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A study of the Bai (Minjia) language along historical lines

Wiersma, Grace Claire, Ph.D.

University of California, Berkeley, 1990

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A Study of the Bai (Minjia) Language Along Historical Lines

By

Grace Claire Wiersma

A.B. (University of California) 1967

M.A. (University of California) 1977

DISSERTATION

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..... James A. Motisak	May 22, 1990
..... Chair	Date
..... [Signature]	May 22, 1990
..... [Signature]	May 23, 1990
..... [Signature]	May 22, 1990

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A Study of the Bai (Minjia) Language Along Historical Lines

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To the memory of
J. Gijsbert Wiersma

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Introduction

This work combines two complementary studies that are based on different materials: (1) application of the comparative method to a dialect glossary of Bai that was recently published in China (Zhao and Xu 1984, *Baiyu Jianzhi*, hereafter *Jianzhi*), and (2) preliminary analysis of spoken Bai text materials that I collected during two years of research and study with a native-speaking Bai language consultant (LSN) at the Central Institute of Nationalities in Beijing.

While the nature and genetic status of Bai remain controversial until now, with some scholars exploiting unusual Bai/Chinese correspondences to reconstruct an ancestral stage of Sinitic, what the comparative study of Bai dialects shows is that internal correspondence patterns that are clearly regular and inherent to the dialects involve lexical morphemes of different proveniences, Chinese as well as Tibeto-Burman. That being the case, it is not clear whether such patterns are more appropriately viewed in the context of historical developments well established for parts of Chinese, or alternatively, linked with developments now generally acknowledged as diagnostic for the Loloish grouping of Tibeto-Burman. Although there is still room for differences and speculation on the relative weighting of Chinese versus Tibeto-Burman resemblances in Bai, I believe the comparative approach to the Bai tonal system adopted in Chapter 2 will show the basically heterogeneous nature of the language, both lexical and structural.

This mixture of resemblances is not inconsistent with the picture we get from looking at the Bai grammar, as may be demonstrated by the analysis in Chapter 3 of text materials that were provided by my consultant in Beijing over a twelve-month period from June 1988 to June 1989. The grammar that emerges from study of his speech reveals among other things a significant literary influence from Chinese. A pronoun system that is inflected for case in genitive functions shows extended applications to nominalization (in combination and competition with a true nominalizing particle), and a system of verbal functors operating in ordered serial constructions allows comparison to well-established analyses of similar paradigms in Chinese and Tibeto-Burman languages. The consultant's language is also considered in Chapter 3 in the light of published statements about contrasts that distinguish the surface grammars of the Bai dialects, and his speech is found to represent the standard dialect of Jianchuan on syntactic grounds, despite some systematic departures in his realization of predicted vowel qualities (or rhymes). Some of these departures are the subject of another paper I plan to write in the near future, and I do not treat them here.

Unusual phonation-type features characterising the consultant's speech are described, however, in Chapter 2 and drawn into my comparative study, where they figure in tonogenetic speculations leading to a tentative proposal for convergence of different historical sound changes from two source languages at an earlier stage.

Considered study of the linguistic data naturally raises questions about the historical background of the Bai speech community, and I attempt to add some new information in this regard in an introductory chapter that is based mainly on scholarly materials I obtained while studying in China. Some data from personal interviews is also reported there in a preliminary way.

Abbreviations and Symbols

Abbreviations and styles of representing data in this work fall into a number of categories.

I. Phonetic characters

The following phonetic character set is used to represent Bai data and data from other languages that has appeared in a number of different sources. As far as possible I follow the representation of the source.

β is a voiced bilabial fricative as in Bai (LSN) 'anger': tu42+

[β u42+]

θ is a voiceless interdental fricative as in Burmese 'meat':

a11.t θ a53

r indicates a rhotic vowel or r-colored vowel quality as in Bai

(Dali) 'white': pe r 42+

ʈ is a voiceless retroflex stop as in Bai (Bijiang) 'just before now'

$\text{ʈ}o33\text{ʈ}u21+$

ɖ is a voiced retroflex stop as in Bai (Bijiang) CLF-'tree' $\text{ɖ}u42+$

ʂ is a voiceless retroflex fricative as in Bai (Bijiang) 'body louse'

$\text{ʂ}i44+$

ʐ is a voiced retroflex fricative as in Bai (Bijiang) 'lamplight'

$\text{ʐ}e r 42+$

ʃ is a voiceless alveolar fricative as in Jingpo 'eat' $\text{ʃ}a55$

- ʒ is a voiced alveolar fricative as in Jingpo 'white' phʒo31
- ʃ is a voiceless cerebral or palatal fricative in reconstructed forms of Proto-Tibeto-Burman such as PTB: MEAT *ʃa
- ʒ̥ is a voiced cerebral or palatal fricative in reconstructed forms of Proto-Tibeto-Burman such as PTB: USE *ʒum
- ɲ is a palatal nasal as in Bai (Dali) CLF-person ɲi21+
- ɳ is a voiced dorsopalatal fricative as in Bai (LSN) CLF-person ɳi21+
- ç is a voiceless palatal fricative as in Bai (Jianchuan) 'day' çɛ44+
- ʒ̥ is a voiced palatal fricative as in Yi (Xide) 'weep' ʒ̥i33ŋo34
- ŋ is a velar nasal as in Bai (Jianchuan) PRON (1st S.) ŋo31
- ɣ is a voiced velar fricative as in Bai (Jianchuan) 'come' ɣu35
- ɦ is a laryngeal fricative as represented by Written Tibetan 'crooked' ɦgug
- ʔ is a glottal stop or interruption of voicing as in Zaiwa 'sharp' thoʔ55
- ɬ is a voiceless lateral continuant as in Burmese 'boat' ɬe11
- ɱ is a voiceless bilabial nasal as in Yi 'teach' ɱo55
- ɳ̥ is a voiceless alveolar nasal as in Burmese 'nose' ɳ̥a11khō53
- ŋ̥ is a voiceless velar nasal as in Burmese 'borrow' ŋ̥a53
- ʃ̥ is aspirated voiceless alveolar fricative as in Bai (Jianchuan vernacular) 'hand' [ʃ̥u33]
- ɿ is an apical vowel as in the Bai (LSN) COPULA tsɿ; with some inconsistency it also appears in reconstructed forms of Chinese as medial -i-
- ɿ̥ is a labiodental vowel typical of Bai dialects as in Jianchuan 'six' ɿ̥y44+

- ÿ is "barred i" in Lahu data but also appears as Middle Chinese
 medial -i- with brev
- u is a high or mid-high back unrounded vowel as in Bai (Jianchuan)
 'eat' ju44+
- é spells Tibetan e ablaut as in 'yellow' séépo
- E describes an open or low front vowel in some Chinese publications
- ö is umlaut o as in Malmö
- ə is schwa or the central vowel of Middle Chinese rhymes
 in *-iəŋ
- v is a mid back unround vowel in some Chinese publications as in Yi
 'nine' ky33
- ε is the open and low front vowel of Bai (Jianchuan) 'white' pε42+
- œ is the high front rounded of Dell's Bai (Dali) 'ask' piœ2
- o is a low back unround vowel or "open o" as in Lahu 'drink' do31
- æ is an open and low front vowel in some Chinese publications, as for
 example in Yi (Kunming) 'write' væ33+
- e is the low back or darkened vowel of Middle Chinese rhymes in *-iəŋ
- a is the "open a" of Middle Chinese rhymes in *-a
- ɔ is the "o-colored a" of Middle Chinese rhymes in *-ɑ
- ě is an unstressed vowel in Jingpo prefixed syllables but "short e"
 or e with brev in certain Middle Chinese rhymes (*-iěŋ, *-iět)

II. Tones and phonation types

For the representation of tones in Bai I use two different systems
 depending on the source of the data and the context. When citing

lexical forms in tables and charts I generally use an adaptation of the system of tone letters credited to Y.R. Chao: instead of writing Chao's vertical bar with pitch and contour indicated along the horizontal axis to one side (̄, ˊ, ˇ, ˋ and so on) I translate the pitch and contour values this system conveys into double digits ranging from 11 (lowest level) to 55 (highest level). Data cited in this way is generally from a published source viz. *Jianzhi* or other Chinese publication. For my own transcription of Bai speech data I have found it convenient to assign a single digit to each lexical tone as a mnemonic device and to facilitate the writing of compounds and long utterances. The equivalences between the two systems are shown by a table on page 52. Although my tone numbers make it appear that there are nine tonal reflexes, the fact is that "tone number 3" is an empty category. After it was created I found it not to be useful, but I have retained the same system of number assignments in order to avoid confusion in interpreting my own transcriptions. Ideally a new system of numbers would be assigned. In representing the tones of Mandarin I use single digits that correspond to the well known four diacritical marks of the *pin2yin1* spelling system. My use of a "plus" (+) following tone representations to indicate {+constriction} or tenseness of vocalism in the syllable corresponds to two systems in use by Chinese scholars. The more generally familiar convention in Chinese publications is to represent tense vowels or special phonation with underlining. The publications from which I draw Bai comparative dialect data, on the other hand, have used a modified version of the Zhao tone letters to represent similar

phenomena: for tones pronounced with {+constriction} they show pitch and contour values to the right of the vertical bar, a convention more generally used to represent sandhi tones in Chinese studies. For a number of reasons that are explained in Chapter 2, I find the "plus" a convenient translation for both of these conventions.

III. Style of representation for different languages

Bai data from my text transcriptions is enclosed in square brackets [], a convention that doubles as a segmenting device. Infrequently, square brackets may also be used to indicate "close transcription" in citing dialect reflexes of particular lexical items but there are very few such instances in the present work. Explanatory translations and parsing of grammatical constituents are generally enclosed in curly brackets { }. In transcribing Bai speech data I have begun to introduce certain minimal analytical markings: a hyphen "-" joins a suffix to its head and (inconsistently) a CLF (noun classifier) to its noun or quantifier; a period "." joins other syllabic collocations. My analysis has not yet been refined and there is much room for improvement in my application of such conventions.

IV. Language names

Language names appearing in the text are generally straightforward, but in citing Bai dialect data I often abbreviate Dali as DL, Jianchuan as JC, Bijiang as BJ. Where reference is to the speech of

my Bai consultant in China I abbrevate his name: LSN. In assembling the comparative data that appears in 2.5.00 languages are cited as follows:

LQ is Luquan Yi

HN is Hani

ZW is Zaiwa

WT is written Tibetan (or WTib)

LS is Lisu

LH is Lahu

NX is Naxi

JP is Jingpo

Bse is Burmese

WS is Weishan Yi

WN is Woni

KM is Kunming Yi

Chapter 1

Defining the Bai Speech Community

1.1.00 Topics in the history of the recognized Bai nationality of China

1.1.01 Previous works

Anyone familiar with the sources for Yunnan ethnohistory will recognize the chapter that follows here as the result of drastic oversimplification, a cursory review of a diverse body of materials drawn together (sometimes unwillingly) under the single theme of the quest for a possible history of cultural and linguistic differentiation for the contemporary Bai people of northwest Yunnan province in China. The sources that find themselves juxtaposed here range from the well-known canonical histories of Chinese dynasties beginning with the *History of the Later Han* (composed during the fifth century but commemorating the later Han revival after the Wang Mang interregnum, a period covering roughly the first to third centuries A.D.), and some contemporary text-critical scholarship on them, to personal histories recorded by myself on magnetic tape from Bai-speaking acquaintances in China, with a great many other

exemplary works of scholarship from varied disciplines filling out the continuum of formality that lies between these extremes. The main body of the present work is devoted to study of the language of the Bai people--which they call [pɛ42+.ŋy21+.tsu31]--and it is therefore not possible to do real justice here to the sources on which I rely. Likewise I cannot claim to solve either philological or factual problems that still attach to the problem of identity and differentiation among Yunnanese clans and ethnic groups. Yet there is ample reason for a linguistic study to provide background that will define the speech community whose common behavior provides its primary data. In the present case, the Yunnan Bai people or Minjia, as they were previously known, have already been the subject of two book-length ethnographic accounts published in the West, and one linguistic account devoted to the phonology of the Dali Bai dialect has also recently appeared outside China.¹ Aside from these works, a western-language secondary literature on the relatively well-documented period of Dali and Yunnan history has long been established, and this corpus was recently enlarged by a detailed historical monograph in English that is a welcome or even essential aid to approaching the traditional primary sources on one's own, including Chinese historical and quasi-historical works as well as the Tibetan chronicles.² Against this background, I have felt it desirable here to seek ways of clarifying what remains a puzzling picture despite the excellence of previous works. A unique ethnic identity and diagnostic cultural traits for the contemporary Bai speech community remain problematic not only because of

historiographic and philological problems but because of the nature of the ethnographic material itself.³ Within the just-completed decade a flood of new Chinese publications has provided empirical data from survey research and other studies concerning the Bai history and culture, conducted on a level of detail that was perhaps never possible before government-sponsored survey teams collected information on Chinese minority nationalities during the 1950s. (As is generally acknowledged, political and other problems have intervened since then, slowing down publication of most of their results until the 1980s.) To adequately account for all the relevant printed materials now available would require a proper study of its own, and would amount to a comprehensive survey of the evidence for a Bai cultural and social history. Such an enterprise exceeds the scope of an introductory chapter to a linguistic study. Nonetheless, to begin such a survey may make a small contribution to general knowledge, and it will be a project worth returning to in future work. Meanwhile, problems of language genesis and typological resemblance that are raised by the Bai linguistic data at our disposal suggest a hypothesis about the language that may find support in such new information as I am able to present here. The mixed resemblances, both diachronic and synchronic, presented by the various forms of linguistic data we now have in hand would suggest that the study of Bai is a study of early creolization, and possibly of later "decreolization" (or we may need some other term that can account for sociolinguistic stratification affecting types of performance within a speech community) in certain varieties or

.

speakers. Recent anthropological fieldwork among the Bai people of the Dali Bai Autonomous Prefecture apparently leads to a complementary hypothesis about their contemporary culture.⁴ So the following (admittedly superficial) treatment of a recently acquired stock of ethnohistorical materials is perhaps justified by the striking impression of heterogeneity that is left by study of the linguistic data, and by the fact that earlier western sources have failed to provide a convincing scenario that would explain the ethnic and linguistic differentiation of the Bai people from their neighbors. (I do not mean to suggest that ethnic and linguistic identity are necessarily contiguous--rather, that heterogeneity in the linguistic domain may eventually be explained by the facts of a complex social history.) The strategy I will follow in this chapter will be to examine categories of evidence that could, in my view, support a creolization hypothesis for Bai, using information and arguments drawn from the works of other scholars in various disciplines, as well as my own field notes. A general accounting of the disciplines that must, in my view, be consulted to achieve an informative survey would include traditional historiography and philology as well as epigraphy and archaeology, local history, folklore, oral history, and education. Although time and space do not permit the treatment these disciplines and materials warrant, we can at least make a start.

1.1.02 Political boundaries and population

A basic problem in defining the Bai speech community is to decide how or to what extent the historical situation corresponds with current political boundaries. Given the existence of a local geopolitical and administrative entity in northwest Yunnan Province that implicitly recognizes the Bai people as a discrete ethnic and linguistic community of China, we may well ask how far backward beyond the establishment of the Autonomous Prefecture in 1956 the same community can be projected. Here Fitzgerald, Hsu, and earlier colonial reports are helpful in documenting the community well back to the early nineteenth-century, which was to all accounts a difficult period marked by epidemic and pogroms for the population of the Erhai region, a population that was apparently chiefly composed of Minjia and Muslim communities who were by mid-century locked in mutual intrigue and desperate conflict over local power relations vis-a-vis fiscal and political loyalty to the Qing government.⁵ But our sources are consistently vague if we try to assess how different is the contemporary geographic distribution of Bai speakers from what may have been true in the past. This vagueness is no doubt partly to do with the physical difficulty of travel and trekking in Yunnan, where even today travel is often by traditional means or on unpaved roads. Perhaps it should come as no surprise if we learn that contemporary political boundaries cover a multitude of ambiguities. Perhaps it is in these ambiguities that we may find help to correct for the perceptible drift toward a reified ethnic mythology that is now a

feature of local political autonomy and aspirations in the Autonomous Prefecture. But population statistics greeting the visitor to the Dali Prefectural Museum in Xiaguan are surprising: of the total population within the borders of the Dali Bai Autonomous Prefecture, just under one third is identified as ethnically Bai (899,936 of a total population of 2,812,300 or 31.82 percent). Other sectors of the population are said to be comprised of Han (Chinese), Yi, Hui (Muslim), Lisu, Miao, Naxi, Tibetan, Bulang, Dai, Lahu, and Yao elements, probably in that order. We must conclude that there are indeed half again as many Bai speakers living elsewhere--as the reports of Dell on d'Ollone and *Jianzhi* have led us to think, to whom we should like to pay some attention. *Jianzhi* cites the population of Bai speakers as just less than two million, of whom the "majority" are supposed to live within the Autonomous Prefecture. Yet the earlier language survey report of 1957 indicates twice as many Bai speakers; so in fact modern attempts to locate and quantify the speech community are also imprecise, and we may be permitted to wonder whether this has something to do with a population that is itself linguistically difficult to distinguish--perhaps because of large-scale bilingualism, or because monolinguals are not always visible to survey research conducted in Chinese.

1.1.03 Official recognition: A few questions

We know that recognition of entities such as the Dali Bai Autonomous Prefecture and the Bai national minority in New China, during the

decade following the Liberation of 1949, was based on the then most up-to-date information about the actual geographic distribution and ethnic identification of particular populations, from data that was collected under often difficult physical circumstances by the research "brigades" dispatched by the Chinese Academy of Sciences. The 1957 report of the Bai Language Workgroup suggests, however, that deep divisions on the question of recognizing an official Bai orthography made their work difficult in another way, possibly reflecting a situation of mixed cultural identities or language loyalties within the speech community.⁶ Such background may amplify our speculation that contemporary attempts in the Dali Bai Autonomous Prefecture to reclaim an ethnic heritage from the obscurity of what remains an only partially-documented history may represent a degree of overinterpretation or simplification of the evidence. To the outsider it may seem that the most vital questions remain difficult to answer with certainty, invoking a vast complex of ethnohistorical problems that in themselves demand careful investigation: What historically distinguished the Bai people from their Yi (Lolo) and Naxi (Moso) neighbors, aside from penetration of their language by Chinese vocabulary? At what historical point did the Bai acquire their separate identity from these peoples--are these contemporary ethnic groups in fact descended from a single historical community at all? The answers to these questions, if we knew them, would go a long way toward helping us with the basic problem that is addressed (but not answered) by the present work, namely: Is the contemporary Bai language a product of imperfect language shift to Chinese or

creolization of Chinese, or alternatively, perhaps the outcome of a historical process sometimes termed language maintenance? And, would there be a discernible difference in the language states created by these different processes given the linguistic sources on which any one of them must have drawn? Perhaps linguistic investigation in a vacuum cannot answer questions of sociohistorical fact. On the other hand, to postpone linguistic proposals until the historical facts can be finally established would perhaps mean consigning to the unknown a treasury of evidence that is in some danger of disappearing within a few generations.

1.1.04 Ethnicity as language or as custom?

If we start from the political facts of recognized nationality and language policy, we can characterise the community of Bai speakers superficially as: that group centered around the Erhai lake sharing a borrowed core vocabulary of (often) archaic Chinese pronunciations, a complex idiom of dress styles that features black and blue (and red) head-wrapping and apron skirts, and a diffused tradition of local ancestor and spirit worship mixed with eclectic elements from the "three doctrines" of Chinese tradition. They are the people who speak of themselves as [pɛ42+.xo44+] (a syllabic collocation composed of their autonym and a collective plural suffix that is restricted to {+human} nouns), who pursue a mixed agricultural economy based on wet rice cultivation in the lower plateaus and dry-field cultivation at upper altitudes, who build lofted courtyard dwellings of cut stone

masonry foundations and wood beam upper stories generally surrounding the Erhai region and into the mountainous regions to the north of it, but who also encompass a subgroup of boat-dwellers and fisher-folk that maintains a unique local tradition of shipbuilding. And they are the people who have been "united in controversy" by ongoing disagreement over the need for literacy-based primary education using an alphabetic orthography to represent their mother tongue. This disagreement probably reflects a long-standing situation of social stratification that may have been created historically by high levels of bilingualism and literary achievement in Chinese on the part of certain individuals and families, many of whom can claim to be descended by virtue of their surnames and genealogical traditions from the eight-century Nanzhao state's bureaucratic, clerical (religious), and military guilds of local landholders.

1.1.05 Tibeto-Burman patronymic linking and Han surnames

If we start from the study of naming practices, we come up with a controversy over styles of patronymic linking that might be used to define the contemporary ethnic community. But the fact remains that in pursuing approaches of this kind through Chinese sources we are also obliged to sort out to what extent such debates may have been perpetuated by the continuing need to rationalize particular ethnic and administrative policies first put in place during the 1950s. In part, this is a "chicken and egg" problem, because the state-supported fieldwork of the 50s also relied upon a background of

pre-Liberation research that had been influenced almost equally by traditional Qing styles of scholarship and twentieth-century Western social sciences, especially by anthropological and descriptive linguistics. We may be reminded of the impetus that was provided during the previous century by nation-building goals to the scientific investigation of American kinship relations, expressed in the fieldwork of Lewis Henry Morgan.⁷ Looking at the genealogies reported by Lo Changpei and survey results of more recent Chinese articles, we may wonder whether it is really possible to distinguish between, for example, Yi and Bai systems of patronymic linking. Still we may note with interest a subtle difference between the style typical of the historical Mengshe princes (who later became the ruling house of Nanzhao) and their more northerly congeners (especially those princes e.g. Langshe, and so on whose territory in the 7th and 8th centuries verged on present-day Jianchuan). Northerners typically are found to pass down the names of the succeeding fathers in a regular progression, whereas the Meng clan records from modern studies show only imperfect transmission of patronyms, a similarity in one syllable from generation to generation, but not following the classical Tibeto-Burman pattern of linking the ultimate syllable of the father to the son through his initial name. We can find evidence that Han (Chinese) surnames were superimposed on this system beginning with the Han campaigns in Yunnan, creating an elite group of clans who were specialized finally by social pressures organized under the Nanzhao state, serving for

example as hereditary guilds of religious practitioners (the Dong family or clan) and financial administrators (the Yangs).⁸

1.1.06 Ethnic designations in traditional sources

No doubt one of the most notable scholarly debates to accompany the creation (in 1956) of the Dali Bai Autonomous Prefecture and official recognition of the autonym Bai to designate the ethnic group that had, up to that time, been known in popular and scholarly literature as Minjia, the controversy involving the historical ethnic designations *bai2man2* (白蛮 "white barbarian") and *wu1man2* (乌蛮 "black barbarian") offers one convenient focal point for our discussion. It is instructive because the arguments turn on philological decisionmaking with regard to traditions of ethnic terminology found in the medieval and later Yunnan documentary sources written in Chinese. Backus, following Ma Changshou, basically accepts that ethnic or clan distinctions separating the Nanzhao rulers from their aristocratic military and clerical class reflected the same difference between "black" and "white" that is enshrined in the traditional Chinese terminology. And he concedes that because different Chinese documentary sources record native Yunnanese vocabulary with varying graphs, we cannot achieve greater precision where ethnic names appearing in Chinese documents are concerned. Still, the Yunnan polymath Fang Guoyu did push further with several articles on this topic, concluding that the vague terms *bai2man2* and *wu1man2* probably refer to different groups in different texts and

periods. Also relevant here is Ma Yao's article pushing the Bai ethnic identity backward to Han sources through other traditional ethnic terms: *dian1* 滇, *sou3* 叟, and *cuan4* 爨. But we may note with interest here that Ma includes both Bai and Yi ethnic origins in his discussion. Finally, the process of ethnic shift from *wu1man2* identity to *bai2man2* identity described by Yang Kun gives us firm clues as to the fluidity of self-identification that has probably marked the ethnic differentiation of Bai-speaking clans from their local peers.

1.1.07 The modern ethnonym

An important corollary to Fang's doctrine concerning the inherent looseness of the *bai2man2* and *wu2man2* terminology is spelled out by him in defense of promoting Bai as the official ethnonym and discarding Minjia. Fang and other writers have long been at pains to show how the (mistaken) identification of Nanzhao as the historical antecedent of the Thai people could have been supported for so long, a circumstance they blame on the Wanli (Ming) compilation of the Yunnan gazetteer. As Chinese writers have shown, this text shifts graphic usages, applying written terms that formerly denoted the ethnic group resident in the Erhai region (*bo2* 徼, *bai2* 白) to a more dispersed and southerly group of Thai people then called *bai2yi2* 白夷 or *bo2yi2* 徼夷. The same terms that in Yuan and early Ming compilations are understood to represent the Nanzhao-period *bai2man2* (which also may be read *bo2man2*) and therefore to refer to the

historical antecedents of the present-day Bai people, were arbitrarily applied to a Thai group or groups later, after circa 1400, at the same time as the new term "Minjia" came into application referring to the Bai precursors. The terminological knot that resulted from this textual and graphological repartition demonstrates the extent to which philological problems have complicated our understanding of ethnographic information recorded by Chinese documentary sources. Yet the unraveling of the philological controversy shows that used with some care the Chinese texts can provide an accurate picture. We may be especially grateful to the publication of reference materials collected by the Yunnan Ethnohistory Editorial Group for organizing in one place all the textual evidence that demonstrates the Ming repartition of the terms "Baiyi" and "Boren" at the time "Minjia" came into use, as well as for text citations and supporting elaboration for the two possible meanings of "Minjia": 1) a Chinese term for local villages in Yunnan that were composed of non-militia households--"local commoners' households" (as opposed to military settlements of imported or northern origin that were called *jun4jia1* 军家 --"garrisoned soldiers' households"; and 2) a reduced form of the Chinese term *ming2jia1* 名家 that had earlier been applied to the Nanzhao *bai2man2* in the sense of "illustrious families": they were the local aristocratic families best known to the Tang imperial representatives sojourning in Yunnan, and we may assume that they were so because of their bilingual skills in use of the Han language.⁹

1.1.08 Population movements in history

Here time prevents me from going into detail, but I would like to report in passing on some interesting examples of locally published scholarship from Dali that give authoritative information on the arrival of branches of the historical Bai population in areas not now encompassed by the boundaries of today's Bai autonomous prefecture. Notable among these is the paper of Zhan which documents the movement of a Bai-speaking population from the mountainous areas around Lijiang, Heqing, and Jianchuan to the western Bijiang district, located along the banks of the Lancang (Mekong) river, where they remain today as the Lemo people. Zhan cautions that although they must have carried with them a language and culture that was typical of the Jianchuan area some 500 years before the present time, they were not originally urban or basin dwellers in their former homeland, but rather from the backward mountains. Unfortunately the current physical and geopolitical realities make it difficult for a visiting scholar to collect linguistic data on the speech of this group at the present time, but armed with the information that is supplied by studies like Zhan it seems we may hope for a better understanding of the relationship that may obtain between the rarer Bai vernaculars such as Lemo and the better-documented varieties of Dali and Jianchuan.

1.1.09 Literacy: The Baiwen debate and the "schriftlos" kingdom

Another apparently acrimonious debate that accompanied the recognition of the Bai people as a national minority in 1956 concerns the problem of why no autochthonous written documents in any non-"Chinese" script appear to record the history and culture of the Bai or their precursors, identified by most scholars with certain *bai2man2* clans who functioned as an aristocratic subclass ruled by the Nanzhao kings.¹⁰ Perhaps the most controversial aspect of this debate, with implications for the development of a nationality language policy at the time, saw scholars either pursuing or ridiculing a hypothesis that certain "later" Chinese texts of local Dali history and folklore are in fact the only remains of a previously existing written tradition based on the early Bai language that was obliterated as a matter of policy during the Ming period.¹¹ On this difficult question it may be important to observe that well-documented archeological reports attest findings in the Erhai region consisting of Nanzhao period pottery shards with some unknown graphs either incised or drawn on the surface--alongside other shards with Chinese-based graphs and some that show what resemble Indic letters.¹² Along with this evidence for competing traditions of literacy in the Erhai region we have the articles of Dong identifying the titles of many Buddhist manuscript texts dating from the Dali period and later that were found in 1956 at Fengyi in the Dong family temple. Among these manuscripts is at least one reflecting an early local adaptation of Chinese graphs as a native language syllabary for

exegetical use in glossing religious texts. Next in the chronological order of this orthographic puzzle are sources such as the recent Xizhou gazetteer that claim books or documents reflecting a Bai written tradition were destroyed as a matter of policy after the pacification of Dali by Ming militia, at the same time as their content was mined and transformed into Chinese-language versions for preservation in Ming archives. From this it would appear that local scholars of the Erhai region currently believe that Ming pacification policies were in fact designed to wipe out their ancestral culture. As an example of the Chinese quasi-historical texts these scholars cite, we may point to the interesting *Bai2guo3 yin1you2* 白國因由, a text we have only from Qing preservation of an earlier Dali recension that recounts the mythology of the Duan aristocrats who ruled the Dali state for three hundred years before the Mongol conquest of Yunnan. Local scholars are anxious to point out passages in this text that reveal its earlier identity as a Bai language witness. Although we will include a more detailed description of text materials encoded in Chinese graphs in 1.3.00 below, it may be useful here to sum up the categories and approximate dates of inscriptional and manuscript evidence that may be relevant to the problem of literacy in Bai ethnic history. We can identify the following types and rough dates of local written materials for future consideration:

- (1) Chinese inscriptions in Chinese script: c. 400-800
- (2) Sanskrit inscriptions in Siddham script: c. 600-800

- (3) mixed inscriptions based on local language and Chinese script: c. 900-1400
- (4) Chinese religious manuscripts in Chinese script: c. 900-1300+
- (5) Chinese religious manuscript in Chinese with interlinear syllabic reading marks: c. 1100
- (6) inscriptions in Yi syllabic script: c. 1500-1800

1.1.10 Stratigraphy of popular religion

An overwhelming impression is created by published first-hand observations of the remarkable penetration of Bai social life by a variety of popular Mahayana Buddhism venerating Guanyin or Avalokiteśvara, especially as reflected in the ritual practices and financial contributions of middle-aged and older Bai women. But most sources are quick to point out that this Buddhism is "corrupted" by outcroppings from a lower stratum of indigenous popular religion involving the worship and propitiation of ancestors and local deities as well as animistic practices that sometimes cohabit the same sacred structures or events with material from Buddhism.¹³ During a brief fieldtrip to Dali I was not able to observe temple meetings or private rituals, but several personal communications, from two outside Han Chinese visitors, one ethnic Bai acquaintance, and several professionals--Bai and Han--working in the local cultural bureaucracy within the Autonomous Prefecture attest that public practices such as sutra chanting and ritual observances of tutelary gods are not extinct. If anything the reform policies of "openness"

(*kailfang4*) generally pursued by the PRC government during the 1980s has had the effect of increasing disposable income in Dali, permitting voluntary revival of religious practices that may have become moribund during the Cultural Revolution.¹⁴ I have heard a recent tape-recording purporting to be sutra chanting as practiced by a group of elderly Bai women, and the impression to my ear was of a habitual four-beat metrical performance, with allegro syllables in half-time at some points on a falling, rising, and falling chant melody of four- and five-step intervals, sung in high register. It is certainly worth further investigation to find out the relationship of chanted texts in current use in the Erhai region to texts identified with popular traditions elsewhere, and in any case their existence tempts further study from a linguistic perspective, since they surely must form an occult part of the acknowledged tradition of oral literature in Bai.

1.1.11 Direct cultural transmissions from the west

As a look at the map that accompanies the Tin/Luce translation of Fan Cho's treatise on the peoples of Yunnan will show, the premodern geography of conquest, trade, and religious transmission linking the Erhai region with the west provided opportunities for cultural transmission from northeast India by way of the Kamarupa-Pyu-Annam route, and from Tibet by way of the Lhasa-Batang-Weixi-Jianchuan-Xiaguan route. Time and space limitations prevent adequate treatment of a possible Tibetan and north Indian cultural horizon around the

Erhai region of the Nanzhao period, but I may mention in closing this survey of ethnohistorical sources that Yang Kun in an important paper has placed the social catalysation of certain clan groups of the Erhai basin into a coherent ethnic grouping historically approximately 1150 years before the present, or in other words circa 700, the period of Nanzhao consolidation against competing intrusions from Han and Tibetan colonial campaigns.¹⁵ We know that the Jianchuan region was a hotly-contested territory between the Nanzhao kings and Tibet, and we have textual reasons for believing that Nanzhao was represented in religious and state counsels held at Lhasa during the same period.

1.2.00 Dialect regions and Bai/Chinese contact

1.2.01 Two regions as established by the Bai Language Workgroup

Reporting the results of their survey to the provincial and national government in 1957, members of the Bai Language Workgroup defined only two main dialect areas for Bai, a northern area typified by the speech of the old Jinhua Commandery 金华镇, now the county administrative center for Jianchuan 剑川 county, and a southern area typified by the speech of Dali 大理 city and its suburbs closer to the Erhai lake. During the survey period, the government-sponsored teams of academics continued a tradition of linguistic and ethnographic fieldwork in frontier areas that actually

had begun years earlier when the Academia Sinica had retreated to the southwest during the war with Japan.¹⁶ The post-Liberation teams were dispatched to the same areas where scholars had previously worked, with the mission of identifying unrecognized national ethnic minorities so as to bring them within reach of government policies, and especially to provide input for the development of appropriate language and communications policies. One area where the teams might act in an advisory capacity to the government was in the matter of how best to implement progress in education, especially whether to establish an orthography for use in education and publishing to bridge the gap between the local or native language and standard or written Chinese.

