i>    | -1 |
| Ong Be     | <i>kon<sup>4</sup></i>   | 2  |
| Lakkja     | <i>ho:p<sup>7</sup></i>  | 5  |
| Li Tongshi | <i>tʃip<sup>7</sup></i>  | 5  |
| Li Baoding | <i>tʃip<sup>7</sup></i>  | 5  |

o:k<sup>9</sup>  
cf. VM \**nɿ*?

## DRY

|            |                          |    |
|------------|--------------------------|----|
| Siamese    | <i>hə:ɲ<sup>A</sup></i>  | 1  |
| Longzhou   | <i>khai<sup>5</sup></i>  | -2 |
| Zhuang     | <i>hai<sup>5</sup></i>   | -2 |
| Saek       | <i>kho<sup>2</sup></i>   | -2 |
| Sui        | <i>siu<sup>5</sup></i>   | 2  |
| Mulao      | <i>khu<sup>1</sup></i>   | -2 |
| Kam        | <i>so<sup>3</sup></i>    | -2 |
| Maonan     | <i>chi:u<sup>5</sup></i> | 2  |
| Ong Be     | <i>liɑŋ<sup>2</sup></i>  | 3  |
| Lakkja     | <i>hja:u<sup>3</sup></i> | 3  |
| Li Tongshi | <i>da:u<sup>1</sup></i>  | -3 |
| Li Baoding | <i>da:u<sup>1</sup></i>  | -3 |
|            | Vn <i>khan, khô, ráo</i> |    |

## EAR

|            |  |    |
|------------|--|----|
| Siamese    | <i>hu<sup>A</sup></i>                    | 1  |
| Longzhou   | <i>pi<sup>5</sup>-hu<sup>1</sup></i>     | 1  |
| Zhuang     | <i>ɣi<sup>2</sup></i>                    | 1  |
| Saek       | <i>gya<sup>4</sup> ~ rua<sup>4</sup></i> | 1  |
| Sui        | <i>qha<sup>1</sup></i>                   | 2  |
| Mulao      | <i>khyɑ<sup>1</sup></i>                  | 2  |
| Kam        | <i>kha<sup>1</sup></i>                   | 2  |
| Maonan     | <i>kha<sup>1</sup></i>                   | 2  |
| Ong Be     | <i>sa<sup>4</sup></i>                    | 2  |
| Lakkja     | <i>kan<sup>3</sup>-ja<sup>2</sup></i>    | 2  |
| Li Tongshi | <i>ʔai<sup>4</sup></i>                   | -1 |
| Li Baoding | <i>zai<sup>1</sup></i>                   | -1 |
|            | cf. VN <i>tai</i>                        |    |

## EARTH

|            |                         |   |
|------------|-------------------------|---|
| Siamese    | <i>ʔdin<sup>A</sup></i> | 1 |
| Longzhou   | <i>tɿ<sup>6</sup></i>   | 2 |
| Zhuang     | <i>teɿ<sup>6</sup></i>  | 2 |
| Saek       | <i>bal<sup>1</sup></i>  | 3 |
| Sui        | <i>tɿ<sup>6</sup></i>   | 2 |
| Mulao      | <i>tɿ<sup>6</sup></i>   | 2 |
| Kam        | <i>tɿ<sup>6</sup></i>   | 2 |
| Maonan     | <i>tɿ<sup>6</sup></i>   | 2 |
| Ong Be     | <i>mat<sup>1</sup></i>  | 3 |
| Lakkja     | <i>tɿ<sup>6</sup></i>   | 2 |
| Li Tongshi | <i>fan<sup>4</sup></i>  | 4 |
| Li Baoding | <i>van<sup>1</sup></i>  | 4 |

## EAT

|            |                          |   |
|------------|--------------------------|---|
| Siamese    | <i>kin<sup>A</sup></i>   | 1 |
| Longzhou   | <i>kin<sup>1</sup></i>   | 1 |
| Zhuang     | <i>kɿn<sup>1</sup></i>   | 1 |
| Saek       | <i>kin<sup>1</sup></i>   | 1 |
| Sui        | <i>tsje<sup>1</sup></i>  | 1 |
| Mulao      | <i>tsa:n<sup>1</sup></i> | 1 |
| Kam        | <i>ʔi<sup>1</sup></i>    | 1 |
|            | <i>ʔa:n<sup>1</sup></i>  | 1 |
| Maonan     | <i>na<sup>4</sup></i>    | 1 |
| Ong Be     | <i>kon<sup>4</sup></i>   | 1 |
| Lakkja     | <i>tsen<sup>1</sup></i>  | 1 |
| Li Tongshi | <i>lau<sup>5</sup></i>   | 2 |
| Li Baoding | <i>la<sup>2</sup></i>    | 3 |

## EGG

|            |  |    |
|------------|--|----|
| Siamese    | <i>khaj<sup>B</sup></i>                        | -1 |
| Longzhou   | <i>khjai<sup>5</sup></i>                       | -1 |
| Zhuang     | <i>kjai<sup>5</sup></i>                        | -1 |
| Saek       | <i>trə:ɲ<sup>3</sup></i>                       | -2 |
| Sui        | <i>kai<sup>5</sup></i>                         | -1 |
| Mulao      | <i>kɣəi<sup>5</sup></i>                        | -1 |
| Kam        | <i>kəi<sup>5</sup></i>                         | -1 |
| Maonan     | <i>kai<sup>5</sup></i>                         | -1 |
| Ong Be     | <i>zum<sup>4</sup></i>                         | 1  |
| Lakkja     | <i>lo:m<sup>6</sup></i>                        | 2  |
| Li Tongshi | <i>zi:n<sup>4</sup></i>                        | 1  |
| Li Baoding | <i>zi:m<sup>1</sup></i>                        | 1  |
|            | cf. PMY *[k]raɿ <sup>B</sup> ; Vn <i>trúng</i> |    |

## EYE

|            |  |   |
|------------|--|---|
| Siamese    | <i>tə<sup>A</sup></i>                    | 1 |
| Longzhou   | <i>ma:k<sup>7</sup>-ha<sup>1</sup></i>   | 1 |
| Zhuang     | <i>ta<sup>1</sup></i>                    | 1 |
| Saek       | <i>pra<sup>1</sup></i>                   | 1 |
| Sui        | <i>nda<sup>1</sup></i>                   | 1 |
| Mulao      | <i>hla<sup>1</sup></i>                   | 1 |
| Kam        | <i>ta<sup>1</sup></i>                    | 1 |
| Maonan     | <i>nda<sup>1</sup></i>                   | 1 |
| Ong Be     | <i>da<sup>4</sup></i>                    | 1 |
| Lakkja     | <i>pla<sup>1</sup></i>                   | 1 |
| Li Tongshi | <i>tshu<sup>3</sup>-tsha<sup>1</sup></i> | 1 |
| Li Baoding | <i>tsha<sup>1</sup></i>                  | 1 |

|            |                         |    |            |  |     |
|------------|-------------------------|----|------------|--|-----|
|            | FAT                     |    |            | FISH                                       |     |
| Siamese    | <i>man<sup>A</sup></i>  | 1  | Siamese    | <i>pla<sup>A</sup></i>                     | 1   |
| Longzhou   | <i>pi<sup>2</sup></i>   | -1 | Longzhou   | <i>pja<sup>1</sup></i>                     | 1   |
| Zhuang     | <i>pi<sup>2</sup></i>   | -1 | Zhuang     | <i>pja<sup>1</sup></i>                     | 1   |
| Saek       | <i>==</i>               | 0  | Saek       | <i>pla<sup>1</sup></i>                     | 1   |
| Sui        | <i>man<sup>2</sup></i>  | 1  | Sui        | <i>mon<sup>6</sup></i>                     | 2   |
| Mulao      | <i>pi<sup>2</sup></i>   | -1 | Mulao      | <i>mən<sup>6</sup></i>                     | 2   |
| Kam        | <i>pui<sup>2</sup></i>  | -1 | Kam        | <i>pa<sup>1</sup></i>                      | -1  |
| Maonan     | <i>pi<sup>2</sup></i>   | -1 | Maonan     | <i>mbjai<sup>3</sup></i>                   | -2  |
| Ong Be     | <i>==</i>               | -1 | Ong Be     | <i>ba<sup>4</sup></i>                      | 1   |
| Lakkja     | <i>pu:i<sup>2</sup></i> | -1 | Lakkja     | <i>phla<sup>1</sup></i>                    | 1   |
| Li Tongshi | <i>gu:i<sup>6</sup></i> | 2  | Li Tongshi | <i>ʔa<sup>1</sup></i>                      | 1   |
| Li Baoding | <i>gwei<sup>3</sup></i> | 2  | Li Baoding | <i>ʔa<sup>1</sup></i>                      | 1   |
|            | FEATHER                 |    |            | FLY (v.)                                   |     |
| Siamese    | <i>khon<sup>A</sup></i> | 1  | Siamese    | <i>ʔbin<sup>A</sup></i>                    | 1   |
| Longzhou   | <i>==</i>               | 0  | Longzhou   | <i>bin<sup>1</sup></i>                     | 1   |
| Zhuang     | <i>==</i>               | 0  | Zhuang     | <i>bin<sup>1</sup></i>                     | 1   |
| Saek       | <i>pul<sup>1</sup></i>  | 2  | Saek       | <i>==</i>                                  | 0   |
| Sui        | <i>==</i>               | 0  | Sui        | <i>vjən<sup>3</sup></i>                    | 2   |
| Mulao      | <i>==</i>               | 0  | Mulao      | <i>fən<sup>3</sup></i>                     | 2   |
| Kam        | <i>==</i>               | 0  | Kam        | <i>pən<sup>3</sup></i>                     | 2   |
| Maonan     | <i>==</i>               | 0  | Maonan     | <i>vin<sup>3</sup></i>                     | 2   |
| Ong Be     | <i>==</i>               | 0  | Ong Be     | <i>vin<sup>4</sup></i>                     | 1   |
| Lakkja     | <i>==</i>               | 0  | Lakkja     | <i>pon<sup>5</sup></i>                     | 2   |
| Li Tongshi | <i>==</i>               | 0  | Li Tongshi | <i>ben<sup>1</sup></i>                     | 1   |
| Li Baoding | <i>==</i>               | 0  | Li Baoding | <i>benj<sup>1</sup></i>                    | 1   |
|            | FIRE                    |    |            | FOOT                                       |     |
| Siamese    | <i>va<sup>A</sup></i>   | 1  | Siamese    | <i>tha:u<sup>C</sup></i>                   | 1   |
| Longzhou   | <i>fai<sup>2</sup></i>  | 1  | Longzhou   | <i>kha<sup>1</sup></i>                     | 3   |
| Zhuang     | <i>fei<sup>2</sup></i>  | 1  | Zhuang     | <i>tin<sup>1</sup></i>                     | 2   |
| Saek       | <i>vi<sup>4</sup></i>   | 1  | Saek       | <i>ge:ŋ<sup>5</sup> ~ je:ŋ<sup>5</sup></i> | -1  |
| Sui        | <i>vi<sup>1</sup></i>   | 1  | Sui        | <i>tin<sup>1</sup></i>                     | 2   |
| Mulao      | <i>fi<sup>1</sup></i>   | 1  | Mulao      | <i>tin<sup>1</sup>-kwa<sup>3</sup></i>     | 2 3 |
| Kam        | <i>pui<sup>1</sup></i>  | 1  | Kam        | <i>tin<sup>1</sup></i>                     | 2   |
| Maonan     | <i>vi<sup>1</sup></i>   | 1  | Maonan     | <i>ti:n<sup>1</sup></i>                    | 2   |
| Ong Be     | <i>vəi<sup>1</sup></i>  | 1  | Ong Be     | <i>==</i>                                  | -1  |
| Lakkja     | <i>pu:i<sup>1</sup></i> | 1  | Lakkja     | <i>puk<sup>7</sup></i>                     | 4   |
| Li Tongshi | <i>fei<sup>1</sup></i>  | 1  | Li Tongshi | <i>i.-tet<sup>7</sup></i>                  | 5   |
| Li Baoding | <i>fei<sup>1</sup></i>  | 1  | Li Baoding | <i>tej<sup>7</sup></i>                     | 5   |

## FULL

|            |                          |   |
|------------|--------------------------|---|
| Siamese    | <i>tem<sup>A</sup></i>   | 1 |
| Longzhou   | <i>tim<sup>l</sup></i>   | 1 |
| Zhuang     | <i>yim<sup>l</sup></i>   | 1 |
| Saek       | <i>==</i>                | 0 |
| Sui        | <i>tik<sup>7</sup></i>   | 2 |
| Mulao      | <i>pik<sup>7</sup></i>   | 2 |
| Kam        | <i>tik<sup>9</sup></i>   | 2 |
| Maonan     | <i>tik<sup>7</sup></i>   | 2 |
| Ong Be     | <i>dik<sup>2</sup></i>   | 2 |
| Lakkja     | <i>mot<sup>8</sup></i>   | 3 |
| Li Tongshi | <i>thia<sup>77</sup></i> | 2 |
| Li Baoding | <i>thi:k<sup>7</sup></i> | 2 |

???cf. Vn *thăm*

## GREEN

|            |                           |    |
|------------|---------------------------|----|
| Siamese    | <i>khieu<sup>A</sup></i>  | -1 |
| Longzhou   | <i>kheu<sup>l</sup></i>   | -1 |
| Zhuang     | <i>heu<sup>l</sup></i>    | -1 |
| Saek       | <i>he:w<sup>2</sup></i>   | -1 |
| Sui        | <i>çu<sup>l</sup></i>     | -1 |
| Mulao      | <i>həu<sup>l</sup></i>    | -1 |
| Kam        | <i>su<sup>l</sup></i>     | -1 |
| Maonan     | <i>ju<sup>l</sup></i>     | -1 |
| Ong Be     | <i>luk<sup>l</sup></i>    | 2  |
| Lakkja     | <i>jau<sup>2</sup></i>    | -1 |
| Li Tongshi | <i>khi:u<sup>l</sup></i>  | -1 |
| Li Baoding | <i>khi:iu<sup>l</sup></i> | -1 |

cf. WrK *khie̯w*

## GIVE

|            |                          |   |
|------------|--------------------------|---|
| Siamese    | <i>hai<sup>C</sup></i>   | 1 |
| Longzhou   | <i>hi<sup>3</sup></i>    | 1 |
| Zhuang     | <i>hai<sup>3</sup></i>   | 1 |
| Saek       | <i>==</i>                | 0 |
| Sui        | <i>ha:i<sup>l</sup></i>  | 1 |
| Mulao      | <i>khye<sup>l</sup></i>  | 2 |
| Kam        | <i>sa:i<sup>l</sup></i>  | 3 |
| Maonan     | <i>?na:k<sup>7</sup></i> | 4 |
| Ong Be     | <i>ŋau<sup>4</sup></i>   | 5 |
| Lakkja     | <i>==</i>                | 0 |
| Li Tongshi | <i>dei<sup>l</sup></i>   | 6 |
| Li Baoding | <i>tɿ:ŋ<sup>2</sup></i>  | 7 |

## HAIR

|            |  |   |
|------------|--|---|
| Siamese    | <i>phom<sup>A</sup></i>                  | 1 |
| Longzhou   | <i>phjum<sup>l</sup></i>                 | 1 |
| Zhuang     | <i>pjom<sup>l</sup></i>                  | 1 |
| Saek       | <i>phram<sup>2</sup></i>                 | 1 |
| Sui        | <i>pjam<sup>l</sup></i>                  | 1 |
| Mulao      | <i>pyam<sup>l</sup>-kyo<sup>3</sup></i>  | 1 |
| Kam        | <i>pjam<sup>l</sup>-ka:u<sup>3</sup></i> | 1 |
| Maonan     | <i>pjam<sup>l</sup></i>                  | 1 |
| Ong Be     | <i>pui<sup>4</sup></i>                   | 2 |
| Lakkja     | <i>kjom<sup>2</sup></i>                  | 1 |
| Li Tongshi | <i>dan<sup>5</sup>-go<sup>6</sup></i>    | 3 |
| Li Baoding | <i>dan<sup>2</sup>-gwou<sup>3</sup></i>  | 3 |

## GOOD

|            |                         |   |
|------------|-------------------------|---|
| Siamese    | <i>?di<sup>A</sup></i>  | 1 |
| Longzhou   | <i>dai<sup>l</sup></i>  | 1 |
| Zhuang     | <i>dei<sup>l</sup></i>  | 1 |
| Saek       | <i>di<sup>4</sup></i>   | 1 |
| Sui        | <i>da:i<sup>l</sup></i> | 1 |
| Mulao      | <i>il</i>               | 2 |
| Kam        | <i>la:i<sup>l</sup></i> | 1 |
| Maonan     | <i>da:i<sup>2</sup></i> | 1 |
| Ong Be     | <i>mai<sup>l</sup></i>  | 3 |
| Lakkja     | <i>lai<sup>l</sup></i>  | 1 |
| Li Tongshi | <i>ʔen<sup>l</sup></i>  | 4 |
| Li Baoding | <i>ʔenj<sup>l</sup></i> | 4 |

## HAND

|            |                                      |   |
|------------|--------------------------------------|---|
| Siamese    | <i>mi<sup>A</sup></i>                | 1 |
| Longzhou   | <i>mi<sup>2</sup></i>                | 1 |
| Zhuang     | <i>fɿŋ<sup>2</sup></i>               | 1 |
| Saek       | <i>mi<sup>4</sup></i>                | 1 |
| Sui        | <i>mja<sup>l</sup></i>               | 1 |
| Mulao      | <i>nja<sup>2</sup></i>               | 1 |
| Kam        | <i>mja<sup>2</sup></i>               | 1 |
| Maonan     | <i>si:m<sup>3</sup></i>              | 2 |
| Ong Be     | <i>mo<sup>l</sup></i>                | 1 |
| Lakkja     | <i>mie<sup>2</sup></i>               | 1 |
| Li Tongshi | <i>i<sup>3</sup>-mei<sup>l</sup></i> | 1 |
| Li Baoding | <i>mei<sup>l</sup></i>               | 1 |

| HEAD       |                         |    | HORN       |                         |    |
|------------|-------------------------|----|------------|-------------------------|----|
| Siamese    | <i>hua<sup>A</sup></i>  | 1  | Siamese    | <i>khau<sup>A</sup></i> | 1  |
| Longzhou   | <i>hu<sup>l</sup></i>   | 1  | Longzhou   | <i>ko:k<sup>7</sup></i> | -1 |
| Zhuang     | <i>kjau<sup>3</sup></i> | 2  | Zhuang     | <i>kau<sup>l</sup></i>  | 1  |
| Saek       | <i>thra<sup>2</sup></i> | 2  | Saek       | <i>gaw<sup>l</sup></i>  | 1  |
| Sui        | <i>qam<sup>4</sup></i>  | 3  | Sui        | <i>pa:u<sup>l</sup></i> | 1  |
| Mulao      | <i>kyo<sup>3</sup></i>  | 2  | Mulao      | <i>ku<sup>l</sup></i>   | 1  |
| Kam        | <i>ka:u<sup>3</sup></i> | 2  | Kam        | <i>pa:u<sup>l</sup></i> | 1  |
| Maonan     | <i>ko<sup>3</sup></i>   | 2  | Maonan     | <i>ŋa:u<sup>l</sup></i> | 1  |
| Ong Be     | <i>hua<sup>2</sup></i>  | -1 | Ong Be     | <i>vau<sup>l</sup></i>  | 1  |
| Lakkja     | <i>kjɛu<sup>l</sup></i> | 2  | Lakkja     | <i>kou<sup>2</sup></i>  | 1  |
| Li Tongshi | <i>go<sup>6</sup></i>   | 2  | Li Tongshi | <i>hau<sup>l</sup></i>  | 1  |
| Li Baoding | <i>gwou<sup>3</sup></i> | 2  | Li Baoding | <i>hau<sup>l</sup></i>  | 1  |

| HEAR       |   |    | I          |                         |   |
|------------|---|----|------------|-------------------------|---|
| Siamese    | <i>jin<sup>A</sup></i>                  | 1  | Siamese    | <i>chan<sup>A</sup></i> | 1 |
| Longzhou   | <i>tiŋ<sup>6</sup></i>                  | -1 | Longzhou   | <i>kau<sup>l</sup></i>  | 2 |
| Zhuang     | <i>tiŋ<sup>5</sup></i>                  | -1 | Zhuang     | <i>kou<sup>l</sup></i>  | 2 |
| Saek       | <i>ŋia<sup>3</sup></i>                  | -2 | Saek       | <i>ku<sup>6</sup></i>   | 2 |
| Sui        | <i>di<sup>3</sup></i>                   | 3  | Sui        | <i>ju<sup>2</sup></i>   | 2 |
| Mulao      | <i>theŋ<sup>5</sup></i>                 | -1 | Mulao      | <i>həi<sup>2</sup></i>  | 3 |
| Kam        | <i>thiŋ<sup>5'</sup></i>                | -1 | Kam        | <i>ja:u<sup>2</sup></i> | 2 |
| Maonan     | <i>?ni<sup>3</sup></i>                  | 3  | Maonan     | <i>h'e<sup>2</sup></i>  | 2 |
| Ong Be     | ==                                      | -1 | Ong Be     | <i>hau<sup>l</sup></i>  | 2 |
| Lakkja     | <i>theŋ<sup>5</sup></i>                 | -1 | Lakkja     | <i>tsi<sup>l</sup></i>  | 4 |
| Li Tongshi | <i>plei<sup>l</sup></i>                 | 4  | Li Tongshi | <i>hou<sup>l</sup></i>  | 2 |
| Li Baoding | <i>plei<sup>l</sup></i>                 | 4  | Li Baoding | <i>hou<sup>l</sup></i>  | 2 |
|            | <i>hi:ŋ<sup>l</sup>-zai<sup>l</sup></i> |    |            |                         |   |
|            | cf. Vn <i>nghe</i>                      |    |            |                         |   |

| HEART      |  |    | KILL       |                                   |   |
|------------|--|----|------------|-----------------------------------|---|
| Siamese    | <i>ca<sup>A</sup></i>                  | 1  | Siamese    | <i>g<sup>l</sup>a<sup>C</sup></i> | 1 |
| Longzhou   | <i>ʔim<sup>l</sup>-tau<sup>2</sup></i> | -1 | Longzhou   | <i>kha<sup>3</sup></i>            | 1 |
| Zhuang     | <i>sim<sup>l</sup></i>                 | -1 | Zhuang     | <i>ka<sup>3</sup></i>             | 1 |
| Saek       | <i>tsi<sup>l</sup></i>                 | 1  | Saek       | <i>kha<sup>3</sup></i>            | 1 |
| Sui        | <i>çum<sup>l</sup></i>                 | -1 | Sui        | <i>ha<sup>3</sup></i>             | 1 |
| Mulao      | <i>təm<sup>l</sup></i>                 | -1 | Mulao      | <i>hli<sup>3</sup></i>            | 2 |
| Kam        | <i>səm<sup>l'</sup></i>                | -1 | Kam        | <i>sa<sup>l'</sup></i>            | 1 |
| Maonan     | <i>sam<sup>l</sup></i>                 | -1 | Maonan     | <i>ha<sup>3</sup></i>             | 1 |
| Ong Be     | ==                                     | 0  | Ong Be     | <i>ka<sup>2</sup></i>             | 1 |
| Lakkja     | <i>fem<sup>l</sup></i>                 | -1 | Lakkja     | <i>a<sup>4</sup></i>              | 1 |
| Li Tongshi | <i>ʔa:u<sup>3</sup></i>                | 2  | Li Tongshi | <i>hau<sup>3</sup></i>            | 1 |
| Li Baoding | <i>ʔa:u<sup>3</sup></i>                | 2  | Li Baoding | <i>hau<sup>3</sup></i>            | 1 |

## KNEE

|            |   |   |
|------------|---|---|
| Siamese    | <i>khau<sup>B</sup></i>                 | 1 |
| Longzhou   | <i>hu<sup>1</sup>-khau<sup>5</sup></i>  | 1 |
| Zhuang     | <i>kjau<sup>3</sup>-ho<sup>5</sup></i>  | 1 |
| Saek       | ==                                      | 0 |
| Sui        | <i>qam<sup>5</sup>-qu<sup>5</sup></i>   | 1 |
| Mulao      | <i>ku<sup>6</sup>-ko<sup>5</sup></i>    | 1 |
| Kam        | <i>əm<sup>3</sup>-kwa:u<sup>5</sup></i> | 1 |
| Maonan     | <i>kam<sup>6</sup>-ku<sup>6</sup></i>   | 1 |
| Ong Be     | <i>kau<sup>3</sup></i>                  | 1 |
| Lakkja     | ==                                      | 0 |
| Li Tongshi | <i>gō<sup>6</sup>-rou<sup>4</sup></i>   | 3 |
| Li Baoding | <i>gwou<sup>3</sup>-rou<sup>1</sup></i> | 3 |

## KNOW

|            |  |     |
|------------|--|-----|
| Siamese    | <i>ru<sup>C</sup></i>                      | 1   |
| Longzhou   | <i>ʔu<sup>4</sup>-na<sup>3</sup></i>       | 1   |
| Zhuang     | <i>yo<sup>4</sup></i>                      | 1   |
| Saek       | <i>rō<sup>6</sup></i>                      | 1   |
| Sui        | <i>çau<sup>3</sup></i>                     | 3   |
| Mulao      | <i>yo<sup>4</sup>-çeu<sup>3</sup></i>      | 1 3 |
| Kam        | <i>wo<sup>4</sup></i>                      | 1   |
| Maonan     | <i>wo<sup>3</sup></i>                      | 1   |
| Ong Be     | <i>hu<sup>3</sup></i>                      | 1   |
| Lakkja     | <i>hji:u<sup>3</sup></i>                   | 1   |
| Li Tongshi | <i>khu:ŋ<sup>1</sup>-gwe:ɿ<sup>4</sup></i> | 2   |
| Li Baoding | <i>khu:ŋ<sup>1</sup>-gwe:ɿ<sup>1</sup></i> | 2   |

## LEAF

|            |                         |   |
|------------|-------------------------|---|
| Siamese    | <i>ʔbai<sup>A</sup></i> | 1 |
| Longzhou   | <i>bai<sup>1</sup></i>  | 1 |
| Zhuang     | <i>bai<sup>1</sup></i>  | 1 |
| Saek       | <i>bə<sup>1</sup></i>   | 1 |
| Sui        | <i>va<sup>5</sup></i>   | 2 |
| Mulao      | <i>fa<sup>5</sup></i>   | 2 |
| Kam        | <i>pa<sup>5</sup></i>   | 2 |
| Maonan     | <i>va<sup>5</sup></i>   | 2 |
| Ong Be     | <i>bo<sup>1</sup></i>   | 1 |
| Lakkja     | <i>wa<sup>1</sup></i>   | 1 |
| Li Tongshi | <i>be:ɿ<sup>1</sup></i> | 1 |
| Li Baoding | <i>be:ɿ<sup>1</sup></i> | 1 |

## LIE

|            |                         |   |
|------------|-------------------------|---|
| Siamese    | <i>no:n<sup>A</sup></i> | 1 |
| Longzhou   | ==                      | 0 |
| Zhuang     | ==                      | 0 |
| Saek       | <i>nu:n<sup>A</sup></i> | 1 |
| Sui        | ==                      | 0 |
| Mulao      | ==                      | 0 |
| Kam        | ==                      | 0 |
| Maonan     | ==                      | 0 |
| Ong Be     | ==                      | 0 |
| Lakkja     | ==                      | 0 |
| Li Tongshi | ==                      | 0 |
| Li Baoding | ==                      | 0 |

## LIVER

|            |                         |    |
|------------|-------------------------|----|
| Siamese    | <i>tap</i>              | 1  |
| Longzhou   | <i>tap<sup>7</sup></i>  | 1  |
| Zhuang     | <i>tap<sup>7</sup></i>  | 1  |
| Saek       | <i>tap<sup>4</sup></i>  | 1  |
| Sui        | <i>tap<sup>7</sup></i>  | 1  |
| Mulao      | <i>tap<sup>7</sup></i>  | 1  |
| Kam        | <i>tap<sup>7</sup></i>  | 1  |
| Maonan     | <i>tap<sup>7</sup></i>  | 1  |
| Ong Be     | <i>dop<sup>2</sup></i>  | 1  |
| Lakkja     | <i>tap<sup>7</sup></i>  | 1  |
| Li Tongshi | <i>ŋa:n<sup>1</sup></i> | -1 |
| Li Baoding | <i>ŋa:n<sup>1</sup></i> | -1 |

## LONG

|            |                          |    |
|------------|--------------------------|----|
| Siamese    | <i>ja:u<sup>A</sup></i>  | -1 |
| Longzhou   | <i>ʔj<sup>2</sup></i>    | 1  |
| Zhuang     | <i>ɣai<sup>2</sup></i>   | 1  |
| Saek       | <i>raɣ<sup>4</sup></i>   | 1  |
| Sui        | <i>ʔja:i<sup>3</sup></i> | 1  |
| Mulao      | <i>ya:i<sup>3</sup></i>  | 1  |
| Kam        | <i>ja:i<sup>3</sup></i>  | 1  |
| Maonan     | <i>ʔja:i<sup>3</sup></i> | 1  |
| Ong Be     | <i>loɣ<sup>4</sup></i>   | 1  |
| Lakkja     | <i>ai<sup>2</sup></i>    | 1  |
| Li Tongshi | <i>ta:u<sup>6</sup></i>  | 2  |
| Li Baoding | <i>ta:u<sup>3</sup></i>  | 2  |

cf. Vn *nhəo*; WrK *ʔənla:j*; *laj* 'high'

## LOUSE

|            |                         |   |
|------------|-------------------------|---|
| Siamese    | <i>hau<sup>A</sup></i>  | 1 |
| Longzhou   | <i>hau<sup>l</sup></i>  | 1 |
| Zhuang     | <i>ɣau<sup>l</sup></i>  | 1 |
| Saek       | <i>raw<sup>2</sup></i>  | 1 |
| Sui        | <i>tu<sup>l</sup></i>   | 1 |
| Mulao      | <i>khyo<sup>l</sup></i> | 1 |
| Kam        | <i>ta:u<sup>l</sup></i> | 1 |
| Maonan     | <i>tu<sup>l</sup></i>   | 1 |
| Ong Be     | <i>don<sup>l</sup></i>  | 2 |
| Lakkja     | <i>ŋwan<sup>l</sup></i> | 2 |
| Li Tongshi | <i>fou<sup>l</sup></i>  | 1 |
| Li Baoding | <i>fou<sup>l</sup></i>  | 1 |

## MAN

|            |  |    |
|------------|--|----|
| Siamese    | <i>ʒa:i<sup>A</sup></i>                  | -1 |
| Longzhou   | <i>ti<sup>6</sup>-po<sup>6</sup></i>     | 1  |
| Zhuang     | <i>pour<sup>4</sup>-sa:i<sup>l</sup></i> | 1  |
| Saek       | <i>sa:i<sup>ʔ</sup></i>                  | -1 |
| Sui        | <i>ai<sup>3</sup>-mba:n<sup>l</sup></i>  | 2  |
| Mulao      | <i>ti<sup>6</sup>-kɔŋ<sup>l</sup></i>    | 4  |
| Kam        | <i>ɲən<sup>2</sup>-pa:n<sup>l</sup></i>  | 2  |
| Maonan     | <i>ai<sup>l</sup>-mba:n<sup>l</sup></i>  | 2  |
| Ong Be     | <i>da<sup>2</sup>kiaŋ<sup>3</sup></i>    | 4  |
| Lakkja     | <i>lak<sup>8</sup>-kjei<sup>l</sup></i>  | 3  |
| Li Tongshi | <i>ʔi:ʔ<sup>7</sup>-pha<sup>3</sup></i>  | 3  |
| Li Baoding | <i>pha<sup>3</sup>-ma:n<sup>l</sup></i>  | 2  |

## MANY

|            |                          |    |
|------------|--------------------------|----|
| Siamese    | <i>hla:i<sup>A</sup></i> | 2  |
| Longzhou   | <i>la:i<sup>l</sup></i>  | 1  |
| Zhuang     | <i>la:i<sup>l</sup></i>  | 1  |
| Saek       | <i>la:i<sup>ʔ</sup></i>  | 1  |
| Sui        | <i>kuŋ<sup>2</sup></i>   | -1 |
| Mulao      | <i>kyuŋ<sup>2</sup></i>  | -1 |
| Kam        | <i>kuŋ<sup>2</sup></i>   | -1 |
| Maonan     | <i>coŋ<sup>2</sup></i>   | -1 |
| Ong Be     | <i>liau<sup>2</sup></i>  | 3  |
| Lakkja     | <i>ʔoŋ<sup>l</sup></i>   | -1 |
| Li Tongshi | <i>ʔa:i<sup>l</sup></i>  | 1  |
| Li Baoding | <i>ʔo:i<sup>l</sup></i>  | 1  |

cf. Vn *rông* < MK

## MEAT

|            |                         |    |
|------------|-------------------------|----|
| Siamese    | <i>nɪa<sup>C</sup></i>  | 1  |
| Longzhou   | <i>nɪ<sup>4</sup></i>   | 1  |
| Zhuang     | <i>no<sup>6</sup></i>   | 1  |
| Saek       | <i>no<sup>3</sup></i>   | 1  |
| Sui        | <i>na:n<sup>4</sup></i> | 1  |
| Mulao      | <i>sik<sup>8</sup></i>  | -1 |
| Kam        | <i>na:n<sup>4</sup></i> | 1  |
| Maonan     | <i>na:n<sup>4</sup></i> | 1  |
| Ong Be     | <i>nan<sup>3</sup></i>  | 1  |
| Lakkja     | <i>mom<sup>6</sup></i>  | 2  |
| Li Tongshi | <i>gam<sup>6</sup></i>  | 2  |
| Li Baoding | <i>a:k<sup>7</sup></i>  |    |
|            | <i>gom<sup>3</sup></i>  | 2  |

## MOON

|            |   |    |
|------------|---|----|
| Siamese    | <i>ʔdɪan<sup>A</sup></i>                  | 1  |
| Longzhou   | <i>na:i<sup>l</sup></i>                   | 1  |
| Zhuang     | <i>yo:ŋ<sup>6</sup>-di:n<sup>l</sup></i>  | 1  |
| Saek       | <i>blian<sup>l</sup></i>                  | 1  |
| Sui        | <i>njen<sup>2</sup></i>                   | 1  |
| Mulao      | <i>kɣa:ŋ<sup>l</sup>-njen<sup>2</sup></i> | 1  |
| Kam        | <i>ɲa:n<sup>l</sup></i>                   | 1  |
| Maonan     | <i>nɪ<sup>4</sup>-njen<sup>2</sup></i>    | 1  |
| Ong Be     | <i>sai<sup>4</sup>-leŋ<sup>2</sup></i>    | -1 |
| Lakkja     | <i>man<sup>4</sup>-lie:ŋ<sup>6</sup></i>  | -1 |
| Li Tongshi | <i>ɲa:n<sup>l</sup></i>                   | 1  |
| Li Baoding | <i>ɲa:n<sup>l</sup></i>                   | 1  |

cf. Vn *trăng* < \**tləŋ*

## MOUNTAIN

|            |  |    |
|------------|--|----|
| Siamese    | <i>khau<sup>A</sup></i>                | 1  |
| Longzhou   | <i>do:ŋ<sup>l</sup></i>                | 3  |
| Zhuang     | <i>doi<sup>l</sup></i>                 | -1 |
| Saek       | <i>ro:ʔ<sup>l</sup></i>                | -1 |
| Sui        | <i>nu<sup>2</sup></i>                  | 4  |
| Mulao      | <i>pya<sup>l</sup></i>                 | 5  |
| Kam        | <i>ʔən<sup>2</sup></i>                 | 6  |
| Maonan     | <i>koŋ<sup>5</sup>-pja<sup>l</sup></i> | 5  |
| Ong Be     | <i>tia<sup>3</sup></i>                 | 7  |
| Lakkja     | <i>kja<sup>3</sup></i>                 | 7  |
| Li Tongshi | <i>hwou<sup>3</sup></i>                | 8  |
| Li Baoding | <i>go<sup>3</sup></i>                  | 8  |

Vn *đồi* < MK

## MOUTH

|            |                         |    |
|------------|-------------------------|----|
| Siamese    | <i>pa:k</i>             | 1  |
| Longzhou   | <i>pa:k<sup>7</sup></i> | 1  |
| Zhuang     | <i>pa:k<sup>7</sup></i> | 1  |
| Saek       | <i>pa:k<sup>6</sup></i> | 1  |
| Sui        | <i>pa:k<sup>7</sup></i> | 1  |
| Mulao      | <i>pa:k<sup>7</sup></i> | 1  |
| Kam        | <i>pa:k<sup>9</sup></i> | 1  |
| Maonan     | <i>pa:k<sup>7</sup></i> | 1  |
| Ong Be     | <i>bak<sup>2</sup></i>  | 1  |
| Lakkja     | <i>tei<sup>3</sup></i>  | 2  |
| Li Tongshi | <i>pam<sup>6</sup></i>  | -1 |
| Li Baoding | <i>pon<sup>6</sup></i>  | -1 |
|            | cf. Vn <i>mòm</i>       |    |

## NECK

|            |  |    |
|------------|--|----|
| Siamese    | <i>gɔ<sup>A</sup></i>                  | -1 |
| Longzhou   | <i>ko<sup>2</sup></i>                  | -1 |
| Zhuang     | <i>ho<sup>2</sup></i>                  | -1 |
| Saek       | <i>gɔ<sup>A</sup></i>                  | -1 |
| Sui        | <i>qɔ<sup>A</sup></i>                  | -1 |
| Mulao      | <i>lən<sup>3</sup></i>                 | 1  |
| Kam        | <i>ɲən<sup>6</sup></i>                 | 1  |
| Maonan     | <i>dən<sup>4</sup></i>                 | 1  |
| Ong Be     | <i>go<sup>1</sup></i>                  | -1 |
| Lakkja     | <i>kan<sup>3</sup>-en<sup>1</sup></i>  | 2  |
| Li Tongshi | <i>i<sup>3</sup>-toŋ<sup>6</sup></i>   | -2 |
| Li Baoding | <i>tsi<sup>3</sup>-zoŋ<sup>3</sup></i> | -2 |
|            | cf. Vn <i>cỏ</i> < MK                  |    |

## NAIL

|            |  |   |
|------------|--|---|
| Siamese    | <i>lep</i>                               | 1 |
| Longzhou   | <i>lip<sup>8</sup>-mi<sup>2</sup></i>    | 1 |
| Zhuang     | <i>ɣip<sup>8</sup>-fiŋ<sup>2</sup></i>   | 1 |
| Saek       | <i>li:p<sup>5</sup></i>                  | 1 |
| Sui        | <i>ljap<sup>7</sup></i>                  | 1 |
| Mulao      | <i>nja<sup>2</sup>-hnəp<sup>7</sup></i>  | 1 |
| Kam        | <i>ɲəp<sup>7</sup></i>                   | 1 |
| Maonan     | <i>dip<sup>7</sup></i>                   | 1 |
| Ong Be     | <i>lip<sup>1</sup>-mo<sup>1</sup></i>    | 1 |
| Lakkja     | <i>pli:p<sup>7</sup>-mie<sup>2</sup></i> | 1 |
| Li Tongshi | <i>i<sup>3</sup>-li:p<sup>7</sup></i>    | 1 |
| Li Baoding | <i>tsi<sup>3</sup>-li:p</i>              | 1 |

## NEW

|            |                                     |    |
|------------|-------------------------------------|----|
| Siamese    | <i>hmai<sup>B</sup></i>             | -1 |
| Longzhou   | <i>mai<sup>5</sup></i>              | -1 |
| Zhuang     | <i>moi<sup>5</sup></i>              | -1 |
| Saek       | <i>mɔ<sup>3</sup></i>               | -1 |
| Sui        | <i>hmai<sup>5</sup></i>             | -1 |
| Mulao      | <i>hmai<sup>5</sup></i>             | -1 |
| Kam        | <i>məi<sup>5</sup></i>              | -1 |
| Maonan     | <i>mai<sup>5</sup></i>              | -1 |
| Ong Be     | <i>nau<sup>2</sup></i>              | 1  |
| Lakkja     | <i>wāi<sup>6</sup></i>              | -1 |
| Li Tongshi | <i>no<sup>3</sup></i>               | 1  |
| Li Baoding | <i>pa:n<sup>1</sup></i>             | -2 |
|            | Vn <i>moi</i> < MK, <i>mén</i> < MK |    |

## NAME

|            |                                       |    |
|------------|---------------------------------------|----|
| Siamese    | <i>zɨ<sup>B</sup></i>                 | -1 |
| Longzhou   | <i>miŋ<sup>2</sup></i>                | -2 |
| Zhuang     | <i>miŋ<sup>2</sup>-çi<sup>6</sup></i> | -2 |
| Saek       | <i>sɔ<sup>5</sup></i>                 | -1 |
| Sui        | <i>da:n<sup>1</sup></i>               | 1  |
| Mulao      | <i>ʔya:n<sup>1</sup></i>              | 1  |
| Kam        | <i>kwa:n<sup>1</sup></i>              | 1  |
| Maonan     | <i>da:n<sup>2</sup></i>               | 1  |
| Ong Be     | <i>noi<sup>4</sup></i>                | 2  |
| Lakkja     | <i>ja:n<sup>1</sup></i>               | 1  |
| Li Tongshi | <i>phe:ŋ<sup>1</sup></i>              | 3  |
| Li Baoding | <i>phe:ŋ<sup>1</sup></i>              | 3  |

## NIGHT

|            |  |   |
|------------|--|---|
| Siamese    | <i>gi:n<sup>A</sup></i>                  | 1 |
| Longzhou   | <i>kja:ŋ<sup>1</sup>-kən<sup>2</sup></i> | 1 |
| Zhuang     | <i>kja:ŋ<sup>1</sup>-hɨn<sup>2</sup></i> | 1 |
| Saek       | <i>gi:n<sup>4</sup></i>                  | 1 |
| Sui        | <i>sa:n<sup>2</sup></i>                  | 1 |
| Mulao      | <i>thəu<sup>5</sup>-mu<sup>2</sup></i>   | 2 |
| Kam        | <i>an<sup>1</sup>-tə:n<sup>1</sup></i>   | 1 |
|            | <i>an<sup>1</sup>-ɲa:m<sup>5</sup></i>   | 3 |
| Maonan     | <i>ʔɲam<sup>5</sup></i>                  | 3 |
| Ong Be     | <i>kxən</i>                              | 1 |
| Lakkja     | <i>bon<sup>1</sup>-blau<sup>2</sup></i>  | 5 |
| Li Tongshi | <i>pai<sup>6</sup>-tshop<sup>7</sup></i> | 6 |
| Li Baoding | <i>pai<sup>6</sup>-tshop<sup>7</sup></i> | 6 |



| NO         |                         |    | PERSON     |  |    |
|------------|-------------------------|----|------------|--|----|
| Siamese    | <i>mai<sup>B</sup></i>  | 1  | Siamese    | <i>gon<sup>A</sup></i>                   | 1  |
| Longzhou   | <i>mi<sup>5</sup></i>   | 1  | Longzhou   | <i>kən<sup>2</sup></i>                   | 1  |
| Zhuang     | <i>bou<sup>3</sup></i>  | -2 | Zhuang     | <i>vun<sup>2</sup></i>                   | 1  |
| Saek       | <i>==</i>               | 0  | Saek       | <i>gun<sup>1</sup> ~ hun<sup>1</sup></i> | 1  |
| Sui        | <i>me<sup>2</sup></i>   | 1  | Sui        | <i>zən<sup>1</sup></i>                   | -1 |
| Mulao      | <i>ŋ<sup>5</sup></i>    | 3  | Mulao      | <i>çən<sup>1</sup></i>                   | -1 |
| Kam        | <i>kwe<sup>2</sup></i>  | 4  | Kam        | <i>ɲən<sup>2</sup></i>                   | -1 |
| Maonan     | <i>kam<sup>3</sup></i>  | 5  | Maonan     | <i>zən<sup>1</sup></i>                   | -1 |
| Ong Be     | <i>mə<sup>1</sup></i>   | 1  | Ong Be     | <i>leŋ<sup>4</sup> -hun<sup>1</sup></i>  | 1  |
| Lakkja     | <i>ŋ<sup>3</sup></i>    | 3  | Lakkja     | <i>ŋjun<sup>2</sup></i>                  | -1 |
|            | <i>hwāi<sup>1</sup></i> | 6  | Li Tongshi | <i>ha<sup>3</sup>-a:u<sup>1</sup></i>    | 2  |
| Li Tongshi | <i>vei<sup>4</sup></i>  | 6  | Li Baoding | <i>u<sup>2</sup>-a:u<sup>1</sup></i>     | 2  |
| Li Baoding | <i>ta<sup>1</sup></i>   | 7  |            |  |    |

| NOSE       |   |    | RAIN       |                         |   |
|------------|---|----|------------|-------------------------|---|
| Siamese    | <i>ca.-muk</i>                          | -1 | Siamese    | <i>fon<sup>A</sup></i>  | 1 |
| Longzhou   | <i>ma:k<sup>7</sup>-dan<sup>1</sup></i> | 1  | Longzhou   | <i>phən<sup>1</sup></i> | 1 |
| Zhuang     | <i>daŋ<sup>1</sup></i>                  | 1  | Zhuang     | <i>fɪn<sup>1</sup></i>  | 1 |
| Saek       | <i>daŋ<sup>1</sup></i>                  | 1  | Saek       | <i>vyn<sup>2</sup></i>  | 1 |
| Sui        | <i>?naŋ<sup>1</sup></i>                 | 1  | Sui        | <i>fən<sup>1</sup></i>  | 1 |
| Mulao      | <i>kə<sup>5</sup>-naŋ<sup>1</sup></i>   | 1  | Mulao      | <i>kwən<sup>1</sup></i> | 1 |
| Kam        | <i>naŋ<sup>1</sup></i>                  | 1  | Kam        | <i>pjən<sup>1</sup></i> | 1 |
| Maonan     | <i>?naŋ<sup>1</sup></i>                 | 1  | Maonan     | <i>fɪn<sup>1</sup></i>  | 1 |
| Ong Be     | <i>loŋ<sup>4</sup></i>                  | 1  | Ong Be     | <i>pfur<sup>4</sup></i> | 1 |
| Lakkja     | <i>naŋ<sup>1</sup></i>                  | 1  | Lakkja     | <i>fən<sup>1</sup></i>  | 1 |
| Li Tongshi | <i>khat<sup>7</sup></i>                 | 2  | Li Tongshi | <i>fun<sup>1</sup></i>  | 1 |
| Li Baoding | <i>khat<sup>7</sup></i>                 | 2  | Li Baoding | <i>fun<sup>1</sup></i>  | 1 |

cf. WrK *crəmuh*

| ONE        |                          |    | RED        |                          |    |
|------------|--------------------------|----|------------|--------------------------|----|
| Siamese    | <i>hniŋ<sup>B</sup></i>  | 1  | Siamese    | <i>?de:ŋ<sup>A</sup></i> | 1  |
| Longzhou   | <i>nəŋ<sup>1</sup></i>   | 1  | Longzhou   | <i>deŋ<sup>1</sup></i>   | 1  |
| Zhuang     | <i>deu<sup>1</sup></i>   | 2  | Zhuang     | <i>diŋ<sup>1</sup></i>   | 1  |
| Saek       | <i>muŋ<sup>3</sup></i>   | -1 | Saek       | <i>ri:ŋ<sup>4</sup></i>  | 1  |
| Sui        | <i>to<sup>2</sup></i>    | 4  | Sui        | <i>ha:n<sup>3</sup></i>  | 2  |
| Mulao      | <i>hna:u<sup>3</sup></i> | 3  | Mulao      | <i>hla:n<sup>3</sup></i> | 2  |
| Kam        | <i>la:u<sup>3'</sup></i> | 3  | Kam        | <i>ja<sup>5</sup></i>    | 3  |
| Maonan     | <i>deu<sup>2</sup></i>   | 4  | Maonan     | <i>la:n<sup>3</sup></i>  | 2  |
| Ong Be     | <i>==</i>                | -1 | Ong Be     | <i>hoŋ<sup>2</sup></i>   | -1 |
| Lakkja     | <i>in<sup>3</sup></i>    | 6  | Lakkja     | <i>ko:ŋ<sup>5</sup></i>  | -1 |
| Li Tongshi | <i>ɨ<sup>3</sup></i>     | 5  | Li Tongshi | <i>de:ŋ<sup>3</sup></i>  | 1  |
| Li Baoding | <i>tsheɨ<sup>3</sup></i> | 7  | Li Baoding | <i>de:ŋ<sup>3</sup></i>  | 1  |

cf. Vn *mõng*

## ROAD

|            |                           |    |
|------------|---------------------------|----|
| Siamese    | <i>da:ŋ<sup>A</sup></i>   | -1 |
| Longzhou   | <i>lɔ<sup>6</sup></i>     | -2 |
| Zhuang     | <i>ɣon<sup>l</sup></i>    | 1  |
| Saek       | <i>tha:ŋ<sup>A</sup></i>  | -1 |
| Sui        | <i>khwən<sup>l</sup></i>  | 1  |
| Mulao      | <i>khwən<sup>l</sup></i>  | 1  |
| Kam        | <i>khwən<sup>l</sup>'</i> | 1  |
| Maonan     | <i>khun<sup>l</sup></i>   | 1  |
| Ong Be     | <i>sun<sup>A</sup></i>    | 1  |
| Lakkja     | <i>tsa:ŋ<sup>l</sup></i>  | -1 |
| Li Tongshi | <i>ku:n<sup>l</sup></i>   | 1  |
| Li Baoding | <i>ku:n<sup>l</sup></i>   | 1  |

## ROOT

|            |                          |    |
|------------|--------------------------|----|
| Siamese    | <i>ra:k</i>              | 1  |
| Longzhou   | <i>la:k<sup>8</sup></i>  | 1  |
| Zhuang     | <i>ya:k<sup>8</sup></i>  | 1  |
| Saek       | <i>ra:k<sup>6</sup></i>  | 1  |
| Sui        | <i>ha:ŋ<sup>l</sup></i>  | 2  |
| Mulao      | <i>ta:ŋ<sup>l</sup></i>  | 2  |
| Kam        | <i>sa:ŋ<sup>l</sup>'</i> | 2  |
| Maonan     | <i>sa:ŋ<sup>l</sup></i>  | 2  |
| Ong Be     | <i>za<sup>l</sup></i>    | 3  |
| Lakkja     | <i>kan<sup>l</sup></i>   | -1 |
| Li Tongshi | <i>van<sup>A</sup></i>   | 4  |
| Li Baoding | <i>kei<sup>l</sup></i>   | 5  |

## ROUND

|            |                          |    |
|------------|--------------------------|----|
| Siamese    | <i>klom<sup>A</sup></i>  | -1 |
| Longzhou   | <i>mən<sup>2</sup></i>   | -2 |
| Zhuang     | <i>lu:n<sup>2</sup></i>  | 3  |
| Saek       | <i>mən<sup>A</sup></i>   | -2 |
|            | <i>plum<sup>2</sup></i>  | -1 |
| Sui        | <i>qa-lu<sup>5</sup></i> | 4  |
| Mulao      | <i>kon<sup>6</sup></i>   | 5  |
| Kam        | <i>ton<sup>2</sup></i>   | -1 |
| Maonan     | <i>don<sup>2</sup></i>   | -1 |
| Ong Be     | <i>vin<sup>l</sup></i>   | 6  |
| Lakkja     | <i>kjon<sup>l</sup></i>  | 3  |
| Li Tongshi | <i>lun<sup>5</sup></i>   | 3  |
|            | <i>gom<sup>A</sup></i>   | -1 |
| Li Baoding | <i>plu:n<sup>5</sup></i> | 3  |
|            | <i>hwom<sup>l</sup></i>  | -1 |

## SAND

|            |                          |    |
|------------|--------------------------|----|
| Siamese    | <i>dra:i<sup>A</sup></i> | -1 |
| Longzhou   | <i>ʔa:i<sup>2</sup></i>  | -1 |
| Zhuang     | <i>ye<sup>5</sup></i>    | 1  |
| Saek       | <i>==</i>                | 0  |
| Sui        | <i>nde<sup>l</sup></i>   | 2  |
| Mulao      | <i>sa<sup>l</sup></i>    | -1 |
| Kam        | <i>çe<sup>l</sup>'</i>   | -1 |
| Maonan     | <i>sa<sup>l</sup></i>    | -1 |
| Ong Be     | <i>taŋ<sup>2</sup></i>   | 3  |
| Lakkja     | <i>sa<sup>l</sup></i>    | -1 |
| Li Tongshi | <i>phau<sup>5</sup></i>  | 4  |
| Li Baoding | <i>phou<sup>2</sup></i>  | 4  |

## SEE

|            |                         |    |
|------------|-------------------------|----|
| Siamese    | <i>heŋ<sup>A</sup></i>  | 1  |
| Longzhou   | <i>jo:m<sup>6</sup></i> | 2  |
| Zhuang     | <i>jai<sup>3</sup></i>  | 3  |
| Saek       | <i>ne:ŋ<sup>l</sup></i> | -1 |
| Sui        | <i>gau<sup>5</sup></i>  | 4  |
| Mulao      | <i>kau<sup>5</sup></i>  | 4  |
| Kam        | <i>nu<sup>5</sup></i>   | 5  |
| Maonan     | <i>kau<sup>5</sup></i>  | 4  |
| Ong Be     | <i>dek<sup>l</sup></i>  | 6  |
| Lakkja     | <i>lo:m<sup>l</sup></i> | 7  |
| Li Tongshi | <i>ʔu:i<sup>6</sup></i> | 8  |
| Li Baoding | <i>zu:i<sup>3</sup></i> | 8  |

## SEED

|            |                         |    |
|------------|-------------------------|----|
| Siamese    | <i>==</i>               | 0  |
| Longzhou   | <i>fan<sup>2</sup></i>  | 1  |
| Zhuang     | <i>çe<sup>6</sup></i>   | -1 |
| Saek       | <i>==</i>               | 0  |
| Sui        | <i>van<sup>l</sup></i>  | 1  |
| Mulao      | <i>la:k<sup>8</sup></i> | 2  |
| Kam        | <i>pan<sup>l</sup></i>  | 1  |
| Maonan     | <i>van<sup>l</sup></i>  | 1  |
| Ong Be     | <i>von<sup>l</sup></i>  | 1  |
| Lakkja     | <i>tsəŋ<sup>3</sup></i> | -2 |
| Li Tongshi | <i>fan<sup>l</sup></i>  | 1  |
| Li Baoding | <i>fan<sup>l</sup></i>  | 1  |

## SIT

|            |                         |   |
|------------|-------------------------|---|
| Siamese    | <i>naŋ<sup>B</sup></i>  | 1 |
| Longzhou   | <i>naŋ<sup>6</sup></i>  | 1 |
| Zhuang     | <i>naŋ<sup>6</sup></i>  | 1 |
| Saek       | <i>naŋ<sup>2</sup></i>  | 1 |
| Sui        | <i>huŋ<sup>6</sup></i>  | 2 |
| Mulao      | <i>tui<sup>6</sup></i>  | 2 |
| Kam        | <i>sui<sup>5</sup></i>  | 2 |
| Maonan     | <i>zu:i<sup>6</sup></i> | 2 |
| Ong Be     | <i>ŋou<sup>4</sup></i>  | 1 |
| Lakkja     | <i>niŋ<sup>5</sup></i>  | 1 |
| Li Tongshi | <i>tsoŋ<sup>3</sup></i> | 3 |
| Li Baoding | <i>tsoŋ<sup>3</sup></i> | 3 |