1.2.02 Importance of standardization in the 1950s surveys

We know that the language surveys of this important period in China were conducted under the guidance of Soviet linguistic advisors, whose published works in Chinese testify to the primary role assigned to language standardization in all the linguistic fieldwork conducted at this time. Speaking about the work of the early survey teams now in the 1980s, Chinese scholars are quick to point out that without standardization, very little could have been done to implement governmental language policies giving minority nationalities the right to publish and conduct official business in their own languages if they chose.¹⁷ Seen in this light we can appreciate that the linguistic descriptions of that period probably functioned to unite

certain speech communities that enjoyed little cohesion through a native written tradition, speaking related dialects but with a possibly bewildering array of localisms. What we find in our 1957 report is that the Bai Language Workgroup was unable to recommend on the question of establishing an official orthography for Bai: we may find this a telling fact today, since there is apparent disagreement within the Autonomous Prefecture and in the wider speech community on the the need for literacy education using a mother-tongue orthography at beginning levels. The history of this debate is of more than passing interest here because it throws light on the special identification of Bai-speaking people with the Han culture as represented by its writing system.¹⁸

1.2.03 Schooling in the Dali region

My early speculations about the role of education in perpetuating bilingualism and/or diglossia among Bai speakers were encouraged by the descriptions of Fitzgerald--who spent the years 1937-1940 in and around the old city of Dali. Since I have relatively less first-hand material on the contemporary situation in the Dali city region, it may be useful to look back at some of Fitzgerald's observations. In fact he speculated that the increasing modernisation of teaching methods he could observe in village schools near Dali might one day make the Bai language obsolete. He claimed that since traditional learning among the Bai had involved mainly rote memorization of Chinese classical texts, committed to memory but perhaps not fully

understood, it was natural that up to the time of his observations Bai speakers should not have adopted their language of literacy as a medium of thought and communication for everyday use. But Fitzgerald reasoned further that the relatively closer approximation of the new written Chinese (*bai2hua4wen2* 白話文) to standard spoken Chinese (as compared with the relatively distant correspondence of literary Chinese) could soon influence newly educated young Bai speakers away from using their mother tongue, once they had learned to speak and write the prestige language as monoliterate bilinguals. Still, the situation he observed in 1937-38 was that educated Bai speakers who commanded a high degree of proficiency in both spoken and written Chinese did not abandon their use of Bai in conversation with their peers. But persistence of the mother tongue notwithstanding, Fitzgerald did claim that the Bai of that period as spoken in Dali Xian had been "corrupted" by Chinese such that, for example, the system of counting in common use was "now completely mixed, [Bai] and Chinese numerals being used in turn in the most confusing way." Fitzgerald went on to report that "many Chinese words are also used even when Min Chia [Bai] equivalents exist, and there is no general rule for their usage. It largely depends which word occurs to the speaker first."¹⁹ Fitzgerald also observed that some aspects of Bai social and kinship organization, especially the practice of endogamy, had retained currency and acceptance even among upper-class Bai in the city of Dali, people also related to local Chinese families by marriage. The picture conveyed by Fitzgerald's report, made just ten years prior to Liberation, suggests that a pattern of well-

established family ties between Bai speakers and Chinese in-laws was the norm at least in the relatively urban centers of the region.²⁰ Of course, political developments during the intervening years may have changed this picture somewhat; yet Fitzgerald's report would lead us to expect that a relatively old mix of native and Chinese material still complicates the Bai vocabulary of kinship, grooming, and householding, the very vocabulary that might be inspected for purposes of classification based on core vocabulary. In this connection we may mention the more recent fieldwork of Yokoyama, who reports data from local statistical sources and from personal interviews on the the contemporary survival of matrilocal marriages among the Bai people of the Dali region.²¹ If such marriages represented, at one time, a form for the integration and assimilation of a surplus of Han males by the local population, there is reason to suppose that the type of diglossia Fitzgerald bewailed has been caused in part by mixed marriages at least back to the (fourteenth century) Ming takeover. As for possible scenarios for local acquisition of Chinese among the Bai outside the mixed-ethnicity family, Fitzgerald described options for schooling in the Dali area that were current in his time. He reports that a combined enrollment of one thousand students was shared by two urban middle schools at Dali in 1937-38, claiming that only children of relatively wealthy Bai families would find their way to this educational level. Fitzgerald does not report on the actual ethnic composition of the middle school population at the time, or on the nature of the curriculum, but he does claim that successful completion of this

middle school curriculum in Dali was the only route to matriculation at Yunnan University in Kunming for an educated Bai.²² We can infer from this description that a program of Chinese-medium instruction in a curriculum similar to that found elsewhere in Republican China was an option for well-to-do Bai speakers fifty years ago. On the other hand, Fitzgerald also describes a type of education available to non-gentry or peasant children in local village schools at the same time. He characterizes such schools as traditionally organized institutions that met in local ancestral temples and taught the basic skills of Chinese literacy and practical calculation in addition to principles of hygiene and civic awareness.²³ Although Fitzgerald does not comment on the language of instruction in the village schools, his description and his claim that 70% of village boys (and 30% of the girls) were in commonly in attendance make it appear likely that alongside the Chinese-medium schooling that was presumably the standard in urban schools of Dali, a tradition of elementary mother-tongue pedagogy must have remained in practice at least until the revolutionary government could put new policies in place after 1949.

1.2.04 Schooling in the Jianchuan region

During 1989 I was fortunate to pay a personal visit to the UNICEF-sponsored experimental Bai language primary education and literacy program using the Jianchuan orthography described in *Jianzhi* (but not yet officially adopted at the prefectural level). The program is currently in its third year of operation in Xizhong 西中 village

outside of the Jianchuan county seat. Several articles in recent issues of *Yunnan Minzu Yuwen* discuss and promote this mother-tongue education project at Shizhong Primary School, pointing out that the population of Jianchuan county is overwhelmingly Bai-speaking (over 90 percent) and that the rates of educational attrition or failure, as well as outright illiteracy, in this area is higher than average for all of China and compared to certain particular regions.

Especially in the article of Zhang Wenbo, we can see that problems of illiteracy and low cultural achievement are currently being linked to mistakes in the application of Chinese-only education policies in the past.²⁴ Comparing the Jianchuan region with Dali it is easy to imagine that divergence between the home language and language of school has created very different educational situations in the two areas named because of demographic factors that are linked in part to economics. Jianchuan county is consistently behind Dali (and even Heqing county) in economic and agricultural output in local statistical reporting. On visiting the school in Xizhong village I learned that teachers in the program have the additional burden of translating primary textbooks into mother-tongue orthography for inclusion in the experimental curriculum, and that the program is financially depressed. On the other hand, school officials exhibit obvious pride in the success of the Bai-medium instruction based on testing and comparison.

1.3.00 Bai language texts

encoded in Chinese graphs, past and present

1.3.01 What kind of evidence in Chinese-based texts?

Comparison of Bai with Chinese through written texts encoded in Chinese graphs is a messy business in part because of the mixed method of graph-to-sound decoding that renders the texts readable in Bai. Xu has recently described the mixture of encoding found in Bai texts written in Chinese, which includes straightforward use of the graphs as phonograms but also two types of "borrowing" from the Chinese graph, semantic borrowing that encodes a Bai lexeme of similar meaning, and outright borrowing that involves Bai reading pronunciation of a Chinese graph that must be understood as itself in the text. These ways of decoding orthodox graphic forms account for most textual material and do require special knowledge of the reader; depending on the type of text, heterodox graphs that are unknown in Chinese also sometimes appear and require of the reader yet another type of special knowledge.²⁵ To be sure, this use of the Chinese writing system makes for an unusual type of linguistic evidence, but there should be nothing to prevent our use of it to explore different strata of Chinese character readings as a covert element or subsystem coexisting with native elements in Bai. In Chapter 2 below we shall examine correspondences between the readings for a medieval inscriptional text and the traditional tonal categories of Chinese,

on the theory that this type of material can contribute to a possible history for the Bai tonal system. But that is only a first step toward full exploitation of a category of Bai linguistic materials that have not been widely described or understood, toward understanding the full dimensions of the role Chinese has played in the historical development of the language. Probably one reason Bai materials recorded in this way have not been much exploited is that they represent an ambiguous or problematic type of linguistic evidence, not quite Chinese but not easily identifiable as Bai. But this also explains why they invite attention here.

1.3.02 A taxonomy of sources

The rough taxonomy of Bai or putatively Bai text materials given below may be useful if we can establish the existence of a type of linguistic evidence for the historical Bai language that has not, to my knowledge, been generally reported in western-language sources. The types of material are arranged in chronological order as an heuristic device, although it will soon be apparent that differences in linguistic character separate these types at least as much as the chronological periods they represent. The list does not pretend to exhaust all possible sources, but rather describes what are the main types of written and inscriptional material that may be exploited in future studies. Some materials of the type described under the rubric of "early scribal witnesses" have been studied by Chapin (1944) and Li Lin-ts'an (1967), but their linguistic properties as Chinese or

quasi-Chinese texts did not come under examination. A fairly large number of such scribal witnesses is extant, but they will probably remain difficult to study for the immediate future, having been stored and jealously protected in the provincial library of Yunnan since their discovery.

1.3.03 Incipient witnesses in literary Chinese

Some linguistic remains of the Nanzhao and Dali kingdoms are still extant and preserved in Chinese documentary sources and literary collections that record fragmentary vocabularies of the local inhabitants of the region transcribed in Chinese graphs, or preserve the poetic compositions of particular rulers or their literate functionaries, written in Chinese. The early inscriptional witnesses in literary Chinese (including the Dehua stele commemorating the Nanzhao defeat of the Tang militia) have been preserved in local gazetteers and in two large reference collections of Yunnan historical documents and inscriptional relics. These reflect the empirical text researches (*kao3zheng4* 考证, a traditional category of Chinese philological scholarship) of competent text scholars, whose opinions as to the import or of particular inscriptions are sometimes supported by quotations from the traditional documentary sources that serve as a rhetorical device. Texts and inscriptions purporting to be literary Chinese records from the early period of Erhai regional history should ideally be studied in terms of their

degree of approximation to contemporary Chinese norms. I have not seen any detailed study of this type in recent Chinese publications.

1.3.04 Early scribal witnesses

We are on firmer ground as regards the linguistic identity of texts in Chinese orthography where religious and exegetical writings come into the picture, on which we have a certain amount of information from the discovery in 1956 of a cache of religious documents in the Dong family temple at Fengyi. These manuscripts are held to document a well-developed local tradition of sutra copying and exegetical writings using Chinese as the medium, a tradition that apparently flourished among the Buddhist teachers and monks who formed a kind of clerical guild in service to the Nanzhao and Dali (Duan clan) rulers. The special significance of this tradition is that it includes manuscript and printed copies of Buddhist scriptures dating from the 10th through 13th centuries, written or copied in Chinese but some of them provided with interlinear glosses or commentary written in another shorthand script, based on Chinese graphs but reflecting local usage and possibly adaptation as a syllabary. According to expert opinion, the manuscripts in this group show features of fluency and systematic character that point to a scribal tradition shared among the members of a local monastic community, as opposed to a notation system that remained the unique or private invention of a particular monk.²⁶ I have personally seen photographs of one such manuscript and can agree at least in the matter of fluency, or in

other words, that the writer of the particular glosses had a practiced hand in writing what are apparently adaptations of Chinese graphs in a cursive style, something like the style of *hiragana* readings alongside Japanese text in *kanji*. It remains to be seen whether analysis of these manuscript writings will be possible in the near future, since they have been stored in the Yunnan Provincial Library and protected even from expert linguists in China.

1.3.05 Medieval inscriptional witnesses

At what remains an uncertain point in the history of the Erhai region, local commemorative inscriptions reflecting text composition in the borrowed literary language of the Tang people (literary Chinese or *wen2yan2* 文言) gave way to a variety of inscriptions that are encoded by Chinese graphs, but reflect texts that were composed in the local vernacular and committed to writing by speakers of that language who were literate in Chinese. A group of such inscriptions was collected from stone monuments north of Dali city in the environs of Xizhou and edited for private circulation in China as early as 1942, and it was apparently this collection that became the focus of controversy during the post-Liberation debate over whether the newly-established Bai national minority should be considered "scriptless" or not.²⁷ Because the linguistic fieldwork and ethnic research of the 1950s was officially sponsored to solve practical problems of ethnic identification and political administration, what may seem to outsiders essentially a semantic dispute (whether to call

the Chinese-character transcription of Bai a "script" or historical orthography) was fraught with implications for language policy and literacy education. It was a standoff among scholars active during that period whether exploitation of the Chinese writing system as a tool for recording texts that only make sense if read by speakers of Bai using their native language, should be taken to represent a native written tradition or not. According to my present knowledge, native scholars and local governmental authorities alike are still not unanimous either in their view of *bai2wen2* writings or in their recognition of a need for an established Bai orthography, but there is a discernible trend in currently published works on the subject toward accepting that a continuous linguistic identity does link certain of the extant Nanzhao inscriptions with some later Buddhist manuscripts of the Dali Kingdom, and these in turn with the still later local inscriptions on stone. It may not be possible, yet, to pinpoint exactly a *locus ad quem* for the scribal tradition based on Chinese orthography that is linguistically identifiable with modern Bai. But it seems clear enough that the most widely-accepted inscriptional witnesses date from the early Ming period (A.D. 1368-1644). Although recent scholarship has situated them in a context that encompasses earlier and later text genres, they still appear to represent a discrete class of linguistic artifacts, reflecting private memorials on the lives of deceased local aristocrats, and poetic encomiums on the natural environment typical of the Erhai region and Dali plain.

1.3.06 Modern witnesses from the oral tradition

Although such texts may reflect an oral tradition of some antiquity in Bai, currently circulating works of popular oral literature that are encoded or transcribed in Chinese graphs must be considered for our purpose here as modern texts. These are works intended for oral performance that are preserved in the form of handcopied prompt-books (*shouchao ben*) and have been passed down from one performer to another for an undetermined length of time. They represent a kind of living tradition in that different versions may be available from various performers and local scholars, showing some improvisational unsystematic features in the exploitation of Chinese graphs as phonograms. Clearly they cannot be considered together with commemorative writings inscribed on stone or other non-perishable media, and at the same time they offer a different type of linguistic material from what is preserved in modern ethnographic texts recorded phonetically from spoken or sung performances, some examples of which have now begun to appear in Chinese publications.²⁸ According to our best authority, exploitation of Chinese graphs to record popular literature of the Bai language is a widespread phenomenon that is traditional in its origins.²⁹ It is perhaps important to observe that like the inscriptions of an earlier period, such oral literary materials from the popular tradition would not necessarily be readable today for even an educated Bai speaker who is literate in Chinese. Literacy in Chinese implies ability to read Chinese texts as such, and not necessarily the skill of decoding vernacular texts that

appear in Chinese transcription. Of the Bai speakers to whom folk texts recorded in Chinese graphs are intelligible (they are likely to be folk performers themselves), we may say that the variety of literacy they use for this probably represents a traditional skill. One exemplary text of this type is a long dramatic poem entitled "The Huang Family Woman and the Vajracchedika," a critical edition of which has recently appeared in print. The text is of considerable length (1,075 lines composed mainly in quatrains of which alternate lines are rhymed), comprising upwards of 5,500 tone-bearing Bai syllables, each one recorded by a Chinese graph.³⁰ Compared to other such handcopied literary texts, the manuscript on which the critical text is based is relatively free of innovative or non-canonical graphs, and it would be recited, according to our authority, mainly as a mixed set of phonograms and rebuses that would refer the performer to the original language of the Bai verse text.³¹ It seems likely that the decision to read a graph either phonetically, or as the semantic representation of a Bai lexeme entirely unlike the Chinese lexeme in form, will depend only partly on the performer's level of Chinese literacy, and probably as much on his/her previous knowledge of the text. Here is an area of interest for future study, which should be approached through the recitation practice of a knowledgeable performer.

1.4.00 Biographical profiles: Case histories
of Bai speakers

1.4.01 Collecting educational histories

The three Bai speakers whose educational experiences are partially reflected here were polled for autobiographical material that would shed light especially on their education and acquisition of literacy and performance skills in Chinese. All three individuals were familiar with my research interest, having come to know me through regular informal personal contacts over a period ranging from sixteen (at the most) to five months, and they agreed to speak in Bai about their educational backgrounds and experiences for the sake of enriching my study and understanding. Differences in the level and type of detail characterising the three accounts partly reflect differences in my relationships with each informant, differences that to some extent affected the collection of the data. Unfortunately time constraints contribute to the fact that my report of the resulting material remains incomplete for each speaker. I include these accounts in spite of their incompleteness because of the important role I sense has been played by educational aspirations and outcomes in the natural history of Bai language performance skills among the speakers I have come to know. Each case history is based on tape-recorded remarks made by the individual concerned, speaking in Bai, in response to my queries. LSN provided extemporaneous and

lengthy remarks that were aimed toward my general concerns (as these had been perceived during a lengthy acquaintance) over a period of several weeks in a number of recording sessions, ZLQ's remarks amount to no more than a twenty-minute planned monologue that was collected in a single session, followed by an account of the substantive contents given in *pu3tong1hua4*. Qualitatively different from both of these accounts, DSY's remarks represent prepared responses elicited during an hour-long interview that was conducted for me by an assistant, following an outline of questions in written Chinese provided to both of them in advance. Thus, for DSY the raw material on which I base the case history is relatively more considered and analytical, in contrast to that provided by both LSN and ZLQ, which is chiefly anecdotal material.

1.4.02 LSN

LSN was born in 1937 at Qiaohou, a well-known salt-producing site (although Qiaohou is referred to as the site of a "salt mine" the actual resemblance to a mine remains uncertain, since the salt produced there is processed by boiling--see Appendix 1, text 6.2) situated west of Eryuan but separated from it by the Eryuan Xishan (West Mountain) range. The settlement at Qiaohou historically owes its existence to salt production. The town and production sites are situated on the two banks of the Yangbi River, which flows southward from there along the western side of the Cangshan range to join the Xi'erhe River, the waterway flowing into the southern mouth of the

Erhai lake that *Man3shu1* identifies with a distinct clan of *man3* (barbarians). LSN has one elder brother five years senior and one sister. At age three or four (circa 1940-41) he was taken by his mother to live at Madeng, now situated on the extreme northwest frontier of the Dali Bai Autonomous Prefecture and in a "transitional" zone between the modern Jianchuan dialect area and that of Bijiang Bai (that is, a zone where so-called "mixed" dialect phenomena would be expected). According to LSN's account, daily life at Madeng was made difficult by relatively high elevation, but the family residence there was spacious compared to the situation at Qiaohou where LSN's father was at work. The father would pay occasional visits to the family at Madeng, but remained a relatively unfamiliar figure to LSN during this period. Between 1940 and 1943, LSN's mother travelled periodically away from the family home to find employment or sell merchandise, sometimes crossing the Lancang and Nu Rivers (Mekong and Salween, respectively) to work on the other side of the Burma border. When LSN had reached age six, it was determined that he should enter school at Madeng. Both LSN's father and mother were illiterate. His father, however, had literate friends and associates through his employment and underground (communist) political work at the Qiaohou salt mine. The family's aspiration to educate their son was apparently endorsed by LSN himself, and he entered a traditional primary school at Madeng in 1944.

1.4.03 A traditional curriculum

The curriculum at this school consisted chiefly of memorizing passages from the Four Books, beginning with the *Great Learning* (Daxue) of Confucius. The actual material would be held only by the schoolmaster, who would first intone part of the text and then write out some of it on a slate. As he intoned, the schoolmaster would interpolate sentences of explication in Bai vernacular between text sentences, explaining the meanings of the passage in this way. Pupils would then repeat text phrases in chorus after the master, and would finally be called upon singly to recite bits of text aloud after memorizing them as homework. Discipline was sternly meted out with a bamboo switch to pupils whose recitation fell below par. Aside from reciting Confucian texts, pupils also were trained to compose simple letters in written Chinese, distinguishing between an honorific style--appropriate for addressing teachers in writing--and an informal style suitable for ordinary correspondence with friends.³²

1.4.04 DSY

DSY is the eldest of the three informants polled, born in 1922. Her educational experiences include early childhood literacy education in a traditional primary school at old Jinhua Commandery (Jianchuan city), uncompleted post-secondary studies at Central Union College in Xizhou during the anti-Japanese war period, and a career of primary school teaching that began in the new Republican schools and private

tutorial academies of Kunming before the Liberation of 1949 (which actually was realised only after the fact in Yunnan, where notorious local ethnic chieftains *tu3si1* 土司 remained loyal to the Republican government until negotiations with the new head of state assured them of continuing privilege and legal status under the Communists.

1.4.05 ZLQ

ZLQ was born circa 1964 at Fengyu, a village situated immediately south of Eryuan, into a formerly landed family with pre-Liberation ties to the Republican government. Her grandfather had been a tax and finance official posted at Baoshan before the communist victory, and ZLQ has early childhood memories of standing beside him during sessions of criticism related to his earlier status and activities. Judging from ZLQ's report, he was the instrumental figure in decisionmaking that began and fostered her early education. At age four (circa 1968) ZLQ began primary school studies at Taihe village, but on what was only her second day of school she lost the bag that contained her books, writing brushes, and ink when she ran outside the building (we may assume, along with a crowd of others) to appreciate the spectacle of an approaching truck, leaving the bag inside the classroom unattended. The loss of her books and writing equipment effectively kept her out of school for an entire year, but she reentered at the start of the following school year.

1.5.00 Implications for placing Bai in a genetic schema

1.5.01 Social facts and types of language change

Summarizing the possible implications of language contact and creolization for genetic linguistics, Thomason and Kaufman have stressed that "the major determinants of contact-induced language change are the social facts of particular contact situations." They draw a distinction between "normal" and "imperfect" transmission of a language, in order to allow theoretically for the existence of language states that have integrated features of more than a single source language while subject to interruption in the normal course of intergenerational transmission.³³ What I have tried to show in this chapter is that the social facts placing contemporary Bai speakers in situations of contact with Chinese through early literacy education and assimilation of immigrating spouses are suggestive in a retrospective way. The situations we can describe from observation, personal histories, and local statistics today are not just the product of communist Chinese language policies and their implementation in minority ethnic regions after 1949. On the contrary, the biographical accounts and educational situations we report here are the contemporary outcome of a protracted history of language contact that must have involved some speakers of a substrate language or languages continuously in the acquisition of Chinese literacy beginning at least from the eighth century, when the Dehua

stele was erected at Taihe City near the Erhai lake. This is a conservative estimate, however, since we have commemorative verses of unidentified Tibeto-Burman speakers transcribed in Chinese orthography as early as the fourth-century *History of the Later Han*, and since the Han expedition in western Yunnan is supposed to have marked the introduction of Han surnames among members of select local clans. What we may be increasingly allowed to see as the evidence for a Bai ethnohistory accumulates is a remarkable historical situation, in which ethnic differentiation has been closely related to the linguistic specialization of certain local clans, who served the local political elite as a "buffer" caste or hereditary class of diplomats, compradors, and religious practitioners. The protracted influence of such linguistic and social factors upon the development of the Bai language, spanning possibly two millenia of local history, has no doubt been crosscut by sweeping changes in the modern social situation resulting from the anti-Japanese and civil war struggles, the eventual success of the Revolutionary movement against Republican loyalists in Yunnan, and new social and language policies implemented after 1949. But the difficulty of situating Bai within the classical schema of a genetic family tree (one that would assume an early binary split between the Tibeto-Burman and the Sinitic branches of Sino-Tibetan, and would require us to place Bai finally under one or the other branch) is one sign that a long-lived historical situation of contact between Tibeto-Burman dialects and Chinese has probably contributed to the genesis and development of the language state we now encounter in the various geographical and social dialects of Bai.

The fact that we can document three generations of Bai-speaking bilinguals (we may be tempted to coin a term "Bilingual" to refer to them) whose repertoire of performance skills in *pu3tong1hua4*, written Chinese, and other local dialects of Chinese is the end product of schooling that generally begins with traditional literacy education in village schools, demonstrates in part that the recent intrusion of modern standard Chinese through political change has been a relatively minor factor in creating a language that encompasses what is by all accounts a hybrid vocabulary and grammar. What we need to consider in deciding about the relevance of genetic affiliation in the case of Bai is the extent to which the speech community has historically been split by Chinese literacy, and we need to study the effects of this historical situation in the speech of many individuals of different backgrounds.

1.5.02 A typological view of influence from a literary language

In a recent survey of what he calls "the great prestige languages of the West," Kahane illustrates some useful scenarios of influence and interaction between a dominant language and a vernacular with case-history examples, notably, from 17th-century Venetian literary sources that document "the pidginization of Italian by Greeks."³⁴ The scope of Kahane's paper is comprehensive and we cannot pursue all its implications fully here, but the categories of linguistic contact and change he illustrates point to what I believe is the most useful way to think about the linguistic situation of Bai in relation to Chinese

and the protracted period of mutual interaction between them that has resulted in the modern Bai dialects we can study today. Briefly, Kahane's paper adumbrates a type of study that acknowledges the linking of a 'native' vernacular language to a dominant language largely through the instrument of literacy and education, a process that finds expression in linguistic forms we can describe in terms of "nativization." Either of two possible scenarios of influence may be uncovered by such study: if the dominant language has been creolized, it will "integrate features of the native language ... as substratum influence"; if it has developed, instead, the function of a superstratum, its influence will be shown in changes it has "inflicted" on the native language. Actually these general scenarios express what are probably the limits of a continuum of variation along which a particular corpus of Bai speech data may be located according to internal criteria that we can develop in the near future, based on materials from printed sources and from fieldwork that we now have in hand. Some of our treatment of the Bai sentence grammar in Chapter 4 is influenced by the desire to establish a hierarchy of features that can be diagnostic for one or the other characterisation (creolized Chinese with influence from a substratum, or Bai vernacular with degrees of approximation to a norm identified with the superstratum) when applied to the study of Bai data from particular speakers. Looking at the background of Bai social and cultural history that is suggested by this chapter, it is clear that there has been ample opportunity for each of these outcomes to be realized at different times and in the speech of different sectors of

the population. If we can acknowledge this, perhaps the notion of a finding the correct "genetic solution" can be set aside in favor of studies that can illuminate the actual features and history of the language. It is my hope that the present study will be a step in the direction of finding evidence in Bai data for what Kahane calls the process of nativization, which, he says, "can be analyzed synchronically in terms of creolization, and diachronically in terms of stratigraphy.... Nativization may be overt--as lexemic, morphosyntactic, or phonological borrowing--or it may be covert, expressing itself in style, calques, and metaphors." The data studied here in Chapter 4 provide many examples that can be fruitfully explored in these terms. Characterising the larger linguistic situation that is implied by study of nativization phenomena, Kahane summarizes: "the lasting impact of the prestige language consists in standardization, the creation of a sprachbund, and a relatively stable culture of bilingualism." We may easily, and without stretching the information already at our disposal, think of the demise of inscriptional Bai (and the survival of folk traditions of Chinese transcription) as evidence of standardization, and our study of the dialect vocabulary and grammar from published sources (Chapter 4) suggests a continuum of variation from Chinese norms that could have resulted from coalescence around a prestige language (Chinese) among members of two speech communities that were essentially separate. From the tradition of Chinese scholarship and literacy that is almost emblematic of the Bai people and their historical precursors, and from the data on life histories from three

generations we have assembled here, it seems reasonable to assume that a type of Chinese-oriented bilingualism (an obvious feature of the Bai data we examine in Chapter 4, although it is not the main focus of this study) has been typical of one sector of the local speech community since the time when the earliest inscriptional witnesses to Chinese literacy can be identified. For all these reasons I believe that we may look forward to productive scholarship on Bai synchronic features as well as plausible reconstruction of its historical developments only if these are framed in terms of a relationship such as the one described by Kahane, between a local vernacular in contact with a (at least one) non-native prestige language that has been historically transmitted through a literary tradition.

Notes

1. I refer to the engaging reports of fieldwork by Fitzgerald (1941) and Hsu (1949), and to the study of the Dali dialect and its correspondences with Middle Chinese phonological categories published by Dell in 1981.

2. The literature includes Blackmore 1960 and 1967 and the monograph of Backus (1981), which draws on both Chinese and Japanese scholarship, especially that of Fujisawa Yoshimi, in addition to primary sources. It is worth remarking that this study, like those of Fitzgerald and Hsu, have not gone unnoticed in the Dali Bai Autonomous Prefecture, where lengthy translated excerpts from all of them have appeared in the locally published serial publication *Dali Wenhua*. One of the early Chinese sources (thought to be based on first-hand information, but perhaps not collected personally by the author, as Backus points out)--the treatise on Nanzhao written by the Tang military attaché Sun Cho and later preserved through its incorporation into the Song compilation of *Xin Tang Shu* 新唐书 (found at XTS 22.1)--was available in English translation as early as 1908 (by E.H. Parker, in the *China Journal*), but this translation went out of its way to foster a conception of the Nanzhao kingdom at Dali as the ethnic antecedent to the contemporary Siamese people, through copious philological annotations that drew direct comparisons of Nanzhao terms, recorded in the ninth century by the Chinese text, with Thai lexical items. An unbiased English translation was later made available through the work of Tin and Luce, a work that paves

the way for further interpretations combining empirical data with textual insights based on Sun Cho's early work. This worthy project is, however, beyond the scope of my present study.

3. Still it must be acknowledged that Fitzgerald does describe a distinctive complex of Minjia daily life, ritual practices, and folklore in and around the old Dali city in some detail, based on a degree of unsupervised personal experience that is difficult to duplicate today, and taking pains to point out differences and similarities to elements of Chinese culture. But in Fitzgerald's work, too, the Minjia people and their culture were identified with the historical Shan (Thai) people. What is perhaps strange is that Fitzgerald on one hand denies the identification of the Minjia people as direct descendants of the Nanzhao kings, while on the other he claims Shan identities for both the ancient kingdom and the modern Minjia. The Shan hypothesis for Nanzhao can be traced to western interpretations of the Chinese historical documents that had not yet been discredited when Fitzgerald wrote (see note 2).

4. Hiroko Yokoyama's recent paper (1990) on the multifarious character of the contemporary Bai culture, when available, should lend support to my view. I regret that I have not yet had access to the publication, but eagerly await her insights when it reaches me.

5. For the rise and careers of the Muslim warlords who ruled at Dali see especially Rocher vol. 2, and note also that some of this history figures in one text transcribed here in Appendix 1 (Text 6).

6. Chinese Academy of Sciences 1957: 28-34.

7. Parallel concerns, as expressed for example in scholarly emphasis on genetic classification of native languages, may be extrapolated from the interesting work of Trautmann (1987).

8. For the specialization of the Dongs as Buddhist tantric facilitators see the articles of Dong (1986, 1988); for the Yangs, see Xu 1984.

9. See Yunnan Ethnohistory Editorial Group 1977: 304 and Fang Guoyu 1956a: 13-16. According to Fang Guoyu the Wanli recension was compiled in 1575 and was basically a revamping of the material contained in the gazetteer compiled some fifty years earlier during the Zhengde period. Fang does not offer any theory to explain the compiler's motivation in shifting terms by editorial fiat.

10. See Yang Kun 1957 and Ma Yao 1957 on the process of ethnic differentiation that probably took place under Nanzhao rule because of social pressures to function as a buffer between the Meng clan rulers and northern powers, e.g. Tibet and Tang.

11. See the articles by Du, Deng, and Sun in Yang Kun et al. 1957.

12. From photographs published in Wang Ningsheng 1980: 150.

13. Both Fitzgerald (1941) and Hsu (1949) stress the heterogeneity of local ritual practice.

14. Zhao Liqi, personal communication, December 1988.

15. Yang Kun 1957:2. Ma Yao (1957: 75-60) also claims that the formation of an identifiable ethnic grouping was based on commonalities shared by certain *bai2man2* and *wu1man2* clans during the time of early Nanzhao's resistance against Tang domination and

colonization, and their simultaneous struggle to claim or reclaim the Jianchuan region from Tibetan administration (circa 750).

16. A good account of the early tradition of fieldwork in China, and its development into a form of empirical study consistent with socialist political and practical concerns, is found in Wong 1979: 80-92 and passim. Meanwhile a lively impression of the style of collaboration practised by scholars of the Academia Sinica interacting with local native informants during the years before Liberation can be had from Li, Chang, and Ho 1967. Accounts like these make clear that the 1950s surveys built on an established tradition of ethnolinguistic fieldwork, and we know that some members of the Bai Language Workgroup had been trained by the architects of that tradition (Zhao Yansun, personal communication, December 1988).

17. Dai Qingxia, personal communication, December 1987. I am grateful to Prof. Ma Xueliang for lending me materials from his personal collection that make clear the role of Soviet advisors in establishing the direction of linguistic description during this period.

18. Academia Sinica Nationality Language Survey Team 1957: 28-34. I am especially indebted to the Nationalities Language Work Executive Committee of Yunnan Province for allowing me access to the Workgroup's report, which was never published in other than mimeograph form.

19. These observations are from Fitzgerald 1941: 84-85 and passim.

20. Fitzgerald 1941: 86.

21. Yokoyama 1989 gives statistics for families living under the roof of the wife's family in two communes of the Erhai region. Her interview data suggest that the institution of "taking in a son" (*tsou2mei2*) has served a practical function to solve problems of labor shortage in the family. It has been described by my linguistic consultant as a local solution to the social problem that was historically created by a significant influx of Han military personnel from the north in Yunnan after the Ming government established its power in the region. But we can imagine on the other hand that this pattern might represent the survival of an ancestral social arrangement that was promoted by historical circumstances.

22. Fitzgerald 1941: 83-84.

23. Fitzgerald 1941: 84.

24. Zhang Wenbo 1986.

25. Xu 1986-88, vol. 1: 41-44.

26. For a summary see Zhao 1987, or more detailed descriptions in the Dong 1986 and 1988 articles that trace the rise and fall of the Acarya teachings of north Indian Buddhist tantra in the Erhai region under the protection of a hereditary guild of non-celibate priests, many of whom belonged to the lineage of the still well-known Dong family at Fengyi. For a photographic view of the manuscript containing interlinear glosses I am indebted to Zhao Yansun.

27. Fang 1984: 1191 and Xu 1984: 362.

28. Several spoken texts in modern phonetic transcription have been published in Xu 1988.

29. Xu 1988: 41 and 44.

30. Xu 1988: 9.

31. Xu 1988: 41 and 43.

32. Some of this material is from biographical text data partially transcribed in Appendix 1. Details of classroom procedure are from an elicited performance emulating the reading of literary Chinese texts by the consultant's primary teacher.

33. Thomason and Kaufman 1988: 10-11 and *passim*.

34. Kahane 1986: 502, and other material summarized here, *passim*.

Chapter 2 Tone and Phonation in Bai Speech:
Toward a Historical Interpretation

2.1.00 Outline of the Bai tones and initials

2.1.01 The tones of Bai and their representation

According to published sources a general outline of the Bai tones must encompass a system that varies between six and eight reflexes, depending on the dialect. The descriptions of Bai in print at that time were Xu and Zhao 1964, Dell 1981, and Zhao 1982, sources that present a consistent picture as to the general shape of the Bai tonal system, but which differ in formal representation and in their treatment of co-articulated features associated with individual tones. A two-way contrast, apparently involving laryngeal constriction, had been incorporated into the system of tonal notation by the Chinese authors, such that the whole tonal system appeared to be symmetrically split by the realization of a single coarticulated feature (Xu and Zhao 1964:322). This symmetry, moreover, extended to the segmental system in that there appeared to be no restrictions governing the co-occurrence of particular rhymes (treated as vowels in this description) with either type of tone. Dell, on the other

hand, described particular auditory effects characterizing each tone encompassed by his data corpus, treating the individual tone value as a perceptually unique bundle of "subtonemic" entities distinctively realized: pitch, length, contour salience, presence/absence of glottal interruption (Dell 1981:30-34). The difference in approach partly reflected the fact that Xu and Zhao 1964 had described an ideal system, based on survey data, that was intended to represent the speech of numbers of individuals, while Dell, twenty years later, presented a case study based on data from a single speaker.

2.1.02 Comparison of Dell's Dali tones and Jianchuan tones

The two descriptions could, therefore, be understood as entirely complementary, especially since Dell's historical discussion was illustrated by correspondences linking his Dali data to the Jinhua data of the earlier description. Lacking further information and access to multiple speakers for comparison, however, Dell thought that the "laryngealized tones" described by the notation of Xu and Zhao represented only a conservative feature in the speech of older Bai individuals. He therefore proposed that in the speech of his youthful Dali informant (circa 1967, e.g. roughly contemporaneous with the description published by Xu and Zhao) the corresponding tones had "lost" their mark of phonological distinction (Dell:90, 103). Only one of the corresponding tones in his data corpus was described as audibly glottalized, his tone 8, which equals tone 42+ in the *Jianzhi* data. By implication, the speaker who provided Dell's

data illustrated an innovative tendency among youthful speakers toward the same "relaxation" of tense larynx that had been pointed out by Dai 1980 (see 2.2 below).

Table 2.1 A

The Jianchuan tones represented by number and by value
in Zhao's tone letters

- 1 (55+)
- 2 (44+)
- 3 (--)
- 4 (42+)
- 5 (21+)
- 6 (55)
- 7 (33)
- 8 (35)
- 9 (31)

The following table illustrates Dell's tonal schema for Dali Bai and his description of auditory impressions, alongside corresponding reflexes as represented in the dialect corpus published as Xu and Zhao 1984 (hereafter *Jianzhi*). Dialect forms drawn from that source here and elsewhere in this paper are cited as DL: (Dali), JC: (Jianchuan), and BJ: (Bijiang), and Jianchuan Bai is assumed to reflect the same variety of speech that was earlier identified as Jinhua vernacular by the same authors. Examples from Dell's Dali data

corpus are cited as GKC, and the impressions described for each tone reflect my understanding of Dell's text.

Table 2.1 B

Dell's tonal impressions and corresponding Jianchuan reflexes

Gloss	GKC	Dell's Auditory Impressions

to listen	ts'ioe 1	Spread out, medium length, distinct vocal offset, 44 contour
DL: tɕe ^r 55	JC: tɕhẽ55	BJ: tɕhã55
to weigh	ts'y 1	
DL: tɕhui55	JC: tɕhuĩ55	BJ: tshuĩ55

to curse	w 2	Spread out, medium length, distinct vocal offset, 33 contour
DL: ɣu44+	JC: u44+	BJ: xa44+
to ask	pioe 2	
DL: piẽ ^r 44+	JC: piɛ44+	BJ: tɕua44+

two	ko 3	Spread out, medium length, distinct vocal offset, 22 contour
DL: kou33	JC: kō33	BJ: ky33
to lick	tsw 3	
DL: tsi33	JC: tsi33	BJ: dz ^r ẽ ^r 33

DL: ko21+ JC: ko21+ BJ: -qo-21+

CLF (person) ni 7

DL: ɲi21+ JC: jɿ21+ BJ: ɲi21+

white poe 8 Very high & short in final
position, 55 or 54 contour
and interrupted by glottal stop,
but in other contexts rapidly
descending (53) without
glottalization

DL: pe^f42+ JC: pe42+ BJ: pa42+

ten tsw 8

DL: tsi42+ JC: tse42+ BJ: ts^fe^f42+

As these equations demonstrate, Dell's descriptive comments provide useful benchmarks against which the tonal notations {+ constriction} of Xu and Zhao may be evaluated, especially for readers lacking access to native-speaking consultants, even though "laryngealization" as such does not enter into his phonological analysis as a structurally significant feature.

2.1.03 Speculations on the origins of {+/-constriction} in Bai:

A theory of reconstruction from Benedict

Dell's Bai/Chinese comparisons showed regular correspondences with Middle Chinese tone categories, but also showed that the same correspondences are sometimes illustrated by both modern loan vocabulary and what look like cognates or archaic loans. Benedict

1982 proposed reconstructions for some proto-Bai etyma based on Dell and the earlier Chinese sources, viewing laryngeal constriction or glottal events ("glottalized *rusheng*" in his terminology) as the reflex of PST *-ptk, *-s or a PST prefix (either *ʔ- or *s-) (Benedict 1982:2, 4-6). This treatment, it should be remarked, represented a proposal to push the Bai proto-language to a considerable level of antiquity, such that sporadic retention of similarities to Old Chinese, Middle Chinese, and conservative modern Chinese dialects, as well as parts of Tibeto-Burman, could be regarded as a single gestalt, evidence of an early period of common development shared with a minimally differentiated ST or Sinitic ancestral language. Indeed, Benedict even suggested that in some cases aberrant or variant forms in Chinese might actually reflect Bai proveniences.¹ Dell observed an apparent tendency toward convergence shared by the segmental systems of local Chinese vernaculars and Bai, and contrasted this with what he suggested was an inherent coherence and imperviousness to pressure from Chinese contact characterising the Bai tonal system (Dell 1981:96-97). This observation holds out the hope that a systemic hypothesis incorporating the tones and coarticulated features associated with them, worked out in relation to segmental correspondences obtaining for Bai dialects, and considering the correlations with traditional Chinese phonological categories, could lead to internal reconstruction of what is truly ancient in the language whether illustrated by borrowed vocabulary or not.

2.1.04 Lexical frequency of {+constriction} and internal tonal correspondences for the Bai dialects

After the appearance of the *Jianzhi* material, it became possible to study the lexical frequency and internal correspondences in a relatively large corpus of dialect material as recorded by a single team of investigators. Study of this material without access to a native-speaking consultant

Table 2.1 C

Inventory of tonal reflexes in the Bai dialects

Bijiang Tones

	Level		Rising	Falling	
Tense	44			42	21
Lax	55	33	[35]	31	

Jianchuan Tones

	Level			Rising	Falling	
Tense	55	44	[33]		42	21
Lax	55	33		35	31	

Dali Tones

	Level		Rising	Falling		
Tense	44			42	21	
Lax	55	33	35	32	31	[53]

The above summary of tonal reflexes for the three recognized varieties of Bai is based on actual inspection of the dialect materials published at the back of *Jianzhi*. Some cross-dialectal equivalences are inventoried in the phonological statement for "standard" or Jianchuan Bai, but the tacit assumption is that like reflexes otherwise correspond across the dialects. The "conditioned variants" are given as follows:

- (1) Bijiang 55 : Jianchuan 55 : Dali 35, in the case of unaspirated stop and affricate initials.
- (2) Bijiang 33 : Jianchuan 31 : Dali 31, in the case of modern borrowings from Mandarin *shangsheng*.
- (3) Bijiang 21+ : Jianchuan 31 : Dali 31, in the case of modern borrowings from Mandarin *shangsheng* (no statement appears regarding the distinction between this and the preceding correspondence).
- (4) Bijiang 55 : Jianchuan 55+ : Dali 55, in the case of modern borrowings from Mandarin *qusheng*.
- (5) Bijiang 21+ : Jianchuan 35 : Dali 35, in the case of modern borrowings from Chinese *rusheng*.²

These equivalences show that the high level {+ tense} tone of Jianchuan Bai is probably a recent innovation associated with newly borrowed Chinese words that historically would have had rhyme endings in either -f or -s. In addition, we can see that Bijiang's low falling tone has contacts with both the historical *shang3sheng1* and *ru4sheng1* categories of Chinese, categories we may think of as having

shared a feature {+ glottalized rhyme ending} at one stage of the tonogenetic scenario, or possibly as having assumed this feature sequentially (*shang3sheng1* gradually losing it as *ru4sheng1* gradually assumed it) over a period of time. On the other hand, *Jianzhi* does not explain what corresponds to the Dali 32 reflex in other dialects: this is a rare tonal reflex even in Dali, judging from the *Jianzhi* dialect materials, but the most frequently encountered correspondence involves the Bijiang and Jianchuan 42+ reflexes. If we overlook what are apparently the two recent or "secondary" tones (Jianchuan 55+ and Dali 32), the pandialectal tone system can be reduced to three basic reflexes in tense phonation and four in lax. The one tonal reflex in rising contour may have a special status in Jianchuan, in that it mainly represents recent contact with MC *ru4sheng1*. Yet, the same 35 contour has broader distribution in the Dali dialect (unaspirated stops), while its function is assumed by the low falling tone (21+) in Bijiang speech. Elsewhere in *Jianzhi* and from other sources (*Jianzhi* p. 12 & Primer p. 18-19) we learn that the tonal "subsystem" used in pronunciation of recent loans from Mandarin (which may include borrowed local vocabulary i.e. from Southwestern Mandarin or character readings from written Chinese--*bendi hanhua*--as well as readings transparently from *putonghua*, but perhaps via the Yunnan form of Mandarin) includes the 33 and 42+ "tonemes," as well as 31, 55, and 35, apparently leaving aside 55+, 44+, and 21+. Since 33 is thus twice used by Bijiang, to accommodate some *shangsheng* as well as *yinping* loans, while the two {+tense} falling reflexes accommodate the rest of Bijiang's *shangsheng* loans and all *yangping* loans, we may

find some encouragement for a hypothesis that the rather symmetrical appearance of {+tense} phonation in Bai bears witness to a historical process involving loss of a voicing contrast in an earlier system of consonant initials. Another way of describing the same situation would be to say that well-attested patterns of initial correspondence among the Bai dialects are marked by what appear as symmetrical "tonal splits," although there are sometimes more instances of one etymological tone reflex than the other for a given correspondence pattern. Adopting this rubric, one could then reconcile most tonal "irregularities" by assuming that a difference between {+tense} and {-tense} notation represents the criterial (i.e. historically relevant) distinction in correspondence sets that also show "irregular" contour notations such as 31:21:21 or 42:21:33, or 55:44:31. The actual correspondences found are summarized in the following table.

Table 2.1 D

Tonal correspondences from comparison of the dialects

Bijiang	Jianchuan	Dali
55	55	55
55	55	35
33	33	33
44+	44+	44+
42+	42+	42+
42+	42+	32
42+	31	31
21+	21+	21+

2.1.05 Inventory of consonant initials for the dialects

Once we begin to speculate about the developments that have produced the tonal system found in the modern Bai dialects, we are obliged to expand our perspective to include the system of consonant initials. We have seen that at least one internal tonal variation across the dialects is linked by co-occurrence with a synchronic manner contrast (aspirated/unaspirated) in stops and affricates. In addition, published sources as well as our consultant point to certain Bai tones as reflecting an internal subsystem of "literary" tones through which a recent stratum of Chinese borrowings is nativized, or through which Chinese written texts may be "read in Bai tones" (*han4zi4 bai2du2*). We shall say more about this subsystem in 2.4.00 below, where it will become a tool for distinguishing the literary from the colloquial stratum of Chinese character readings in a Bai inscription. Here we may simply observe that this is a complex subsystem fully integrated with the native tonal system, and not merely a borrowing device or system of tones reserved for lexical borrowings. Before saying more about what these Chinese/Bai tonal contacts may show in regard to tonogenetic (or phonogenetic) developments in Bai, then, we need to examine the corresponding inventories of consonant initials for the three Bai dialects already named.

Table 2.1 E

Inventory of consonant initials for the Bai dialects

Bijiang

Labial	Palatal	Alveopalatal		Retroflex		Velar	Postvelar
b	dz	d	dz	d ^r	dz ^r	g	
p	tɕ	t	ts	t ^r	ts ^r	k	q
ph	tɕh	th	tsh	t ^r h	ts ^r h	kh	qh
v	j		(z)		z ^r	ɣ	
f	ɕ		s		s ^r	x	h
m	ŋ		n			ŋ	
			l				(0)

Jianchuan

Labial	Palatal	Alveopalatal		Velar
p	tɕ	t	ts (t ^r)	k
ph	tɕh	th	tsh	kh
v	j		(z)	ɣ
f	ɕ		s	x
m		n		ŋ
		l		(0)

Dali

Labial	Palatal	Alveopalatal		Velar
p	tɕ	t	ts	k
ph	tɕh	th	tsh	kh
v	j		z	ʎ
f	ɕ		s	x
m	ŋ	n		ŋ
		l		(0)

Study of the *Jianzhi* dialect materials showed that the most regular-looking patterns of phonetic correspondence for consonant initials across the dialects gave the appearance of being split almost equally between instances in {+tense} phonation and instances lacking this notation. Close inspection of the patterns in fact leads to the observation that for some correspondences instances in {+tense} phonation actually outnumber their {-tense} counterparts. One question that motivates the present chapter is to ask whether this slightly asymmetrical distribution of {+tense} phonation among instances of correspondence can be interpreted as the witness of a historical shift in Bai, or is rather a function of gaps in the (still rather limited) data, or yet again, is actually an effect that correlates with one or another loan stratum. The corpus upon which these observations rest is itself a reduced version of the actual amount of dialect material made available for study, because it was only possible to establish instances of consonant initial correspondence for about 690 of the original 1016 lexical entries in

the *Jianzhi* list. Still, even though this characterization of a "topheavy" distribution of {+tense} phonation in the data is impressionistic and based on occurrences in a selected corpus, the selection was itself neutral to phonation type. That is, the "split" in the data appeared as a byproduct of having sorted it to find the phonetic correspondences for consonant initials, treating the record of {+tense} phonation as relevant to those correspondences, but not discarding any instance of correspondence because of its failure to show {+tense} phonation (or its absence) consistently in each dialect. In other words, instances of consonant initial correspondence were considered {+tense} even if only one reflex (of the three available) was affected, but the majority of instances still presented a consistent picture, such that sets involving mixed {+tense} and {-tense} morphemes often invited explanation as illustrating a "regular" tonal correspondence.

2.1.06 Light on {+constriction} from the consultant

Below is a summary of tonal data provided by the consultant LSN, a self-identified Jianchuan speaker who in practice affirms a clear distinction between morphemes in four different types of phonation. The tonal reflexes are represented as in *Jianzhi*, but terminology is that used by the consultant to describe his own pronunciations.

Table 2.1 F

The Jianchuan tones as phonation types

- 1) "tense" (*jinhcu* 紧喉) [55+, 44+, 42+]
- 2) "pressed" or "creaky" (*jihua* 挤化) [21+]
- 3) "breathy" (*qihua* 气化) [31]
- 4) "non-tense" (*fei jinhou* 非紧喉) [55, 33, 35]

2.1.07 Benedict's glottalized *ru4sheng1* theory

The following table summarizes Benedict's proposals for special or unpredicted development of the {+constriction} tones, a theory that attempts to show what, apart from etymological membership of the etymon in the traditional Chinese *rusheng* tone class, can make the feature {+constriction} show up in modern Bai lexical items. This amounts to accounting for apparent irregularities of correspondence, that is, Bai morphemes in {+constriction} not attributable to the Chinese "entering tone" or *ru4sheng1*. Benedict derives the feature {+constriction} by means of a PST *s- prefix, a *glottalized consonant initial, or a *-s suffix, all supposedly preserved in the "unexpected" Bai reflexes. In the following table I first list the predicted development based on the register split in the Middle Chinese *rusheng* category, and this list is followed by Benedict's proposals for unexpected development due to assimilation of phonetic elements originally not belonging to the syllable, but attached to it.

Table 2.1 G
Syllable-external ST influences on Bai rhyme and tone reflexes
as proposed in Benedict 1982

Provenience (ST/PC)	Proto-Bai	Modern Reflex	Examples

p,t,k	-t/-k > -ʔ	{glottalized <i>rusheng</i> }	
> MC D1		tone 44+	
> MC D2		tone 42+	'white' pɛ42+ 'stone'.1 tso42+.khui55

s-	s-	unexpected {glottalized <i>rusheng</i> } &/or contour shift	
if MC D2		tone 44+	'moon' mi55ɲua44+ 'leaf' se44+
if MC C1/2		tone 44+	'four' ɕi44+ 'year' sua44+

ʔ-	ʔC-	unexpected {glottalized <i>rusheng</i> } &/or contour shift	
if MC D2		tone 44+	'forehead' ɲɛ44+te44+
if MC A2		tone 21+	'shoe' ɲe21+
if MC <i>qusheng</i>		tone 44+	'outside' ɲua44+no33
if MC A1		tone 42+	'to swallow' ẽ42+

-s	-t > -ʔ	unexpected {glottalized	<i>rusheng</i> }
if MC	<i>qusheng</i>	tone 44+	'two' ne44+

-a + GEN SUF	-ai > -aə	-u	PRON 1st, 2d, 3d GEN

-n (NOM SUF)	-n > -ŋ	unexpected nasalization	
			'trousers' kuã55
			'tea' tsõ21+
			'hoe' tsỹ21+

The table above also includes Benedict's proposals to account for "sporadic nasalization" in Bai (viz. nasalization in non-nasal-final syllables of Chinese provenience) and residual case morphology in the Bai pronouns, because it was originally designed to summarize all changes to the syllable that were proposed by that author to have origins "external" to the changed syllable itself. So, although the table is not limited to explanations for unexpected tonal phenomena, it is worth remarking that the genitive pronoun morphology here described in terms of vowel ablaut is always accompanied by tonal shift. I have not determined whether unexpected nasalization in Chinese cognate/loans is also accompanied by shift or irregularity in tonal correspondences, but that is a topic worth exploring.

2.1.08 A cover term broader than {+/-constriction}

Suffice it to say at this point that my original doubts about the system of tonal notation in use by the *Jianzhi* authors combined with personal observations of native pronunciations of the Jianchuan Bai tones in consultation with LSN led me to suspect that the terms "tense" or "glottalized" might be better replaced by a rough cover term to represent varied phonation-type phenomena probably reflecting a more complicated history of developments than the *rusheng* explanation (regressive assimilation of articulatory features associated with historical checked-final rhymes followed by a register split) will account for. Given that the object of studying the tone system in isolation here is to explore its possible links with the mutually unrelated tonal systems of separate language groupings within the Sino-Tibetan super-family (Chinese, Tibeto-Burman, Burmese-Lolo), it will be as well in any case to avoid assumptions about the system that might be implied by adopting Benedict's use of the term *rusheng* in reference to tones 55+, 44+, 42+, and 21+. Reference to these tones in terms of "marked phonation" or {+P} has the virtue of allowing for the same historical interpretation of relevant data (e.g. data that fits the << *-ptk theory) without requiring that we assign Chinese "tonal etymologies" to all reflexes involved, whether they are clearly of Chinese provenience or not, and if so whether they are *rusheng* etyma in Chinese or not. And, the use of a cover term allows for other explanations to be added where the data do not fit, so that a

combination of historical developments may be shown to have contributed to what is a coherent synchronic system. In the rest of this work I have adopted the usage "marked phonation" or {+P} as a cover term to include all the combinations of phonation type and tone in Bai whose acoustic properties are perceptually salient. In citing linguistic forms from the works of other scholars who treat {+/-constriction} as the salient feature (whether belonging to the tone or to the vowel), however, I represent morphemes in {+constriction} by means of a "plus" (+) following the tone letters pitch and contour. This amounts to alternating between two notation systems that cut across the system differently, and underscores the fact that there are really two synchronic analyses of the Bai tones at stake. Without going into this at great length, I can say that the {+/-P} analysis (including all perceptually salient phonation types) seems to fit the requirements of diachronic study best because it allows for a higher degree of abstraction. In my system of transcription, the single numerals assigned to tones provide specificity as to phonation type, whereas in correspondence sets involving data from printed sources that use the {+/-constriction} feature, use of the cover term {+/-P} makes complex hypotheses possible. Lacking a term that includes all the salient phonation types, it would only be possible to think in terms of tonogenetic developments along binary lines. We should perhaps have to propose that morphemes in {-constriction} that correspond with morphemes in {+constriction} had somehow lost their earlier glottal quality--but that is far too neat.

2.1.09 Summary of internal correspondences for Bai initials and tonal environments

Table 2.1 H

Summary of initial correspondences in the Bai dialects

(488 sets, cited in order BJ:JC:DL)

- (1) 0 : 0 : 0 {+P} <11 sets> hawk (42+:42+:42+); bury (-JC) (42+:42+); pit (42+:42+:42+); duck (44+:44+:44+); irrigate (-DL) (44+:44+); goose (21+:21+:21+); frog (21+:21+:21+); swallow (v.) (42+:42+:32); feed (55:42+:32); NEG PRT (-DL) (42+:31); one (42+:31:31)
- (2) 0 : 0 : 0 {-P} <4 sets> saddle (55:55:35); PRON INTERROG.1 (55:55:55); KIN PREF (55:31:31); warm (33:55:35)
- (3) p : p : p {+P} <20 sets> breast (42+:42+:42+); thin (paper) (42+:42+:42+); white (42+:42+:42+); lazy (-DL) (42+:42+); magpie (-DL) (42+:42+); lock (n.) (-DL) (42+:42+); insert (42+:42+:42+); clap (hands) (44+:44+:44+); hundred (44+:44+:44+); hoof (21+:21+:21+); harrow (v.) (21+:21+:21+); flat (21+:21+:42+); float (21+:42+:21+); move (-DL) (21+:42+); stool (21+:42+:42+); leopard (42+:42+:32); change (v.) (42+:42+:32); braid (n.) (42+:55:35); collapse (55:44+:44+); beside (55:21+:55)

- (4) tç : p : p {+P} <5 sets> chaff (21+:21+:21+); ant
(21+:21+:21+); eight (44+:44+:44+); ask (44+:44+:44+); skin
(33:21+:21+)
- (5) p : p : p {-P} <9 sets> axe (33:33:33); mend (33:33:33);
winnow (55:33:33); shoulder (33:33:33); plank (33:33:33); get
sick (-BJ) (31:31); split open (intra.) (55:55:35); wrap
(55:55:35); CLF (dry litre) (55:55:[35])
- (6) b : p : p {-P} <3 sets> pond (33:33:33); full (stomach)
(33:33:33); embrace (v.) (33:33:55)
- (7) tç : p : p {-P} <3 sets> wind (55:55:35); plait (v.)
(55:55:35); left side (55:55:35)
- (8) ph : ph : ph {+P} <5 sets> split (wood).A (42+:31:[55]); lid
(42+:31:31); artillery (44+:44+:44+); cucumber (44+:44+:44+);
forget (-BJ) (44+:44+)
- (9) ph : ph : ph {-P} <3 sets> shop (55:31:31); blow (w/ mouth)
(55:55:55); rice gruel (55:55:55)
- (10) tçh : ph : ph {-P} <3 sets> tear (paper) (55:55:55); cheap
(55:55:55); steep (-DL) (55:55)

- (11) m : m : m {+P} <18 sets> tomorrow (21+:55:55); coal
(42+:42+:42+); fine (42+:42+:32+); crawl (44+:44+:44+);
mosquito (44+:44+:44+); wheat (44+:44+:44+); crow (v.)
(21+:21+:21+); sharpen (21+:21+:21+); door (21+:21+:21+); fog
(-DL) (21+:21+); hair (fur) (21+:21+:21+); flee (21+:21+:31+);
grave (42+:31:53); dream (n.) (42+:31:32); ink (stick)
(42+:44+:44+); root (42+:44+:44+); bamboo hat (44+:31:31); buy
(33:42+:32)
- (12) m : m : m {-P} <7 sets> horse (33:33:33); full (33:33:33);
late (33:33:33); uncooked rice (33:33:33); think over
(33:33:33); NEG EXIST (33:33:33); close eyes (55:55:35)
- (13) f : f : f {+P} <3 sets> malaria (44+:44+:44+); saw
(42+:42+:42+); six (44+:44+:44+)
- (14) v : v : v {-P} <3 sets> crow (n.) (55:55:35); owe (-DL)
(33:33); KIN CMW (33:33:33)
- (15) t : t : t {+P} <18 sets> talk (n.) (21+:21+:21+); CLF
(drop/water) (55:44+:44+); choose (33:42+:42+); help (v.)
(42+:42+:32); answer (v.) (21+:55:35); strike.B (-BJ)
(44+:44+); PRON REFLEX (-DL) (44+:42+); wear (hat)
(42+:42+:32); chop (mince) (42+:42+:32); trample (42+:42+:42+);
rice huller (42+:42+:32); front (21+:21+:21+); hair (head)

- (21+:21+:21+); peach (21+:21+:21+); peanut (55:55+:55); pig (42+:42+:42+); root.B (-DL) (44+:44+); sugar.2 (21+:21+:21+)
- (16) t^r : t : t {+P} <3 sets> year before last (21+:21+:21+); head (33:21+:21+); CLF (chicken) (21+:21+:21+)
- (17) d : t : t {+P} <8 sets> KIN WM/WF (-DL) (42+:31); large (42+:42+:31); steal (42+:31:31); win (-DL) (44+:44+); back (body) (42+:42+:31); boy (-JC) (42+:31); beans (42+:31:31); KIN FEBW (42+:55:55)
- (18) t : t : t {-P} <5 sets> KIN FEB (55:55:55); distant (33:33:33); vertical (-JC) (55:35); lamp (55:55:35); gallbladder (33:33:33)
- (19) t^r : t : t {-P} <3 sets> basket (55:55:35); stupid (33:35:33); NUM ORD PREF (33:31:31)
- (20) d : t : t {-P} <3 sets> plain (33:31:31); courage (33:33:33); top (33:33:33)
- (21) th : th : th {+P} <3 sets> bucket (42+:31:31); CLF (handspan) (42+:31:31); untie (-DL) (55:44+)
- (22) n : n : n {+P} <4 sets> pus (21+:21+:21+); difficult (21+:21+:21+); CLF (ounce) (42+:42+:42+); mud (21+:21+:21+)

- (23) n : n : n {-P} <3 sets> PRON 2d-s (55:31:31); PRON 2d-P
(55:55:55); brains (33:33:33)
- (24) l : l : l {+P} <6 sets> tiger (21+:21+:21+); roll (-DL)
(33:42+); retreat (21+:31); chili (21+:35:35); quilt (n.)
(42+:31:31); sieve (21+:21+:21+)
- (25) l : l : l {-P} <3 sets> take off (55:55:35); tear off
(55:55:35); ADV also (55:55:55)
- (26) ts : ts : ts {+P} <5 sets> bird (44+:44+:44+); soak
(21+:21+:21+); plough (v.) (44+:44+:44+); say (-DL) (42+:42+);
bell (42+:55:35)
- (27) ts^r : ts : ts {+P} <4 sets> ten (42+:42+:42+); narrow (?)
(44+:44+:44+); break off (intrs.) (55:42+:33); pick up
(42+:42+:42+)
- (28) dz : ts : ts {+P} <3 sets> sparrow (42+:44+:44+); chew
(42+:42+:42+); written word (42+:31:31)
- (29) t^r : ts : ts {+P} <17 sets> tongue (42+:42+:42+); narrow (?)
(44+:44+:44+); long (21+:21+:21+); bear fruit (21+:42+:42+);
ADV again (42+:44+:44+); shoot at (42+:42+:42+); stone
(42+:42+:42+); right side (33:42+:32); intestine (21+:42+:21+);

- broom (44+:44+:44+); weave (42+:55:44+); house (-DL) (21+:21+);
 city wall (21+:21+:21+); bed (-DL) (21+:21+); key
 (42+:42+:42+); tea (21+:21+:21+); remember (44+:44+: [44+])
- (30) tɕ : ts : ts {+P} <7 sets> plant (v.) (42+:42+:32);
 chopsticks (42+:31:31); hoe (21+:21+:21+); bug (21+:21+:21+);
 bamboo (44+:44+:44+); saliva (42+:44+:44+); release (-BJ)
 (42+:42+)
- (31) ts : ts : ts {-P} <6 sets> CLF (knife) (33:33:33); make/do
 (55:55:55); liquor (33:33:33); peasant (55:55:55); KIN CM
 (33:33:33); early (33:33:33)
- (32) ts^f : ts : ts {-P} <7 sets> finger (33:33:33); true
 (55:55:55); ADV surely (-DL) (55:55); oil (55:55:35); needle
 (55:55:35); paper (33:33:33); pillow (33:33:33)
- (33) dz^f : ts : ts {-P} <4 sets> lick (33:33:33); kidney
 (33:33:44+); market (33:33:33); persimmon (33:31:31)
- (34) t^f : ts : ts {-P} <5 sets> ear (grain) (33:33:33); steam
 (v.) (55:55:55); host (33:33:33); table (55:55:35); pass new
 year (55:55:35)
- (35) tɕ : ts : ts {-P} <5 sets> teeth (33:33:33); pack into
 (33:55:35); seed (33:33:33); boil (33:33:33); cup (55:55:35)

- (36) dz : ts : ts {-P} <4 sets> be at / in (33:33:33); EXIST
(33:33:33); COP (33:33:33); heavy (33:33:33)
- (37) tsh : tsh : tsh {+P} <6 sets> radish (42+:31:31); salty
(42+:31:31); vegetable (42+:31:31); kitchen knife (42+:31:31);
twist (55:44+:44+); inspect.2 (21+:42+:42+)
- (38) t^rh : tsh : tsh {+P} <5 sets> sniff (42+:55:55); foul-
smelling (42+:31:31); thin (person) (-DL) (44+:44+); sweep
(-DL) (44+:44+); red (44+:44+:44+)
- (39) tsh : tsh : tsh {-P} <4 sets> scallion (55:55:55); window
(55:55:55); extend (31:31:31); cut (33:33:33)
- (40) ts^rh : tsh : tsh {-P} <3 sets> transport (35:55:55); swell
(55:55:55); CLF (foot) (33:33:33)
- (41) t^rh : tsh : tsh {-P} <5 sets> husks (55:55:55); sound
(55:55:55); pot (-DL) (55:55); light (55:55:55); ADV
immediately (-DL) (55:33)
- (42) tçh : tsh : tsh {-P} <6 sets> grass (33:33:33); coarse
(55:55:55); short (55:55:55); obstruct (55:55:55); body
(55:55:55); rub (-DL) (55:55)

- (43) s : s : s {+P} <12 sets> painful (42+:31:31); cloth (-DL) (44+:44+); small (42+:31:31); lay (egg) (42+:42+:32); laugh (42+:31:31); rope (44+:44+:44+); year (44+:44+:44+); blood (44+:44+:44+); egg (cf. lay) (42+:42+:42+); garlic (42+:31:31); snow (44+:44+:44+); teacher (55:55:44+)
- (44) s^r : s : s {+P} <9 sets> urine (42+:31:33); mushroom (33:33:42+); produce (44+:33:44+); mountain (55:42+:32); leaf (44+:44+:44+); run (55:44+:44+); throw (-DL) (55:21+); kerchief (33:44+:33); palmbark cape (44+:44+:44+)
- (45) s : s : s {-P} <7 sets> three (55:55:55); assist (mutual) (55:55:55); fight (v.) (-DL) (55:55); ramie (33:33:33); KIN GCM (55:55:55); written word (55:55:35); loose (-DL) (55:55)
- (46) s^r : s : s {-P} <8 sets> rat (33:33:33); deep (55:55:55); harvest (v.) (55:55:35); comb (v.) (31:31:31); comb (n.) (55:55:35); excrement (33:33:33); hand (33:33:33); ash (plant) (cf. group 47 below) (55:55:55)
- (47) ɸ : s : s {-P} <10 sets> wash (33:33:33); send off (33:33:33); ice (-DL) (33:55); frost (55:55:55); bear (child).B (-DL) (33:33); lose (-DL) (33:33); sugar (55:55:35); ash (plant) (doublet in BJ) (55:55:55); sand (55:55:55); count (55:55:55)

- (48) tç : tç : tç {+P} <6 sets> KIN BCM (42+:42+:42+); false
(42+:31:31); bear.A (-BJ) (42+:42+); borrow/lend (44+:44+:44+);
join (trs.) (44+:44+:44+); KIN MB (-BJ?) (55+:55)
- (49) ts : tç : tç {+P} <3 sets> ADV fast (42+:42+:31); leech
(44+:44+:44+); arrow (42+:42+:32)
- (50) t : tç : tç {+P} <5 sets> bracelet (21+:21+:21+); elect
(42+:31:31); leap ahead (21+:31:55); nail to (44+:42+:42+);
chase (33:42+:42+)
- (51) tç : tç : tç {-P} <11 sets> tendon (55:55:35); nine
(33:33:33); hungry (55:55:55); inspect (55:31:31); establish
(55:55:55); CLF (catty) (55:55:35); pull (55:55:33); gold
(55:55:35); pigeon (55:55:55); mouth A.1 (33:33:33); plough
(n.) (55:55:35)
- (52) tç : tçh : tçh {+P} <3 sets> autumn (44+:55:44+); laquer
(55:44+:44+); rob (21+:31:31)
- (53) tçh : tçh : tçh {-P} <3 sets> listen (55:55:55); blue
(-DL) (55:55); manure (55:55:55)
- (54) tsh : tçh : tçh {-P} <5 sets> thorn (31:31:31); hot (pepper)
(55:55:55); CLF (inch) (55:31:31); thousand (55:55:55); weigh
(55:55:55)

- (55) ɸ : ɸ : ɸ {-P} <6 sets> water (33:33:33); fragrant
(55:55:31); die (33:33:33); star (55:55:55); school (55:55:35);
rest (55:55:35)
- (56) s : ɸ : ɸ {-P} <4 sets> heart (55:55:35); new (55:55:35);
firewood (55:55:35); chest (bodypart) (55:55:55)
- (57) sʳ : ɸ : ɸ {-P} <3 sets> trunk (55:55:35); fortunate
(55:55:55); few (33:33:33)
- (58) j : j : j {+P} <9 sets> eat (55:44+:44+); potato.1
(42+:42+:42+); potato.2 (55:44+:55); medicine (42+:42+:42+);
stockade village (33:42+:42+); armpit (42+:21+:55); tremble
(-BJ) (21+:21+); return (-DL) (44+:44+); sharp (42+:31:31)
- (59) n̄ : j : j {+P} <5 sets> sheep (21+:21+:21+); boat
(21+:21+:21+); sickle (21+:21+:21+); first day (of month)
(44+:44+:44+); itchy (33:33:44+)
- (60) n̄ : j : n̄ {+P} <11 sets> sun (44+:44+:44+); person
(21+:21+:21+); zero (55:55:42+); want (42+:44+:44+); NEG IMP
(44+:44+:44+); enter (44+:44+:44+); PRON 1st-P (incl.)
(21+:55:55:); day (44+:44+:44+); noon (44+:33:44+); KIN H.A
(-BJ) (21+:21+); silver (21+:21+:21+)

- (61) k : k : k {+P} <15 sets> horizontal (21+:21+:21+); rich (21+:21+:21+); love (v.) (-DL) (21+:21+); cross over (-BJ) (42+:42+); rescue (42+:42+:32); flow (33:21+:21+); reside (42+:42+:32); sit (42+:42+:32); ride (horse) (33:21+:21+); seize (44+:44+:44+); song (33:33:44+); bridge (21+:21+:21+); dew (42+:42+:31); foot (44+:44+:44+); tie (44+:44+:42+)
- (62) q : k : k {+P} <23 sets> waist (44+:44+:44+); strike.A (-DL) (42+:42+); hang up (44+:44+:44+); bright (33:33:44+); expensive (42+:42+:53); thick (42+:33:33); CLF (stick) (44+:44+:44+); trim (42+:42+:42+); revise (42+:31:31); sell (21+:21+:21+); drum (21+:33:33); price (42+:42+:32); bowl (42+:42+:42+); stick (44+:42+:42+); meat (21+:21+:21+); bone (44+:44+:44+); butterfly (44+:55:55); horn (44+:44+:44+); neck (42+:42+:44+); rice (21+:21+:21+); stem (55:44+:44+); throat (21+:21+:21+); lake (-BJ) (21+:21+)
- (63) k : k : k {-P} <11 sets> branch (tree) (55:55:55); old (person) (33:33:33); ginger (55:55:35); fear (v.) (55:55:35); two (33:33:33); cold (weather) (55:55:35); clean (55:55:35); grow up (55:55:35); kneel (55:31:31); bow (55:55:35); deaf person (55:55:35)
- (64) g : k : k {-P} <3 sets> story (33:31:31); old (food) (33:33:33); dance (v.) (-DL) (33:33)

- (65) q : k : k {-P} <20 sets> dry (55:55:35); shadow (33:33:33); copper (33:33:33); high (55:55:35); chicken (55:55:35); scale (fish) (55:55:35); dry (v. intrs.) (55:55:35); ladle out (55:55:35); teach (55:55:35); ring (finger) (55:55:35); earthworm (-DL) (55:55); liver (55:55:35); official (55:55:35); today (55:55:55); this year (55:55:55); KIN FS (55:55:35); dry field (55:55:35); tell (-DL) (55:31); mouth A.2 (55:55:35); plough.2 (n.) (55:55:31)
- (66) qh : kh : kh {+P} <8 sets> thigh (42+:31:31); thirsty (44+:44+:44+); wide (44+:44+:44+); weep (44+:44+:44+); nose (-DL) (42+:44+); guest (44+:44+:44+); lame person (-DL) (44+:44+); hungry.2 (44+:44+:44+)
- (67) kh : kh : kh {-P} <5 sets> PRON other (-DL) (55:55); CLF (clothing) (55:55:55); lack (v.) (55:55:55); make bed (55:55:55); begin (33:33:33)
- (68) qh : kh : kh {-P} <8 sets> bitter (33:33:33); CLF (money) (55:55:31); CLF (kernel) (33:33:33); be good at (33:33:33); open (v.) (55:55:55); lead by nose (55:55:55); dog (33:33:33); bear fruit (33:33:33)
- (69) ŋ : ŋ : ŋ {+P} <7 sets> sweat (21+:21+:21+); bite (44+:44+:44+); sprout (n.) (21+:21+:21+); ox (21+:21+:21+);

forehead (44+:44+:44+); yellow (21+:21+:21+); PRON 1st-S
(42+:31:31)

(70) x : x : x {+P} <7 sets> night-time (42+:55:31); boil
(intrs.) (44+:44+:44+); shine on (42+:31:31); Chinese
(42+:42+:42+); household (42+:31:31); peace (33:42+:42+); black
(44+:44+:44+)

(71) x : x : x {-P} <5 sets> sky (55:55:55); raw (55:55:55);
patterned (55:55:44+); good.A (33:33:33); wet (-DL) (55:55).