## SKIN

|            |                           |    |
|------------|---------------------------|----|
| Siamese    | <i>hnaŋ<sup>A</sup></i>   | 1  |
| Longzhou   | <i>naŋ<sup>l</sup></i>    | 1  |
| Zhuang     | <i>naŋ<sup>l</sup></i>    | 1  |
| Saek       | <i>thra:p<sup>6</sup></i> | 2  |
| Sui        | <i>pi<sup>2</sup></i>     | -1 |
| Mulao      | <i>ŋya<sup>2</sup></i>    | 3  |
| Kam        | <i>pi<sup>2</sup></i>     | -1 |
| Maonan     | <i>pi<sup>2</sup></i>     | -1 |
| Ong Be     | <i>naŋ<sup>4</sup></i>    | 1  |
| Lakkja     | <i>pei<sup>2</sup></i>    | -1 |
| Li Tongshi | <i>no:ŋ<sup>l</sup></i>   | 1  |
| Li Baoding | <i>no:ŋ<sup>l</sup></i>   | 1  |

## SLEEP

|            |                         |   |
|------------|-------------------------|---|
| Siamese    | <i>no:n<sup>A</sup></i> | 1 |
| Longzhou   | <i>no:n<sup>2</sup></i> | 1 |
| Zhuang     | <i>nin<sup>2</sup></i>  | 1 |
| Saek       | <i>nu:n<sup>4</sup></i> | 1 |
| Sui        | <i>nun<sup>2</sup></i>  | 1 |
| Mulao      | <i>nun<sup>2</sup></i>  | 1 |
| Kam        | <i>nun<sup>2</sup></i>  | 1 |
| Maonan     | <i>nu:n<sup>2</sup></i> | 1 |
| Ong Be     | <i>==</i>               | 0 |
| Lakkja     | <i>hep<sup>7</sup></i>  | 2 |
| Li Tongshi | <i>kau<sup>2</sup></i>  | 3 |
| Li Baoding | <i>kau<sup>2</sup></i>  | 3 |

## SMALL

|            |                         |   |
|------------|-------------------------|---|
| Siamese    | <i>lek</i>              | 1 |
| Longzhou   | <i>ʔai<sup>5</sup></i>  | 2 |
| Zhuang     | <i>sai<sup>5</sup></i>  | 2 |
| Saek       | <i>==</i>               | 0 |
| Sui        | <i>ti<sup>3</sup></i>   | 3 |
| Mulao      | <i>niŋ<sup>5</sup></i>  | 4 |
| Kam        | <i>ni<sup>5</sup></i>   | 5 |
| Maonan     | <i>?ni<sup>5</sup></i>  | 5 |
| Ong Be     | <i>nok<sup>l</sup></i>  | 6 |
| Lakkja     | <i>kjai<sup>3</sup></i> | 7 |
| Li Tongshi | <i>tok<sup>8</sup></i>  | 6 |
| Li Baoding | <i>enŋ<sup>2</sup></i>  | 8 |

## SMOKE

|            |   |   |
|------------|---|---|
| Siamese    | <i>gwan<sup>A</sup></i>                   | 1 |
| Longzhou   | <i>van<sup>2</sup></i>                    | 1 |
| Zhuang     | <i>hon<sup>2</sup></i>                    | 1 |
| Saek       | <i>gɔn<sup>4</sup></i>                    | 1 |
| Sui        | <i>kwan<sup>2</sup></i>                   | 1 |
| Mulao      | <i>fi<sup>l</sup>-kwan<sup>l</sup></i>    | 1 |
| Kam        | <i>kwan<sup>2</sup></i>                   | 1 |
| Maonan     | <i>kwan<sup>2</sup></i>                   | 1 |
| Ong Be     | <i>duai<sup>2</sup></i>                   | 2 |
| Lakkja     | <i>pu:i<sup>l</sup>-ŋji:n<sup>l</sup></i> | 3 |
| Li Tongshi | <i>go:n<sup>l</sup></i>                   | 1 |
| Li Baoding | <i>hwo:n<sup>l</sup></i>                  | 1 |

Vn *hun* 'to fumigate'  
< Kd

## SPEAK

|            |                          |    |
|------------|--------------------------|----|
| Siamese    | <i>?po:k</i>             | 1  |
| Longzhou   | <i>kja:ŋ<sup>3</sup></i> | 2  |
| Zhuang     | <i>ka:ŋ<sup>3</sup></i>  | 2  |
| Saek       | <i>no:j<sup>3</sup></i>  | -2 |
| Sui        | <i>fan<sup>2</sup></i>   | 3  |
| Mulao      | <i>ca:ŋ<sup>3</sup></i>  | 2  |
| Kam        | <i>a:ŋ<sup>3</sup></i>   | 2  |
|            | <i>wa<sup>6</sup></i>    |    |
| Maonan     | <i>ca:ŋ<sup>3</sup></i>  | 2  |
| Ong Be     | <i>==</i>                | 0  |
| Lakkja     | <i>tsa:ŋ<sup>3</sup></i> | 2  |
| Li Tongshi | <i>ri:n<sup>l</sup></i>  | -2 |
| Li Baoding | <i>ri:n<sup>l</sup></i>  | -2 |

cf. Vn *nói*; *rānh* < MK

|            | STAND                    |    |
|------------|--------------------------|----|
| Siamese    | <i>ji:n<sup>A</sup></i>  | 1  |
| Longzhou   | <i>jin<sup>l</sup></i>   | 1  |
| Zhuang     | <i>din<sup>l</sup></i>   | 1  |
| Saek       | <i>jo:ŋ<sup>4</sup></i>  | 1  |
| Sui        | <i>?jon<sup>l</sup></i>  | 1  |
| Mulao      | <i>taŋ<sup>4</sup></i>   | -2 |
| Kam        | <i>jun<sup>l</sup></i>   | 1  |
| Maonan     | <i>tsən<sup>2</sup></i>  | -1 |
| Ong Be     | <i>==</i>                | 0  |
| Lakkja     | <i>ju:n<sup>l</sup></i>  | 1  |
| Li Tongshi | <i>tsu:n<sup>l</sup></i> | 1  |
| Li Baoding | <i>tsu:n<sup>l</sup></i> | 1  |

|            | SUN                                      |   |
|------------|--|---|
| Siamese    | <i>ta.B-wan<sup>A</sup></i>              | 1 |
| Longzhou   | <i>ha<sup>l</sup>-van<sup>2</sup></i>    | 1 |
| Zhuang     | <i>taŋ<sup>l</sup>-ŋon<sup>2</sup></i>   | 1 |
| Saek       | <i>ta<sup>6</sup>-ŋɛŋ<sup>4</sup></i>    | 1 |
| Sui        | <i>nda<sup>l</sup>-van<sup>l</sup></i>   | 1 |
| Mulao      | <i>thəu<sup>5</sup>-fan<sup>l</sup></i>  | 1 |
| Kam        | <i>ta<sup>5</sup>-man<sup>l</sup></i>    | 1 |
| Maonan     | <i>la:k<sup>8</sup>-van<sup>l</sup></i>  | 1 |
| Ong Be     | <i>da<sup>4</sup>-vən<sup>2</sup></i>    | 1 |
| Lakkja     | <i>tau<sup>3</sup>-wan<sup>2</sup></i>   | 1 |
| Li Tongshi | <i>tsha<sup>l</sup>-van<sup>4</sup></i>  | 1 |
| Li Baoding | <i>tsha<sup>l</sup>-hwan<sup>l</sup></i> | 1 |

|            | STAR                                     |   |
|------------|--|---|
| Siamese    | <i>da:u<sup>A</sup></i>                  | 1 |
| Longzhou   | <i>da:u<sup>l</sup>-di<sup>5</sup></i>   | 1 |
| Zhuang     | <i>da:u<sup>l</sup>-dei<sup>5</sup></i>  | 1 |
| Saek       | <i>tra:w<sup>l</sup></i>                 | 1 |
| Sui        | <i>zət<sup>7</sup></i>                   | 2 |
| Mulao      | <i>la:k<sup>8</sup>-hmət<sup>7</sup></i> | 2 |
| Kam        | <i>çət<sup>7</sup></i>                   | 2 |
| Maonan     | <i>zət<sup>7</sup></i>                   | 2 |
| Ong Be     | <i>tiŋ<sup>4</sup></i>                   | 1 |
| Lakkja     | <i>tau<sup>3</sup>-blet<sup>7</sup></i>  | 1 |
| Li Tongshi | <i>ra:u<sup>4</sup></i>                  | 1 |
| Li Baoding | <i>ra:u<sup>l</sup></i>                  | 1 |

cf. Vn *sao* < VM < Kd

|            | SWIM                    |    |
|------------|-------------------------|----|
| Siamese    | <i>wa:i<sup>A</sup></i> | -1 |
| Longzhou   | <i>==</i>               | 0  |
| Zhuang     | <i>==</i>               | 0  |
| Saek       | <i>a<sup>6</sup></i>    | 1  |
| Sui        | <i>==</i>               | 0  |
| Mulao      | <i>==</i>               | 0  |
| Kam        | <i>==</i>               | 0  |
| Maonan     | <i>==</i>               | 0  |
| Ong Be     | <i>==</i>               | 0  |
| Lakkja     | <i>==</i>               | 0  |
| Li Tongshi | <i>==</i>               | 0  |
| Li Baoding | <i>==</i>               | 0  |

|            | STONE                     |   |
|------------|---------------------------|---|
| Siamese    | <i>hin<sup>A</sup></i>    | 1 |
| Longzhou   | <i>hin<sup>l</sup></i>    | 1 |
| Zhuang     | <i>yin<sup>l</sup></i>    | 1 |
| Saek       | <i>ri:l<sup>2</sup></i>   | 1 |
| Sui        | <i>tin<sup>2</sup></i>    | 1 |
| Mulao      | <i>tui<sup>2</sup></i>    | 2 |
| Kam        | <i>tin<sup>l</sup></i>    | 1 |
| Maonan     | <i>tu:i<sup>2</sup></i>   | 2 |
| Ong Be     | <i>din<sup>l</sup></i>    | 1 |
| Lakkja     | <i>fa:ŋ<sup>l</sup></i>   | 3 |
| Li Tongshi | <i>tshi:n<sup>l</sup></i> | 1 |
| Li Baoding | <i>tshi:n<sup>l</sup></i> | 1 |

|            | TAIL                                      |   |
|------------|---|---|
| Siamese    | <i>ha:ŋ<sup>A</sup></i>                   | 1 |
| Longzhou   | <i>ha:ŋ<sup>l</sup></i>                   | 1 |
| Zhuang     | <i>yi:ŋ<sup>l</sup></i>                   | 1 |
| Saek       | <i>gyaŋ<sup>l</sup></i>                   | 1 |
| Sui        | <i>hət<sup>8</sup></i>                    | 2 |
| Mulao      | <i>khyət<sup>7</sup></i>                  | 2 |
| Kam        | <i>sət<sup>7</sup></i>                    | 2 |
| Maonan     | <i>sət<sup>7</sup></i>                    | 2 |
| Ong Be     | <i>tu<sup>ʔ</sup></i>                     | 3 |
| Lakkja     | <i>kan<sup>3</sup>-kjie:ŋ<sup>l</sup></i> | 1 |
| Li Tongshi | <i>tshut<sup>7</sup></i>                  | 3 |
| Li Baoding | <i>tshutj<sup>7</sup></i>                 | 3 |

## THAT

|            |                        |    |
|------------|------------------------|----|
| Siamese    | <i>nan<sup>A</sup></i> | 1  |
| Longzhou   | <i>niŋ<sup>3</sup></i> | 1  |
| Zhuang     | <i>han<sup>4</sup></i> | 1  |
| Saek       | <i>nan<sup>5</sup></i> | 1  |
| Sui        | <i>tɕa<sup>5</sup></i> | -1 |
| Mulao      | <i>nau<sup>2</sup></i> | 2  |
| Kam        | <i>ta<sup>6</sup></i>  | -1 |
| Maonan     | <i>ka<sup>5</sup></i>  | -1 |
| Ong Be     | <i>nə<sup>4</sup></i>  | 1  |
| Lakkja     | <i>ŋan<sup>2</sup></i> | 1  |
| Li Tongshi | <i>hai<sup>5</sup></i> | 2  |
| Li Baoding | <i>hai<sup>2</sup></i> | 2  |

## THIS

|            |                         |   |
|------------|-------------------------|---|
| Siamese    | <i>ni<sup>C</sup></i>   | 1 |
| Longzhou   | <i>nai<sup>3</sup></i>  | 1 |
| Zhuang     | <i>nei<sup>4</sup></i>  | 1 |
| Saek       | <i>ni<sup>5</sup></i>   | 1 |
| Sui        | <i>na:i<sup>6</sup></i> | 1 |
| Mulao      | <i>na:i<sup>6</sup></i> | 1 |
| Kam        | <i>na:i<sup>6</sup></i> | 1 |
| Maonan     | <i>na:i<sup>6</sup></i> | 1 |
| Ong Be     | <i>nə<sup>4</sup></i>   | 1 |
| Lakkja     | <i>ni<sup>2</sup></i>   | 1 |
| Li Tongshi | <i>ni<sup>5</sup></i>   | 1 |
| Li Baoding | <i>nei<sup>2</sup></i>  | 1 |

cf. Vn *này* < MK < ? AU

## TONGUE

|            |                         |   |
|------------|-------------------------|---|
| Siamese    | <i>lin<sup>C</sup></i>  | 1 |
| Longzhou   | <i>lin<sup>4</sup></i>  | 1 |
| Zhuang     | <i>lin<sup>4</sup></i>  | 1 |
| Saek       | <i>li:n<sup>4</sup></i> | 1 |
| Sui        | <i>ma<sup>2</sup></i>   | 2 |
| Mulao      | <i>ma<sup>2</sup></i>   | 2 |
| Kam        | <i>ma<sup>2</sup></i>   | 2 |
| Maonan     | <i>ma<sup>2</sup></i>   | 2 |
| Ong Be     | <i>lim<sup>3</sup></i>  | 1 |
| Lakkja     | <i>ŋwa<sup>2</sup></i>  | 2 |
| Li Tongshi | <i>ʔi:n<sup>3</sup></i> | 1 |
| Li Baoding | <i>ʔi:n<sup>3</sup></i> | 1 |

cf. Vn *lān* < Kd  
cf. LB *lip*

## TOOTH

|            |                         |    |
|------------|-------------------------|----|
| Siamese    | <i>van<sup>A</sup></i>  | 1  |
| Longzhou   | <i>kheu<sup>3</sup></i> | 2  |
| Zhuang     | <i>fan<sup>2</sup></i>  | 1  |
| Saek       | <i>nɛ:ŋ<sup>1</sup></i> | -1 |
| Sui        | <i>vjan<sup>1</sup></i> | 1  |
| Mulao      | <i>fan<sup>1</sup></i>  | 1  |
| Kam        | <i>pjan<sup>1</sup></i> | 1  |
| Maonan     | <i>hi:u<sup>3</sup></i> | 2  |
| Ong Be     | <i>tin<sup>4</sup></i>  | 3  |
| Lakkja     | <i>wan<sup>2</sup></i>  | 1  |
| Li Tongshi | <i>fan<sup>1</sup></i>  | 1  |
| Li Baoding | <i>fan<sup>1</sup></i>  | 1  |

cf. Vn *nanh* < VM \**k-neŋ*

## TREE

|            |                          |   |
|------------|--------------------------|---|
| Siamese    | <i>mai<sup>C</sup></i>   | 1 |
| Longzhou   | <i>mai<sup>4</sup></i>   | 1 |
| Zhuang     | <i>fai<sup>4</sup></i>   | 1 |
| Saek       | <i>maj<sup>6</sup></i>   | 1 |
| Sui        | <i>mai<sup>4</sup></i>   | 1 |
| Mulao      | <i>mai<sup>4</sup></i>   | 1 |
| Kam        | <i>məi<sup>4</sup></i>   | 1 |
| Maonan     | <i>mai<sup>4</sup></i>   | 1 |
| Ong Be     | <i>dun<sup>2</sup></i>   | 2 |
| Lakkja     | <i>tsei<sup>5</sup></i>  | 3 |
| Li Tongshi | <i>tshai<sup>1</sup></i> | 3 |
| Li Baoding | <i>tshai<sup>1</sup></i> | 3 |

## TWO

|            |                         |    |
|------------|-------------------------|----|
| Siamese    | <i>so:ŋ<sup>4</sup></i> | -1 |
| Longzhou   | <i>ji<sup>6</sup></i>   | -2 |
| Zhuang     | <i>ŋeɪ<sup>6</sup></i>  | -2 |
| Saek       | <i>so:ŋ<sup>2</sup></i> | -1 |
| Sui        | <i>ya<sup>2</sup></i>   | 1  |
| Mulao      | <i>ya<sup>2</sup></i>   | 1  |
| Kam        | <i>ja<sup>2</sup></i>   | 1  |
| Maonan     | <i>ja<sup>1</sup></i>   | 1  |
| Ong Be     | <i>von<sup>2</sup></i>  | 2  |
| Lakkja     | <i>hou<sup>3</sup></i>  | 3  |
| Li Tongshi | <i>ʔau<sup>3</sup></i>  | 3  |
| Li Baoding | <i>ʔau<sup>3</sup></i>  | 3  |

## WALK

|            |                           |   |
|------------|---------------------------|---|
| Siamese    | <i>paɪ<sup>A</sup></i>    | 1 |
| Longzhou   | <i>phja:i<sup>3</sup></i> | 2 |
| Zhuang     | <i>pja:i<sup>3</sup></i>  | 2 |
| Saek       | <i>ɲa:ŋ<sup>5</sup></i>   | 3 |
| Sui        | <i>sa:m<sup>3</sup></i>   | 2 |
| Mulao      | <i>tsha:m<sup>3</sup></i> | 2 |
| Kam        | <i>t̥ha:m<sup>3</sup></i> | 2 |
| Maonan     | <i>sa:m<sup>3</sup></i>   | 2 |
| Ong Be     | ==                        | 0 |
| Lakkja     | <i>a:m<sup>4</sup></i>    | 2 |
| Li Tongshi | <i>fei<sup>1</sup></i>    | 1 |
| Li Baoding | <i>fei<sup>1</sup></i>    | 1 |

## WARM

|            |                        |   |
|------------|------------------------|---|
| Siamese    | ==                     | 0 |
| Longzhou   | ==                     | 0 |
| Zhuang     | ==                     | 0 |
| Saek       | <i>raw<sup>3</sup></i> | 1 |
| Sui        | ==                     | 0 |
| Mulao      | ==                     | 0 |
| Kam        | ==                     | 0 |
| Maonan     | ==                     | 0 |
| Ong Be     | ==                     | 0 |
| Lakkja     | ==                     | 0 |
| Li Tongshi | ==                     | 0 |
| Li Baoding | ==                     | 0 |

## WATER

|            |                        |   |
|------------|------------------------|---|
| Siamese    | <i>nam<sup>C</sup></i> | 1 |
| Longzhou   | <i>nam<sup>A</sup></i> | 1 |
| Zhuang     | <i>yam<sup>A</sup></i> | 1 |
| Saek       | <i>nam<sup>6</sup></i> | 1 |
| Sui        | <i>nam<sup>3</sup></i> | 1 |
| Mulao      | <i>nəm<sup>4</sup></i> | 1 |
| Kam        | <i>nam<sup>A</sup></i> | 1 |
| Maonan     | <i>nam<sup>3</sup></i> | 1 |
| Ong Be     | <i>nam<sup>3</sup></i> | 1 |
| Lakkja     | <i>num<sup>4</sup></i> | 1 |
| Li Tongshi | <i>nam<sup>3</sup></i> | 1 |
| Li Baoding | <i>nom<sup>3</sup></i> | 1 |

## WE

|            |  |   |
|------------|--|---|
| Siamese    | <i>rau<sup>A</sup></i>                 | 1 |
| Longzhou   | <i>huŋ<sup>1</sup>-lau<sup>2</sup></i> | 1 |
| Zhuang     | <i>tou<sup>1</sup></i>                 | 2 |
| Saek       | <i>tu<sup>1</sup></i>                  | 2 |
| Sui        | <i>ndiu<sup>1</sup></i>                | 1 |
| Mulao      | <i>niu<sup>2</sup></i>                 | 1 |
| Kam        | <i>t̥iu<sup>1</sup></i>                | 1 |
| Maonan     | <i>nde<sup>1</sup></i>                 | 1 |
| Ong Be     | <i>hau<sup>1</sup>lo<sup>3</sup></i>   | 3 |
| Lakkja     | <i>ta<sup>2</sup></i>                  | 2 |
| Li Tongshi | <i>fau<sup>1</sup></i>                 | 4 |
| Li Baoding | <i>fa<sup>1</sup></i>                  | 4 |

## WHAT

|            |  |   |
|------------|--|---|
| Siamese    | <i>a.-raɪ<sup>A</sup></i>              | 1 |
| Longzhou   | <i>ki<sup>5</sup>-laŋ<sup>1</sup></i>  | 2 |
| Zhuang     | <i>ma<sup>2</sup></i>                  | 3 |
| Saek       | <i>tha<sup>4</sup></i>                 | 4 |
| Sui        | <i>ni<sup>4</sup>-ma:ŋ<sup>2</sup></i> | 5 |
| Mulao      | <i>ə<sup>5</sup>-na:ŋ<sup>2</sup></i>  | 5 |
| Kam        | <i>ma:ŋ<sup>2</sup></i>                | 5 |
| Maonan     | <i>nam<sup>2</sup></i>                 | 6 |
| Ong Be     | <i>ki<sup>2</sup></i>                  | 2 |
| Lakkja     | <i>lak<sup>7</sup>-ke<sup>6</sup></i>  | 2 |
| Li Tongshi | <i>me<sup>3</sup>-he<sup>1</sup></i>   | 8 |
| Li Baoding | <i>me<sup>3</sup>-he<sup>3</sup></i>   | 8 |

## WHITE

|            |                           |    |
|------------|---------------------------|----|
| Siamese    | <i>kha:u<sup>A</sup></i>  | 1  |
| Longzhou   | <i>kha:u<sup>1</sup></i>  | 1  |
| Zhuang     | <i>ha:u<sup>1</sup></i>   | 1  |
| Saek       | <i>ha:w<sup>2</sup></i>   | 1  |
| Sui        | <i>pa:k<sup>8</sup></i>   | -1 |
| Mulao      | <i>cwa<sup>3</sup></i>    | 2  |
| Kam        | <i>pa:k<sup>10</sup></i>  | -1 |
| Maonan     | <i>kwa<sup>3</sup></i>    | 2  |
| Ong Be     | <i>p̥çiak<sup>1</sup></i> | -1 |
| Lakkja     | <i>pie:k<sup>8</sup></i>  | -1 |
| Li Tongshi | <i>kha:u<sup>1</sup></i>  | 1  |
| Li Baoding | <i>kha:u<sup>1</sup></i>  | 1  |

## WHO

|            |  |    |
|------------|--|----|
| Siamese    | <i>graj<sup>A</sup></i>                | 1  |
| Longzhou   | <i>ki<sup>2</sup>-nai<sup>2</sup></i>  | -1 |
| Zhuang     | <i>pou<sup>4</sup>-lai<sup>2</sup></i> | 1  |
| Saek       | <i>də<sup>1</sup></i>                  | -2 |
| Sui        | <i>ai<sup>3</sup>-hnu<sup>1</sup></i>  | -1 |
| Mulao      | <i>nau<sup>2</sup></i>                 | -1 |
| Kam        | <i>nəu<sup>2</sup></i>                 | -1 |
| Maonan     | <i>ai<sup>1</sup>-nau<sup>1</sup></i>  | -1 |
| Ong Be     | <i>i<sup>1</sup></i>                   | -1 |
| Lakkja     | <i>ne<sup>4</sup></i>                  | -1 |
| Li Tongshi | <i>a<sup>3</sup>-ra<sup>2</sup></i>    | 3  |
| Li Baoding | <i>i.<sup>3</sup>-ra<sup>3</sup></i>   | 3  |

## YELLOW

|            |                          |    |
|------------|--------------------------|----|
| Siamese    | <i>hliag<sup>A</sup></i> | 1  |
| Longzhou   | <i>lə:ŋ<sup>1</sup></i>  | 1  |
| Zhuang     | <i>hen<sup>3</sup></i>   | 2  |
| Saek       | <i>va:ŋ<sup>4</sup></i>  | -1 |
| Sui        | <i>hma:n<sup>3</sup></i> | 3  |
| Mulao      | <i>hŋa:n<sup>3</sup></i> | 3  |
| Kam        | <i>ma:n<sup>3</sup></i>  | 3  |
| Maonan     | <i>ma:n<sup>3</sup></i>  | 3  |
| Ong Be     | <i>laf<sup>4</sup></i>   | 1  |
| Lakkja     | <i>hŋjie<sup>5</sup></i> | 4  |
| Li Tongshi | <i>ʔe:ŋ<sup>4</sup></i>  | 1  |
| Li Baoding | <i>ze:ŋ<sup>1</sup></i>  | 1  |

cf. WrK *liəŋ* < MK < ? AU

## WOMAN

|            |  |     |
|------------|--|-----|
| Siamese    | <i>hpiŋ<sup>A</sup></i>                  | -1  |
| Longzhou   | <i>ti<sup>6</sup>-me<sup>6</sup></i>     | 1   |
| Zhuang     | <i>me<sup>6</sup>-bi<sup>k7</sup></i>    | 1 3 |
| Saek       | <i>byk<sup>4</sup></i>                   | -2  |
| Sui        | <i>ni<sup>4</sup>-bjə:k<sup>7</sup></i>  | -2  |
| Mulao      | <i>ti<sup>6</sup>-pwa<sup>2</sup></i>    | 2   |
| Kam        | <i>ŋən<sup>2</sup>-mjek<sup>9</sup></i>  | -2  |
| Maonan     | <i>la:k<sup>8</sup>-bi:k<sup>7</sup></i> | -2  |
| Ong Be     | <i>maj<sup>1</sup>-lək<sup>1</sup></i>   | 1   |
| Lakkja     | <i>lak<sup>8</sup>-kjā:u<sup>3</sup></i> | 3   |
| Li Tongshi | <i>ʔi:ŋ<sup>7</sup>-kho<sup>5</sup></i>  | 3   |
| Li Baoding | <i>pai<sup>3</sup>-khau<sup>2</sup></i>  | 3   |

## YOU (sg.)

|            |                          |    |
|------------|--------------------------|----|
| Siamese    | <i>dhe:w<sup>A</sup></i> | 1  |
| Longzhou   | <i>mai<sup>2</sup></i>   | 3  |
| Zhuang     | <i>miŋ<sup>2</sup></i>   | 3  |
| Saek       | <i>miŋ<sup>4</sup></i>   | 3  |
| Sui        | <i>ŋa<sup>2</sup></i>    | -1 |
| Mulao      | <i>ŋa<sup>2</sup></i>    | -1 |
| Kam        | <i>ŋa<sup>2</sup></i>    | -1 |
| Maonan     | <i>ŋ<sup>2</sup></i>     | -1 |
| Ong Be     | <i>mə<sup>1</sup></i>    | 3  |
| Lakkja     | <i>ma<sup>2</sup></i>    | 3  |
| Li Tongshi | <i>mei<sup>1</sup></i>   | 3  |
| Li Baoding | <i>mei<sup>1</sup></i>   | 3  |

cf. Vn *may* < MK < ? AU

## APPENDIX B: MON-KHMER DATA

| ALL        |                         |    | BARK       |                           |    |
|------------|-------------------------|----|------------|---------------------------|----|
| Jeh        | ==                      | 0  | Jeh        | <i>kədu:h</i>             | 1  |
| Bahnar     | ==                      | 0  | Bahnar     | <i>hmə:k</i>              | 2  |
| Chrau      | ==                      | 0  | Chrau      | <i>mə:ʔ</i>               | 2  |
| Vietnamese | <i>cá</i>               | 2  | Vietnamese | <i>vó</i>                 | 3  |
| Ruc        | ==                      | 0  | Ruc        | <i>kəduh</i>              | 1  |
| Mon        | <i>paʔuit</i>           | 3  | Mon        | <i>sakow</i>              | 4  |
| Nyakur     | <i>thəŋ<sup>2</sup></i> | -1 | Nyakur     | <i>ŋkuər<sup>2</sup></i>  | 4  |
| Khmer      | <i>ʔamŋ</i>             | 1  | Khmer      | <i>səmbak</i>             | 2  |
| Kui        | <i>ʔai the:B</i>        | 4  | Kui        | <i>mphuaʔ<sup>B</sup></i> | 2  |
| Semai      | <i>dic</i>              | 5  | Semai      | <i>ckə:p</i>              | 5  |
| Wa         | <i>to</i>               | -2 | Wa         | <i>hloʔ</i>               | 6  |
| Deang      | <i>dviʔ</i>             | 6  | Deang      | <i>goʔ</i>                | 10 |
| Khmu       | <i>ku:</i>              | 7  | Khmu       | <i>həmpə:k</i>            | 2  |
| Ksinmul    | <i>ʔe:</i>              | 8  | Ksinmul    | <i>bɨŋ</i>                | 7  |
| Khasi      | <i>baroh</i>            | 9  | Khasi      | <i>snep</i>               | 8  |
| Mundari    | <i>soben</i>            | -3 | Mundari    | <i>harta</i>              | 9  |

| ASHES      |                          |    | BELLY      |                          |   |
|------------|--------------------------|----|------------|--------------------------|---|
| Jeh        | <i>luŋ lo:k</i>          | 1  | Jeh        | <i>pədok<sup>L</sup></i> | 1 |
| Bahnar     | <i>həyo:k</i>            | 9  | Bahnar     | ==                       | 0 |
| Chrau      | <i>bu:h</i>              | 3  | Chrau      | <i>kandil</i>            | 3 |
| Vietnamese | <i>tro</i>               | 10 | Vietnamese | <i>bung</i>              | 4 |
| Ruc        | <i>təpəh</i>             | 3  | Ruc        | <i>kdəl</i>              | 3 |
| Mon        | <i>pateŋ</i>             | 2  | Mon        | <i>buŋ</i>               | 4 |
| Nyakur     | <i>pətɨŋ<sup>1</sup></i> | 2  | Nyakur     | <i>phuŋ<sup>2</sup></i>  | 4 |
| Khmer      | <i>phe:h</i>             | 3  | Khmer      | <i>bo:h</i>              | 5 |
| Kui        | <i>phaʔ</i>              | 4  | Kui        | <i>phùŋ</i>              | 4 |
| Semai      | <i>gŋhəl</i>             | 11 | Semai      | <i>kət</i>               | 6 |
| Wa         | <i>ɲauʔ</i>              | 5  | Wa         | <i>vaik</i>              | 7 |
| Deang      | <i>k'fa:ŋ</i>            | 6  | Deang      | <i>vɛʔ</i>               | 7 |
| Khmu       | <i>poh<sup>2</sup></i>   | 3  | Khmu       | <i>pə:ŋ</i>              | 4 |
| Ksinmul    | <i>ʔəboh</i>             | 3  | Ksinmul    | <i>ku:</i>               | 8 |
| Khasi      | <i>dypɛi</i>             | 3  | Khasi      | <i>kypoh</i>             | 5 |
| Mundari    | <i>toroeʔ</i>            | 8  | Mundari    | <i>laʒ</i>               | 2 |



| BIG        |                          |    | BITE       |                        |   |
|------------|--------------------------|----|------------|------------------------|---|
| Jeh        | <i>ti:h<sup>L</sup></i>  | 1  | Jeh        | <i>kap</i>             | 1 |
| Bahnar     | <i>tih</i>               | 1  | Bahnar     | <i>kap</i>             | 1 |
| Chrau      | <i>maʔ</i>               | 2  | Chrau      | <i>==</i>              | 0 |
| Vietnamese | <i>lón</i>               | 3  | Vietnamese | <i>cǎn</i>             | 8 |
| Ruc        | <i>məam</i>              | 4  | Ruc        | <i>koo̯m</i>           | 2 |
| Mon        | <i>ʒnok</i>              | 12 | Mon        | <i>kit</i>             | 3 |
| Nyakur     | <i>ʔəto:L</i>            | 5  | Nyakur     | <i>kit<sup>l</sup></i> | 3 |
| Khmer      | <i>dhə:m</i>             | 6  | Khmer      | <i>kha:m</i>           | 2 |
| Kui        | <i>phi:t<sup>B</sup></i> | 7  | Kui        | <i>kap<sup>L</sup></i> | 1 |
| Semai      | <i>nto:j</i>             | 5  | Semai      | <i>kap</i>             | 1 |
| Wa         | <i>tiŋ<sup>B</sup></i>   | 8  | Wa         | <i>kiat</i>            | 3 |
| Deang      | <i>da:ŋ</i>              | 13 | Deang      | <i>gaʔ</i>             | 4 |
| Khmu       | <i>nam</i>               | 9  | Khmu       | <i>pok</i>             | 5 |
| Ksinmul    | <i>do:</i>               | 5  | Ksinmul    | <i>ʔak</i>             | 6 |
| Khasi      | <i>khraw</i>             | 10 | Khasi      | <i>dait</i>            | 7 |
| Mundari    | <i>marəŋ</i>             | 11 | Mundari    | <i>hua</i>             | 1 |

| BIRD       |                          |    | BLACK      |                           |    |
|------------|--------------------------|----|------------|---------------------------|----|
| Jeh        | <i>cim</i>               | 1  | Jeh        | <i>ʔju:ŋ</i>              | 1  |
| Bahnar     | <i>sem</i>               | 1  | Bahnar     | <i>gam</i>                | 2  |
| Chrau      | <i>sum</i>               | 1  | Chrau      | <i>sindo:c</i>            | 3  |
| Vietnamese | <i>chim</i>              | 1  | Vietnamese | <i>den</i>                | 4  |
| Ruc        | <i>icim</i>              | 1  | Ruc        | <i>tenten</i>             | 4  |
| Mon        | <i>gacem</i>             | 1  | Mon        | <i>ləmcək</i>             | 5  |
| Nyakur     | <i>ɲciəm<sup>l</sup></i> | 1  | Nyakur     | <i>phliət<sup>2</sup></i> | 6  |
| Khmer      | <i>sat-slap</i>          | 2  | Khmer      | <i>khəməw</i>             | 7  |
| Kui        | <i>cæ:m<sup>L</sup></i>  | 1  | Kui        | <i>twæ:ɲ</i>              | 8  |
| Semai      | <i>cɛ:p<sup>m</sup></i>  | 1  | Semai      | <i>blʔak</i>              | 9  |
| Wa         | <i>sim</i>               | 1  | Wa         | <i>luŋ<sup>B</sup></i>    | 10 |
| Deang      | <i>siŋ</i>               | 1  | Deang      | <i>vaŋ</i>                | 8  |
| Khmu       | <i>si:m</i>              | 1  | Khmu       | <i>hiəŋ</i>               | 1  |
| Ksinmul    | <i>ce:m</i>              | 1  | Ksinmul    | <i>ʔoc</i>                | 9  |
| Khasi      | <i>sim</i>               | 1  | Khasi      | <i>ioŋ</i>                | 10 |
| Mundari    | <i>ceŋe</i>              | -1 | Mundari    | <i>hende</i>              | 11 |

## BLOOD

|            |                           |   |
|------------|---------------------------|---|
| Jeh        | <i>pha:m</i>              | 1 |
| Bahnar     | <i>pha:m</i>              | 1 |
| Chrau      | <i>n'ha:m</i>             | 1 |
| Vietnamese | <i>máu</i>                | 2 |
| Ruc        | <i>asam</i>               | 1 |
| Mon        | <i>chim</i>               | 1 |
| Nyakur     | <i>chim<sup>l</sup></i>   | 1 |
| Khmer      | <i>zha:m</i>              | 1 |
| Kui        | <i>ʔəha:m<sup>L</sup></i> | 1 |
| Semai      | <i>bhi:p<sup>m</sup></i>  | 1 |
| Wa         | <i>nham</i>               | 1 |
| Deang      | <i>nha:m</i>              | 1 |
| Khmu       | <i>ma:m</i>               | 1 |
| Ksinmul    | <i>miəm</i>               | 1 |
| Khasi      | <i>sna:m</i>              | 1 |
| Mundari    | <i>mayam</i>              | 1 |

## BREAST

|            |                        |   |
|------------|------------------------|---|
| Jeh        | <i>tuh<sup>T</sup></i> | 1 |
| Bahnar     | <i>təh</i>             | 1 |
| Chrau      | <i>gatoh</i>           | 1 |
| Vietnamese | <i>vú</i>              | 2 |
| Ruc        | <i>nəj</i>             | 3 |
| Mon        | <i>tah</i>             | 1 |
| Nyakur     | <i>təh<sup>l</sup></i> | 1 |
| Khmer      | <i>to:h</i>            | 1 |
| Kui        | <i>təh<sup>L</sup></i> | 1 |
| Semai      | <i>ntəh</i>            | 1 |
| Wa         | <i>təih</i>            | 1 |
| Deang      | <i>bu</i>              | 2 |
| Khmu       | <i>pu</i>              | 2 |
| Ksinmul    | <i>ʔum</i>             | 4 |
| Khasi      | <i>shadem</i>          | 5 |
| Mundari    | <i>nunu</i>            | 6 |

## BONE

|            |                            |   |
|------------|----------------------------|---|
| Jeh        | <i>kəsiar<sup>L</sup></i>  | 1 |
| Bahnar     | <i>kəti:ŋ</i>              | 1 |
| Chrau      | <i>nti:ŋ</i>               | 1 |
| Vietnamese | <i>xương</i>               | 1 |
| Ruc        | <i>sàŋ</i>                 | 1 |
| Mon        | <i>zət</i>                 | 2 |
| Nyakur     | <i>chəlu:t<sup>2</sup></i> | 2 |
| Khmer      | <i>chʔiŋ</i>               | 1 |
| Kui        | <i>ŋha:ŋ<sup>L</sup></i>   | 1 |
| Semai      | <i>ʔʔa:kŋ</i>              | 1 |
| Wa         | <i>si-saŋ</i>              | 1 |
| Deang      | <i>k'ʔa:ŋ</i>              | 1 |
| Khmu       | <i>cəʔa:ŋ</i>              | 1 |
| Ksinmul    | <i>laŋ</i>                 | 1 |
| Khasi      | <i>sh'ieŋ</i>              | 1 |
| Mundari    | <i>ʒaŋ</i>                 | 1 |

## BURN

|            |                           |    |
|------------|---------------------------|----|
| Jeh        | <i>==</i>                 | 0  |
| Bahnar     | <i>==</i>                 | 0  |
| Chrau      | <i>ŋi:t</i>               | 1  |
| Vietnamese | <i>thiêu</i>              | -2 |
| Ruc        | <i>takát</i>              | 3  |
| Mon        | <i>tau</i>                | 4  |
| Nyakur     | <i>khla:k<sup>2</sup></i> | 5  |
| Khmer      | <i>ʔut</i>                | 2  |
| Kui        | <i>caŋ<sup>L</sup></i>    | 9  |
| Semai      | <i>==</i>                 | 0  |
| Wa         | <i>kik<sup>B</sup></i>    | 10 |
| Deang      | <i>==</i>                 | 0  |
| Khmu       | <i>pɔ:k</i>               | 6  |
| Ksinmul    | <i>==</i>                 | 0  |
| Khasi      | <i>iŋ</i>                 | 7  |
| Mundari    | <i>ro</i>                 | 8  |

## CLOUD

|            |                          |    |
|------------|--------------------------|----|
| Jeh        | <i>kəsok<sup>L</sup></i> | 1  |
| Bahnar     | <i>həmə:l</i>            | 2  |
| Chrau      | <i>tu?</i>               | 3  |
| Vietnamese | <i>mây</i>               | 2  |
| Ruc        | <i>məl</i>               | 2  |
| Mon        | <i>mat.brai</i>          | 4  |
| Nyakur     | <i>mə:k<sup>2</sup></i>  | 5  |
| Khmer      | <i>bəbo:k</i>            | 5  |
| Kui        | <i>hlət<sup>B</sup></i>  | 6  |
| Semai      | <i>sagup</i>             | -1 |
| Wa         | <i>pai-ʔəm</i>           | 7  |
| Deang      | <i>nh'ʔu:t</i>           | 8  |
| Khmu       | <i>pu:t</i>              | 8  |
| Ksinmul    | <i>mə:k</i>              | 5  |
| Khasi      | <i>ly'oh</i>             | 9  |
| Mundari    | <i>rimil</i>             | 2  |

## COME

|            |                         |    |
|------------|-------------------------|----|
| Jeh        | ==                      | 0  |
| Bahnar     | ==                      | 0  |
| Chrau      | ==                      | 0  |
| Vietnamese | <i>đi</i>               | 1  |
| Ruc        | <i>ti</i>               | 1  |
| Mon        | <i>kluŋ</i>             | 2  |
| Nyakur     | <i>lo:ŋ<sup>L</sup></i> | 2  |
| Khmer      | <i>mə:k</i>             | 3  |
| Kui        | <i>cau<sup>L</sup></i>  | 4  |
| Semai      | <i>bəj</i>              | 5  |
| Wa         | <i>hoik</i>             | 6  |
| Deang      | <i>rət</i>              | 7  |
| Khmu       | <i>ka:y</i>             | 8  |
| Ksinmul    | <i>pleh</i>             | 9  |
| Khasi      | <i>wan</i>              | 10 |
| Mundari    | <i>hiʒu?</i>            | 11 |

## COLD

|            |                          |    |
|------------|--------------------------|----|
| Jeh        | <i>rətəh</i>             | 1  |
| Bahnar     | <i>təŋjet</i>            | 2  |
| Chrau      | <i>takat</i>             | 3  |
| Vietnamese | <i>lạnh</i>              | -1 |
| Ruc        | <i>lubát</i>             | 4  |
| Mon        | <i>gaok</i>              | 5  |
| Nyakur     | <i>təkət<sup>l</sup></i> | 3  |
| Khmer      | <i>trəzak</i>            | 6  |
| Kui        | <i>cŋæ:t<sup>L</sup></i> | 2  |
| Semai      | <i>sŋec</i>              | 2  |
| Wa         | <i>kuat</i>              | 3  |
| Deang      | <i>kat</i>               | 3  |
| Khmu       | <i>ŋar</i>               | 7  |
| Ksinmul    | <i>təkət</i>             | 3  |
| Khasi      | <i>khreät</i>            | 8  |
| Mundari    | <i>tutukan</i>           | 9  |

## DIE

|            |                            |   |
|------------|----------------------------|---|
| Jeh        | <i>kəchiat<sup>L</sup></i> | 1 |
| Bahnar     | <i>kətec</i>               | 7 |
| Chrau      | <i>cit</i>                 | 1 |
| Vietnamese | <i>chết</i>                | 1 |
| Ruc        | <i>kucít</i>               | 1 |
| Mon        | <i>khyuit</i>              | 1 |
| Nyakur     | <i>kəcet<sup>l</sup></i>   | 1 |
| Khmer      | <i>slap</i>                | 2 |
| Kui        | <i>lah<sup>B</sup></i>     | 3 |
| Semai      | <i>dat<sup>n</sup></i>     | 4 |
| Wa         | <i>jum</i>                 | 5 |
| Deang      | <i>jam</i>                 | 5 |
| Khmu       | <i>ha:n</i>                | 6 |
| Ksinmul    | <i>siən</i>                | 6 |
| Khasi      | <i>iap noh</i>             | 2 |
| Mundari    | <i>goʒu?</i>               | 1 |

|            | DOG                     |   |
|------------|-------------------------|---|
| Jeh        | <i>cə:T</i>             | 1 |
| Bahnar     | <i>kə</i>               | 2 |
| Chrau      | <i>sə:</i>              | 1 |
| Vietnamese | <i>chó</i>              | 1 |
| Ruc        | <i>acə</i>              | 1 |
| Mon        | <i>kluiw</i>            | 3 |
| Nyakur     | <i>chur<sup>l</sup></i> | 3 |
| Khmer      | <i>chəke:</i>           | 2 |
| Kui        | <i>ca:L</i>             | 1 |
| Semai      | <i>co:?</i>             | 1 |
| Wa         | <i>so?</i>              | 1 |
| Deang      | <i>a'ʔoʔ</i>            | 5 |
| Khmu       | <i>sə:</i>              | 1 |
| Ksinmul    | <i>cə:</i>              | 1 |
| Khasi      | <i>ksew</i>             | 1 |
| Mundari    | <i>seta</i>             | 4 |

|            | DRY                      |    |
|------------|--------------------------|----|
| Jeh        | <i>raŋ<sup>T</sup></i>   | 1  |
| Bahnar     | <i>hreŋ</i>              | 1  |
| Chrau      | <i>raŋ</i>               | 1  |
| Vietnamese | <i>khô</i>               | -1 |
| Ruc        | <i>kho</i>               | -1 |
| Mon        | <i>səmkah</i>            | 4  |
| Nyakur     | <i>cəkəs<sup>l</sup></i> | 4  |
| Khmer      | <i>sŋuət</i>             | 5  |
| Kui        | <i>sʔa:t<sup>L</sup></i> | 6  |
| Semai      | <i>ho:c</i>              | 7  |
| Wa         | <i>krəh</i>              | 2  |
| Deang      | ==                       | 0  |
| Khmu       | <i>ra:s</i>              | 2  |
| Ksinmul    | ==                       | 0  |
| Khasi      | <i>rykhiaŋ</i>           | 8  |
| Mundari    | <i>roŋo</i>              | 2  |

<> cf. Mal *kering*

|            | DRINK                    |   |
|------------|--------------------------|---|
| Jeh        | <i>hut<sup>T</sup></i>   | 1 |
| Bahnar     | <i>pa</i>                | 2 |
| Chrau      | <i>hu:c</i>              | 1 |
| Vietnamese | <i>uống</i>              | 3 |
| Ruc        | <i>pủ</i>                | 2 |
| Mon        | <i>sư</i>                | 5 |
| Nyakur     | <i>cho:ŋ<sup>l</sup></i> | 5 |
| Khmer      | <i>phik</i>              | 6 |
| Kui        | <i>ŋuac<sup>B</sup></i>  | 4 |
| Semai      | <i>ŋu:t</i>              | 4 |
| Wa         | <i>rhip</i>              | 7 |
| Deang      | <i>rhip</i>              | 7 |
| Khmu       | <i>uak</i>               | 8 |
| Ksinmul    | <i>ʔuk</i>               | 8 |
| Khasi      | <i>dih</i>               | 9 |
| Mundari    | <i>nu</i>                | 2 |

|            | EAR                       |   |
|------------|---------------------------|---|
| Jeh        | <i>pat<sup>L</sup></i>    | 1 |
| Bahnar     | <i>don</i>                | 2 |
| Chrau      | <i>to:r</i>               | 4 |
| Vietnamese | <i>tai</i>                | 3 |
| Ruc        | <i>saj</i>                | 3 |
| Mon        | <i>katow</i>              | 4 |
| Nyakur     | <i>kətuər<sup>l</sup></i> | 4 |
| Khmer      | <i>trəciək</i>            | 5 |
| Kui        | <i>kəto:r<sup>L</sup></i> | 4 |
| Semai      | <i>ntakʉ</i>              | 6 |
| Wa         | <i>jhauk</i>              | 5 |
| Deang      | <i>jəʔ</i>                | 5 |
| Khmu       | <i>hermə:j</i>            | 7 |
| Ksinmul    | <i>həltə:l</i>            | 4 |
| Khasi      | <i>shkor</i>              | 4 |
| Mundari    | <i>lutur</i>              | 4 |

| EARTH      |                           |    | EGG        |                            |    |
|------------|---------------------------|----|------------|----------------------------|----|
| Jeh        | <i>ʔne:h<sup>T</sup></i>  | 2  | Jeh        | <i>tətap<sup>T</sup></i>   | 1  |
| Bahnar     | <i>tɛh</i>                | 1  | Bahnar     | ==                         | 0  |
| Chrau      | <i>nɛh</i>                | 1  | Chrau      | <i>cap</i>                 | 1  |
| Vietnamese | <i>đất</i>                | 1  | Vietnamese | <i>trúng</i>               | 2  |
| Ruc        | <i>bə̃n</i>               | -1 | Ruc        | <i>təlúl</i>               | 8  |
| Mon        | <i>ti</i>                 | 1  | Mon        | <i>khamhay</i>             | 3  |
| Nyakur     | <i>ti:ʔ<sup>l</sup></i>   | 1  | Nyakur     | <i>pho:ŋ<sup>2</sup></i>   | -4 |
| Khmer      | <i>ti:</i>                | 1  | Khmer      | <i>bo:ŋ</i>                | 4  |
| Kui        | <i>kətæ:ʔ<sup>L</sup></i> | 1  | Kui        | <i>nthræ:l<sup>B</sup></i> | 8  |
| Semai      | <i>te:ʔ</i>               | 1  | Semai      | <i>pŋlə:k<sup>ŋ</sup></i>  | 2  |
| Wa         | <i>tɛʔ</i>                | 1  | Wa         | <i>təm</i>                 | 5  |
| Deang      | <i>k'tai</i>              | 1  | Deang      | <i>kra:u</i>               | 6  |
| Khmu       | <i>pəte</i>               | 1  | Khmu       | <i>kətoŋ</i>               | 7  |
| Ksinmul    | <i>kəte:</i>              | 1  | Ksinmul    | <i>kloŋ</i>                | 2  |
| Khasi      | <i>pyrthei</i>            | 1  | Khasi      | <i>pylləŋ</i>              | 2  |
| Mundari    | <i>ote</i>                | 1  | Mundari    | <i>zarom</i>               | 9  |

| EAT        |                         |   | EYE        |                        |   |
|------------|-------------------------|---|------------|------------------------|---|
| Jeh        | <i>ca:T</i>             | 1 | Jeh        | <i>mat<sup>T</sup></i> | 1 |
| Bahnar     | <i>sa:</i>              | 1 | Bahnar     | <i>mat</i>             | 1 |
| Chrau      | <i>sa:</i>              | 1 | Chrau      | <i>mat</i>             | 1 |
| Vietnamese | <i>ăn</i>               | 2 | Vietnamese | <i>mắt</i>             | 1 |
| Ruc        | <i>ʔăn</i>              | 2 | Ruc        | ==                     | 0 |
| Mon        | <i>ca</i>               | 1 | Mon        | <i>mat</i>             | 1 |
| Nyakur     | <i>ca:ʔ<sup>l</sup></i> | 1 | Nyakur     | <i>mat<sup>2</sup></i> | 1 |
| Khmer      | <i>ja:m</i>             | 3 | Khmer      | <i>bhə̃nɛ:k</i>        | 2 |
| Kui        | <i>ca:<sup>L</sup></i>  | 1 | Kui        | <i>mat<sup>B</sup></i> | 1 |
| Semai      | <i>ca:ʔ</i>             | 1 | Semai      | <i>mat</i>             | 1 |
| Wa         | <i>səm</i>              | 4 | Wa         | <i>ŋai</i>             | 3 |
| Deang      | <i>hə:m</i>             | 4 | Deang      | <i>ŋa:i</i>            | 3 |
| Khmu       | <i>pə</i>               | 6 | Khmu       | <i>mat</i>             | 1 |
| Ksinmul    | <i>ca:</i>              | 1 | Ksinmul    | <i>mat</i>             | 1 |
| Khasi      | <i>ba:m</i>             | 7 | Khasi      | <i>khymat</i>          | 1 |
| Mundari    | <i>zom</i>              | 4 | Mundari    | <i>med</i>             | 1 |

|            | FAT                       |    |
|------------|---------------------------|----|
| Jeh        | <i>pədreŋ<sup>T</sup></i> | 1  |
| Bahnar     | <i>rəma</i>               | -1 |
| Chrau      | ==                        | 0  |
| Vietnamese | <i>mõ</i>                 | 2  |
| Ruc        | <i>klùŋ</i>               | 3  |
| Mon        | <i>kleŋ</i>               | 3  |
| Nyakur     | <i>kəliŋ<sup>l</sup></i>  | 3  |
| Khmer      | <i>khləŋ</i>              | 3  |
| Kui        | <i>ŋche:ŋ<sup>L</sup></i> | 4  |
| Semai      | <i>lʔu:s</i>              | 5  |
| Wa         | <i>bɨ</i>                 | 6  |
| Deang      | ==                        | 0  |
| Khmu       | ==                        | 0  |
| Ksinmul    | ==                        | 0  |
| Khasi      | ==                        | 0  |
| Mundari    | <i>itil</i>               | 7  |

AN \**lemak* > Pr.Cham \**luma*?