(72) y : y : y {+P} <4 sets> strength (-DL) (42+:42+); wages
(42+:42+:42+); leak (v.) (42+:31:32); to read aloud
(42+:42+:42+)

2.1.10 Directions for further thought

The type of initial and tone-plus-phonation patterns illustrated by the above table leads to the following speculations: (1) Roughly equal splitting of the data between morphemes in {+tense} or constricted (i.e. "marked") phonation and those lacking it might suggest a recent development in Bai, in which case the conditioning should still be apparent in some redundant traces of another earlier and widespread contrast, that is, in some asymmetrical pattern of complementary distribution elsewhere in the system--among the initials and/or rhymes. Against this view, however, we have the claim

in Egerod 1971 that "already tonal" languages have resisted development of register contrasts from segmental shifts involving phonation types, but instead reflect such systemic changes in tonal splits and/or mergers. Following this principle, we would expect a tonal system marked by greater dialectal variation than what we see recorded in the *Jianzhi* material. (2) On the other hand, since previous studies have already shown a systematic correlation between Bai constriction or marked phonation and an early stratum of Chinese *rusheng*, there must be a close and longstanding relationship internal to Bai between {+tense} phonation or its antecedent and final stops or their reflex (possibly -?), involving at least two of *Jianzhi's* four {+tense} tones.³ It is surely significant, however, that correlation has also been established for one {+tense} tone (*Jianzhi's* 21+ tone) and the Chinese A2 tone class or in other words, initial consonant voicing.⁴ Benedict, while reconstructing a few proto-Bai etyma from reflexes in tone 21+ (for examples, see the summary table of Benedict's reconstructions above), did not single out this tone for special attention apart from the hypothesis that derived "glottalized *rusheng*" from *-ptk, *s-, and *?-. Following Egerod just a bit further, it might be reasonable to wonder, then, whether evidence can be adduced to show that marked phonation (< register distinction < loss of consonant initial contrast) actually antedates the process of regressive assimilation resulting in {+tense} phonation from etymological {-ptk}. In any case, the lexical frequency and wide distribution in text data of {+P} or marked phonation as I have defined it here, both in published materials and

in the data I collected, gives a different impression from what we would expect if {+P} reflected *only* a historical {* -ptk} tone class. Granted that the Chinese *rusheng* correlations do show that for some Bai morphemes at least, the etymology of {+P} tonal reflexes is to be sought in earlier checked syllables (whether borrowed or inherited from Chinese), it is still inviting to ask whether putative retention of *ST affixes (as summarized in the tables above) can account for all the rest. The so-called glottalized *rusheng* of Benedict 1982 was a device for reconstructing proto-Bai as an early congener of Chinese. Although Benedict assumed Chinese etymologies, by implication, in assigning the term "glottalized *rusheng*" to the constricted or "tense" tonal reflexes characterising much of the modern Bai vocabulary (that is, to tones 44+, 42+, and 21+), it is precisely this view of Bai (as a daughter language of proto-Chinese) that is still the subject of some doubt. As will be seen in 2.4.0.0 below, although there are clear correspondences linking these tones with the Chinese "entering tone," the Bai tones represented by {+constriction} notations in *Jianzhi* also have links with traditional Chinese tonal categories other than D1 and D2. The question whether this fact represents different chronological strata or accretions in a genetically inherited lexical stock, or a complicated and protracted contact situation involving repeated borrowings from Chinese by a non-Sinitic language, cannot be answered exclusively through study of the Chinese lexical material in Bai unless we can link the correspondences shown by this material to principles of development that are arguably internal to Bai. From there it may be

possible to propose a scenario of linguistic developments that is consistent with the historical record. Notwithstanding the fact that some reflexes in tones 44+, 42+ and 21+ have clear contacts with Chinese *rusheng* through borrowing, we may still ask whether the unusual phonation types including tone 31 in the group of {+P} morphemes in modern Bai may not have more to tell us about the history of the language? The point of the present chapter is to explore this question, and to show that the implications of contrasts in phonation type for the reconstruction of Bai diachrony are far from trivial. The thrust of the present chapter, aside from providing this introduction to the Bai tones, is to pursue the conviction that the phonation-type contrasts so carefully recorded by the *Jianzhi* authors--and vigorously affirmed by my native-speaker consultant LSN--may provide useful evidence toward a relative chronology of linguistic developments for Bai, and that these internal developments will shed welcome light on the genetic question with regard to Bai. But this will be possible only if fuller account is made in one place of the way "marked phonation" {+P} in Bai corresponds (or fails to do so) with diachronically significant features of Chinese and other languages spoken in Yunnan--especially those sharing common ancestry with written Tibetan. The recent genetic proposals, placing Bai by implication at different taxonomic levels within the Sino-Tibetan super-family (Benedict 1982 for Sinitic, Zhao 1982 for the Yi or Loloish branch of Tibeto-Burman) are based on lexical correspondences derived from essentially different segments (or strata) of the Bai vocabulary, each without reference to the other proposal and without

examining the other body of "lexical evidence." Earlier accounts of the Bai language have long since made the heterogeneity of the Bai lexicon notorious.⁵ Perhaps it will be legitimate, then, in the rest of this and the following chapters to explore the various aspects of this language as if heterogeneity had been a significant factor in its development. The present chapter aims at uncovering tonogenetic implications inherent in the dialectal distributions of tones and initial consonants, and at evaluating whether historical comparative evidence from one side or the other of the Sino-Tibetan "tree" can possibly be more convincing. Throughout this chapter special concern is directed to possible explanations for contrasts involving other than "clear" phonation. Since laryngeal constriction with contrastive function has been shown to have developed independently (from different historical processes) in a number of different Tibeto-Burman languages, we have at our disposal a variety of scenarios that could explain the development of the Bai system if it could be linked uniquely and exclusively to one or another of the known patterns of development elsewhere. What I believe the heterogeneity principle (that is, the principle that evidence resides in all parts of the lexicon) will show in this case is that no single explanation for the development of {+P} can exclude the others, just as no one stratum of the vocabulary can prove the linguistic heritage of Bai.

2.2.00 Studies of contrastive phonation
in Tibeto-Burman languages and Chinese

2.2.01 Tone and phonation types: a tonogenetic problem

As we have seen above, phonation-type contrasts enjoy a remarkable lexical frequency in the dialect materials made accessible through *Jianzhi*, and they are (partially) represented in that and other recent Chinese sources by an exceptional notational convention that foregrounds their relationship to the tonal system of Bai. The pedagogical approach to these phonation types adopted by my native-speaking consultant suggested that their place in the psychology of Bai-speaking individuals is important: among other functions they allow for modification or nativization of new vocabulary from *pu3tong1hua4*, while also discriminating archaic Chinese borrowings from recent ones for educated speakers, who after all are intensely interested in the relationship of their unwritten vernacular to the language of literacy through which their cultural and social achievements are mainly accomplished. Because of their salience, which is not only notational but also perceptual and social, the phonation-type phenomena of Bai invite further study and comment in the context of a diachronic study of tonal developments in the language. Although we now know that regular tonal correspondence with Chinese does not spell genetic affiliation with Chinese (indeed, that regularity of tonal correspondence between any two languages is

probably a sign of recent borrowing), it is possible that *tonogenetic* correspondences, if they are unique and systematic, might be useful for placing Bai within a diachronic scenario that can answer the genetic question. Dell's study already established the outlines of tonogenetic implications for two strata of Chinese material in Bai, but without examining either the coexisting Tibeto-Burman lexical material or TB tonogenetic scenarios. It is my purpose in the remainder of this chapter to cast the net somewhat wider by considering the Tibeto-Burman side in relation to Chinese evidence, and by adding to the stock of Chinese evidence through study of an inscriptional source. These practical comparisons will be considered, however, in the light of some recent scholarship relating tonogenetic changes to phonation types, work from which I draw inspiration to speculate about the history of the Bai tones.

2.2.02 An areal approach to tonogenesis involving phonation types

Contrasts in phonation type have been associated with different but comparable historical developments (splitting of vowel systems, development of tones, and appearance of register distinctions) that significantly affect the synchronic vocalism of many languages and dialects distributed all over mainland Southeast Asia, and descended from various language stocks of differing mutual relationships (Chinese, Tibeto-Burman, Austroasiatic, Tai). Some systemic resemblances linking these types of historical development in an overall pattern of areal features were brought together with a review

of the literature that deals with them by Egerod 1971.⁶ The resulting areal view of phonation-type tonogenetic phenomena suggested that languages around the southern periphery of the Sinosphere (alternatively dubbed Cis-Yangtzeana, both terms coined by Matisoff)⁷ had been subject, each in separate ways, to drastic internal phonological realignments as they "struggled" to maintain structural coherence under the influence of an apparently contagious tendency toward disappearing segmental or syllabic contrasts. Although such scenarios have run their course independently in the various affected languages, and although the resulting language states have been differently described, Egerod's treatment did signal a growing consensus with regard to the important hypothesis that loss of phonation contrast(s) inherent to consonants has led to proliferation of suprasegmentals and/or vowel qualities in languages affected by this areal trend. Naturally there remains disagreement over the specific course of events involved in tonogenesis for any single language.⁸ The importance of Egerod's paper (it would be difficult to overemphasize this) was not just in linking the tonogenetics of Chinese with that of Southeast Asian languages (this had already been done by Haudricourt), and in comparing well-known cases of vowel splitting (notably as reflected in the *deng3yun4* system of the Chinese rhyme tables) with splitting of tonal systems, but also in demonstrating that two types of assimilation (regressive and progressive) are involved--each with its own implications for historical reconstruction but having similar (comparable, not identical) historical results in synchronically observable languages

(in some cases, forming different chronological strata of change in the same language). These seminal observations were later picked up for elaboration by Weidert in a wildly confessional polemic aimed at restructuring Tibeto-Burman tonogenetics around a laryngeal theory involving syllable-final, as opposed to syllable-initial, proveniences.⁹

2.2.03 Opposite historical processes involving a single feature

It will be useful to recall that in all the languages Egerod discussed it was the presence of one feature that involves a peripheral gesture of the throat (an aspect of "manner"), termed in this context "laryngeal coarticulation," that was supposed to have given the historical consonantal contrasts their structural reality, rather than a differentiated group of "place-specific" oral gestures connected with particular consonant articulations, and that such different effects as vowel splitting (in Chinese, Thai, Mon, Khmer, and Burmese) and tonalization--splits in an existing system of tones--(in Chinese and Thai, partly in Burmese) were explained as representing structural retentions of the historical contrast between {+ laryngeal} and {- laryngeal} in newly salient phonetic forms. The process had been richly documented for already tonal languages by Haudricourt, who extended the insights of Prague Circle phonology relative to Chinese correlations of voicing and register to a vast array of Southeast Asian languages and created, thereby, a large body of tonal evidence for transphonologization.¹⁰ Egerod, for his part,

also extended an observation from Chinese data to the status of general hypothesis that historical contrasts involving laryngeal coarticulation (phonation type) have first been exploited by processes of morphophonemic alternation (grammatical or semi-lexical derivation) among *semantically* related word forms (simplex/causative, basic verb/verbal noun), and that the emergence of a split tonal or vocalic system serving a purely lexical function is generally a later development that can be linked to the breakdown of the historical derivation paradigm.¹¹

2.2.04 Egerod's relative chronology of tonogenesis

Although his stated purpose was to extend the laryngeal scenario backward for Chinese from the Ancient (Middle Chinese) to the Archaic (Old Chinese) stage drawing analogies to changes in other languages,¹² the weight of Egerod's achievement was in elaborating all the above principles toward a generally applicable relative chronology for the operation of a trend toward transphonologization of dichotomies involving phonation types, and in tracing the actual sequence and substance of historical changes in many different languages to demonstrate that they amount to an areal complex of typologically similar changes. For Chinese, what might otherwise be seen as (1) anomalous splitting of historical vowels and (2) complicated tone sandhi phenomena, each typical of some modern Chinese dialects, were similarly explained in terms of a relatively (relative to the rest of Chinese) early clash in affected dialect

groups (Yue and Wu) between regressive assimilation of syllable-final phonation contrasts and progressive assimilation of syllable-initial phonation contrasts that ideally "should have" occurred later, after the syllable-final change had run its course.¹³ For Thai, a fully developed tonal system from early regressive assimilation of syllable-final phonation contrasts was said to have actually prevented the development of a register system with split vowels, a change that could have resulted from the later loss of a contrast in phonation type among the consonant initials, so that the existing tone system was in a sense "forced" to undergo secondary (tonal) splits at this point. Khmer, on the other hand, lacking any *tonal* system, was shown to have developed a fully split vowel system in connection with the unimpeded emergence of two distinct voice registers, arising from the "same" loss of syllable-initial phonation contrast(s) that created split tonemes in Thai. Other historical scenarios could no doubt be adduced from data encompassing still more languages, but these cases are sufficient to establish the areal distribution and basic character of an important type of phonological change, one that is almost certain to have played a role in the genesis and development of the Bai tones as we know them. The critical point here is that while a single areal feature (laryngeal coarticulation) was shown by Egerod to have effected quite different changes in the various languages he discussed, general principles of systemic resemblance and chronological evolution still link all these changes typologically, regardless of the genetic relationship (or lack of it) that happens to obtain among the languages involved. In

general, Egerod showed that structural realignments from regressive assimilation have usually preceded those due to progressive assimilation, in languages where both developments have occurred.

2.2.05 Mixed origins for the tense/lax contrast within Tibeto-Burman

In a similar vein, different historical origins for *synchronic* contrasts in phonation type that have been subject to nearly identical description for a restricted group of Tibeto-Burman languages (various dialects of Yi, Lisu, Hani, Lahu, Kucong, Jingpo, and Zaiwa) were studied comparatively by Dai, in a paper that showed differential correspondences for tense- and lax-vowel phonemes conditioned by their proveniences, even though the synchronic phonation-type contrasts might be thought of as a phonological trait that is shared by all these languages. Following the lines of comparative demonstration established in an earlier paper on the tense and lax vowels of Hani only, this paper demonstrated that the contrast between tense and lax vowels found in the group of languages named above has developed from different systemic origins, or in other words from a syllable-initial feature in some languages, and from a syllable-final one in others.¹⁴ That the apparent phonetic similarity shared by these languages is heterogeneous in its origins was shown by demonstrating comparatively the pattern of asymmetrical but interlocking lexical correspondences that obtains among them. Treating the tense vowels of all these languages as perceptually "marked," Dai showed that in one group (Yi, Hani, Lisu, Lahu, etc.) a

historical contrast between checked and unchecked syllables has been transphonologized and preserved in the tense/lax vowel contrast, while in the remaining group (Jingpo and Zaiwa) the same contrast preserves an earlier correlation between a voiced and voiceless series of consonant initials. We shall see below that the situation is more complex than this description would make it appear, however, since in the first group it is tense vowels that reflect a (presumably) laryngeal feature, while in the second group the lax vowels are the reflex of historical voicedness. According to Dai the synchronic situation is characterised by either complete or partial phonological opposition between a certain number of vowels that require laryngeal constriction for perceptual recognition (the tense vowels), and a sometimes larger set of unconstricted vowel sounds (the lax vowels). Tense articulation is treated as a property of the vowel by this author even though it correlates systematically (sometimes in a pattern of complimentary distribution) with tones in the languages concerned. The fact that in most of these languages the tense vowel sounds constitute a restricted set compared to the lax was generally attributed to a continuing historical trend toward gradual disappearance of laryngeal coarticulation altogether, but Dai also pointed to conditioning factors involving a possible clash between a historically predicted tense- or lax-vowel sound and synchronic requirements brought to bear in the exploitation of the tense/lax contrast for grammatical derivation. The general situation of asymmetrical distribution--a usually larger set of lax vowels in relation to tense--was also described in terms of tone types (high

level, low falling, and so on) in the various languages. In Lisu, for example, of four recognized tone types only two can co-occur with tense vowels; in Hani, only two of three can do so; in X Jinping Yi two tone types occur only with lax vowels, one with tense vowels, and one tone type admits full opposition between tense and lax.¹⁵

2.2.06 The role of Tibetan in reconstructing opposite historical processes

It is important to point out here that the mixed-origin hypothesis as outlined by Dai assumed a single origin for the two-way phonation contrast found in any given language, but that both types of historical development (e.g. from regressive assimilation and from progressive assimilation) were illustrated by evidence from Written Tibetan. In other words, the writing system of Tibetan furnished indirect evidence that the two different historical processes invoked to explain the development of synchronic tense/lax vowel contrasts in Burmese-Lolo (Burmese-Yipho) languages may both have occurred later than the seventh century A.D. The synchronic correspondences on which Dai's theory of tense/lax vowel development in Burmese-Lolo is based are summarized in the following table, which shows that the historical voicing contrast is still preserved as such in the consonant initial systems of some languages and dialects of Loloish/Yipho (Yi, etc.), while the contrast of rhyme-endings has been preserved in Burmish (Zaiwa, etc.) vowel qualities and tones.

Table 2.2 A

Asymmetrical Correspondences of Tense/Lax Contrast in BL

Yi, etc.	:	Zaiwa, etc.	:	Written Tibetan
{+tense} rhyme	:	{-ptk?} rhyme	:	checked rhyme
{-voice} initial	:	{+tense} rhyme	:	{P-} initial
{+voice} initial	:	{+lax} rhyme	:	{B-} initial

Now, if we are permitted to extrapolate from the findings of Egerod above, it may also be possible to suggest here that the tense/lax contrast found in the Loloish/Yipho group is historically older, if indeed it can be attributed to the breakdown and regressive assimilation of Tibeto-Burman final consonants.

2.2.07 Does failure to correspond exactly rule out grouping Bai with Loloish?

Having reviewed this background, we may further observe that in the same article Dai explicitly declined to treat the contrast of tense and lax vowels that has been described for Bai, although this language has often been grouped with Loloish/Yipho by Chinese scholars. Dai claimed that clear patterns of correspondence linking the actual "tense" and "lax" vowels of Bai with those of the various Loloish/Yipho languages explained by his theory were difficult to establish. He also cited some unusual phonetic features described for the laryngeal coarticulation found in some Bai tones, as well as a

unique pattern of distribution in relation to the tones, commenting that all these conditions might well be used as criteria for grouping Bai separately from Loloish/Yipho. Dai further implied that these conditions might call for a unique type of explanation, to account historically for the phonation type contrast(s) found in modern forms of Bai.

2.2.08 Experimental study of what is "marked phonation" in any given language

In light of the historical situation illustrated by the above two papers, the study reported in Ladefoged and Maddieson 1986 has encouraged me to consider the Bai tones, and the various articulatory phenomena associated with them, in terms of a basic structural (phonological) contrast between marked and unmarked phonation. This study described a series of experimental recordings that were made to demonstrate what the authors termed "the wide range of phonetic properties that have been called tense as opposed to lax" in a number of non-Chinese languages spoken in south China. The languages they studied fell into two separate groups that showed some measurable differences in their realization of a contrast between tense and lax syllables, a pattern that correlated with a difference in the historical origin of the phonation type contrast in each group. Hani and Yi, where "tense" vowel articulation preserves an earlier contrast that was maintained by stopped rhyme-endings, had relatively shorter vowels in affected syllables, while Jingpo and Wa, where

"lax" vowel articulation is the reflex of an earlier contrastive phonation type associated with voiced consonant initials, did not show such a difference in vowel quantity. More important for my thinking here, these authors found relatively longer voice onset time for stop initials in the tense syllables of Hani and Yi, while they found the SAME effect characterised stop initials in lax syllables of Jingpo and Wa. This difference led them to suggest that for languages where the modern phonation type contrast is due to a historical contrast of rhyme-endings, the normal or "modal" (unmarked) phonation type is lax, whereas for languages where the modern contrast is attributable to an earlier state of the consonant initials, the normal, unmarked phonation type may be tense. So in effect, the same phonation type ("tense vowel") was shown to have a different structural (phonological) status in different languages, according to whether it represented the historical laryngeal feature or not: in Hani and Yi, tense vowels might be treated as phonologically marked, but in Jingpo and Wa on the other hand, they were to be treated as unmarked.

2.2.09 Applications to the study of {+P} in Bai

These findings, which link difference in type of development to difference in phonological status, have inspired me to wonder if the complex variety of coarticulated features associated with the tones in Bai speech might not be the result of conflict and readjustment among shifting phonation contrasts of different provenience (from

rhyme-endings and from initials--leaving aside for the moment the question of different source languages), possibly brought into competition in a synchronic language state by a sudden shift in the intensity of a contact situation. Whether or not such a hypothesis can be supported, I believe the distinction drawn by these authors between (1) normal or modal phonation and (2) marked phonation is an important one for my purpose here, because it allows for a degree of abstraction in thinking about empirical data that present quite remarkable differences to perception. Though time does not allow it here, the above instrumental findings invite some discussion of Thurgood's work on Tibeto-Burman subgrouping criteria: ideally we should consider the question of shared phonetic features as against innovations in subgrouping.

2.3.00 Functions of marked phonation {+P} in Loloish and other BL languages

2.3.01 Derivation and phonation type in BL languages

In a recent survey of the tense/lax situation among the Tibeto-Burman languages spoken in Yunnan Province, a language grouping somewhat broader than Loloish or Yi (the approximate equivalent in contemporary Chinese sources), Dai distinguishes two functions for the contrasts in phonation type described for these languages. Among the languages studied, traces of "causative derivation by phonation

type" are said to be still in evidence though in an eroded state, while the lexical function of distinguishing word meanings is said to be pervasive in affected languages.¹⁶ Derived verb forms in what we may call {+P} (although this author treats marked phonation type in terms of a tense/lax vowel contrast) with causative meanings are described for a restricted cluster of related dialects in this group (Zaiwa and Jingpo). The remaining languages (Yi, Hani, Lisu, Lahu, and Kucong) form a contrastive grouping, also affected by contrasts in phonation type but generally not exploiting such contrasts for the expression of grammatical meaning. Rather, languages of this group devolve the consonant initial of certain verbs to express the causative. Despite this difference, the simplex/causative paradigm appears to yield only what amounts to a group of listable items in all the languages under discussion. How large this group may be in any given language is still a matter of some debate. For Lahu, disagreement turns on the question of whether simplex and causative pairs defined by alternations in consonant initial and in vowel quality may be admitted to the list, or whether only pairs distinguished by phonation contrast are admissible.¹⁷ Although this debate at points threatens to degenerate to the level of *reductio ad absurdum* or semantic quibbling, the general situation that emerges for this group of languages does not seem essentially different from the more familiar situation in modern standard Chinese, where suprasegmentals (tones) are principally exploited to distinguish word meanings (lexical tones), leaving a listable group of tonally alternating homophones (representing the fossilized retention or

residue of a historically productive morphophonemic system) that belong to different word classes (verb/noun, adjective/verb) or sometimes express semantically different shades of meaning. Despite this general similarity, we may still draw a tentative conclusion that exploitation of suprasegmental contrasts in the domain of simplex/causative meanings is more typical of Tibeto-Burman, while word class derivation is more typical of modern Chinese, so long as we admit exceptions to the rule on both sides.

2.3.02 Doublets and phonation type in Bai

In the remainder of this chapter we will be pursuing some implications of Dai's historical findings on the tense/lax situation among the TB languages of Yunnan for a historical interpretation of the tones and {+P} in Bai. Here it may be interesting to take a preliminary look at some semantically related word sets or doublets from Bai that could be interpreted synchronically as representing a type of lexical derivation. The mechanism of causative/simplex alternation is not illustrated by these sets, (indeed, the only causative that emerges from my recorded data is a paraphrastic construction that resembles a translation from modern standard Chinese). Rather, the sets illustrate a type of variant or alternation in Bai that was studied earlier by Wen as a problem of Bai "synonyms."¹⁸ Yet we may note with interest how the repertoire of phonation types in Bai often functions to distinguish doublets, and

this perspective may help us to evaluate the historical significance of Bai {+P} in the light of Dai's study.

Table 2.3 A

Semantically related near-homonyms in three Bai dialects

		Bijiang	Jianchuan	Dali
(1)	to be split open	pō55	pē55	pe ^r 35xo55
	to split (wood)	pho42+	pho31	(phi55)
(2)	to get dry	qō55	kā55	ka35
	to dry (clothes)	gō42+	kō31	khou3
(3)	plank	pō33pho55	pē33	pe ^r 33
	flat; plain	pa21+	pē21+	pe ^r 42+
(4)	price	qa42+	ke42+	ke ^r 32
	to sell	qu21+	ku21+	ku21+
	meat	qa21+	ke21+	ke ^r 21+
(5)	seed	po55tqō33	tsȳ33	tsy33
	to plant	tqō42+	tsȳ42+	tsy32
(6)	to lick	dz ^r e ^r 33	tsi33	tsi33
	tongue	t ^r e ^r 42+	tse42+	tse42+
(7)	to sweep	t ^r ho44+	tsho44+	(su33)

	broom	t ^r ue44+gy21+	tsui44+ku31	tsui44+ky31
(8)	to sniff	t ^r hy42+	tshu55	tshu55
	foul-smelling	xã55t ^r hy42+	tshu31	tshu31
(9)	chopsticks	tçy42+	tsy31	tsy31
	hoe	tçy21+	tsv̄21+	tsy21+
(10)	to revolve	dzuẽ42+	tsuĩ42+	fe44+jui32
	to wring out	ji42+	tsui44+	je42+
(11)	to comb (hair)	s ^r γ31	sγ31	sγ31
	comb	s ^r γ55tuĩ21+	sγ55	kho55sγ35
(12)	to trim	qa42+	kɛ42+	ke ^r 42+
	to revise	qa42+	kɛ31	ke31
(13)	stick	qua44+	kua42+	kua42+
	CLF (stick)	qua44+	kua44+	kua44+
	bone	qua44+	kua44+tu21+	kua44+tu21+
(14)	horn	qõ44+	ky44+	ky44+
	neck	qõ42+te44+me ^r 42+	ky42+ly42+mi42+	po35tsi33ku44+

2.4.00 Bai tones and historical tonal categories of Chinese through an inscriptional source

2.4.01 Review of the cover term {+P}

As the internal tone correspondences across the dialects show, the class of morphemes that is defined by the feature {+P} must include some etyma that are represented by "lax" vowels in one or more dialects according to the transcription of native scholars, so that the {+P} class is broader than either class that might be defined by a feature {+/-constriction}. Once we look at the Bai phonological system in this way, we may decide that the apparent structural symmetry created by dividing the vowel system into an equally distributed number of tense and lax phonemes is slightly misleading. In any case, here I would like to examine contacts between the four tonal categories of Middle Chinese and Bai morphemes having {+P} rhymes, for the moment disregarding the question of whether the Bai phonation types are better treated as a part of the tonal system or analysed as a structural division in the system of vowels (e.g. rhymes).

2.4.02 Syllables and tones in Bai and Mandarin

Although the aim of this chapter is to examine historical comparative evidence from Chinese and Tibeto-Burman languages that together may

shed light on diachronic developments in the Bai tones and initials, we should not ignore the possibility that direct comparisons (synchronic contrasts) may form part of the available evidence. Indeed, the argument mounted in favor of grouping Bai with the Yi or Loloish language group was based primarily on direct comparison of lexical items and other linguistic elements. It may be useful to briefly examine a set of contrasts involving direct comparison of Bai data and data from Mandarin or *pu3tong1hua4*, which will expand on the basic description previously presented in our outline of the Bai tones and initials above.

Table 2.4 A

The syllable canon for Jianchuan Bai and Mandarin

Bai				Mandarin			
T [+/-P]				T			
(C)	(V)	V	(V) [+/-N]	(C)	(V)	V	(V) (C)

Starting from the four tonal categories traditionally recognized in historical studies of Chinese (A = *ping2*, B = *shang3*, C = *qu4*, and D = *ru4*), it may be useful to summarize the correspondences that link the traditional categories with present-day tonal reflexes of Mandarin or *pu3tong1hua4*, as contrasted with the equivalences generally cited for the Bai "loan tones" or in other words the Chinese traditional categories as expressed through the literary or reading pronunciations of recent Chinese loans in Bai. The consultant labels these pronunciations "Han characters read in Bai"

(*han4zi4bai2du2* 汉字白读) and for convenience I refer to the subsystem of tones that are used in such pronunciations as the HZBD system below. This system (or a variant of it) may be consciously invoked by literate Bai speakers as a system of native reading pronunciations for Chinese texts, as attested by a sample of intoned reading data including both a *wen2yan2* text sample and one from a *People's Daily* editorial, taken from the consultant LSN in June of 1988. Time and space do not permit analysis of those readings here, but I can report that the consultant uses a system similar to the one described by *Jianzhi* for reading Chinese text "in the Bai way," a fact that is most evident in his use of the [35] tone to read graphs belonging to the traditional entering tone *ru4sheng1* category. This performance differs perceptibly from that of, for example, standard broadcast pronunciation as heard on the Beijing broadcast media. It is tempting to think of the HZBD system as a learned repertoire of mutations that has traditionally been used by literate Bai speakers to "naturalize" material from written Chinese text voluntarily. The tables below outline this subsystem in two ways. The first table gives the numbers of Jianchuan tones that I have assigned for convenience in transcription, alongside their standardized values (that is, the values recorded for the equivalent tones by *Jianzhi*), with the traditional Chinese tonal category for literary readings (the HZBD system) appearing to the right of the Jianchuan tonal value that is used for that category. By way of comparison, a simplified schema shows the historical tonal splits and mergers for Mandarin, that is, the standard contemporary Chinese language based on the

speech of Beijing and not the "Mandarin" or *guan3hua4* of southwest China. The following table shows the outcome of historical "splits and mergers" in a different way, starting from the traditional categories (MC) and superimposing a grid over these to show which categories are represented by a single reflex in the modern system.

Table 2.4 B

Contacts with MC tonal categories in Jianchuan Bai and in Mandarin

GW #	JC value	HZBD		Mandarin #	Value	MC category
1	(55+)			1	(55)	[A1]
2	(44+)			2	(35)	[A2]
3	(not assigned)			3	(214)	[B1/2]
4	(42+)	[A2]		4	(51)	[C1/2, B2]
5	(21+)					
6	(55)	[C1/2]				
7	(33)	[A1]				
8	(35)	[D1/2]				
9	(31)	[B1/2]				

Table 2.4 c
 Contacts with historical Chinese tonal categories
 in HZBD system and Mandarin

	HZBD system				Mandarin			
MC	A1	B1	C1	D1	A1	B1	C1	D1
MC	A2	B2	C2	D2	A2	B2	C2	D2

2.4.03 Lexical context and choice of tone reading

When quizzed about his use of a literary (HZBD) pronunciation instead of another available pronunciation (implicitly, when there are two choices for pronouncing the same Chinese etymon in speech), the consultant gives examples that show his preference for a literary (HZBD) reading in syllabic collocations involving a modern concept. Lacking reference materials for their language, speakers may of course vary in this, and we have then an interesting area for further exploration and study when elicitation from a number of speakers becomes possible.

2.4.04 Special developments among the Bai initials: Benedict's
reconstruction theory bis

We have touched on the theories of Benedict in relation to the Bai "glottalized *ru4sheng1*" in 2.1.03, 2.1.07, and 2.1.10 above. Actually his treatment of the tones in {+constriction} fits into a larger scheme that encompasses the effects of ST prefixes and suffixes on the consonant initials and the syllables of Bai.

Table 2.4 D
Syllable-external ST influences on the Bai initials
proposed in Benedict 1982

ST Provenience	Proto-Bai	Development	Examples
s- prefix cluster	s- cluster	> {spirant}	'pen' f _Y 44+ 'six' f _Y 44+ 'saw' f _Y 42+tshe44+ 'house' tsm21+xo31 'look at' xã55 'sky' xẽ55
	if: {back}	> {front}	'five' (Dali) mu33
	if: {glottal}	> 0	'swallow' (v.) ẽ42+

The data and explanations supporting the above claims may be summarized from Benedict's paper as follows (MC and pre-MC spellings are cited as given in this source, except that Benedict's *i* with superscript brev is spelled with "barred *i*" as \bar{i}):

- (1) 'pen' (writing brush)...fv2 (Dell); JC: f γ 44+; MC: pi \bar{e} t (D1) 筆
 < *pliət < *sblīwət. This and the following two lexical items constitute a trio of Bai homophones for which PKB reconstructs proto-Bai forms that either compare with or antedate their Middle Chinese counterparts, showing complex s- clusters at the pre-MC level that have yielded (by various routes) proto-Bai plain bilabial stops with medial \bar{i} -, later undergoing "dentilabialization" similar to that in Chinese, but as an independent development in Bai "caused" by the lingering effect in this language of the Sinitic or ST s- prefix. That this is a secondary development unique to Bai which nevertheless may link it with earlier forms of Chinese than MC (viz. proto-Min) is in part attested by the MC initial 幫 of the corresponding Chinese form 筆, which is the *plain* bilabial surd stop rather than the one marked for later dentilabialization in Chinese. For this etymon, Benedict spells OC and MC the same as Karlgren (GSR 502d), and the proto-form in *sblīw- must therefore be understood to refer to Sinitic, yielding a Proto-Bai initial *(s)piw-. Why the Sinitic reconstruction must involve a sonant stop is not clear from the context.