|            | FIRE                     |    |
|------------|--------------------------|----|
| Jeh        | <i>on<sup>L</sup></i>    | 1  |
| Bahnar     | <i>uŋ</i>                | 1  |
| Chrau      | <i>uŋ</i>                | 1  |
| Vietnamese | <i>lũa</i>               | 2  |
| Ruc        | <i>kuř, kuřh</i>         | 3  |
| Mon        | <i>pamat</i>             | 4  |
| Nyakur     | <i>kəmat<sup>l</sup></i> | 4  |
| Khmer      | <i>bhlaəŋ</i>            | 5  |
| Kui        | <i>ʔu:h</i>              | 1  |
| Semai      | <i>ʔɔ:s</i>              | 1  |
| Wa         | <i>ŋu</i>                | 7  |
| Deang      | <i>ŋar</i>               | 7  |
| Khmu       | <i>pərləa</i>            | 2  |
| Ksinmul    | <i>həgoŋ</i>             | 8  |
| Khasi      | <i>diŋ</i>               | 9  |
| Mundari    | <i>seŋgel</i>            | 10 |

|            | FEATHER                      |   |
|------------|------------------------------|---|
| Jeh        | <i>suk<sup>T</sup></i>       | 1 |
| Bahnar     | <i>sək</i>                   | 1 |
| Chrau      | <i>sinɔ:ʔ</i>                | 1 |
| Vietnamese | <i>lông chim</i>             | 2 |
| Ruc        | <i>usúk</i>                  | 1 |
| Mon        | <i>səneŋ</i>                 | 7 |
| Nyakur     | <i>chəkchɔ:k<sup>l</sup></i> | 1 |
| Khmer      | <i>slap</i>                  | 3 |
| Kui        | <i>sɔʔ</i>                   | 1 |
| Semai      | <i>sntɔ:l</i>                | 4 |
| Wa         | ==                           | 0 |
| Deang      | ==                           | 0 |
| Khmu       | <i>khu:l</i>                 | 5 |
| Ksinmul    | <i>sək</i>                   | 1 |
| Khasi      | <i>snér</i>                  | 6 |
| Mundari    | <i>iil</i>                   | 5 |

|            | FISH                    |   |
|------------|-------------------------|---|
| Jeh        | <i>ka:<sup>T</sup></i>  | 1 |
| Bahnar     | <i>ka:</i>              | 1 |
| Chrau      | <i>ka:</i>              | 1 |
| Vietnamese | <i>cá</i>               | 1 |
| Ruc        | <i>aká</i>              | 1 |
| Mon        | <i>ka</i>               | 1 |
| Nyakur     | <i>ka:ʔ<sup>l</sup></i> | 1 |
| Khmer      | <i>tri:</i>             | 2 |
| Kui        | <i>ka:<sup>L</sup></i>  | 1 |
| Semai      | <i>ka:ʔ</i>             | 1 |
| Wa         | <i>kaʔ</i>              | 1 |
| Deang      | <i>ka</i>               | 1 |
| Khmu       | <i>ka:</i>              | 1 |
| Ksinmul    | <i>ka:</i>              | 1 |
| Khasi      | <i>dohkha</i>           | 1 |
| Mundari    | <i>ha=i</i>             | 1 |

| FLY        |                         |   | FULL       |                         |    |
|------------|-------------------------|---|------------|-------------------------|----|
| Jeh        | <i>təpa<sup>L</sup></i> | 1 | Jeh        | <i>bi:ŋ<sup>L</sup></i> | 1  |
| Bahnar     | <i>par</i>              | 1 | Bahnar     | <i>?beŋ</i>             | 1  |
| Chrau      | <i>par</i>              | 1 | Chrau      | <i>be:ŋ</i>             | 1  |
| Vietnamese | <i>bay</i>              | 1 | Vietnamese | <i>đây</i>              | 2  |
| Ruc        | <i>pəl</i>              | 1 | Ruc        | <i>blam</i>             | 3  |
| Mon        | <i>paw</i>              | 1 | Mon        | <i>peŋ</i>              | 1  |
| Nyakur     | <i>phar<sup>L</sup></i> | 1 | Nyakur     | <i>piŋ<sup>L</sup></i>  | 1  |
| Khmer      | <i>haər</i>             | 2 | Khmer      | <i>bə:ŋ</i>             | 1  |
| Kui        | <i>pa:r<sup>L</sup></i> | 1 | Kui        | <i>==</i>               | 0  |
| Semai      | <i>hɛ:k<sup>ŋ</sup></i> | 3 | Semai      | <i>təbe:k</i>           | 1  |
| Wa         | <i>pu</i>               | 1 | Wa         | <i>nauk<sup>B</sup></i> | 5  |
| Deang      | <i>phru</i>             | 5 | Deang      | <i>nɔ?</i>              | 5  |
| Khmu       | <i>ti:r</i>             | 6 | Khmu       | <i>kiŋ</i>              | 6  |
| Ksinmul    | <i>pal</i>              | 1 | Ksinmul    | <i>?kiŋ</i>             | 6  |
| Khasi      | <i>he:r</i>             | 2 | Khasi      | <i>dap</i>              | 7  |
| Mundari    | <i>apir</i>             | 1 | Mundari    | <i>pura</i>             | -1 |

| FOOT       |                         |   | GIVE       |                         |    |
|------------|-------------------------|---|------------|-------------------------|----|
| Jeh        | <i>==</i>               | 0 | Jeh        | <i>do:h<sup>L</sup></i> | 1  |
| Bahnar     | <i>təpa:ŋʒəŋ</i>        | 1 | Bahnar     | <i>an</i>               | 2  |
| Chrau      | <i>ʒəŋ</i>              | 1 | Chrau      | <i>a:n</i>              | 2  |
| Vietnamese | <i>chân</i>             | 1 | Vietnamese | <i>cho</i>              | 3  |
| Ruc        | <i>ciŋ</i>              | 1 | Ruc        | <i>==</i>               | 0  |
| Mon        | <i>ʒoŋ</i>              | 1 | Mon        | <i>kuiw</i>             | 4  |
| Nyakur     | <i>chuŋ<sup>2</sup></i> | 1 | Nyakur     | <i>kul</i>              | 4  |
| Khmer      | <i>ʒaəŋ</i>             | 1 | Khmer      | <i>?o:j</i>             | 10 |
| Kui        | <i>ʒi:ŋ<sup>L</sup></i> | 1 | Kui        | <i>?a:n<sup>L</sup></i> | 2  |
| Semai      | <i>ʒuk<sup>ŋ</sup></i>  | 1 | Semai      | <i>?o:k</i>             | 5  |
| Wa         | <i>cauŋ<sup>B</sup></i> | 1 | Wa         | <i>tɔ?</i>              | 6  |
| Deang      | <i>ʒəŋ</i>              | 1 | Deang      | <i>don</i>              | 9  |
| Khmu       | <i>cəəŋ</i>             | 1 | Khmu       | <i>u:n</i>              | 2  |
| Ksinmul    | <i>zuŋ</i>              | 1 | Ksinmul    | <i>mah</i>              | 7  |
| Khasi      | <i>kynʒat</i>           | 2 | Khasi      | <i>ai</i>               | 10 |
| Mundari    | <i>kaʔa</i>             | 3 | Mundari    | <i>om</i>               | 8  |

## GOOD

|            |                         |    |
|------------|-------------------------|----|
| Jeh        | <i>liam<sup>T</sup></i> | 1  |
| Bahnar     | <i>liem</i>             | 1  |
| Chrau      | <i>jah</i>              | 2  |
| Vietnamese | <i>tót</i>              | 3  |
| Ruc        | <i>haj</i>              | 14 |
| Mon        | <i>khuih</i>            | 4  |
| Nyakur     | <i>hnap<sup>L</sup></i> | 5  |
| Khmer      | <i>ləʔo:</i>            | 6  |
| Kui        | <i>ʔa:<sup>L</sup></i>  | 6  |
| Semai      | <i>bə:r</i>             | 7  |
| Wa         | <i>mhəm</i>             | 8  |
| Deang      | <i>mhəm</i>             | 9  |
| Khmu       | <i>lə</i>               | 10 |
| Ksinmul    | <i>tuh</i>              | 11 |
| Khasi      | <i>babha</i>            | 12 |
| Mundari    | <i>bugi</i>             | 13 |

## HAIR

|            |                          |   |
|------------|--------------------------|---|
| Jeh        | <i>suk<sup>T</sup></i>   | 1 |
| Bahnar     | <i>sək</i>               | 1 |
| Chrau      | <i>soʔ</i>               | 1 |
| Vietnamese | <i>tóc</i>               | 1 |
| Ruc        | <i>usúk</i>              | 1 |
| Mon        | <i>sok</i>               | 1 |
| Nyakur     | <i>chə:k<sup>l</sup></i> | 1 |
| Khmer      | <i>sok</i>               | 1 |
| Kui        | <i>səʔ<sup>L</sup></i>   | 1 |
| Semai      | <i>sə:k</i>              | 1 |
| Wa         | <i>hauk</i>              | 1 |
| Deang      | <i>huʔ</i>               | 1 |
| Khmu       | <i>klə</i>               | 2 |
| Ksinmul    | <i>sok</i>               | 1 |
| Khasi      | <i>shniuh</i>            | 1 |
| Mundari    | <i>up</i>                | 3 |

## GREEN

|            |                          |    |
|------------|--------------------------|----|
| Jeh        | <i>drih<sup>T</sup></i>  | 1  |
| Bahnar     | <i>ʒək</i>               | 2  |
| Chrau      | ==                       | 0  |
| Vietnamese | <i>xanh</i>              | -1 |
| Ruc        | <i>seŋ</i>               | -1 |
| Mon        | <i>sageak</i>            | 2  |
| Nyakur     | <i>ləcok<sup>L</sup></i> | 3  |
| Khmer      | <i>pajtaŋ</i>            | 4  |
| Kui        | ==                       | 0  |
| Semai      | ==                       | 0  |
| Wa         | <i>klai</i>              | 5  |
| Deang      | <i>ɲiar</i>              | 6  |
| Khmu       | <i>cəŋa:r</i>            | 6  |
| Ksinmul    | <i>le:</i>               | 5  |
| Khasi      | ==                       | 0  |
| Mundari    | <i>gaded</i>             | 8  |

## HAND

|            |                            |   |
|------------|----------------------------|---|
| Jeh        | <i>ti<sup>L</sup></i>      | 1 |
| Bahnar     | <i>ti:</i>                 | 1 |
| Chrau      | <i>ti:</i>                 | 1 |
| Vietnamese | <i>tay</i>                 | 1 |
| Ruc        | <i>si</i>                  | 1 |
| Mon        | <i>tay</i>                 | 1 |
| Nyakur     | <i>tej<sup>L</sup></i>     | 1 |
| Khmer      | <i>taŋ</i>                 | 1 |
| Kui        | <i>te:<sup>L</sup></i>     | 1 |
| Semai      | <i>təkɔ</i>                | 1 |
| Wa         | <i>taiʔ</i>                | 1 |
| Deang      | <i>tai</i>                 | 1 |
| Khmu       | <i>kəta:k<sup>ti</sup></i> | 1 |
| Ksinmul    | <i>kəsap</i>               | 2 |
| Khasi      | <i>k<sup>ti</sup></i>      | 1 |
| Mundari    | <i>ti</i>                  | 1 |



| HEAD       |                          |     | HEART      |                           |      |
|------------|--------------------------|-----|------------|---------------------------|------|
| Jeh        | <i>ka<sup>L</sup></i>    | 1   | Jeh        | <i>?nojh<sup>L</sup></i>  | 1    |
| Bahnar     | <i>kəl</i>               | 1   | Bahnar     | <i>nuih</i>               | 1    |
| Chrau      | <i>kambo:?</i>           | 2   | Chrau      | <i>pla:j nuih</i>         | 1    |
| Vietnamese | <i>đầu</i>               | -1  | Vietnamese | <i>trái tim</i>           | -1   |
| Ruc        | <i>kuluok</i>            | 3   | Ruc        | <i>toŋ</i>                | -2   |
| Mon        | <i>kaɗuip</i>            | 4   | Mon        | <i>gruih</i>              | 2    |
| Nyakur     | <i>kədəp<sup>l</sup></i> | 4   | Nyakur     | <i>ɲjum<sup>2</sup></i>   | 3    |
| Khmer      | <i>kəpa:l</i>            | -10 | Khmer      | <i>pəhtu:ŋ</i>            | -2   |
| Kui        | <i>pla:<sup>L</sup></i>  | 5   | Kui        | <i>phha:m<sup>L</sup></i> | 3    |
| Semai      | <i>ku:j</i>              | 9   | Semai      | <i>nu:s</i>               | 1    |
| Wa         | <i>kaiŋ</i>              | 6   | Wa         | <i>rhəm</i>               | 3    |
| Deang      | <i>kiŋ</i>               | 6   | Deang      | <i>nəih</i>               | 1    |
| Khmu       | <i>kəmpoŋ</i>            | 7   | Khmu       | <i>həŋrəəm</i>            | 3    |
| Ksinmul    | <i>?əlu:</i>             | 5   | Ksinmul    | <i>?en</i>                | 4    |
| Khasi      | <i>khlih</i>             | 11  | Khasi      | <i>kloŋ snam</i>          | 5    |
| Mundari    | <i>boo?</i>              | 8   | Mundari    | <i>zi kuɾam</i>           | -1 6 |

| HEAR       |                           |    | HORN       |                          |   |
|------------|---------------------------|----|------------|--------------------------|---|
| Jeh        | <i>ɲaŋ<sup>L</sup></i>    | 1  | Jeh        | <i>təkoy<sup>L</sup></i> | 1 |
| Bahnar     | <i>kətəŋ</i>              | 2  | Bahnar     | <i>ake:</i>              | 5 |
| Chrau      | <i>caŋ</i>                | 3  | Chrau      | <i>==</i>                | 0 |
| Vietnamese | <i>nghe</i>               | 4  | Vietnamese | <i>sùŋg</i>              | 2 |
| Ruc        | <i>camáŋ</i>              | 5  | Ruc        | <i>krɪŋ</i>              | 2 |
| Mon        | <i>miŋ</i>                | 5  | Mon        | <i>draŋ</i>              | 2 |
| Nyakur     | <i>khəmiŋ<sup>2</sup></i> | 5  | Nyakur     | <i>thraŋ<sup>2</sup></i> | 2 |
| Khmer      | <i>li:</i>                | 6  | Khmer      | <i>səne:ŋ</i>            | 3 |
| Kui        | <i>saŋ<sup>L</sup></i>    | 7  | Kui        | <i>təka:i</i>            | 1 |
| Semai      | <i>gərte:k</i>            | 2  | Semai      | <i>==</i>                | 0 |
| Wa         | <i>mhəŋ</i>               | 5  | Wa         | <i>ruŋ</i>               | 2 |
| Deang      | <i>s'ŋa'u ji</i>          | 8  | Deang      | <i>nuŋ</i>               | 6 |
| Khmu       | <i>mec</i>                | 10 | Khmu       | <i>centrɪ:ŋ</i>          | 2 |
| Ksinmul    | <i>?aal</i>               | 11 | Ksinmul    | <i>cəlgan</i>            | 4 |
| Khasi      | <i>sŋow</i>               | 9  | Khasi      | <i>reŋ</i>               | 2 |
| Mundari    | <i>ajum</i>               | 12 | Mundari    | <i>diriŋ</i>             | 2 |

◁ Pr. Cham \*tuki

| I          |                         |    | KNEE       |                                |    |
|------------|-------------------------|----|------------|--------------------------------|----|
| Jeh        | <i>au<sup>T</sup></i>   | 1  | Jeh        | <i>kroŋ<sup>L</sup></i>        | 1  |
| Bahnar     | <i>iŋ</i>               | 2  | Bahnar     | ==                             | 0  |
| Chrau      | <i>aŋ, iŋ</i>           | 2  | Chrau      | <i>ko:ʔkruŋ</i>                | 1  |
| Vietnamese | <i>tʃoi</i>             | 3  | Vietnamese | <i>đầu gối</i>                 | 2  |
| Ruc        | <i>ho</i>               | -1 | Ruc        | <i>kuluòk tukuf</i>            | 2  |
| Mon        | <i>ʔay</i>              | 2  | Mon        | <i>kboəŋ</i>                   | 3  |
| Nyakur     | <i>ʔe:ŋ<sup>l</sup></i> | 2  | Nyakur     | <i>kəbəŋ<sup>l</sup></i>       | 3  |
| Khmer      | <i>khəŋom</i>           | 4  | Khmer      | <i>zəŋgaŋ</i>                  | 4  |
| Kui        | ==                      | 0  | Kui        | <i>pla: təkə:l<sup>L</sup></i> | 2  |
| Semai      | <i>ʔeŋ</i>              | 2  | Semai      | <i>kuro:l</i>                  | 5  |
| Wa         | <i>ʔəʔ</i>              | 1  | Wa         | <i>pimŋəŋ<sup>B</sup></i>      | 4  |
| Deang      | <i>ʔo</i>               | 1  | Deang      | <i>kir ker</i>                 | 10 |
| Khmu       | <i>o</i>                | 1  | Khmu       | <i>kənu:n</i>                  | 9  |
| Ksinmul    | <i>ʔaŋ</i>              | 2  | Ksinmul    | <i>ʔəlu:-məldi:l</i>           | 6  |
| Khasi      | <i>ŋa</i>               | -2 | Khasi      | <i>kh0siw</i>                  | 7  |
| Mundari    | <i>aiŋ</i>              | 2  | Mundari    | <i>mukuri</i>                  | -8 |

| KILL       |                           |   | KNOW       |                          |    |
|------------|---------------------------|---|------------|--------------------------|----|
| Jeh        | <i>za:h<sup>T</sup></i>   | 7 | Jeh        | <i>ʔlo<sup>T</sup></i>   | 1  |
| Bahnar     | <i>pəlo:c</i>             | 2 | Bahnar     | <i>bat</i>               | 2  |
| Chrau      | <i>təcit</i>              | 1 | Chrau      | <i>git</i>               | 3  |
| Vietnamese | <i>giết</i>               | 1 | Vietnamese | <i>biết</i>              | 2  |
| Ruc        | <i>kacít</i>              | 1 | Ruc        | <i>hi</i>                | 4  |
| Mon        | <i>gacuit</i>             | 1 | Mon        | <i>tim</i>               | 5  |
| Nyakur     | <i>kəcet<sup>l</sup></i>  | 1 | Nyakur     | <i>cədim<sup>l</sup></i> | 5  |
| Khmer      | <i>səmlap</i>             | 3 | Khmer      | <i>tiŋ</i>               | 6  |
| Kui        | <i>kəcæ:t<sup>L</sup></i> | 1 | Kui        | <i>dijŋ</i>              | 6  |
| Semai      | <i>pərdat</i>             | 4 | Semai      | <i>pəŋej</i>             | -1 |
| Wa         | <i>paih<sup>B</sup></i>   | 8 | Wa         | <i>juŋ<sup>B</sup></i>   | 12 |
| Deang      | <i>ŋah</i>                | 5 | Deang      | <i>nap</i>               | 7  |
| Khmu       | <i>pha:n</i>              | 6 | Khmu       | <i>nə:ŋ</i>              | 8  |
| Ksinmul    | <i>pəsien</i>             | 6 | Ksinmul    | <i>zuə</i>               | 9  |
| Khasi      | <i>pyniap</i>             | 3 | Khasi      | <i>tip</i>               | 10 |
| Mundari    | <i>goeʔ</i>               | 1 | Mundari    | <i>itu</i>               | 11 |

| LEAF       |                          |   | LIVER      |                          |    |
|------------|--------------------------|---|------------|--------------------------|----|
| Jeh        | <i>la:T</i>              | 1 | Jeh        | <i>kle:m<sup>L</sup></i> | 1  |
| Bahnar     | <i>hla:</i>              | 1 | Bahnar     | <i>klə:m</i>             | 1  |
| Chrau      | <i>la:</i>               | 1 | Chrau      | <i>khlə:m</i>            | 1  |
| Vietnamese | <i>lá</i>                | 1 | Vietnamese | <i>gan</i>               | -1 |
| Ruc        | <i>ulá</i>               | 1 | Ruc        | <i>lòəm</i>              | 1  |
| Mon        | <i>sla</i>               | 1 | Mon        | <i>gruih</i>             | 2  |
| Nyakur     | <i>hla:ʔ<sup>1</sup></i> | 1 | Nyakur     | <i>khrih</i>             | 2  |
| Khmer      | <i>səlik</i>             | 4 | Khmer      | <i>thlaəm</i>            | 1  |
| Kui        | <i>sla:</i>              | 1 | Kui        | <i>luam<sup>B</sup></i>  | 1  |
| Semai      | <i>sla:ʔ<sup>L</sup></i> | 1 | Semai      | <i>ri:s</i>              | 4  |
| Wa         | <i>hlaʔ</i>              | 1 | Wa         | <i>təm</i>               | 1  |
| Deang      | <i>hla</i>               | 1 | Deang      | <i>k'tə:m</i>            | 1  |
| Khmu       | <i>la</i>                | 1 | Khmu       | <i>təlo:m</i>            | 1  |
| Ksinmul    | <i>bə:w</i>              | 2 | Ksinmul    | <i>təlo:m</i>            | 1  |
| Khasi      | <i>sla</i>               | 1 | Khasi      | <i>ba im</i>             | 1  |
| Mundari    | <i>sakam</i>             | 3 | Mundari    | <i>iim</i>               | 1  |

| LIE        |                         |    | LONG       |                            |   |
|------------|-------------------------|----|------------|----------------------------|---|
| Jeh        | <i>kat<sup>T</sup></i>  | 1  | Jeh        | <i>proih<sup>L</sup></i>   | 1 |
| Bahnar     | <i>pəso:m</i>           | 2  | Bahnar     | <i>kəʒu:ŋ</i>              | 2 |
| Chrau      | <i>biʔ</i>              | 3  | Chrau      | <i>ʒo:ŋ</i>                | 2 |
| Vietnamese | <i>nəm</i>              | 4  | Vietnamese | <i>dài</i>                 | 3 |
| Ruc        | <i>nɔp</i>              | 5  | Ruc        | <i>ʔjal</i>                | 3 |
| Mon        | <i>wat</i>              | 3  | Mon        | <i>glin</i>                | 2 |
| Nyakur     | <i>pu:p<sup>1</sup></i> | 12 | Nyakur     | <i>khli:p<sup>2</sup></i>  | 2 |
| Khmer      | <i>gəŋ</i>              | 6  | Khmer      | <i>ve:ŋ</i>                | 4 |
| Kui        | <i>tic<sup>L</sup></i>  | 7  | Kui        | <i>nthri:ŋ<sup>L</sup></i> | 2 |
| Semai      | <i>daʔ</i>              | 8  | Semai      | <i>crək<sup>ŋ</sup></i>    | 2 |
| Wa         | <i>nəi</i>              | 9  | Wa         | <i>laŋ</i>                 | 2 |
| Deang      | <i>==</i>               | 0  | Deang      | <i>doŋ</i>                 | 2 |
| Khmu       | <i>ŋi:m</i>             | 10 | Khmu       | <i>wa:ŋ</i>                | 5 |
| Ksinmul    | <i>ʔe:m</i>             | 10 | Ksinmul    | <i>ʔəlo:ŋ</i>              | 2 |
| Khasi      | <i>shaniah</i>          | 11 | Khasi      | <i>zerəŋ</i>               | 2 |
| Mundari    | <i>gitiʔ</i>            | 7  | Mundari    | <i>ziliŋ</i>               | 2 |

| LOUSE      |                           |   | MANY       |                           |    |
|------------|---------------------------|---|------------|---------------------------|----|
| Jeh        | <i>kəca:j<sup>T</sup></i> | 1 | Jeh        | <i>kədrəm<sup>L</sup></i> | 1  |
| Bahnar     | <i>si:</i>                | 1 | Bahnar     | <i>thər</i>               | 2  |
| Chrau      | <i>si:</i>                | 1 | Chrau      | <i>goʔ</i>                | 3  |
| Vietnamese | <i>chấý</i>               | 1 | Vietnamese | <i>nhieu</i>              | 4  |
| Ruc        | <i>cí</i>                 | 1 | Ruc        | <i>ɲiw</i>                | 4  |
| Mon        | <i>cay</i>                | 1 | Mon        | <i>gluiŋ</i>              | 5  |
| Nyakur     | <i>caj<sup>l</sup></i>    | 1 | Nyakur     | <i>khləŋ<sup>2</sup></i>  | 5  |
| Khmer      | <i>caj</i>                | 1 | Khmer      | <i>craən</i>              | 6  |
| Kui        | <i>ɲcæ<sup>ʔL</sup></i>   | 1 | Kui        | <i>da:l<sup>L</sup></i>   | 7  |
| Semai      | <i>cɛ:ʔ</i>               | 1 | Semai      | <i>ʒʔɔ:j</i>              | 8  |
| Wa         | <i>siʔ</i>                | 1 | Wa         | <i>hun</i>                | 9  |
| Deang      | <i>sai</i>                | 1 | Deang      | <i>mh'blam</i>            | 1  |
| Khmu       | <i>se</i>                 | 1 | Khmu       | <i>kɨ</i>                 | 10 |
| Ksinmul    | <i>cɛ:j</i>               | 1 | Ksinmul    | <i>ga:j</i>               | 10 |
| Khasi      | <i>ksi</i>                | 1 | Khasi      | <i>bún</i>                | 11 |
| Mundari    | <i>si=ku</i>              | 1 | Mundari    | <i>bese</i>               | -1 |

| MAN        |                   |    | MEAT       |                           |    |
|------------|-------------------|----|------------|---------------------------|----|
| Jeh        | <i>==</i>         | 0  | Jeh        | <i>siʔnek<sup>L</sup></i> | 1  |
| Bahnar     | <i>dro-ŋlo:</i>   | 1  | Bahnar     | <i>ʔɲem</i>               | 2  |
| Chrau      | <i>klo:</i>       | 1  | Chrau      | <i>goŋ</i>                | 3  |
| Vietnamese | <i>đàn ông</i>    | 2  | Vietnamese | <i>thịt</i>               | 1  |
| Ruc        | <i>==</i>         | 0  | Ruc        | <i>sít</i>                | 1  |
| Mon        | <i>truʔ</i>       | 3  | Mon        | <i>cun</i>                | 4  |
| Nyakur     | <i>tuj-tru:ʒ</i>  | 3  | Nyakur     | <i>hwa:ʔ<sup>l</sup></i>  | 5  |
| Khmer      | <i>purah</i>      | -1 | Khmer      | <i>sac</i>                | 1  |
| Kui        | <i>ku:i thò:l</i> | 4  | Kui        | <i>sac<sup>L</sup></i>    | 1  |
| Semai      | <i>kra:l</i>      | 5  | Semai      | <i>sec</i>                | 1  |
| Wa         | <i>si-meʔ</i>     | 6  | Wa         | <i>ne<sup>ʔB</sup></i>    | 6  |
| Deang      | <i>ʔi mai</i>     | 6  | Deang      | <i>jəŋ</i>                | 7  |
| Khmu       | <i>cəmpɾə</i>     | -2 | Khmu       | <i>ah</i>                 | 8  |
| Ksinmul    | <i>kho:n-sa:j</i> | -3 | Ksinmul    | <i>ksəŋ</i>               | 9  |
| Khasi      | <i>ái-briw</i>    | 3  | Khasi      | <i>doh</i>                | 10 |
| Mundari    | <i>koɾa</i>       | 7  | Mundari    | <i>ʒilu</i>               | 11 |

## MOON

|            |  |     |
|------------|--|-----|
| Jeh        | <i>khei<sup>T</sup></i>                    | 1   |
| Bahnar     | <i>khei</i>                                | 1   |
| Chrau      | <i>kha:j</i>                               | 1   |
| Vietnamese | <i>mặt-trắng</i>                           | 2   |
| Ruc        | <i>pulean</i>                              | -1  |
| Mon        | <i>gatu</i>                                | 3   |
| Nyakur     | <i>ntu:ʔ<sup>l</sup></i>                   | 3   |
| Khmer      | <i>khe:</i>                                | 1   |
| Kui        | <i>mphriar<sup>B</sup>.sai<sup>L</sup></i> | 2 1 |
| Semai      | <i>gce:ʔ</i>                               | 1   |
| Wa         | <i>khiʔ</i>                                | 1   |
| Deang      | <i>pla:ŋkiar</i>                           | 2   |
| Khmu       | <i>moŋ</i>                                 | 5   |
| Ksinmul    | <i>blah</i>                                | 6   |
| Khasi      | <i>bynai</i>                               | 7   |
| Mundari    | <i>caŋduʔ</i>                              | -2  |

## MOUTH

|            |                          |    |
|------------|--------------------------|----|
| Jeh        | <i>təmun<sup>T</sup></i> | 1  |
| Bahnar     | <i>ʔbər</i>              | 2  |
| Chrau      | <i>mij</i>               | -1 |
| Vietnamese | <i>miệng</i>             | 12 |
| Ruc        | <i>káŋ</i>               | 4  |
| Mon        | <i>paŋ</i>               | 3  |
| Nyakur     | <i>pa:ŋ<sup>l</sup></i>  | 3  |
| Khmer      | <i>ma:t</i>              | 5  |
| Kui        | <i>nəh<sup>L</sup></i>   | 6  |
| Semai      | <i>mpa:kŋ</i>            | 3  |
| Wa         | <i>jhiih</i>             | 7  |
| Deang      | <i>sop</i>               | 8  |
| Khmu       | <i>tənoh</i>             | 6  |
| Ksinmul    | <i>ɲuk</i>               | 9  |
| Khasi      | <i>shintur</i>           | 10 |
| Mundari    | <i>moca</i>              | 11 |

## MOUNTAIN

|            |                         |    |
|------------|-------------------------|----|
| Jeh        | <i>ŋuk<sup>T</sup></i>  | 1  |
| Bahnar     | <i>ko:ŋ</i>             | 2  |
| Chrau      | <i>guŋ</i>              | 2  |
| Vietnamese | <i>núi</i>              | 3  |
| Ruc        | <i>cát</i>              | 4  |
| Mon        | <i>duiw</i>             | 3  |
| Nyakur     | <i>kur<sup>l</sup></i>  | 10 |
| Khmer      | <i>bhəno:m</i>          | 5  |
| Kui        | <i>bru:<sup>L</sup></i> | 6  |
| Semai      | <i>lo:t<sup>n</sup></i> | 7  |
| Wa         | <i>gəŋ</i>              | 2  |
| Deang      | <i>svr</i>              | 8  |
| Khmu       | <i>mok</i>              | 11 |
| Ksinmul    | <i>khəgaŋ</i>           | 2  |
| Khasi      | <i>lymbah</i>           | 9  |
| Mundari    | <i>buru</i>             | 6  |

## NAIL

|            |                             |   |
|------------|-----------------------------|---|
| Jeh        | <i>kəʔnialh<sup>T</sup></i> | 1 |
| Bahnar     | <i>təŋjəh</i>               | 1 |
| Chrau      | <i>kəŋ-hjeih</i>            | 1 |
| Vietnamese | <i>móng</i>                 | 2 |
| Ruc        | <i>kəntoŋ</i>               | 3 |
| Mon        | <i>saŋem</i>                | 4 |
| Nyakur     | <i>ŋhli:əm<sup>l</sup></i>  | 4 |
| Khmer      | <i>krəco:k</i>              | 5 |
| Kui        | <i>nthræh<sup>B</sup></i>   | 6 |
| Semai      | <i>cəŋro:s</i>              | 6 |
| Wa         | <i>ŋhim</i>                 | 4 |
| Deang      | <i>a'rhim</i>               | 4 |
| Khmu       | <i>təmmə:ŋ</i>              | 7 |
| Ksinmul    | <i>moŋ-suəŋ</i>             | 7 |
| Khasi      | <i>tyrsim</i>               | 4 |
| Mundari    | <i>rama</i>                 | 9 |

|            | NAME                     |    |            | NEW                       |    |
|------------|--------------------------|----|------------|---------------------------|----|
| Jeh        | <i>təliʔ<sup>T</sup></i> | 1  | Jeh        | <i>?nao</i>               | 1  |
| Bahnar     | <i>anan</i>              | -1 | Bahnar     | <i>hlɛ:</i>               | 2  |
| Chrau      | <i>saʔ</i>               | 2  | Chrau      | <i>mɛ:</i>                | 3  |
| Vietnamese | <i>tên</i>               | 3  | Vietnamese | <i>mó<i>i</i></i>         | 3  |
| Ruc        | <i>ten</i>               | -3 | Ruc        | <i>bəj</i>                | 4  |
| Mon        | <i>imu, yamu</i>         | -2 | Mon        | <i>tami</i>               | 3  |
| Nyakur     | <i>==</i>                | 0  | Nyakur     | <i>təmi:ʔ<sup>l</sup></i> | 3  |
| Khmer      | <i>ʒhəmaoh</i>           | 4  | Khmer      | <i>thmi:</i>              | 3  |
| Kui        | <i>mih<sup>B</sup></i>   | 4  | Kui        | <i>tmai<sup>L</sup></i>   | 3  |
| Semai      | <i>muh</i>               | 4  | Semai      | <i>pəj</i>                | 4  |
| Wa         | <i>kaiʔ</i>              | 5  | Wa         | <i>khrauʔ</i>             | 5  |
| Deang      | <i>ci:</i>               | -6 | Deang      | <i>k'mai</i>              | 3  |
| Khmu       | <i>ci:</i>               | -6 | Khmu       | <i>hənme</i>              | 3  |
| Ksinmul    | <i>=</i>                 | 0  | Ksinmul    | <i>həme</i>               | 3  |
| Khasi      | <i>kyrteŋ</i>            | 3  | Khasi      | <i>thymmai</i>            | 3  |
| Mundari    | <i>n&lt;ut&gt;um</i>     | 7  | Mundari    | <i>nawa</i>               | -6 |

|            | NECK                      |    |            | NIGHT                     |    |
|------------|---------------------------|----|------------|---------------------------|----|
| Jeh        | <i>təkuai<sup>T</sup></i> | -1 | Jeh        | <i>maŋ<sup>T</sup></i>    | 1  |
| Bahnar     | <i>ako:</i>               | 1  | Bahnar     | <i>maŋ</i>                | 1  |
| Chrau      | <i>nkɔ:</i>               | 1  | Chrau      | <i>maŋ,naŋ</i>            | 1  |
| Vietnamese | <i>cổ</i>                 | 1  | Vietnamese | <i>dê<i>m</i></i>         | 2  |
| Ruc        | <i>tekê</i>               | -1 | Ruc        | <i>lim</i>                | -3 |
| Mon        | <i>kaʔ</i>                | 1  | Mon        | <i>btam</i>               | 2  |
| Nyakur     | <i>kɔ:ʔ<sup>l</sup></i>   | 1  | Nyakur     | <i>pətam<sup>l</sup></i>  | 2  |
| Khmer      | <i>kɔ:</i>                | 1  | Khmer      | <i>jop</i>                | 4  |
| Kui        | <i>ka:ŋ</i>               | 2  | Kui        | <i>khriau<sup>B</sup></i> | 5  |
| Semai      | <i>taŋən</i>              | 3  | Semai      | <i>təp<sup>m</sup></i>    | 2  |
| Wa         | <i>ŋək<sup>B</sup></i>    | 4  | Wa         | <i>pom=səm</i>            | 6  |
| Deang      | <i>a'mo:ŋ</i>             | 5  | Deang      | <i>səm</i>                | 7  |
| Khmu       | <i>kəntuar</i>            | 6  | Khmu       | <i>pəsə<i>m</i></i>       | 6  |
| Ksinmul    | <i>kɔ:k</i>               | 9  | Ksinmul    | <i>pət</i>                | 8  |
| Khasi      | <i>ryndaŋ</i>             | 7  | Khasi      | <i>miet</i>               | 8  |
| Mundari    | <i>hoʔoʔ</i>              | 8  | Mundari    | <i>nida</i>               | -9 |

Pr. Cham \**takuai*

|            | NO                    |    |            | ONE                     |    |
|------------|-----------------------|----|------------|-------------------------|----|
| Jeh        | ==                    | 0  | Jeh        | <i>muɿ<sup>L</sup></i>  | 1  |
| Bahnar     | <i>əh</i>             | 1  | Bahnar     | <i>mo:ŋ</i>             | 1  |
| Chrau      | <i>?e:?</i>           | 1  | Chrau      | <i>muoi</i>             | 1  |
| Vietnamese | <i>không</i>          | 2  | Vietnamese | <i>một</i>              | 1  |
| Ruc        | <i>vǎŋ</i>            | 3  | Ruc        | <i>moɿç</i>             | 1  |
| Mon        | <i>ha, hwa</i>        | 4  | Mon        | <i>mwaj</i>             | 1  |
| Nyakur     | <i>ku<sup>l</sup></i> | 10 | Nyakur     | <i>muəj<sup>2</sup></i> | 1  |
| Khmer      | <i>min</i>            | 5  | Khmer      | <i>muəj</i>             | 1  |
| Kui        | ==                    | 0  | Kui        | <i>mu:i<sup>B</sup></i> | 1  |
| Semai      | <i>pɛ?</i>            | 6  | Semai      | <i>nanə?</i>            | 2  |
| Wa         | <i>?aŋ</i>            | 7  | Wa         | <i>ti?<sup>B</sup></i>  | -1 |
| Deang      | <i>?ə</i>             | 1  | Deang      | <i>?u</i>               | 3  |
| Khmu       | ==                    | 0  | Khmu       | <i>mo:y</i>             | 1  |
| Ksinmul    | ==                    | 0  | Ksinmul    | <i>met</i>              | -2 |
| Khasi      | <i>em</i>             | 8  | Khasi      | <i>wei</i>              | 4  |
| Mundari    | <i>ka</i>             | 9  | Mundari    | <i>mijod</i>            | 1  |

|            | NOSE                    |   |            | PERSON                   |    |
|------------|-------------------------|---|------------|--------------------------|----|
| Jeh        | <i>mu:h<sup>L</sup></i> | 1 | Jeh        | <i>məŋai<sup>T</sup></i> | 1  |
| Bahnar     | <i>mu:h</i>             | 1 | Bahnar     | <i>bəŋai</i>             | 1  |
| Chrau      | <i>muh</i>              | 1 | Chrau      | <i>tamu:n</i>            | 2  |
| Vietnamese | <i>mũ</i>               | 1 | Vietnamese | <i>ngưòì</i>             | 1  |
| Ruc        | <i>muλh</i>             | 1 | Ruc        | <i>ŋǎj</i>               | 1  |
| Mon        | <i>muh</i>              | 1 | Mon        | <i>mnih</i>              | -1 |
| Nyakur     | <i>hmək<sup>l</sup></i> | 1 | Nyakur     | <i>mənih</i>             | -1 |
| Khmer      | <i>crəmuh</i>           | 1 | Khmer      | <i>manus</i>             | -1 |
| Kui        | <i>muh<sup>B</sup></i>  | 1 | Kui        | <i>ku:i<sup>L</sup></i>  | 3  |
| Semai      | <i>muh</i>              | 1 | Semai      | <i>sn?<sup>o</sup>:j</i> | 1  |
| Wa         | <i>miih<sup>B</sup></i> | 1 | Wa         | <i>pui<sup>B</sup></i>   | 4  |
| Deang      | <i>muih</i>             | 1 | Deang      | <i>to ?i</i>             | 5  |
| Khmu       | <i>muh</i>              | 1 | Khmu       | <i>kəmmu</i>             | 6  |
| Ksinmul    | <i>moh</i>              | 1 | Ksinmul    | <i>ksi:ŋ</i>             | 7  |
| Khasi      | <i>khmut</i>            | 1 | Khasi      | <i>briw</i>              | 8  |
| Mundari    | <i>mũ</i>               | 1 | Mundari    | <i>hoꝝo</i>              | 9  |

|            | RAIN                       |   |   |
|------------|----------------------------|---|---|
| Jeh        | <i>ʔm=riah<sup>L</sup></i> | 1 | 2 |
| Bahnar     | <i>ʔmi:</i>                | 2 |   |
| Chrau      | <i>mi:</i>                 | 2 |   |
| Vietnamese | <i>mura</i>                | 2 |   |
| Ruc        | <i>kumla</i>               | 2 |   |
| Mon        | <i>braj</i>                | 1 |   |
| Nyakur     | <i>phrej<sup>2</sup></i>   | 1 |   |
| Khmer      | <i>bhliəŋ</i>              | 3 |   |
| Kui        | <i>məmia<sup>L</sup></i>   | 2 |   |
| Semai      | <i>mani:ʔ</i>              | 4 |   |
| Wa         | <i>lɛʔ</i>                 | 5 |   |
| Deang      | <i>klai</i>                | 6 |   |
| Khmu       | <i>kəma</i>                | 2 |   |
| Ksinmul    | <i>ʔəmə</i>                | 2 |   |
| Khasi      | <i>slap</i>                | 7 |   |
| Mundari    | <i>gama</i>                | 2 |   |

|            | ROAD                     |    |
|------------|--------------------------|----|
| Jeh        | <i>traaŋ<sup>L</sup></i> | 1  |
| Bahnar     | <i>tro:ŋ</i>             | 1  |
| Chrau      | <i>tro:ŋ</i>             | 1  |
| Vietnamese | <i>đường di</i>          | 1  |
| Ruc        | <i>tɿàŋti</i>            | -1 |
| Mon        | <i>traw</i>              | 2  |
| Nyakur     | <i>trəw<sup>l</sup></i>  | 2  |
| Khmer      | <i>zəlu:w-thənal</i>     | 2  |
| Kui        | <i>kəna:</i>             | 4  |
| Semai      | <i>nu:ŋ</i>              | 5  |
| Wa         | <i>kraʔ</i>              | 6  |
| Deang      | <i>n'dəŋ</i>             | 3  |
| Khmu       | <i>ŋə:r</i>              | 6  |
| Ksinmul    | <i>tu:m</i>              | 8  |
| Khasi      | <i>surok</i>             | 9  |
| Mundari    | <i>hora</i>              | 5  |

|            | RED                        |    |
|------------|----------------------------|----|
| Jeh        | <i>dum<sup>L</sup></i>     | 1  |
| Bahnar     | <i>ʔbre:</i>               | 1  |
| Chrau      | <i>prhə:</i>               | 3  |
| Vietnamese | <i>đỏ</i>                  | 4  |
| Ruc        | <i>tə</i>                  | 4  |
| Mon        | <i>bkat</i>                | 5  |
| Nyakur     | <i>phəle:ŋ<sup>l</sup></i> | 6  |
| Khmer      | <i>krəha:m</i>             | 7  |
| Kui        | <i>ksaw<sup>L</sup></i>    | 8  |
| Semai      | <i>rŋa:ŋ</i>               | 9  |
| Wa         | <i>rauh</i>                | 10 |
| Deang      | <i>rəŋ</i>                 | 6  |
| Khmu       | <i>jim</i>                 | 11 |
| Ksinmul    | <i>kəʔet</i>               | 12 |
| Khasi      | <i>saw</i>                 | 8  |
| Mundari    | <i>araʔ</i>                | 13 |

|            | ROOT                                    |   |
|------------|---|---|
| Jeh        | <i>riayh<sup>T</sup></i>                | 1 |
| Bahnar     | <i>rə:h</i>                             | 1 |
| Chrau      | <i>zijeih</i>                           | 1 |
| Vietnamese | <i>rẽ</i>                               | 1 |
| Ruc        | <i>liərih</i>                           | 1 |
| Mon        | <i>ruih</i>                             | 1 |
| Nyakur     | <i>rih<sup>2</sup>-ra:k<sup>2</sup></i> | 1 |
| Khmer      | <i>rɿk</i>                              | 1 |
| Kui        | <i>rɛh<sup>B</sup></i>                  | 1 |
| Semai      | <i>rʔe:s</i>                            | 1 |
| Wa         | <i>riah<sup>B</sup></i>                 | 1 |
| Deang      | <i>riaih</i>                            | 1 |
| Khmu       | <i>rias</i>                             | 1 |
| Ksinmul    | <i>geh</i>                              | 1 |
| Khasi      | <i>tyndrai</i>                          | 1 |
| Mundari    | <i>red</i>                              | 1 |



| ROUND      |                           |    | SEE        |                           |    |
|------------|---------------------------|----|------------|---------------------------|----|
| Jeh        | ==                        | 0  | Jeh        | <i>tau<sup>T</sup></i>    | 1  |
| Bahnar     | <i>həpɔ:m</i>             | 1  | Bahnar     | <i>ʔbo:h</i>              | 2  |
| Chrau      | ==                        | 0  | Chrau      | <i>saj</i>                | 13 |
| Vietnamese | <i>tròn</i>               | 2  | Vietnamese | <i>thá:y</i>              | 3  |
| Ruc        | <i>klòn</i>               | 2  | Ruc        | <i>cɨŋ</i>                | 4  |
| Mon        | <i>khɔm</i>               | 1  | Mon        | <i>ɲa:t</i>               | 5  |
| Nyakur     | <i>kəlpum<sup>l</sup></i> | 1  | Nyakur     | <i>khəmaj<sup>2</sup></i> | 6  |
| Khmer      | <i>mul</i>                | 3  | Khmer      | <i>maəl</i>               | 7  |
| Kui        | <i>du<sup>L</sup></i>     | 4  | Kui        | <i>si:r<sup>L</sup></i>   | 8  |
| Semai      | ==                        | 0  | Semai      | <i>nɛ:ŋ</i>               | 11 |
| Wa         | <i>lɔm-le</i>             | 5  | Wa         | <i>jau<sup>ʔB</sup></i>   | 12 |
| Deang      | ==                        | 0  | Deang      | <i>ji</i>                 | 12 |
| Khmu       | <i>mon</i>                | 3  | Khmu       | <i>ku:ŋ</i>               | 14 |
| Ksinmul    | <i>mon</i>                | 3  | Ksinmul    | <i>diə</i>                | 3  |
| Khasi      | <i>pyllun</i>             | 2  | Khasi      | <i>khymih</i>             | 6  |
| Mundari    | <i>gol</i>                | -6 | Mundari    | <i>lel</i>                | 15 |

| SAND       |                          |    | SEED       |                          |    |
|------------|--------------------------|----|------------|--------------------------|----|
| Jeh        | <i>coih<sup>T</sup></i>  | 1  | Jeh        | ==                       | 0  |
| Bahnar     | <i>cuəh</i>              | 1  | Bahnar     | ==                       | 0  |
| Chrau      | <i>cwoh</i>              | 1  | Chrau      | ==                       | 0  |
| Vietnamese | <i>cát</i>               | 2  | Vietnamese | <i>hat gǒng</i>          | 1  |
| Ruc        | <i>təkǎc</i>             | 2  | Ruc        | <i>kajáj</i>             | 1  |
| Mon        | <i>bti:</i>              | 3  | Mon        | ==                       | 0  |
| Nyakur     | <i>nti<sup>l</sup></i>   | 3  | Nyakur     | <i>khrap<sup>2</sup></i> | -2 |
| Khmer      | <i>khəsac</i>            | 2  | Khmer      | <i>grap</i>              | 2  |
| Kui        | <i>ska:c<sup>L</sup></i> | -1 | Kui        | <i>kla:ŋ<sup>L</sup></i> | 3  |
| Semai      | <i>pasir</i>             | -2 | Semai      | <i>si:p</i>              | 4  |
| Wa         | <i>mhaik</i>             | 2  | Wa         | <i>sə:k</i>              | 5  |
| Deang      | <i>khai<sup>ʔ</sup></i>  | 2  | Deang      | <i>kau</i>               | 6  |
| Khmu       | <i>cres</i>              | 4  | Khmu       | <i>pəliar</i>            | 7  |
| Ksinmul    | <i>diŋ-sa:j</i>          | -3 | Ksinmul    | ==                       | 0  |
| Khasi      | <i>shyiap</i>            | 5  | Khasi      | <i>synbai</i>            | 8  |
| Mundari    | <i>gitil</i>             | 3  | Mundari    | <i>hita</i>              | 9  |

|            | SIT                       |    |
|------------|---------------------------|----|
| Jeh        | <i>siʔnan<sup>L</sup></i> | 1  |
| Bahnar     | ==                        | 0  |
| Chrau      | <i>guʔ</i>                | 2  |
| Vietnamese | <i>ngòì</i>               | 3  |
| Ruc        | <i>ηòj</i>                | 3  |
| Mon        | <i>gazaʔ</i>              | 4  |
| Nyakur     | <i>thoŋ<sup>2</sup></i>   | 5  |
| Khmer      | <i>ʔəŋguj</i>             | 3  |
| Kui        | ==                        | 0  |
| Semai      | <i>gə:j</i>               | 3  |
| Wa         | <i>ŋom<sup>B</sup></i>    | 6  |
| Deang      | <i>ŋoi</i>                | 3  |
| Khmu       | <i>ten, tan</i>           | 7  |
| Ksinmul    | <i>kliən</i>              | 8  |
| Khasi      | <i>shoŋ</i>               | 9  |
| Mundari    | <i>dub</i>                | 10 |

|            | SLEEP                        |    |
|------------|------------------------------|----|
| Jeh        | <i>kat<sup>L</sup></i>       | 1  |
| Bahnar     | <i>te:p</i>                  | 2  |
| Chrau      | <i>biʔ</i>                   | 3  |
| Vietnamese | <i>ngủ</i>                   | 4  |
| Ruc        | <i>ɲəʔp</i>                  | 5  |
| Mon        | <i>stik</i>                  | 6  |
| Nyakur     | <i>pu:ŋ-ŋkuj<sup>1</sup></i> | 7  |
| Khmer      | <i>tə:k</i>                  | 6  |
| Kui        | <i>ŋæ:t<sup>L</sup></i>      | 8  |
| Semai      | <i>bɛ:t</i>                  | 3  |
| Wa         | <i>ʔit</i>                   | 9  |
| Deang      | <i>ʔit</i>                   | 9  |
| Khmu       | <i>sis</i>                   | 11 |
| Ksinmul    | <i>ʔe:m</i>                  | 12 |
| Khasi      | <i>thiah</i>                 | 13 |
| Mundari    | <i>duʔum</i>                 | 14 |

|            | SKIN                     |    |
|------------|--------------------------|----|
| Jeh        | <i>paI<sup>T</sup></i>   | 1  |
| Bahnar     | <i>ʔəka:r</i>            | 2  |
| Chrau      | <i>nto:</i>              | 3  |
| Vietnamese | <i>da</i>                | 4  |
| Ruc        | <i>karɔt</i>             | -1 |
| Mon        | <i>sna:m</i>             | 5  |
| Nyakur     | <i>hna:m<sup>1</sup></i> | 5  |
| Khmer      | <i>səpɛ:k</i>            | 6  |
| Kui        | ==                       | 0  |
| Semai      | <i>gtə:ʔ</i>             | 3  |
| Wa         | <i>hak</i>               | 7  |
| Deang      | <i>hur</i>               | 8  |
| Khmu       | <i>həmpuur</i>           | 8  |
| Ksinmul    | <i>bɪŋ</i>               | 9  |
| Khasi      | <i>khoh</i>              | 10 |
| Mundari    | <i>ur</i>                | 8  |

|            | SMALL                   |    |
|------------|-------------------------|----|
| Jeh        | <i>təsi<sup>T</sup></i> | 1  |
| Bahnar     | <i>ie</i>               | 2  |
| Chrau      | <i>ke:n</i>             | 3  |
| Vietnamese | <i>nhỏ</i>              | 4  |
| Ruc        | <i>dədə+</i>            | 5  |
| Mon        | <i>ɲi</i>               | 4  |
| Nyakur     | <i>ndɪc<sup>1</sup></i> | 6  |
| Khmer      | <i>tu:c</i>             | 6  |
| Kui        | <i>kæ:t<sup>L</sup></i> | 7  |
| Semai      | <i>macɔt</i>            | 8  |
| Wa         | <i>ʔiak</i>             | 9  |
| Deang      | <i>diat</i>             | 6  |
| Khmu       | <i>ne</i>               | 4  |
| Ksinmul    | <i>nek</i>              | 10 |
| Khasi      | <i>rit</i>              | 11 |
| Mundari    | <i>kunɪŋ</i>            | 12 |

| SMOKE      |                           |   | STAND      |                          |   |
|------------|---------------------------|---|------------|--------------------------|---|
| Jeh        | <i>ʔhnuai<sup>L</sup></i> | 1 | Jeh        | ==                       | 0 |
| Bahnar     | <i>ʔɲui</i>               | 1 | Bahnar     | <i>dəŋ</i>               | 1 |
| Chrau      | <i>ɲuʔ</i>                | 2 | Chrau      | ==                       | 0 |
| Vietnamese | <i>khói</i>               | 1 | Vietnamese | <i>đứng</i>              | 1 |
| Ruc        | <i>kahóʝ</i>              | 1 | Ruc        | <i>tǎŋ</i>               | 1 |
| Mon        | <i>jak</i>                | 2 | Mon        | <i>tuiw</i>              | 2 |
| Nyakur     | <i>jak<sup>2</sup></i>    | 2 | Nyakur     | <i>ji:n<sup>l</sup></i>  | 3 |
| Khmer      | <i>phəse:ŋ</i>            | 3 | Khmer      | <i>zhar</i>              | 4 |
| Kui        | <i>mpi:ʔ<sup>L</sup></i>  | 4 | Kui        | <i>təjəŋ<sup>L</sup></i> | 3 |
| Semai      | <i>cu:l</i>               | 5 | Semai      | <i>zɪŋzək</i>            | 3 |
| Wa         | <i>tauʔ</i>               | 6 | Wa         | <i>cuŋ<sup>B</sup></i>   | 5 |
| Deang      | <i>təʔ</i>                | 6 | Deang      | <i>zəŋ</i>               | 3 |
| Khmu       | <i>pətə</i>               | 6 | Khmu       | <i>tɪn</i>               | 1 |
| Ksinmul    | <i>pətow</i>              | 6 | Ksinmul    | <i>cal</i>               | 6 |
| Khasi      | <i>ndem</i>               | 7 | Khasi      | <i>ieŋ</i>               | 3 |
| Mundari    | <i>sukul</i>              | 8 | Mundari    | <i>tiŋgu</i>             | 1 |

| SPEAK      |                           |    | STAR       |                           |    |
|------------|---------------------------|----|------------|---------------------------|----|
| Jeh        | <i>tətəjh<sup>T</sup></i> | 1  | Jeh        | <i>hloŋ<sup>T</sup></i>   | 1  |
| Bahnar     | <i>pəma:</i>              | 2  | Bahnar     | <i>səŋlo:ŋ</i>            | 1  |
| Chrau      | <i>ɲa:i</i>               | 3  | Chrau      | <i>siməŋ</i>              | 2  |
| Vietnamese | <i>nói</i>                | 1  | Vietnamese | <i>ngôi sao</i>           | -1 |
| Ruc        | <i>cól</i>                | 4  | Ruc        | <i>kumɪŋ</i>              | 2  |
| Mon        | <i>huim</i>               | 5  | Mon        | <i>saman</i>              | 2  |
| Nyakur     | <i>phu:t<sup>2</sup></i>  | 7  | Nyakur     | <i>pəka:j<sup>l</sup></i> | -3 |
| Khmer      | <i>srətɪ:</i>             | 6  | Khmer      | <i>phəka:j</i>            | 3  |
| Kui        | ==                        | 0  | Kui        | <i>nta:r<sup>L</sup></i>  | 4  |
| Semai      | <i>pde:r</i>              | 1  | Semai      | <i>prlə:j</i>             | 5  |
| Wa         | <i>krai<sup>B</sup></i>   | 8  | Wa         | <i>simʔuiŋ</i>            | 2  |
| Deang      | <i>grai</i>               | 8  | Deang      | <i>sman</i>               | 2  |
| Khmu       | <i>lə:</i>                | 9  | Khmu       | <i>sərmɪŋ</i>             | 2  |
| Ksinmul    | <i>waw</i>                | 10 | Ksinmul    | <i>məŋ</i>                | 2  |
| Khasi      | <i>oŋ</i>                 | 11 | Khasi      | <i>khlur</i>              | 5  |
| Mundari    | <i>men</i>                | 12 | Mundari    | <i>ipil</i>               | 6  |

| STONE      |                           |    | SWIM       |                          |   |
|------------|---------------------------|----|------------|--------------------------|---|
| Jeh        | <i>təməu<sup>T</sup></i>  | 1  | Jeh        | <i>pəloi<sup>L</sup></i> | 1 |
| Bahnar     | <i>təmə:</i>              | 1  | Bahnar     | <i>gləi</i>              | 1 |
| Chrau      | <i>təmə:</i>              | 1  | Chrau      | <i>==</i>                | 0 |
| Vietnamese | <i>đá</i>                 | 2  | Vietnamese | <i>lội</i>               | 2 |
| Ruc        | <i>latá</i>               | 2  | Ruc        | <i>aja</i>               | 3 |
| Mon        | <i>təmə<sup>?</sup></i>   | 1  | Mon        | <i>biŋ</i>               | 4 |
| Nyakur     | <i>hmə:?<sup>l</sup></i>  | 1  | Nyakur     | <i>bi:ŋ<sup>l</sup></i>  | 4 |
| Khmer      | <i>thəmə:</i>             | 1  | Khmer      | <i>hel</i>               | 5 |
| Kui        | <i>təməu<sup>L</sup></i>  | 1  | Kui        | <i>lə:j<sup>B</sup></i>  | 1 |
| Semai      | <i>batu:?<sup>?</sup></i> | -1 | Semai      | <i>lə:j</i>              | 1 |
| Wa         | <i>si məu<sup>?</sup></i> | 1  | Wa         | <i>loi<sup>B</sup></i>   | 1 |
| Deang      | <i>mə:u</i>               | 1  | Deang      | <i>lam ŋa</i>            | 8 |
| Khmu       | <i>kla:ŋ</i>              | 3  | Khmu       | <i>wə:j</i>              | 5 |
| Ksinmul    | <i>ʔəliəŋ</i>             | 3  | Ksinmul    | <i>lə:j</i>              | 1 |
| Khasi      | <i>maw</i>                | 1  | Khasi      | <i>ʒiŋi</i>              | 6 |
| Mundari    | <i>diri</i>               | 4  | Mundari    | <i>oyar</i>              | 7 |

| SUN        |                            |   | TAIL |            |                           |   |
|------------|----------------------------|---|------|------------|---------------------------|---|
| Jeh        | <i>mat-ŋaj<sup>T</sup></i> | 1 | 4    | Jeh        | <i>te:ŋ<sup>T</sup></i>   | 1 |
| Bahnar     | <i>ʔnar</i>                | 2 |      | Bahnar     | <i>kieŋ</i>               | 1 |
| Chrau      | <i>mat nar</i>             | 2 | 4    | Chrau      | <i>tieŋ</i>               | 1 |
| Vietnamese | <i>mặt-trời</i>            | 3 | 4    | Vietnamese | <i>đuôi</i>               | 2 |
| Ruc        | <i>məłt-pləj</i>           | 3 | 4    | Ruc        | <i>tuoj</i>               | 2 |
| Mon        | <i>tŋaj</i>                | 1 |      | Mon        | <i>bata</i>               | 3 |
| Nyakur     | <i>hăj<sup>l</sup></i>     | 1 |      | Nyakur     | <i>pətá:?<sup>?</sup></i> | 3 |
| Khmer      | <i>thəŋaj</i>              | 1 |      | Khmer      | <i>kənduj</i>             | 2 |
| Kui        | <i>məniəŋ<sup>B</sup></i>  | 4 |      | Kui        | <i>sə:l<sup>L</sup></i>   | 4 |
| Semai      | <i>mat ʒi:s</i>            | 5 | 4    | Semai      | <i>snta:?<sup>?</sup></i> | 3 |
| Wa         | <i>sĭ-ŋai<sup>?</sup></i>  | 1 |      | Wa         | <i>si-da<sup>?</sup></i>  | 3 |
| Deang      | <i>s'ŋoi</i>               | 1 |      | Deang      | <i>s'ta</i>               | 3 |
| Khmu       | <i>matpri</i>              | 3 | 4    | Khmu       | <i>hənta</i>              | 3 |
| Ksinmul    | <i>cəlŋe:</i>              | 1 |      | Ksinmul    | <i>həltə:</i>             | 3 |
| Khasi      | <i>sŋi</i>                 | 1 |      | Khasi      | <i>tydoŋ</i>              | 1 |
| Mundari    | <i>singi</i>               | 1 |      | Mundari    | <i>cadlom</i>             | 5 |

| THAT       |                        |    | TONGUE     |                           |   |
|------------|------------------------|----|------------|---------------------------|---|
| Jeh        | ==                     | 0  | Jeh        | <i>rəpiat<sup>T</sup></i> | 1 |
| Bahnar     | <i>?=ni:</i>           | 1  | Bahnar     | <i>rəpiet</i>             | 1 |
| Chrau      | <i>no?</i>             | 1  | Chrau      | <i>lapiet</i>             | 1 |
| Vietnamese | <i>kia</i>             | 2  | Vietnamese | <i>luõi</i>               | 2 |
| Ruc        | <i>he</i>              | 3  | Ruc        | <i>ləarh</i>              | 2 |
| Mon        | <i>te?</i>             | 4  | Mon        | <i>kata:k</i>             | 3 |
| Nyakur     | <i>te?<sup>l</sup></i> | 4  | Nyakur     | <i>nta:k<sup>l</sup></i>  | 3 |
| Khmer      | <i>no:h</i>            | 5  | Khmer      | <i>?ənta:k</i>            | 3 |
| Kui        | <i>kəi</i>             | 2  | Kui        | <i>nta:ʔ<sup>L</sup></i>  | 3 |
| Semai      | <i>?ageh</i>           | 6  | Semai      | <i>lnta:k</i>             | 3 |
| Wa         | <i>?a=n</i>            | 7  | Wa         | <i>dak</i>                | 3 |
| Deang      | <i>də</i>              | 8  | Deang      | <i>k'ta:?</i>             | 3 |
| Khmu       | <i>kə=ni</i>           | 1  | Khmu       | <i>hənta:k</i>            | 3 |
| Ksinmul    | <i>pə?o:w</i>          | 7  | Ksinmul    | <i>həlta:k</i>            | 3 |
| Khasi      | <i>ba</i>              | 9  | Khasi      | <i>thyllied</i>           | 2 |
| Mundari    | <i>han=i?</i>          | 10 | Mundari    | <i>le?</i>                | 4 |

| THIS       |                         |   | TOOTH      |                           |    |
|------------|-------------------------|---|------------|---------------------------|----|
| Jeh        | <i>mou</i>              | 1 | Jeh        | <i>si?neŋ<sup>T</sup></i> | 1  |
| Bahnar     | <i>?nou</i>             | 1 | Bahnar     | <i>səneŋ</i>              | 1  |
| Chrau      | <i>hε:?</i>             | 2 | Chrau      | <i>se:c</i>               | 2  |
| Vietnamese | <i>này</i>              | 3 | Vietnamese | <i>rǎng</i>               | 3  |
| Ruc        | <i>nì</i>               | 3 | Ruc        | <i>kasəŋ</i>              | 3  |
| Mon        | <i>ŋa?</i>              | 4 | Mon        | <i>ŋek</i>                | 4  |
| Nyakur     | <i>?o:?<sup>l</sup></i> | 5 | Nyakur     | <i>ŋiək<sup>2</sup></i>   | 4  |
| Khmer      | <i>nə:h</i>             | 3 | Khmer      | <i>dhəmə:ŋ</i>            | 5  |
| Kui        | ==                      | 0 | Kui        | <i>kənə:ŋ<sup>L</sup></i> | 1  |
| Semai      | <i>?adeh</i>            | 3 | Semai      | <i>lmu:ŋ</i>              | 5  |
| Wa         | <i>?i=n</i>             | 7 | Wa         | <i>rhaŋ</i>               | 3  |
| Deang      | <i>?i</i>               | 7 | Deang      | <i>rha:ŋ</i>              | 3  |
| Khmu       | <i>kə=ki:</i>           | 8 | Khmu       | <i>ra:ŋ</i>               | 3  |
| Ksinmul    | <i>?i:</i>              | 7 | Ksinmul    | <i>həgiəŋ</i>             | 6  |
| Khasi      | <i>ne</i>               | 3 | Khasi      | <i>byniat</i>             | 7  |
| Mundari    | <i>ni=i?</i>            | 3 | Mundari    | <i>dəta</i>               | -1 |