- (2) 'six'...fv2 (Dell); JC: fy44+; MC: liuk (D2) < *gliok 六, but Proto-Min *hluok < *sluk. Here Benedict's MC and OC spellings both depart from Karlgren, reflecting evidence drawn from the MC homophone meaning 'early ripening grain', 禾芻 from an earlier form in velar cluster *gl- (GSR 1069x). This method allows his OC 'six' to parallel evidence from Tibeto-Burman: PTB SIX *k-ruk; Pa-o Karen: su' and Pwo Karen: xu' both < a Proto-Karen doublet alternating in *s-kr- / *skr-. On this basis Benedict suggests an evolution from ST *skriok (emphasising that for this scenario to work, the s- must already be incorporated into a cluster at the ST level) to Sinitic *skiwok, fronting to *(s)piwok in Proto-Bai giving a form eligible to undergo the same unique dentilabialization as described above for 'pen'.
- (3) 'saw'(1)...fv2 ts'ε2 (Dell); JC: fy42+tshe44+; MC: kiwo (C1) < *kio 鋸. In this case again Benedict follows Karlgren's spellings for OC and MC, reconstructing a Proto-Bai form again in *(s)piw- by way of a cluster *skiw-. Whether the earlier cluster refers to Sinitic or Proto-Bai is not explicit, but we can observe that the fronting to Proto-Bai labial seems to foreshadow the later palatalization of the MC plain surd stop initial 見 to [tɕ-] (a post-MC development) in Chinese, and that the development of medial -w- might therefore also represent a parallel secondary development in both Proto-Bai and MC.

- (4) 'house'...xɔ3/4 (Dell); JC: tsw21+xo31; MC: ka (A1) 家. The prefixed form necessary for deriving this Bai reflex (as well as the related 'household, family' JC: xa31t̃y55) is unrepresented in both MC and OC *kɔ (GSR 32a), contrasting with 'six' above where Benedict cites a Proto-Min (i.e. pre-MC) remnant of the ST *s-. For Proto-Bai he suggests *xa < Sinitic or ST *s-kha, the same form to yield the OC form in plain surd stop initial 見. Although this is far from explicit, Benedict seems to prefer a prefixed form in *s-kh- over a cluster *skh- at the Sinitic level to explain why Proto-Bai does not have a form in "fronted" labial cluster *(s)ph-. The 'partial shift from velar to labial' shown by 'five' below perhaps does not operate here because of a differential effect in Bai of the ST *s- prefix upon surd and sonant initials.
- (5) 'look at'...xa1 (Dell); JC: (A) xā55; (B) ā33; MC: 看
- (6) 'sky'...xe1 ? (Dell); JC: xē55; MC: 天
- (7) 'five'...mu3 (Dell); JC: ɲy33 but DL: mu33; MC: 五
- (8) 'swallow'...e8 (Dell); JC: ē42+; DL: e32; MC: ?ien (A1) 因. That Benedict proposes an ST *s-ki- provenience for Proto-Bai *(s)?ien suggests that the MC glottal initial 影 represents preemption in both Chinese and Bai of a Sinitic postvelar plain surd by prefixed ST *s-.¹⁹

2.4.05 Direct comparison of Bai data and written Chinese transcriptions

Some comparisons of Bai vocabulary and early transcriptions of *man* words using Chinese characters as phonetic symbols were undertaken some years ago by Ma Changshou, based on local pronunciations in the northern Erhai lake region for lexical items that were recorded by Han observers and preserved in the *Manshu* account of Fan Cho. But Ma's data, drawn from several modern Bai vernaculars, could not be described as systematic: very little analysis was offered beyond placing comparative data from Bai next to the Chinese graph that recorded a lexical item of similar meaning in *Manshu*, yet this was an interesting attempt to examine modern Bai linguistic data with the traditional historical sources in mind. Some preliminary results of comparison involving text materials catalogued in the preceding section will come under analysis here. As I have said, the category of "early" materials has been included in the above taxonomy mainly for reasons of documentary completeness. My own comparisons represent only a beginning, and are limited here to examining the Bai readings for the first 102 graphs of an inscriptional text (see 2.4.07 below).

2.4.06 Is there a literary/colloquial dichotomy in Bai?

Studying the phonetic correspondences across the Bai dialects as revealed by an inventory of the *Jianzhi* vocabulary material forced me to consider a multifarious complex of methodological problems, the

thorniest of which is probably the problem of how to distinguish and deal with the various strata of Chinese that are clearly involved in Bai diachronic developments. My purpose in this paper is to explore the history of Bai especially as it may be discovered through study of the tones and associated phonation type phenomena, unimpeded by these problems, and I focus below only on the tonal "contacts" with traditional Chinese phonological categories as revealed by reading pronunciations for Bai text material in Chinese graphs, in hopes of establishing that one set of correspondences may be regarded as "literary" and another set "colloquial." I am not sure to what extent the same (literary/colloquial) dichotomy can be used to distinguish chronological layers among the Bai readings of Chinese initials and rhymes in text--this line of inquiry seems promising however, and I will explore the question elsewhere. In any case, the tradition of literary readings that is acknowledged by native Bai scholars is described in the sources authored by them purely in terms of tonal correspondences with Chinese. This tradition is the so-called *hanzi baidu* system, whereby Chinese characters may be "read in Bai tones." The following tables illustrate the system very well, but in addition they show that a literate Bai speaker will almost surely depart from the system of literary readings, probably depending on the semantic requirements of the surrounding context, and perhaps also on some other factors involving sandhi rules for literary readings that have not yet been adequately investigated.

2.4.07 Inscriptional text facsimile and data analysis from Chinese character readings

Before comparing the readings for a sample of text (graphs 1-102) from the "Funerary inscription of elder worthy Yang Zong" in Bai script with the traditional tonal categories of the Chinese graphs encoding them, it will be useful to give the same 102 graphs of the text in their proper order. These appear in the following table with Dali readings and punctuation provided by the critical annotator of the text, Xu Lin. Pitch and contour notations for the tones of these readings differ only slightly from the system outlined in 2.1.04 above: in this corpus there are two {-P} mid level tones, [44] and [33], and there is one aberrant [34] reading. These pronunciations are identified by Xu as reflecting the local speech of Xizhou, and we may assume that this level of specificity accounts for the differences from the standardized Dali system of *Jianzhi*.

Table 2.4 E

Partial facsimile of a 15th-century Bai inscriptional text
in Chinese characters with Bai readings²⁰

(1) 故	(2) 善	(3) 士	(4) 杨	(5) 宗
ku55	se55	si55	ja53+	tsu44
(6) 墓	(7) 志	(8) 弟	(9) 杨	(10) 安

mu55 tsi55 the44 ja53+ a44

(11)道 (12)书 · (13)白 (14)文 · (15)你

to55 ve^r53+ pe^r53+ si35 lu31

(16)侣 (17)玉 (18)叶 (19)杨 (20)家 ·

ŋi21+ ju35 je^r35 ja35 ke^r35

(21)名 (22)宗 · (23)生 (24)在 (25)蒙

mie^r35 tsy35 tɕi53+.xe^r55 tsw35 mw31

(26)城 (27)喜 (28)脸 (29)城 (30)南

xuo44+ xw33 tɕe44 tsi21+ na35

(31)仙 (32)村 (33)丘 (34)臭 · (35)息 ·

ɕe^r35 jw44+ xw31 ji31 ɕi55

(36)波 (37)夕 (38)杨 (39)祥 (40)通 ·

po35 mie^r35 ja53+ tɕha53+ thu33

(41) 息 (42) 夜 (43) 夕 (44) 药 (45) 师

ɕi55 jo53+ mie^r35 jo35 si33

(46) 玉 (47) 波 (48) 夕 (49) 杨 (50) 通

ju35 po35 mie^r35 ja53+ thu33

(51) 夕 (52) 夜 (53) 夕 (54) 杨 (55) 满

mim53+ jo53+ mie^r35 ja53+ ma31

(56) 珠 (57) 父 (58) 难 (59) 夕 (60) 杨

tsy44 tie44 na31 mie^r35 ja53+

(61) 观 (62) 音 (63) 庆 (64) 母 (65) 难

kua33 ju44+ tɕhu55 mo33 na31

(66) 夕 (67) 夜 (68) 息 (69) 生 (70) 二

mie^r35 je55 ɕi35 su44 e^r55

(71) 子 (72) 大 (73) 难 (74) 夕 (75) 应

tsi31 to31 na31 mie^r35 ju55

(76) 小 (77) 知 (78) 宗 . (79) 南文 (80) 是

se31 mie^r35 tsy35 pi55 tsw33

(81) 波 (82) 扬 (83) 矣 . (84) 年 (85) 初

po35 jo21+ ji31 ni44+.sua44+ se31.tsi21+

(86) 聪 (87) 明 (88) 秀 (89) 气 . (90) 迎

tshu55 miw35 ɕo55 tɕhi55 ŋe^r21+

(91) 市 (92) 上 (93) 村 (94) 老 (95) 人

tsi33.pe^r21+ to34 ju44+ ku33 ni21+

(96) 王 (97) 秋 (98) 小 (99) 女 (100) 观

ua53+ tɕhw44 se31 ny44 kua44

(101) 音 (102) 宝 .

ju44 po31

Inspection of the readings for this text shows that the Bai speaker interprets the graphs sometimes phonetically, sometimes semantically, exploiting one of the interesting features of the Chinese writing system. At this writing I do not know how widespread the skill of reading texts in this way is among Bai speakers, but as we have seen (in 1.3.00) above there is reason to expect some performers of Bai oral literature to be practised in it. The data from this trial study do show us something, but we need a larger sample and especially a sample that includes actual oral performances from skilled readers to really explore this kind of material further. Of course study of such performances will furnish data on many more aspects of the Bai language than its tonal system, but one question to start with might be to see whether recitation of folkloric texts from contemporary prompt-books in Chinese transcription depart from the HZBD literary reading system to the same extent as the readings of this inscriptional text. A more difficult problem would be to evaluate why or why not--the variables make this a tricky question: for example, degree of literacy on the part of the performer, as against lexical or discourse features of the text.

Table 2.4 F
 Chinese character readings from a 15th-century Bai inscription
 compared with Chinese tonal category and MC spelling

Tone Class A 1			
Position	Tone Class	Guangyun	Reading
86	A 1	ts'uŋ	tshu 55
5	A 1	tsuoŋ	tsu 44
10	A 1	an	a 44
56	A 1	tɕiu	tsy 44
69	A 1	fɛŋ	su 44
97	A 1	ts'ieu	tɕhu 44
100	A 1	kuən	kua 44
101	A 1	iɛm	ju 44
32	A 1	ts'uən	ju 44+
62	A 1	iɛm	ju 44+
93	A 1	ts'uən	ju 44+
40	A 1	t'uŋ	thu 33
45	A 1	fi	si 33
50	A 1	t'uŋ	thu 33
6i	A 1	kuən	kua 33

12 *	A 1	ɕiə	vɛ ^r 54+
33	A 1	k'ɿəu	xu 31
20	A 1	ka	kɛ ^r 35
22	A 1	tsuoŋ	tsy 35
31	A 1	siɛn	ɕɛ ^r 35
36	A 1	pua	po 35
47	A 1	pua	po 35
78	A 1	tsuoŋ	tsy 35
81	A 1	pua	po 35
23	A 1	ʃeŋ	tɕi 54+ xɛ ^r 55
85	A 1	tʃ'io	se 31 tsi 21+

Tone Class A 2

Position	Tone Class	Guangyun	Reading
4	A 2	ɟiaŋ	ja 54+
9	A 2	ɟiaŋ	ja 54+
38	A 2	ɟiaŋ	ja 54+
39	A 2	ziəŋ	tɕha 54+
49	A 2	ɟiaŋ	ja 54+
51	A 2	mɿɛŋ	miu 54+

54	A 2	jɿaŋ	ja 54+
60	A 2	jɿaŋ	ja 54+
96	A 2	jɿwaŋ	ua 54+
29	A 2	ʒɿɛŋ	tsi 21+
82	A 2	jɿaŋ	jo 21+
90	A 2	ŋɿɛŋ	ŋɛ ^r 21+
95	A 2	nʒɿɛn	ŋɿ 21+
25	A 2	muŋ	mu 31
58	A 2	jan	na 31
65	A 2	nan	na 31
73	A 2	nan	na 31
26	A 2	ʒɿɛŋ	xuo 44+
14 *	A 2	mɿuən	si 35
19	A 2	jɿaŋ	ja 35
21	A 2	mɿɛŋ	mɿɛ ^r 35
30	A 2	nɿɿm	na 35
37	A 2	mɿɛŋ	mɿɛ ^r 35
43	A 2	mɿɛŋ	mɿɛ ^r 35
48	A 2	mɿɛŋ	mɿɛ ^r 35
53	A 2	mɿɛŋ	mɿɛ ^r 35
59	A 2	mɿɛŋ	mɿɛ ^r 35
66	A 2	mɿɛŋ	mɿɛ ^r 35
74	A 2	mɿɛŋ	mɿɛ ^r 35

77	A 2	mɿɛŋ	miɛ ^r 35
87	A 2	mɿɛŋ	miu 35
84	A 2	nien	ni 44+ sua 44+

Tone Class B 1

Position	Tone Class	Guangyun	Reading
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71	B 1	tsɿə	tsi 31
76	B 1	sɿɛu	se 31
98	B 1	sɿɛu	se 31
102	B 1	pəu	po 31
28	B 1	kɿɛm	tɕe 44
27	B 1	xɿə	xu 33

Tone Class B 2

Position	Tone Class	Guangyun	Reading
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15 *	B 2	nɿə	lu 31
34	B 2	jɿə	ji 31
55	B 2	muən	ma 31
83	B 2	jɿə	ji 31

16	B 2	lio	ŋi 21+
2	B 2	zɿɛn	se 55
3	B 2	dʒɿə	si 55
11	B 2	dau	to 55
8	B 2	diei	the 44
57	B 2	bɿu	tie 44
99	B 2	nɿo	ny 44
64	B 2	məu	mo 33
80	B 2	zɿe	tsu 33
94	B 2	lou	ku 33
24	B 2	dʒɿi	tsu 35
92	B 2	zɿaŋ	to 34
91	B 2	zɿə	tsi 33 pɛr 21+

Tone Class C 1

Position	Tone Class	Guangyun	Reading
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1	C 1	ku	ku 55
7	C 1	tɕiə	tsi 55
63	C 1	k'ieŋ	tɕhu 55
75	C 1	iəŋ	ju 55
88	C 1	sieu	ɕo 55
89	C 1	k'iei	tɕhi 55

Tone Class C 2

Position	Tone Class	Guangyun	Reading
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6	C 2	mu	mu 55
67	C 2	jiə	je 55
70	C 2	nzi	ɛ ^r 55
79	C 2	biei	pi 55
42	C 2	jiə	jo 54+
52	C 2	jiə	jo 54+
72	C 2	da	to 31

Tone Class D 1

Position	Tone Class	Guangyun	Reading
68	D 1	sɿək	çi 35
35	D 1	sɿək	çi 55
41	D 1	sɿək	çi 55

Tone Class D 2

Position	Tone Class	Guangyun	Reading
17	D 2	ŋɿwək	ju 35
18	D 2	jɿɛp	je ^r 35
44	D 2	jɿək	jo 35
46	D 2	ŋɿwək	ju 35
13	D 2	bək	pe ^r 54+

2.4.08 Discussion of Chinese character readings

Analysis of the graphs according to their tonal category and initial consonant type in the traditional Chinese phonological schema (i.e. the Middle Chinese system) shows that the readings often depart from the HZBD system of literary pronunciations.²¹ Although the text offers us the fewest examples from MC tones C1/2 and D1/2, graphs in

these categories are most consistently read in the literary way, with the [55] and [35] tones, respectively. The most voluminously represented category is MC tone A1/2 (which is, we may observe, also the largest class of words in *Guangyun*, the rhyme book traceable to the Middle Chinese period that encompasses the traditional phonological system of Chinese). The A1/2 graphs, and also those from tone class B2, show the greatest degree of inconsistency or divergence from HZBD in their Xizhou Bai readings. Those readings that do reflect HZBD literary pronunciations are marked as such in the table. Graphs belonging to the D1/2 class of Chinese almost always receive HZBD readings--a fact we may think of as related to the salience of this class in the phonological tradition itself. In *Guangyun* this class of syllables is perceptibly smaller than all other classes, reflecting the relatively low lexical frequency of the checked syllable type in the Chinese language at the time the system was codified. Whether these syllables were actually pronounced with final stops or not, to the pupil in a traditional curriculum this class of syllables (represented by a small subset of the total number of graphs to be learned) would be memorable if teaching were based on the *Guangyun* system, as opposed to the later *ping2ze2* 平仄 rhyming system that distinguishes only two syllable types. Since the literary reading pronunciations of Bai treat A1 and A2 graphs differently (readings in tone [33] and tone [42+], respectively) but do not distinguish subcategories (1 and 2) in the tonal treatment of graphs belonging to the other tone classes, it is not unreasonable to speculate that the HZBD system has resulted from pedagogy influenced

by *Guangyun*. Dell, discussing the supposedly recent stratum of Chinese loans (whose correspondences with Middle Chinese are exactly those of HZBD), pointed out the resemblance of this tonal subsystem to the five-tone system of Southwestern Mandarin, where the historical *ru4sheng1* class (tone class D) is still distinguished as a separate tone. The supposition there was that such pronunciations represent lexical borrowing from the local Mandarin dialect. Perhaps these explanations are not mutually exclusive.

2.4.09 Study of literary/colloquial dichotomy in Chinese dialects

Some thorny methodological problems connected with the study of literary versus colloquial character readings in the conservative Min dialect of Chinese have been outlined by Chang. These problems are similar to the ones we face in studying Bai readings of text encoded in Chinese graphs. But the implications hold for all comparisons we may draw between Bai lexical items and putative Chinese loans or cognates, and it is useful to consider some of Chang's remarks.

The problem of difference between colloquial and literary readings is extremely complicated. Literary readings are "foreign," while colloquial readings are native. Literary readings are relatively late, and colloquial readings are earlier. There is no direct historical relationship between the two traditions, and certainly there is no question of the one having developed from the other.... If we study the

vocabulary, we find that in many cases a literary reading has replaced a colloquial counterpart. Literary readings are quite likely to appear in the speech of educated or literate persons. If we make use of a dialect survey chart [i.e. a list of Chinese graphs arranged according to traditional sound categories] in our investigation, the literary readings will be quickly elicited, while the colloquial readings will often remain hidden in the background, or be difficult to elicit.... Moreover, in different dialects, a literary reading will have replaced a colloquial one in different lexical items, masking the appearance of the literary/colloquial distinction. A minority of lexical items will have preserved colloquial readings at the expense of literary ones, so that there will be no literary counterpart for these items. So, in cases where there is only a single reading, we must compare it with cases where both a literary and colloquial reading coexist, to decide upon its position *vis a vis* the two strata.

The effect of the competition between literary and colloquial readings has differed in each dialect because of lexical variation among the different dialects. Because the strata of literary and colloquial readings each have a number of different layers, a single lexical item may have a number of variant readings in different dialects. If we want to pursue historical comparative research in phonology, we must know the contrastive relationships obtaining between the

different layers for each dialect. Because the dialects have generally not been exhaustively recorded, we probably will not find all the possible literary and colloquial readings, or all the possible layers, within a given dialect. The same lexical item may be represented by one literary/colloquial distinction in dialect A, another distinction in dialect B, and still another in dialect C--and these three distinctions, belonging to different layers, may not be directly related in terms of phonological correspondence. This is an important methodological problem in the comparative study of the Min dialects.

Zhang Shengyu (1979) in his article on literary and colloquial readings in the dialect of Chaoyang pointed out that while the general distinction between the two strata is easy to draw, within each one it is not so easy to distinguish layers. The colloquial readings are used widely, while literary readings are used in a limited domain. And, the colloquial readings differ significantly from northern *guanhua*, whereas the literary readings come very close to it. In the same article, this author also claimed that the literary readings cannot be equated with a system of "recitation sounds," since some of them are also frequently used in speech. Likewise, the colloquial readings cannot be equated with a purely "vernacular pronunciation," since some of them appear in highly literary or elevated expressions (such colloquial readings are probably lacking a literary

counterpart). Zhang also gave several examples to show that in discussing literary and colloquial readings, the initials, finals, and tones must sometimes be considered separately: the reading [ti] for the character 子 shows that the initial is colloquial, while the rhyme is literary; conversely, the alternative reading [tsai] shows a literary initial combined with a colloquial rhyme.²²

We may consider briefly how these remarks (pessimistic though they be) are applicable to the study of Bai, where we have a similar distinction between groups of relatively more "native" and literary character readings, and sets of semantically related or "synonymous" forms distinguished by a contrast in initial, rhyme, or tone.²³ Chang aptly describes the possible complications, in that initials, rhymes, and tonal reflexes may need to be considered separately as elements of contamination from another stratum. By implication, it is the Chinese graphs that provide the link between forms that might otherwise seem unrelated: yet elicitation based on Chinese character readings may obscure the colloquial layer. On the positive side, however, if we can establish enough cases of multiple or variant readings for the same graph (or multiple pronunciations related to a single Chinese comparand), we may then be in a position to set up separate patterns of correspondence against which to evaluate the relative antiquity represented by isolated forms. Clearly we need more detailed material than what is provided by a wordlist, but when

we have that, the occult literary pronunciations of the HZBD system give us a way to sort out the meaning of variant forms.

2.5.00 Bai tones and TB comparative data

2.5.01 Tonal individuation of TB subgroups and mock correspondences

In this section we are interested in establishing a relationship between the facts presented by the Bai tone system and the larger picture presented by the collectivity of Tibeto-Burman languages (which happen to be either true Loloish languages e.g. the various dialects of Yi, Hani, Akha, and Lahu or "transitional" BL languages e.g. Jingpo and Zaiwa, closer to Burmese, and Naxi, closer to Tibetan) spoken in the Yunnan area. We have seen that in this group of languages two different historical processes (a merger of historically voiced and voiceless consonant initials, and loss or assimilation of historical final consonants, e.g. a merger of syllable types) have both resulted in structurally relevant contrasts in phonation types. Although phonation-type contrasts are recorded for many languages of this group, they do not represent a shared historical development among them, but rather must be regarded as secondary, an "areal feature" that has developed independently in a group of cognate languages (and also in non-cognate languages), as conflicting or opposite historical changes have run their course. We may observe that the independent synchronic status of this type of

contrast within each language parallels the independent development that has been proposed for tones throughout Tibeto-Burman in general. Although Benedict (1972 and in later works) argues that a basic two-way tonal distinction can be pushed back to Sino-Tibetan, comparisons of tonal systems within the BL group and beyond have shown 1: individuation of developments in Proto-BL tones and consonant initials among closely related languages e.g. Burmese, Lahu, and Lisu, and 2: apparent tonal correspondences in languages recognized as only distantly related e.g. Karen and Lahu via Proto-BL, or the same correspondence partially shown among the stopped-final syllables of Jingpo.²⁴

2.5.02 Strata of conflicting historical processes and possible subgrouping evidence

Within a language state undergoing sound change (register split) due to consonantal mergers causing the progressive (i.e. forward into the syllable) assimilation of a syllable-initial voicing contrast, it is usually assumed that we should not find a simultaneous trend of regressive (i.e. backward into the syllable) assimilation of syllable-final contrasts, that is, a merger of syllable types, in progress at the same time. This principle can be stated more generally in terms of an overall phonological coherence or consistency at the level of the "articulatory base" that may be assumed to obtain within a given language state at any point in time.²⁵ This is one part of the explanation why the "same" phonetic

trait in various TB and non-TB languages (tense/lax vowel contrasts) that are related chiefly by their geographic proximity can be shown to have different historical proveniences. Although not of primary concern here, it is worth remembering in this connection that while etymological equivalence of the so-called tense/lax vowel contrast in any two of these languages does not necessarily provide positive evidence for closer sugrouping (of, for example, Liangshan Yi with Akha, currently recognized as belonging in separate groups of Loloish or Yipho) at the BL level (since analogous retentions of a historical contrast can occur in distantly related languages), the reverse case of establishing heterogeneous origins does add support to the exclusion of Jingpo and Zaiwa from the same lower grouping of BL, since by implication the merger of syllable types (loss of final consonants) did not run its course in these languages before intrusion of syllable-initial devoicing. The situation is similar to the case of the Yue dialects of Chinese, where the tonal splits in Cantonese caused by mergers of consonant initials interrupted an incomplete merger of syllable types.²⁶

2.5.03 Maximal contrasts in minimal syllables and possible converging changes

In the comparative tables that follow, lexical morphemes from Bai are paired with putative TB cognates involving the historically different tense/lax contrasts of Yi (etc.) and Zaiwa. Although our emphasis in this chapter is on the Bai tones and consonant initials, at the

practical level we cannot avoid taking both initials and finals into account at once. We have already seen that a mixed pattern of contacts for Bai {+P} morphemes, with the historically oblique tonal categories of Chinese and with the historically voiced initials of Chinese, implies the structural relevance at some historical stage in Bai developments of both (1) syllable-type contrasts that had still been expressed by consonantal rhyme-endings in Middle Chinese (generally placed historically at A.D. 600, but actually codified by native literati earlier circa 450) and (2) a syllable-initial voicing contrast that may have been preserved in some varieties of Chinese until after the period of the Mongol conquest in Yunnan (circa 1253).²⁷ If it turns out that the perceptually salient phonation-type phenomena {+P} of modern Bai can also be linked to the two opposite types of consonantal change attested by tense/lax vowel contrasts in Tibeto-Burman, we may have some basis for a claim that the Bai tone system and its related gestures of coarticulation are actually the meeting ground for conflicting or stratified historical processes from two sources, converging in a language that has been affected by intense contact between the two. A contact situation involving languages undergoing different permutations of a typologically identical structural change affecting the form of the canonical syllable could, plausibly, result in a borrowing language that preserved historically heterogeneous syllable-type contrasts in the form of maximal phonation-type contrasts, expressed in the synchronic forms of a drastically reduced syllable canon. If such were the case in Bai, our ability to reconstruct a prior language state would

depend on establishing a relative chronology of developmental stages for the most probable set of historical source languages and on case-by-case analysis of putative donor morpheme proveniences. Morpheme identification in a comparative context will involve a good deal of trial and error especially since the Bai syllable is so minimal an entity, and this is precisely why the category of marked phonation {+P} is useful in assembling the data.

2.5.04 Arrangement of comparative data

In the following table Bai {+P} syllables are placed within a TB context so that we may look especially for a pattern of correspondences linking the unusual repertoire of Bai phonation types to particular developments recognized for BL. Data from *Jianzhi* are paired with TB and BL data from other sources that are individually identified. Rather than group the data according to hypothetically diagnostic correspondences for BL, however, I have preferred to arrange it according to the tonal contour found in Jianchuan Bai. If we began by grouping the comparative data according to well-studied aspects of BL development, we could end up with unmeaningful sets of Bai data in comparison with BL data whose internal regularity remained irrelevant.

2.5.05 TB comparisons for Bai syllables: front initial, {+P} and
falling contour

(1) PBL: GIVE *be (T2)

'pay for' BJ: pa21+ JC: pe21+ DL: phe42+ta32ju35
LQ: dze55, HN: bi31+, ZW: pji21, WT: sbjin (Dai 1980)
Lahu: peʔ21 (JAM 1988)

(2) PBL: PULL UP *C-mruk (L)

'pull up' BJ: tɕua42+ JC: ma21+ DL: ma21+
HN: mu31+, LS: mo31+, LH: mu31+, NX: z^foa31 (Dai 1980)

(3) PTB: WHITE *bok PBL: WHITE *plu (T1)

'white' BJ: pa42+ JC: pe42+ DL: pe^f42+
HN: phju55, LS: phu33, JP: phɕo31, ZW: phju51, Bse: phju11 (Dai
1980)
Lahu: phu33 / pho33 (JAM 1980)

(4) PBL: THIN *ba (T2)

'thin' BJ: po42+ JC: po42+ DL: po42+
HN: ba31, LS: ba31, Bse: pa53 (Dai 1980)

(5) PBL: INSECT *bi / *bo (T2)

'ant'.2 BJ: tɕi21+pu21+ JC: pi21+pu21+ DL: pi21+pu21+
ZW: pau21, WT: fbu (Dai 1980)

(6) PBL: ANT *p-rwak (H)

'ant'.1 BJ: tɕi21+pu21+ JC: pi21+pu21+ DL: pi21+pu21+

Lahu: pu45-ɣɔʔ54 (JAM 1988)

(7) PTB: GOITRE *(l-)ba/(m-)ba PBL: CHEEKS *ba (T2)

'breast; milk' BJ: pa42+ JC: pa42+ DL: pa42+

'cheek' JC: tɕui33pa42+ (Zhao 1989)

WS: a55pa52+ ('milk'), WN: pa55pa55mo31, NX: ɣ55po31, Mawo

Qiang: papa (Zhao 1982)

WTib: lba-ba ('goitre') (Benedict 1972)

(8) PBL: FLATULATE *p(y)əw (T2)

'break wind' JC: fɣ31 (Zhao 1982)

Bse: hpaw: Mpi: (jon2)kho2 (Bradley 1979)

(9) PTB: SPEAK *br(w)ak/(s-)br(w)aŋ PBL: WRITE *m-bup (L)

'write' BJ: uã42+ JC: vɛ42+ DL: vɛ^r42+

WS: vɛ31 ('write'), LQ: vɛ31, KM: vɛ33 (Zhao 1982)

Bse: re:, Lisu: baw3 (Bradley 1979)

(10) PTB: EYE *mik/myak PBL: EYE *(C)-myak (H)

'tears'.1 BJ: vɪ33ɕui33 JC: mi42+ɕi21+ DL: mi42+ji42+

NH: mi33+zɪ33, LS: miɛ33ji33, NX: miə31dɕi31 (Zhao 1982)

2.5.06 TB comparisons for Bai syllables: front initial, {+P} and level contour

(11) PTB: EIGHT *(b)g-ryat PBL: EIGHT *C-yat (L)

'eight' BJ: t̚ua44+ JC: pia44+ DL: pia44+

Yi: xi31+, LS: he31+, HN: ɕe31+, LH: xi35, LQ: hi55+,

ZW: ʃit55, Jingpo: mə31tsat55+, Bse: ʃiʔ55, WT: brgjad (Dai 1980)

(12) PTB: SIX *d-ruk PBL: SIX *C-krok (L)

'six' BJ: f̚y44+ JC: f̚y44+ DL: f̚y44+

Yi: ts^ru31+, LS: tʃho31+, HN: ku31+, LH: kho31+ (Dai 1980)

(13) PTB: CANE, SPROUT *s-m(y)ik PBL: ROOT.A *mlik/g-lik (L)

ROOT.B *m-je(T1)/m-ge(T3)

'root' BJ: me^r42+ JC: mi44+ DL: mi44+

Bse: ʔaʔ mrac, Lisu: yi1hchye3 (Bradley 1979)

(14) PTB: BAT *ba:k PBL: BAT.A *bo (T1) BAT.B *no(T3)/na(T2)

'bat'.2 BJ: ua42+la42+ JC: po55po44+tsi33

DL: se55mu44+tsi44+lo21+

Bse: laŋ: nuiʔ, Lisu: wa6la6, Akha: boe(HF)ha(LF)

(15) PTB: TOOTH *s-wa PBL: TEETH *swa (T2) PBL: TUSK *ʔ-cway

'tooth'.2 BJ: t̚o33pa44+ JC: tsi33pa44+ DL: tsi33pa44+

Bse: swa:, Lisu: si5hchi3, Bisu: so(F)phjɛ(F) (Bradley 1979)

2.5.07 TB comparisons for Bai syllables: mid initial, {+P} and
falling contour

(16) PBL: SPEECH *daŋ (T2)

'speech' BJ: tō21+ JC: tō21+ DL: to21+

LC: do31 (Dai 1980)

Lahu: tɔ54 (JAM 1988)

(17) PBL: PINCH *tsit (H)

'pick up' BJ: ts^rhe^r42+ts^re^r42+ JC: tsɛ42+ DL: tsi42+

Yi: dz^ri31 ('gather'), ZW: tsiŋ21 (Dai 1980)

Akha: tsui(LF)-eu ('pinch'), WBse: hcit (Bradley 1979)

(18) PBL: DAWN *C-nak (L), DAY *(?)ne (T3)

'last year'.1 BJ: ŋi21+tsu33 JC: na21+tsi55 DL: na21+tsi55

Yi: ne31+ ('early'), LS: ne31+, HN: na31+, LH: na31+ (Dai 1980)

(19) PBL: EAT *dza (T2)

'chew' BJ: ŋa44+dzã42+ JC: tso42+ DL: tso42+

HN: dza31 ('eat'), LS: dza31, JP: ja55, ZW: tso21,

Yi: dzo21, NX: ndzɿ, WT: za (Dai 1980)

(20) PBL: ROLL *(C)-lim (T3)

'roll' BJ: lo33 JC: lui42+ DL: kui31

Yi: lɛ33, ZW: leŋ21 (Dai 1980)

CL: lo (LF), Mpi: loŋ3, joʔ3, WB: lim, hlim? (Bradley 1979)

(21) PTB: FILTH, EXCREMENT *(s-)ŋik/(s-)ŋek PLB: MUCUS *s-nap

'nasal mucus'.2 BJ: ŋɣ42+sē42+ē55 JC: pī21+çī2ī

DL: pi31çī31

NH: mi33+zī33 ('tears'), LS: miɛ33ji33, NX: miə31dçi31 (Zhao 1982)

(22) PTB: FILTH, EXCREMENT *(s-)ŋik/(s-)ŋek

'mud'.1 BJ: ne21+pha55 JC: ni21+ue55 DL: ne21+

(23) PTB: WINNOW, PADDLE *ya:p

'boat'.1 BJ: ŋa21+ JC: jī21+su55 DL: je21+su55

(for 'boat'.2 see PTB: BE IN MOTION, COME, GO *s-wal)

(24) PTB: POISONED *duk/tuk PBL: ANGRY ?-(d)zup (H)

'get angry' BJ: xē55tsē55 JC: tɣ42+ DL: tshuo35tçhi55

Bse: cit hcui:, Lisu: ni2dzaw3, Phunoi: tsi (F) (Bradley 1979)