<> cf. An *\*qi-ni*

| TREE       |                          |   | WALK       |                         |    |
|------------|--------------------------|---|------------|-------------------------|----|
| Jeh        | <i>ʔlo:ŋ<sup>T</sup></i> | 1 | Jeh        | <i>ciu<sup>L</sup></i>  | 1  |
| Bahnar     | <i>ʔlo:ŋ</i>             | 1 | Bahnar     | <i>ano</i>              | 2  |
| Chrau      | <i>chə:</i>              | 2 | Chrau      | <i>sa:ʔ</i>             | 3  |
| Vietnamese | <i>cây</i>               | 3 | Vietnamese | <i>đi</i>               | 4  |
| Ruc        | <i>kəʌj</i>              | 3 | Ruc        | <i>ti</i>               | 4  |
| Mon        | <i>chu</i>               | 2 | Mon        | <i>ʔa:</i>              | 5  |
| Nyakur     | <i>chu:ʔ<sup>l</sup></i> | 2 | Nyakur     | <i>ʔa:r</i>             | 5  |
| Khmer      | <i>ʔəəm=zhaə</i>         | 2 | Khmer      | <i>ʔəər</i>             | 6  |
| Kui        | <i>==</i>                | 0 | Kui        | <i>hu:c<sup>L</sup></i> | 7  |
| Semai      | <i>ʒhu:ʔ</i>             | 2 | Semai      | <i>ci:p</i>             | 8  |
| Wa         | <i>khauʔ</i>             | 2 | Wa         | <i>hu</i>               | 9  |
| Deang      | <i>he</i>                | 5 | Deang      | <i>ha:u</i>             | 9  |
| Khmu       | <i>səʔo:ŋ</i>            | 6 | Khmu       | <i>jəh</i>              | 10 |
| Ksinmul    | <i>cəʔuəŋ</i>            | 6 | Ksinmul    | <i>zu:</i>              | 10 |
| Khasi      | <i>dieŋ</i>              | 7 | Khasi      | <i>iaid</i>             | 11 |
| Mundari    | <i>daru</i>              | 8 | Mundari    | <i>sen</i>              | 12 |

| TWO        |                         |    | WARM       |                           |   |
|------------|-------------------------|----|------------|---------------------------|---|
| Jeh        | <i>ba:l<sup>T</sup></i> | 1  | Jeh        | <i>==</i>                 | 0 |
| Bahnar     | <i>ʔba:r</i>            | 1  | Bahnar     | <i>==</i>                 | 0 |
| Chrau      | <i>ba:r</i>             | 1  | Chrau      | <i>==</i>                 | 0 |
| Vietnamese | <i>hai</i>              | 1  | Vietnamese | <i>ám</i>                 | 1 |
| Ruc        | <i>hal</i>              | 1  | Ruc        | <i>tɨl</i>                | 2 |
| Mon        | <i>ba:</i>              | 1  | Mon        | <i>guim</i>               | 3 |
| Nyakur     | <i>ba:r<sup>l</sup></i> | 1  | Nyakur     | <i>rəʔu:ŋ<sup>l</sup></i> | 4 |
| Khmer      | <i>bi:r</i>             | 1  | Khmer      | <i>kədaw</i>              | 5 |
| Kui        | <i>bi:a<sup>L</sup></i> | 1  | Kui        | <i>==</i>                 | 0 |
| Semai      | <i>na:r</i>             | 1  | Semai      | <i>==</i>                 | 0 |
| Wa         | <i>ra</i>               | 1  | Wa         | <i>ʔu</i>                 | 6 |
| Deang      | <i>ʔa</i>               | 1  | Deang      | <i>ʔu:n</i>               | 6 |
| Khmu       | <i>pə:r</i>             | 1  | Khmu       | <i>ŋəkɨm</i>              | 3 |
| Ksinmul    | <i>sə:ŋ</i>             | -1 | Ksinmul    | <i>gɨm</i>                | 3 |
| Khasi      | <i>ar</i>               | 1  | Khasi      | <i>==</i>                 | 0 |
| Mundari    | <i>bar</i>              | 1  | Mundari    | <i>lolo</i>               | 7 |

| WATER      |                         |   | WHAT       |                         |    |
|------------|-------------------------|---|------------|-------------------------|----|
| Jeh        | <i>da:k<sup>T</sup></i> | 1 | Jeh        | <i>?nai</i>             | 1  |
| Bahnar     | <i>da:k</i>             | 1 | Bahnar     | <i>kiə</i>              | 2  |
| Chrau      | <i>da:ʔ</i>             | 1 | Chrau      | <i>pac n'hja:</i>       | 3  |
| Vietnamese | <i>nuóc</i>             | 1 | Vietnamese | <i>gi</i>               | 2  |
| Ruc        | <i>dák</i>              | 1 | Ruc        | <i>camə</i>             | 4  |
| Mon        | <i>da:k</i>             | 1 | Mon        | <i>nu</i>               | 5  |
| Nyakur     | <i>da:k<sup>l</sup></i> | 1 | Nyakur     | <i>mo:ʔ<sup>2</sup></i> | 4  |
| Khmer      | <i>dik</i>              | 1 | Khmer      | <i>?əvi:</i>            | 6  |
| Kui        | <i>diaʔ</i>             | 1 | Kui        | <i>na:<sup>B</sup></i>  | 5  |
| Semai      | <i>te:w</i>             | 2 | Semai      | <i>ma:h</i>             | 4  |
| Wa         | <i>rəm</i>              | 3 | Wa         | <i>paiʔ</i>             | 8  |
| Deang      | <i>?om</i>              | 3 | Deang      | <i>se muh</i>           | 4  |
| Khmu       | <i>?om</i>              | 3 | Khmu       | <i>məh</i>              | 4  |
| Ksinmul    | <i>hə:t</i>             | 4 | Ksinmul    | <i>həlmoh</i>           | 4  |
| Khasi      | <i>um</i>               | 3 | Khasi      | <i>a=iu</i>             | 9  |
| Mundari    | <i>daʔ</i>              | 1 | Mundari    | <i>ca=na</i>            | 10 |

<> cf. Kadai \*R-nam<sup>C</sup>

| WE         |                         |    | WHITE      |                           |    |
|------------|-------------------------|----|------------|---------------------------|----|
| Jeh        | <i>juan<sup>L</sup></i> | 1  | Jeh        | <i>təbo:k<sup>T</sup></i> | 1  |
| Bahnar     | <i>no:n</i>             | 1  | Bahnar     | <i>ko:k</i>               | 9  |
| Chrau      | <i>khaj na:n</i>        | 10 | Chrau      | <i>bə:ʔ</i>               | 1  |
| Vietnamese | <i>chúng tao</i>        | 2  | Vietnamese | <i>trắng</i>              | 2  |
| Ruc        | <i>cupa</i>             | 3  | Ruc        | <i>təkəl</i>              | 3  |
| Mon        | <i>puij</i>             | 4  | Mon        | <i>bu</i>                 | 10 |
| Nyakur     | <i>pej<sup>l</sup></i>  | 4  | Nyakur     | <i>chu:ŋ<sup>l</sup></i>  | 4  |
| Khmer      | <i>jaəŋ</i>             | 5  | Khmer      | <i>so:</i>                | 5  |
| Kui        | <i>mhai<sup>L</sup></i> | 6  | Kui        | <i>bua?<sup>L</sup></i>   | 1  |
| Semai      | <i>zi:ʔ</i>             | 7  | Semai      | <i>bje:k</i>              | 6  |
| Wa         | <i>jiʔ</i>              | 7  | Wa         | <i>paiŋ<sup>B</sup></i>   | 11 |
| Deang      | <i>jəi</i>              | 7  | Deang      | <i>blə:ʔ</i>              | 6  |
| Khmu       | <i>i</i>                | 7  | Khmu       | <i>klə:k</i>              | 6  |
| Ksinmul    | <i>zi:</i>              | 7  | Ksinmul    | <i>luək</i>               | 6  |
| Khasi      | <i>ŋi</i>               | -8 | Khasi      | <i>liŋ</i>                | 7  |
| Mundari    | <i>ale</i>              | 9  | Mundari    | <i>puŋdi</i>              | -8 |

| WHO        |                          |   | YELLOW     |                           |                |
|------------|--------------------------|---|------------|---------------------------|----------------|
| Jeh        | <i>bau<sup>L</sup></i>   | 1 | Jeh        | <i>dri:ŋ<sup>T</sup></i>  | 1              |
| Bahnar     | <i>bu:</i>               | 1 | Bahnar     | <i>dre:ŋ</i>              | 1              |
| Chrau      | <i>==</i>                | 0 | Chrau      | <i>rəmɪt</i>              | 2              |
| Vietnamese | <i>ai</i>                | 2 | Vietnamese | <i>vàng</i>               | 8 <sup>1</sup> |
| Ruc        | <i>?aj</i>               | 2 | Ruc        | <i>vàŋ</i>                | 8              |
| Mon        | <i>==</i>                | 0 | Mon        | <i>da?mit</i>             | 2              |
| Nyakur     | <i>?əŋah<sup>2</sup></i> | 3 | Nyakur     | <i>pəcu:ŋ<sup>1</sup></i> | 3              |
| Khmer      | <i>khəŋao</i>            | 4 | Khmer      | <i>liəŋ</i>               | 9              |
| Kui        | <i>naw<sup>B</sup></i>   | 4 | Kui        | <i>==</i>                 | 0              |
| Semai      | <i>bo:?</i>              | 1 | Semai      | <i>pho:k</i>              | 4              |
| Wa         | <i>mə?</i>               | 6 | Wa         | <i>lhəŋ</i>               | 9              |
| Deang      | <i>se</i>                | 7 | Deang      | <i>təŋ</i>                | 5              |
| Khmu       | <i>mə</i>                | 6 | Khmu       | <i>sii-ləəŋ</i>           | 9              |
| Ksinmul    | <i>noh</i>               | 3 | Ksinmul    | <i>liəŋ</i>               | 9              |
| Khasi      | <i>uei</i>               | 2 | Khasi      | <i>stem</i>               | 6              |
| Mundari    | <i>okoj</i>              | 8 | Mundari    | <i>sa=səŋ</i>             | 7              |

<> cf. Kadai

| WOMAN      |                               |    | YOU        |                         |   |
|------------|-------------------------------|----|------------|-------------------------|---|
| Jeh        | <i>==</i>                     | 0  | Jeh        | <i>mi:<sup>T</sup></i>  | 1 |
| Bahnar     | <i>dra-kan</i>                | 1  | Bahnar     | <i>ε:</i>               | 2 |
| Chrau      | <i>?u:r</i>                   | 10 | Chrau      | <i>ma:i</i>             | 1 |
| Vietnamese | <i>đàn bà</i>                 | 2  | Vietnamese | <i>màŋ</i>              | 1 |
| Ruc        | <i>==</i>                     | 0  | Ruc        | <i>mi</i>               | 1 |
| Mon        | <i>brau</i>                   | 3  | Mon        | <i>beh</i>              | 3 |
| Nyakur     | <i>phəphraw<sup>2</sup></i>   | 3  | Nyakur     | <i>phəh<sup>1</sup></i> | 3 |
| Khmer      | <i>stri:</i>                  | -2 | Khmer      | <i>?ε:ŋ</i>             | 4 |
| Kui        | <i>ku:i kəpai<sup>L</sup></i> | 4  | Kui        | <i>muəŋ<sup>B</sup></i> | 1 |
| Semai      | <i>krdo:r</i>                 | 5  | Semai      | <i>he:?</i>             | 2 |
| Wa         | <i>bun</i>                    | 6  | Wa         | <i>mai?</i>             | 1 |
| Deang      | <i>?i pən</i>                 | 6  | Deang      | <i>mə:i</i>             | 1 |
| Khmu       | <i>cəmkən</i>                 | 1  | Khmu       | <i>me:</i>              | 1 |
| Ksinmul    | <i>khə:n-ŋij</i>              | -3 | Ksinmul    | <i>mih</i>              | 1 |
| Khasi      | <i>briw</i>                   | 3  | Khasi      | <i>me</i>               | 1 |
| Mundari    | <i>kuŋi</i>                   | 9  | Mundari    | <i>am</i>               | 1 |

<sup>1</sup> Not from Chinese.



## APPENDIX C: MIAO-YAO DATA

|       |  |    |       |  |    |
|-------|--|----|-------|--|----|
|       | ALL                                    |    |       | BIRD                                   |    |
| Hmu   | <i>se<sup>4</sup></i>                  | 1  | Hmu   | <i>nə<sup>6</sup></i>                  | -1 |
| Xx    | <i>sa<sup>5</sup></i>                  | 1  | Xx    | <i>ta<sup>1</sup>-nu<sup>6</sup></i>   | -1 |
| Hmong | <i>tou<sup>1</sup></i>                 | -1 | Hmong | <i>noN<sup>6</sup></i>                 | -1 |
| Bunu  | <i>pe<sup>2a</sup></i>                 | 2  | Bunu  | <i>naN<sup>6</sup></i>                 | -1 |
| She   | <i>sjj<sup>6</sup></i>                 | 1  | She   | <i>no<sup>4</sup>-yaŋ<sup>1</sup></i>  | -1 |
| Yao   | <i>sjaŋ<sup>6</sup></i>                | 1  | Yao   | <i>no<sup>8</sup></i>                  | -1 |
|       | ASHES                                  |    |       | BITE                                   |    |
| Hmu   | <i>qa<sup>1</sup>-čhu<sup>3</sup></i>  | 1  | Hmu   | <i>ki<sup>7</sup></i>                  | 1  |
| Xx    | <i>ći<sup>3</sup></i>                  | 1  | Xx    | <i>to<sup>4</sup></i>                  | 2  |
| Hmong | <i>žhou<sup>3</sup></i>                | 1  | Hmong | <i>qa<sup>1</sup></i>                  | 3  |
| Bunu  | <i>ka<sup>1</sup>-ća<sup>3</sup></i>   | 1  | Bunu  | <i>to<sup>8</sup></i>                  | 2  |
| She   | <i>si<sup>3</sup></i>                  | 1  | She   | <i>thə<sup>8</sup></i>                 | 2  |
| Yao   | <i>sa:i<sup>3</sup></i>                | 1  | Yao   | <i>ŋa:t<sup>8</sup></i>                | 4  |
|       | BARK                                   |    |       | BLACK                                  |    |
| Hmu   | ==                                     | 0  | Hmu   | <i>hle<sup>1</sup></i>                 | 1  |
| Xx    | ==                                     | 0  | Xx    | <i>qwe<sup>1</sup></i>                 | 1  |
| Hmong | ==                                     | 0  | Hmong | <i>tlo<sup>1</sup></i>                 | 1  |
| Bunu  | ==                                     | 0  | Bunu  | <i>tluN<sup>1</sup></i>                | 1  |
| She   | ==                                     | 0  | She   | <i>kjaŋ<sup>1</sup></i>                | 1  |
| Yao   | ==                                     | 0  | Yao   | <i>tce<sup>7</sup></i>                 | 2  |
|       | BELLY                                  |    |       | BLOOD                                  |    |
| Hmu   | <i>qa<sup>1</sup>-tčhu<sup>1</sup></i> | 1  | Hmu   | <i>ćhaN<sup>3</sup></i>                | 1  |
| Xx    | <i>qo<sup>1</sup>-tčhi<sup>1</sup></i> | 1  | Xx    | <i>ntčhi<sup>3</sup></i>               | 1  |
| Hmong | <i>plaN<sup>1</sup></i>                | 2  | Hmong | <i>ntšhaN<sup>3</sup></i>              | 1  |
| Bunu  | <i>ka<sup>1</sup>-tlaN<sup>1</sup></i> | 2  | Bunu  | <i>ntshəN<sup>3</sup></i>              | 1  |
| She   | <i>ŋjɔ<sup>3</sup>-ka<sup>3</sup></i>  | 3  | She   | <i>sji<sup>3</sup></i>                 | 1  |
| Yao   | <i>ke<sup>2</sup>-sje<sup>1</sup></i>  | 1  | Yao   | <i>dzja:m<sup>3</sup></i>              | 1  |
|       | BIG                                    |    |       | BONE                                   |    |
| Hmu   | <i>lhjə<sup>1</sup></i>                | 1  | Hmu   | <i>šoN<sup>3</sup></i>                 | 1  |
| Xx    | <i>ljo<sup>2</sup></i>                 | 1  | Xx    | <i>qo<sup>1</sup>-soN<sup>3</sup></i>  | 1  |
| Hmong | <i>lho<sup>1</sup></i>                 | 1  | Hmong | <i>tshaN<sup>3</sup></i>               | 1  |
| Bunu  | <i>laN<sup>8</sup></i>                 | 1  | Bunu  | <i>ka<sup>1</sup>-θoN<sup>3a</sup></i> | 1  |
| She   | <i>voŋ<sup>2</sup></i>                 | 2  | She   | <i>suŋ<sup>3</sup>-ko<sup>3</sup></i>  | 1  |
| Yao   | <i>tu<sup>1</sup></i>                  | 1  | Yao   | <i>buŋ<sup>3</sup></i>                 | 1  |

|       |  |    |       |   |    |
|-------|--|----|-------|---|----|
|       | BREAST                                 |    |       | DIE                                     |    |
| Hmu   | <i>uə<sup>4</sup></i>                  | 1  | Hmu   | <i>ta<sup>6</sup></i>                   | -1 |
| Xx    | <i>ma<sup>1</sup></i>                  | 2  | Xx    | <i>ta<sup>6</sup></i>                   | -1 |
| Hmong | <i>kua<sup>5</sup></i>                 | 3  | Hmong | <i>tua<sup>6</sup></i>                  | -1 |
| Bunu  | <i>kəN<sup>5</sup></i>                 | 3  | Bunu  | <i>tə<sup>6</sup></i>                   | -1 |
| She   | ==                                     | 0  | She   | <i>tha<sup>4</sup></i>                  | -1 |
| Yao   | ==                                     | 0  | Yao   | <i>taɪ<sup>6</sup></i>                  | -1 |
|       | BURN                                   |    |       | DOG                                     |    |
| Hmu   | <i>tio<sup>3</sup></i>                 | 1  | Hmu   | <i>lha<sup>3</sup></i>                  | 1  |
| Xx    | <i>ɔ<sup>1</sup></i>                   | 2  | Xx    | <i>ta<sup>1</sup>-qwi<sup>3</sup></i>   | 1  |
| Hmong | <i>fau<sup>3</sup></i>                 | 3  | Hmong | <i>tle<sup>3</sup></i>                  | 1  |
| Bunu  | <i>phe<sup>3</sup></i>                 | 4  | Bunu  | <i>tle<sup>3</sup></i>                  | 1  |
| She   | ==                                     | 0  | She   | <i>kja<sup>3</sup></i>                  | 1  |
| Yao   | ==                                     | 0  | Yao   | <i>tɕu<sup>3</sup></i>                  | 1  |
|       | CLOUD                                  |    |       | DRINK                                   |    |
| Hmu   | <i>teN<sup>5</sup>-eN<sup>5</sup></i>  | 1  | Hmu   | <i>hə<sup>7</sup></i>                   | 1  |
| Xx    | <i>tlaN<sup>1</sup>-oN<sup>5</sup></i> | 1  | Xx    | <i>hu<sup>7</sup></i>                   | 1  |
| Hmong | <i>ca<sup>3</sup>-tu<sup>5</sup></i>   | 2  | Hmong | <i>hou<sup>7</sup></i>                  | 1  |
| Bunu  | <i>ka<sup>1</sup>-həu<sup>3</sup></i>  | 3  | Bunu  | <i>həu<sup>7</sup></i>                  | 1  |
| She   | <i>fə<sup>1</sup></i>                  | -1 | Yao   | <i>hop<sup>7</sup></i>                  | 1  |
| Yao   | <i>mou<sup>6</sup></i>                 | 5  |       |   |    |
|       | COLD                                   |    |       | DRY                                     |    |
| Hmu   | <i>sei<sup>4</sup></i>                 | 0  | Hmu   | <i>ŋa<sup>6</sup></i>                   | 1  |
| Xx    | <i>ce<sup>4</sup></i>                  | 0  | Xx    | <i>qha<sup>3/7</sup></i>                | 1  |
| Hmong | <i>za<sup>6</sup></i>                  | 0  | Hmong | <i>qhua<sup>3</sup></i>                 | 1  |
| Bunu  | ==                                     | 0  | Bunu  | <i>ŋkhai<sup>1</sup></i>                | 1  |
| She   | ==                                     | 0  | She   | <i>khui<sup>1</sup></i>                 | 1  |
| Yao   | ==                                     | 0  | Yao   | <i>ga:i<sup>1</sup></i>                 | 1  |
|       | COME                                   |    |       | EAR                                     |    |
| Hmu   | <i>lo<sup>4</sup></i>                  | 1  | Hmu   | <i>qa<sup>1</sup>-ze<sup>2</sup></i>    | 1  |
| Xx    | <i>lo<sup>4</sup></i>                  | 1  | Xx    | <i>ʔoN<sup>2</sup>-mzɨ<sup>2</sup></i>  | 1  |
| Hmong | <i>lo<sup>4</sup></i>                  | 1  | Hmong | <i>ntɕou<sup>2</sup></i>                | 1  |
| Bunu  | <i>lo<sup>4</sup></i>                  | 1  | Bunu  | <i>ka<sup>1</sup>-ntse<sup>2a</sup></i> | 1  |
|       | <i>to<sup>2</sup></i>                  | 2  | She   | <i>ka<sup>2</sup>-khuŋ<sup>3</sup></i>  | 2  |
| She   | <i>nə<sup>4</sup></i>                  | 1  | Yao   | <i>ni<sup>2</sup>-no:m<sup>2</sup></i>  | 1  |
| Yao   | <i>ta:i<sup>2</sup></i>                | 2  |       |   |    |

|       |   |   |       |                                       |   |
|-------|---|---|-------|---------------------------------------|---|
|       | <b>EARTH</b>                              |   |       | <b>FEATHER</b>                        |   |
| Hmu   | <i>qa<sup>3</sup>-ta<sup>1</sup></i>      | 1 | Hmu   | <i>tlin<sup>1</sup></i>               | 1 |
| Xx    | <i>qo<sup>1</sup>-tɰ<sup>1</sup></i>      | 1 | Xx    | <i>pi<sup>1</sup></i>                 | 2 |
| Hmong | <i>lua<sup>2</sup></i>                    | 2 | Hmong | <i>==</i>                             | 0 |
| Bunu  | <i>ka<sup>1</sup>-te<sup>1</sup></i>      | 1 | Bunu  | <i>tla<sup>1</sup></i>                | 1 |
| She   | <i>ta<sup>1</sup></i>                     | 1 | She   | <i>==</i>                             | 0 |
| Yao   | <i>nje<sup>1</sup></i>                    | 3 | Yao   | <i>==</i>                             | 0 |
|       | <b>EAT</b>                                |   |       | <b>FIRE</b>                           |   |
| Hmu   | <i>naN<sup>2</sup></i>                    | 1 | Hmu   | <i>tu<sup>4</sup></i>                 | 1 |
| Xx    | <i>noN<sup>2</sup></i>                    | 1 | Xx    | <i>pji<sup>3</sup>-tə<sup>4</sup></i> | 1 |
| Hmong | <i>nau<sup>2</sup></i>                    | 1 | Hmong | <i>teu<sup>4</sup></i>                | 1 |
| Bunu  | <i>nau<sup>2</sup></i>                    | 1 | Bunu  | <i>ka<sup>1</sup>-tu<sup>4</sup></i>  | 1 |
| Yao   | <i>ɲen<sup>6</sup></i>                    | 1 | She   | <i>tho<sup>4</sup></i>                | 1 |
|       | <b>EGG</b>                                |   | Yao   | <i>tou<sup>4</sup></i>                | 1 |
| Hmu   | <i>ki<sup>5</sup></i>                     | 1 |       | <b>FISH</b>                           |   |
| Xx    | <i>qo<sup>1</sup> ni<sup>6</sup></i>      | 2 | Hmu   | <i>ze<sup>4</sup></i>                 | 1 |
| Hmong | <i>qe<sup>5</sup></i>                     | 1 | Xx    | <i>ta<sup>1</sup>-mzɰ<sup>4</sup></i> | 1 |
| Bunu  | <i>ce<sup>5</sup></i>                     | 1 | Hmong | <i>ntse<sup>4</sup></i>               | 1 |
| She   | <i>ka<sup>5</sup></i>                     | 1 | Bunu  | <i>ntse<sup>4</sup></i>               | 1 |
| Yao   | <i>tcau<sup>5</sup></i>                   | 1 | She   | <i>pja<sup>4</sup></i>                | 1 |
|       | cf. different Kd forms                    |   | Yao   | <i>bjau<sup>4</sup></i>               | 1 |
|       | <b>EYE</b>                                |   |       | <b>FLY</b>                            |   |
| Hmu   | <i>ɲhu<sup>1</sup>-me<sup>6</sup></i>     | 1 | Hmu   | <i>jaN<sup>5</sup></i>                | 1 |
| Xx    | <i>lə<sup>3</sup>-qe<sup>1</sup></i>      | 2 | Xx    | <i>ji<sup>5</sup></i>                 | 1 |
| Hmong | <i>mua<sup>6</sup></i>                    | 1 | Hmong | <i>jaN<sup>5</sup></i>                | 1 |
| Bunu  | <i>khi<sup>3</sup>-moN<sup>6</sup></i>    | 1 | Bunu  | <i>jəN<sup>5</sup></i>                | 1 |
| She   | <i>ka<sup>1</sup>-khɔ<sup>3</sup></i>     | 3 | She   | <i>ɲi<sup>5</sup></i>                 | 2 |
| Yao   | <i>mwei<sup>6</sup>-tsi:ɲ<sup>1</sup></i> | 1 | Yao   | <i>dai<sup>5</sup></i>                | 3 |
|       | <b>FAT</b>                                |   |       | <b>FOOT</b>                           |   |
| Hmu   | <i>taN<sup>6</sup></i>                    | 1 | Hmu   | <i>le<sup>1</sup></i>                 | 1 |
| Xx    | <i>taN<sup>6</sup></i>                    | 1 | Xx    | <i>qo<sup>1</sup>-lho<sup>1</sup></i> | 1 |
| Hmong | <i>tau<sup>6</sup></i>                    | 1 | Hmong | <i>teu<sup>5</sup></i>                | 2 |
| Bunu  | <i>tɰ<sup>6</sup></i>                     | 1 | Bunu  | <i>ta<sup>5</sup>-lau<sup>5</sup></i> | 2 |
| She   | <i>khurɰ<sup>6</sup></i>                  | 1 | She   | <i>tɔ<sup>5</sup></i>                 | 2 |
| Yao   | <i>tɰun<sup>6</sup></i>                   | 1 | Yao   | <i>==</i>                             | 0 |

| FULL  |                         |   | HAND  |                                      |   |
|-------|-------------------------|---|-------|--------------------------------------|---|
| Hmu   | <i>pe<sup>3</sup></i>   | 1 | Hmu   | <i>pɿ<sup>4</sup></i>                | 1 |
| Xx    | <i>pe<sup>3</sup></i>   | 1 | Xx    | <i>qo<sup>1</sup>-tɿ<sup>4</sup></i> | 1 |
| Hmong | <i>po<sup>3</sup></i>   | 1 | Hmong | <i>te<sup>4</sup></i>                | 1 |
| Bunu  | <i>céN<sup>1</sup></i>  | 2 | Bunu  | <i>ta<sup>1</sup>-pe<sup>4</sup></i> | 1 |
| She   | <i>paŋ<sup>3</sup></i>  | 1 | She   | <i>khwa<sup>4</sup></i>              | 1 |
| Yao   | <i>pwaŋ<sup>3</sup></i> | 1 | Yao   | <i>pwo<sup>4</sup></i>               | 1 |

| GIVE  |                        |   | HEAD  |  |   |
|-------|------------------------|---|-------|--|---|
| Hmu   | <i>pe<sup>1</sup></i>  | 1 | Hmu   | <i>qho<sup>1</sup></i>                 | 1 |
| Xx    | <i>kaN<sup>3</sup></i> | 2 | Xx    | <i>ko<sup>3</sup>-pzei<sup>3</sup></i> | 2 |
| Hmong | <i>==</i>              | 0 | Hmong | <i>hou<sup>5</sup></i>                 | 3 |
| Bunu  | <i>==</i>              | 0 | Bunu  | <i>fa<sup>3</sup></i>                  | 4 |
| She   | <i>==</i>              | 0 | She   | <i>kaŋ<sup>6</sup>-khə<sup>5</sup></i> | 5 |
| Yao   | <i>==</i>              | 0 | Yao   | <i>mu<sup>2</sup>-go:ŋ<sup>3</sup></i> | 6 |

| GOOD  |                        |   | HEAR  |                         |   |
|-------|------------------------|---|-------|-------------------------|---|
| Hmu   | <i>yu<sup>5</sup></i>  | 1 | Hmu   | <i>nhaN<sup>3</sup></i> | 1 |
| Xx    | <i>zu<sup>5</sup></i>  | 1 | Xx    | <i>toN<sup>5</sup></i>  | 2 |
| Hmong | <i>zoN<sup>5</sup></i> | 1 | Hmong | <i>noN<sup>6</sup></i>  | 3 |
| Bunu  | <i>yaN<sup>5</sup></i> | 1 | Bunu  | <i>cəN<sup>5</sup></i>  | 2 |
| She   | <i>ŋəŋ<sup>5</sup></i> | 1 | She   | <i>kuŋ<sup>5</sup></i>  | 4 |
| Yao   | <i>loŋ<sup>5</sup></i> | 1 | Yao   | <i>mwaŋ<sup>5</sup></i> | 5 |

<> cf. ST \*raŋ 'good'

| GREEN |                                       |    | HEART |                                       |    |
|-------|---------------------------------------|----|-------|---------------------------------------|----|
| Hmu   | <i>zo<sup>2</sup></i>                 | 1  | Hmu   | <i>hlju<sup>3</sup></i>               | 1  |
| Xx    | <i>mro<sup>1</sup></i>                | 1  | Xx    | <i>qo<sup>1</sup>-moN<sup>2</sup></i> | 2  |
| Hmong | <i>ncua<sup>1</sup></i>               | 1  | Hmong | <i>pleu<sup>3</sup></i>               | 1  |
| Bunu  | <i>ka<sup>6</sup>-phə<sup>4</sup></i> | 2  | Bunu  | <i>pɿ<sup>3</sup>-cu<sup>1</sup></i>  | 3  |
| She   | <i>ncəu<sup>2</sup></i>               | 1  | She   | <i>san<sup>1</sup></i>                | -1 |
| Yao   | <i>lwo<sup>8</sup></i>                | -1 | Yao   | <i>ŋou<sup>3</sup></i>                | 4  |

| HAIR  |  |   | HORN  |                                      |   |
|-------|--|---|-------|--------------------------------------|---|
| Hmu   | <i>qa<sup>1</sup>-lhju<sup>1</sup></i>               | 1 | Hmu   | <i>ki<sup>1</sup></i>                | 1 |
| Xx    | <i>qo<sup>1</sup>-pji<sup>1</sup></i>                | 1 | Xx    | <i>qo<sup>1</sup>-ce<sup>1</sup></i> | 1 |
| Hmong | <i>plou<sup>1</sup>-hou<sup>5</sup></i>              | 1 | Hmong | <i>ko<sup>1</sup></i>                | 1 |
| Bunu  | <i>tla<sup>1</sup>-fa<sup>3</sup></i>                | 1 | Bunu  | <i>cuN<sup>1</sup></i>               | 1 |
| She   | <i>kaŋ<sup>6</sup>khə<sup>5</sup>-pi<sup>1</sup></i> | 1 | She   | <i>kaŋ<sup>1</sup></i>               | 1 |
| Yao   | <i>pu<sup>2</sup>-pjei<sup>1</sup></i>               | 1 | Yao   | <i>tcoŋ<sup>1</sup></i>              | 1 |

|       |   |    |       |   |     |
|-------|---|----|-------|---|-----|
|       | I   |    |       | LIE   |     |
| Hmu   | <i>vi<sup>4</sup></i>                                     | 1  | Hmu   | <i>pi<sup>5</sup></i>                                 | 1   |
| Xx    | <i>we<sup>4</sup></i>                                     | 1  | Xx    | <i>pə<sup>5</sup></i>                                 | 1   |
| Hmong | <i>ko<sup>3</sup></i>                                     | 2  | Hmong | <i>pu<sup>5</sup></i>                                 | 1   |
| Bunu  | <i>cuN<sup>3</sup></i>                                    | 3  | Bunu  | <i>pau<sup>5</sup></i>                                | 1   |
| She   | <i>vaŋ<sup>4</sup></i>                                    | 1  | She   | <i>==</i>   | 0   |
| Yao   | <i>je<sup>1</sup></i>                                     | 4  | Yao   | <i>==</i>   | 0   |
|       | KILL  |    |       | LIVER   |     |
| Hmu   | <i>ma<sup>8</sup></i>                                     | 1  | Hmu   | <i>fhu<sup>2</sup> zε<sup>6</sup> cōN<sup>5</sup></i> | 1   |
| Xx    | <i>tə<sup>5</sup></i>                                     | -1 | Xx    | <i>sé<sup>1</sup></i>                                 | 2   |
| Hmong | <i>tuə<sup>5</sup></i>                                    | -1 | Hmong | <i>śa<sup>1</sup></i>                                 | 2   |
| Bunu  | <i>tə<sup>5</sup></i>                                     | -1 | Bunu  | <i>ncəu<sup>6</sup></i>                               | 3   |
| She   | <i>tə<sup>5</sup></i>                                     | -1 | She   | <i>hin<sup>1</sup></i>                                | 2   |
| Yao   | <i>tai<sup>5</sup></i>                                    | -1 | Yao   | <i>tan<sup>1</sup></i>                                | 2   |
|       | KNEE  |    |       | LONG  |     |
| Hmu   | <i>qhaN<sup>3</sup>-və<sup>8</sup>-cə<sup>5</sup></i>     | 1  | Hmu   | <i>ta<sup>3</sup></i>                                 | 1   |
| Xx    | <i>qhu<sup>3</sup>-tco<sup>5</sup></i>                    | 1  | Xx    | <i>nti<sup>3</sup></i>                                | 1   |
| Hmong | <i>qhau<sup>3</sup>-tso<sup>7</sup></i>                   | 1  | Hmong | <i>nte<sup>3</sup></i>                                | 1   |
| Bunu  | <i>kuN<sup>1</sup> a-cō<sup>7</sup></i>                   | 1  | Bunu  | <i>nte<sup>3</sup></i>                                | 1   |
| She   | <i>nak<sup>8</sup>-tshak<sup>7</sup>-khuN<sup>3</sup></i> | 1  | She   | <i>ka<sup>1</sup>-ta<sup>3</sup></i>                  | 1   |
| Yao   | <i>pwo<sup>4</sup>-sei<sup>1</sup>-dje<sup>3</sup></i>    | 2  | Yao   | <i>da:u<sup>3</sup></i>                               | 1   |
|       | KNOW  |    |       | LOUSE   |     |
| Hmu   | <i>pu<sup>1</sup></i>                                     | 1  | Hmu   | <i>kaN<sup>1</sup>-te<sup>3</sup></i>                 | 1   |
| Xx    | <i>pe<sup>4</sup></i>                                     | 2  | Xx    | <i>ta<sup>1</sup>-te<sup>3</sup></i>                  | 1   |
| Hmong | <i>pou<sup>1</sup></i>                                    | 1  | Hmong | <i>to<sup>3</sup></i>                                 | 1   |
| Bunu  | <i>pa<sup>1</sup></i>                                     | 1  | Bunu  | <i>ka<sup>1</sup>-tuN<sup>3</sup>a</i>                | 1   |
| She   | <i>pi<sup>1</sup></i>                                     | 1  | She   | <i>taŋ<sup>3</sup></i>                                | 1   |
| Yao   | <i>pei<sup>1</sup>-tu<sup>7</sup></i>                     | 1  | Yao   | <i>tam<sup>3</sup></i>                                | 1   |
|       | LEAF  |    |       | MAN   |     |
| Hmu   | <i>nu<sup>2</sup></i>                                     | 1  | Hmu   | <i>tci<sup>1</sup>-pa<sup>3</sup></i>                 | 1   |
| Xx    | <i>nə<sup>2</sup></i>                                     | 1  | Xx    | <i>qo<sup>1</sup>-pi<sup>5</sup></i>                  | 2   |
| Hmong | <i>mploN<sup>2</sup></i>                                  | 1  | Hmong | <i>jeu<sup>6</sup></i>                                | 3   |
| Bunu  | <i>ntlaN<sup>2</sup>'</i>                                 | 1  | Bunu  | <i>pu<sup>3</sup>-cəN<sup>6</sup></i>                 | 1 4 |
| She   | <i>pjəŋ<sup>2</sup></i>                                   | 1  | She   | <i>ne<sup>2</sup>-pə<sup>3</sup></i>                  | 1   |
| Yao   | <i>no:m<sup>2</sup></i>                                   | 1  | Yao   | <i>mjen<sup>2</sup>-tcaŋ<sup>6</sup></i>              | 4   |

## MANY

|       |                         |   |
|-------|-------------------------|---|
| Hmu   | <i>ne<sup>3</sup></i>   | 1 |
| Xx    | <i>ljho<sup>3</sup></i> | 2 |
| Hmong | <i>ntou<sup>5</sup></i> | 3 |
| Bunu  | <i>ntau<sup>5</sup></i> | 3 |
| She   | <i>u<sup>5</sup></i>    | 4 |
| Yao   | <i>cham<sup>3</sup></i> | 5 |

## MEAT

|       |                         |   |
|-------|-------------------------|---|
| Hmu   | <i>ŋa<sup>2</sup></i>   | 1 |
| Xx    | <i>ŋa<sup>2</sup></i>   | 1 |
| Hmong | <i>nqai<sup>2</sup></i> | 1 |
| She   | <i>ŋka<sup>2</sup></i>  | 1 |
| Bunu  | <i>kwei<sup>2</sup></i> | 1 |
| Yao   | <i>o<sup>3</sup></i>    | 2 |

## MOON

|       |                                       |   |
|-------|---------------------------------------|---|
| Hmu   | <i>lha<sup>5</sup></i>                | 1 |
| Xx    | <i>qe<sup>1</sup>-lha<sup>5</sup></i> | 1 |
| Hmong | <i>lhi<sup>5</sup></i>                | 1 |
| Bunu  | <i>ne<sup>5</sup></i>                 | 1 |
| She   | <i>mi<sup>8</sup>-tu<sup>5</sup></i>  | 1 |
| Yao   | <i>ta<sup>5</sup></i>                 | 1 |

## MOUNTAIN

|       |                                       |   |
|-------|---------------------------------------|---|
| Hmu   | <i>qa<sup>1</sup>-po<sup>5</sup></i>  | 1 |
| Xx    | <i>qo<sup>1</sup>-zei<sup>2</sup></i> | 2 |
| Hmong | <i>toN<sup>1</sup></i>                | 3 |
| Bunu  | <i>θau<sup>2</sup></i>                | 4 |
| She   | <i>kje<sup>6</sup></i>                | 5 |
|       | <i>ho<sup>1</sup></i>                 |   |
| Yao   | <i>tci:m<sup>2</sup></i>              | 6 |

## MOUTH

|       |   |    |
|-------|---|----|
| Hmu   | <i>lo<sup>5</sup></i>                   | 1  |
| Xx    | <i>qa<sup>3</sup>-lo<sup>5</sup></i>    | 1  |
| Hmong | <i>ntcou<sup>2</sup></i>                | -1 |
| Bunu  | <i>ka<sup>1</sup>-ncəu<sup>2</sup>a</i> | -1 |
| She   | <i>tjə<sup>2</sup></i>                  | -1 |
| Yao   | <i>dzu:i<sup>2</sup></i>                | -1 |

## NAIL

|       |  |    |
|-------|--|----|
| Hmu   | <i>keN<sup>5</sup>-pi<sup>4</sup></i>  | 1  |
| Xx    | <i>po<sup>5</sup>-tei<sup>5</sup></i>  | 2  |
| Hmong | <i>ʔou<sup>5</sup>-te<sup>4</sup></i>  | 2  |
| Bunu  | <i>kwa<sup>5</sup>-pe<sup>4</sup></i>  | -1 |
| She   | <i>tje<sup>4</sup>-kji<sup>6</sup></i> | 2  |
| Yao   | <i>gwai<sup>5</sup></i>                | 3  |

## NAME

|       |  |   |
|-------|--|---|
| Hmu   | <i>zaN<sup>2</sup>-pi<sup>5</sup></i>  | 1 |
| Xx    | <i>mpu<sup>5</sup></i>                 | 1 |
| Hmong | <i>mpe<sup>5</sup></i>                 | 1 |
| Bunu  | <i>mpe<sup>5</sup>-θə<sup>1</sup></i>  | 1 |
| She   | <i>mui<sup>2</sup></i>                 | 2 |
| Yao   | <i>meŋ<sup>2</sup>-bwo<sup>5</sup></i> | 1 |

## NECK

|       |  |   |
|-------|--|---|
| Hmu   | <i>qa<sup>1</sup>-qoN<sup>3</sup></i>              | 1 |
| Xx    | <i>soŋ<sup>3</sup>-nqoN<sup>3</sup></i>            | 1 |
| Hmong | <i>tce<sup>2</sup>-tlaN<sup>1</sup></i>            | 2 |
| Bunu  | <i>kuN<sup>1</sup>a-tləN<sup>1</sup>a</i>          | 2 |
| She   | <i>ka<sup>1</sup>kin<sup>1</sup>ka<sup>3</sup></i> | 2 |
| Yao   | <i>tca:ŋ<sup>1</sup></i>                           | 2 |

## NEW

|       |                                       |    |
|-------|---------------------------------------|----|
| Hmu   | <i>xhi<sup>1</sup></i>                | -1 |
| Xx    | <i>cé<sup>1</sup></i>                 | -1 |
| Hmong | <i>tśha<sup>1</sup></i>               | -1 |
| Bunu  | <i>ciN<sup>1</sup></i>                | -1 |
| She   | <i>tθ<sup>6</sup>-hin<sup>1</sup></i> | -1 |
| Yao   | <i>sjaN<sup>1</sup></i>               | -1 |

## NIGHT

|       |  |   |
|-------|--|---|
| Hmu   | <i>chi<sup>1</sup>-mhaN<sup>5</sup></i>                  | 1 |
| Xx    | <i>tchi<sup>1</sup>-mhaN<sup>5</sup></i>                 | 1 |
| Hmong | <i>mhau<sup>5</sup></i>                                  | 1 |
| Bunu  | <i>nʔoN<sup>1</sup>-muN<sup>4</sup></i>                  | 1 |
| She   | <i>mo<sup>1</sup>-kaŋ<sup>4</sup>-tshi<sup>2</sup></i>   | 2 |
| Yao   | <i>luŋ<sup>2</sup>-mwan<sup>4</sup>-tsan<sup>6</sup></i> | 1 |

|       |                                     |    |       |                                      |    |
|-------|-------------------------------------|----|-------|--------------------------------------|----|
|       | NO                                  |    |       | RED                                  |    |
| Hmu   | a <sup>2</sup>                      | 1  | Hmu   | co <sup>7</sup>                      | 1  |
| Xx    | tce <sup>2</sup>                    | 2  | Xx    | ntchi <sup>5</sup>                   | 2  |
| Hmong | tsi <sup>5</sup>                    | 2  | Hmong | la <sup>1</sup>                      | 3  |
| Bunu  | ma <sup>2</sup>                     | 3  | Bunu  | lən <sup>1</sup>                     | 3  |
|       | ntu <sup>5</sup>                    |    | She   | sj <sup>5</sup>                      | 1  |
| She   | ha <sup>6</sup>                     | 4  | Yao   | si <sup>7</sup>                      | 1  |
| Yao   | n <sup>5</sup>                      | 5  |       |                                      |    |
|       | NOSE                                |    |       | ROAD                                 |    |
| Hmu   | po <sup>1</sup> -ze <sup>6</sup>    | 1  | Hmu   | ki <sup>3</sup>                      | 1  |
| Xx    | pa <sup>3</sup> -mzá <sup>6</sup>   | 1  | Xx    | kí <sup>3</sup>                      | 1  |
| Hmong | nt'su <sup>6</sup>                  | 1  | Hmong | ke <sup>3</sup>                      | 1  |
| Bunu  | pi <sup>3</sup> -ntsau <sup>6</sup> | 1  | Bunu  | ce <sup>3</sup>                      | 1  |
| She   | khuj <sup>3</sup> -piu <sup>4</sup> | 1  | She   | ka <sup>3</sup>                      | 1  |
| Yao   | bjut <sup>8</sup>                   | 1  | Yao   | tcau <sup>3</sup>                    | 1  |
|       | ONE                                 |    |       | ROOT                                 |    |
| Hmu   | i <sup>1</sup>                      | 1  | Hmu   | qa <sup>1</sup> -tcoN <sup>2</sup>   | 1  |
| Xx    | a <sup>3</sup>                      | 1  | Xx    | qo <sup>1</sup> -tcoN <sup>2</sup>   | 1  |
| Hmong | i <sup>1</sup>                      | 1  | Hmong | tcaN <sup>6</sup>                    | 1  |
| Bunu  | i <sup>1</sup> a                    | 1  | Bunu  | ka <sup>1</sup> -coN <sup>2</sup>    | 1  |
| She   | ɸ                                   | 1  | She   | toŋ <sup>5</sup> -khjuŋ <sup>2</sup> | 1  |
| Yao   | jet <sup>8</sup>                    | -1 | Yao   | dzur <sup>2</sup>                    | 1  |
|       | PERSON                              |    |       | ROUND                                |    |
| Hmu   | ne <sup>2</sup>                     | 1  | Hmu   | lhen <sup>2</sup>                    | 1  |
| Xx    | ne <sup>2</sup>                     | 1  | Xx    | je <sup>4/8</sup>                    | 2  |
| Hmong | neN <sup>1</sup>                    | 1  | Hmong | jueN <sup>2</sup>                    | -1 |
| Bunu  | nu <sup>2</sup>                     | 1  | Bunu  | nɔ̄toN <sup>1</sup>                  | 3  |
| She   | ne <sup>2</sup>                     | 1  | She   | zin <sup>2</sup>                     | -1 |
| Yao   | mjen <sup>2</sup>                   | 1  | Yao   | tɕun <sup>2</sup>                    | 4  |
|       | RAIN                                |    |       | SAND                                 |    |
| Hmu   | noN <sup>6</sup>                    | 1  | Hmu   | qa <sup>1</sup> -sha <sup>1</sup>    | -1 |
| Xx    | noN <sup>6</sup>                    | 1  | Xx    | qo <sup>1</sup> -tsha <sup>1</sup>   | -1 |
| Hmong | naN <sup>6</sup>                    | 1  | Hmong | sua <sup>1</sup> -tsi <sup>3</sup>   | -1 |
| Bunu  | aN <sup>1</sup> -noN <sup>6</sup>   | 1  | Bunu  | ka <sup>1</sup> -θai <sup>5</sup>    | -1 |
| She   | nuŋ <sup>4</sup>                    | 1  | She   | hja <sup>1</sup>                     | -1 |
| Yao   | bjur <sup>6</sup>                   | 1  | Yao   | -fa:i <sup>1</sup>                   | -1 |

| SEE   |   |   |
|-------|---|---|
| Hmu   | <i>čí<sup>3</sup></i>                   | 1 |
| Xx    | <i>tčí<sup>3</sup>-nqhe<sup>3</sup></i> | 1 |
| Hmong | <i>ma<sup>8</sup></i>                   | 2 |
| Bunu  | <i>nkoN<sup>5</sup></i>                 | 3 |
|       | <i>nta<sup>1</sup></i>                  |   |
| She   | <i>mə<sup>6</sup></i>                   | 2 |
| Yao   | <i>maŋ<sup>6</sup></i>                  | 2 |

| SEED  |                                       |   |
|-------|---------------------------------------|---|
| Hmu   | <i>qa<sup>1</sup>-ɲhu<sup>1</sup></i> | 1 |
| Xx    | <i>qɔ<sup>1</sup>-ɲu<sup>1</sup></i>  | 1 |
| Hmong | <i>noN<sup>1</sup></i>                | 1 |
| Bunu  | <i>nhaN<sup>1</sup></i>               | 1 |
| She   | <i>ha<sup>6</sup></i>                 | 2 |
| Yao   | <i>n<sup>5</sup></i>                  | 3 |

| SIT   |                          |   |
|-------|--------------------------|---|
| Hmu   | <i>ɲa<sup>1</sup></i>    | 1 |
| Xx    | <i>tcoN<sup>5</sup></i>  | 1 |
| Hmong | <i>ɲau<sup>1</sup></i>   | 1 |
| Bunu  | <i>ɲuN<sup>5</sup></i>   | 1 |
| She   | <i>ɲjuN<sup>1</sup></i>  | 1 |
| Yao   | <i>tswei<sup>4</sup></i> | 2 |

| SKIN  |  |   |
|-------|--|---|
| Hmu   | <i>qa<sup>1</sup>-tu<sup>5</sup></i>   | 1 |
| Xx    | <i>qɔ<sup>1</sup>-cɔ<sup>5</sup></i>   | 2 |
| Hmong | <i>teu<sup>5</sup></i>                 | 1 |
| Bunu  | <i>ka<sup>1</sup>-tlau<sup>5</sup></i> | 3 |
| She   | <i>khə<sup>5</sup></i>                 | 3 |
| Yao   | <i>dop<sup>7</sup></i>                 | 4 |

| SLEEP |                         |   |
|-------|-------------------------|---|
| Hmu   | <i>pi<sup>5</sup></i>   | 1 |
| Xx    | <i>pə<sup>5</sup></i>   | 1 |
| Hmong | <i>pu<sup>5</sup></i>   | 1 |
| Bunu  | <i>pau<sup>5</sup></i>  | 1 |
| She   | <i>pɔ<sup>5</sup></i>   | 1 |
| Yao   | <i>pwei<sup>5</sup></i> | 1 |

| SMALL |                        |   |
|-------|------------------------|---|
| Hmu   | <i>ju<sup>5</sup></i>  | 1 |
| Xx    | <i>jou<sup>5</sup></i> | 1 |
| Hmong | <i>cu<sup>1</sup></i>  | 2 |
| Bunu  | <i>vi<sup>3</sup></i>  | 3 |
| She   | <i>soŋ<sup>1</sup></i> | 2 |
| Yao   | <i>fai<sup>5</sup></i> | 4 |

| SMOKE |  |     |
|-------|--|-----|
| Hmu   | <i>ə<sup>1</sup>-i<sup>1</sup></i>       | 1   |
| Xx    | <i>qɔ<sup>1</sup>-ntcho<sup>5</sup></i>  | 2   |
| Hmong | <i>paN<sup>5</sup>-ntcho<sup>5</sup></i> | 2 3 |
| Bunu  | <i>ka<sup>1</sup>-poN<sup>5</sup></i>    | 3   |
| She   | <i>ka<sup>1</sup>-no<sup>1</sup></i>     | 4   |
| Yao   | <i>sjou<sup>5</sup></i>                  | 5   |

| SPEAK |                         |   |
|-------|-------------------------|---|
| Hmu   | <i>mha<sup>5</sup></i>  | 1 |
|       | <i>yu<sup>3</sup></i>   |   |
| Xx    | <i>phu<sup>3</sup></i>  | 2 |
| Hmong | <i>hai<sup>6</sup></i>  | 3 |
| Bunu  | <i>təu<sup>2</sup></i>  | 4 |
|       | <i>vaN<sup>6</sup></i>  |   |
| She   | <i>kuŋ<sup>3</sup></i>  | 5 |
| Yao   | <i>ko:ŋ<sup>3</sup></i> | 5 |

| STAND |                        |   |
|-------|------------------------|---|
| Hmu   | <i>ču<sup>3</sup></i>  | 1 |
| Xx    | <i>ćə<sup>3</sup></i>  | 1 |
| Hmong | <i>źeu<sup>3</sup></i> | 1 |
| Bunu  | <i>cu<sup>3</sup></i>  | 1 |
| She   | <i>sə<sup>3</sup></i>  | 1 |
| Yao   | <i>sou<sup>3</sup></i> | 1 |

| STAR  |  |   |
|-------|--|---|
| Hmu   | <i>te<sup>1</sup>-qe<sup>1</sup></i>                               | 1 |
| Xx    | <i>te<sup>1</sup>-te<sup>1</sup>-qe<sup>1</sup>lha<sup>5</sup></i> | 1 |
| Hmong | <i>hno<sup>1</sup>-qo<sup>1</sup></i>                              | 1 |
| Bunu  | <i>ta<sup>1</sup>a-kuN<sup>1</sup>a</i>                            | 1 |
| She   | <i>nei<sup>1</sup>-taŋ<sup>1</sup></i>                             | 1 |
| Yao   | <i>tei<sup>5</sup></i>   | 2 |



| STONE |  |   | THIS  |                         |   |
|-------|--|---|-------|-------------------------|---|
| Hmu   | <i>ɣi<sup>l</sup></i>  | 1 | Hmu   | <i>noN<sup>β</sup></i>  | 1 |
| Xx    | <i>qɔ<sup>l</sup>-ẓi<sup>l</sup></i>                              | 1 | Xx    | <i>neN<sup>β</sup></i>  | 1 |
| Hmong | <i>ze<sup>l</sup></i>  | 1 | Hmong | <i>na<sup>3</sup></i>   | 1 |
| Bunu  | <i>fa<sup>3</sup>-ye<sup>l</sup></i>                               | 1 | Bunu  | <i>nau<sup>3</sup></i>  | 1 |
| She   | <i>ŋa<sup>l</sup>-ko<sup>3</sup></i>                               | 1 | She   | <i>==</i>               | 0 |
| Yao   | <i>lai<sup>2</sup>-pjei<sup>3</sup></i><br><i>bɛ:ŋ<sup>5</sup></i> | 2 | Yao   | <i>na:i<sup>3</sup></i> | 1 |

| SUN   |   |   | TONGUE |  |   |
|-------|---|---|--------|--|---|
| Hmu   | <i>nhe<sup>l</sup></i>                  | 1 | Hmu    | <i>qa<sup>l</sup>-ni<sup>8</sup></i>   | 1 |
| Xx    | <i>nhe<sup>l</sup></i>                  | 1 | Xx     | <i>qɔ<sup>l</sup>-mja<sup>8</sup></i>  | 1 |
| Hmong | <i>nho<sup>l</sup></i>                  | 1 | Hmong  | <i>mplai<sup>8</sup></i>               | 1 |
| Bunu  | <i>mi<sup>8</sup>-nhoN<sup>l</sup></i>  | 1 | Bunu   | <i>ka<sup>l</sup>-ntla<sup>8</sup></i> | 1 |
| She   | <i>no<sup>l</sup>-ko<sup>3</sup></i>    | 1 | She    | <i>pi<sup>6</sup></i>                  | 1 |
| Yao   | <i>pu<sup>2</sup>-nho:i<sup>l</sup></i> | 1 | Yao    | <i>bjet<sup>8</sup></i>                | 1 |

| SWIM  |           |   | TOOTH |  |    |
|-------|-----------|---|-------|--|----|
| Hmu   | <i>==</i> | 0 | Hmu   | <i>mhi<sup>3</sup></i>                 | 1  |
| Xx    | <i>==</i> | 0 | Xx    | <i>qɔ<sup>l</sup>-cé<sup>3</sup></i>   | 2  |
| Hmong | <i>==</i> | 0 | Hmong | <i>nha<sup>3</sup></i>                 | -1 |
| Bunu  | <i>==</i> | 0 | Bunu  | <i>fa<sup>3</sup>-mhiN<sup>β</sup></i> | 1  |
| She   | <i>==</i> | 0 | She   | <i>mun<sup>3</sup></i>                 | 1  |
| Yao   | <i>==</i> | 0 | Yao   | <i>ja<sup>2</sup></i>                  | -1 |

| TAIL  |                                       |   | TREE  |                                       |   |
|-------|---------------------------------------|---|-------|---------------------------------------|---|
| Hmu   | <i>qa<sup>l</sup>-te<sup>3</sup></i>  | 1 | Hmu   | <i>tə<sup>5</sup></i>                 | 1 |
| Xx    | <i>pji<sup>3</sup>-tə<sup>3</sup></i> | 1 | Xx    | <i>qɔ<sup>l</sup>-ntu<sup>5</sup></i> | 1 |
| Hmong | <i>ko<sup>5</sup>-tu<sup>3</sup></i>  | 1 | Hmong | <i>ntoN<sup>5</sup></i>               | 1 |
| Bunu  | <i>tau<sup>3</sup></i>                | 1 | Bunu  | <i>ntaN<sup>5</sup></i>               | 1 |
| She   | <i>ka<sup>l</sup>-to<sup>3</sup></i>  | 1 | She   | <i>toŋ<sup>5</sup></i>                | 1 |
| Yao   | <i>twei<sup>3</sup></i>               | 1 | Yao   | <i>djaŋ<sup>5</sup></i>               | 1 |

| THAT  |                        |   | TWO   |                       |   |
|-------|------------------------|---|-------|-----------------------|---|
| Hmu   | <i>moN<sup>2</sup></i> | 1 | Hmu   | <i>o<sup>l</sup></i>  | 1 |
| Xx    | <i>a<sup>3</sup></i>   | 2 | Xx    | <i>i<sup>l</sup></i>  | 1 |
| Hmong | <i>ji<sup>3</sup></i>  | 3 | Hmong | <i>au<sup>l</sup></i> | 1 |
| Bunu  | <i>uN<sup>l</sup></i>  | 4 | Bunu  | <i>au<sup>l</sup></i> | 1 |
| She   | <i>==</i>              | 0 | She   | <i>u<sup>l</sup></i>  | 1 |
| Yao   | <i>wo<sup>3</sup></i>  | 5 | Yao   | <i>i<sup>l</sup></i>  | 1 |

## WALK

|       |   |   |
|-------|---|---|
| Hmu   | <i>haN<sup>1</sup></i>  | 1 |
| Xx    | <i>hwe<sup>5</sup></i>  | 2 |
| Hmong | <i>mσ<sup>4</sup></i>   | 3 |
| Bunu  | <i>tsha<sup>3</sup></i>   | 4 |
| She   | <i>ka<sup>1</sup>-pji<sup>3</sup></i><br><i>tjσ<sup>3</sup></i> | 5 |
| Yao   | <i>jaŋ<sup>1</sup></i>  | 6 |

## WARM

|       |    |   |
|-------|----|---|
| Hmu   | == | 0 |
| Xx    | == | 0 |
| Hmong | == | 0 |
| Bunu  | == | 0 |
| She   | == | 0 |
| Yao   | == | 0 |

## WATER

|       |                        |   |
|-------|------------------------|---|
| Hmu   | <i>ə<sup>1</sup></i>   | 1 |
| Xx    | <i>u<sup>1</sup></i>   | 1 |
| Hmong | <i>tle<sup>2</sup></i> | 2 |
| Bunu  | <i>aN<sup>1</sup></i>  | 1 |
| She   | <i>σŋ<sup>2</sup></i>  | 1 |
| Yao   | <i>wam<sup>1</sup></i> | 1 |

## WE

|       |                                       |   |
|-------|---------------------------------------|---|
| Hmu   | <i>pi<sup>1</sup></i>                 | 1 |
| Xx    | <i>pi<sup>1</sup></i>                 | 1 |
| Hmong | <i>pe<sup>1</sup></i>                 | 1 |
| Bunu  | <i>pe<sup>1</sup></i>                 | 1 |
| She   | <i>pa<sup>1</sup></i>                 | 1 |
| Yao   | <i>je<sup>1</sup>-bwo<sup>1</sup></i> | 2 |

## WHAT

|       |  |   |
|-------|--|---|
| Hmu   | <i>čí<sup>3</sup></i>                  | 1 |
| Xx    | <i>qσ<sup>1</sup>-hnaN<sup>1</sup></i> | 2 |
| Hmong | <i>la<sup>1</sup>-tśi<sup>3</sup></i>  | 1 |
| Bunu  | <i>pu<sup>1</sup>-čí<sup>3</sup>a</i>  | 4 |
| She   | <i>tsha<sup>5</sup>-na<sup>1</sup></i> | 3 |
| Yao   | <i>ke<sup>5</sup>-pou<sup>1</sup></i>  | 3 |

## WHITE

|       |                         |    |
|-------|-------------------------|----|
| Hmu   | <i>hlu<sup>1</sup></i>  | 1  |
| Xx    | <i>qwə<sup>1</sup></i>  | 1  |
| Hmong | <i>tleu<sup>1</sup></i> | 1  |
| Bunu  | <i>tlu<sup>1</sup></i>  | 1  |
| She   | <i>kjσ<sup>1</sup></i>  | 1  |
| Yao   | <i>pe<sup>8</sup></i>   | -1 |

## WHO

|       |   |   |
|-------|---|---|
| Hmu   | <i>tε<sup>4</sup>-čí<sup>3</sup></i>    | 1 |
| Xx    | <i>tčí<sup>3</sup>-le<sup>3</sup></i>   | 2 |
| Hmong | <i>tσ<sup>4</sup>-tu<sup>6</sup></i>    | 1 |
| Bunu  | <i>tí<sup>6</sup>-čí<sup>3</sup>a</i>   | 1 |
| She   | <i>pe<sup>2</sup></i>                   | 3 |
| Yao   | <i>ha:i<sup>5</sup>-tau<sup>2</sup></i> | 4 |

## WOMAN

|       |   |   |
|-------|---|---|
| Hmu   | <i>tčí<sup>1</sup>-maN<sup>6</sup></i>  | 1 |
| Xx    | <i>qσ<sup>1</sup>-mpha<sup>3</sup></i>  | 2 |
| Hmong | <i>po<sup>2</sup></i>                   | 3 |
| Bunu  | <i>pu<sup>1</sup>-mpha<sup>7</sup></i>  | 2 |
| She   | <i>ne<sup>2</sup>-va<sup>3</sup></i>    | 4 |
| Yao   | <i>mjen<sup>2</sup>-sje<sup>7</sup></i> | 2 |

## YELLOW

|       |                         |    |
|-------|-------------------------|----|
| Hmu   | <i>faN<sup>2</sup></i>  | -1 |
| Xx    | <i>kwei<sup>2</sup></i> | -1 |
| Hmong | <i>tlaN<sup>2</sup></i> | -1 |
| Bunu  | <i>kweN<sup>2</sup></i> | -1 |
| She   | <i>khun<sup>2</sup></i> | -1 |
| Yao   | <i>jwan<sup>2</sup></i> | -1 |

## YOU

|       |                         |   |
|-------|-------------------------|---|
| Hmu   | <i>moN<sup>2</sup></i>  | 1 |
| Xx    | <i>mi<sup>2</sup></i>   | 1 |
| Hmong | <i>kau<sup>2</sup></i>  | 2 |
| Bunu  | <i>kau<sup>2</sup></i>  | 2 |
| She   | <i>muŋ<sup>2</sup></i>  | 1 |
| Yao   | <i>mwei<sup>2</sup></i> | 1 |

## APPENDIX D: LOLO-BURMESE DATA

| ALL      |  |     | BARK     |   |   |
|----------|--|-----|----------|---|---|
| Burmese  | <i>?a.-lum:</i>                                      | 1   | Burmese  | <i>?a.khauk</i>                         | 1 |
| Zaiwa    | <i>tʃat<sup>55</sup></i>                             | 3   | Zaiwa    | ==                                      | 0 |
| Akha     | <i>dji<sup>1</sup>-dji<sup>1</sup>-i<sup>2</sup></i> | 4   | Akha     | <i>ba<sup>?2</sup>-xo<sup>?2</sup></i>  | 1 |
| Biyue    | <i>xa<sup>55</sup></i>                               | 5   | Biyue    | ==                                      | 0 |
| Mpi      | ==   | 0   | Mpi      | <i>?o<sup>2</sup>-kho<sup>?4</sup></i>  | 1 |
| Bisu     | ==   | 0   | Bisu     | <i>tsiŋ<sup>2</sup>-kho<sup>2</sup></i> | 1 |
| Jino     | <i>tʃə<sup>33</sup></i>                              | 3 6 | Jino     | ==                                      | 0 |
| Lahu     | <i>ka<sup>2</sup></i>                                | 2   | Lahu     | ==                                      | 1 |
| Xide     | <i>ɲi<sup>55</sup></i>                               | 6   | Xide     | <i>ku<sup>?33</sup></i>                 | 1 |
| Dafang   | <i>kho<sup>31</sup></i>                              | 7   | Dafang   | ==                                      | 0 |
| Nanjiang | <i>li<sup>55</sup></i>                               | 1   | Nanjiang | ==                                      | 0 |
| Lisu     | <i>a<sup>31</sup>-dʒi<sup>31</sup></i>               | 4   | Lisu     | ==                                      | 0 |
| Nusu     | <i>a<sup>31</sup>-dyi<sup>31</sup></i>               | 4   | Nusu     | ==                                      | 0 |
| Achang   | ==   | 0   | Achang   | ==                                      | 0 |
| Naxi     | <i>di<sup>33</sup>-xə<sup>33</sup></i>               | 4   | Naxi     | ==                                      | 0 |

| ASHES    |   |     | BELLY    |   |     |
|----------|---|-----|----------|---|-----|
| Burmese  | <i>mi:phui.pra</i>                        | 1   | Burmese  | <i>wam:</i>                             | 1   |
| Zaiwa    | <i>mji<sup>31</sup>-mop<sup>55</sup></i>  | 3   | Zaiwa    | <i>vam<sup>31</sup></i>                 | 1   |
| Akha     | <i>xha<sup>3</sup>-le<sup>1</sup></i>     | 1 4 | Akha     | <i>u<sup>?3</sup>-ma<sup>?2</sup></i>   | 1 4 |
| Biyue    | <i>kha<sup>31</sup>-la<sup>55</sup></i>   | 1 4 | Biyue    | <i>o<sup>31</sup>-phu<sup>31</sup></i>  | 2   |
| Mpi      | <i>kho<sup>2</sup>-lo<sup>6</sup></i>     | 1 4 | Mpi      | <i>?o<sup>?2</sup>-tha<sup>2</sup></i>  | 1   |
| Bisu     | <i>kha<sup>3</sup>-la<sup>3</sup></i>     | 1 4 | Bisu     | <i>poŋ<sup>3</sup>-ba<sup>2</sup></i>   | 2 4 |
| Jino     | <i>a<sup>33</sup>-mə<sup>55</sup></i>     | 5   | Jino     | <i>yo<sup>55</sup>-phu<sup>44</sup></i> | 1 2 |
| Lahu     | <i>kho<sup>31</sup>-la<sup>35</sup></i>   | 1 4 | Lahu     | <i>yu<sup>53</sup>-pe<sup>31</sup></i>  | 1 2 |
| Xide     | <i>khu<sup>31</sup>-tə<sup>33</sup></i>   | 1 4 | Xide     | <i>i<sup>31</sup>-mo<sup>31</sup></i>   | 3   |
| Dafang   | <i>kho<sup>55</sup>-m<sup>31</sup></i>    | 4 5 | Dafang   | <i>yo<sup>13</sup>-mo<sup>55</sup></i>  | 1 3 |
| Nanjiang | <i>khu<sup>31</sup>-tsho<sup>55</sup></i> | 4   | Nanjiang | <i>çi<sup>31</sup>-py<sup>55</sup></i>  | 2   |
| Lisu     | <i>kho<sup>31</sup>-ha<sup>33</sup></i>   | 1 4 | Lisu     | <i>he<sup>31</sup>-mə<sup>44</sup></i>  | 1   |
| Nusu     | <i>ɰi<sup>35</sup></i>                    | 1   | Nusu     | <i>va<sup>31</sup>-lo<sup>53</sup></i>  | 1   |
| Achang   | <i>ŋa<sup>31</sup>-žap<sup>35</sup></i>   | 2   | Achang   | <i>om<sup>31</sup>-tau<sup>31</sup></i> | 1   |
| Naxi     | <i>mbv<sup>31</sup>-tçi<sup>33</sup></i>  | 6   | Naxi     | <i>dv<sup>31</sup>-me<sup>33</sup></i>  | 4   |

|          |                                       | BIG |  |
|----------|---------------------------------------|-----|--|
| Burmese  | <i>kri:</i>                           | 1   |  |
| Zaiwa    | <i>ko<sup>ʔ31</sup></i>               | 2   |  |
| Akha     | <i>hy<sup>3</sup></i>                 | 1   |  |
| Biyue    | <i>xɿ<sup>31</sup></i>                | 1   |  |
| Mpi      | <i>hɿ<sup>1</sup></i>                 | 1   |  |
| Bisu     | <i>ʔaŋ<sup>2</sup>-hɿ<sup>3</sup></i> | 1   |  |
| Jino     | <i>xə<sup>44</sup></i>                | 1   |  |
| Lahu     | <i>ɿ<sup>31</sup></i>                 | 3   |  |
| Xide     | <i>a<sup>44</sup>-yɿ<sup>33</sup></i> | 1   |  |
| Dafang   | <i>ɣə<sup>33</sup></i>                | 1   |  |
| Nanjiang | <i>ye<sup>31</sup></i>                | 1   |  |
| Lisu     | <i>vu<sup>31</sup></i>                | 1   |  |
| Nusu     | <i>ji<sup>55</sup>-a<sup>31</sup></i> | 1   |  |
| Achang   | <i>kʒə<sup>31</sup></i>               | 1   |  |
| Naxi     | <i>dɿ<sup>31</sup></i>                | 4   |  |

|          |  | BIRD |   |
|----------|--|------|---|
| Burmese  | <i>hŋak</i>                              | 1    |   |
| Zaiwa    | <i>ŋo<sup>ʔ55</sup></i>                  | 1    |   |
| Akha     | <i>a<sup>1</sup>-dʒil</i>                | 2    |   |
| Biyue    | <i>ŋa<sup>ʔ33</sup>-jo<sup>31</sup></i>  | 1    |   |
| Mpi      | <i>ŋaŋ<sup>ʔ4</sup>-lo<sup>4</sup></i>   | 1    |   |
| Bisu     | <i>ha<sup>2</sup>-ja<sup>2</sup></i>     | 1    | 2 |
| Jino     | <i>hŋa<sup>42</sup>-zo<sup>44</sup></i>  | 1    | 2 |
| Lahu     | <i>ŋa<sup>ʔ54</sup></i>                  | 1    |   |
| Xide     | <i>he<sup>33</sup>-tsɿ<sup>ʔ33</sup></i> | 1    | 2 |
| Dafang   | <i>ŋa<sup>33</sup></i>                   | 1    |   |
| Nanjiang | <i>a<sup>55</sup>-n<sup>ʔ33</sup></i>    | 1    |   |
| Lisu     | <i>nie<sup>35</sup></i>                  | 1    |   |
| Nusu     | <i>hə<sup>53</sup></i>                   | 1    |   |
| Achang   | <i>hmə<sup>ʔ55</sup></i>                 | 1    |   |
| Naxi     | <i>v<sup>55</sup>-zi<sup>33</sup></i>    | 1    |   |

|          |                           | BITE |  |
|----------|---------------------------|------|--|
| Burmese  | <i>kuik</i>               | 1    |  |
| Zaiwa    | <i>ŋat<sup>31</sup></i>   | 3    |  |
| Akha     | <i>ko<sup>ʔ3</sup></i>    | 1    |  |
| Biyue    | <i>tho<sup>ʔ31</sup></i>  | 4    |  |
| Mpi      | <i>the<sup>ʔ1</sup></i>   | 4    |  |
| Bisu     | <i>tshe<sup>3</sup></i>   | 5    |  |
| Jino     | <i>tçhə<sup>55</sup></i>  | 5    |  |
| Lahu     | <i>tshe<sup>ʔ21</sup></i> | 5    |  |
|          | <i>thə<sup>55</sup></i>   | 4    |  |
| Xide     | <i>çi<sup>55</sup></i>    | 5    |  |
| Dafang   | <i>tçhi<sup>13</sup></i>  | 5    |  |
| Nanjiang | ==                        | 0    |  |
| Lisu     | <i>kho<sup>42</sup></i>   | 1    |  |
| Nusu     | <i>tshuo<sup>53</sup></i> | 5    |  |
| Achang   | <i>pan<sup>31</sup></i>   | 2    |  |
| Naxi     | <i>tsha<sup>55</sup></i>  | 5    |  |

|          |   | BLACK |  |
|----------|---|-------|--|
| Burmese  | <i>nak</i>                              | 1     |  |
| Zaiwa    | <i>no<sup>ʔ31</sup></i>                 | 1     |  |
| Akha     | <i>na<sup>ʔ2</sup></i>                  | 1     |  |
| Biyue    | <i>na<sup>ʔ33</sup></i>                 | 1     |  |
| Mpi      | <i>naŋ<sup>ʔ3</sup></i>                 | 1     |  |
| Bisu     | <i>ʔaŋ<sup>2</sup>-plan<sup>1</sup></i> | 2     |  |
| Jino     | <i>na<sup>42</sup></i>                  | 1     |  |
| Lahu     | <i>na<sup>ʔ54</sup></i>                 | 1     |  |
| Xide     | <i>a<sup>44</sup>-no<sup>33</sup></i>   | 1     |  |
| Dafang   | <i>na<sup>33</sup></i>                  | 1     |  |
| Nanjiang | <i>ni<sup>ʔ33</sup></i>                 | 1     |  |
| Lisu     | <i>ne<sup>44</sup></i>                  | 1     |  |
| Nusu     | <i>na<sup>35</sup>-na<sup>53</sup></i>  | 1     |  |
| Achang   | <i>lok<sup>55</sup></i>                 | -1    |  |
| Naxi     | <i>no<sup>31</sup></i>                  | 1     |  |

## BLOOD

|          |                                       |   |
|----------|---------------------------------------|---|
| Burmese  | <i>swe:</i>                           | 1 |
| Zaiwa    | <i>sui<sup>31</sup></i>               | 1 |
| Akha     | <i>sjhi<sup>3</sup></i>               | 1 |
| Biyue    | <i>ɔ<sup>31</sup>-çi<sup>31</sup></i> | 1 |
| Mpi      | <i>si<sup>2</sup></i>                 | 1 |
| Bisu     | <i>fj<sup>3</sup></i>                 | 1 |
| Jino     | <i>fj<sup>44</sup></i>                | 1 |
| Lahu     | <i>ɔ<sup>31</sup>-sɿ<sup>11</sup></i> | 1 |
| Xide     | <i>sɿ<sup>33</sup></i>                | 1 |
| Dafang   | <i>çi<sup>33</sup></i>                | 1 |
| Nanjiang | <i>sɿ<sup>31</sup></i>                | 1 |
| Lisu     | <i>sɿ<sup>31</sup></i>                | 1 |
| Nusu     | <i>sui<sup>55</sup></i>               | 1 |
| Achang   | <i>sui<sup>31</sup></i>               | 1 |
| Naxi     | <i>sa<sup>33</sup></i>                | 1 |

## BREAST

|          |  |   |
|----------|--|---|
| Burmese  | <i>raŋ</i>                             | 1 |
| Zaiwa    | ==                                     | 0 |
| Akha     | <i>a<sup>3</sup>-tjhö<sup>1</sup></i>  | 2 |
| Biyue    | ==                                     | 0 |
| Mpi      | <i>m<sup>4</sup>-po<sup>74</sup></i>   | 3 |
| Bisu     | <i>loŋ<sup>2</sup>-pet<sup>2</sup></i> | 4 |
| Jino     | ==                                     | 0 |
| Lahu     | ==                                     | 0 |
| Xide     | <i>ŋo<sup>33</sup>-mo<sup>31</sup></i> | 6 |
| Dafang   | ==                                     | 0 |
| Nanjiang | ==                                     | 0 |
| Lisu     | ==                                     | 0 |
| Nusu     | ==                                     | 0 |
| Achang   | ==                                     | 0 |
| Naxi     | ==                                     | 0 |

## BONE

|          |   |   |
|----------|---|---|
| Burmese  | <i>?a.rui:</i>  | 1 |
| Zaiwa    | <i>fɔ<sup>31</sup>-vui<sup>31</sup></i>               | 1 |
| Akha     | <i>sha<sup>3</sup>-jō<sup>3</sup></i>                 | 1 |
| Biyue    | <i>ɔ<sup>31</sup>-ji<sup>31</sup></i>                 | 1 |
| Mpi      | <i>?ɔ<sup>2</sup>-?ɿ<sup>2</sup></i>                  | 1 |
| Bisu     | <i>?aŋ<sup>2</sup>-gaw<sup>3</sup></i>                | 1 |
| Jino     | <i>fɔ<sup>33</sup>-yɿ<sup>44</sup></i>                | 1 |
| Lahu     | <i>ɔ<sup>31</sup>-mv<sup>21</sup>-kv<sup>33</sup></i> | 2 |
| Xide     | <i>vu<sup>31</sup>-du<sup>33</sup></i>                | 1 |
| Dafang   | <i>xɔ<sup>31</sup>-yɿ<sup>33</sup></i>                | 1 |
| Nanjiang | <i>u<sup>31</sup>-da<sup>55</sup></i>                 | 3 |
| Lisu     | <i>ɔ<sup>42</sup>-to<sup>44</sup></i>                 | 1 |
| Nusu     | <i>rɿ<sup>55</sup></i>                                | 1 |
| Achang   | <i>a<sup>31</sup>-žau<sup>31</sup></i>                | 1 |
| Naxi     | <i>šɔ<sup>33</sup>-lo<sup>33</sup></i>                | 1 |

## BURN

|          |  |   |
|----------|--|---|
| Burmese  | <i>mi:-hrui</i>                        | 1 |
| Zaiwa    | ==                                     | 0 |
| Akha     | <i>py<sup>2</sup>-ə<sup>1</sup></i>    | 2 |
| Biyue    | ==                                     | 0 |
| Mpi      | <i>pjo<sup>23</sup></i>                | 2 |
| Bisu     | ==                                     | 0 |
| Jino     | ==                                     | 0 |
| Lahu     | <i>po<sup>?</sup></i>                  | 2 |
| Xide     | <i>ši<sup>31</sup>-çe<sup>33</sup></i> | 3 |
| Dafang   | ==                                     | 0 |
| Nanjiang | ==                                     | 0 |
| Lisu     | ==                                     | 0 |
| Nusu     | ==                                     | 0 |
| Achang   | ==                                     | 0 |
| Naxi     | ==                                     | 0 |

## CLOUD

|          |   |     |
|----------|---|-----|
| Burmese  | <i>tim</i>  | 1   |
| Zaiwa    | <i>mu<sup>55</sup>-mau<sup>55</sup></i>               | 3   |
| Akha     | <i>m<sup>3</sup>-dm<sup>l</sup></i>                   | 1   |
| Biyue    | <i>ɲi<sup>ʔ31</sup>-tɕhi<sup>31</sup></i>             | 2   |
| Mpi      | <i>fa<sup>l</sup></i>                                 | -1  |
| Bisu     | <i>mu<sup>ʔ3</sup>-bən<sup>3</sup></i>                | 4   |
| Jino     | <i>m<sup>33</sup>-tɛ<sup>44</sup></i>                 | 1   |
| Lahu     | <i>mu<sup>31</sup></i>                                | 3   |
| Xide     | <i>m<sup>33</sup>-ti<sup>33</sup></i>                 | 1   |
| Dafang   | <i>tiɛ<sup>33</sup></i>                               | 1   |
| Nanjiang | <i>ɔ<sup>55</sup>-mu<sup>31</sup>-ti<sup>55</sup></i> | 1   |
| Lisu     | <i>mu<sup>44</sup>-ku<sup>55</sup></i>                | 5   |
| Nusu     | <i>tʂhuɛ<sup>31</sup>-mɔ<sup>55</sup></i>             | 2 3 |
| Achang   | <i>xa<sup>ʔ31</sup>-tɕin<sup>31</sup></i>             | 2   |
| Naxi     | <i>tɕi<sup>31</sup></i>                               | 2   |

## COLD

|          |  |   |
|----------|--|---|
| Burmese  | <i>khjam:</i>                          | 1 |
| Zaiwa    | <i>==</i>                              | 0 |
| Akha     | <i>ga<sup>ʔ2</sup></i>                 | 2 |
| Biyue    | <i>==</i>                              | 0 |
| Mpi      | <i>==</i>                              | 0 |
| Bisu     | <i>ʔa<sup>ʔ2</sup>-chɔ<sup>3</sup></i> | 3 |
| Jino     | <i>==</i>                              | 0 |
| Lahu     | <i>ka<sup>ʔ54</sup></i>                | 3 |
| Xide     | <i>mgo<sup>33</sup></i>                | 4 |
| Dafang   | <i>==</i>                              | 0 |
| Nanjiang | <i>dɣi<sup>ʔ33</sup></i>               | 4 |
| Lisu     | <i>dʒɛ<sup>44</sup></i>                | 4 |
| Nusu     | <i>gra<sup>53</sup></i>                | 4 |
| Achang   | <i>kʒuat</i>                           | 4 |
| Naxi     | <i>tɕhi<sup>55</sup></i>               | 1 |

## COME

|          |   |     |
|----------|---|-----|
| Burmese  | <i>la</i>                               | 1   |
| Zaiwa    | <i>le<sup>55</sup></i>                  | 1   |
| Akha     | <i>la<sup>ʔ3</sup></i>                  | 1   |
| Biyue    | <i>la<sup>55</sup>; li<sup>33</sup></i> | 1 2 |
| Mpi      | <i>lo<sup>5</sup>; li<sup>3</sup></i>   | 1 2 |
| Bisu     | <i>la<sup>3</sup>; li<sup>2</sup></i>   | 1 2 |
| Jino     | <i>lo<sup>42</sup></i>                  | 1   |
| Lahu     | <i>la<sup>31</sup></i>                  | 1   |
| Xide     | <i>la<sup>33</sup></i>                  | 1   |
| Dafang   | <i>lo<sup>55</sup>; li<sup>31</sup></i> | 1 2 |
| Nanjiang | <i>la<sup>55</sup></i>                  | 1   |
| Lisu     | <i>la<sup>33</sup></i>                  | 1   |
| Nusu     | <i>la<sup>35</sup></i>                  | 1   |
| Achang   | <i>ʒə<sup>31</sup></i>                  | 2   |
| Naxi     | <i>li<sup>33</sup></i>                  | 2   |
|          | <i>tshi<sup>31</sup></i>                |     |

## DIE

|          |                         |   |
|----------|-------------------------|---|
| Burmese  | <i>sij</i>              | 1 |
| Zaiwa    | <i>ʃi<sup>51</sup></i>  | 1 |
| Akha     | <i>sjhi<sup>l</sup></i> | 1 |
| Biyue    | <i>sɿ<sup>55</sup></i>  | 1 |
| Mpi      | <i>si<sup>5</sup></i>   | 1 |
| Bisu     | <i>ʃi<sup>l</sup></i>   | 1 |
| Jino     | <i>ʃi<sup>42</sup></i>  | 1 |
| Lahu     | <i>sɿ<sup>33</sup></i>  | 1 |
| Xide     | <i>sɿ<sup>33</sup></i>  | 1 |
| Dafang   | <i>ɕi<sup>33</sup></i>  | 1 |
| Nanjiang | <i>xɿ<sup>55</sup></i>  | 1 |
| Lisu     | <i>ʃɿ<sup>44</sup></i>  | 1 |
| Nusu     | <i>ɕi<sup>35</sup></i>  | 1 |
| Achang   | <i>sa<sup>55</sup></i>  | 1 |
| Naxi     | <i>ʂɿ<sup>33</sup></i>  | 1 |

| DOG      |   |   | DRY      |   |     |
|----------|---|---|----------|---|-----|
| Burmese  | <i>khwe:</i>                                      | 1 | Burmese  | <i>khrauk</i>                                       | 1   |
| Zaiwa    | <i>khui<sup>31</sup></i>                          | 1 | Zaiwa    | ==  | 0   |
| Akha     | <i>a<sup>23</sup>-khy<sup>3</sup></i>             | 1 | Akha     | ==  | 0   |
| Biyue    | <i>kh<sub>i</sub><sup>31</sup></i>                | 1 | Biyue    | <i>k<sub>i</sub><sup>33</sup></i>                   | 1   |
| Mpi      | <i>kh<sub>i</sub><sup>2</sup></i>                 | 1 | Mpi      | <i>k<sub>i</sub><sup>3</sup></i>                    | 1   |
| Bisu     | <i>khə<sup>3</sup></i>                            | 1 | Bisu     | <i>?aŋ<sup>2</sup>-k<sub>i</sub><sup>2</sup></i>    | 1   |
| Jino     | <i>khə<sup>44</sup></i>                           | 1 | Jino     | <i>kə<sup>33</sup></i>                              | 1   |
| Lahu     | <i>phə<sup>53</sup></i>                           | 1 | Lahu     | <i>vi<sup>33</sup></i>                              | 3   |
| Xide     | <i>kh<sub>i</sub><sup>33</sup></i>                | 1 | Xide     | <i>a<sup>33</sup>-vu<sup>33</sup></i>               | 3   |
| Dafang   | <i>tɕhy<sup>33</sup></i>                          | 1 | Dafang   | <i>fɛ<sup>33</sup></i>                              | 3   |
| Nanjiang | <i>a<sup>55</sup>-kh<sub>i</sub><sup>31</sup></i> | 1 | Nanjiang | <i>fə<sup>31</sup></i>                              | 3   |
| Lisu     | <i>a<sup>55</sup>-na<sup>31</sup></i>             | 2 | Lisu     | <i>fu<sup>44</sup>-le<sup>33</sup></i>              | 4   |
| Nusu     | <i>khui<sup>55</sup></i>                          | 1 |          | <i>tʃh<sub>i</sub><sup>35</sup>-le<sup>33</sup></i> | 5   |
| Achang   | <i>xu<sup>31</sup></i>                            | 1 | Nusu     | <i>zyi<sup>31</sup>-a<sup>31</sup></i>              | 7   |
| Naxi     | <i>kh<sub>i</sub><sup>33</sup></i>                | 1 | Achang   | <i>s<sub>i</sub><sup>255</sup></i>                  | 2   |
|          |   |   | Naxi     | <i>pv<sup>31</sup></i>                              | 6   |
| DRINK    |   |   | EAR      |   |     |
| Burmese  | <i>suak</i>                                       | 1 | Burmese  | <i>na:</i>  | 1   |
| Zaiwa    | <i>ʃu<sup>255</sup></i>                           | 1 | Zaiwa    | <i>no<sup>31</sup>-phjo<sup>31</sup></i>            | 1   |
| Akha     | <i>dɔ<sup>1</sup></i>                             | 2 | Akha     | <i>na<sup>3</sup>-bo<sup>1</sup></i>                | 1 2 |
| Biyue    | <i>tu<sup>55</sup></i>                            | 2 | Biyue    | <i>no<sup>31</sup>-pu<sup>55</sup></i>              | 1 2 |
| Mpi      | <i>tɔŋ<sup>5</sup></i>                            | 2 | Mpi      | <i>m<sup>2</sup>-pha<sup>2</sup></i>                | 2   |
| Bisu     | <i>taŋ<sup>1</sup></i>                            | 2 | Bisu     | <i>na<sup>3</sup>-s<sub>i</sub>ŋ<sup>3</sup></i>    | 1 3 |
| Jino     | <i>tə<sup>42</sup></i>                            | 2 | Jino     | <i>hna<sup>33</sup>-kho<sup>55</sup></i>            | 1   |
| Lahu     | <i>dɔ<sup>31</sup></i>                            | 2 | Lahu     | <i>na<sup>31</sup>-pɔ<sup>33</sup></i>              | 1 2 |
| Xide     | <i>ndo<sup>33</sup></i>                           | 2 | Xide     | <i>hn<sub>i</sub><sup>31</sup>-pɔ<sup>33</sup></i>  | 1 2 |
| Dafang   | <i>ndo<sup>31</sup></i>                           | 2 | Dafang   | <i>lɔ<sup>31</sup>-pɔ<sup>33</sup></i>              | 2 3 |
| Nanjiang | <i>du<sup>55</sup></i>                            | 2 | Nanjiang | <i>na<sup>31</sup>-pu<sup>55</sup></i>              | 1 2 |
| Lisu     | <i>dɔ<sup>33</sup></i>                            | 2 | Lisu     | <i>no<sup>44</sup>-po<sup>44</sup></i>              | 1 2 |
| Nusu     | <i>çhu<sup>255</sup></i>                          | 1 | Nusu     | <i>hna<sup>55</sup>-shə<sup>35</sup></i>            | 1 3 |
| Achang   | <i>šo<sup>255</sup></i>                           | 1 | Achang   | <i>ni<sup>31</sup>-tʃua<sup>31</sup></i>            | 1   |
| Naxi     | <i>th<sub>i</sub><sup>31</sup></i>                | 3 | Naxi     | <i>xɛ<sup>33</sup>-ts<sub>i</sub><sup>31</sup></i>  | 3   |

## EARTH

|          |  |   |
|----------|--|---|
| Burmese  | <i>mrij</i>                                      | 1 |
| Zaiwa    | <i>mji<sup>31</sup>-tse<sup>31</sup></i>         | 1 |
| Akha     | <i>mi<sup>1</sup>-tsha<sup>3</sup></i>           | 1 |
| Biyue    | <i>me<sup>55</sup> tsho<sup>31</sup></i>         | 1 |
| Mpi      | <i>m<sup>2</sup>-pe<sup>2</sup></i>              | 1 |
| Bisu     | <i>niŋ<sup>1</sup>-tsha<sup>2</sup></i>          | 2 |
| Jino     | <i>hmi<sup>42</sup>-tsha<sup>55</sup></i>        | 1 |
| Lahu     | <i>mi<sup>31</sup></i>                           | 1 |
| Xide     | <i>m<sup>44</sup></i>                            | 1 |
| Dafang   | <i>mi<sup>33</sup>-di<sup>33</sup></i>           | 1 |
| Nanjiang | <i>mi<sup>55</sup></i>                           | 1 |
| Lisu     | <i>ha<sup>33</sup>-mi</i>                        | 1 |
| Nusu     | <i>mri<sup>35</sup></i>                          | 1 |
| Achang   | <i>žai<sup>55</sup></i>                          | 1 |
| Naxi     | <i>li<sup>33</sup></i><br><i>dy<sup>31</sup></i> | 1 |

## EAT

|          |                          |   |
|----------|--------------------------|---|
| Burmese  | <i>ca:</i>               | 1 |
| Zaiwa    | <i>tso<sup>31</sup></i>  | 1 |
| Akha     | <i>dza<sup>3</sup></i>   | 1 |
| Biyue    | <i>tso<sup>31</sup></i>  | 1 |
| Mpi      | <i>tço<sup>1</sup></i>   | 1 |
| Bisu     | <i>tsa<sup>3</sup></i>   | 1 |
| Jino     | <i>tso<sup>44</sup></i>  | 1 |
| Lahu     | <i>tsa<sup>53</sup></i>  | 1 |
| Xide     | <i>dzi<sup>33</sup></i>  | 1 |
| Dafang   | <i>dzu<sup>33</sup></i>  | 1 |
| Nanjiang | <i>dzo<sup>31</sup></i>  | 1 |
| Lisu     | <i>dza<sup>31</sup></i>  | 1 |
| Nusu     | <i>dza<sup>55</sup></i>  | 1 |
| Achang   | <i>tço<sup>31</sup></i>  | 1 |
| Naxi     | <i>ndzi<sup>33</sup></i> | 1 |

## EGG

|          |  |   |
|----------|--|---|
| Burmese  | <i>ʔu</i>                              | 1 |
| Zaiwa    | <i>a<sup>31</sup>-u<sup>55</sup></i>   | 1 |
| Akha     | <i>u<sup>ʔ2</sup></i>                  | 1 |
| Biyue    | <i>v<sup>33</sup></i>                  | 1 |
| Mpi      | <i>ʔo<sup>2</sup>-ʔu<sup>ʔ4</sup></i>  | 1 |
| Bisu     | <i>ʔaŋ<sup>2</sup>ʔu<sup>2</sup></i>   | 1 |
| Jino     | <i>a<sup>44</sup>-vu<sup>33</sup></i>  | 1 |
| Lahu     | <i>o<sup>31</sup>-v<sup>33</sup></i>   | 1 |
| Xide     | <i>tçhi<sup>21</sup></i>               | 2 |
| Dafang   | <i>ndo<sup>55</sup></i>                | 3 |
| Nanjiang | <i>fu<sup>33</sup></i>                 | 1 |
| Lisu     | <i>fu<sup>44</sup></i>                 | 1 |
| Nusu     | <i>ra<sup>31</sup>-ʔu<sup>31</sup></i> | 1 |
| Achang   | <i>u<sup>ʔ1</sup></i>                  | 1 |
| Naxi     | <i>kv<sup>33</sup></i>                 | 1 |

## EYE

|          |   |   |
|----------|---|---|
| Burmese  | <i>mjak.ci</i>                            | 1 |
| Zaiwa    | <i>mjo<sup>31</sup>-tʃi<sup>55</sup></i>  | 1 |
| Akha     | <i>mja<sup>ʔ2</sup>-ny<sup>ʔ2</sup></i>   | 1 |
| Biyue    | <i>ma<sup>ʔ33</sup>-tsi<sup>ʔ33</sup></i> | 1 |
| Mpi      | <i>ɲ<sup>4</sup>-tçho<sup>ʔ4</sup></i>    | 2 |
| Bisu     | <i>me<sup>2</sup>-hni<sup>2</sup></i>     | 1 |
| Jino     | <i>mja<sup>42</sup>-tsi<sup>33</sup></i>  | 1 |
| Lahu     | <i>me<sup>54</sup>-si<sup>11</sup></i>    | 1 |
| Xide     | <i>ɲo<sup>33</sup>-dzi<sup>31</sup></i>   | 1 |
| Dafang   | <i>na<sup>33</sup>-du<sup>33</sup></i>    | 1 |
| Nanjiang | <i>mi<sup>ʔ33</sup>-çe<sup>31</sup></i>   | 1 |
| Lisu     | <i>niε<sup>44</sup>-si<sup>31</sup></i>   | 1 |
| Nusu     | <i>mia<sup>53</sup>-dyi<sup>31</sup></i>  | 1 |
| Achang   | <i>ɲo<sup>31</sup>-tsi<sup>ʔ1</sup></i>   | 1 |
| Naxi     | <i>miə<sup>31</sup>-lv<sup>33</sup></i>   | 1 |



## FAT

|          |  |   |
|----------|--|---|
| Burmese  | <i>ʔa.-chi-mja:</i>                    | 1 |
| Zaiwa    | <i>tshu<sup>51</sup></i>               | 2 |
| Akha     | <i>tshi<sup>1</sup></i>                | 1 |
| Biyue    | <i>tshv<sup>55</sup></i>               | 2 |
| Mpi      | <i>thu<sup>ʔ3</sup></i>                | 2 |
| Bisu     | <i>ʔaŋ<sup>2</sup>-tuŋ<sup>2</sup></i> | 3 |
| Jino     | <i>tshə<sup>44</sup></i>               | 1 |
| Lahu     | <i>tshv<sup>33</sup></i>               | 2 |
| Xide     | <i>tshu<sup>33</sup></i>               | 2 |
| Dafang   | <i>tshu<sup>33</sup></i>               | 2 |
| Nanjiang | <i>tshi<sup>55</sup></i>               | 1 |
| Lisu     | <i>tshɿ<sup>44</sup></i>               | 1 |
| Nusu     | ==                                     | 0 |
| Achang   | <i>tçho<sup>55</sup></i>               | 2 |
| Naxi     | <i>ma<sup>31</sup></i>                 | 4 |

## FIRE

|          |                                       |     |
|----------|---------------------------------------|-----|
| Burmese  | <i>mi:</i>                            | 1   |
| Zaiwa    | <i>mji<sup>31</sup></i>               | 1   |
| Akha     | <i>mi<sup>3</sup>-dza<sup>3</sup></i> | 1   |
| Biyue    | <i>mi.tso<sup>31</sup></i>            | 1   |
| Mpi      | <i>mi<sup>2</sup></i>                 | 1   |
| Bisu     | <i>bi<sup>1</sup>-tho<sup>2</sup></i> | 1 3 |
| Jino     | <i>mi<sup>44</sup></i>                | 1   |
| Lahu     | <i>a<sup>53</sup>-mi<sup>31</sup></i> | 1   |
| Xide     | <i>m<sup>31</sup>-tu<sup>55</sup></i> | 1 3 |
| Dafang   | <i>m<sup>33</sup>-to<sup>55</sup></i> | 1 3 |
| Nanjiang | <i>a<sup>55</sup>-to<sup>31</sup></i> | 3   |
| Lisu     | <i>a<sup>55</sup>-to<sup>55</sup></i> | 3   |
| Nusu     | <i>mi<sup>55</sup></i>                | 1   |
| Achang   | <i>poi<sup>31</sup></i>               | -1  |
| Naxi     | <i>mi<sup>33</sup></i>                | 1   |

## FEATHER

|          |  |   |
|----------|--|---|
| Burmese  | <i>mwe:</i>                            | 1 |
| Zaiwa    | ==                                     | 0 |
| Akha     | ==                                     | 0 |
| Biyue    | ==                                     | 0 |
| Mpi      | <i>ʔo<sup>2</sup>-mi<sup>2</sup></i>   | 1 |
| Bisu     | <i>ʔaŋ<sup>2</sup>-hmɿ<sup>2</sup></i> | 1 |
| Jino     | ==                                     | 0 |
| Lahu     | <i>mi<sup>31</sup></i>                 | 1 |
| Xide     | <i>je<sup>33</sup></i>                 | 1 |
| Dafang   | ==                                     | 0 |
| Nanjiang | ==                                     | 0 |
| Lisu     | ==                                     | 0 |
| Nusu     | ==                                     | 0 |
| Achang   | ==                                     | 0 |
| Naxi     | <i>fv<sup>55</sup></i>                 | 1 |

## FISH

|          |   |    |
|----------|---|----|
| Burmese  | <i>ŋa:</i>                              | 1  |
| Zaiwa    | <i>ŋo<sup>31</sup>-tso<sup>31</sup></i> | 1  |
| Akha     | <i>ŋa<sup>3</sup>-sjha<sup>3</sup></i>  | 1  |
| Biyue    | <i>ŋo<sup>31</sup>-so<sup>31</sup></i>  | 1  |
| Mpi      | <i>ŋo<sup>2</sup></i>                   | 1  |
| Bisu     | <i>loŋ<sup>3</sup>-te<sup>3</sup></i>   | 2  |
| Jino     | <i>hŋo<sup>44</sup>-fo<sup>44</sup></i> | 1  |
| Lahu     | <i>ŋa<sup>53</sup></i>                  | 1  |
| Xide     | <i>hi<sup>33</sup></i>                  | 1  |
| Dafang   | <i>ŋo<sup>33</sup></i>                  | 1  |
| Nanjiang | <i>o<sup>31</sup></i>                   | 1  |
| Lisu     | <i>ŋua<sup>55</sup></i>                 | 1  |
| Nusu     | <i>ŋa<sup>55</sup></i>                  | 1  |
| Achang   | <i>ŋa<sup>31</sup>-šua<sup>31</sup></i> | 1  |
| Naxi     | <i>pi<sup>33</sup></i>                  | -1 |

| FLY      |                          |   | FULL     |   |   |
|----------|--------------------------|---|----------|---|---|
| Burmese  | <i>pjam</i>              | 1 | Burmese  | <i>praŋ</i>                             | 1 |
| Zaiwa    | <i>taŋ<sup>31</sup></i>  | 2 | Zaiwa    | <i>pjiŋ<sup>55</sup></i>                | 1 |
| Akha     | <i>zɔ<sup>2</sup></i>    | 3 | Akha     | ==                                      | 0 |
| Biyue    | <i>pe<sup>55</sup></i>   | 1 | Biyue    | <i>pi<sup>33</sup></i>                  | 1 |
| Mpi      | <i>pjəŋ<sup>5</sup></i>  | 1 | Mpi      | <i>pji<sup>3</sup></i>                  | 1 |
| Bisu     | <i>pjam<sup>l</sup></i>  | 1 | Bisu     | <i>?aŋ<sup>2</sup>-pliŋ<sup>2</sup></i> | 1 |
| Jino     | <i>pre<sup>42</sup></i>  | 1 | Jino     | <i>prə<sup>32</sup></i>                 | 1 |
| Lahu     | <i>pu<sup>31</sup></i>   | 1 | Lahu     | <i>bi<sup>53</sup></i>                  | 1 |
| Xide     | <i>dyi<sup>33</sup></i>  | 1 | Xide     | <i>dji<sup>31</sup></i>                 | 1 |
| Dafang   | <i>dɿ<sup>31</sup></i>   | 1 | Dafang   | <i>die<sup>31</sup></i>                 | 1 |
| Nanjiang | <i>by<sup>55</sup></i>   | 1 | Nanjiang | <i>dzi<sup>33</sup></i>                 | 2 |
| Lisu     | <i>bi<sup>33</sup></i>   | 1 | Lisu     | <i>bi<sup>44</sup>-le<sup>33</sup></i>  | 1 |
| Nusu     | <i>biə<sup>55</sup></i>  | 1 | Nusu     | <i>bə<sup>31</sup></i>                  | 1 |
| Achang   | <i>tšam<sup>55</sup></i> | 1 | Achang   | <i>pžəŋ<sup>l</sup></i>                 | 1 |
| Naxi     | <i>mbi<sup>31</sup></i>  | 1 | Naxi     | <i>šər<sup>55</sup></i>                 | 3 |

| FOOT     |   |   | GIVE     |                         |   |
|----------|---|---|----------|-------------------------|---|
| Burmese  | <i>krij-thauŋ</i>                         | 1 | Burmese  | <i>pij:</i>             | 1 |
| Zaiwa    | <i>khji<sup>51</sup></i>                  | 1 | Zaiwa    | ==                      | 0 |
| Akha     | <i>dju<sup>3</sup>-xhɔ<sup>3</sup></i>    | 1 | Akha     | <i>bi<sup>73</sup></i>  | 1 |
| Biyue    | <i>ɔ<sup>31</sup>-tçi<sup>55</sup></i>    | 1 | Biyue    | <i>pi<sup>31</sup></i>  | 1 |
| Mpi      | <i>lɔ<sup>2</sup>-khi<sup>6</sup></i>     | 1 | Mpi      | <i>pe<sup>5</sup></i>   | 1 |
| Bisu     | <i>la<sup>3</sup>-khi<sup>3</sup></i>     | 1 | Bisu     | <i>pi<sup>3</sup></i>   | 1 |
| Jino     | <i>ʃɔ<sup>33</sup>-khi<sup>44</sup></i>   | 1 | Jino     | <i>pi<sup>44</sup></i>  | 1 |
| Lahu     | <i>khɿ<sup>33</sup>-se<sup>33</sup></i>   | 1 | Lahu     | <i>pi<sup>53</sup></i>  | 1 |
| Xide     | <i>tçi<sup>33</sup>-çɿ<sup>33</sup></i>   | 1 | Xide     | <i>bi<sup>33</sup></i>  | 1 |
| Dafang   | <i>tçi<sup>33</sup>-pha<sup>33</sup></i>  | 1 | Dafang   | ==                      | 0 |
| Nanjiang | <i>khi<sup>55</sup>-pi<sup>733</sup></i>  | 1 | Nanjiang | ==                      | 0 |
| Lisu     | <i>tʃhr<sup>44</sup>-phe<sup>35</sup></i> | 1 | Lisu     | <i>go<sup>31</sup></i>  | 2 |
| Nusu     | <i>khri<sup>35</sup></i>                  | 1 | Nusu     | ==                      | 0 |
| Achang   | <i>tçi<sup>55</sup></i>                   | 1 | Achang   | <i>tsi<sup>31</sup></i> | 3 |
| Naxi     | <i>khi<sup>33</sup></i>                   | 1 | Naxi     | ==                      | 0 |

## GOOD

|          |   |   |
|----------|---|---|
| Burmese  | <i>kaʊ̯:</i>                            | 1 |
| Zaiwa    | <i>xui<sup>55</sup></i>                 | 3 |
| Akha     | ==                                      | 0 |
| Biyue    | <i>mɔʔ<sup>33</sup></i>                 | 4 |
| Mpi      | <i>mi<sup>1</sup></i>                   | 4 |
| Bisu     | <i>ʔaŋ<sup>2</sup>-hmen<sup>3</sup></i> | 4 |
| Jino     | <i>mə<sup>44</sup></i>                  | 4 |
| Lahu     | <i>da<sup>5</sup></i>                   | 5 |
| Xide     | <i>xɿ<sup>33</sup></i>                  | 3 |
| Dafang   | <i>no<sup>33</sup></i>                  | 6 |
| Nanjiang | <i>me<sup>31</sup></i>                  | 4 |
| Lisu     | ==                                      | 0 |
| Nusu     | <i>ge<sup>35</sup>-a<sup>55</sup></i>   | 8 |
| Achang   | <i>tɕi<sup>55</sup></i>                 | 2 |
| Naxi     | <i>ɣi<sup>33</sup></i>                  | 7 |