(25) PTB: CONCEAL *yip

'wear' BJ: pē^r42+ JC: ji42+ DL: ji32

(26) PTB: NAIL, CLAW *m-tsyen

'claw' BJ: tçī42+ JC: tçui21+ DL: tso31tçi44+

(27) PTB: KNOW *syey

'look for' BJ: (tça44+)s^rē^r42+ JC: çī21+; ji21+ DL: ji21+

2.5.08 TB comparisons for Bai syllables: mid initial, {+P} and level
contour

(28) PL: HIT (a) *m-tok (H), (b) m-di (T2)

'strike' A BJ: -- JC: tẽ44+, tu33 DL: te^r44+

HN: di31, LS: dũ31, WT: rdun (Dai 1980)

Lahu: dɔʔ54 (JAM 1988)

(29) PL: SUN *(?)-ne (T1)

'sun' BJ: ɲi44+ JC: jĩ44+phiĩ31 DL: ɲe44+phi31

HN: nɔ33, LS: ɲi33, JP: ni55, ZW: ŋji55, NX: ɲi33 ('day'),

WT: ɲi (Dai 1980)

Lahu: ni (JAM 1988)

(30) PL: JOIN *?-tsak (L)

'join together' BJ: so55tɕa44+ JC: tɕa44+ DL: tɕa44+xu44+

Yi: tse55+, LS: tsa55, HN: tsa31+, LH: tsa35, ZW: tshoʔ55 (Dai
1980)

(31) PL: SLAUGHTER *C-sat (L)

'slaughter' BJ: ɕa44+ JC: ɕa44+ DL: ɕa44+

Yi: xo31, LS: se31+, HN: se31+, LQ: si55+, BH: ɕe31,

NX: sy55, JP: sat31, ZW: sat55, Bse: tθaʔ55, WT: bsad (Dai
1980)

(32) PL: DRIP *Ntsak (H)

'drip' BJ: tɕa44+ JC: to44+ DL: tie^r32

Yi: dzɛ33+, LS: dzɛ33+, HN: dza33+, LH: dza53+ (Dai 1980)

(33) PTB: THUNDERBOLT *gle:k (based on Kuki-Naga reflexes in
th-, note especially Lushei)

'thunder'.2 (v.) BJ: xẽ55ma21+ JC: xẽ55thɛ44+

DL: lui21+me^r21+

(34) PBL: TWO *s-ni(k)

'two' BJ: -- JC: ne44+ DL: ne44+

(35) PBL: TREE *sik (H)

'lumber' JC: si44+ly44+; sy44+ly44+

(36) PTB: ONE *(g-)tyik

'one' BJ: e44+ JC: ji44+; ji35 DL: ji44+; ji35

(37) PTB: FLITTER, FLASH *(s-)lyap

'butterfly'.2 BJ: qe44+le44+tsi33 JC: ko55li44+ DL: ko55le44+

(for butterfly.1 see PTB: DIVARICATE, SPREAD *ka)

(38) PTB: DAY (24 hr.) *s-ryak

'day'.B BJ: ɲi44+ JC: ɕɛ44+; jĩ44+ DL: se^r44+; ɲi44+

(39) PTB: RED, GOLD *tʃak

'red' BJ: tʃhã44+ JC: tshe44+ DL: tsheʳ44+

(40) PTB: THAT, THIS *day

PRON 'here'.2 BJ: -- JC: a55ta44+ DL: tɯ31lɯi33

PRON 'there'.2 BJ: -- JC: mu55ta44+ DL: pu55ta44+

2.5.09 TB comparisons for Bai syllables: back initial, {+P} and
falling contour

(41) PTB: BASKET, RECEPTACLE *kuk

'bowl' BJ: qe42+ JC: ke42+ DL: ke42+

'wooden bowl'.2 JC: si44+ke42+

(42) PTB: SHINE, LIGHT *hwa-t

'shine on' BJ: xo42+ JC: xo31 DL: xo31

(43) PTB: HOLD IN MOUTH *gam

'hold in mouth' BJ: tɕu33 JC: ka21+ DL: ka21+

(44) PL: STAB *m-gya / *gay (T2)

'strike'.B BJ: qã42+ JC: kã42+

2.5.10 TB comparisons for Bai syllables: back initial, {+P} and level contour

(45) PL: CROOKED *gok (L)

'crooked' BJ: jo21+kho55ti42+kho55 JC: khy44+ DL: khy44+

Yi: a33gu55+, LS: go31+, HN: yu31+, LH: qo31+ (Dai 1980)

(46) PTB: WEEP *krap

'weep' BJ: qho44+ JC: kho44+ DL: kho4+

2.5.11 TB comparisons for Bai syllables: {-P} and level contour

(47) PL: ABLE TO *?brek (L), CAN *(k)ra T1

'good at' BJ: qhy33 JC: khu33 DL: khu33

HN: tci31+, LS: ku55, LH: pu35 (Dai 1980)

(48) PTB: WINNOW, PADDLE *ya:p

'boat'.1 BJ: na21+ JC: ji21+su55 DL: je21+su55

(for 'boat'.2 see PTB: BE IN MOTION, COME, GO *s-wa)

2.5.12 TB comparisons for Bai syllables: zero initial and {+P}

(49) PTB: SCOOP OUT *r-go-t/r-ko-t

'scoop up' JC: y21+

(50) PTB: COVER *up

'cure in salt; press together' JC: ε44+

2.6.00 Discussion of the Bai tones and phonation types
in terms of Loloish developments

2.6.01 Relevance of TB comparisons to a creolization hypothesis

The perceptual salience of phonation types associated with the tones of Jianchuan Bai, as well as their lexical frequency and distribution, their correspondences with the literary system of traditional Chinese tonal categories, and their relevance to comparisons of lexical morphemes on the Tibeto-Burman side all support speculation that the Bai phonation-type contrasts represent a clash between sound change processes that were already in progress in two contact languages at the time the Bai language became distinct from its ancestral language state or coalesced around these two source languages. I have stressed at several points in this chapter the need to consider comparative data on both the Sinitic and Tibeto-Burman fronts in systemic or tonogenetic terms, and to hold in mind the potential implications of stratified literary and colloquial contacts with traditional Chinese tonal categories. Of course a creolization or substratum hypothesis for Bai would provide a basis for studying other aspects of Bai apart from its tonal system. From explaining irregular or bizarre internal correspondences in the

comparative dialect data, to arbitrating in the matter of genetic relationship, to interpreting what may be described as typologically mixed expression of grammatical functions in Bai speech data, problems abound that invite further study in terms of early contact between two ancestral languages of the Sinitic and Tibeto-Burman stocks, with a crescendo of pressure from Chinese literacy beginning probably around A.D. 400, when the earliest inscriptional witnesses of Chinese begin to show up in Yunnan at locations of historical contact between Han administrative and military representatives and local clans. The interesting possibility is that a language showing the results of maximum contraction in the syllable canon and significant lexical replacement through loans may offer us a tool for comparative reconstruction in phonation types that are associated with tone.

2.6.02 Bai correspondences for the BL checked tone class

Here we should review what we know in particular about development of the tonal system of Lahu from the BL tone classes, since among other factors that language provides some of the comparative evidence for the origins of Yi tense vowels in TB final consonants. It has been proposed that the modern Lahu tones reflect a history of secondary developments undergone by historical BL checked syllables after their separation from the proto-stock, as represented by two synchronic Lahu checked tones, high and low, with proveniences in BL voiceless and voiced initials, and a high rising tone from certain BL checked

syllables where glottal effects in the historical initial suppressed the final stop, creating an asymmetrical (three-way, as opposed to two-way) split in this proto-tone or tone class. The situation is comparable to the distribution of early Bai borrowings from the Chinese *ru4sheng1* class (historically checked at the time of borrowing) in Jianchuan Bai between tones 44+ and 42+, depending on the feature of voicing that we may assume for the borrowed initial, while the lexically rare tone 35 reflects later *rusheng* (lacking glottal endings, but still a separate tone in Southwest Mandarin) loans in a systematic way.

2.6.03 Bai correspondences for BL non-checked tone classes

Next we can look at developments of PLB tones *1, *2 and *3, perhaps a marginal tone but reconstructible for PLB on the basis of the Burmese "creaky" tone. A four-way contrast in PLB initial stop consonants (plain, aspirated, glottalized, and voiced) is said to have collaborated with spirant initials to split PLB tones *1 and *2 symmetrically, but according to asymmetrical criteria: the plain and voiced stops are said to have merged, creating one side of the bipartition in each of the two well-attested PLB unchecked tones. This side of the split gives modern falling-tone reflexes, one high and one low (but undergoing a "flip-flop" along the way, reflexes from tone *2 assuming the high end of the pitch continuum). The other side of the split in both proto-tones is said to have been created by a three-way merger of the aspirated and glottalized stops with

spirants in tone *1 (the proto-HIGH tone), and of the glottalized and spirant initials in tone *2 (the proto-LOW tone). The aspirates in tone *2 merged with the plain and voiced stops in that tone, probably one reason the reflexes end up as "unexpectedly" higher than their counterparts in tone *1. Finally, the marginal proto-tone *3 is said to have merged with the tone *1 aspirated side, resulting in a high-frequency category of reflexes. This situation is comparable to what we find in Bai, where aside from the tones with contacts to historical Chinese *ru4sheng1* there are still four basic tonemes to account for, two with relatively low reflexes and two with relatively high ones. It looks as if Bai tone 21+ corresponds most often to Lahu low level tone and Bai tone 31 to Lahu low falling tone, while Bai tone 55 corresponds to Lahu high falling tone from historical plain, aspirated and voiced (prenasalized) initials. That leaves Bai tone 33 which appears to correspond with Lahu mid tone from historical aspirates, spirants, and glottalized initials. The fact that the Lahu low level and low falling tones are easily confused may also correspond to the frequent auditory confusion between Jianchuan Bai tones 21+ (tone 5) and 31 (tone 9) in LSN's speech. Given enough time and rich enough data we may find numerous heretofore unrecognized Bai and Lahu cognates with corresponding tones according to this scheme: Lahu: no 'you' in low falling tone (from BL tone *1) looks much like JC: no9 'you' in tone 31, and so on. Although we need much more comparative data to support this scheme, the prospects for establishing convincing Bai/TB correspondences based on well-supported Loloish developments are encouraging.

2.6.04 Tentative tonal scheme for Bai, Lahu, and BL

Table 2.6 A

Tentative correspondences for Lahu, PBL, and Bai tones
(including HZBD and colloquial contacts with Chinese)

Lahu:	High checked	Low checked	Low	High falling	Mid	High rising	Low falling
BL:	High *p,t,k	Low *p,t,k	*2	*2	*1 *3	*?- *p,t,k	*1
Bai:	2	4	5	6	7	8 — 4	9 — 4
JC:	[44+]	[42+]	[21+]	[55]	[33]	[35] — [42+]	[31] — [42+]
HZBD:		A2		C1/2	A1	D1/2	B1/2

Notes

1. Benedict 1982, p. 3 cites a Chinese variant for 'sky' 天 in spirant initial rather than stop (*tian1*), pointing to a proto-alternation between an s-prefixed and s-cluster initial at the Sinitic level that would yield variants in spirant and aspirated stop initials, respectively, at the OC stage. This claim made possible identification of the Bai etymon 'sky' represented by Jianchuan [xē55] as a true cognate of modern Chinese *tian1*, and allowed Benedict to suggest "a Bai provenience for the variant" form in Chinese. This is an intriguing proposal, and there is indeed an etymon glossed by Karlgren as 'heavenly' (GSR 140c 乾 *qian2*) from an old voiced velar fricative initial. It is difficult to decide with certainty that this is a "variant" however, since it bears no graphic resemblance to *tian1*, and since the variant Benedict actually cites is not this but another graph 天 (*xian1*) that is apparently not of the same antiquity (i.e. not given in GSR). I have not pursued the problem further.

2. *Jianzhi* p. 119-22.
3. Xu and Zhao 1964:323; Dell 1981:121-25.
4. Dell 1981:109-14.
5. Fitzgerald 1941: 14-22; Xu and Zhao 1964: 331-34; Dell 1981: 105-7; *Jianzhi* 113-115; Zhao 1988: 51 and passim.
6. Egerod 1971.
7. For this term see the handout from Matisoff 1988.

8. For example, Ting Pang-hsin in a recent article expresses reserve with regard to Chinese tonogenesis from syllable-final segments.

9. Weidert 1979.

10. Haudricourt 1961, repr. 1979: 284-85 makes explicit reference to Prague Circle statements that were based on data made accessible through Karlgren's work. The rest of the article is concerned with schematic representation of data showing the different possible types of tonal splitting attested by numerous languages and dialects of Southeast Asia.

11. Egerod 1971: 163.

12. Egerod 1971: n. 4.

13. Egerod 1971: 163, 166.

14. Dai 1980. The earlier paper, Hu and Dai 1964, had showed that in the Hani language under study, tense vowels are evidence of historical syllable-final consonants.

15. Dai 1980.

16. Dai 1980.

17. Jin 1988.

18. Wen 1940.

19. For 'pen', 'six', 'saw', and 'five' see pp. 10-11 of Benedict 1982; for 'house', 'look at', and 'sky', p. 3; for 'swallow'(v.), p. 4.

20. A rubbing of the text was first collected by Shi Zhongjian during the 1940s and published by him at Central Institute of Nationalities in Beijing (along with four other Bai inscriptions he

had collected at the same time) in *Problems and Research on Chinese Nationalities* in January of 1957. Shi's article did not present Bai readings for the inscriptional texts, studying them rather in terms of their epigraphical properties. My facsimile of the text and Bai readings for the graphs are from Xu 1984, which may represent the first published attempt of any scholar in China to document native Bai readings for texts encoded in Chinese graphs.

21. A gloss on "tonal category and initial consonant type" may be in order here: briefly, Middle Chinese phonology is thought to have encompassed four types of syllable distinguished by their syllable endings. Class A should have been composed of open syllables or syllables in nasal endings (other resonants, i.e. stops, having been lost at an earlier stage). Class B is thought to have been distinguished at this period by final glottal stop, class C by a laryngeal ending that may have already become -s. Class D is the checked tone class of Chinese, composed of syllables in final voiceless stop, some of which are preserved in conservative dialects today. The distinction between 1 and 2 cuts across all these categories and reflects a manner contrast in syllable-initial consonants that later was lost, causing splits and realignments among the original four tonal categories. In general, syllables in historically voiceless initials fall into category 1, those in voiced initials into category 2 (but complications may be introduced by certain initial types, i.e. nasals, laterals, and voiceless fricatives). To speak of "tone class A1," and so on, is to

encapsulate a series of potential diachronic changes in a single model, a kind of mental shorthand.

22. My translation of passages from Chang Kun 1984.

23. A number of such forms in Bai were studied by Wen You during the 1940s and found to be relatable to different stages in the development of Chinese.

24. Matisoff 1973: 81-82 and 88-89 summarizes the situation, represented by systematic correspondence linking the four Karen tones and Proto BL Tones *1 and *2, in contrast to lack of correspondence (or difficulty of establishing it) between the Jingpo tones and those of proto BL in unstopped syllables. This work also cites the well-known contrast between Lhasa Tibetan (highly tonal) and certain other Tibetan dialects, notably Khams, in support of the same view. See also Matisoff 1979: 19-23.

25. The concept of "articulatory base" is used by Haudricourt and Hagege (1978: 16-22) to explain that one phonetic tendency (for example, palatalisation of historical *ki* --> [tɕi] in Chinese) is unlikely to be opposed by a contrary tendency in a given language at the same time (for example, as illustrated by retention of historical *ki* in Japanese, while historical *ti* is palatalised --> [tɕi] in Japanese, but not Chinese). The same concept can explain that we should not find both progressive assimilation (initial voicing contrast --> phonation contrast) and regressive assimilation (checked/unchecked final contrast --> phonation contrast) in progress at once in Bai.

26. Egerod 1971 outlines the Cantonese developments.

27. Although scholars remain in disagreement on the relative chronology of these changes for the various dialect groups of Chinese, Pulleyblank has argued convincingly that a glottalized vowel feature historically from syllable-final segments "remained an essential feature of ... [Chinese tonal categories after A.D. 901] if one is to account for later developments" in most dialects. But Pulleyblank believes that glottal stop, laryngealisation or its relic in final -s, and oral occlusion must have been present as actual syllable-final segments at the MC stage, which must therefore be the latest chronological time-depth for the early stratum of Chinese pronunciations in Bai, since the more regular or literary stratum can be pushed back to early Mandarin. The intrusion of the devoicing change among the Chinese initial consonants varies with the dialect and is incomplete in some conservative dialects of the south, but is assumed to have been completed for the northern group before 1253 (see Pulleyblank 1984b: 7, 9-11, and 13).

Chapter 3
Analysis of Bai Spoken Text Materials

3.1.00 Elements of Bai grammar in a discourse environment

3.1.01 Possible interference from Mandarin

Beginning with this section our attention shifts from identifying the dialect of the consultant to the preliminary analysis of a portion of the recorded text data that was provided by him on a series of occasions over a period of nine months between June 1988 and March 1989. At points in the presentation below comparative reference will be made to some well-known grammatical features of Mandarin (especially to the types and ordering of verbal functors such as complements, aspectual particles, prepositions and coverbs), sometimes with additional mention of possible comparisons to analogous paradigms in Tibeto-Burman languages. Although these comparisons are still far from well worked-out, it may be useful to acknowledge here that my general approach to the data has been influenced mainly by the demands of contrastive analysis, in part for simple reasons of temperament and interest but also for certain linguistic and practical reasons. Some of these latter considerations

may be appropriately summarized here. Although the ideal situation for learning about Bai might have been realized by working with a Bai speaker with a certain command of English, the fact is that the one consultant with whom I was able to work on a long-term basis (as well as the several other Bai-speaking individuals who became my acquaintances in China and graciously provided biographical data and shorter samples of their speech for my study) simply lacked a functional command of English. This being the case, Mandarin or *pu3tong1hua4* provided from the outset both an implicit baseline of comparison and contrast (a substantive part of the linguistic and historical situation under study) and my sole medium of communication (an aspect of the social and practical situation surrounding my study) with an otherwise linguistically sophisticated consultant who showed various types of bilingualism combining his native Bai and several different local forms of Chinese along with the standard *pu3.tong1.hua4* or Mandarin in one repertoire. This profile also constitutes a part of the problem I considered relevant to my study of Bai, so that the project of data collection was not easy to contain inside elicitation events: often the most telling answers to my questions came indirectly from observation of linguistic events occurring between individuals around me. In any case, for practical purposes of data analysis I have consistently found useful access to the meaning of given Bai utterances through their transparency or intertranslatability with Chinese, or where this was not possible, in contrastive differences from an analogous utterance in *pu3.tong1.hua4*. Although at many points along the way I would have

benefitted from the opportunity to pose questions in English or to elicit from English models, the fact remains that much of my understanding and explanation of the data is informed by knowledge of and assumptions made in terms of Mandarin grammar. There may be hazards in this type of situation, as was illustrated by my recent experience in a field methods class at Berkeley, where varying insights on the grammar of Hmong were often differentially distributed between one group of Chinese-speaking graduate students and another group untainted by knowledge of Chinese. In such a situation it is also important to correct or think around possible reanalyses or rationalizations based only on knowledge of Chinese and not on the intrinsic features of the language under study. In other words, in studying non-Chinese languages of China with a known history of Chinese contact, Chinese-speaking investigators may jump to conclusions ["insights"] that others fail to see. The problem remains, however, that in studying Bai (and probably other languages similarly situated) our best analytic tool is probably Chinese grammar, not only because of the access provided by frequent cases of intertranslatability but also because spoken Mandarin grammar is voluminously documented.

3.1.02 Twofold utility of the Mandarin model

The classical model of the discovery process involving a bilingual informant that typifies the methodology of anthropological linguistics probably does not assume elicitation through a third

language that is not the investigator's native language, or indeed, a language in which the informant is actually stronger than the investigator. Nonetheless linguistic descriptions may often be facilitated by reference to a third or "transitional" language. In the present case, far from the anthropologist's paradise, I found my consultant--apart from his lack of skills in English--linguistically sophisticated not only in his fluent bilingual deployment of Bai and Chinese skills, the latter variable along a continuum from standard *pu3tong1hua4* to local Southwest Mandarin, but also in his inclination to perceive and analyze his own Bai grammar through the Mandarin model. One illustration of the pervasiveness of Mandarin in his thought may be shown by his explanation of the genitive/possessive construction in { N mu6 N }. This form [mu6] would always be explained as equivalent to Mandarin *ta1.de* by the consultant whether used possessively or in a nominalizing or partitive function. I was made critically aware by his gloss that the "Mandarin factor" could cut two ways, providing important insights but also possibly obscuring some important aspects of the Bai grammar. Thus although I have felt it important to evaluate the data against a Mandarin model at many points, I have also tried to avoid allowing that model to conceal facts of the language. For the present I will simply point out that the usefulness of the Mandarin model is twofold, as illustrated by fequent cases of intertranslatability (putative examples of loan translation) between Bai utterances and *pu3tong1hua4* and by certain structural/functional contrasts that distinguish some elements of the Bai grammar from their Mandarin analogues.

3.1.03 Segmenting utterances and focusing the discourse

In this and following sections of Chapter 3 examples will be drawn from the transcribed texts that appear as samples of the consultant's speech in Appendix 1. Reference numbers to the text where a given example is found are placed at the end of the translation for that example in angle brackets < >. The first problem of analysis was to dislodge or segment individual utterances from the rest of the recorded narration. The first text, for example, has been roughly segmented into 90 utterances, relying in part upon arbitrary criteria of length and content bundling, but in part upon an inherent segmenting function that is apparently served for the speaker by certain recurring particles and compound expressions, some of which I treat below as utterance-initial discourse advancing operators. The rest follow thereafter and are treated as utterance-final comment particles having mainly backward thrust, adding emotive value or a degree of certitude (positive or negative) to the preceding utterance. Because these operators are useful not only to the analyst but also to the speaker himself, they may easily be thought of under the rubric of "speaker-centered" segmenting devices. In translations of text data and in interlinear glosses, I have adopted analytic cover terms to indicate their presence: in these contexts, SPRT (sentence particle) means either utterance-initial or utterance-final operator; QPRT (question particle) is transparently a variant of the same term; DISC (discourse particle) glosses only the operator

[tsm6] and requires further comment, which is given along with the examples below.

(I) Sentence-initial discourse-advancing particles and compounds include the following forms. Of the forms identified here, there are 32 instances in text 1, the source of all the examples in this section.

(a) la8/le8 And so...

[mu6 ti7.mo7.xo7 li6 ɕi9.xuã6 kō6 mo9 ɲe5
3d-GEN parents-PL also like force 3d-S go

ɣu4.s16] [la8 mo9 ɣu4.tu2.s16 ka8 ts19]
study SPRT 3d-S study-able several written-word

His parents also wanted to make him go and study. And so he was able to learn a few written words. <1:6-7>

(b) ɣu7.fɣ7.no7 After that... ; Later on...

[ɣu7.fɣ7.no7 mo9 khao9 tɕiũ1.s11 li6 ts19.tso7]
rear-place-LOC 3d-S take-exam jin4shi4 also SPRT

Later on, it's a fact that he even {succeeded in} the jin4shi4 exam.

<1:8>

(c) nɛ7 But... ; Nevertheless...

[mu6 xa9.tõ6 pi9.tɕao1 ɲi6.ku5] [nɛ7 ɲi9.kẽ6-ɲi9
3d-GEN home rather poor SPRT person-CLF

mo9 tiũ9 tshõ6.miũ6]

DIST most clever

His home was rather poor. But that character was nevertheless
terribly clever. <1:4-5>

(d) ts16 That being the case... ; That is to say... ;

As for...

This operator invites analysis more in terms of channeling the focus of the surrounding context than of segmenting utterances, because it also occurs mid-utterance as a topic marker, and because it may have either forward or backward reference whether its relative position is utterance-initial or -medial. In fact its function is similar to that of the "empty word" *ze2* [ʔ] of Chinese *wen2yan2* texts, tempting me to identify it as one example of literary influence from Chinese in Bai speech. The consultant in fact identifies this operator with the Chinese graph *ze2* in glossing text, and its functions in his speech data match fairly well with Chou Fa-kao's description of the Chinese literary particle.¹

[ti6.tu6 tɕɛ2 pɛ4.ŋo4.ts17 sua2 u6.mu6.no7 mu6
 squinty little Bai.language say call.3d-GEN.SUB 3d-GEN

ŋui7.pho2 no7 ti6.tu6 tɕɛ2] [ts16 tui7.tshu9 mo9 ā7
 eye(s) LOC squinty little DPRT distant.place 3d-S see

ya8 tui7]
 NEG distant

"A bit squinty"--in the Bai language one says that his eyes [had a property of] being a bit squinty. That is to say, as for distant places, he could not see far. <1:25-26>

(e) ya8.mu7.ts16Otherwise... ; If not... ; Why not...

[tɕi4.tsua4 tɕɛ2 tɕhā9 ju2 s16 mo9 pi4] [ya8.mu7.ts16
 quick little steal eat ASP 3d-S SPRT SPRT

mo9 ju2 ja8 tu2 la4]
 3d-S eat NEG COMP SPRT

"I'd better grab [steal] and eat it quick! Otherwise [I] won't get to eat it at all!" <1:54-55>

(II) Final or backward-referring comment particles and compounds are as follows. In the same 90-segment text there are about 19 instances.

- (a) ts19.tso7 ...[attributive] and that's a fact.
- (b) la4 ...[inchoative] how about that; ...that's what.
- (c) lu7 ...[concessive] true enough.
- (d) lɛ4 ...[disapprobative] can you imagine.
- (e) sɛ7 ...[prescriptive] at least you would think so.
- (f) ni6 ...[interrogative] what do you suppose?
- (g) ne5 ...[aversive] and that's all it amounts to.
- (h) ɕã7.la4 ...[comitative] as you will surely agree.

3.1.04 Number, category, and case in pronouns

One of the most immediately accessible contrasts with Mandarin presented by the Bai grammar is in the system of personal pronouns, which in the Jianchuan vernacular are as follows:

Table 3.1 A
Pronouns in Jianchuan Bai

	1st	2d	3d	
NOM				
	ŋo31	no31	mo31	
ACCUS		-----		
		ji55 (Hon.)		
				Singular
GEN				
	ŋu55	nu55	mu55	
DAT				
NOM				
ACCUS	ŋa55 (Excl.)	na55	ma55	
	-----			Plural
GEN	jã55 (Incl.)			
DAT				

Looking at what distinguishes the Jianchuan pronoun system from its counterpart in Mandarin or *pu3tong1hua4* gets us to one essential difference between the two grammars, namely, that in Jianchuan Bai a residual system of obligatory morphophonemic alternations

characterizes the operation of number and case paradigms upon the pronouns, whereas Mandarin achieves similar grammatical results through suffixing and morphosyntactic constructions. The basic contrast is shown in (1), where the change from 1st singular to 1st plural in each language is given (MSC abbreviates Mandarin in examples).

(1)

JC: [ŋo9]	/	[ŋa6]	MSC: wo3	/	wo3.men
1st Sg.	/	1st Pl.	1st Sg.	/	1st Sg. + Pl. Suf.
I		We (excl.)	I		We (excl.)

We will see below that plural suffixation of {+human} nouns is common in Jianchuan Bai, but that the suffixed morpheme never occurs in place of the plural PRON allomorph. For the record, however, we should also remark here that the Bijiang data shows mixture of the two types of number paradigm within the pronoun system. The same type of contrast is shown in the change from 1st plural exclusive to 1st plural inclusive category, with the difference that in this case Mandarin also reverts to an allomorph for the categorical shift. Making this contrast more interesting is the fact that both languages share the 1st plural category (Inclusive/Exclusive) paradigm, an unusual feature in terms of the world's languages but possibly a relic in Mandarin of Altaic contact with an early ancestor of the northern Chinese dialects.²

(2)

1stP-EXC / 1stP-INC

JC: [ŋa6] / [ŋa6] MSC: wo3men / zan2men

(3)

1st.S-NOM / 1st.S-GEN

JC: [ŋo9] / [ŋu6] MSC: wo3 / wo3 de

(4)

3ds-NOM / 3ds-GEN / { REL / LOC / SUB / NOM }

JC: [mo9] / [mu6] / [mu6]; [no7]

MSC: ta1 / ta1 de / de

(5)

2d. Sg. NOM / DX PRO / DX DIS

JC: [no9] / [lu9], [no9] / [mu9], [mo9]

MSC: ni2 / zhe4.(ge) / nei4.(ge)

(6)

[ε1.jui1 no9 ŋi5 tsm7 miu4.tjao4 mo9 tsε5.kε2 no7

PN this CLF be Ming.dynasty that time REL
ŋi5.kε6]

person

This person ε1.jui1 was a man who [lived during] the Ming period.

{ lao3.wang2 nei4.ge ren2 shi4 yi1.ge shen2.me dou1
bu2.zai4.hu de ren2 }

(PN that person be one.CLF anything also
disregard REL person)

That guy Old Wang is a man who doesn't care about anything.

(7) [ke6.ɕɛ2 ŋo9 ju7 tʃuũ9.pe6 tɕã9 ɛ1.jui1 mu6 ku9.xua2
kõ7.tuẽ7]

(today I want prepare tell.about PN REL story
two.CLF)

Today I'm going to tell [you] two stories about ɛ1.jui1.

{ wo3 jin1.tian1 ba3 xin1.li3 de gan3.qing2 lai2 jiang3
ji3.ju4 hua4 }

(I today take heart REL feelings come speak
few.CLF(M) language)

Today I'm going to say a few words about my inner feelings.

We have now observed a number of utterances where the Jianchuan 3rd singular genitive form precedes an object marking particle [no7], the two syllables together sometimes suggesting a dative pronoun functioning as indirect object, but sometimes seeming to behave like a lexicalized compound meaning 'some' or 'some of' [what follows]. In some utterances what we might want to translate as a dative pronoun ('from him') is actually represented by the reduplicated 3rd.S-GEN pronoun form: thus, 'his-his'. Elsewhere the 3rd.S-GEN form is repeated n times while the speaker thinks of what to say, assuming a

function similar to that of *zhe4ge* in Mandarin. However we may interpret this phenomenon, it is at least possible to say that no such usage appears in Xi Zhi's illustrations from Dali speech (see 4.4.00 below), and to recall that in "double object" constructions illustrated by Xi with variant Jianchuan renderings of 'I've given him a pair of shoes,' Dali speakers were said to produce only the 3rd singular nominative pronoun form [po31] followed by a locative particle, one that has been identified elsewhere as a suffix meaning 'internal space' in Dali speech.³ To explore what may be involved in the Jianchuan usage we can observe in the consultant's speech, let us look at some examples of the canonical occurrences of each syllable separately, with their possible translations.

Table 3.1 B

Canonical subordinating [no7] and DAT object marker [no7]

- | | |
|---------------------|---|
| (a) ... no7 ni5.kē6 | SUB a person of (the Ming Dynasty) |
| SUB person | |
| (b) ... no7 ku2.sɿ1 | SUB the story of (ɛ1juɿ1 beating the chicken) |
| SUB story | |
| (c) ... no ni5.kē6 | SUB a person belonging to the (landlord category) |
| SUB person | |
| (d) pã6.kō6.xo7 no7 | DAT (paid out) to [his] servants |
| servant-PL DAT | |

Table 3.1 C

Canonical 3rd.S-GEN in possessive function

- (a) $\mu\mu 6$ xa9.tõ6 POSS his family
 POSS family
- (b) $\mu\mu 6$ ti7.mo7-xo7 POSS his father and mother
 POSS father.mother-PL
- (c) $\mu\mu 6$ ηui7.pho2 POSS his eyes
 POSS eyes
- (d) ko6 $\mu\mu 6$ ti7 POSS with his father
 with POSS father
- (e) sε2 $\mu\mu 6$ kε5 POSS cutting off his flesh
 cut POSS meat

Finally, let us look at a few examples where the above functions seem to blend or be confused.

- (a) $\mu\mu 6$ ηui7.pho no7? his eyes [having a property of]
 being (a bit squinty) < = the
 [squintiness] of his eyes >
- (b) tçã9 $\mu\mu 6$.no7 ku2.s12? tell *her/some* stories
- (c) pε4.ηo4.ts17 sua2 u6. $\mu\mu 6$.no7? speaking in Bai language it's
 called

(d) tsu6.to6 mu6.mu6 ke9? embarrass (him) for once

The reduplication of the genitive 3rd pronoun at numerous points in the speaker's narration (d) suggests a hesitation marker of the same type provided by Chinese *zhe4ge*, which also occurs frequently in the same narration. At the same time, however, [mu6] occurs often in two different environments that both include the object marker [no7], suggesting that the pronoun morphology of Jianchuan speech is residual rather than borrowed, or at least that it was present well before Bai speakers began code-switching in a "modern Chinese" way using *zhege*. The fact that the genitive pronoun is interacting with another element of the grammar (an element that closely resembles a dative marker and nominalizer) in two types of construction, one that translates as a syntactic collocation (a) and one that more closely resembles a lexicalized or idiomatic compound (b and c) offers support for the view that the grammar of Bai harbors microsyntactic retentions from a Tibeto-Burman prehistory, and suggests that the semantic functions of genitive, dative, and nominalization have progressively overlapped under pressure from a system that does not mark the distinction overtly (Mandarin). Meanwhile, since these constructions are both lacking in the contrastive samples of Dali dialect grammar presented by Xi Zhi (4.4.00), there is additional support for identifying the speaker's grammar with the Jianchuan dialect of Bai. We shall see below that in the texts we consider here examples of NEG following the verbal nucleus have not materialized as in the Dali vernacular.

3.1.05 Noun determiners and quantifiers: Type & order

(1)

JC: [sy6.tshue2] / [sy6.tshue2 a9-tshue2]
 book / book one-CLF

MSC: *shu1* / *yi1.ben3 shu1*
 book / one.CLF book

(2)

[tshɛ2 ke6 kō7-tu5] / [n̩15.kē6 kō7-fē4]
 red chicken two-CLF / (person two-CLF)
 two red chickens / two fat people

3.1.06 Types of negation, uses of negation

(1)

JC: [tɕu7] / [ɣa8.mo7] MSC: *you3* / *mei2.you3*
 EXIST / NEG.EXIST EXIST / NEG.EXIST
 there is / there isn't there is / there isn't

(2)

JC: [tɕu7] / [a9.pio6] MSC: *shi4* / *bu2.shi4*
 COP / NEG.COP COP / NEG.COP
 it is / it isn't it is / it isn't

(3)

JC: [tɕu7] / [ja8.tɕu7], [ɣa8.mo7]

LOC-v. / NEG.LOC-v.

MSC: zai4 / bu2.zai4

LOC-v. NEG.LOC-v.

[tɕa6.tɕa6.xo6.xo6 tshɛ4.tsu9-n̩5 xa9.tõ6 ja8.mo7 tse5.kɛ2]

just right master-CLF home NEG.LOC-v. time

Just then when the master was not at home...

MSC: lao3.shi1 zheng1.hao3 bu2.zao4 jia1 de shi2.hou4

teacher just.right NEG.LOC-v. home REL time

(5)

[sɛ̃7] / [suĩ7]; [ja8 suĩ7] [ta4] / [tua4] / [a9.mia2]

(know) / (doesn't know) (can) / (can't) / (don't)

zhi1.dao4 / bu4 zhi1.dao4 neng2.gou4 / bu neng2.gou4 / bie2

(6)

[kɛ2 li6 suĩ6.tsu6 kɛ2 li6 tsu6 tso4 khu7 tua4]

sandals also extend.to sandals also DISC wear COMP can't

[I] couldn't even wear sandals.

MSC: lian2 shui3 dou1 he2 bu liao3

include water also drink NEG finish

[I] can't even manage to drink water.

(7)

[ɲa6 ke6.çɛ2 çui7.tçi9 ja8 pɛ5 la4]

1st.Pl today paddy NEG harrow SPRT

We didn't harrow paddy today.

MSC: wo3.men jin1.tian1 mei2.you3 mai3 dong1.xi

1st-Pl today NEG.EXIST buy things

We didn't buy anything today.

(8)

JC: [ɣa8.mo7.tsu7]

MSC: yao4.bu4(.ran2)

NEG.EXIST.EXIST

want.NEG(.thus)

otherwise, maybe, why not

otherwise

3.1.07 Verbal functors: Types, ordering

Under the general rubric of verbal functors I will illustrate a number of monosyllables and one disyllabic construction that can be assumed (some exceptions) to derive from Bai verbs of related meaning and identical form, but which occur frequently in syntactic environments involving another principle verb. Among these, we probably need to distinguish five types: a) verbal complements that convey a directional or potential/resultative meaning (as in English 'fix up', 'send off', 'manage to hear'); b) aspectual particles (comparable to Mandarin perfective/change of state *le*); c) modal auxiliaries that convey the feeling or state of an agent (as in

English 'want to beat up', 'unable to speak'); d) prepositions that convey the force or import of an action in relation to a patient or location (comparable to Mandarin *zai4* 'at', 'in' and *cong2* 'from', 'through'), and a coverb that topicalizes an object (comparable to the Mandarin coverb *ba3* 'take ... and V'). In the data there are possible cases of overlapping in these functions, which may indicate either that our distinctions are overly fine for this data or that some of the functions themselves may be semantically similar. For the present we will assume the validity of the named categories as an heuristic device and because the text data under study apparently can be described by them. They are familiar categories within the context of Mandarin grammar, allowing us also to make Mandarin comparisons at points where our data suggest either direct borrowing or loan translation of a Chinese term or construction, or conversely, show significant contrast with a Chinese model. Where the ungrammaticalized source of the form is an available word choice as a principle verb in Bai, we give the lexical meaning of that verb first, showing the more abstract meaning of the related verbal functor in upper case letters.

(1) Directional and potential/resultative complements

(a) [*thw6*] 'descend' >> [*thw6*] DIMINUENDO

[*tɕi9.fy7.nw7* *ã6.tiũ7* *thw6* *tua4*] <6:41>

earth-place-DAT pacify DOWN can-NEG

In the territory [the trouble] could not be put down.

<other examples are at 6:49, 61, 70, 76, 87>

Comparison with Mandarin in this case suggests the directional complement *xia4*, as in:

MSC: *ta1 bu2.shu4.fu4 de chi1 bu xia4 fan4*
 s/he unwell SUB eat NEG DOWN rice
 He's so ill he can't eat.

(b) [*khɯ7*] 'rise' >> [*khɯ7*] CRESCENDO

[*tsu7 sua2 ku4 kuɛ8.miũ4.tã7 tse2.ku7 se4.kɛ4-xu9 ku1*
 just say AT KMT this world-inside grow.up

to4 khɯ7 no7 si6.tsi7.ni5-xo2 tsm6 xã9.tsi7.xo9.tsi7
 big CRESCENDO SUB child-PL DISC everybody

tɕi6.pũ9.sã6 tsi7 liã4.si7.si7 no7 tɕhĩ9.khuã6 la4]
 basically EXIST like.that SUB condition SPRT

We may simply say that as for kids that grew up in the KMT world, every one of them had basically that kind of condition. <9:10>

(c) [*ɣu8*] 'come' >> [*ɣu8*] PROXIMAL ACT

[s18.tɕi1 li1.nɔ1 mo9 ā7 ja8 tɕhiũ1.tshu9 no9 tɕɛ2.ts17 ɕā9.pē1.fa8
ɣu8 to5 mo9 kɛ9] <1:29>

[la8 tshu7 a9 pū6 tsw7 ma5 thw6 phia2 ke4.tsw6 no9 tse5.kɛ2 ŋa6
xa9.tỹ6 tsw7 ku4 ɣu8] <6:49>

[ŋɛ5] 'go' >> [ŋɛ5] DISTAL ACT

[mu6 ti7.mo7.xo7 li6 ɕi9.xuā6 kō6 mo9 ŋɛ5 ɣu4.s16] <1:6>

[tɕhā9] FURTIVE ACT

[tɕi4.tsua4.tɕɛ2 tɕhā9 ju2 s16 mo9 pi4] <1:54>

[phō7] 'run' >> ACT ON THE RUN

[a6.ta2 tshɛ4.tsu9 li6 ts17 sa8 kɛ2.piɛ2 s16.ɣu9 tshu7 mo9 phō7
ja2.ku6] <1:79>

These are arguably not true verbal complements, since they occur in front of the principle verb, but in each case their force is less verbal and more directional, only an adjunct to the meaning of the predicate (as in English 'come and eat', 'go and buy'. So we will treat them for the present as complements, and recognize this category as occurring in variable environments, both #__V and V__#, subject to lexical conditioning by the ungrammaticalized source of the complement. But a more appropriate subcategory might be set up for them, something like adverbial complements, different from true adverbs in their 'force' or semantics but similar in their function.

(d) [t̥hi2] 'expel, emerge' >> PRODUCTIVE ACTION

[la8 ts17.a9.pũ6 ts16 mo9 pe2 t̥hi2] <1:67>

[tsw6 # tshu6 # a6.ta2 tse2.ku7 ε1.jui1 ne5 ne5 xã6 t̥hi7 mu6 # xã6
t̥hi7 ke4.tsw6 li9 lao9 tshε4.tsu4 mu6 ɕã9 pã6 nu7 ne5 la4] <2:37>

(e) [t̥hẽ6] 'clear' >> COMPLETED ACTION

[mo9 tshu7 ɲo4 mu6 # mu6 ɲɣ7 mu6 tshu7 mu7 ti9 ɕi7 tiu2 lu7 ju2 tsw6
ju2 mu6 ɲuẽ5 kã6.tɕi9 t̥hẽ6] <2:59>

[tu5.pũ6 ɲo4 t̥i7.pũ9.ɟã6 ɲo4 kau6.tsõ6 sã6 ɟua2 no7 tsĩ7.ko7 ɲu6
tshĩ7.t̥i7 no7 sũ6.xuo8 ɲu6 tshĩ7.t̥i7 no7 li9.ɕã9 ε6.xau6 tsĩ7.ko7
no9.li8 fũ6.to6 ko8.tsõ9 t̥hĩ9.khuã6 ji8.t̥ɟu7.phia2 kho9 ta1.ɕo8 no7
t̥hĩ9.khuã6 t̥i7.pũ9.ɟã6 t̥ã9 tshu7 t̥hẽ6 la4] <9:2>

(f) [tu2] 'get, obtain' >> SUCCESSFUL ACTION

[ma6 tse6.ts17 tsõ6 no7 pe9 tu2 ke4.ts17 t̥hu6.ɣuε6 a9.kho7 a9]
<1:31>

[la8 kẽ4 tu2 ts16 mo9 pi8.ɕy7 tẽ2 ma6 ke6.tu5] <1:77>

[pe4 tsh16 γu7.fy7.no7 ts16 ma6 tse6.ts17 tsō6 no7 ts17 ke2.piε2.xo7
ma6 ke6.tw5 fy6 γu8 ke4.ts17 mu6 tse6.ts17 tsō6 no7] <1:34>

[la8 mo9 γu4.tw2.s16 ka8 ts19] <1:7>

(g) [z19] GIVE TO, BENEFACTIVE

[nε7 kō6.tse5 ts16 a9.li6 li6 mo9 ni9.ke6 no7 pā6.kō6.xo7 no7 ja8
khe6 z19] <1:17>

(2) Aspect markers

(a) [tshu6] 'stop up' >> PERFECTIVE

(Examples at 1:46, 1:35, 2:46, 9:2)

(b) [s16] CHANGE OF STATE

[la8 mo9 tshu6 a9.tshua2.ts17 a9.ke9.xu7 nɔ4 mo9 ke4 ju2 s12]
<1:59>

[tē2 ts16 no9 nɔ4 nu6 ts12.tci9 no7 phao1.xu4.kho7 tē2 kui4 s16]
<1:88>

c) [ko4] EXPERIENCE

[la8 tsũ7 tɔ8 tɕi9.fɣ7 ɣu9 tsw7 ɣu9 mo9 tshu7 jo9.sɿ7.xo6 tsw6 mo9
 tsɿ7 xo6.xui7.tsɿ7.xo7 ɕɛ4 ko4 ɣu8 mo9 tse5.ke2 tsw6 xã4.ɳɣ4.tsw7 u6
 # u6.mu6.no7 sua2 tshu7 tsw7 xui4 xã6 ɕã7 tsũ7 # xui4 xã6 ɕã7 tsũ7]
 <6:32>

[tɕã6 tshu7 ji9.tɕhie8 u7 ne8 tsw6 ji9.tɕiũ7 nu6 tɕã9 ko2 la4]
 <9:63>

(d) [khu7 (mu6.no7)] INCHOATIVE (cf. 1b above)
 (Examples at 2:26, 2:23)

3) Modal particles

(a) [ta4] 'able to, permitted to'

[le8.lo7.mo7 ɳɔ2 tsu6 mu6 pã6.kõ6 tsɿ6 ta4 lu7] <1:16>

[mo9 thiu9 ã7 tu2 ta4 tɕi7.tshu9 ne5] <1:27>

(b) [tua4] 'unable to, unsuitable to'

[e1.jy1 tẽ2 a9.pio7 sɿ7 tsu6 e1.jy1 mu6 tse9 tsu6.tsẽ5 tua4] <1:89>

(c) [pi4] 'must'

[tɕi4.tsua4.tɕe2 tɕhã9 ju2 sɿ6 mo9 pi4] <1:54>

(d) [ɲɔ2] 'want' >> WANT TO

[ju7] WANT TO

[lɛ8.lo7.mo7 ɲɔ2 tsu6 mu6 pã6.kõ6 ts16 ta4 lu7] <1:16>

[ke6.ɕɛ2 ɲo9 ju2 tɕuũ9.pe6 tɕã9 ɛ1.jui1 mu6 ku4.s17 kõ7.tuẽ2] <2:3>

(4) Prepositions and coverbs

a) [sa8] 'from, since'

[a6.ta2 tsɛ4.tsu9 li6 ts17 sa8 kɛ2.piɛ2 s12.ɣu9 tshu7 mo9 phõ7
ja2.ku6] <1:79>

[tsu7 a9.pũ6 nu6 ɲo9 tsu7 tse2 nu7 sua2 tsu7 ɲo9 sa8 ɕy6.thã6
fã4.tɕɛ2 pia2 xo7 phia2 ku4 ɣu8] <9:51>

[sua2 ts16 sua2 se9 mo9 tse5.kɛ2 nu7 s19.ɣ7 ɲo9 pi8.ɕy8 ɲo4 sa8
tsu9.tsõ6 no7 tɕã9 thu7 ts16 mu6.tu2 ɲo4 mo9 tɕã9 tɕhĩ6.tɕhu9] <6:3>

(b) [ke4.tsu7] 'on, touching'

[ɲo9 tshu7 ɲo4 ke4.ts16 phao1.xu4 no9.kho6 s12 ke4.ts16 mu6
tse6.ts19.tsõ6 no7 ju2 tshã6.pe2 no7 tse6.ts19.tsõ6 no7] <1:72>

[ts16 tshɛ4.tsu9.po6 no9 tɯ5.mɯ6.no7 sã2.tã2 no7 ke4.ts16 ma6
 kɛ2.piɛ2.xo7 ma6 ke6 no9.tɯ5 mɯ6 ji7 s16 mɯ6 sɛ7 no9.ti6 no7
 ɕã7.la4] <1:75>

(c) [ku4] 'at, in' (a place)

[la8 ts17.a9.pũ7 li9 lao9.tshɛ4.tsu9 ɲi9 ku4 xa9.tõ6] <1:30>

[ɣu8 phia2 la4.ɣu8.ts16 ku4 mɯ6.ta2 ju2 tshã6.pẽ7] <1:48>

(d) [ko6], [ta2] 'with, together with'

[mo9 ko6 mɯ6 ti7 kõ7.ɲi9 kõ7.ts19.po7 ta9.ko6 tã6 ke4.ts16 ti1.tsu9
 lao9.tshɛ4 ma6 ɯ6.mɯ6.no7 li9 lao9.tshɛ4.tsu9 xuɛ6.tsɛ9 li9
 lao9.thɛ1.ji4 no9.xo7 ma6 pã6.kõ6] <1:14>

(e) [ɲõ4] 'use' >> TAKE ... AND

[ka2] 'grasp'

[tẽ2 ts16 no9 ɲo4 mɯ6 ts12.tɕi9 no7 phao1.xu4.kho7 tẽ2 kui4 s16]
 <1:88>

3.1.08 Locatives, patients, noun phrases and other objects

As for the pain in my leg, it was terrible. <T 9.1>

As for what it tasted like, it was putrid. <T 1.1>

3d sg. GEN / SUB JC: [mɯ6] / [no7]
 MSC: ta1 de / de

We can distinguish different grammatical functions for a single syllable [no7], in somewhat the same manner as was done for Mandarin *de* by Zhu.⁴

(1) Locative marker: [no7] LOC

[ma6 tsɛ6.ts17 tsō6 no7 pɛ9 tu2 ke4.ts17
 they-GEN table top LOC place.on SUCCEED AFFECT
 tɕhu6.ɣuɛ6 a9-kho7 a9] <1:31>
 snail one-CLF SPRT

A snail had been placed upon their table.

(2) Dative marker: [no7] DAT

[lɛ8 lu7.pũ6 no7 no9.pũ6 ts16 mo9 kē4 tu2 ts16 mo9 tshu7 ku4.xa2
 tsh16 ma6 ke6 no9.tu5 no7 la4]

(3) Relative complementizer: [no7] REL

[ku4 kau6.tsō6 tsɛ5.kɛ2 tsu8.tu8 ŋɔ9 tsɿ6.kɔ7
 AT upper.middle.school time CAUSE.TO me this

kau6.ɕiũ7 tsu8.tu8 ŋɔ9 ɕi9.xuã6 ŋa4.sɿ7.sɿ7 no7 sɿ9.vu7
 happy CAUSE TO me happy that way SUB matter

a9-thɛ6 tsi7 a6.sɛ9 ni7] <9:6>

one-CLF COP WHAT QPRT

What do you think it was that made me happy, something like that,
when I was in upper middle school?

(4) Nominal complementizer: [no7] NOM 'instance of'

[ā7 khu7 ts16 mo9 tshu7 ā7.tsō4 khu7

look at BEGIN DISC he just consider as BEGIN

tɕhu6.ɣue6-kho7 no7] <1:57>

snail-CLF NOM

Looking at it, he was just considering that it was a snail.

[ts16 tshɛ4.tsu9.po6 no9 tu5.mu6.no7 sã2.tã2 no7 ke4.ts16 ma6

kɛ2.piɛ2.xo7 ma6 ke6 no9.tu5 mu6 ji7 s16 mu6 sɛ7 no9.ti6 no7

ɕã7.la4] <1:75>

DISC Master-M this before-DAT tricked INSTANCE INVOLVE

they-GEN neighbor-PL they-GEN chicken this-CLF it-GEN

let out STATE it-GEN shit this-CLF INSTANCE / SPRT

(5) Possessive subordinator: [no7] POSS

(6) ɲv7/ke4.tsu6: "lexical" and "lexicosyntactic" locative

This might be originally a {+/-human} paradigm, with the {+human} lexical form giving way to the {-human} lexicosyntactic form in most environments under pressure from a grammar that does not make the distinction, or in other words, lacks the paradigm.

In the following examples we consider the frequently appearing 3d Sg. GEN in a nominalizing function with apparently existential or predicative force, that is, in emphatic declarative utterances where the predicate consists only of a noun or noun phrase.

(7) 3d Sg. GEN >> Pronominalized existential: [muu6]

[lɛ8.lo4.mo7 tɕɛ6.ts19 tsõ6 no7 tɕhu6.yue6 no9.kho7 no7 muu6
ju2.ɕu9.tshy9] <1:50>

[lɛ8.lo4.mo7 muu6 muu6 ke6.s17 a2.s17 lia4] <1:61>

3.1.09 Expression of sequence in temporal phrases and subordinate clauses

(1) Subordination by parataxis with [ts16] and [la4]

[la8 kē4 tu2 ts16 mo9 pi8.ɕy7 tē2 ma6 ke6-tu5] <1:77>

ISP see succeed.in DISC he must strike they chicken-CLF

So, when he saw it, he had to beat their chicken.

Having let out a pile of dung the chicken flew away. <1:46>

(2) Last time

Last time (before this) I already told you about my schooldays. <9:1>

As for ... I can only tell about it clearly {by = just after} talking from the {early-top} downward. <6:3>

That time was when the opium war had started all over the nation.

<6:24>

After the Opium War had started... <6:25>

3.1.10 Elaborate expressions

These can be lumped together in a treatment of syntactic and grammatical elements because they share a property of expressing an idiomatic meaning through a sequence of morphemes, some obligatory, some changeable according to the lexical situation, but in a fixed or frozen order.

Below is a list of some elaborate expressions found in the consultant's speech:

(1) [pa9.tɕi6.pa9.tã4] <1:10>

- (mix together / much / mix together / return)
 'inseparable'
- (2) [ɕa2.tɕi6.ɕa2.tã4] <6:38>
 (slaughter / much / slaughter / return)⁵
 'engaged in mutual violence'
- (3) [tɕĩ6.ɕi6.ko4.tua4] <2:10>
 (tendons / knowledge / pass through / unable)⁶
 'unbearably'
- (4) [tɕa6.tɕa6.xo6.xo6] <1:68>
 (join / join / correct / correct)
 'just right', 'bull's eye'
- (5) [xa9.ts17.jĩ2.ts17]
 (? / COP / day / COP)
 'every day'

3.2.00 Toward a dialect grammar for Bai

3.2.01 Recent study of syntactic dialect markers

Having collected some samples of Bai data from speakers other than the consultant, I began to ask whether it could be phonetic equivalences alone that made this data opaque to my interpretation. Not much information could be found in *Jianzhi*, and experience showed consistently that the consultant could himself communicate with all the speakers whom I recorded. I first found the courage to try to

identify features of dialect grammar in text data I had collected after reading a brief article that appeared in *Yunnan Minzu Yuwen*, a little-known publication of the Yunnan Province Nationality Languages Executive Working Committee.⁷ This is an administrative unit under the provincial Nationalities Committee that is charged with overseeing local applications of national language policies everywhere in Yunnan. Because their publication does not have international distribution rights (a type of permission from the central Chinese government that is required of publishers before they may supply copies of periodical literature to subscribers abroad), it is unlikely for material published there to reach an international audience. This article, however, is probably the first discussion in print to document significant grammatical differences that can be used to define the geographical varieties of Bai. An outline of the examples presented there will make possible evaluation of the consultant's speech in terms of dialect markers, and this material is therefore examined in extenso in sections 4.5.2.0--4.5.2.4 below. Phonetic equivalences among the dialects have been examined in relation to the consultant's pronunciations in 4.2.0.0 above, and some evidence for lexical divergence among the dialects has been evaluated in relation to his text vocabulary in 4.3.0.0. In these discussions we have already seen that the consultant's speech is easily described as approximating Jianchuan norms, despite some differences that may be systemic in character, and that show a degree of affinity in his speech with the northern or Bijiang variety of Bai. Since variation in the grammar and syntax of Bai is not

explicitly treated in *Jianzhi* or other Chinese publications I have collected, Xi Zhi's comparisons and contrasts showing typical ordering in equivalent Jianchuan and Dali constructions marks an important departure for all future work in this area.

3.2.02 Xi Zhi's explanation for dialectal differences

It will be useful to consider the argument made by this author regarding the origin of syntactic dialect markers before seeking illustrations from his data to compare with material from the consultant's text data under analysis in this chapter. Xi points out that while *Jianzhi* draws dialectal distinctions mainly based on equivalences in phonetics and phonology, significant dialectal variation involving other "essential linguistic elements" (outside the domain of pronunciation) can also be identified. According to Xi, such variation is to be attributed to differences in "linguistic environment" or to linguistic phenomena he terms "uneven developments" (*fa1zhan3 bu4ping2deng3*). Some difficulty of interpretation is presented by these statements, because the author's argument is couched in rather general (not to say vague) terminology that is not further defined in the context. Because knowledge of dialect markers for Bai is generally limited, and because such differences as we can discover may constitute significant evidence for the history and development of the language, it is important to consider what may really be meant by such usages as "linguistic environment" and "uneven developments." Taking the language of Xi's

explanation at face value I have drawn the following inferences. It would appear that Xi is claiming to identify two contributing causes for the differentiation of Bai dialects at the level of syntax and grammar: 1) dissimilar contact situations involving separate configurations of donor or substrate languages, and 2) secondary developments involving elements inherent to an earlier or proto-language state, but which have taken separate courses of development toward contrasting surface structures in the dialects after geographical or social isolation came between sectors of an "original" or homogeneous speech community.⁸ It is worth remarking here that two different methodologies would be appropriate to recover evidence for diachronic change and differentiation attributed to these separate causes, namely, contrastive analysis (in the case of a contact and diffusion theory) and internal reconstruction (if the theory proposes secondary developments among native linguistic elements).

3.2.03 Dialect evidence from pronouns

Although syntax is certainly a separate subsystem that is in some sense independent of morphology, the two systems probably overlap differently in the dialects. The pronoun data given in *Jianzhi* invites historical interpretation especially if supporting evidence for dialectal differences is available as suggested by Xi, and we can find other evidence in lexical formations available in the *Jianzhi* dialect materials. The general contrast presented by this material

is case marking in pronoun morphology for Jianchuan and Dali, and suffixing, synthetic formations, and paratactic lexical constructions for Bijiang. Whereas in Jianchuan and Dali, all personal pronouns exhibit tonal and vocalic shifts in plural forms, the supposedly conservative Bijiang creates a simpler or more "analytic" picture with uniform singular and plural stems taking a pluralizing suffix in second and third person forms. First person plural in Bijiang is more complex, showing morphological change to both the stem and the suffix, and the plural inclusive form is innovative in relation to the system as a whole. It is unfortunate that we lack data on Bijiang equivalences for the Jianchuan morphological genitive, a feature that is well-attested by our data and would offer an interesting area for dialect investigation.

3.2.04 Deictics and other lexical form types

If we are allowed to interpret this data as indicating a difference in dialectal "drift" or "genius" between the northern Bijiang speech and other varieties of Bai, we may find such a difference corroborated in other forms, as for example in the deictics where Jianchuan and Dali have monosyllabic forms in contrast to Bijiang's suffixed forms. If such a dialectal difference in grammar is real, we may rely on it in part to explain some lexical differences as well, where Bijiang shows multisyllabic forms in contrast with monosyllabic or disyllabic forms in the other two dialects (see 4.3 below).

3.2.05 Summary of Dali/Jianchuan syntactic contrasts

Below is a summary of the seven types of construction considered by Xi, one group revealing uniform arrangements of sentence constituents in both dialects while another shows significant dialect markers involving the negative marker, interrogative marker, and ordering of grammatical objects in relation to a transitive verb.

(a)

Simple constructions of the type {S + V}, for example 'The wind is blowing,' 'I don't want to.'

(b)

Simple constructions of the type {S + V + ADV}, for example 'My little brother's getting married this year.'

(c)

Simple constructions of the type {S + V + COMP}, where COMP is similar in function to the adverbial resultative complement of Mandarin or *pu3tong1hua4*, for example 'Sweep [the place] very clean [lit: a little clean].'

(d)

Simple constructions of the type: S + V + OBJ, where OBJ is an inanimate patient or direct object of a transitive verb, for example 'We are writing [Chinese] characters,' 'He's harrowing paddy.'

(e)

Simple constructions of the type: S + V + OBJ, where OBJ is a human patient that may be understood as a dative noun, for example 'I cannot wait for Grandpa,' 'The teacher loves [has love for] the students,' 'Father-in-law has told [told it to] Mother-in-law.'

(f)

Simple and complex constructions of the type S + V + OBJ + INTERROG/NEG, where OBJ is again an inanimate patient, for example 'Did you harrow paddy today?' 'We didn't harrow paddy today,' 'What shall we do if Little Brother doesn't take the medicine?' 'It won't do for Little Brother not to take the medicine.'

(g)

Simple constructions of the type S + V + OBJ.1 + OBJ.2, where OBJ.2 is inanimate and OBJ.1 is a human patient and dative noun, for example 'I've given him a pair of shoes.'

3.2.06 Dialect markers in Xi's data

Perhaps it is not very surprising to find that in (e), (f), and (g) significant dialectal differences appear in the ordering of constituents and in the functional load assigned to word order (relative to object-marking particles and morphology). Although Xi's comparisons are essentially unexplained except for glosses on

sentence constituents, we may be reminded by (e) and (g) of the syntactic ambiguity in double-object constructions of literary Chinese involving so-called "lexical datives" as studied by Peyraube.⁹ In (f) where syntactic differences emerge in the environment of an interrogative or negative, it is less clear which of the two dialects compared invites closer comparison with a literary Chinese model, because while the typical characteristic of Jianchuan grammar is SOV ordering, the marked characteristic of the contrasting Dali examples is actually their unique ordering of the negative marker with respect to the verb (V + NEG). The matter of comparative grammar is an important question for future research, but at this stage it would appear that the contrast in ordering of negatives is equally salient (if not more so) to the contrast in ordering of objects as a marker of internal dialect differences in Bai. We may observe, in this connection, that object "preposing" occurs even in Xi's Dali data, although not sentence-medially between subject and verb. Whatever external comparisons may eventually be offered in support of Xi's "linguistic environment" theory, the differences illustrated by his data in fact constitute dialect markers that may help to identify the grammar of the text data analyzed in this chapter with one or the other (southern or central) recognized varieties of Bai. This problem is addressed below by comparisons drawn from the consultant's data in the final paragraph of this section. As a preliminary step it will be useful to consider the actual data presented by Xi, and to move from his data to a more

abstract level of analysis that will give a basis for comparison with the consultant's speech data.

3.2.07 Syntactic homogeneity of Jianchuan and Dali Bai

The following examples are cited by Xi to illustrate the homogeneous aspect (SVO ordering) that is shared under certain circumstances by Jianchuan and Dali Bai. This is perhaps the aspect of Bai sentence grammar that most resembles the grammar of modern standard Chinese, a similarity that is foregrounded by Xi's obvious conviction that "verb medial" syntax is in some sense the "basic" or unmarked ordering in Bai. We may observe, however, that his illustrations are examples of "simple" sentence construction, that is, sentences lacking subordination of any kind, and that he does not discuss even those instances of divergent verbal functors that occur in his data. Although this comparison appears to provide support for a view of the Bai dialect grammars as "versions" of the same linguistic system, it is interesting that one significant difference in ordering occurs even among these examples: simple negation is expressed by a pre-verbal particle in Jianchuan, but a post-verbal particle in Dali

(a:I) 'The wind is blowing.'

JC: [pi55.si55 phu55]

 wind blow

DL: [pi35.si35 phu55]
 wind blow

(a:II) 'I don't want to' (lit: I'm not thinking).

JC: [ŋo31 a35 mi33 la42+]
 3d.S NEG think SPRT

DL: [ŋo31 mi33 mu33 lo32]
 3d.S think NEG SPRT

(b) 'My Little Brother's getting married this year.'

JC: [ŋu55 thi33 tsi33 kɛ55.tsi55 u55.vu33]
 3d.S-GEN ygr.bro COP this.year marry

DL: [ŋu55 the33+ tsw33 ke^r55.tsi55.sua33+ thu55.vu33]
 3d.S-GEN ygr.bro COP this.year marry

(c) 'Sweep <the place> very clean!'

JC: [no31 tsho44+ kã55.tɕũ42+ tɕɛ44+]
 2d.S sweep clean little

DL: [no31 su33 ka35.tɕu53 tie^r33+]
 2d.S sweep clean little

(d) 'He's harrowing paddy.'

JC: [mo31 pe21+ ɕui33.tɕi31]
 3d.S harrow paddy

DL: [po31 pe^r53 tɕi31]

3d.S harrow paddy

3.2.08 Grammatical contrasts of Jianchuan and Dali Bai

Contrasting with the homogeneous picture presented by the simple sentences above is the group of examples I have represented earlier as (e), (f), and (g), through which Xi illustrates differences in syntax and the deployment of grammatical functors in sentences with double objects or with only a "second object" or dative noun present, as well as in simple sentences that involve the negative or interrogative marker.

(e:I) 'I cannot wait for Grandpa.'

JC: [ɲo31 ɛ1.ji42+ no33 tu33 mi42+ tua53+]

1st.S Grandpa DAT wait NEG MOD=NEG

DL: [ɲo31 tu33 tu33+ a31.lo31 tuo33 lo32]

1st.S wait COMP Grandpa MOD=NEG SPRT

DL: [a31.lo31 no33 ɲo31 tu33 tu33+ tuo33 lo32]

(e:II) 'The teacher loves the students.'

JC: [sy55.po55 yu42+.sy55.tsi33-xo44+ no33 li55 ko21+ lu33]

teacher student-PL DAT also love SPRT

DL: [lo32.si33+ tsi55+ e33+ ru42+.si35.tsi33 lu33]

teacher DISC love student(s) SPRT

(e:III) 'Father-in-law has told Mother-in-law.'

JC: [to31.sm33-pu33 to31.sm33-mu33 ηγ55 sua44+ la42+ tā31]
 in.law-Ma in.law-Fe DAT=H say SPRT? CLF(act)

DL: [jo35.fγ55 ta33+ jo35.mu31 sua33+ kuo42+ a31-tqa21+ lo32]
 in.law-Ma PREP in.law-Fe say ASP one-CLF(act) SPRT

(f:I) 'Did you=PL harrow paddy today?'

JC: [na55 kε55.jf44+ çui33.tçi31 pe21+ mo33]
 2d.PL today paddy harrow QPRT

DL: [na55 ke^r55.ηi33+ pe^r21+ tçi31 ni55.mu31]
 2d.PL today harrow paddy QPRT

(f:II) 'We didn't harrow paddy today.'

JC: [ηa55 kε55.jf44+ çui33.tçi31 ja55 pe42+ la42+]
 1st=PL today paddy NEG harrow SPRT

DL: [ηa55 ke^r55.ηi33+ pe^r21+ tçi31 mu31]
 1st=PL today harrow paddy NEG

(f:III) 'What do we do if Little Brother doesn't take the medicine?'

JC: [a31.thi33 jo44+ a31 ju44+ jō44+ tsi55.kε21+ to21+]
 L.Bro medicine NEG eat CV Q.how do

DL: [a31.the33+ yu33 jo33+ mu33 tsi55.mu55 to21+]
 L.Bro eat medicine NEG Q.how do

(f:IV) 'It won't do for Little Brother not to take the medicine (lit: can't not take).'

JC: [a31.thi33 jo44+ a35 ju44+ tua42+]

L.Bro medicine NEG eat MOD=NEG

DL: [(a31.the33+) yu33 jo33+ mu33 tsi55.mu55 te^r33]

L.Bro eat medicine NEG Q.how MOD?

(g) 'I've given him a pair of shoes.'

JC: (1) [mu55 no33 no31 si31 la42+ ne21+ a31-tɕi33]

3d.S=GEN DAT 1st.S give SPRT? shoe one-CLF(pair)

b) [no31 mu55 no33 si31 la42+ ne21+ a31-tɕi33]

1st.S 3d.S=GEN DAT give SPRT? shoe one-CLF(pair)

c) [no31 si31 la42+ mu55 no33 ne21+ a31-tɕi33]

1st.S give SPRT? 3d.S=GEN DAT shoe one-CLF(pair)

DL: [no31 su31 xu33 po31 xu42+ ne21+ a31-tɕi33]

1st.S give ASP 3d.S DAT? shoe one-CLF(pair)

3.2.09 Summary of Xi's dialect contrasts

Looking back at just those examples that reveal criterial differences in ordering and grammatical texture distinguishing Dali and Jianchuan speech, we may describe them abstractly under four sentence types as follows:

Type 1: { S + NEG + V } (as in 4.5.2.a: II)

Type 2: { S + HPAT + DAT + V.INT } (as in 4.5.2.e: I, II, & III)

Type 3: { S + DO + V.TRS + INTERROG } (as in 4.5.2.f: I)

{ S + DO + NEG + V.TRS } (as in 4.5.2.f: II)

Type 4: (a) { HPAT + DAT + S + V.TRS + DO } (as in 4.5.2.g)

(b) { S + HPAT + DAT + V.TRS + DO }

(c) { S + V.TRS + HPAT + DAT + DO } (= Dali order)

3.2.10 Jianchuan dialect markers in recorded text data

Based on the contrasts shown by Xi Zhi and summarized above, I find ample illustrations from the consultant's text data to support identification of his language as Jianchuan Bai. What is perhaps equally significant is that I have so far found no instances of the contrasting Dali marker { V + NEG }. The following examples may serve to illustrate the consistency of the text data analyzed in this chapter with Jianchuan norms.

Type 1:

(a) 'Otherwise, he would not be able to eat [it].'

[ya8.mu7.ts16 mo9 ju2 ja8 tu2 la4]

SPRT 3d.S eat NEG COMP SPRT

- (b) 'As for him [ɛ1juɪ1], the reason he could come up with a scheme was that, since [Master Li's] eyes were squinty, he could not see.'

[mo9 ts16 mo9 ɕã9.pẽ1.fa8 ɳi7.we1 ts17 mu6
 3d.S DISC 3d.S scheme reason COP 3d.S=GEN
 ɳui7.pho2 ti6.tu6 mo9 ǎ7 ja8 tu2 la4]
 eye(s) squinty 3d.S see NEG COMP SPRT

- (c) 'And so then, since he had eaten up the shit, he certainly preferred not to tell [about it].'

[la8 ts16 ju2 s16 se7 la4 ts16 mo9 tɕã9 ja8
 SPRT DISC eat ASP shit SPRT DISC 3d.S tell NEG
 ɕo9 ɕã4.la4]
 good SPRT

- (d) 'The chicken doesn't cry out!'