## GREEN

|          |  |    |
|----------|--|----|
| Burmese  | <i>cim:</i>  | 1  |
| Zaiwa    | <i>ŋju<sup>51</sup></i>                              | 2  |
| Akha     | <i>njɔ<sup>1</sup></i>                               | 2  |
| Biyue    | <i>ɲi<sup>55</sup></i>                               | 2  |
| Mpi      | <i>ʔɔ<sup>2</sup>-ɲi<sup>6</sup></i>                 | 2  |
| Bisu     | <i>ʔaŋ<sup>2</sup>-khjaw<sup>2</sup></i>             | -1 |
| Jino     | <i>ɲu<sup>44</sup></i>                               | 2  |
| Lahu     | <i>no<sup>33</sup></i>                               | 2  |
| Xide     | <i>a<sup>44</sup>-to<sup>31</sup></i>                | 3  |
| Dafang   | <i>ho<sup>55</sup></i>                               | 4  |
| Nanjiang | <i>a<sup>31</sup>-n<sup>55</sup>-ɣu<sup>31</sup></i> | 2  |
| Lisu     | <i>ni<sup>35</sup>-tʃhi<sup>42</sup></i>             | 2  |
| Nusu     | <i>ɲi<sup>35</sup>-ɲi<sup>31</sup></i>               | 2  |
| Achang   | <i>ɲau<sup>55</sup></i>                              | 2  |
| Naxi     | <i>xər<sup>31</sup></i>                              | 2  |

## HAIR

|          |   |     |
|----------|---|-----|
| Burmese  | <i>cham-paŋ</i>                           | 1   |
| Zaiwa    | <i>u<sup>31</sup>-tsham<sup>51</sup></i>  | 1   |
| Akha     | <i>tja<sup>ʔ3</sup>-khaŋ<sup>1</sup></i>  | 3   |
| Biyue    | <i>tshe<sup>55</sup></i>                  | 1   |
|          | <i>khɿ<sup>55</sup></i>                   | 3   |
| Mpi      | <i>ŋ<sup>4</sup>-khi<sup>6</sup></i>      | 3   |
| Bisu     | <i>tam<sup>1</sup>-khiŋ<sup>1</sup></i>   | 1 3 |
| Jino     | <i>tshe<sup>42</sup>-khə<sup>44</sup></i> | 1 3 |
| Lahu     | <i>v<sup>35</sup>-mv<sup>33</sup></i>     | 2   |
| Xide     | <i>o<sup>33</sup>-ɲe<sup>33</sup></i>     | 2   |
| Dafang   | <i>o<sup>33</sup>-tshi<sup>33</sup></i>   | 1   |
| Nanjiang | <i>u<sup>31</sup>-tɕhy<sup>55</sup></i>   | 3   |
| Lisu     | <i>o<sup>55</sup>-tshe<sup>44</sup></i>   | 3   |
| Nusu     | <i>tsha<sup>35</sup></i>                  | 1   |
| Achang   | <i>u<sup>31</sup>-mui<sup>31</sup></i>    | 2   |
| Naxi     | <i>kv<sup>33</sup>-fv<sup>33</sup></i>    | 4   |

## HAND

|          |   |   |
|----------|---|---|
| Burmese  | <i>lak</i>                                | 1 |
| Zaiwa    | <i>lo<sup>ʔ31</sup></i>                   | 1 |
| Akha     | <i>la<sup>ʔ3</sup></i>                    | 1 |
| Biyue    | <i>a<sup>31</sup>-la<sup>ʔ31</sup></i>    | 1 |
| Mpi      | <i>lo<sup>2</sup>-phu<sup>6</sup></i>     | 1 |
| Bisu     | <i>la<sup>3</sup>-po<sup>3</sup></i>      | 1 |
| Jino     | <i>la<sup>55</sup>-pu<sup>44</sup></i>    | 1 |
| Lahu     | <i>la<sup>ʔ21</sup>-se<sup>33</sup></i>   | 1 |
| Xide     | <i>lo<sup>55</sup></i>                    | 1 |
| Dafang   | <i>la<sup>13</sup></i>                    | 1 |
| Nanjiang | <i>li<sup>ʔ31</sup>-phi<sup>ʔ33</sup></i> | 1 |
| Lisu     | <i>le<sup>31</sup>-phe<sup>35</sup></i>   | 1 |
| Nusu     | <i>la<sup>ʔ53</sup></i>                   | 1 |
| Achang   | <i>lo<sup>ʔ55</sup></i>                   | 1 |
| Naxi     | <i>lo<sup>31</sup></i>                    | 1 |

| HEAD     |  |     | HEART    |  |   |
|----------|--|-----|----------|--|---|
| Burmese  | <i>khaʊŋː</i>                            | 1   | Burmese  | <i>hna.luiː</i>  | 1 |
| Zaiwa    | <i>u<sup>31</sup>-lum<sup>31</sup></i>   | 2 6 | Zaiwa    | <i>nik<sup>55</sup>-lum<sup>31</sup></i>               | 2 |
| Akha     | <i>u<sup>ʔ3</sup>-du<sup>3</sup></i>     | 2 3 | Akha     | <i>ny<sup>2</sup>-ma<sup>2</sup></i>                   | 2 |
| Biyue    | <i>v<sup>31</sup>-khe<sup>31</sup></i>   | 1 2 | Biyue    | <i>ni<sup>ʔ33</sup>-mo<sup>33</sup></i>                | 2 |
| Mpi      | <i>ʔo<sup>2</sup>-si<sup>2</sup></i>     | 4   | Mpi      | <i>no<sup>4</sup>-wo<sup>4</sup></i>                   | 2 |
| Bisu     | <i>ʔaŋ<sup>2</sup>-tu<sup>3</sup></i>    | 3   | Bisu     | <i>niŋ<sup>2</sup>-ba<sup>3</sup></i>                  | 2 |
| Jino     | <i>vu<sup>44</sup>-khe<sup>44</sup></i>  | 1 2 | Jino     | <i>hnə<sup>42</sup>-sə<sup>44</sup></i>                | 1 |
| Lahu     | <i>v<sup>35</sup>-qu<sup>11</sup></i>    | 1 2 | Lahu     | <i>ni<sup>33</sup>-ma<sup>33</sup>-si<sup>11</sup></i> | 2 |
| Xide     | <i>i<sup>33</sup>-tçi<sup>33</sup></i>   | 5   | Xide     | <i>he<sup>33</sup>-ma<sup>55</sup></i>                 | 2 |
| Dafang   | <i>o<sup>33</sup>-gu<sup>55</sup></i>    | 1 2 | Dafang   | <i>ne<sup>33</sup>-mo<sup>31</sup></i>                 | 2 |
| Nanjiang | <i>u<sup>31</sup>-dy<sup>55</sup></i>    | 1 3 | Nanjiang | <i>mu<sup>33</sup>-mo<sup>33</sup></i>                 | 2 |
| Lisu     | <i>o<sup>55</sup>-du<sup>33</sup></i>    | 1 3 | Lisu     | <i>ni<sup>35</sup>-ma<sup>33</sup></i>                 | 2 |
| Nusu     | <i>u<sup>31</sup>-phu<sup>55</sup></i>   | 2   | Nusu     | <i>hi<sup>31</sup>-lo<sup>53</sup></i>                 | 2 |
| Achang   | <i>na<sup>31</sup>-kuəŋ<sup>31</sup></i> | 1   | Achang   | <i>hpa<sup>55</sup>-lum<sup>31</sup></i>               | 2 |
| Naxi     | <i>kv<sup>33</sup>-ly<sup>33</sup></i>   | 1 6 | Naxi     | <i>nv<sup>55</sup>-me<sup>33</sup></i>                 | 2 |

| HEAR     |   |   | HORN     |  |   |
|----------|---|---|----------|--|---|
| Burmese  | <i>kraː</i>                             | 1 | Burmese  | <i>khjui</i>                             | 1 |
| Zaiwa    | <i>kjo<sup>31</sup></i>                 | 1 | Zaiwa    | <i>khjui<sup>51</sup></i>                | 1 |
| Akha     | <i>ga<sup>3</sup></i>                   | 1 | Akha     | <i>u<sup>ʔ3</sup>-tjö<sup>2</sup></i>    | 1 |
| Biyue    | <i>na<sup>55</sup>-te<sup>31</sup></i>  | 2 | Biyue    | <i>v<sup>31</sup>-tçi<sup>55</sup></i>   | 1 |
| Mpi      | <i>kjo<sup>1</sup></i>                  | 1 | Mpi      | <i>ŋ<sup>2</sup>-khui<sup>6</sup></i>    | 1 |
| Bisu     | <i>kja<sup>3</sup></i>                  | 1 | Bisu     | <i>ʔaŋ<sup>2</sup>-khjaw<sup>1</sup></i> | 1 |
| Jino     | <i>hnə<sup>42</sup>-to<sup>44</sup></i> | 2 | Jino     | <i>vu<sup>33</sup>-khi<sup>44</sup></i>  | 1 |
| Lahu     | <i>na<sup>33</sup></i>                  | 2 | Lahu     | <i>kho<sup>33</sup></i>                  | 1 |
| Xide     | <i>hna<sup>33</sup></i>                 | 2 | Xide     | <i>o<sup>33</sup>-fu<sup>33</sup></i>    | 2 |
| Dafang   | <i>dyu<sup>33</sup></i>                 | 1 | Dafang   | <i>o<sup>33</sup>-tçi<sup>33</sup></i>   | 1 |
| Nanjiang | <i>ne<sup>55</sup></i>                  | 2 | Nanjiang | <i>khui<sup>55</sup></i>                 | 1 |
| Lisu     | <i>na<sup>44</sup>-lo<sup>35</sup></i>  | 2 | Lisu     | <i>o<sup>55</sup>.t/hi<sup>44</sup></i>  | 1 |
| Nusu     | <i>hna<sup>35</sup></i>                 | 2 | Nusu     | <i>khri<sup>35</sup>-a<sup>55</sup></i>  | 1 |
| Achang   | <i>kžua<sup>31</sup></i>                | 1 | Achang   | <i>khžau<sup>55</sup></i>                | 1 |
| Naxi     | <i>kho<sup>33</sup>-mi<sup>33</sup></i> | 3 | Naxi     | <i>kho<sup>33</sup></i>                  | 1 |

## I

|          |                         |   |
|----------|-------------------------|---|
| Burmese  | <i>kjwan-tau</i>        | 1 |
| Zaiwa    | <i>ŋo<sup>51</sup></i>  | 2 |
| Akha     | <i>ŋa<sup>1</sup></i>   | 2 |
| Biyue    | <i>ŋa<sup>55</sup></i>  | 2 |
| Mpi      | <i>ŋo<sup>6</sup></i>   | 2 |
| Bisu     | <i>ga<sup>2</sup></i>   | 2 |
| Jino     | <i>ŋo<sup>42</sup></i>  | 2 |
| Lahu     | <i>ŋa<sup>31</sup></i>  | 2 |
| Xide     | <i>ŋa<sup>33</sup></i>  | 2 |
| Dafang   | <i>ŋo<sup>31</sup></i>  | 2 |
| Nanjiang | <i>ŋo<sup>55</sup></i>  | 2 |
| Lisu     | <i>ŋua<sup>33</sup></i> | 2 |
| Nusu     | <i>ŋa<sup>35</sup></i>  | 2 |
| Achang   | <i>ŋo<sup>55</sup></i>  | 2 |
| Naxi     | <i>ŋə<sup>31</sup></i>  | 2 |

## KILL

|          |                         |   |
|----------|-------------------------|---|
| Burmese  | <i>sat</i>              | 1 |
| Zaiwa    | <i>sat<sup>55</sup></i> | 1 |
| Akha     | <i>se<sup>?3</sup></i>  | 1 |
| Biyue    | <i>sɿ<sup>?31</sup></i> | 1 |
| Mpi      | <i>sə<sup>?1</sup></i>  | 1 |
| Bisu     | <i>se<sup>3</sup></i>   | 1 |
| Jino     | <i>se<sup>55</sup></i>  | 1 |
| Lahu     | <i>pe<sup>11</sup></i>  | 2 |
| Xide     | <i>si<sup>55</sup></i>  | 1 |
| Dafang   | <i>se<sup>13</sup></i>  | 1 |
| Nanjiang | <i>çj<sup>?31</sup></i> | 1 |
| Lisu     | <i>se<sup>42</sup></i>  | 1 |
| Nusu     | <i>sa<sup>?53</sup></i> | 1 |
| Achang   | <i>sat<sup>55</sup></i> | 1 |
| Naxi     | <i>kho<sup>55</sup></i> | 3 |

## KNEE

|          |  |     |
|----------|--|-----|
| Burmese  | <i>du:</i>   | 1   |
| Zaiwa    | <i>khjɿ<sup>51</sup>-phut<sup>55</sup></i>               | 2   |
| Akha     | <i>khy<sup>1</sup>-tsy<sup>?3</sup></i>                  | 5   |
| Biyue    | <i>==</i>  | 0   |
| Mpi      | <i>ŋ<sup>2</sup>-koŋ<sup>2</sup></i>                     | 4   |
| Bisu     | <i>pa<sup>3</sup>-to<sup>2</sup></i>                     | 1   |
| Jino     | <i>phə<sup>55</sup>-tshɿ<sup>55</sup></i>                | 2 5 |
| Lahu     | <i>khɿ<sup>33</sup>-tsɿ<sup>35</sup>-qv<sup>33</sup></i> | 4 5 |
| Xide     | <i>ba<sup>31</sup>-cɿ<sup>?33</sup></i>                  | 5   |
| Dafang   | <i>==</i>  | 0   |
| Nanjiang | <i>==</i>  | 0   |
| Lisu     | <i>==</i>  | 0   |
| Nusu     | <i>==</i>  | 0   |
| Achang   | <i>tçhi<sup>55</sup>-ŋo<sup>?55</sup></i>                | 5   |
| Naxi     | <i>==</i>  | 0   |

## KNOW

|          |  |   |
|----------|--|---|
| Burmese  | <i>si</i>                                | 1 |
| Zaiwa    | <i>se<sup>55</sup></i>                   | 1 |
| Akha     | <i>sjhi<sup>3</sup></i>                  | 1 |
| Biyue    | <i>sɿ<sup>?31</sup>-la<sup>31</sup></i>  | 1 |
| Mpi      | <i>sɿ<sup>1</sup></i>                    | 1 |
| Bisu     | <i>be<sup>3</sup></i>                    | 2 |
| Jino     | <i>sə<sup>44</sup>-jo<sup>33</sup></i>   | 1 |
| Lahu     | <i>sj<sup>31</sup></i>                   | 1 |
| Xide     | <i>dɿ<sup>33</sup>-dyɿ<sup>33</sup></i>  | 3 |
| Dafang   | <i>sə<sup>55</sup></i>                   | 1 |
| Nanjiang | <i>sa<sup>31</sup></i>                   | 1 |
| Lisu     | <i>sɿ<sup>55</sup></i>                   | 1 |
| Nusu     | <i>tçə<sup>?55</sup>-du<sup>55</sup></i> | 4 |
| Achang   | <i>sa<sup>55</sup></i>                   | 1 |
| Naxi     | <i>sɿ<sup>33</sup></i>                   | 1 |

## LEAF

|          |  |     |
|----------|--|-----|
| Burmese  | <i>sac-rwak</i>                            | 1   |
| Zaiwa    | <i>a<sup>31</sup>-xa<sup>ʔ55</sup></i>     | 1   |
| Akha     | <i>a<sup>1</sup>-pa<sup>ʔ3</sup></i>       | 2   |
| Biyue    | <i>a<sup>31</sup>-pha<sup>ʔ31</sup></i>    | 2   |
| Mpi      | <i>ʔo<sup>2</sup>-pha<sup>2</sup></i>      | 2   |
| Bisu     | <i>ʔaŋ<sup>2</sup>-pha<sup>3</sup></i>     | 2   |
| Jino     | <i>a<sup>33</sup>-pha<sup>55</sup></i>     | 2   |
| Lahu     | <i>o<sup>31</sup>-pha<sup>ʔ21</sup></i>    | 2   |
| Xide     | <i>tçhɪ<sup>44</sup>-tçhi<sup>33</sup></i> | 3   |
| Dafang   | <i>se<sup>33</sup>-thu<sup>33</sup></i>    | 4   |
| Nanjiang | <i>si<sup>ʔ33</sup>-phi<sup>ʔ31</sup></i>  | 2   |
| Lisu     | <i>e<sup>55</sup>-phia<sup>31</sup></i>    | 2   |
| Nusu     | <i>pha<sup>ʔ53</sup>-ʔa<sup>55</sup></i>   | 2 3 |
| Achang   | <i>a<sup>31</sup>-xro<sup>ʔ55</sup></i>    | 1   |
| Naxi     | <i>phiə<sup>55</sup></i>                   | 2   |

## LIE

|          |                                      |   |
|----------|--------------------------------------|---|
| Burmese  | <i>laj:-nij</i>                      | 1 |
| Zaiwa    | ==                                   | 0 |
| Akha     | <i>ju<sup>ʔ3</sup></i>               | 2 |
| Biyue    | ==                                   | 0 |
| Mpi      | <i>ʔ<sup>2</sup>-tça<sup>3</sup></i> | 3 |
| Bisu     | ==                                   | 0 |
| Jino     | ==                                   | 0 |
| Lahu     | ==                                   | 0 |
| Xide     | <i>zu<sup>33</sup></i>               | 3 |
| Dafang   | ==                                   | 0 |
| Nanjiang | ==                                   | 0 |
| Lisu     | ==                                   | 0 |
| Nusu     | ==                                   | 0 |
| Achang   | ==                                   | 0 |
| Naxi     | ==                                   | 0 |

## LIVER

|          |  |   |
|----------|--|---|
| Burmese  | <i>ʔa.səŋ:</i>                           | 1 |
| Zaiwa    | <i>siŋ<sup>31</sup></i>                  | 1 |
| Akha     | <i>sha<sup>3</sup>-tshaŋ<sup>3</sup></i> | 1 |
| Biyue    | <i>o<sup>31</sup>-tshɪ<sup>31</sup></i>  | 1 |
| Mpi      | <i>ʔo<sup>2</sup>-thi<sup>2</sup></i>    | 2 |
| Bisu     | <i>ʔaŋ<sup>2</sup>-tshin<sup>3</sup></i> | 1 |
| Jino     | <i>a<sup>33</sup>-tshɪ<sup>44</sup></i>  | 1 |
| Lahu     | <i>o<sup>31</sup>-se<sup>31</sup></i>    | 1 |
| Xide     | <i>si<sup>31</sup></i>                   | 1 |
| Dafang   | <i>sə<sup>33</sup></i>                   | 1 |
| Nanjiang | <i>dzɪ<sup>31</sup>-si<sup>31</sup></i>  | 1 |
| Lisu     | <i>si<sup>31</sup></i>                   | 1 |
| Nusu     | <i>tshə<sup>55</sup></i>                 | 1 |
| Achang   | <i>a<sup>31</sup>-šəŋ<sup>31</sup></i>   | 1 |
| Naxi     | <i>sər<sup>55</sup></i>                  | 1 |

## LONG

|          |   |   |
|----------|---|---|
| Burmese  | <i>hraŋ</i>                             | 1 |
| Zaiwa    | <i>xiŋ<sup>51</sup></i>                 | 1 |
| Akha     | <i>maŋ<sup>l</sup></i>                  | 2 |
| Biyue    | <i>mu<sup>55</sup></i>                  | 2 |
| Mpi      | <i>si<sup>5</sup></i>                   | 1 |
| Bisu     | <i>ʔaŋ<sup>2</sup>-hməŋ<sup>l</sup></i> | 2 |
| Jino     | <i>ʃə<sup>42</sup></i>                  | 1 |
| Lahu     | <i>zi<sup>31</sup></i>                  | 3 |
| Xide     | <i>a<sup>33</sup>-šo<sup>33</sup></i>   | 1 |
| Dafang   | <i>çe<sup>33</sup></i>                  | 1 |
| Nanjiang | <i>šɪ<sup>55</sup></i>                  | 1 |
| Lisu     | <i>ʃɪ<sup>44</sup></i>                  | 1 |
| Nusu     | <i>xri<sup>31</sup></i>                 | 1 |
| Achang   | <i>səŋ<sup>55</sup></i>                 | 1 |
| Naxi     | <i>šər<sup>31</sup></i>                 | 1 |

| LOUSE    |  |   | MANY     |  |   |
|----------|--|---|----------|--|---|
| Burmese  | <i>san:</i>                              | 1 | Burmese  | <i>mja:</i>                            | 1 |
| Zaiwa    | <i>ʃin<sup>31</sup></i>                  | 1 | Zaiwa    | <i>mjo<sup>31</sup></i>                | 1 |
| Akha     | <i>she<sup>2</sup>-mo<sup>1</sup></i>    | 1 | Akha     | <i>mja<sup>3</sup></i>                 | 1 |
| Biyue    | <i>se<sup>55</sup>-phv<sup>55</sup></i>  | 1 | Biyue    | <i>mo<sup>31</sup></i>                 | 1 |
| Mpi      | <i>se<sup>6</sup></i>                    | 1 | Mpi      | <i>mjo<sup>1</sup></i>                 | 1 |
| Bisu     | <i>hmɔŋ<sup>1</sup></i>                  | 1 | Bisu     | <i>?aŋ<sup>2</sup>-bja<sup>3</sup></i> | 1 |
| Jino     | <i>ʃi<sup>44</sup></i>                   | 1 | Jino     | <i>thə<sup>42</sup></i>                | 2 |
| Lahu     | <i>se<sup>33</sup></i>                   | 1 | Lahu     | <i>ma<sup>53</sup></i>                 | 1 |
| Xide     | <i>tsho<sup>44</sup>-ʃi<sup>33</sup></i> | 1 | Xide     | <i>a<sup>44</sup>-ŋi<sup>33</sup></i>  | 1 |
| Dafang   | <i>çi<sup>33</sup>-mo<sup>55</sup></i>   | 1 | Dafang   | <i>ŋa<sup>33</sup></i>                 | 1 |
| Nanjiang | <i>çi<sup>55</sup></i>                   | 1 | Nanjiang | <i>khū<sup>55</sup></i>                | 3 |
| Lisu     | <i>xɿ<sup>44</sup></i>                   | 1 | Lisu     | <i>miə<sup>31</sup></i>                | 1 |
| Nusu     | <i>ʃa<sup>55</sup></i>                   | 1 | Nusu     | <i>miā<sup>53</sup></i>                | 1 |
| Achang   | <i>ʃan<sup>31</sup></i>                  | 1 | Achang   | <i>ŋo<sup>31</sup></i>                 | 1 |
| Naxi     | <i>ʃu<sup>33</sup></i>                   | 1 | Naxi     | <i>bɿ<sup>31</sup></i>                 | 4 |

| MAN      |  |     | MEAT     |  |   |
|----------|--|-----|----------|--|---|
| Burmese  | <i>jau-kja:</i>  | 1   | Burmese  | <i>?a.-sa:</i>                         | 1 |
| Zaiwa    | <i>ju<sup>ʔ31</sup>-ke<sup>51</sup></i>                  | 1   | Zaiwa    | <i>ʃo<sup>31</sup></i>                 | 1 |
| Akha     | <i>za<sup>3</sup>-jo<sup>2</sup></i>                     | 3 4 | Akha     | <i>sha<sup>3</sup>-dja<sup>1</sup></i> | 2 |
| Biyue    | <i>ja<sup>ʔ31</sup>-jv<sup>ʔ31</sup></i>                 | 3 4 | Biyue    | <i>so<sup>31</sup></i>                 | 1 |
| Mpi      | <i>ko<sup>2</sup>-pho<sup>2</sup></i>                    | 5 6 | Mpi      | <i>?o<sup>2</sup>-so<sup>2</sup></i>   | 1 |
| Bisu     | <i>ka<sup>3</sup>-pha<sup>3</sup>-ja<sup>3</sup></i>     | 5   | Bisu     | <i>?aŋ<sup>2</sup>-ʃa<sup>3</sup></i>  | 1 |
| Jino     | <i>khə<sup>44</sup>-phə<sup>44</sup></i>                 | 5 6 | Jino     | <i>kə<sup>33</sup>-e<sup>44</sup></i>  | 3 |
| Lahu     | <i>xo<sup>35</sup>-qha<sup>ʔ54</sup>-pa<sup>11</sup></i> | 6   | Lahu     | <i>sa<sup>11</sup></i>                 | 1 |
| Xide     | <i>za<sup>31</sup>-bu<sup>33</sup>-zɿ<sup>33</sup></i>   | 3   | Xide     | <i>ʃi<sup>33</sup></i>                 | 1 |
| Dafang   | <i>zu<sup>33</sup>-yo<sup>33</sup></i>                   | 4   | Dafang   | <i>fu<sup>33</sup></i>                 | 1 |
| Nanjiang | <i>ʒu<sup>33</sup>-pa<sup>33</sup></i>                   | 4   | Nanjiang | <i>xo<sup>31</sup></i>                 | 1 |
| Lisu     | <i>za<sup>31</sup></i>                                   | 3   | Lisu     | <i>xua<sup>31</sup></i>                | 1 |
| Nusu     | <i>?iu<sup>ʔ53</sup>-a<sup>31</sup></i>                  | 1   | Nusu     | <i>çə<sup>55</sup></i>                 | 1 |
| Achang   | <i>i<sup>31</sup>-tçi<sup>55</sup></i>                   | 1   | Achang   | <i>ʃua<sup>31</sup></i>                | 1 |
| Naxi     | <i>zo<sup>33</sup></i>                                   | 3   | Naxi     | <i>ʃi<sup>33</sup></i>                 | 1 |

## MOON

|          |  |   |
|----------|--|---|
| Burmese  | <i>la</i>                                | 1 |
| Zaiwa    | <i>lo<sup>255</sup>-mo<sup>55</sup></i>  | 1 |
| Akha     | <i>ba<sup>2</sup>-la<sup>2</sup></i>     | 1 |
| Hani     | <i>po<sup>33</sup>-lo<sup>33</sup></i>   | 1 |
| Mpi      | <i>lo<sup>2</sup>-ʔi<sup>4</sup></i>     | 1 |
| Bisu     | <i>ʔu<sup>2</sup>-hla<sup>3</sup></i>    | 1 |
| Jino     | <i>pu<sup>44</sup>-to<sup>33</sup></i>   | 1 |
| Lahu     | <i>xa<sup>33</sup>-pa<sup>33</sup></i>   | 1 |
| Xide     | <i>to<sup>33</sup>-bo<sup>33</sup></i>   | 1 |
| Dafang   | <i>ho<sup>31</sup>-bo<sup>31</sup></i>   | 1 |
| Nanjiang | <i>xo<sup>33</sup>-ba<sup>33</sup></i>   | 1 |
| Lisu     | <i>ha<sup>33</sup>-ba<sup>33</sup></i>   | 1 |
| Nusu     | <i>ʔa<sup>31</sup></i>                   | 1 |
| Achang   | <i>pha<sup>31</sup>-lo<sup>231</sup></i> | 1 |
| Naxi     | <i>xe<sup>33</sup>-me<sup>33</sup></i>   | 1 |

## MOUNTAIN

|          |  |     |
|----------|--|-----|
| Burmese  | <i>tauŋ</i>                              | 1   |
| Zaiwa    | <i>pum<sup>51</sup></i>                  | 2   |
| Akha     | <i>go<sup>3</sup>-djo<sup>3</sup></i>    | 3 4 |
| Biyue    | <i>ju<sup>31</sup>-mo<sup>33</sup></i>   | 4   |
| Mpi      | <i>ʔo<sup>2</sup>-pjo<sup>6</sup></i>    | 2   |
| Bisu     | <i>ta<sup>2</sup>-se<sup>1</sup></i>     | 5   |
| Jino     | <i>ɣi<sup>42</sup>-tha<sup>55</sup></i>  | 5   |
| Lahu     | <i>qh<sup>33</sup></i>                   | 3   |
| Xide     | <i>bo<sup>33</sup></i>                   | 2   |
| Dafang   | <i>bi<sup>31</sup></i>                   | 2   |
| Nanjiang | <i>khu<sup>55</sup>-dži<sup>31</sup></i> | 3 4 |
| Lisu     | <i>ko<sup>44</sup></i>                   | 3   |
| Nusu     | <i>ŋu<sup>35</sup>-a<sup>55</sup></i>    | 7   |
|          | <i>lā<sup>35</sup></i>                   | 8   |
| Achang   | <i>pum<sup>55</sup></i>                  | 2   |
| Naxi     | <i>ko<sup>31</sup></i>                   | 3   |
|          | <i>ndy<sup>31</sup></i>                  | 4   |

## SAND

|          |  |     |
|----------|--|-----|
| Burmese  | <i>saj:</i>  | 1   |
| Zaiwa    | <i>sa<sup>31</sup>-mui<sup>51</sup></i>                | 1 3 |
| Akha     | <i>==</i>  | 0   |
| Biyue    | <i>tsho<sup>31</sup>-se<sup>31</sup></i>               | 1   |
| Mpi      | <i>n<sup>4</sup>-si<sup>5</sup></i>                    | 1   |
| Bisu     | <i>saj<sup>3</sup></i>                                 | -1  |
| Jino     | <i>mə<sup>42</sup>-ʃi<sup>44</sup></i>                 | 1 3 |
| Lahu     | <i>sai<sup>53</sup>-si<sup>11</sup></i>                | 1   |
| Xide     | <i>hm<sup>44</sup>-šɿ<sup>33</sup></i>                 | 1 3 |
| Dafang   | <i>lo<sup>33</sup>-xa<sup>33</sup>-mo<sup>33</sup></i> | 2 3 |
| Nanjiang | <i>xa<sup>31</sup>-ša<sup>33</sup></i>                 | 1   |
| Lisu     | <i>-xi<sup>31</sup></i>                                | 1   |
| Nusu     | <i>mi<sup>35</sup>-a<sup>55</sup></i>                  | 3   |
| Achang   | <i>sa<sup>31</sup>-le<sup>255</sup></i>                | 1   |
| Naxi     | <i>šə<sup>31</sup></i>                                 | 1   |

## MOUTH

|          |  |     |
|----------|--|-----|
| Burmese  | <i>pa:-cap</i>                           | 1   |
| Zaiwa    | <i>nut<sup>55</sup></i>                  | 2   |
| Akha     | <i>xha<sup>3</sup>-me<sup>2</sup></i>    | 3   |
| Biyue    | <i>o<sup>31</sup>-me<sup>31</sup></i>    | 3   |
| Mpi      | <i>ʔo<sup>2</sup>-khwe<sup>2</sup></i>   | 4   |
| Bisu     | <i>man<sup>2</sup>-poŋ<sup>3</sup></i>   | 5   |
| Jino     | <i>hmə<sup>44</sup>-hmə<sup>44</sup></i> | 3   |
| Lahu     | <i>mə<sup>21</sup>-qo<sup>33</sup></i>   | 3 4 |
| Xide     | <i>khə<sup>31</sup>-phi<sup>55</sup></i> | 4   |
| Dafang   | <i>mi<sup>13</sup>-pu<sup>31</sup></i>   | 3   |
| Nanjiang | <i>kha<sup>31</sup>-phy<sup>31</sup></i> | 4   |
| Lisu     | <i>mi<sup>31</sup>-li<sup>35</sup></i>   | 3   |
| Nusu     | <i>hna<sup>55</sup>-kə<sup>35</sup></i>  | 6   |
| Achang   | <i>hɲot<sup>55</sup></i>                 | 2   |
| Naxi     | <i>nv<sup>55</sup>-ta<sup>33</sup></i>   | 2   |



## NAIL

|          |   |   |
|----------|---|---|
| Burmese  | <i>lak-saŋ:</i>   | 1 |
| Zaiwa    | <i>loʔ<sup>31</sup>-siŋ<sup>31</sup></i>                | 1 |
| Akha     | <i>shaŋ<sup>3</sup></i>                                 | 1 |
| Biyue    | <i>laʔ<sup>31</sup>-sɿ<sup>31</sup></i>                 | 1 |
| Mpi      | <i>la<sup>2</sup>-sɿ<sup>2</sup></i>                    | 1 |
| Bisu     | <i>pa<sup>2</sup>-siŋ<sup>3</sup></i>                   | 1 |
| Jino     | <i>la<sup>55</sup>-sə<sup>44</sup></i>                  | 1 |
| Lahu     | <i>laʔ<sup>21</sup>-si<sup>11</sup>-qv<sup>35</sup></i> | 1 |
| Xide     | <i>lo<sup>55</sup>-sɿ<sup>33</sup></i>                  | 1 |
| Dafang   | <i>la<sup>13</sup>-sɿ<sup>33</sup>-kə<sup>33</sup></i>  | 1 |
| Nanjiang | <i>liʔ<sup>31</sup>-ku<sup>31</sup>-se<sup>31</sup></i> | 1 |
| Lisu     | <i>le<sup>31</sup>-se<sup>31</sup></i>                  | 1 |
| Nusu     | <i>la<sup>ʔ53</sup>-shə<sup>55</sup></i>                | 1 |
| Achang   | <i>lo<sup>ʔ55</sup>-šəŋ<sup>31</sup></i>                | 1 |
| Naxi     | <i>la<sup>33</sup>-dzɿ<sup>31</sup>-kv<sup>55</sup></i> | 1 |

## NECK

|          |   |     |
|----------|---|-----|
| Burmese  | <i>laŋ-paŋ:</i>   | 1   |
| Zaiwa    | <i>liŋ<sup>51</sup>-tsiŋ<sup>31</sup></i>               | 1   |
| Akha     | <i>khə<sup>3</sup>-laŋ<sup>1</sup></i>                  | 1   |
| Biyue    | <i>ŋɿ<sup>31</sup>-li<sup>55</sup></i>                  | 1   |
| Mpi      | <i>ʔi<sup>2</sup>li<sup>6</sup></i>                     | 1   |
| Bisu     | <i>ho<sup>2</sup>-ʔaŋ<sup>2</sup>-tu<sup>3</sup></i>    | 2   |
| Jino     | <i>lə<sup>44</sup>-tshə<sup>55</sup></i>                | 1   |
| Lahu     | <i>qə<sup>31</sup>-pe<sup>31</sup></i>                  | 3 4 |
| Xide     | <i>ku<sup>31</sup>-li<sup>33</sup></i>                  | 1 4 |
| Dafang   | <i>lie<sup>31</sup>-bo<sup>31</sup></i>                 | 1   |
| Nanjiang | <i>lu<sup>55</sup>-ka<sup>31</sup>-tsɿ<sup>33</sup></i> | 1 4 |
| Lisu     | <i>li<sup>33</sup>-be<sup>33</sup></i>                  | 1 3 |
| Nusu     | <i>le<sup>31</sup>-də<sup>35</sup></i>                  | 1   |
| Achang   | <i>laŋ<sup>31</sup>-tseŋ<sup>31</sup></i>               | 1   |
| Naxi     | <i>tçɿ<sup>33</sup>-pəŋ<sup>31</sup></i>                | 3   |

## NAME

|          |  |   |
|----------|--|---|
| Burmese  | <i>ʔa.-maŋ</i>                           | 1 |
| Zaiwa    | <i>mjiŋ<sup>51</sup></i>                 | 1 |
| Akha     | <i>tjhə<sup>2</sup>-mjaŋ<sup>1</sup></i> | 1 |
| Biyue    | <i>ə<sup>31</sup>-mi<sup>55</sup></i>    | 1 |
| Mpi      | <i>m<sup>2</sup>-mi<sup>6</sup></i>      | 1 |
| Bisu     | <i>ʔaŋ<sup>2</sup>-hmeŋ<sup>1</sup></i>  | 1 |
| Jino     | <i>a<sup>33</sup>-hme<sup>44</sup></i>   | 1 |
| Lahu     | <i>ə<sup>31</sup>-me<sup>33</sup></i>    | 1 |
| Xide     | <i>hmi<sup>33</sup></i>                  | 1 |
| Dafang   | <i>mie<sup>33</sup></i>                  | 1 |
| Nanjiang | <i>mɿ<sup>31</sup>-tsɿ<sup>55</sup></i>  | 1 |
| Lisu     | <i>e<sup>55</sup>-mi<sup>44</sup></i>    | 1 |
| Nusu     | <i>hmə<sup>35</sup></i>                  | 1 |
| Achang   | <i>a<sup>31</sup>-jiŋ<sup>55</sup></i>   | 1 |
| Naxi     | <i>mi<sup>31</sup></i>                   | 1 |

## NEW

|          |  |   |
|----------|--|---|
| Burmese  | <i>sac</i>                             | 1 |
| Zaiwa    | <i>a<sup>31</sup>-sik<sup>55</sup></i> | 1 |
| Akha     | <i>sɿj<sup>ʔ3</sup></i>                | 1 |
| Biyue    | <i>a<sup>31</sup>-sɿ<sup>ʔ31</sup></i> | 1 |
| Mpi      | <i>sɿ<sup>ʔ1</sup></i>                 | 1 |
| Bisu     | <i>ʔaŋ<sup>2</sup>-fɿ<sup>3</sup></i>  | 1 |
| Jino     | <i>fɿ<sup>55</sup></i>                 | 1 |
| Lahu     | <i>ə<sup>31</sup>-sɿ<sup>35</sup></i>  | 1 |
| Xide     | <i>a<sup>33</sup>-šɿ<sup>ʔ55</sup></i> | 1 |
| Dafang   | <i>xə<sup>13</sup></i>                 | 1 |
| Nanjiang | <i>xɿ<sup>ʔ31</sup></i>                | 1 |
| Lisu     | <i>e<sup>55</sup>-fɿ<sup>42</sup></i>  | 1 |
| Nusu     | <i>dyə<sup>53</sup></i>                | 1 |
| Achang   | <i>šək<sup>55</sup></i>                | 1 |
| Naxi     | <i>šɿ<sup>55</sup></i>                 | 1 |

## NIGHT

|          |  |     |
|----------|--|-----|
| Burmese  | <i>ɲa</i>  | 1   |
| Zaiwa    | <i>mjin<sup>55</sup>-le<sup>31</sup></i>                 | 3 4 |
| Akha     | <i>u<sup>ʔ3</sup>-tji<sup>ʔ3</sup></i>                   | 2   |
| Biyue    | <i>me<sup>31</sup>-khe<sup>ʔ33</sup></i>                 | 2 3 |
| Mpi      | <i>ʔuŋ<sup>2</sup>-khwi<sup>ʔ2</sup></i>                 | 2   |
| Bisu     | <i>muŋ<sup>3</sup>-khi<sup>3</sup></i>                   | 2   |
| Jino     | <i>hme<sup>42</sup>-kha<sup>42</sup></i>                 | 2 3 |
| Lahu     | <i>ta<sup>53</sup>-khi<sup>53</sup></i>                  | 2   |
| Xide     | <i>khɿ<sup>55</sup>-thi<sup>33</sup>-mo<sup>31</sup></i> | 2   |
| Dafang   | <i>sɿ<sup>31</sup>-pi<sup>33</sup>-ha<sup>33</sup></i>   | 5   |
| Nanjiang | <i>mi<sup>55</sup>-khi<sup>31</sup>-çi<sup>55</sup></i>  | 2 3 |
| Lisu     | <i>sa<sup>44</sup>-khua<sup>33</sup></i>                 | 2 5 |
| Nusu     | <i>sua<sup>35</sup>-na<sup>35</sup></i>                  | 5   |
| Achang   | <i>ni<sup>31</sup>-tçhot<sup>35</sup></i>                | 1 2 |
| Naxi     | <i>mv<sup>33</sup>-khv<sup>55</sup></i>                  | 2 3 |

## NO

|          |                        |   |
|----------|------------------------|---|
| Burmese  | <i>ma</i>              | 1 |
| Zaiwa    | <i>a<sup>31</sup></i>  | 2 |
| Akha     | <i>ma<sup>3</sup></i>  | 1 |
| Biyue    | <i>ma<sup>31</sup></i> | 1 |
| Mpi      | <i>ma<sup>2</sup></i>  | 1 |
| Bisu     | <i>ma<sup>3</sup></i>  | 1 |
| Jino     | <i>ma<sup>44</sup></i> | 1 |
| Lahu     | <i>ma<sup>3</sup></i>  | 1 |
| Xide     | <i>a<sup>31</sup></i>  | 2 |
| Dafang   | <i>ma<sup>31</sup></i> | 1 |
| Nanjiang | <i>ma<sup>31</sup></i> | 1 |
| Lisu     | <i>ma<sup>31</sup></i> | 1 |
| Nusu     | <i>ma<sup>55</sup></i> | 1 |
| Achang   | <i>ma<sup>31</sup></i> | 1 |
| Naxi     | <i>mə<sup>33</sup></i> | 1 |

## NOSE

|          |  |     |
|----------|--|-----|
| Burmese  | <i>hna-khaug:</i>                        | 1 3 |
| Zaiwa    | <i>no<sup>ʔ51</sup></i>                  | 1   |
| Akha     | <i>na<sup>2</sup>-me<sup>l</sup></i>     | 1   |
| Biyue    | <i>na<sup>55</sup>-me<sup>55</sup></i>   | 1   |
| Mpi      | <i>ɲ<sup>4</sup>-khorɲ<sup>6</sup></i>   | 3   |
| Bisu     | <i>na<sup>l</sup>-khaŋ<sup>l</sup></i>   | 1   |
| Jino     | <i>hnɔ<sup>42</sup>-to<sup>44</sup></i>  | 1   |
| Lahu     | <i>na<sup>31</sup>-qho<sup>53</sup></i>  | 1 3 |
| Xide     | <i>hna<sup>31</sup>-bi<sup>55</sup></i>  | 1   |
| Dafang   | <i>no<sup>33</sup>-mo<sup>55</sup></i>   | 1   |
| Nanjiang | <i>no<sup>55</sup>-khu<sup>33</sup></i>  | 1 3 |
| Lisu     | <i>na<sup>44</sup>-khu<sup>44</sup></i>  | 1 3 |
| Nusu     | <i>hna<sup>55</sup>-kə<sup>35</sup></i>  | 1 3 |
| Achang   | <i>ni<sup>31</sup>-xorɲ<sup>55</sup></i> | 1 3 |
| Naxi     | <i>ɲi<sup>55</sup>-mɿr<sup>31</sup></i>  | 1   |

## ONE

|          |  |    |
|----------|--|----|
| Burmese  | <i>tac</i>                             | 1  |
| Zaiwa    | <i>za<sup>31</sup></i>                 | -1 |
| Akha     | <i>ti<sup>ʔ3</sup> thi<sup>3</sup></i> | 1  |
| Biyue    | <i>thi<sup>31</sup></i>                | 1  |
| Mpi      | <i>thi<sup>ʔ2</sup></i>                | 1  |
| Bisu     | <i>tɿ<sup>3</sup></i>                  | 1  |
| Jino     | <i>thi<sup>44</sup></i>                | 1  |
| Lahu     | <i>te<sup>53</sup></i>                 | 1  |
| Xide     | <i>tshi<sup>31</sup></i>               | 1  |
| Dafang   | <i>tha<sup>31</sup></i>                | 1  |
| Nanjiang | <i>tšhi<sup>31</sup></i>               | 1  |
| Lisu     | <i>thi<sup>31</sup></i>                | 1  |
| Nusu     | <i>thi<sup>53</sup></i>                | 1  |
| Achang   | <i>ta<sup>31</sup></i>                 | 1  |
| Naxi     | <i>dɿ<sup>31</sup></i>                 | 1  |

| PERSON   |  |     | RED      |  |     |
|----------|--|-----|----------|--|-----|
| Burmese  | <i>lu</i>  | 1   | Burmese  | <i>ni</i>                                  | 1   |
| Zaiwa    | <i>pju<sup>51</sup></i>                                | 3   | Zaiwa    | <i>ne<sup>51</sup></i>                     | 1   |
| Akha     | <i>tsho<sup>1</sup>-ha<sup>3</sup></i>                 | 2   | Akha     | <i>ne<sup>1</sup></i>                      | 1   |
| Biyue    | <i>tshu<sup>55</sup></i>                               | 2   | Biyue    | <i>ni<sup>55</sup></i>                     | 1   |
| Mpi      | <i>tʃoŋ<sup>6</sup></i>                                | 2   | Mpi      | <i>nə<sup>5</sup></i>                      | 1   |
| Bisu     | <i>tshaŋ<sup>1</sup></i>                               | 2   | Bisu     | <i>ʔaŋ<sup>2</sup>-hne<sup>1</sup></i>     | 1   |
| Jino     | <i>tshə<sup>42</sup>-zə<sup>44</sup></i>               | 2   | Jino     | <i>ahnə<sup>44</sup></i>                   | 1   |
| Lahu     | <i>tsho<sup>33</sup></i>                               | 2   | Lahu     | <i>ni<sup>33</sup></i>                     | 1   |
| Xide     | <i>tsho<sup>33</sup></i>                               | 2   | Xide     | <i>a<sup>33</sup>-hni<sup>33</sup></i>     | 1   |
| Dafang   | <i>tsho<sup>31</sup></i>                               | 2   | Dafang   | <i>ni<sup>31</sup></i>                     | 1   |
| Nanjiang | <i>tshu<sup>55</sup></i>                               | 2   | Nanjiang | <i>n<sup>55</sup></i>                      | 1   |
| Lisu     | <i>tsho<sup>44</sup>-za<sup>31</sup></i>               | 2   | Lisu     | <i>si<sup>31</sup></i>                     | 2   |
| Nusu     | <i>su<sup>35</sup></i>                                 | 6   | Nusu     | <i>xri<sup>35</sup>-a<sup>55</sup></i>     | 3   |
| Achang   | <i>tʃo<sup>55</sup></i>                                | 3   | Achang   | <i>na<sup>55</sup></i>                     | 1   |
| Naxi     | <i>çi<sup>33</sup></i>                                 | 5   | Naxi     | <i>xy<sup>31</sup></i>                     | 3   |
| RAIN     |  |     | ROAD     |  |     |
| Burmese  | <i>mui:</i>  | 1   | Burmese  | <i>lam:</i>                                | 1   |
| Zaiwa    | <i>mau<sup>31</sup></i>                                | 1   | Zaiwa    | <i>khjo<sup>51</sup></i>                   | 3   |
| Akha     | <i>u<sup>ʔ3</sup>-je<sup>1</sup></i>                   | 2   | Akha     | <i>ga<sup>1</sup>-ma<sup>2</sup></i>       | 2   |
| Biyue    | <i>o<sup>31</sup>-xu<sup>55</sup></i>                  | 2   | Biyue    | <i>ja<sup>55</sup>-mo<sup>33</sup></i>     | 2   |
| Mpi      | <i>ʔo<sup>2</sup>-ho<sup>6</sup></i>                   | 2   | Mpi      | <i>ko<sup>4</sup>-khuŋ<sup>6</sup></i>     | 3 7 |
| Bisu     | <i>muŋ<sup>3</sup>-ho<sup>3</sup></i>                  | 2   | Bisu     | <i>ki<sup>1</sup>-ba<sup>2</sup></i>       | 4   |
| Jino     | <i>m<sup>42</sup>-tha<sup>55</sup></i>                 | 1   | Jino     | <i>jo<sup>44</sup>-kho<sup>44</sup></i>    | 3   |
| Lahu     | <i>mv<sup>53</sup>-ze<sup>31</sup></i>                 | 1 2 | Lahu     | <i>za<sup>ʔ54</sup>-qo<sup>33</sup></i>    | 2   |
| Xide     | <i>m<sup>33</sup>-ha<sup>33</sup></i>                  | 1 2 | Xide     | <i>ga<sup>31</sup>-mo<sup>31</sup></i>     | 2   |
| Dafang   | <i>m<sup>33</sup>-ho<sup>33</sup></i>                  | 1 2 | Dafang   | <i>dyo<sup>31</sup></i>                    | 6   |
| Nanjiang | <i>ho<sup>55</sup></i>                                 | 2   | Nanjiang | <i>go<sup>55</sup>-ma<sup>33</sup></i>     | 2   |
| Lisu     | <i>mi<sup>31</sup>-ha<sup>33</sup></i>                 | 1 2 | Lisu     | <i>dʒa<sup>44</sup>-gu<sup>44</sup></i>    | 6   |
| Nusu     | <i>mi<sup>55</sup>-a<sup>31</sup>-rua<sup>55</sup></i> | 1 2 | Nusu     | <i>khra<sup>35</sup>-phrə<sup>35</sup></i> | 3   |
| Achang   | <i>mau<sup>31</sup>-ʒo<sup>55</sup></i>                | 1 2 | Achang   | <i>xa<sup>55</sup>-mʒua<sup>51</sup></i>   | 7   |
| Naxi     | <i>xi<sup>31</sup></i>                                 | 2   | Naxi     | <i>zi<sup>33</sup>-gv<sup>33</sup></i>     | 6   |

|          | ROOT                                     |   |
|----------|--|---|
| Burmese  | <i>ʔa.mrac</i>                           | 1 |
| Zaiwa    | <i>a<sup>31</sup>-pun<sup>51</sup></i>   | 2 |
| Akha     | <i>du<sup>3</sup>-tjhi<sup>1</sup></i>   | 3 |
| Biyue    | <i>o<sup>31</sup>-tshi<sup>55</sup></i>  | 3 |
| Mpi      | <i>ʔo<sup>2</sup>-tche<sup>6</sup></i>   | 3 |
| Bisu     | <i>tsiŋ<sup>2</sup>-che<sup>1</sup></i>  | 3 |
| Jino     | <i>a<sup>33</sup>-tche<sup>44</sup></i>  | 3 |
| Lahu     | <i>o<sup>31</sup>-gi<sup>33</sup></i>    | 3 |
| Xide     | <i>ndyi<sup>31</sup>-pa<sup>33</sup></i> | 3 |
| Dafang   | <i>tshi<sup>31</sup></i>                 | 3 |
| Nanjiang | <i>tçi<sup>33</sup></i>                  | 3 |
| Lisu     | <i>e<sup>55</sup>-tfe<sup>44</sup></i>   | 3 |
| Nusu     | <i>grɿ<sup>55</sup></i>                  | 3 |
| Achang   | <i>a<sup>31</sup>-mžat<sup>55</sup></i>  | 1 |
| Naxi     | <i>khɿ<sup>33</sup>-tv<sup>31</sup></i>  | 3 |

|          | SEE                      |   |
|----------|--------------------------|---|
| Burmese  | <i>mraŋ</i>              | 1 |
| Zaiwa    | <i>vu<sup>55</sup></i>   | 3 |
| Akha     | <i>mɔ<sup>1</sup></i>    | 1 |
| Biyue    | <i>te<sup>31</sup></i>   | 4 |
| Mpi      | <i>mjoŋ<sup>5</sup></i>  | 1 |
| Bisu     | <i>hmjaŋ<sup>1</sup></i> | 1 |
| Jino     | <i>tɛ<sup>44</sup></i>   | 4 |
| Lahu     | <i>ni<sup>33</sup></i>   | 5 |
| Xide     | <i>hi<sup>31</sup></i>   | 3 |
| Dafang   | <i>na<sup>33</sup></i>   | 8 |
| Nanjiang | <i>i<sup>55</sup></i>    | 6 |
| Lisu     | <i>ŋi<sup>44</sup></i>   | 5 |
| Nusu     | <i>ru<sup>55</sup></i>   | 3 |
| Achang   | <i>en<sup>31</sup></i>   | 2 |
| Naxi     | <i>ly<sup>31</sup></i>   | 7 |

|          | ROUND   |     |
|----------|---|-----|
| Burmese  | <i>wuiŋ:</i>  | 1   |
| Zaiwa    | <i>liŋ<sup>55</sup></i>                                 | 2   |
| Akha     | <i>laŋ<sup>2</sup></i>                                  | 2   |
| Biyue    | <i>lu<sup>55</sup></i>                                  | 2   |
| Mpi      | <i>ko<sup>5</sup></i>                                   | 3   |
| Bisu     | <i>ʔaŋ<sup>2</sup>-bon<sup>1</sup></i>                  | -1  |
| Jino     | <i>lə<sup>33</sup></i>                                  | 2   |
| Lahu     | <i>vɔ<sup>45</sup></i>                                  | 1   |
| Xide     | <i>vu<sup>33</sup>-lə<sup>33</sup>-chi<sup>31</sup></i> | 1 2 |
| Dafang   | <i>vie<sup>31</sup></i>                                 | 1   |
| Nanjiang | <i>u<sup>31</sup>-ly<sup>31</sup></i>                   | 1 2 |
| Lisu     | <i>lu<sup>55</sup>-lu<sup>55</sup>-za<sup>42</sup></i>  | 2   |
| Nusu     | <i>lɔ<sup>35</sup></i>                                  | 2   |
| Achang   | <i>lum<sup>31</sup></i>                                 | 2   |
| Naxi     | <i>uə<sup>55</sup>-uə<sup>33</sup></i>                  | 1   |

|          | SEED                                    |     |
|----------|---|-----|
| Burmese  | <i>mjui:-cij:</i>                       | 1 3 |
| Zaiwa    | <i>a<sup>31</sup>-mji<sup>31</sup></i>  | 1   |
| Akha     | <i>a<sup>1</sup>-yö<sup>3</sup></i>     | 2   |
| Biyue    | <i>a<sup>31</sup>-tsi<sup>ʔ33</sup></i> | 5   |
| Mpi      | <i>ʔo<sup>2</sup>-si<sup>2</sup></i>    | 3   |
| Bisu     | <i>ʔaŋ<sup>2</sup>-hnɿ<sup>2</sup></i>  | 4   |
| Jino     | <i>tʃə<sup>55</sup></i>                 | 3   |
| Lahu     | <i>o<sup>31</sup>-zo<sup>53</sup></i>   | 2   |
| Xide     | <i>tsi<sup>33</sup></i>                 | 3   |
| Dafang   | <i>si<sup>55</sup>-mo<sup>31</sup></i>  | 3   |
| Nanjiang | <i>ha<sup>55</sup>-šɿ<sup>31</sup></i>  | 3   |
| Lisu     | <i>e<sup>55</sup>-fɿ<sup>55</sup></i>   | 3   |
| Nusu     | <i>vi<sup>55</sup></i>                  | 4   |
|          | <i>çi<sup>55</sup></i>                  | 3   |
| Achang   | <i>a<sup>31</sup>-ŋau<sup>31</sup></i>  | 1   |
| Naxi     | <i>ləɾ<sup>55</sup></i>                 | 5   |

## SIT

|          |  |   |
|----------|--|---|
| Burmese  | <i>thuiŋ</i>                             | 1 |
| Zaiwa    | <i>tsuŋ<sup>51</sup></i>                 | 3 |
| Akha     | <i>ny<sup>l</sup></i>                    | 2 |
| Biyue    | <i>ni<sup>55</sup>-tsa<sup>ʔ33</sup></i> | 2 |
| Mpi      | <i>ni<sup>4</sup>-ti<sup>4</sup></i>     | 1 |
| Bisu     | <i>diŋ<sup>l</sup></i>                   | 2 |
| Jino     | <i>tə<sup>44</sup>-n<sup>44</sup></i>    | 1 |
| Lahu     | <i>mi<sup>33</sup></i>                   | 4 |
| Xide     | <i>ni<sup>33</sup></i>                   | 2 |
| Dafang   | <i>ni<sup>31</sup></i>                   | 2 |
| Nanjiang | <i>di<sup>55</sup></i>                   | 5 |
| Lisu     | <i>ni<sup>44</sup>-ta<sup>55</sup></i>   | 2 |
| Nusu     | <i>ni<sup>35</sup></i>                   | 2 |
| Achang   | <i>ni<sup>55</sup></i>                   | 2 |
| Naxi     | <i>ndzi<sup>31</sup></i>                 | 3 |

## SKIN

|          |   |     |
|----------|---|-----|
| Burmese  | <i>ʔa.re</i>                              | 1   |
| Zaiwa    | <i>ʃo<sup>31</sup>-ku<sup>ʔ55</sup></i>   | 2   |
| Akha     | <i>ba<sup>ʔ2</sup>-xo<sup>ʔ2</sup></i>    | 2   |
| Biyue    | <i>o<sup>31</sup>-tçi<sup>55</sup></i>    | 3   |
| Mpi      | <i>ʔo<sup>2</sup>-kho<sup>ʔ4</sup></i>    | 2   |
| Bisu     | <i>ʔaŋ<sup>2</sup>-kho<sup>2</sup></i>    | 2   |
| Jino     | <i>a<sup>44</sup>-kho<sup>42</sup></i>    | 2   |
| Lahu     | <i>o<sup>31</sup>-gi<sup>31</sup></i>     | 3   |
| Xide     | <i>ndyi<sup>44</sup>-šçi<sup>33</sup></i> | 3   |
| Dafang   | <i>ndyi<sup>31</sup></i>                  | 3   |
| Nanjiang | <i>gi<sup>55</sup>-tšu<sup>31</sup></i>   | 3   |
| Lisu     | <i>ko<sup>35</sup>-dçi<sup>33</sup></i>   | 3   |
| Nusu     | <i>khu<sup>31</sup>-ri<sup>35</sup></i>   | 1 2 |
| Achang   | <i>a<sup>31</sup>-žçi<sup>55</sup></i>    | 1   |
| Naxi     | <i>yi<sup>33</sup></i>                    | 1   |

## SLEEP

|          |  |   |
|----------|--|---|
| Burmese  | <i>ʔip</i>                                       | 1 |
| Zaiwa    | <i>ju<sup>p</sup><sup>55</sup></i>               | 1 |
| Akha     | <i>ju<sup>ʔ3</sup></i>                           | 1 |
| Biyue    | <i>ji<sup>ʔ33</sup>-tsa<sup>ʔ33</sup></i>        | 1 |
| Mpi      | <i>ʔi<sup>ʔl</sup></i>                           | 1 |
| Bisu     | <i>ju<sup>3</sup></i>                            | 1 |
| Jino     | <i>e<sup>55</sup></i>                            | 1 |
| Lahu     | <i>zi<sup>ʔ21</sup></i>                          | 1 |
| Xide     | <i>i<sup>55</sup></i>                            | 1 |
| Dafang   | <i>yi<sup>l3</sup></i>                           | 1 |
| Nanjiang | <i>yi<sup>31</sup>-da<sup>31</sup></i>           | 1 |
| Lisu     | <i>e<sup>31</sup>-ta<sup>55</sup></i>            | 1 |
| Nusu     | <i>i<sup>o</sup><sup>53</sup>-o<sup>31</sup></i> | 1 |
| Achang   | <i>e<sup>31</sup></i>                            | 1 |
| Naxi     | <i>yi<sup>55</sup></i>                           | 1 |

## SMALL

|          |   |    |
|----------|---|----|
| Burmese  | <i>sij:</i>                             | 1  |
| Zaiwa    | <i>tj<sup>55</sup></i>                  | -1 |
| Akha     | <i>nji<sup>l</sup></i>                  | 2  |
| Biyue    | <i>ni<sup>55</sup></i>                  | 2  |
| Mpi      | <i>ni<sup>5</sup></i>                   | 2  |
| Bisu     | <i>ʔaŋ<sup>2</sup>-ʔi<sup>l</sup></i>   | 3  |
| Jino     | <i>a<sup>33</sup>-ni<sup>55</sup></i>   | 2  |
| Lahu     | <i>i<sup>33</sup></i>                   | 3  |
| Xide     | <i>e<sup>55</sup>-tsi<sup>ʔ33</sup></i> | 7  |
| Dafang   | <i>ba<sup>31</sup></i>                  | 4  |
| Nanjiang | <i>u<sup>55</sup></i>                   | 5  |
| Lisu     | <i>ʒo<sup>44</sup></i>                  | 6  |
| Nusu     | <i>a<sup>31</sup>-ʔme<sup>ʔ53</sup></i> | 8  |
| Achang   | <i>ni<sup>55</sup></i>                  | 2  |
| Naxi     | <i>tçi<sup>55</sup></i>                 | 7  |

## SMOKE

|          |   |   |
|----------|---|---|
| Burmese  | <i>mi:-khui:</i>                          | 1 |
| Zaiwa    | <i>mji<sup>31</sup>-khau<sup>31</sup></i> | 1 |
| Akha     | <i>u<sup>ʔ</sup>-xhō<sup>3</sup></i>      | 1 |
| Biyue    | <i>mi<sup>31</sup>-tçhi<sup>31</sup></i>  | 1 |
| Mpi      | <i>ŋ<sup>2</sup>-khwi<sup>2</sup></i>     | 1 |
| Bisu     | <i>bi<sup>3</sup>-khaw<sup>3</sup></i>    | 1 |
| Jino     | <i>mi<sup>44</sup>-tçhu<sup>44</sup></i>  | 1 |
| Lahu     | <i>mv<sup>53</sup>-qhō<sup>53</sup></i>   | 1 |
| Xide     | <i>m<sup>33</sup>-ku<sup>33</sup></i>     | 1 |
| Dafang   | <i>m<sup>33</sup>-kɿ<sup>33</sup></i>     | 1 |
| Nanjiang | ==  | 0 |
| Lisu     | <i>mu<sup>31</sup>-khu<sup>31</sup></i>   | 1 |
| Nusu     | <i>khɿ<sup>55</sup></i>                   | 1 |
| Achang   | <i>ni<sup>31</sup>-xau<sup>31</sup></i>   | 1 |
| Naxi     | <i>mɿ<sup>55</sup>-khɿ<sup>31</sup></i>   | 1 |

## SPEAK

|          |                          |    |
|----------|--------------------------|----|
| Burmese  | <i>prau</i>              | 1  |
| Zaiwa    | <i>tai<sup>31</sup></i>  | 3  |
| Akha     | <i>e<sup>1</sup></i>     | 4  |
| Biyue    | <i>pe<sup>ʔ33</sup></i>  | 5  |
|          | <i>mi<sup>31</sup></i>   |    |
| Mpi      | <i>tçe<sup>1</sup></i>   | 6  |
| Bisu     | <i>ci<sup>3</sup></i>    | 6  |
| Jino     | <i>pja<sup>42</sup></i>  | 1  |
| Lahu     | <i>zō<sup>33</sup></i>   | 7  |
|          | <i>qu<sup>ʔ54</sup></i>  |    |
| Xide     | <i>hi<sup>55</sup></i>   | 8  |
| Dafang   | <i>hɿ<sup>55</sup></i>   | 8  |
| Nanjiang | <i>bi<sup>ʔ33</sup></i>  |    |
|          | <i>thy<sup>55</sup></i>  | 9  |
| Lisu     | <i>the<sup>44</sup></i>  | 9  |
| Nusu     | <i>khuo<sup>55</sup></i> | 10 |
| Achang   | <i>kžai<sup>55</sup></i> | 2  |
| Naxi     | <i>šə<sup>55</sup></i>   | 11 |

## STAND

|          |                                       |   |
|----------|---------------------------------------|---|
| Burmese  | <i>mat-tap-rap-nij</i>                | 1 |
| Zaiwa    | <i>jap<sup>31</sup></i>               | 1 |
| Akha     | <i>jō<sup>ʔ3</sup></i>                | 1 |
| Biyue    | <i>thv<sup>55</sup></i>               | 2 |
|          | <i>tsv<sup>55</sup></i>               | 3 |
| Mpi      | <i>hə<sup>ʔ2</sup>-ɲi<sup>5</sup></i> | 1 |
| Bisu     | <i>cuŋ<sup>2</sup></i>                | 3 |
| Jino     | <i>xe<sup>55</sup></i>                | 1 |
| Lahu     | <i>xv<sup>35</sup></i>                | 1 |
| Xide     | <i>hi<sup>55</sup></i>                | 1 |
| Dafang   | <i>hi<sup>13</sup></i>                | 1 |
| Nanjiang | <i>hy<sup>ʔ31</sup></i>               | 1 |
| Lisu     | <i>he<sup>42</sup></i>                | 1 |
| Nusu     | <i>dzə<sup>35</sup></i>               | 4 |
| Achang   | <i>jap<sup>55</sup></i>               | 1 |
| Naxi     | <i>xy<sup>55</sup></i>                | 1 |

## STAR

|          |  |   |
|----------|--|---|
| Burmese  | <i>kraj</i>  | 1 |
| Zaiwa    | <i>kji<sup>ʔ51</sup></i>                               | 1 |
| Akha     | <i>a<sup>3</sup>-gy<sup>1</sup></i>                    | 1 |
| Biyue    | <i>mi<sup>31</sup>-tçi<sup>55</sup></i>                | 1 |
| Mpi      | <i>pi<sup>2</sup>-kɿ<sup>6</sup></i>                   | 1 |
| Bisu     | <i>ʔi<sup>3</sup>-kɿ<sup>3</sup></i>                   | 1 |
| Jino     | <i>pu<sup>33</sup>-ki<sup>44</sup></i>                 | 1 |
| Lahu     | <i>mə<sup>ʔ21</sup>-kə<sup>33</sup></i>                | 1 |
| Xide     | <i>m<sup>33</sup>-tçi<sup>33</sup></i>                 | 1 |
| Dafang   | <i>tçə<sup>33</sup>-mo<sup>33</sup></i>                | 1 |
| Nanjiang | <i>tçe<sup>55</sup></i>                                | 1 |
| Lisu     | <i>ko<sup>44</sup>-ma<sup>44</sup>-ze<sup>31</sup></i> | 1 |
| Nusu     | <i>kre<sup>31</sup>-lō<sup>35</sup></i>                | 1 |
| Achang   | <i>khže<sup>55</sup></i>                               | 1 |
| Naxi     | <i>kɿ<sup>31</sup></i>                                 | 1 |

## STONE

|          |  |   |
|----------|--|---|
| Burmese  | <i>kjauk</i>                             | 1 |
| Zaiwa    | <i>lu<sup>31</sup>-ko<sup>55</sup></i>   | 1 |
| Akha     | <i>xha<sup>3</sup>-lo<sup>2</sup></i>    | 1 |
| Biyue    | <i>lv<sup>33</sup>-mo<sup>33</sup></i>   | 1 |
| Mpi      | <i>so<sup>2</sup>-lo<sup>4</sup></i>     | 1 |
| Bisu     | <i>lo<sup>3</sup>-ba<sup>2</sup></i>     | 1 |
| Jino     | <i>lo<sup>42</sup>-mo<sup>33</sup></i>   | 1 |
| Lahu     | <i>xa<sup>35</sup>-pi<sup>33</sup></i>   | 1 |
| Xide     | <i>lu<sup>33</sup>-ma<sup>55</sup></i>   | 1 |
| Dafang   | <i>lo<sup>33</sup>-mo<sup>31</sup></i>   | 1 |
| Nanjiang | <i>ka<sup>55</sup>-lo<sup>33</sup></i>   | 1 |
| Lisu     | <i>lo<sup>44</sup>-tshi<sup>35</sup></i> | 1 |
| Nusu     | <i>lu<sup>753</sup></i>                  | 1 |
| Achang   | <i>liŋ<sup>31</sup>-ko<sup>755</sup></i> | 1 |
| Naxi     | <i>lv<sup>33</sup>-pa<sup>33</sup></i>   | 1 |

## SUN

|          |   |   |
|----------|---|---|
| Burmese  | <i>nij</i>  | 1 |
| Zaiwa    | <i>pui<sup>51</sup></i>                               | 2 |
| Akha     | <i>naŋ<sup>1</sup>-ma<sup>2</sup></i>                 | 1 |
| Hani     | <i>ŋi<sup>55</sup>-mo<sup>33</sup></i>                | 1 |
| Mpi      | <i>ŋi<sup>6</sup>-wo<sup>4</sup></i>                  | 1 |
| Bisu     | <i>muŋ<sup>3</sup>-hniŋ<sup>3</sup></i>               | 1 |
| Jino     | <i>ŋə<sup>42</sup>-o<sup>33</sup></i>                 | 1 |
| Lahu     | <i>mv<sup>53</sup>-ni<sup>33</sup></i>                | 1 |
| Xide     | <i>ho<sup>33</sup>-bu<sup>33</sup></i>                | 3 |
| Dafang   | <i>n<sup>31</sup>-dyy<sup>33</sup></i>                | 1 |
| Nanjiang | <i>a<sup>44</sup>.mu<sup>31</sup>.ŋi<sup>55</sup></i> | 4 |
| Lisu     | <i>mə<sup>31</sup>-mi<sup>33</sup></i>                | 1 |
| Nusu     | <i>ŋi<sup>35</sup>-a<sup>55</sup></i>                 | 1 |
| Achang   | <i>ni<sup>31</sup>-mo<sup>31</sup></i>                | 1 |
|          | <i>pui<sup>51</sup></i>                               | 2 |
| Naxi     | <i>ŋi<sup>33</sup>-me<sup>33</sup></i>                | 1 |

## SWIM

|          |                           |   |
|----------|---------------------------|---|
| Burmese  | <i>rij-ku:</i>            | 1 |
| Zaiwa    | <i>==</i>                 | 0 |
| Akha     | <i>==</i>                 | 0 |
| Biyue    | <i>==</i>                 | 0 |
| Mpi      | <i>fai<sup>1</sup></i>    | 2 |
| Bisu     | <i>bo<sup>3</sup></i>     | 3 |
| Jino     | <i>==</i>                 | 0 |
| Lahu     | <i>==</i>                 | 0 |
| Xide     | <i>çi<sup>33</sup></i>    | 4 |
| Dafang   | <i>==</i>                 | 0 |
| Nanjiang | <i>==</i>                 | 0 |
| Lisu     | <i>==</i>                 | 0 |
| Nusu     | <i>==</i>                 | 0 |
| Achang   | <i>==</i>                 | 0 |
| Naxi     | <i>ndjər<sup>33</sup></i> | 5 |

## TAIL

|          |  |     |
|----------|--|-----|
| Burmese  | <i>mri:</i>                              | 1   |
| Zaiwa    | <i>fo<sup>31</sup>mji<sup>31</sup></i>   | 1   |
| Akha     | <i>do<sup>3</sup>-mi<sup>3</sup></i>     | 1   |
| Biyue    | <i>to<sup>31</sup>-mi<sup>31</sup></i>   | 1   |
| Mpi      | <i>m<sup>2</sup>-pa<sup>4</sup></i>      | 1   |
| Bisu     | <i>toŋ<sup>2</sup>-hni<sup>3</sup></i>   | 1   |
| Jino     | <i>to<sup>44</sup>-hmi<sup>44</sup></i>  | 1   |
| Lahu     | <i>me<sup>31</sup>-tv<sup>33</sup></i>   | 1   |
| Xide     | <i>phu<sup>31</sup>-šu<sup>33</sup></i>  | 4   |
| Dafang   | <i>mo<sup>31</sup>-so<sup>33</sup></i>   | 1 4 |
| Nanjiang | <i>me<sup>31</sup>-phe<sup>31</sup></i>  | 1   |
| Lisu     | <i>e<sup>55</sup>-mi<sup>55</sup></i>    | 1   |
| Nusu     | <i>hmi<sup>31</sup>-po<sup>755</sup></i> | 1   |
| Achang   | <i>tçi<sup>31</sup>-ŋaŋ<sup>35</sup></i> | 2   |
| Naxi     | <i>ma<sup>33</sup>-to<sup>55</sup></i>   | 1   |

## THAT

|          |                                       |     |
|----------|---------------------------------------|-----|
| Burmese  | <i>thui</i>                           | 1   |
| Zaiwa    | <i>xje<sup>51</sup></i>               | 2   |
| Akha     | <i>thə<sup>2</sup></i>                | 1   |
| Biyue    | <i>ai<sup>55</sup></i>                | 3   |
| Mpi      | <i>nɔ<sup>6</sup></i>                 | 4   |
| Bisu     | <i>thɨ<sup>2</sup></i>                | 1   |
| Jino     | <i>kha<sup>55</sup></i>               | 5   |
| Lahu     | <i>u<sup>53</sup></i>                 | 8   |
| Xide     | <i>a<sup>33</sup>-di<sup>55</sup></i> | 1 8 |
| Dafang   | <i>ɨ<sup>55</sup></i>                 | 3   |
| Nanjiang | <i>nə<sup>55</sup></i>                | 4   |
| Lisu     | <i>gɨ<sup>33</sup></i>                | 7   |
| Nusu     | <i>tʃhu<sup>55</sup></i>              | 8   |
| Achang   | <i>the<sup>55</sup></i>               | 1   |
| Naxi     | <i>thɨ<sup>33</sup></i>               | 1   |

## THIS

|          |                          |   |
|----------|--------------------------|---|
| Burmese  | <i>ʔi</i>                | 1 |
| Zaiwa    | <i>xji<sup>51</sup></i>  | 2 |
| Akha     | <i>hə<sup>2</sup></i>    | 2 |
| Biyue    | <i>xe<sup>35</sup></i>   | 2 |
| Mpi      | <i>he<sup>6</sup></i>    | 2 |
| Bisu     | <i>hni<sup>2</sup></i>   | 3 |
| Jino     | <i>çe<sup>33</sup></i>   | 5 |
| Lahu     | <i>tshi<sup>33</sup></i> | 4 |
| Xide     | <i>tshɨ<sup>44</sup></i> | 4 |
| Dafang   | <i>tsho<sup>13</sup></i> | 4 |
| Nanjiang | <i>tʂa<sup>55</sup></i>  | 5 |
| Lisu     | <i>the<sup>33</sup></i>  | 6 |
| Nusu     | <i>çɨ<sup>31</sup></i>   | 5 |
| Achang   | <i>xai<sup>55</sup></i>  | 2 |
| Naxi     | <i>tʂhɨ<sup>33</sup></i> | 4 |

## TONGUE

|          |  |    |
|----------|--|----|
| Burmese  | <i>hlja</i>                              | 1  |
| Zaiwa    | <i>ʃo<sup>51</sup></i>                   | 1  |
| Akha     | <i>me<sup>3</sup>-la<sup>1</sup></i>     | 1  |
| Biyue    | <i>a<sup>31</sup>-la<sup>55</sup></i>    | 1  |
| Mpi      | <i>ʔo<sup>2</sup>-lo<sup>6</sup></i>     | 1  |
| Bisu     | <i>man<sup>2</sup>-hla<sup>3</sup></i>   | 1  |
| Jino     | <i>a<sup>33</sup>-tɔ<sup>44</sup></i>    | 1  |
| Lahu     | <i>xa<sup>33</sup>-te<sup>31</sup></i>   | 1  |
| Xide     | <i>ha<sup>33</sup>-ne<sup>33</sup></i>   | 1  |
| Dafang   | <i>tɔ<sup>33</sup></i>                   | 1  |
| Nanjiang | <i>la<sup>55</sup></i>                   | 1  |
| Lisu     | <i>la<sup>44</sup>-tʃhi<sup>44</sup></i> | 1  |
| Nusu     | <i>fra<sup>35</sup></i>                  | 1  |
| Achang   | <i>ço<sup>55</sup></i>                   | 1  |
| Naxi     | <i>çɨ<sup>55</sup></i>                   | -2 |

## TOOTH

|          |  |   |
|----------|--|---|
| Burmese  | <i>swa:</i>                              | 1 |
| Zaiwa    | <i>tsui<sup>51</sup></i>                 | 2 |
| Akha     | <i>shə<sup>3</sup></i>                   | 1 |
| Biyue    | <i>ɔ<sup>31</sup>-tsɨ<sup>55</sup></i>   | 2 |
| Mpi      | <i>ʔo<sup>2</sup>-so<sup>2</sup></i>     | 1 |
|          | <i>tçɨ<sup>6</sup></i>                   | 2 |
| Bisu     | <i>so<sup>3</sup>-phe<sup>3</sup></i>    | 1 |
| Jino     | <i>a<sup>33</sup>-tʃɔ<sup>44</sup></i>   | 2 |
| Lahu     | <i>tsi<sup>2</sup></i>                   | 2 |
| Xide     | <i>dʒɨ<sup>33</sup></i>                  | 2 |
| Dafang   | <i>dzə<sup>31</sup>-mo<sup>31</sup></i>  | 2 |
| Nanjiang | <i>çy<sup>31</sup></i>                   | 2 |
| Lisu     | <i>sɨ<sup>31</sup>-tʃhi<sup>44</sup></i> | 2 |
| Nusu     | <i>shua<sup>55</sup></i>                 | 1 |
| Achang   | <i>tçoi<sup>55</sup></i>                 | 2 |
| Naxi     | <i>xɨ<sup>33</sup></i>                   | 1 |



## TREE

|          |   |   |   |
|----------|---|---|---|
| Burmese  | <i>sac-paŋ</i>                            | 1 | 3 |
| Zaiwa    | <i>sik<sup>55</sup></i>                   | 1 |   |
| Akha     | <i>a<sup>2</sup>-bo<sup>1</sup></i>       | 3 |   |
| Biyue    | <i>sɿ<sup>ʔ33</sup>-tsɿ<sup>55</sup></i>  | 1 | 2 |
| Mpi      | <i>sɔ<sup>4</sup>-tɿ<sup>6</sup></i>      | 1 |   |
| Bisu     | <i>tsiŋ<sup>2</sup>-tsiŋ<sup>1</sup></i>  | 2 |   |
| Jino     | <i>a<sup>33</sup>-tsə<sup>44</sup></i>    | 2 |   |
| Lahu     | <i>sɿ<sup>ʔ5</sup>4</i>                   | 1 |   |
| Xide     | <i>sɿ<sup>33</sup>-bo<sup>33</sup></i>    | 1 | 3 |
| Dafang   | <i>se<sup>33</sup></i>                    | 1 |   |
| Nanjiang | <i>sɿ<sup>ʔ33</sup>-dzi<sup>ʔ55</sup></i> | 1 | 2 |
| Lisu     | <i>sɿ<sup>35</sup>-dzi<sup>44</sup></i>   | 1 | 2 |
| Nusu     | <i>si<sup>53</sup>-dzə<sup>35</sup></i>   | 1 | 2 |
| Achang   | <i>səŋ<sup>31</sup>-tseŋ<sup>55</sup></i> | 1 | 2 |
| Naxi     | <i>ndzər<sup>31</sup></i>                 | 1 |   |

## TWO

|          |                         |   |  |
|----------|-------------------------|---|--|
| Burmese  | <i>hnac</i>             | 1 |  |
| Zaiwa    | <i>==</i>               | 0 |  |
| Akha     | <i>nji<sup>1</sup></i>  | 1 |  |
| Biyue    | <i>ne<sup>ʔ31</sup></i> | 1 |  |
| Mpi      | <i>ɲi<sup>55</sup></i>  | 1 |  |
| Bisu     | <i>ni<sup>3</sup></i>   | 1 |  |
| Jino     | <i>hn<sup>55</sup></i>  | 1 |  |
| Lahu     | <i>ni<sup>53</sup></i>  | 1 |  |
| Xide     | <i>ɲi<sup>31</sup></i>  | 1 |  |
| Dafang   | <i>ɲi<sup>55</sup></i>  | 1 |  |
| Nanjiang | <i>n<sup>31</sup></i>   | 1 |  |
| Lisu     | <i>ɲi<sup>31</sup></i>  | 1 |  |
| Nusu     | <i>m<sup>55</sup></i>   | 2 |  |
| Achang   | <i>sək<sup>55</sup></i> | 3 |  |
| Naxi     | <i>ɲi<sup>31</sup></i>  | 1 |  |

## WALK

|          |   |   |  |
|----------|---|---|--|
| Burmese  | <i>swa:</i>                             | 1 |  |
| Zaiwa    | <i>so<sup>31</sup></i>                  | 1 |  |
| Akha     | <i>tjhaŋ<sup>2</sup></i>                | 2 |  |
| Biyue    | <i>ju<sup>31</sup></i>                  | 3 |  |
| Mpi      | <i>lo<sup>1</sup></i>                   | 4 |  |
| Bisu     | <i>jo<sup>3</sup></i>                   | 3 |  |
| Jino     | <i>zo<sup>44</sup></i>                  | 3 |  |
| Lahu     | <i>dzv<sup>53</sup></i>                 | 8 |  |
|          | <i>tu<sup>53</sup></i>                  | 5 |  |
| Xide     | <i>ga<sup>44</sup>-šu<sup>33</sup></i>  | 1 |  |
| Dafang   | <i>sɿ<sup>33</sup></i>                  | 1 |  |
| Nanjiang | <i>çy<sup>31</sup></i>                  | 7 |  |
| Lisu     | <i>se<sup>31</sup></i>                  | 1 |  |
| Nusu     | <i>shua<sup>55</sup>-a<sup>55</sup></i> | 1 |  |
| Achang   | <i>so<sup>31</sup></i>                  | 1 |  |
| Naxi     | <i>ndyi<sup>33</sup></i>                | 2 |  |

## WARM

|          |  |   |   |
|----------|--|---|---|
| Burmese  | <i>nwij:</i>                             | 1 |   |
| Zaiwa    | <i>==</i>                                | 0 |   |
| Akha     | <i>laŋ<sup>1</sup></i>                   | 2 |   |
| Biyue    | <i>ɔ<sup>31</sup>-le<sup>55</sup></i>    | 2 |   |
| Mpi      | <i>liŋ<sup>5</sup></i>                   | 2 |   |
| Bisu     | <i>ʔaŋ<sup>2</sup>-lum<sup>1</sup></i>   | 2 |   |
| Jino     | <i>==</i>                                | 0 |   |
| Lahu     | <i>le<sup>31</sup></i>                   | 2 |   |
| Xide     | <i>tsha<sup>33</sup>-tə<sup>33</sup></i> | 2 |   |
| Dafang   | <i>mə<sup>33</sup></i>                   | 3 |   |
| Nanjiang | <i>ly<sup>55</sup></i>                   | 2 |   |
| Lisu     | <i>le<sup>33</sup>-m<sup>31</sup></i>    | 2 | 3 |
| Nusu     | <i>==</i>                                | 0 |   |
| Achang   | <i>lum<sup>55</sup></i>                  | 2 |   |
| Naxi     | <i>lv<sup>31</sup>-fv<sup>55</sup></i>   | 2 |   |

## WATER

|          |  |   |
|----------|--|---|
| Burmese  | <i>rij</i>                               | 1 |
| Zaiwa    | <i>i<sup>31</sup>-tʃho<sup>55</sup></i>  | 1 |
| Akha     | <i>i<sup>1</sup>-tju<sup>ʔ3</sup></i>    | 1 |
| Biyue    | <i>v<sup>55</sup>-tshv<sup>ʔ31</sup></i> | 1 |
| Mpi      | <i>tʃho<sup>ʔ5</sup></i>                 | 3 |
| Bisu     | <i>laŋ<sup>1</sup></i>                   | 4 |
| Jino     | <i>e<sup>42</sup>-tʃho<sup>55</sup></i>  | 1 |
| Lahu     | <i>i<sup>35</sup>-ka<sup>ʔ54</sup></i>   | 1 |
| Xide     | <i>yɿ<sup>33</sup></i>                   | 1 |
| Dafang   | <i>yɿ<sup>31</sup></i>                   | 1 |
| Nanjiang | <i>yɿ<sup>55</sup></i>                   | 1 |
| Lisu     | <i>e<sup>44</sup>-dʒe<sup>44</sup></i>   | 1 |
| Nusu     | <i>ri<sup>31</sup>-gra<sup>55</sup></i>  | 1 |
| Achang   | <i>tɿ<sup>55</sup></i>                   | 4 |
| Naxi     | <i>dyi<sup>31</sup></i>                  | 1 |

## WE

|          |   |   |
|----------|---|---|
| Burmese  | <i>kjwan-tau-tui</i>                    | 1 |
| Zaiwa    | <i>ŋa<sup>55</sup>-mo<sup>ʔ55</sup></i> | 2 |
| Akha     | ==                                      | 0 |
| Biyue    | <i>ŋo<sup>31</sup>-v<sup>33</sup></i>   | 3 |
| Mpi      | ==                                      | 0 |
| Bisu     | <i>gu<sup>2</sup></i>                   | 3 |
| Jino     | <i>ŋa<sup>55</sup>-vu<sup>33</sup></i>  | 3 |
| Lahu     | <i>ŋa<sup>31</sup>-xi<sup>33</sup></i>  | 3 |
| Xide     | <i>ŋo<sup>31</sup>-yo<sup>44</sup></i>  | 3 |
| Dafang   | <i>ŋo<sup>31</sup>-xi<sup>33</sup></i>  | 3 |
| Nanjiang | <i>o<sup>31</sup></i>                   | 4 |
| Lisu     | <i>ŋua<sup>33</sup>-nu<sup>31</sup></i> | 5 |
| Nusu     | <i>ŋa<sup>35</sup>-di<sup>31</sup></i>  | 1 |
| Achang   | <i>ŋo<sup>55</sup>-tu<sup>ʔ31</sup></i> | 1 |
| Naxi     | <i>ŋə<sup>33</sup>-ŋgi<sup>31</sup></i> | 6 |

## WHAT

|          |   |     |
|----------|---|-----|
| Burmese  | <i>ba</i>   | 1   |
| Zaiwa    | <i>xai<sup>51</sup></i>                                 | 3   |
| Akha     | <i>a<sup>3</sup>-dze<sup>1</sup></i>                    | 2   |
| Biyue    | <i>xa<sup>55</sup>-tse<sup>31</sup></i>                 | 2   |
| Mpi      | <i>ɲ<sup>4</sup>-tʃa<sup>5</sup></i>                    | 2   |
| Bisu     | <i>ma<sup>1</sup>-ci<sup>3</sup></i>                    | 2 7 |
| Jino     | <i>tʃə<sup>33</sup></i>                                 | 2   |
| Lahu     | <i>a<sup>31</sup>-thu<sup>ʔ21</sup>-ma<sup>33</sup></i> | 4 7 |
| Xide     | <i>çi<sup>44</sup></i>                                  | 2   |
| Dafang   | <i>mɿ<sup>33</sup>-lɿ<sup>33</sup></i>                  | 5 7 |
| Nanjiang | <i>a<sup>55</sup>-tsa<sup>55</sup></i>                  | 2   |
| Lisu     | <i>a<sup>55</sup>-fɿ<sup>31</sup></i>                   | 6   |
| Nusu     | <i>tʃhu<sup>31</sup>-ma<sup>31</sup></i>                | 7   |
| Achang   | <i>pi<sup>31</sup>-si<sup>55</sup></i>                  | 2   |
| Naxi     | <i>ə<sup>31</sup>-tsɿ<sup>33</sup></i>                  | 2   |

## WHITE

|          |   |    |
|----------|---|----|
| Burmese  | <i>phru</i>                             | 1  |
| Zaiwa    | <i>phju<sup>51</sup></i>                | 1  |
| Akha     | <i>pjhu<sup>1</sup></i>                 | 1  |
| Biyue    | <i>phv<sup>55</sup></i>                 | 1  |
| Mpi      | <i>poŋ<sup>5</sup></i>                  | 2  |
| Bisu     | <i>ʔaŋ<sup>2</sup>-pon<sup>3</sup></i>  | 2  |
| Jino     | <i>phru<sup>44</sup></i>                | 2  |
| Lahu     | <i>phv<sup>33</sup></i>                 | 1  |
| Xide     | <i>a<sup>33</sup>-tʃhu<sup>33</sup></i> | 1  |
| Dafang   | <i>ʃhu<sup>33</sup></i>                 | 1  |
| Nanjiang | <i>fu<sup>55</sup></i>                  | 1  |
| Lisu     | <i>phu<sup>44</sup></i>                 | 1  |
| Nusu     | <i>ba<sup>55</sup>-ba<sup>31</sup></i>  | -1 |
| Achang   | <i>phʒo<sup>55</sup></i>                | 1  |
| Naxi     | <i>phər<sup>31</sup></i>                | 1  |

| WHO      |   |     | YELLOW   |  |    |
|----------|---|-----|----------|--|----|
| Burmese  | <i>bajsu</i>                            | 1   | Burmese  | <i>wa</i>                                    | 1  |
| Zaiwa    | <i>o<sup>55</sup></i>                   | 2   | Zaiwa    | <i>xui<sup>51</sup></i>                      | 2  |
| Akha     | <i>shu<sup>l</sup></i>                  | 1   | Akha     | <i>sjhy<sup>l</sup></i>                      | 2  |
| Biyue    | <i>o<sup>31</sup>-sv<sup>55</sup></i>   | 1   | Biyue    | <i>si<sup>55</sup></i>                       | 2  |
| Mpi      | <i>sə<sup>5</sup></i>                   | 1   | Mpi      | <i>lo<sup>3</sup></i>                        | -1 |
| Bisu     | <i>?a<sup>3</sup>-saŋ<sup>3</sup></i>   | 3   | Bisu     | <i>?aŋ<sup>2</sup>-fi<sup>l</sup></i>        | 2  |
| Jino     | <i>khə<sup>33</sup>-su<sup>44</sup></i> | 1 4 | Jino     | <i>fi<sup>44</sup></i>                       | 2  |
| Lahu     | <i>a<sup>33</sup>-sv<sup>33</sup></i>   | 1   | Lahu     | <i>si<sup>l</sup></i>                        | 2  |
| Xide     | <i>kha<sup>44</sup>-di<sup>33</sup></i> | 4   | Xide     | <i>a<sup>33</sup>-š<i>ɿ</i><sup>33</sup></i> | 2  |
| Dafang   | <i>a<sup>33</sup>-çe<sup>33</sup></i>   | 5   | Dafang   | <i>sə<sup>33</sup></i>                       | 2  |
| Nanjiang | <i>a<sup>31</sup>-sa<sup>31</sup></i>   | 1   | Nanjiang | <i>çe<sup>55</sup></i>                       | 2  |
| Lisu     | <i>a<sup>31</sup>-ma<sup>33</sup></i>   | 6   | Lisu     | <i>fi<sup>44</sup></i>                       | 2  |
| Nusu     | <i>khe<sup>31</sup></i>                 | 4   | Nusu     | <i>bru<sup>55</sup>-bru<sup>31</sup></i>     | 3  |
| Achang   | <i>xau<sup>55</sup></i>                 | 1   | Achang   | <i>ləŋ<sup>35</sup></i>                      | -1 |
| Naxi     | <i>ə<sup>33</sup>-ne<sup>31</sup></i>   | 7   | Naxi     | <i>š<i>ɿ</i><sup>31</sup></i>                | 2  |

| WOMAN    |   |   | YOU      |                          |   |
|----------|---|---|----------|--------------------------|---|
| Burmese  | <i>min:-ma.</i>   | 1 | Burmese  | <i>caŋ</i>               | 1 |
| Zaiwa    | <i>mji<sup>31</sup>-ve<sup>31</sup></i>                       | 1 | Zaiwa    | <i>naŋ<sup>51</sup></i>  | 2 |
| Akha     | <i>za<sup>3</sup>-mi<sup>3</sup>-za<sup>3</sup></i>           | 1 | Akha     | <i>no<sup>l</sup></i>    | 2 |
| Biyue    | <i>jə<sup>31</sup>-mi<sup>31</sup></i>                        | 1 | Biyue    | <i>nv<sup>55</sup></i>   | 2 |
| Mpi      | <i>kho<sup>2</sup>-mo<sup>4</sup></i>                         | 1 | Mpi      | <i>noŋ<sup>6</sup></i>   | 2 |
| Bisu     | <i>kha<sup>3</sup>-ba<sup>2</sup>-ja<sup>3</sup></i>          | 1 | Bisu     | <i>naŋ<sup>2</sup></i>   | 2 |
| Jino     | <i>khə<sup>44</sup>-mo<sup>33</sup></i>                       | 1 | Jino     | <i>nə<sup>42</sup></i>   | 2 |
| Lahu     | <i>za<sup>53</sup>-mi<sup>53</sup>-ma<sup>l</sup></i>         | 1 | Lahu     | <i>no<sup>31</sup></i>   | 2 |
| Xide     | <i>a<sup>31</sup>-m<sup>33</sup>-zi<sup>33</sup></i>          | 1 | Xide     | <i>ni<sup>33</sup></i>   | 2 |
| Dafang   | <i>ni<sup>55</sup>-ni<sup>33</sup></i>                        | 1 | Dafang   | <i>na<sup>31</sup></i>   | 2 |
| Nanjiang | <i>mə<sup>31</sup>-ny<sup>55</sup>-yu<sup>31</sup></i>        | 1 | Nanjiang | <i>n<sup>55</sup></i>    | 2 |
| Lisu     | <i>za<sup>31</sup>-m<i>ɿ</i><sup>42</sup>-za<sup>31</sup></i> | 1 | Lisu     | <i>nu<sup>33</sup></i>   | 2 |
| Nusu     | <i>mi<sup>31</sup>-a<sup>31</sup></i>                         | 1 | Nusu     | <i>no<sup>55</sup></i>   | 2 |
| Achang   | <i>i<sup>31</sup>-ŋə<sup>31</sup></i>                         | 1 | Achang   | <i>nuəŋ<sup>55</sup></i> | 2 |
| Naxi     | <i>mi<sup>55</sup></i>  | 1 | Naxi     | <i>nv<sup>31</sup></i>   | 2 |

## APPENDIX E: CHINESE CHARACTERS REFERRED TO IN THE TEXT

## Chapter 2

|            |             |             |             |
|------------|-------------|-------------|-------------|
| [CHAR 1] 肘 | [CHAR 6] 送  | [CHAR 11] 擇 | [CHAR 16] 捐 |
| [CHAR 2] 到 | [CHAR 7] 負  | [CHAR 12] 騎 | [CHAR 17] 斷 |
| [CHAR 3] 袋 | [CHAR 8] 牛  | [CHAR 13] 到 | [CHAR 18] 園 |
| [CHAR 4] 竹 | [CHAR 9] 臆  | [CHAR 14] 銅 | [CHAR 19] 蓋 |
| [CHAR 5] 中 | [CHAR 10] 主 | [CHAR 15] 合 |             |

## Chapter 3

|            |            |            |
|------------|------------|------------|
| [CHAR 1] 首 | [CHAR 2] 稻 | [CHAR 3] 利 |
|------------|------------|------------|

## Chapter 4

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| [CHAR 1] 洗  | [CHAR 22] 咽 | [CHAR 42] 刺 | [CHAR 62] 晉 |
| [CHAR 2] 洒  | [CHAR 23] 乳 | [CHAR 43] 嚼 | [CHAR 63] 振 |
| [CHAR 3] 合  | [CHAR 24] 念 | [CHAR 44] 結 | [CHAR 64] 爾 |
| [CHAR 4] 洽  | [CHAR 25] 水 | [CHAR 45] 火 | [CHAR 65] 霽 |
| [CHAR 5] 割  | [CHAR 26] 陰 | [CHAR 46] 睡 | [CHAR 66] 卷 |
| [CHAR 6] 羯  | [CHAR 27] 蛇 | [CHAR 47] 土 | [CHAR 67] 挾 |
| [CHAR 7] 銘  | [CHAR 28] 啄 | [CHAR 48] 鹵 | [CHAR 68] 弩 |
| [CHAR 8] 名  | [CHAR 29] 蕨 | [CHAR 49] 蟻 | [CHAR 69] 澡 |
| [CHAR 9] 旁  | [CHAR 30] 旁 | [CHAR 50] 卵 | [CHAR 70] 麩 |
| [CHAR 10] 房 | [CHAR 31] 辛 | [CHAR 51] 彼 | [CHAR 71] 飯 |
| [CHAR 11] 火 | [CHAR 32] 曲 | [CHAR 52] 高 | [CHAR 72] 米 |
| [CHAR 12] 燬 | [CHAR 33] 陟 | [CHAR 53] 屈 | [CHAR 73] 廡 |
| [CHAR 13] 見 | [CHAR 34] 衾 | [CHAR 54] 伐 | [CHAR 74] 吐 |
| [CHAR 14] 現 | [CHAR 35] 刮 | [CHAR 55] 找 | [CHAR 75] 擣 |
| [CHAR 15] 合 | [CHAR 36] 閉 | [CHAR 56] 擒 | [CHAR 76] 力 |
| [CHAR 16] 合 | [CHAR 37] 脫 | [CHAR 57] 絜 | [CHAR 77] 腋 |
| [CHAR 17] 中 | [CHAR 38] 哺 | [CHAR 58] 搗 | [CHAR 78] 翼 |
| [CHAR 18] 仲 | [CHAR 39] 縲 | [CHAR 59] 齧 | [CHAR 79] 胙 |
| [CHAR 19] 開 | [CHAR 40] 同 | [CHAR 60] 揭 | [CHAR 80] 腳 |
| [CHAR 20] 首 | [CHAR 41] 斲 | [CHAR 61] 塞 | [CHAR 81] 辟 |
| [CHAR 21] 腦 |             |             |             |

## Chapter 5

|           |   |           |   |           |   |           |    |
|-----------|---|-----------|---|-----------|---|-----------|----|
| [CHAR 1]  | 搨 | [CHAR 13] | 主 | [CHAR 24] | 中 | [CHAR 35] | 速  |
| [CHAR 2]  | 梘 | [CHAR 14] | 服 | [CHAR 25] | 移 | [CHAR 36] | 宰  |
| [CHAR 3]  | 寇 | [CHAR 15] | 鑣 | [CHAR 26] | 乏 | [CHAR 37] | 稔  |
| [CHAR 4]  | 賊 | [CHAR 16] | 髮 | [CHAR 27] | 正 | [CHAR 38] | 庚  |
| [CHAR 5]  | 膿 | [CHAR 17] | 瞠 | [CHAR 28] | 拉 | [CHAR 39] | 行  |
| [CHAR 6]  | 尋 | [CHAR 18] | 析 | [CHAR 29] | 念 | [CHAR 40] | 蟋蟀 |
| [CHAR 7]  | 沙 | [CHAR 19] | 黃 | [CHAR 30] | 春 | [CHAR 41] | 江  |
| [CHAR 8]  | 羣 | [CHAR 20] | 米 | [CHAR 31] | 篔 | [CHAR 42] | 犁  |
| [CHAR 9]  | 鞞 | [CHAR 21] | 糲 | [CHAR 32] | 介 | [CHAR 43] | 澡  |
| [CHAR 10] | 杭 | [CHAR 22] | 為 | [CHAR 33] | 白 | [CHAR 44] | 虎  |
| [CHAR 11] | 紆 | [CHAR 23] | 觥 | [CHAR 34] | 懷 | [CHAR 45] | 魑  |
| [CHAR 12] | 躄 |           |   |           |   |           |    |

## REFERENCES

- Allen, N.J.**, 1975, *Sketch of Thulung grammar*. (Cornell University East Asia Papers 6). Ithaca: China-Japan Program, Cornell University.
- Anon.**, 1957a, *Guanyu huafeng liyu fanjan he chuanzhi liwen de janju* Tungsha. MS.
- 1957b, *Liyu diaocha baogao chugao*. 2 vols. MS.
- 1958a, *Miao-han jianming cidian. Chuancian dian fangyan*. Guyan: Ethnic Publishing House.
- 1958b, *Miao-han jianming cidian. Jiandong fangyan*. Guyan: Ethnic Publishing House.
- 1959a, *A Dong (Kam) Chinese dictionary*. Guiyang: Guizhou Minorities Publishing House.
- 1959b, *Buyi diaocha biaogao*. Beijing: Chinese Academy of Social Sciences.
- 1959c, *Study of languages of national minorities. Myao-Yao group* (in Chinese). Beijing: Zhungguo kexueyun shaoshu minzu yuyan yanjusuo zhubian.
- 1985, *A collection of words from Miao-Yao dialects* (in Chinese). Beijing: Chinese Institute of Nationalities Press.
- 1991, *Phonologies and vocabularies of Tibeto-Burman languages*. Beijing: Nationalities Publishing House.
- Arutjunov, Sergej A., ed.**, 1990, *Istoki formirovanija sovremennogo naselenija Juzhnoj Asii*. Moscow: Nauka.
- Banker, John E., Elizabeth Banker and Siu Mo**, 1979, *Bahnar dictionary*. Huntington Beach: SIL.
- Barker, Milton E.**, 1963, Proto-Vietnamuong initial labial consonants. *Van-hoa Nguyetsan* 12:491–500.
- 1966, Vietnamese and Muong tone correspondences. In Zide, ed. 1966:9–25.
- Barker, Milton E. and Muriel A. Barker**, 1970, Proto-Vietnamuong (Annamuong) final consonants and vowels. *Lingua* 24/3:268–285.
- Barker, Miriam A.**, 1993, Bibliography of Muong and other Vietic language groups, with notes. *Mon-Khmer Studies* 23:197–243.
- Barnard, Joseph T.O.**, 1934, *A handbook of the Rawang dialect of the Nung*. Rangoon: Government Press.
- Bauman, James J.**, 1975, Pronouns and pronominal morphology in Tibeto-Burman. PhD dissertation. Berkeley: University of California.
- 1979, A historical perspective on ergativity in Tibeto-Burman. In Plank, ed. 1979:419–433.
- Baxter, William H.**, 1992, *A handbook of Old Chinese Phonology*. (Trends in Linguistics. Studies and Monographs 64). Berlin: Mouton de Gruyter.

- Bellwood, Peter**, 1988, A hypothesis for Austronesian origins. *Asian Perspectives* 26/1:107–117.
- 1991, The Austronesian dispersal and the origin of languages. *Scientific American* 265/1:88–93.
- 1994, An archaeologist's view of language macrofamily relationships. *Oceanic Linguistics* 33/2:391–406.
- Benedict, Paul K.**, 1942, Thai, Kadai and Indonesian: a new alignment in South Eastern Asia. *American Anthropologist* n.s. 44/4:576–601.
- 1967, Austro-Tai studies 3. Thai and Chinese. *Behaviour Science Notes* 2/4:288–291.
- 1972a, *Sino-Tibetan: a conspectus*. Cambridge: Cambridge University Press.
- 1972b, The Sino-Tibetan tonal system. In Jacques Barrau et al., eds *Langues et techniques, nature et société*. Paris: Klincksieck, 1972:25–33.
- 1973, Tibeto-Burman tones with a note on teleo-reconstruction. *Acta Orientalia* 35:127–138.
- 1975, *Austro-Thai language and culture*. New Haven: Human Relations Areas Files Press.
- 1976, Sino-Tibetan: another look. *Journal of the American Oriental Society* 96/2:167–197.
- 1990, *Japanese/Austro-Tai* (Linguistica Extransea Studia 20). Ann Arbor: Karoma Publishers.
- Benjamin, Geoffrey**, 1976a, Austroasiatic subgroupings and prehistory in the Malay Peninsula. In Jenner et al., eds, 1976, vol.1:37–128.
- 1976b, An outline of Temiar grammar. In Jenner et al., eds, 1976, vol.1:129–187.
- Bernot, Lucien**, 1967, *Les Cak: contribution à l'étude ethnographique d'une population de langue loi*. (Centre de Documentation sur l'Asie du Sud-Est, Atlas ethnolinguistique, Deuxième série, monographies, 1). Paris: Editions du Centre de la Recherche Scientifique.
- Bhat, D.N. Shankra**, 1968, *Boro vocabulary*. Poona: Deccan College Postgraduate and Research Institute.
- 1969, *Tankhur Naga vocabulary*. Poona: Deccan College Postgraduate and Research Institute.
- Bhattacharya, Sudhibushan**, 1966, Some Munda etymologies. In Zide, ed. 1966: 28–40.
- 1968, *A Bonda dictionary*. Poona: Deccan College Postgraduate and Research Institute.
- 1975, Munda studies: a new classification of Munda. *Indo-Iranian Journal* 17/1–2:97–101.
- Biligiri, H.S.**, 1965, *Kharia: phonology, grammar and vocabulary*. Poona: Deccan College Postgraduate and Research Institute.
- Blood, Henry F.**, 1966, *A reconstruction of Proto-Muong*. Dallas: SIL.
- Blust, Robert A.**, 1972a, Additions to 'Proto-Austronesian addenda' and 'Proto-Oceanic addenda' with cognates in non-Oceanic Austronesian languages'. *University of Hawaii working papers in linguistics* 4/8:1–17.
- 1972b, Proto-Oceanic addenda with cognates in non-Oceanic Austronesian languages. *University of Hawaii working papers in linguistics* 4/1:1–43.
- 1973, Additions to 'Proto-Austronesian addenda' and 'Proto-Oceanic addenda with cognates in non-Oceanic Austronesian languages'. *University of Hawaii working papers in linguistics* 5/3:33–61.
- 1976, Austronesian culture history: some linguistic inferences and their relations to the archaeological record. *World Archaeology* 8/1:19–43.

- 1977, The Proto-Austronesian pronouns and Austronesian subgrouping: a preliminary report. *University of Hawaii working papers in linguistics* 9/2:1–15.
- 1980, Austronesian etymologies. *Oceanic Linguistics* 19/1–2:19–181.
- 1981, Variation in retention rates among Austronesian languages. Paper presented at the Third International Conference on Austronesian Linguistics, Den Pasar, Bali, January 1981.
- 1984–1985, The Austronesian homeland: a linguistic perspective. *Asian perspective* 26/1:45–67.
- 1988, The Austronesian homeland: a linguistic perspective. *Asian Perspectives* 26:45–67.
- n.d., Beyond the Austronesian homeland: the Austric hypothesis and its implications for archaeology. MS.
- Bodding, Paul O.**, 1929–1936, *A Santal dictionary*. 5 vols. Oslo: Norske Videnskaps-Akademi.
- Bodman, Nicholas C.**, 1980, Proto-Chinese and Sino-Tibetan: data towards establishing the nature of the relationship. In Coetsom and Waugh, eds 1980:34–199.
- Bonifacy, Auguste Louis**, 1908, Etude sur les coutumes et la langue des Lolo et des Laqua. *Bulletin de l'École Française d'Extrême-Orient* 8:531–558.
- Bounmy Soukbandith**, 1983, *Modern English-Lao and Lao-English dictionary*. San Diego: Kongseng Soukbandith.
- Bradley, David**, 1979, *Proto-Loloish*. Scandinavian Institute of Asian Studies Monograph Series 39. London and Malmö: Curzon Press.
- 1989, The disappearance of the Ugong in Thailand. In Dorian, ed. 1989:33–40.
- 1997, Tibeto-Burman languages and classification. In Bradley, ed. 1997:1–72.
- Bradley, David, ed.**, 1997, *Papers in Southeast Asian linguistics No.14: Tibeto-Burman languages of the Himalayas*. PL, A–86.
- Bradley, David, Eugénie J.A. Henderson and Martine Mazaudon, eds**, 1989, *Prosodic analyses and Asian linguistics: to honour R.K. Sprigg*. PL, C–104.
- Brown, Marvin J.**, 1985, *From Ancient Thai to modern dialects*. 2nd edn. Bangkok: White Lotus.
- Bulatova, Rimma V. and Vladimir A. Dybo, eds**, 1989, *Istoricheskaja akcentologija i sravnitel'no-istoricheskij metod*. Moscow: Nauka.
- Burling, Robbins**, 1959, Proto-Bodo. *Language* 35:433–453.
- 1967, Proto-Lolo-Burmese. *International Journal of American Linguistics* 31/1 part 2.
- 1969, Proto-Karen: a reanalysis. *Occasional Papers of the Wolfenden Society on Tibeto-Burman Linguistics* 1:1–116.
- 1982, The Sal languages. *Linguistics of the Tibeto-Burman area* 7/2:1–32.
- Burling, Robbins and Pramond Chandra Bhattacharya**, 1956, Lexicostatistic dating of Boro-Garo linguistic separation. *Journal of the University of Gauhati* 7:67–73.
- Carey, Haji D. Iskandar**, 1961, *Tengleq Kui Serok: a study of the Temiar language with an ethnographical summary*. Kuala Lumpur: Dewan Bahasa dan Pustaka.
- Chamberlain, James R.**, 1991, Mène: a Tai dialect originally spoken in Nghê An (Nghê Tinh), Vietnam. Paper for the conference 'The High Bronze age of Southeast Asia and South China'. Thailand.
- Chang Kun**, 1966, A comparative study of the Yao tone system. *Language* 42:303–310.
- 1967, A comparative study of the Southern Ch'ang dialects. *Monumenta Serica* 26:422–444.
- 1972, The reconstruction of Proto-Miao-Yao tones. *Bulletin of the Institute of History and Philology, Academia Sinica* 44:521–628.



- 1976, Proto-Miao-Yao initials. *Bulletin of the Institute of History and Philology, Academia Sinica* 47/2:155–218.
- Chang Kun and Betty Shefts Chang**, 1975, Gyarong historical phonology. *Bulletin of the Institute of History and Philology, Academia Sinica* 46:391–524.
- Cheboksarov, Nikolaj N, Michail V. Krjukov and Michail V. Sofronov, eds**, 1977, *Rannjaja etnichskaja istorija i narody Vostochnoj Asii*. Moscow: Nauka.
- Chen Shilin, Bian Shiming and Li Xiuqing**, 1985, *Sketch grammar of Yi* (in Chinese). Beijing: Nationalities Publishing House.
- Chen Xiangmu, Wang Jingliu and Lai Yongliang**, 1986, *Sketch grammar of Dean* (in Chinese). Beijing: Nationalities Publishing House.
- Coblin, W. South**, 1986, *A Sinologist's handlist of Sino-Tibetan lexical comparisons*. (Monumenta Serica Monograph Series 18). Nettetal: Steyler Verlag.
- Coetsom, Frans Van and Linda R. Waugh, eds**, 1980, *Contributions to historical linguistics: issues and materials*. Leiden: E.J. Brill.
- Conrady, August**, 1896, *Eine indochinesische Causativ Denominativ-Bildung und ihr Zusammenhang mit den Tonakzenten*. Leipzig: Otto Harrassowitz.
- Costello, Nancy A.**, 1971, *Katu vocabulary*. Saigon: Department of Education.
- Cushing, Josiah N.**, 1888, *Elementary handbook of the Shan language*. Rangoon: American Baptist Mission Press.
- 1914, *A Shan and English dictionary*. Rangoon: American Baptist Mission Press.
- Dahl, Otto Christian**, 1981, *Early phonetic and phonemic changes in Austronesian*. Oslo: Institute for Comparative Research in Human Culture.
- Das, Gupta K.**, 1963, *An introduction to the Gallong language*. Shillong: North-East Frontier Agency.
- 1968, *An introduction to Central Monpa*. Shillong: North-East Frontier Agency.
- 1977, *A phrase book in Miju*. Shillong: Government of Aruncachal Pradesh.
- Dempwolff, Otto**, 1934–38, *Vergleichende Lautlehre des Austronesischen Wortschatzes*. 3 vols. Berlin: Dietrich Reimer.
- Diffloth, Gérard**, 1976, Jah Hut. An Austroasiatic language of Malaysia. In Jenner et al., eds 1976 vol.1:73–118.
- 1977, Towards a history of Mon-Khmer: Proto-Semai vowels. *To:nan adzia kenkyu* 14/4:463–495.
- 1980, The Wa languages. *Linguistics of the Tibeto-Burman Area* 5/2:1–182.
- 1982, Registres, dévoisement, timbres vocaliques: leur histoire en Katouique. *Mon-Khmer Studies* 11:47–82.
- 1984, *The Dvaravati Old Mon language and Nyah Kur*. Bangkok: Chulalongkorn University.
- 1985, Austro-Asiatic languages. *Encyclopedia Britannica*, 16th edn. 2:719ff.
- 1989, Sub- and supra-classification of Mon-Khmer. MS.
- 1994, The lexical evidence for Austric, so far. *Oceanic Linguistics* 33/2:309–321.
- Diguet, Edouard**, 1895, *Etude de la langue tai*. Hanoi: F.H. Schneider.
- 1910, *Etude de la langue tho*. Paris: Augustin Challamel.
- Dorian, Nancy C., ed.**, 1989, *Investigating obsolescence: studies in language contraction and death* (Studies in the Social and Cultural Foundations of Language 7). Cambridge: Cambridge University Press.
- Downer, G.B.**, 1973, Strata of Chinese loanwords in the Mien dialect of Yao. *Asia Major* 13:1–33.

- Driem, George van**, 1987, *A grammar of Limbu*. Berlin: Mouton de Gruyter.
- 1993a, Language change, conjugational morphology and the Sino-Tibetan Urheimat. *Acta Linguistica Hafniensia* 26:45–56.
- 1993b, The Proto-Tibeto-Burman verbal agreement system. *Bulletin of the School of Oriental and African Studies* 56 1/2:292–334.
- 1995, Black Mountain conjugational morphology, Proto-Tibeto-Burman morphosyntax, and the linguistic position of Chinese. In Nishi et al., eds 1995, *New horizons in Tibeto-Burman syntax* (Senri Ethnological Studies 41) 229:259. Osaka: National Museum of Ethnology.
- n.d., Neolithic correlates of ancient Tibeto-Burman migrations.
- Dundas, W.C.M.**, 1908, *An outline grammar and dictionary of the Kachari (Dimasa) language*. Shillong: Eastern Bengal and Assam Secretariat Press.
- Dyen, Isidor**, 1971, The Austronesian languages and Proto-Austronesian. *Current Trends in Linguistics* 8/1:5–55.
- Edgar, Huston J.**, 1932, An English-Giarung vocabulary. *Journal of the West-China Border Research Society* 5, Supplement.
- Edmonson, Jerold A.**, 1992a, Gelao: reconstruction and its place in Kadai. Paper for 25th International Conference on Sino-Tibetan languages and Linguistics. Berkley.
- 1992b, Pa-hng development and diversity. In Ratliff, M. and E. Schiller. *Papers from the first Annual Meeting of the Southeast Asia Linguistic Society*, 1991:159–186. Arizona State University: Program for South-East Asian Studies.
- Edmonson, Jerold A. and David B. Solnit, eds**, 1988, *Comparative Kadai: linguistic studies beyond Tai*. (Summer Institute of Linguistics and The University of Texas at Arlington Publications in Linguistics 86). Arlington, Texas: University of Texas at Arlington.
- Edmonson, Jerold A. and Graham Thurgood**, 1992, Gelao: reconstruction and its place in Kadai. Paper for 25th International Conference on Sino-Tibetan languages and Linguistics. Berkley.
- Edmonson, Jerold A. and Yang Quan**, 1988, Word-initial preconsonants and the history of Kam-Sui resonants initials and tones. In Edmonson and Solnit, eds, 1988:143–166.
- Efimov, Aleksander J.**, 1983, Problems in Proto Katuic phonological reconstruction (in Russian). PhD dissertation. Moscow: Institute of Oriental Studies.
- 1990, *Historical phonology of South Bahnaric languages* (in Russian). Moscow: Nauka.
- Egerod, Søren**, 1976, Benedict's Austro-Thai hypothesis and the traditional views on Sino-Thai relationship. *Computational analysis of Asian and African languages* 6:51–60.
- Emeneau, M.B.**, 1980, *Language and linguistic area*. Stanford: Stanford University Press.
- Esquirol, Joseph and Gust Williatte**, 1908, *Essai de dictionnaire dioi-français*. Hong Kong: Imprimerie de la Société des Missions Étrangères.
- Ferlus, Michel**, 1974, Le groupe Viet-Muong. *Asie du Sud-Est et Monde Insulindien* 5/1:69–77.
- 1975, Vietnamien et proto-viet-muong. *Asie du Sud-Est et Monde Insulindien* 6/4:21–55.
- 1976, Du nouveau sur la spirantisation ancienne en vietnamien. *Bulletin de la Société de Linguistique de Paris* 71:305–312.
- 1979, Lexique français-thavung. *Cahiers de Linguistique Asie Orientale* 5:71–94.
- 1982, Spirantisation des obstruants mediales et formation du système consonantique du vietnamien. *Cahiers de Linguistique Asie Orientale* 11/1:83–106
- 1983, Essai de phonétique historique du mon. *Mon-Khmer Studies* 12:1–90.

- 1991, Vocalisme du Proto Viet-Muong. Paper presented at the 24th International Conference on Sino-Tibetan Languages and Linguistics, Thailand, 7–11 October 1991.
- Forbes, C.J.F.S.**, 1881, *Comparative grammar of language of Further India. A fragment*. London: W.H. Allen.
- French, Walter T.**, 1983, Northern Naga: a Tibeto-Burman mesolanguage, 2 vols. PhD dissertation. The City University of New York.
- Fu Zhennan**, 1983, The 'Cun speech' of the West Coast of Hainan Island (in Chinese). *Minzu Yuwen* 4:68–71.
- 1990, A dialect island of Li-Natou (in Chinese). *Minzu Yuwen* 4:14–18.
- Gage, William W.**, 1985, Vietnamese in Mon-Khmer perspective. In Suriya Ratankal et al., eds 1985:493–524.
- Gai Xingzhi**, 1986, *Sketch grammar of Jino* (in Chinese). Beijing: Nationalities Publishing House.
- Gedney, William J.**, 1969, The Saek language of Nakhon Phanom province. Reprinted in Gedney 1989:373–399.
- 1976, On the Thai evidence for Austro-Thai. *Computational analysis of Asian and African languages* 6:65–82.
- 1989, *Selected papers on comparative Tai studies*. Edited by Robert J. Bickner, John Hartmann, Thomas John Hudak and Patcharin Peyasantiwong. Ann Arbor: Michigan Papers on South and Southeast Asia.
- Girard, Beryl**, n.d., *Korku-Hindi-English Dictionary*. Ramkhera (India): Central India Baptist Mission.
- Glover, Warren W.**, 1974, *Sememic and grammatical structures in Gurung (Nepal)*. Norman: University of Oklahoma.
- Glover, Warren W., Jessie R. Glover and Deu Bahadur Gurung**, 1971, *Gurung-Nepali-English dictionary*. PL, C–51.
- Gokhman**, 1980, The position of Be in the genetic classification of the Tai languages (in Russian). In Jakhontov, ed. 1980:127–133.
- Golovastikov, Aleksej N.**, 1977, The Origins of Burmese tones (in Russian). In Ivanov et al., eds, 1977:68–71.
- 1989, A hypothesis of the secondary origin of tones in Lolo-Burmese (in Russian). In Bulatova and Dybo, eds, 1989:255–290.
- Gorgonijev, Juri A.**, 1966, *Grammatika khmerskogo jazyka*. Moscow: Nauka.
- 1984, *Khmersko-russij slovar'*. Moscow: Russkij Jasyk.
- Gregerson, Kenneth, Kenneth Smith and Thomas David**, 1976, The place of Bahnar within Bahnaric. In Jenner et al., eds 1976, vol.1:371–421.
- Gregerson, Kenneth and David Thomas**, 1976, Vietnamese hoi and nga tones and Mom-Khmer h-finals. *Mon-Khmer Studies* 5:76–83.
- Grüssner, Karl-Heniz**, 1978, *Arleng Alam, die Sprache der Mikir: Grammatik und Texte* (Beiträge zur Südasien-Forschung 39). Wiesbaden: Franz Steiner Verlag.
- Guilleminet, Paul**, 1959, *Dictionnaire Bahnar-français*. 2 vols. Paris: EFEO.
- Hale, Austin E.**, ed., 1973, *Clause, sentence and discourse patterns in selected languages of Nepal*. 4 vols. Norman: University of Oklahoma Press.
- Hale, Austin E. and Kenneth L. Pike**, eds, 1970, Tone systems of Tibeto-Burman languages of Nepal. 4 vols. *Occasional Papers of the Wolfenden Society on Tibeto-Burman Linguistics* 3.
- Halim, Amran, Lois Carrington and S.A. Wurm**, eds, 1981, *Papers from the Third International Conference on Austronesian Linguistics*. PL, C-75.

- Halliday, Robert A.**, 1922, *Mon-English dictionary*. Bangkok: Siam Society.
- Hamilton, Robert C.**, 1900, *An outline grammar of the Dafla language*. Shillong.
- Hansell, Mark**, 1988, The relation of Be to Tai: the evidence from tones and initials. In Edmonson and Solnit, eds 1988:239–287.
- Hanson, Ola**, 1906, *A dictionary of the Kachin language*. Reprinted in 1954, Rangoon: Baptist Board of Publications.
- Hashimoto, Mantaro**, 1980a, *The Be language: a classified lexicon of its Limkow dialect*. Tokyo: Institute for the Study of Languages and Cultures of Asian and Africa.
- 1980b, *The Newary languages*. Tokyo: Institute for the Study of Languages and Cultures of Asian and Africa.
- Hashimoto, Oi-Kan Yue**, 1976, Southern Chinese dialects: the Tai connections. *Computational analysis of Asian and African languages* 7:1–10.
- Haudricourt, André-Georges**, 1948, Les phonèmes et le vocabulaire du thai commun. *Journal Asiatique* n.s. 236:197–238.
- 1953, La place du vietnamien dans les langues austroasiatiques. *Bulletin de la Société de Linguistique de Paris* 49:122–128.
- 1954, De l'origine des tons en vietnamien. *Journal Asiatique* n.s. 243:69–82.
- 1956, De la restitution des initiales complexes dans les langues monosyllabiques: le problème du thai commun. *Bulletin de la Société de Linguistique de Paris* 52/1:307–322.
- 1960, Note sur les dialectes de la région de Moncay. *Bulletin de l'École Française d'Extrême-Orient* 50/1:161–177.
- 1963, Remarques sur les initiales complexes de la langue sek. *Bulletin de la Société de Linguistique de Paris* 58/1:156–163.
- 1966, The limits and connections of Austroasiatic in the Northeast. In Zide, ed. 1966:44–56. The Hague: Mouton.
- 1967, La langue Lakkia. *Bulletin de la Société de Linguistique de Paris* 62/1:165–182.
- 1974, Explication et commentaire. In Robert Shafer *Introduction to Sino-Tibetan*. Wiesbaden: Otto Harrassowitz.
- 1976, La tonologie du sek. *Bulletin de la Société de Linguistique de Paris* 71/1:299–304.
- He Jiashan**, 1983, *Sketch grammar of Gelao* (in Chinese). Beijing: Nationalities Publishing House.
- Headley, Robert K.**, 1977, A Pearic vocabulary. *Mon-Khmer Studies* 6:78–115.
- 1978, English-Pearic vocabulary. *Mon-Khmer Studies* 7:61–94.
- 1985, Proto-Pearic and the classification of Pearic. In Suriya Ratankal et al., eds 1985:428–478.
- Headley, Robert K. et al.**, 1977, *Cambodian-English Dictionary*. 2 vols. Washington: The Catholic University Press.
- Heimbach, Ernest F.**, 1969, *White Meo-English dictionary*. (Linguistic Series IV. Data paper 75). Cornell: South East Asia Program.
- Henderson, Eugénie J.A.**, 1965, *Tiddim Chin: a descriptive analysis of two texts*. London: Oxford University Press.
- 1976, Khasi initial clusters. In Jenner et al., eds 1976 vol.1:523–538.
- Hoang Van Ma, Luc Van Pao and Hoang Chi**, 1974, *Tu-Dien Tay-Nung-Viet*. Hanoi: Nha Xuat Ban Khoa Hoc Xa Hoi.
- Hoffman, John B.**, 1930–78, *Encyclopaedia mundarica*. 16 vols. Reprint Edition 1990. New Delhi: Gian Publishing House.
- Huang Bufan, ed.**, 1992, *A Tibeto-Burman lexicon* (in Chinese). Beijing: Chinese Institute of Nationalities Press.

- Hudak, Thomas J., ed.**, 1991, *William J. Gedney's The Yay language*. Michigan Papers on South and Southeast Asia 38.  
1993, *William J. Gedney's The Saek language*. Michigan Papers on South and Southeast Asia 41.
- Huffman, Franklin E.**, 1976, The relevance of lexicostatistics to Mon-Khmer languages. In Jenner et al., eds 1976, vol.1:539–574.
- Ivanov Vjacheslav V., ed.**, 1977, *Konferencija 'Nostraticheskie jazyki i nostraticheskoe jazykoznanie'*. Moscow: Nauka.
- Jakhontov, Sergej. E.**, 1959–60, Phonetics of Chinese of I millenium BC (in Russian). *Problemy vostokovedenija* 2:137–147 (1959), 6:53–77 (1960).  
1964, *Glottochronology and The Sino-Tibetan language family* (in Russian). Moscow: Nauka.  
1966, A Classification of Chinese dialects (in Russian). In *Issledovanija po fililogii stran Asii i Afriki*. Leningrad: Nauka.  
1971, Origins of Tai numerals (in Russian). *Voprosy filologii stran Azii i Afriki* 1:93–99.  
1977a, In defence of Austro-Thai. In Ivanov, ed. 1977:50–51.  
1977b, Languages of East and South East Asia in the fourth to the first millenium BC (in Russian). In Cheboksarov et al., eds 1977:98–108.  
1979a, Sino-Tibetan languages (in Russian). MS.  
1979b, Tones and initials in some languages of Yunnan (in Russian). *Vostokovedenie* 6:66–77.  
1980, Velar correspondences in Dun-Tai languages (in Russian). *Vostokovedenie* 7:86–97.  
1981, Correspondences of finals in Miao dialects (in Russian). *Vostokovedenie* 8:63–72.  
1983, A classification of Austroasiatic (in Russian). Letter to I. Peiros.  
1984, A reconstruction of Dong-Sui initial consonants (in Russian). *Vostokovedenie* 9: 86–95.  
1985, Voiced consonants in Tai languages (in Russian). *Vostokovedenie* 11:77–86.  
1987, Gelao (in Russian). *Vostokovedenie* 13:65–74.
- Jakhontov, Sergej E., ed.**, 1980, *Razyskanija po obshchemu i kitajskomu jazykoznaniju*. Moscow: Nauka.
- Jacob, Judith M.**, 1960, The structure of the word in Old Khmer. *Bulletin of the School of Oriental (and African) Studies* 23:351–368.  
1976, An examination of the vowels and final consonants in correspondences between PreAngkor and Modern Khmer. In Jenner et al., eds 1976, vol.2:19–38.
- Jenner, Philip N. and Saveros Pou**, 1980–81, A lexicon of Khmer morphology. *Mon-Khmer Studies* 9–10.
- Jenner, Philip H., Laurence C. Thompson and Stanley Starosta, eds**, 1976, *Austroasiatic studies* 2 vols. (Oceanic Linguistics Special Publications 13). Honolulu: The University Press of Hawaii.
- Jones, Robert B.**, 1961, *Karen linguistic studies*. (University of California Publications in Linguistics 25). Berkeley: University of California Press.  
1965, On the reconstruction of Proto-Thai. *Lingua* 14:194–229.
- Jørgensen, Hans**, 1936, *A dictionary of the classical Newari*. Copenhagen: Levin and Munksgaard.  
1941, A grammar of the classical Newari. Copenhagen: Levin and Munksgaard.
- Karlgren, Bernhard**, 1923, *Analytic dictionary of Chinese and Sino-Japanese*. Paris: Librairie Orientaliste Paul Geuthner.

- 1940, Grammata Serica: script and phonetic in Chinese and Sino-Japanese. *Bulletin of the Museum of Far Eastern Antiquities* 12:1–471.
- 1954, Compendium of phonetics in Ancient and Archaic Chinese. *Bulletin of the Museum of Far Eastern Antiquities* 26:211–367.
- 1957, Grammata Serica recensa. *Bulletin of the Museum of Far Eastern Antiquities* 29:1–332.
- Keping, Ksenia B.**, 1979, *Sun'czy v tnagutskom perevode*. Moscow: Nauka.
- 1985, *Tangutskij jazyk*. Moscow: Nauka.
- Keping, K B., V.S. Kolokolov, E.I. Kychanov and A.P. Terent'jev-Katanskij**, eds, 1969, *Morje pismen*. Moscow: Nauka.
- Kern, Hendrik**, 1889, Taalkundige gegevens ter bepaling van het stamland der Maleisch-Polynesische volken. Reprinted in Hendrik Kern 1917, *Verspreide Geschriften* 6:105–120. s'-Gravenhage.
- Kolokolov, V.S. and E.I. Kychanov**, 1966, *Kitajskaja klassika v tangutskom perevode*. Moscow: Nauka.
- Krjukov, Mikhail V. et al.**, 1983, *Drevnije kitajcy*. Moscow: Nauka.
- Kuiper, Franciscus Bernardus Jacobus**, 1948, *Proto-Munda words in Sanskrit*. Amsterdam: Noord-Hollandsche Uitgevermaatschappij.
- 1962, *Nahali. A comparative study*. Amsterdam: N.V. Noord-Hollandische Uitegevers Maatschappij.
- 1965, Consonant variation in Munda. *Lingua* 14:54–87.
- 1966, The sources of the Nahali vocabulary. In Zide, ed. 1966:57–81.
- Laufer, Berthold**, 1916, The Si-hsa language. *T'oung Pao* 170:1–126.
- Laycock, Donald C. and Werner Winter**, eds, 1987, *A world of language: papers presented to professor S.A. Wurm on his 65th birthday*. PL, C–100.
- Li Daoyong, Nie Yizhen, Qiu Efeng**, 1986, *Sketch grammar of Blan* (in Chinese). Beijing: Nationalities Publishing House.
- Li Fang-kuei**, 1940, The Tai dialect of Lungchow (in Chinese). *Institute of History and Philology Monograph Series A* 16.
- 1943, Notes on the Mak language (in Chinese). *Institute of History and Philology Monograph Series A* 20.
- 1948, The distribution of initials and tones in the Sui language. *Language* 24:160–167.
- 1956, *The Tai dialect of Wuming: texts, translations and glossary* (in Chinese). Institute of History and Philology Monograph Series A 19.
- 1957, The Jui dialect of Po-ai: phonology. *Institute of History and Philology* 29/1:315–322.
- 1959, Classification by vocabulary: Tai dialects. *Anthropological Linguistics* 1/2:15–21.
- 1965, The Tai and the Kam-Sui languages. *Lingua* 14:148–179.
- 1966–1968 Notes of the T'en (Yang-hwang) language. *Bulletin of the Institute of History and Philology* 36:419–426, 37:1–45, 40:397–504.
- 1971, Studies in Archaic Chinese Phonology (in Chinese). *Tsinghua Journal of Chinese Studies* n.s.1–2:1–61.
- 1977, *A handbook of comparative Tai*. (Oceanic linguistics Special Publication 15). Honolulu: University Press of Hawaii.
- Li Rong**, 1956, *The sound system of the Qieyun* (in Chinese). Beijing: Kexue Chubanshe.
- Li Yongsui, Chen Kejong and Chen Qiguang**, 1959, Problems in the interrelationship of tones and initials in Miao (in Chinese). *Yuyan Yanjiu* 4:65–86.

- Liang Min**, 1980a, *Sketch grammar of Dong* (in Chinese). Beijing: Nationalities Publishing House.
- 1980b, *Sketch grammar of Maonan* (in Chinese). Beijing: Nationalities Publishing House.
- 1981, A brief sketch of the Liangao language (in Chinese). *Yuyan Yanju* 1.
- 1990a, On the affiliation of the Ge-Yang branch of Kadai. *Kadai* 2:45–55.
- 1990b, The Buyang language. *Kadai* 2:13–22.
- 1990c, The Lachi language. *Kadai* 2:35–44.
- Liang Min and Zhang Junru**, 1996, *An introduction to the Kam-Tai languages* (in Chinese). Beijing: Chinese Academy of Sciences.
- Lindell, Kristina**, 1974, A vocabulary of the Yuan dialect of the Kammu language. *Acta Orientalia* 36:191–207.
- Lindell, Kristina, Jan-Olof Svantesson and Damrong Tayanin**, 1978, Two dialects of the Rameet (Lamet) language. *Cahiers de linguistique Asie Orientale* 4:5–22.
- Liu Lubian**, 1984, *Sketch grammar of Jingphaw* (in Chinese). Beijing: Nationalities Publishing House.
- Logan, James R.**, 1852–56, Ethnology of the Indo-Pacific islands. *The Journal of the Indian Archipelago and Eastern Asia* 7, 8, 9, n.s.1.
- Lombard, Sylvia J.**, 1968, *Yao-English dictionary*. (Data paper 69, Linguistics series 2). Ithaca: Cornell University Southeast Asia Program.
- Lorrain, J. Herbert**, 1909, *A dictionary of the Abor-Miri language*. Shillong.
- 1940, *Dictionary of the Lushai language*. Calcutta: Royal Asiatic Society of Bengal.
- Lu, Shaozun**, 1983, *Sketch grammar of Pumi* (in Chinese). Beijing: Nationalities Publishing House.
- 1986, *Sketch grammar of Cuona Monpa* (in Chinese). Beijing: Nationalities Publishing House.
- Luce, Gordon H.**, 1965, Danaw, a dying Austroasiatic language. *Lingua* 14:148–176.
- 1972, Riang-Lang. Parable of the Prodigal Son. In Jacques Barrau et al., eds *Langues et techniques, nature et société*. Paris: Klincksieck, 1972:169–172.
- 1981, *A comparative wordlist of Old Burmese, Chinese and Tibetan*. London: SOAS.
- Lyman, Thomas Amis**, 1974, *A dictionary of Mong Njua*. *Janua linguarum. Ser. practica* No.123.
- McCoy, John and Timothy Light, eds**, 1986, *Contributions to Sino-Tibetan studies* (Cornell linguistic contributions, 5). Leiden: E.J. Brill.
- Mahdi, Waruno**, 1994, Some Austronesian maverick protoforms with culture-historical implications II. *Oceanic Linguistics* 33/2:431–490.
- Mainwaring, George B.**, 1898, *Dictionary of the Lepcha language*. Berlin: Unger Bros.
- Man, E.H.**, 1889, *A dictionary of the Central Nicobarese language*. 2 vols. London: W.H. Allen.
- Mao Zongwu and Meng Chaoji**, 1986, *A brief description of She* (in Chinese). Beijing: Nationalities Publishing House.
- Mao Zongwu, Meng Chaoji and Zheng Zongze**, 1982, *A brief description of Yao* (in Chinese). Beijing: Nationalities Publishing House.
- Marcus, Russell**, 1970., *English-Lao and Lao-English dictionary*. Rutland, Vermont: Charles E. Tuttle Co.
- Marrison, Geoffrey E.**, 1967, The classification of the Naga languages of the North-West India. PhD dissertation. University of London.

- 1989, The Adi-Dafla languages of North-east India: a sketch. In Bradley et al., eds 1989:205–222.
- Maspero, Henri**, 1912, Etudes sur la phonétique historique de la langue annamite. *Bulletin de l'École Française d'Extrême-Orient* 12/1:1–127.
- Materialy**, 1979, *Materialy sovetsko-v'etnamskoj lingvisticheskoj ekspedicii. Jazyk lakha*. Moscow: Nauka.
- 1987, *Materialy sovetsko-v'etnamskoj lingvisticheskoj ekspedicii. Jazyk myong*. Moscow: Nauka.
- 1990, *Materialy sovetsko-v'etnamskoj lingvisticheskoj ekspedicii. Jazyk ksinmul*. Moscow: Nauka.
- Matisoff, James A.**, 1969, Lahu and Proto Lolo-Burmese. *Occasional Papers of the Wolfenden Society on Tibeto-Burman Linguistics* 1:117–221.
- 1972, *The Loloish tonal split revisited*. Berkeley: Center for South and Southeast Asia Studies.
- 1973, *The Grammar of Lahu*. (University of California Publications in Linguistics, 75). Berkeley: University of California Press.
- 1974, The tones of Jinghpaw and Lolo-Burmese: common origin versus independent development. *Acta Linguistica Hafniensia* 15/2:153–212.
- 1978a, *Variational semantics in Tibeto-Burman*. (Occasional Papers of the Wolfenden Society on Tibeto-Burman Linguistics 6). Philadelphia: Institute for the Study of Human Issues.
- 1978b, Stars, moon and spirits. Paper presented at 11th Sino-Tibetan conference. Tucson.
- 1985a, God and the Sino-Tibetan copula. *Journal of Asian and African Studies* 29:1–81.
- 1985b, Out on a limb: arm, hand, and wing in Sino-Tibetan. In Thurgood et al., eds 1985:421–450.
- 1988a, Proto-Hlai initials and tones: a first approximation. In Edmondson and Solnit, eds 1988:289–321.
- 1988b, *The dictionary of Lahu*. (University of California Publications in Linguistics 111). Berkeley: University of California Press.
- 1991a, Jiburish revisited: tonal splits and heterogenesis in Burmo-Naxi-Lolo checked syllables. *Acta Orientalia* 52:91–113.
- 1991b, Sino-Tibetan linguistics: present state and future prospects. *Annual Review of Anthropology* 20:469–504.
- Matson, Dan M.**, 1964, A grammatical sketch of Juang, a Munda language. PhD dissertation, University of Wisconsin.
- Mazaudon, Martine**, 1973, *Phonologie Thatamang, étude phonologique du dialecte tamang de Risangkku*. (Langues et civilisations à tradition orale 4). Paris: Société d'Études Linguistiques et Anthropologiques de France.
- 1976, Tibeto-Burman tonogenesis. *Linguistic of Tibeto-Burman Area* 3/2. 123pp.
- Michailovsky, Boyd**, 1985, Tibeto-Burman suffixes: evidence from Limbu (Nepal). In Thurgood et al., eds 1985:363–375.
- Miller, Roy A.**, 1958, The Tibeto-Burman infix system. *Journal of the American Oriental Society* 78/3:193–204.
- Milne, Leslie**, 1931, *A dictionary of Palaung-English and English-Palaung*. Rangoon: Government Printing.
- Mitani, Yasuyuki**, 1965, A descriptive and comparative study of the Khamet phonology (in Japanese). *To:nan adzia kenkyu*: 3/3:22–51.



- 1966, Descriptive study of the Lawa language (Bo Luang dialect) (in Japanese). *To:nan adzia kenkyu*: 4/2:40–62.
- 1972, A short history of Lawa (in Japanese). *To:nan adzia kenkyu*: 10/1:131–168.
- Morev, Lev N.**, 1964a, *Osnovy sintaksisa tajskogo jazyka* (in Russian). Moscow: Nauka.
- 1964b, *Tajsko-russkij slovar'*. Moscow: Russkoj jazyk.
- 1978, *Jazyk ly*. Moscow: Nauka.
- 1983, *Jazyk shan*. Moscow: Nauka.
- 1988, *Jazyk sek*. Moscow: Nauka.
- Morev, Lev N. et al.**, 1982, *Laossko-russkij slovar'*. Moscow: Russkij jazyk.
- Morev Lev N., Aleksej A. Moskaljov and Jurij Y. Plam**, 1972, *Laosskij jazyk*. Moscow: Nauka.
- Morse, Stephen**, 1989, Five Rawang dialects compared plus more. In Bradley et al. eds 1989:237–250.
- Moskaljev, Aleksej A.**, 1971, *Grammatika chzhuang jazyka*. Moscow: Nauka.
- 1978, *Jazyk duan'skikh yao*. Moscow: Nauka.
- Nagano, Yasuhiko**, 1978, Preliminary remarks to rGyarong dialectology. Paper presented at 11th Sino-Tibetan conference. Tucson.
- 1979a, A historical study of rGyarong initials and prefixes. *Linguistics of the Tibeto-Burman Area* 4/2:44–68.
- 1979b, A historical study of rGyarung rhymes. *Linguistics of the Tibeto-Burman Area* 5/1:37–47.
- 1983, A historical study of the rGyarong verb system. PhD dissertation, University of California Berkeley.
- Nevskij, Nikolaj A.**, 1960, *Tangutskaja filologiya*. 2 vols. Moscow: Nauka.
- Nguyen Minh Du'c**, 1972, Language and scripture of the Pa-hng (pa then) (in Vietnamese). In *Tim hieu ngon ngu cac dan toc thieu so o Viet Nam*. Hanoi: Vien ngon ngu hoc.
- Nguyen Phu Phong, Tran Tri Doi and M. Ferlus**, 1988, *Lexique Vietnamiens-Ruc-Français*. Paris: Université de Paris VII.
- Nikolaev, Sergej L. and Sergej A. Starostin**, 1994, A North Caucasian etymological dictionary. Moscow: Asterisk Publishers.
- Nishida, Tatsuo**, 1964–66, *A study of the Hsi-hia language* (in Japanese). 2 vols. Tokyo: Zayuhō: Kankō:kai
- 1973, *A study of the Tosu-Chinese vocabulary, Tosu I-Yu: the structure and lineage of Tosu, a new language* (in Japanese). Tokyo: Shokado
- Norman, Jerry and Mei Tsulin**, 1978, The Austro-Asiatic in Ancient South China. Some lexical evidence. *Monumenta Serica* 32:274–301.
- Noss, Richard B.**, 1964, *Thai reference grammar*. Washington D.C: FSI.
- Osada Toshiki**, 1992, *A reference grammar of Mundari*. Tokyo: Institute for the Languages and Cultures of Asia and Africa.
- Ouyang Jueya and Fu Zhennan**, 1988, On the issues of the Genetic classification of Cun speech in Hainan Island. *Minzu Yuwen* 1:8–17.
- Ouyang Jueya and Zheng Yiqing**, 1980, *Sketch grammar of Li* (in Chinese). Beijing: Nationalities Publishing House.
- 1983, *Survey of the Li languages* (in Chinese). Beijing: Chinese Academy of Social studies.

- Pallegoix, D.J.B.**, 1854, *Dictionarium linguae Thai sive siamensis interpretatione Latina, gallica et anglica*. Paris.
- Parkin, Robert**, 1991, *A guide to Austronesian speakers and their languages*. (Oceanic Linguistics Special Publications 23). Hawaii: University of Hawaii Press.
- Paulsen, Debbie L.**, 1989, A phonological reconstruction of Proto-Plang. MA thesis, The University of Texas at Arlington (reprinted in *Mon-Khmer Studies* 18–19:160–222.)
- Pawley, Andrew and Medina Pawley**, 1994, Early Austronesian terms for canoe parts and seafaring. In Pawley and Ross, eds 1994:329–361.
- Pawley Andrew and Malcolm Ross, eds**, 1994, *Austronesian terminologies: continuity and change*. PL, C–127.
- Peiros, Ilia**, 1975, Ancient language contact in central Asia (in Russian). In *Problemy sovremennogo Kitaja*, 182–190. Moscow: Institute of Far Eastern Studies.
- 1978a, Origins of Sino-Tibetan tones: Lolo-Burmese and Kachin (in Russian). *Konferentsija "Problemy rekonstruktsii"* 90–92. Moscow: The Institute of Linguistics.
- 1978b, Proto Gurung reconstruction (in Russian). MS.
- 1982a, Problems in reconstructing the Sino-Tibetan tonal system: Tangut and languages of Nepal (in Russian). *Teoreticheskie problemy vostochnogo jazukoznanija* 6:150–154. Moscow: Nauka.
- 1982b, Proto Kam-Sui (in Russian). Paper included in a collection of papers on Tai edited by M. V. Krjukov (not published).
- 1984a, Ancient East and South-East Asia: comparative data and interpretations (in Russian). In *Lingvisticheskaja rekonstrukcija i drevnejshaja istorija Vostoka* 4:3–14. Moscow: Nauka.
- 1984b, Some coincidences between Sino-Tibetan and Dravidian (in Russian). In *Lingvisticheskaja rekonstrukcija i drevnejshaja istorija Vostoka* 4:80–82. Moscow: Nauka.
- 1985a, Lolo-Burmese comparative phonology and lexicon (in Russian). MS.
- 1985b, The Austro-Tai hypothesis and contact between Sino-Tibetan and Austronesian languages (in Russian). In *Drevnij Vostok. Etnikul' turnye svjasi*. 319–332. Moscow: Nauka.
- 1989a, Linguistic history of the Asian East (in Russian). In Ilia Peiros, ed. 1989:167–178.
- 1989b, Proto-Palaung-Wa. Paper presented at the Nostratic seminar. Moscow.
- 1989c, Some specifications of Proto Karenic reconstruction (in Russian). In Bulatova and Dybo, eds 1989:225–245.
- 1989d, The Austric macrofamily: some considerations. In Shevoroshkin, ed. 1989:66–69.
- 1990a, Comparative Kadai lexicon MS, 175pp.
- 1990b, Linguistic aspects of ethnic prehistory of South-East Asia (in Russian). In Arutjunov, ed. 1990:36–88.
- 1994a, Some problems of Austronesian accent and \*t ~ \*C (notes of an outsider). *Oceanic Linguistics* 33/1:105–126.
- 1996, *Katuic comparative dictionary*. PL, C–132.
- 1997a, On the correlation between linguistic and archaeological reconstructions. In P. McConvell and N. Evans, eds *Archaeology and linguistics*. Melbourne: Oxford University Press, 1997:83–98.
- 1997b, Macro families: can a mistake be detected? In I Hegedus, P. Michalove and A. Manaster Ramar, eds *Indo-European, nostratic and beyond: festschrift for Vitatij V. Shevoroshkin*. Journal of Indo-European Studies Monograph Series 22:265–292.

- n.d., Materials for comparative Mon-Khmer lexicon. MS.
- Peiros, Iliia, ed.**, 1989, *Lingvističeskaja rekonstrukcija i drevnejšaja istorija Vostoka*. Moscow: Nauka.
- Peiros, Iliia and Victor A. Shnirelman**, 1985, Toward an understanding of Proto-Dravidian prehistory. Paper presented at the International Symposium on Language and Prehistory, University of Michigan, Ann Arbor.
- 1989, The emergence of rice cultivation (according to interdisciplinary researches). In Iliia Peiros, ed. 1989:179–195.
- 1992, Towards a Dravidian homeland (in Russian) *Vestnik Drevnej Istorii* 1:135–147.
- Peiros, Iliia and Sergej A. Starostin**, 1977, On the Genetic comparison of Chinese and Tibetan: phonological correspondences (in Russian). In Cheboksarov, et al., eds 1977:209–221.
- 1984, Sino-Tibetan and Austro-Tai. *Computational analysis of Asian and African languages* 22:123–127.
- 1986, A lexicostatistical classification of Sino-Tibetan languages (in Russian). MS.
- 1996, A comparative vocabulary of five Sino-Tibetan languages, fascicles I–VI. The University of Melbourne: Melbourne.
- forthcoming, Lexicostatistics revisited. MS.
- Pinnow, Heinz-Jürgen**, 1959, *Versuch einer historischen Lautlehre der Kharia-Sprache*. Wiesbaden: Otto Harrassowitz.
- 1965, Personal pronouns in the Austroasiatic languages: a historical study. *Lingua* 14:3–42.
- Pittman, Richard.S. and Jessie R. Glover**, 1970, Proto-Tamang-Gurung-Thakali. In Hale and Pike, eds 1970 vol.3:9–22.
- Plank, Frans, ed.**, 1979, *Ergativity: towards a theory of grammatical relations*. New York: Academic Press.
- Pou, Saveros and Phillip Jenner**, 1974a, Proto-Indonesian and Mon-Khmer. *Asian Perspectives* 17/2:112–124.
- 1974b, Some Chinese loanwords in Khmer. *Journal of Oriental Studies* 11/1:1–90.
- 1992, *Dictionnaire Vieux Khmer-Français-Anglais*. Paris: Centre de documentation et de recherche sur la civilisation Khmère.
- Prapin Manomaivibool**, 1976, Thai and Chinese – are they genetically related? *Computational analysis of Asian and African languages* 6:11–32.
- Prasert Srivises**, 1978, *Kui (Suai)-Thai-English Dictionary*. Edited by Theraphan L. Thongkum and J.W. Gainey. Bangkok: Chulalongkorn University Language Institute.
- Preisig, Elisabeth**, 1994, *Kmhmu'-Lao-French-English Dictionary*. Vientiane: Institute of Research on Culture.
- Pulleyblank, Edwin G.**, 1962, The consonantal system of Old Chinese. *Asia Major* 9:58–144, 206–265.
- 1984, *Middle Chinese: a study in historical phonology*. Vancouver: University of British Columbia Press.
- 1991, *Lexicon of reconstructed pronunciation in Early Middle Chinese, Late Middle Chinese, and Early Mandarin*. Vancouver: University of British Columbia Press.
- Purnell, Herbert C., Jr**, 1970, Toward a reconstruction of Proto-Miao-Yao. PhD dissertation, Cornell University. Ann Arbor: University Microfilms International.
- Qu Aitang and Tan Kerang**, 1983, *Ali Tibetan language* (in Chinese). Beijing: Academy of Social Sciences Publishing House.

- Rabel, Lili**, 1961, *Khasi, a language of Assam*. Baton Rouge: Louisiana State University Press.
- Radhakrishnan, R.**, 1981, *The Nancowry word: phonology, affixal morphology and roots of a Nicobarese language*. Edmonton, Alberta: Linguistic Research Inc.
- Ramamutri, G.V.**, 1931, *A manual of the So:ra (or Savara) language*. Madras: Government Press.
- 1938, *Sora-English dictionary*. Madras: Government Press.
- Reichle, Verena**, 1981, *Bawn language and lore*. Berne: Peter Lang.
- Reid, Lawrence A.**, 1994, Morphological evidence for Austric. *Oceanic Linguistics* 33/2:323–344.
- Rischel, Jørgen**, 1995, *Minor Mlabri. A hunter-gatherer language of Northern Indochina*. Copenhagen: Museum Tusulanum Press.
- Ruhlen, Merritt**, 1987, *A guide to the world's languages*. Stanford: Stanford University Press.
- Sagart, Laurent**, 1989, Glottalized tones in China and South-East Asia. In Bradley et al., eds 1989:83–93.
- 1993a, Chinese and Austronesian: evidence for genetic relationship. *Journal of Chinese Linguistics* 21:1–62.
- 1993b, L'infixe -r- en chinois archaïque. *Bulletin de la Société de Linguistique de Paris* 88:261–293.
- 1994, Proto-Austronesian and Old Chinese evidence for Sino-Austronesian. *Oceanic Linguistics* 33/2:271–308.
- Savina, François M.**, 1924, *Dictionnaire etymologique Francais-Nung-Chinois*. Hong Kong: Imprimerie de la Société des Missions Etrangères.
- 1926, Dictionnaire Francais-Man. *Bulletin de l'École Française d'Extrême-Orient* 26:11–255.
- 1931, Lexique d'ay-français, accompagné d'un petit lexique français-d'ay et d'un tableau des différences dialectales. *Bulletin de l'École Française d'Extrême-Orient* 31:103–199.
- 1965, Le vocabulaire bê de F. M. Savina (présenté par A.G. Haudricourt). *Bulletin de la Société de Linguistique de Paris* 57.
- Schmidt, Wilhelm**, 1901, Die Sprachen der Sakay und Semang auf Malakka und ihr Verhältnis zu den Mon-Khmer-Sprachen. *Bijdragen tot de Taal-, Land- en Volkenkunde van Nederlandisch-Indie* 52/8:399–583.
- 1904, *Grundzüge einer Lautlehre der Khasi-Sprache, in ihren Beziehungen zu derjenigen der Mon-Khmer-Sprachen*. München.
- 1905, *Grundzüge einer Lautlehre der Mon-Khmer-Sprachen*. Denkschriften der Kaiserlichen Akademie der Wissenschaften, Philosophisch-Historische Classr. Bd. 51:1–233.
- 1906, Die Mon-Khmer-Völker: ein Bindeglied zwischen Völkern Zentral-Asiens und Austronesiens. *Archive für Anthropologie* 5:59–109.
- Sebeok, Thomas A.**, 1942, An examination of the Austroasiatic languages family. *Language* 18/3:206–217.
- Shafer, Robert**, 1952, Etudes sur l'austroasiens. *Bulletin de la Société de Linguistique de Paris* 48/1:111–158.
- 1954, *Ethnography of ancient India*. Wiesbaden: Otto Harrassowitz.
- 1964, Miao-Yao. *Monumenta Serica* 23:398–411.
- 1974, *Introduction to Sino-Tibetan*. Wiesbaden: Otto Harrassowitz.

- Sharma, Devidata**, 1989a, *Tibeto-Himalayan languages of Uttarakhand* (part I). Delhi: Mittal.
- 1989b, *Tribal languages of Hiachal Pradesh* (part I). Delhi: Mittal.
- 1990, *Tibeto-Himalayan languages of Uttarakhand* (part II). Delhi: Mittal.
- 1992, *Tribal languages of Hiachal Pradesh* (part II). Delhi: Mittal.
- Shevoroshkin Vitalij, ed.**, 1989, *Reconstructing languages and cultures*. Bohum: Studienverlag Dr. Norbert Brockmeyer.
- Shi Jinbo, Bai Bin and Huang Zhenhua**, 1983, *Wenhai studies* (in Chinese). Beijing.
- Shorto, Harry L.**, 1962, *A dictionary of Modern Spoken Mon*. London: Oxford University Press.
- 1971, *A dictionary of the Mon inscriptions, from the sixth to the sixteenth centuries, incorporating materials collected by the late C.O. Blogden* (London Oriental Series 24). London: Oxford University Press.
- 1976a, In defence of Austric. *Computational analysis of Asian and African languages* 6:95–104.
- 1976b, The vocalism of Proto-Mon-Khmer. In Jenner et al., eds, 1976, vol.1:1041–1068.
- Simon, I.M.**, 1976, *Hill Miri language guide*. Shillong: North-East Frontier Agency.
- Singh, U Nissor**, 1906, *Khasi-English dictionary*. Shillong: Eastern Bengal and Assam Secretariat Press.
- Sirk, Ulo**, 1984, Localisations of earliest stages of Austronesian (in Russian). *Lingvisticheskaja rekonstrukcija i drevnejshaja istorija Vostoka* 4:15–19. Moscow: Nauka.
- 1987, On the geographical location of Early Austronesian. In Laycock and Winter, eds, 1987:623–630.
- Skrefsrud, Lars O.**, 1889, *A short grammar of the Mech or Boro language*. Benagoria: Santal Mission.
- Smalley, Willam A.**, 1961, *Outline of Khmu' structure*. Baltimore: American Oriental Society.
- Smith, Kenneth D.**, 1967, *Sedang vocabulary*. Saigon: Department of Education.
- 1972, *A phonological reconstruction of Proto-North-Bahnaric*. (Language Data, Asian-Pacific series 2). Santa Ana: SIL.
- 1979, *Sedang grammar*. PL, B-50.
- Sofronov, Mikhail V.**, 1968, *Tangut skajagrammatika*. 2 vols. Moscow: Nauka.
- Sokolovskaja, Natalia K.**, n.d., Proto Viet-Muong phonological reconstruction and comparative list (in Russian). MS, 65pp.
- Solnit, David B.**, 1988, The position of Lakkia within Kadai. In Edmondson and Solnit, eds 1988:219–238.
- Sprigg, R.K.**, 1966, Lepcha and Balti Tibetan: tonal or non-tonal languages? *Asia Major* 12:185–201.
- Starosta, S., A. Pawley and L. Reid**, 1982, The evolution of focus in Austronesian. In A. Halim, L. Carrington and S.A. Wurm, eds *Papers from the Third International conference on Austronesian Linguistics*, vol.2:145–170. PL, C-75.
- Starostin, Sergej A.**, 1979, Reconstruction of Archaic Chinese phonological system (in Russian). PhD thesis. Moscow: Institute of Oriental Studies.
- 1982, Proto Yenisean and the external connections of the Yeniseian languages (in Russian). In E.A. Alekseenko, ed. 1982 *Studia Ketica* 144–237. Leningrad: Nauka.

- 1984, A hypothesis of a genetic relation between Sino-Tibetan Yenisean and North Caucasian languages (in Russian). *Lingvističeskaja rekonstrukcija i drevnjaja istorija Vostoka* 4:19–38. Moscow: Nauka.
- 1985, East Himalayan (in Russian). MS.
- 1989a, Comparative linguistics and lexicostatistics (in Russian). In Peiros, ed. 1989:106–124.
- 1989b, *A reconstruction of the Old Chinese phonological system* (in Russian). Moscow: Nauka.
- 1991, *The Altaic problem and the origins of Japanese* (in Russian). Moscow: Nauka.
- 1995, The historic position of Bai. *Moskovskij Lingvističeskij Žurnal* 1:174–190.
- n.d., Tangut readings. A handwritten addition to *Wenhai*. MS.
- Strecker, David**, 1983, Proto-Tay vowels revisited: a comparison and critique of the work of Sarawit and Li. *Linguistics of the Tibeto-Burman Area* 7/2:33–74.
- 1985, The classification of the Caolan languages. In Suriya Ratankal et al., eds 1985:479–492.
- 1988, Gedney's puzzle in Kam-Sui. In Edmondson and Solnit, eds 1988:107–127.
- Stubel, Hans**, 1937, *Die Li-Stämme der Insel Hainan*. Berlin: Klinkhart und Biermann.
- Sun Hongkai**, 1981, *Sketch grammar of Qiang* (in Chinese). Beijing: Nationalities Publishing House.
- 1982, *Sketch grammar of Trung* (in Chinese). Beijing: Nationalities Publishing House.
- Sun Hongkai, Lu Shaozun and Zhang Jichuan**, 1980, *Monpa, Lhopa and Deng people's languages* (in Chinese). Beijing: Chinese Academy of Social Sciences.
- Suriya Ratanakul**, 1986, *Thai-Sgaw Karen dictionary*, vol.1–2. Salaya: Mahidol University.
- Suriya Ratankal, D. Thomas and Suwilai Premsritat, eds**, 1985, *Southeast Asian linguistic studies presented to André-Georges Haudricourt*. Bangkok:
- Suwilai Premsrirat**, 1993, *Thai-Khmu-English dictionary*. Institute of Languages and Culture for Rural Development, Mahidol University.
- Svantesson, Jan-Olaf**, 1983, *Kammu phonology and morphology*. Lund: Gleerup.
- 1988, U. *Linguistics of the Tibeto-Burman Area* 11/1:64–133.
- Svantesson, Jan-Olaf, Wang Jingliu and Chen Xiagmu**, 1981, Mon-Khmer languages in Yunnan. *Asie du Sud-Est et Monde Insulindien* 12/1–2:91–99.
- Swadesh, Moris**, 1952, Lexicostatistic dating of prehistoric ethnic contacts. *Proceedings of the American Philosophical Society* 96:452–463.
- Tamsang, K.P.**, n.d., *The Lepcha-English encyclopedic dictionary*. Kalimpong: Mani Press.
- Thiengburanathum, W.**, 1986, *A new English-Thai dictionary*. Bangkok.
- Thomas David D.**, 1964, A survey of Austroasiatic and Mon-Khmer comparative studies. *Mon-Khmer Studies* 1:149–163.
- 1966, Mon-Khmer subgrouping in Vietnam. In Zide, ed. 1966:194–202.
- 1971, *Chrau Grammar*. Oceanic linguistics Special Publications 7. Honolulu: The University Press of Hawaii.
- 1979, The place of Alak, Tampuan and West Bahnaric. *Mon-Khmer Studies* 8:171–186.
- Thomas, David D. and Robert K. Headley**, 1970, More on Mon-Khmer subgroupings. *Lingua* 25/4:398–418.
- Thomas, David D. and Marilyn L. Smith**, 1967, Proto-Jeh-Halang. *Zeitschrift für Phonetik, Sprachwissenschaft und Kommunikationsforschung* 20/1–2:157–75.

- Thomas David D. and Tho Sang Luc**, 1966, *Chrau vocabulary. Chrau-Viet-English*. Saigon: Department of Education.
- Thomas, Dorothy M.**, 1967, A phonological reconstruction of Proto-East-Katuić. MA thesis, University of North Dakota. Dallas: Summer Institute of Linguistics. Microfiche Publications.
- Thompson, Laurence C.**, 1976, Proto-Viet-Muong phonology. In Jenner et al., eds 1976, vol.2:1113–1203.
- Thongkum L. Therapan**, 1984, *Nyah Kur (Chao Bon)-Thai-English dictionary* (Monic language studies 2). Bangkok: Chulalongkorn University Printing House.
- Thongkum L. Therapan and See Puengpa**, 1980, *A Bruu-Thai-English dictionary*. Bangkok: Chulalongkorn University Printing House.
- Thurgood, Graham**, 1982, Subgrouping on the basis of shared phonological innovations: a Lolo-Burmese case study. *Proceedings of the Berkeley Linguistic Society* 8:251–260.
- 1984, The ‘Rung’ languages: a major new Tibeto-Burman subgroup. *Proceedings of the Berkeley Linguistic Society* 10:338–349.
- 1985a, Benedict’s work: past and present. In Thurgood et al., eds 1985:1–15.
- 1985b, Pronouns, verbal agreement systems, and the subgrouping of Tibeto-Burman. In Thurgood et al., eds 1985:376–400.
- 1988, Notes on the reconstruction of Proto-Kam-Sui. In Edmondson and Solnit, eds 1988:179–218.
- 1991, Proto-Hlai (Li): a look at the initials, tones and finals. *Kadai*: 3:1–49.
- 1994, Tai-Kadai and Austronesian: the nature of historical relationship. *Oceanic Linguistics* 33/2:343–368.
- Thurgood, Graham, James A. Matisoff and David Bradley, eds**, 1985, *Linguistics of the Sino-Tibetan area: the state of the art – papers presented to Paul K. Benedict for his 71st birthday*. PL, C–87.
- Voegelin, Charles F. and Florence M.R. Voegelin**, 1975, *Classification and index of the world’s languages*. New York: Elsevier.
- Vovin, Alexander**, 1994, Is Japanese related to Austronesian? *Oceanic Linguistics* 33/2:369–390.
- Wang Fushi**, 1980, Tones and rhymes in Miao (in Chinese). *Minzu Yuwen* 2:6–23.
- 1981, New understanding of Miao initials and finals comparisons (in Chinese). *Yuyan yanju* 1.
- 1985, *Sketch grammar of Miao* (in Chinese). Beijing: Nationalities Publishing House.
- Wang Fushi and Mao Zongwu**, 1995, *Reconstruction of the phonology of Proto-Hmong-Mjen* (in Chinese). Beijing: Zhongguo Shehui kexue chubanshe.
- Wang Jun and Zheng Guoqiao**, 1980, *Sketch grammar of Mulao* (in Chinese). Beijing: Nationalities Publishing House.
- Watson, Richard, Sandra K. Watson and Cubat**, 1979, *Pakoh dictionary*. Huntington Beach: SIL.
- Watters, David E. and Nancy Watters**, 1973, *An English-Kham, Kham-English glossary*. Kartipur: SIL.
- Wei Qingwen and Qing Guosheng**, 1980, *Sketch grammar of Zhuang* (in Chinese). Beijing: Nationalities Publishing House.
- Weidert, Alfons**, 1979, Die reconstruction des Tonsystems des Ahom. *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 129:321–334.
- 1987, *Tibeto-Burman Tonology*. (Current issues in Linguistic Theory 54). Amsterdam: John Benjamins Publishing Company.

- Weidert, Alfons and Birkam Subba**, 1985, *Concise Limbu grammar and dictionary*. Amsterdam: Lobster Publications.
- Wen Yu**, 1943, Phonetics of Qiang (Wasi dialect) (in Chinese). *Bulletin of Chinese Studies* 3:293–308.
- 1945, Phonetics of Qiang (Huoerkuo dialect) (in Chinese). *Studia Serica* 4, Supplement.
- 1950, An abridged Ch'iang vocabulary (Chiu Tsu Ying dialect). *Studia Serica* 9/2:217–254.
- 1951, An abridged Ch'iang vocabulary (Wenchuan, Lobuzhai dialect). *Studia Serica* 10.
- Wolfended, Stuard S.**, 1929, *Outlines of the Tibeto-Burman linguistic morphology*. London: Royal Asiatic Society.
- Wolff, John U.**, 1974, Proto-Austronesian \*r and \*d. *Oceanic Linguistics* 13:77–121.
- 1981, Proto-Austronesian \*c, \*z, \*g and \*T. In Halim et al., eds 1981:1–30.
- Wulff, K.**, 1934, *Chinesisch und Tai. Sprachvergleichende Untersuchungen*. Copenhagen: Levin and Munksgaard.
- 1942, *Über das Verhältnis des Malayo-Polynesischen zum Indochinesischen*. Copenhagen: Levin and Munksgaard.
- Xiang Rizheng**, 1992, *Miao-Chinese dictionary (Western Hunan dialect)*. Chengdu: Sichuan Nationalities Press.
- Xing Gongwan**, 1991a, Consonantal correspondences between Chinese and Austronesian (in Chinese). *Minzu yuwen* 4:23–35.
- 1991b, Correspondences of initials and consonantal endings of finals between Chinese and the Austronesian languages (in Chinese). *Minzu yuwen* 5:13–25.
- 1991c, On the genealogical relationship between Chinese and Austronesian (in Chinese). *Minzu yuwen* 3:1–14.
- Xu Xijian, Xiao Jiacheng, Yue Xiangkun and Dai Qingxia**, 1983, *Jingpho-Chinese dictionary*. Kunming: Yunnan Renmin Chubanshe.
- Yan Qixiang, et al.**, 1981, *Wa-Chinese dictionary*. Kunming: Yunnan minzu chubanshe.
- Yan Qixiang and Zhou Zhizhi**, 1995, *The Mon-Khmer languages in China and Austro-Asiatic languages* (in Chinese). Beijing: The Central University for Nationalities Press.
- Zhang Jichuan**, 1986, *Sketch grammar of Canglo Monpa* (in Chinese). Beijing: Nationalities Publishing House.
- Zhang Junru**, 1980, *Sketch grammar of Sui* (in Chinese). Beijing: Nationalities Publishing House.
- 1989, Comparison between Biao and languages of Kam-Tai group. *Minzu Yuwen* 6:42–54.
- 1990a, Comparison between Yao people's Lajia (Lakkja) language and languages of Kan-Tai group (in Chinese). *Minzu Yuwen* 6:38–49.
- 1990b, The Pubiao language. *Kadai* 2:23–34.
- Zhang Ziming**, 1982, Negative adverbs in Gelao of Puding, Guizhou (in Chinese). *Minzu yuwen* 3:25–29.
- 1992, The relationship between Laji and Gelao languages (in Chinese). *Minzu yuwen* 3:19–27.
- 1993, *Gelao studies* (in Chinese). Guiyang: Guizhon Nationalities Publishing House.
- Zhou Zhizhi and Yan Qixiang**, 1981, *Sketch grammar of Wa* (in Chinese). Beijing: Nationalities Publishing.
- Zide, Arlene R.K. and Norman Zide**, 1976, Proto-Munda cultural vocabulary: evidence for early agriculture. In Jenner et al., eds 1976, vol.2:1295–1334.



- Zide, Norman H.**, 1965, Gutob-Remo vocalism and glottalized vowels in Proto-Munda. *Lingua* 14:43–53.
- 1966, Korku low tone and Proto-Korku-Khrwarian vowel system. In Zide, ed. 1966:214–229.
- Zide, Norman H., ed.**, 1966, *Studies in comparative Austroasiatic linguistics* (Indo-Iranian monographs 5). The Hague: Mouton.
- Zorc, Robert D.**, 1981, Where, O where, have the laryngeals gone? Austronesian laryngeals re-examined. In Halim et al., eds 1981:111–144.