[ke6-tu5 ya8 xẽ6.mɛ5]
 chicken-CLF NEG cry.out

- (e) 'So since he'd been fooled in vain by ɛ1juɪ1's [intentions] this time, he preferred not to tell [about it] even more.'

[pe8 sã2 tsh16 ke4.ts16 ɛ1.jy1 mu6 tã2
 vain be.fooled ASP PREP PN 3d.S=GEN PROX
 the6 ts16 mo9 le9 tɕã9 ja8 ɕo9]
 CLF(act) DISC 3d.S again tell NEG good

Type 2:

I find only one example in text 1 that semantically suggests the type of utterance analyzed above as Type 2, but the fit is not precise because the object or patient ('this chicken of theirs') is not human. Interestingly, in this example the order of constituents is also not distinctively Jianchuan, but even though the patient follows the verb, the speaker marks it with the same particle that has elsewhere marked "dative" nouns or indirect objects.

(a) 'And so ... on this occasion, when [he] saw [it], he just despised this chicken of theirs.'

[lɛ8 lu7.pũ6 no7 no9.pũ6 ts16 mo9 kē4 tu2 ts16
 SPRT this.time DAT this.time DISC 3d.S see COMP DISC
 mo9 tshu7 ku4 xa2 tsh16 ma6 ke6
 3d.S just hate COMP ASP 3d.P=GEN chicken
 no9-tu5 no7 la4]
 PROX-CLF DAT SPRT

Type 3:

Four examples in text 1 illustrate Type 3, as follows:

(a) 'But, this person did not like to serve as an official.'

[nɛ7 no9-ni9 ma8 ɕi9.xuã6 tã6.kuã6]
 SPRT PROX-CLF(person) NEG like hold.office

(b) 'But [he] didn't get any money for a long, long time.'

[nɛ7 tse5 nu7 thu9 thiu9 ja8 tu2]
 SPRT money DAT always always NEG get

(c) 'That is to say, as for distant places, he could not see far.'

[ts16 tui7.tshu9 mo9 ã7 ya8 tui7]
 DISC distant.place 3d.S see NEG distant

(d) 'And so, since his eyes were squinty, of course it's a fact that he could not see very far.'

[la8 mu6.no7 ɲui7.pho2 ti6.tu6 ts16 mo9 ts17
 SPRT 3d.S=GEN.DAT eye(s) squinty DISC 3d.S COP
 vu7.tã4 no7 ã7 ja8 tɕhiũ1.tshu9 ɕã7.la4]
 thing(s) DAT see NEG clear SPRT

Type 4:

I find two or three examples (depending on which translation is correct for [a]--see comment below) in text 1 to illustrate the double object construction, or Type 4:

(a) 'Today I'm going to use Bai language to tell *her* one or two stories.' But alternatively, the sentence may be taken to mean 'Today I'm going to use Bai language to tell *some* stories--one or two [of them.]' The first translation makes literal sense based on the syntactic collocation of the genitive 3rd pronoun [mu6] and object-marking particle [no7] (DAT) following the verb

[tɕã9] 'tell', and makes the sentence resemble a double object construction. But frequent occurrences of the same collocation [mu6.no7] elsewhere in the data make the second translation seem almost more plausible, despite the fact that it requires an idiomatic understanding of [mu6.no7]. That the translation 'some' may be assigned to [mu6.no7] based on its other occurrences figures in the discussion of nominalization and noun objects above.

[ke1.ɕɛ2 ɲo9 ɲo4 pe4.ɲo4.ts17 no7 tɕã9 mu6.no7
 today 1st.S CV Bai.language DAT tell 3d.S=GEN.DAT
 ku2.s12 a9-tuẽ7 kõ7.tuẽ7]
 story one-CLF two-CLF

- (b) 'But, as for wages, not even one farthing would be paid out to that person's servants.'

[ɲɕ7 kõ6.tse5 ts16 a9-li6 li6 mo9 ɲi9.kẽ6 no7
 SPRT wages DISC one-CLF(cash) also PROX person DAT
 pã6.kõ6-xo7 no7 ja8 khẽ6 z19]
 servant-PL DAT NEG open COMP

- (c) 'If you wanted a few farthings of wages from him it was something like cutting off [a piece of] his flesh.'

[no9 ɲo2 mu6 mu6 kõ7.tɕhẽ4 ka8-pe2
 2d.S want 3d.S=GEN 3d.S=GEN wages few-CLF(cash)

ti9.tɛ8 sã6.ɕui5 sɛ2 mu6 kɛ5 s17.s17
 really resemble cut 3d.S=GEN meat thus.thus
 lia4.s17.s17 nu7 lɛ4]
 way.thus.thus NOM SPRT

3.2.11 Desideratum

The above comparisons enlarge on Xi's published illustrations with further examples drawn from recent text data collected from a self-identified speaker of Jianchuan Bai. The apparent consistency of this data with the few Jianchuan markers described by Xi suggests the importance of further research on the distribution and degree of variational phenomena in the Bai dialects, at the same time as it allows us to provisionally accept the speaker's data as typical of the Jianchuan variety. The importance of Xi's article for my study is in providing outside confirmation for the consultant's self-identification, confirmation I could not provide myself because I had limited access to the speech community in Beijing. Although Xi's comparisons are quite limited in scope, perhaps they are enough to show that further comparative study of Bai text data from a variety of speakers of different genders, ages, and dialect backgrounds can shed light on the considerable problems of analysis that have no doubt been created by intimate and prolonged contact of these dialects with Chinese, problems that offer a "linguistic minefield" to the would-be investigator of Bai linguistic history.¹⁰

Notes

1. Chou 1961.

2 According to Norman 1988:20 the 1st plural category paradigm is found in both Mongolian and Manchu of the Yuan period, a significant chronological watershed in the history of the Dali region because it was this period that saw the definitive conquest of the autochthonous rulers by the "Chinese"--under Kubilai Khan--from the north.

3. Dell 1981:72.

4. Zhu 1961.

5. For the gloss on the fourth syllable, in structural terms syllable C (the whole phrase could be represented as ABAC), our authority is Xu 1988:88. This word is not given in *Jianzhi*.

6. For the gloss on syllable two (the B syllable if we analyze the phrase as ABCD) we depend on two Bijiang forms given in *Jianzhi*, 'heart/mind' and 'forget'. The first of these is BJ:sē6, JC: qī6, while the second is BJ: qho6.ma5.sē6, JC: phε2.mi4.qi6. We may also note here the probable etymology of Bijiang 'forget' in two common Tibetan verbs meaning 'know' (see Goldstein and Nornang 1978:358).

7. This is the 1988 article published under the pseudonym Xi Zhi, authored by a self-identified native speaker of the Dali dialect. He is employed as a language specialist working in the Executive Committee that sponsors this publication.

8. Xi 1988: 69. It is perhaps important to also point out that the language of these statements, particularly the phrase "uneven

developments," is very commonly found in other contemporary Chinese academic writing from many disciplines, and probably forms part of a repertoire of acceptable Marxist explanation for a variety of social phenomena. Since this article is the only one of its kind I have found to date, I am grateful for even these general statements, and hope that my interpretation fits within the range of the author's true intentions.

9. Peyraube 1987. My summary of Xi's sentence types is influenced by this comparison. Xi's discussion of these sentences is cast purely in terms of the distinction between SVO and SOV ordering, although he does claim that in Jianchuan grammar it is a { + human } object that "triggers" the SOV order. He does not treat the grammatical status (or "case") of the object at all, and claims that in the double-object construction of (g) the criterial difference between the two objects is that the "preposed" object is { + human } as opposed to { + inanimate }. I have introduced the term "dative" because of the possible comparisons with the historical Chinese situation and with the Tibetan case system.

10. Paul K. Benedict, personal communication, May 1987.

References

- Anonymous. 1984. *Bai2guo3 yin1you2* (Whys and wherefores of the Bai nation [first printed by Ji Yu at Dali in 1707]). Xiaguan: Dali Prefectural Library.
- Anttila, Raimo. 1972. *An introduction to historical and comparative linguistics*. New York: Macmillan.
- Aoki, Haruo. 1970. *Nez Perce grammar*. University of California Publications in Linguistics, vol. 62. Berkeley and Los Angeles: University of California Press.
- Backus, Charles. 1981. *The Nan-chao kingdom and T'ang China's southwestern frontier*. Cambridge: Cambridge University Press.
- Banfield, Ann. 1982. Unspeakable sentences. Boston and London: Routledge & Kegan Paul.
- Baudet, Martha M. 1981. Identifying the African grammatical base of the Caribbean creoles: A typological approach. In *Historicity and variation in creole studies*, edited by Arnold Highfield and Albert Valdman, 104-17. Ann Arbor: Karoma Publishers.
- Benedict, Paul K. 1972. *Sino-Tibetan: A conspectus*. James A. Matisoff, contributing editor. Cambridge: Cambridge University Press.
- . 1976. Sino-Tibetan: Another look. *JAOS* 96.2: 167-97.
- . 1982. Sinitic and Proto-Chinese, part II: Bai and loans to Proto-Tai. Paper presented to the 15th STC, Beijing.

- . 1983. *This and that* in TB/ST. *LTBA* 7.2: 75-98.
- . 1984. PST interrogative *ga(ng) / *ka. *LTBA* 8.1: 1-10.
- . 1984b. The Sino-Tibetan existential *s-ri. *LTBA* 8.1: 11-13.
- Bickerton, Derek, and William H. Wilson. 1987. Pidgin Hawaiian. In
 Gilbert 1987, 61-76.
- Blackmore, Michael. 1960. The rise of Nan-chao in Yunnan. *Journal of
 Southeast Asian History* 1.2: 47-61.
- . 1967. The ethnological problems connected with Nanchao. In
 Drake 1967, 59-69.
- Bloomfield, Leonard. 1933. *Language*. British ed., 1935. London:
 George Allen & Unwin.
- Boltz, William G. 1985. Desultory notes on language and semantics in
 ancient China. *JAOS* 105: 309-13.
- Bradley, David. 1979. *Proto-Loloish*. Scandinavian Institute of Asian
 Studies Monograph Series no. 39. London and Malmö: Curzon Press.
- . 1982. Register in Burmese. In *Tonation*, edited by D. Bradley.
Pacific Linguistics, Series A, no. 62.
- . 1985. Nasality in Bisu and Bisoid. In Ratanakul, Thomas, and
 Premsrirat 1985, 234-63.
- Bright, William, and A. K. Ramanujan. 1964. Sociolinguistic variation
 and language change. In *Proceedings of the Ninth International
 Congress of Linguists*, 1107-14.
- Byon, Jae-hyon. 1979. *Local gazetteers of southwest China: A
 handbook*. Parerga Occasional Papers on China no. 5. Seattle:
 School of International Studies, University of Washington.

- Campbell, Lyle, Terrence Kaufman, and Thomas C. Smith-Stark. 1986. Meso-America as a linguistic area. *Language* 62.3: 530-70.
- Campbell, Robert E. 1987. Sino-Japanese *goon* and *kan'on*. *Phi Theta Papers* 17.
- Cao Guangqu. 1989. Wo3guo2 shao3shu4 min2zu2 yu3yan2 zhong1 ren2cheng2 dai4ci2 jian1wei4 zhi3shi4 dai4ci2 de qing2kuang4 (On the personal pronouns as deictics in languages of the minority nationalities in China). *Guizhou Minzu Yanjiu* no. 37, 79-84.
- Chambers, J. K., and Peter Trudgill. 1980. *Dialectology*. Cambridge and London: Cambridge University Press.
- Chang Kun. 1966. A comparative study of the Yao tone system. *Language* 42.2: 303-10.
- . 1984. Lun bijiao Min fangyan (On the comparative study of Min dialects). *Bulletin of the Institute of History and Philology* 55: 415-58.
- Chang Kun and Betty Shefts Chang. 1978. *Spoken Tibetan texts*, vol. 1. Institute of History and Philology Special Publications no. 74. Taipei: Academia Sinica.
- Chang, Kwang-chih. 1977. *The archaeology of China*. 3rd ed. New Haven: Yale University Press.
- Chao Yuen Ren. 1934. The non-uniqueness of phonemic solutions of phonetic systems. *BIHP* 4.4: 363-97.
- . 1968. *A grammar of spoken Chinese*. Berkeley and Los Angeles: University of California Press.
- Chapin, Helen B. 1944. Yunnanese images of Avalokitesvara. *HJAS* 8.1: 131-86.

- Chen Shilin. 1985. *Yi2yu2 yu2yan2xue3 jiang3hua4* (Talks on Yi linguistics). Chengdu: Sichuan Nationalities Press.
- Cheung, Samuel Hung-nin. 1972. *Yueh yu yu fa ti yen chiu* (Cantonese as spoken in Hong Kong). Hong Kong: Chinese University Press.
- Chinese Academy of Sciences. 1957. *Kexueyuan shaoshu minzu yuyan diaocha disan gongzuodui Baiyu gongzuozu zongjie* (Summary report of the Bai language workgroup, minority nationalities language survey team no. 3, Academy of Sciences). Mimeograph dated January 1957.
- Chou Fa-kao. 1961. *A historical grammar of ancient Chinese, pt. 1, syntax*. Institute of History and Philology Special Publications no. 39. Taipei: Academia Sinica.
- Dai Qingxia. 1980. *Zangmian yuzu songjin yuanyin yanjiu* (A study of tense and lax vowels in Tibeto-Burman). *Zhongyang Minzu Xueyuan Xueshu Lunwen Xuanji (Minzu Yuwen)*, no. 3.
- Dai Qingxia, Liu Juhuang, and Fu Ailan. 1987. *Ke4lun2yu3 chu1tan4* (Preliminary discussion of Karen features). *Zhongyang Minzu Xueyuan Xuebao* 55: 50-56.
- Dali Municipal Bureau of Culture. 1988. *Bai2zu2 ben3zhu4 shen2hua4* (Bai legends concerning *benzhu* [tutelary gods]). Beijing: China Ethnic Literature and Arts Press.
- Dawson, Willa. 1985. The Tibetan vowel feature "constricted." In Ratanakul, Thomas, and Premsrirat 1985, 158-77.
- Davies, H. R. 1909. *Yunnan: The link between India and the Yangtze*. Cambridge: Cambridge University Press.

- DeFrancis, John. 1950. *Nationalism and language reform in China*.
Princeton: Princeton University Press.
- . 1984. Digraphia. *Word* 35.1: 59-66.
- . 1989. *Visible speech*. Honolulu: University of Hawaii Press.
- DeLancey, Scott. 1984. Etymological notes on Tibeto-Burman case particles. *LTBA* 8.1: 59-77.
- Dell, Francois. 1981. *La langue Bai: Phonologie et lexique*. Paris: Ecole des Hautes Etudes en Sciences Sociales.
- Deng Yanru. 1957. Cong2 Bai2yu2 de yan2jiu4 zhong1 shi2 wo3men kan4dao4 shen2me (What does research on the Bai language show us?) In Yang Kun et al. 1957, 111-14.
- Diffloth, Gérard. 1984. Proto-Mon registers: Two, three, four...? *BLS* 8: 148-57.
- Ding Shengshu and Li Rong, comp. 1981. *Gujin ziyin duizhao shouci* (Handbook of ancient and modern character readings). Beijing: Xinhua Shuju.
- Dong Guosheng. 1986. Bei3tang1 Tian1fa3zang4 Si4 de jing1zang4 (The repository of scriptures [found] in Tianfazang Temple at Beitang). In Nanzhao Historical Society 1986, 154-58.
- . 1988. Cong2 Dong3shi4 wen2wu4 kan4 mi4zong1 zai4 da4li3 de xing1shuai1 (Evidence from Dong clan inscriptions on the rise and fall of tantra in Dali). In *Dali Wenhua* 50: 45-50.
- Downer, Gordon B. 1973. Strata of Chinese loanwords in the Mien dialect of Yao. *Asia Major* 18: 1-33.

- Drake, F. S., ed. 1967. *Historical, archaeological, and linguistic studies of South East Asia*. Hong Kong: University of Hong Kong Press.
- Dreyer, June Teufel. 1976. *China's forty millions: Minority nationalities and national integration in the People's Republic of China*. Cambridge, Mass.: Harvard University Press.
- Du Yijian. 1957. "Bai2wen2" zhi4yi2 (Queries on the "Bai script"). In Yang Kun et al. 1957, 83-86.
- Eberhard, Wolfram. 1982. *China's minorities: Yesterday and today*. Belmont, Calif.: Wadsworth.
- Edmondson, Jerold A., and Li Shaoni. 1988. Voice quality settings and pitch in the Bai language of Yunnan Province. Paper presented to the 21st STC, Lund.
- Egerod, Soren. 1970. Distinctive features and phonological reconstructions. JAOS 90: 67-73.
- . 1971. Phonation types in Chinese and South East Asian languages. *Acta Linguistica Hafniensia* 13.2.
- . 1985. Typological features in Akha. In Thurgood, Matisoff, and Bradley 1985, 96-104.
- Emeneau, Murray B. 1954. Linguistic prehistory of India. Reprinted in Emeneau 1980.
- . 1956. India as a linguistic area. Reprinted in Emeneau 1980.
- . 1962. Bilingualism and structural borrowing. Reprinted in Emeneau 1980.
- . 1965. Diffusion and evolution in comparative linguistics. Reprinted in Emeneau 1980.

- . 1965b. India and linguistic areas. Reprinted in Emeneau 1980.
- . 1980. *Language and linguistic area: Essays by Murray B. Emeneau*, edited by Anwar S. Dil. Stanford: Stanford University Press.
- Fan Cho (Tang). 1961. *The Manshu (Book of the southern barbarians)*. Translated by Gordon H. Luce, edited by G. P. Oey. Cornell University Southeast Asia Data Papers no. 44. Ithaca: Department of Far Eastern Studies, Cornell University.
- . 1985. *Yunnan zhi jiaoshi* (Fan Cho's *Manshu* [circa 863] edited and annotated by Zhao Lüfu). Beijing: China Social Sciences Press.
- Fang Guoyu. 1957. Guan¹yu² Bai²tzu² de ming²chen² wen⁴ti² (On the problem of an ethnonym for the Bai people). In Yang Kun et al. 1957, 12-17.
- . 1957b. Guan¹yu² "wu²man²," "bai²man²" de jie³shi⁴ (On the meaning of the terms *wuman* and *baiman*). In Yang Kun et al. 1957, 115-19.
- . 1984. *Yun²nan² shi³liao⁴ mu⁴lu⁴ gai⁴shuo¹* (Catalogue and conspectus of Yunnan historical materials, 3 vols.). Beijing: Zhonghua Shuju.
- Fitzgerald, C. P. 1941. *The tower of five glories: A study of the Min Chia of Ta Li*. London: The Cresset Press.
- Forrest, R.A.D. 1962. The linguistic position of Rung (Lepcha). JAOS 82: 331-5.
- . 1973. *The Chinese language*. 3rd edition. London: Faber and Faber.

- Fowkes, Robert A. 1949. Initial mutation of loanwords in Welsh. *Word* 5:1, 205-13.
- Fu Maoji. 1985. Guan1.yu2 yin1.wei4 de li3.lun4 he2 gui1.na4 yin1.wei4 de fang1.fa3 wen4.ti2 (On the phoneme theory and the methodological problem of reaching a phonemic solution). *Minzu Yuwen* 1985.4.
- . 1986. Min2zu2 yu3yan2 diao4cha2 yan2jiu1 jiang3hua4, pts. 26 & 27 (Talks on nationality language fieldwork and research [Comparative sentence grammar of Naxi, Lisu, Bai, and other Loloish languages]). *Minzu yuwen* 1987.5 and 6.
- Gao Guangyu. 1957. Lun4 Bai2zu2 de yu2yan2 xi1shu3 wen4ti2 (Discussion of the genetic affiliation problem for the language of the Bai nationality). In Yang Kun et al. 1957, 93-100.
- Ge Xingzhi. 1982. Suggestions for the genetic classification of the Burmese-Yi languages [in Chinese]. In *Minzu Yuwen yanjiu wenji*. Qinghai: Nationalities Press.
- Gilbert, Glenn G., ed. 1987. *Pidgin and creole languages: Essays in memory of John E. Reinecke*. Honolulu: University of Hawaii Press.
- Goody, Jack. 1987. *The interface between the written and the oral*. Cambridge: Cambridge University Press.
- Guo Xiliang. 1986. *Hanzi guyin shouci* (Handbook of ancient readings for Chinese characters). Beijing: Beijing University Press.
- Gulik, R. H. van. 1957. Siddham: An essay on the history of Sanskrit studies in China and Japan. Delhi: Jayyed Press.
- Haas, Mary R. 1969. 'Exclusive' and 'inclusive': A look at early usage. *IJAL* 35: 1-6.

- . 1969b. *The prehistory of languages*. Published as *Janua Linguarum*, series minor, no. 57. The Hague: Mouton.
- Hall, Kenneth R. 1985. *Maritime trade and state development in early Southeast Asia*. Honolulu: University of Hawaii Press.
- Hamers, Josiane F., and Michel H. A. Blanc. 1989. *Bilinguality and bilingualism*. Translated from the French edition of 1983. Cambridge and New York: Cambridge University Press.
- Hamp, Eric. 1976. On Mon-Khmer, its kin, and principles. In *Austroasiatic Studies 2*: 423-29. Edited by Philip N. Jenner, Laurence C. Thompson, and Stanley Starosta. Honolulu: University Press of Hawaii.
- Hansell, Mark. 1986. Lexical borrowing. Special field exam written for the Department of Linguistics, University of California, Berkeley.
- Hansson, Inga-Lill. 1985. Verb concatenation in Akha. In Thurgood, Matisoff, and Bradley 1985, 287-309.
- Harding, Harry. 1980. Social sciences: Introduction. In Orleans 1980, 475-89.
- Hashimoto, Mantaro J. 1986. The Altaicization of northern Chinese. In McCoy and Light 1986, 76-97.
- Haudricourt, Andre. 1953. A propos de la restitution du Karen commun. Reprinted in Haudricourt 1972.
- . 1954. De l'origine des tons en Vietnamien. Reprinted in Haudricourt 1972.

- . 1961. Bipartition et tripartition des systemes de tons dans quelques langues d'extreme-orient. Reprinted in Haudricourt 1972. Also translated 1972 by Christopher Court and published in *Tai phonetics and phonology*, edited by Jimmy Harris and Richard Noss, Bangkok.
- . 1965. Les mutations consonantiques des occlusives initiales en Mon-Khmer. Reprinted in Haudricourt 1972.
- . 1972. *Phonologie panchronique: Problemes de phonologie diachronique*. Paris: SELAF.
- He Jiren. 1988. Lüe4lun4 Yi2yu2 bei3bu4 fang1yan2 ji1shu4ci2 fy55 de you2lai2 (Brief discussion on the origin of the basic numeral 'six' in northern Yi). *Yunnan Minzu Yuwen* 8: 57-60.
- Henderson, Eugenie J. A. 1985. Feature shuffling in Southeast Asian languages. In Ratanakul, Thomas, and Premsrirat 1985, 1-22.
- Hombert, Jean-Marie, John J. Ohala, and William G. Ewan. 1979. Phonetic explanations for the development of tones. *Language* 55.1.
- Hsu, Francis L. K. 1949. *Under the ancestor's shadow*. London: Routledge & Kegan Paul.
- Hu Tan and Dai Qingxia. 1964. Haniyu yuanyin de songjin (Tense and lax vowels in Hani). *Zhongguo Yuwen* 1964.1.
- Hui Chuan [pen name of Zhao Yansun]. 1988. Baiyu de cihui (The vocabulary of Bai, pts. 1 & 2). *Yunnan Minzu Yuwen* 7: 51-9, 8: 62-8.

- Jianchuan County Nationality Language Executive Committee. 1988.
Advantages of bilingual teaching from the view of practice.
Mimeograph.
- Jin Peng. 1983. *Zang4yu2 jian3zhi4* (Handbook of the Tibetan language). Beijing: Nationalities Press.
- Jin Youjing. 1988. Lahuyu de jin yuanyin (The tense vowels of Lahu).
Minzu Yuwen 51.
- Kahane, Henry. 1986. A typology of the prestige language. *Language* 62.3: 495-508.
- Keightley, David N., ed. 1983. *The origins of Chinese civilization*. Berkeley: University of California Press.
- Kurylowicz, Jerzy. 1964. On the methods of internal reconstruction. In *Proceedings of the Ninth International Congress of Linguists*, 9-36.
- Labov, William. 1981. Resolving the neogrammarian controversy. *Language* 57.2: 267-308.
- Ladefoged, Peter, and Ian Maddieson. 1986. "Tense" and "lax" in four minority languages of China. Paper presented to the 19th STC, Columbus, Ohio.
- LePage, Robert. 1977. Processes of pidginization and creolization. In *Pidgin and creole linguistics*, edited by Albert Valdman, 222-55. Bloomington: Indiana University Press.
- . 1987. The need for a multidimensional model. In Gilbert 1987, 113-29.
- Li, Charles N. 1983. Languages in contact in western China. *Papers in East Asian Languages* 1: 31-51.

- . 1984. From verb-medial analytic language to verb-final synthetic language: A case of typological change. *BLS* 10: 307-23.
- Li, Charles N., and Sandra Thompson. 1981. *Mandarin Chinese: A functional reference grammar*. Berkeley and Los Angeles: University of California Press.
- Li Lin-ts'an. 1967. *A study of the Nan-chao and Ta-li kingdoms in the light of art materials found in various museums*. Taipei: Academia Sinica, Institute of Ethnology [in Chinese, with English summary].
- Li Lin-ts'an, Chang K'un and Ho Ts'ai. 1967. Moso sound and tone charts. In Drake 1967, 90-100.
- Li Min and Ma Ming. 1981. *Liang2shan1 Yi1yu2 hui4hua4 liu4bai3 ju4* (Six hundred sentences of conversational Liangshan Yi). Chengdu: Sichuan Nationalities Press.
- Li Shaoni. 1986. Baizu shige de xingshi he yayun (Forms and rhyme patterns in poems and songs of the Bai nationality). In *Studies in the poetic forms of minority nationalities*, edited by the Institute of Ethnic Literature and Arts, Central Institute of Nationalities. Beijing: Tibetan People's Press.
- . 1987. Bai2yu2 (The Bai language). In *Zhongguo shaoshu minzu yuyan*, edited by the Research Institute for Nationality Languages, Central Institute of Nationalities, Beijing, 239-54. Chengdu: Sichuan Nationalities Press.
- Li, Y. C. 1980. The historical development of the coverb and the coverbial phrase in Chinese. *JCL* 8: 273-93.

- . 1986. Historical significance of certain distinct grammatical features in Taiwanese. In McCoy and Light 1986, 393-413.
- Li Yongsui. 1983. Yi², Mian³, Jing³po¹ san¹ge⁴ yu³zhi¹ di¹yi¹, 'er² ren²cheng² dai⁴ci² bi³jiao⁴ (A comparison of the 1st and 2nd personal pronouns in Yi, Burmese, and Jingpo). *Yuyan Yanjiu* 1983.1: 179-91.
- Li Yongsui. 1984. Han⁴yu³ Zang⁴mian³yu³ ren²cheng² dai⁴ci² tan⁴yuan² (Etymologies of the personal pronouns in Chinese and Tibeto-Burman). *Zhongguo Yuyan Xuebao* no. 2, 271-87.
- Li Zanzu. 1984. *Baizu wenxueshi lue* (Outline history of Bai ethnic literature). Kunming: China Ethnic Literature and Arts Press.
- Liebenthal, Walter. 1947. Sanskrit Inscriptions from Yunnan. *Monumenta Serica* 12: 1-40.
- Lo Meizhen. 1988. Tan²tan² min²zu² wen²zi⁴ de zuo⁴yong⁴ wen⁴ti² (On the problem of the function of ethnic orthographies). *Yunnan Minzu Yuwen* 8: 4-12.
- Lo Nan [pen name of Yin Mingju]. 1988. Nanxue de Baizu hua (The hard-to-master language of the Bai nationality). *Dali Wenhua* 49: 39-40.
- Ma Xueliang. 1981. Yi²wen² he² Yi²wen² jing¹shu¹ (Yi script and Yi classical scriptures). *Minzu Yuwen* 81.1: 8-15.
- Ma Xueliang and Dai Qingxia. 1982. Yiyuzhi yuyin bijiao yanjiu (Comparative research on the phonetics and phonology of the Yi language group). In *Minzu Yuwen yanjiu wenji*, 40-69. Qinghai: Nationalities Press.

- . 1982b. "Bailang ge" yanjiu (Research on the 'White wolf ballad' transcribed in Chinese characters in the *Houhan Shu*). Paper presented to the 15th STC, Beijing.
- Ma Yao. 1957. Shi4lun4 Bai2tzu2 yuan2chu1 yu2 Han4dai4 Er2hai3qu1 de Kun1ming2ren2 (Preliminary discussion: The Bai people are descended from the Han period Kunming people of the Erhai region). In Yang Kun et al. 1957, 62-77.
- . 1987. Dian1, Sou3, Cuan4 zu2 shu3yu2 Yi2 Bai2 yuan2liu2 (The historic Dian, Sou, and Cuan people belong to Yi and Bai ethnic origins). *Yunnan Shehui Kexue* 1987.5: 53-59.
- Mackerras, Colin. 1988. Aspects of Bai culture. *Modern China* 14.1: 51-84.
- Madrolle, Cl. 1908. Quelques peuplades Lo-lo. *T'oung Pao* ser. 2, vol. 9, 528-76.
- Maimaiti Zunong and Wang Yiding, eds. 1987. *Zhong1guo2 li4dai4 shao3shu4 min2zu2 wen2lun4 xuan3* (A selection of writings from China's historical minority peoples). Ürümqi: Xinjiang Nationalities Press.
- Malkiel, Yakov. 1976. Multi-conditioned sound change and the impact of morphology on phonology. *Language* 52.4: 757-78.
- Maspero, Henri. 1947. Notes sur la morphologie du tibéto-birman et du munda. *Bulletin de la Société de Linguistique de Paris* 44.1: 155-85.
- . 1981. *Taoism and Chinese religion*. Translated by Frank A. Kierman, Jr. Amherst: University of Massachusetts Press.

- Matisoff, James A. 1970. Glottal dissimilation and the Lahu high-rising tone: A tonogenetic case-study. *JAOS* 90: 13-44.
- . 1972. *The Loloish tonal split revisited*. Research Monograph no. 7. Berkeley: Center for South and Southeast Asia Studies, University of California.
- . 1972b. Lahu nominalization, relativization, and genitivization. In *Syntax and semantics*, edited by John Kimball, vol. 1, 237-57. New York: Seminar Press.
- . 1973. *The grammar of Lahu*. University of California Publications in Linguistics, vol. 75. Berkeley: University of California Press.
- . 1973b. Tonogenesis in Southeast Asia. In *Consonant types and tone*, edited by Larry M. Hyman, 73-95. Los Angeles: Department of Linguistics, University of Southern California.
- . 1976. Lahu causative constructions: Case hierarchies and the morphology/syntax cycle in a Tibeto-Burman perspective. In *Syntax and semantics*, vol. 6, 413-42. New York: Academic Press.
- . 1978. *Mpi and Lolo-Burmese microlinguistics*. Published as *Monumenta Serindica* 4. Tokyo: Institute for the Study of Languages and Cultures of Asia and Africa.
- . 1978b. *Variational semantics in Tibeto-Burman*. Occasional Papers of the Wolfenden Society, vol. 6. Philadelphia: Institute for the Study of Human Issues.
- . 1979. Problems and progress in Lolo-Burmese: Quo vadimus? *LTBA* 4.2: 11-43.

- . 1984. Sino-Tibetan numerals and the play of prefixes. Paper presented to the 17th STC, Eugene, Oregon.
- . 1986. The languages and dialects of Tibeto-Burman. In McCoy and Light 1986.
- . 1986b. Hearts and minds in Southeast Asian languages and English. *CLAO*, June 1986.
- . 1986c. Tone, intonation, and sound symbolism in Lahu: Loading the syllable canon. Paper presented to the Symposium on Sound Symbolism at the University of California, Berkeley, January 1986.
- . 1987. Jiburish revisited: Tonal splits and heterogenesis in Burmo-Naxi-Lolo checked syllables. Paper presented to the 20th STC, Vancouver.
- Matisoff, James A. 1988. Cis-Yangtzean China as part of the Southeast Asian linguistic area. Paper presented to the 40th annual meeting of the Association for Asian Studies, San Francisco, March 1988.
- . 1988b. *The Dictionary of Lahu*. University of California Publications in Linguistics, vol. 111. Berkeley and Los Angeles: University of California Press.
- Mazaudon, Martine. 1977. *Tibeto-Burman tonogenetics*. Published as *LTBA* 3.2.
- . 1985. Dzongkha number systems. In Ratanakul, Thomas, and Premsrirat 1985, 124-57.
- McCoy, John, and Timothy Light, eds. 1986. *Contributions to Sino-Tibetan Studies*. Leiden: E. J. Brill.

- McRae, John R. 1986. *The Northern School and the formation of early Ch'an Buddhism*. Studies in East Asian Buddhism, no. 3. Honolulu: University of Hawaii Press.
- Mei Tsu-lin. 1970. Tones and prosody in Middle Chinese and the origin of the rising tone. *HJAS* 30: 86-110.
- . 1979. The etymology of the aspect marker [ts₁] in the Wu dialect. *JCL* 7: 1-14.
- . 1982. Shuo shangsheng (On the rising tone). *Ts'ing-hua Journal of Chinese Studies*, n.s. 14: 233-41.
- . 1985. Some examples of prenasals and *S-nasals in Sino-Tibetan. In Thurgood, Matisoff, and Bradley 1985, 334-43.
- Meillet, Antoine. 1970. *The comparative method in historical linguistics*. Translated by Gordon B. Ford, Jr. Paris: Librairie Honore Champion.
- Muysken, Pieter. 1981. Halfway between Quechua and Spanish: The case for relexification. In *Historicity and variation in creole studies*, edited by Arnold Highfield and Albert Valdman, 52-78. Ann Arbor: Karoma Publishers.
- Nagano, Yasuhiko. 1979. A Historical study of rGyarong initials and prefixes. *LTBA* 4.2: 44-68.
- Nanzhao Historical Society. 1986. *Nan2zhao4 shi3 lun4cong4* (Discourses on Nanzhao history). Xiaguan: Wenwu Bookshop.
- Nicolai, Robert. 1987. Is Songay a creole language? In Gilbert 1987, 469-84.
- Nishida Tatsuo. 1985. The Hsihsia, Lolo, and Moso languages. In Thurgood, Matisoff, and Bradley 1985, 230-41.

- Norman, Jerry. 1978. A Preliminary report on the dialects of Mintung. *Monumenta Serica* 33: 326-48.
- . 1980. Linguistics. In Orleans 1980, 490-96.
- . 1982. Some ancient Chinese dialect words in the Min dialects. Paper presented to the 15th STC, Beijing. Published in *Fangyan* 1983.3: 202-11.
- . 1986. The origin of the proto-Min softened stops. In McCoy and Light 1986.
- . 1988. *Chinese*. Cambridge: Cambridge University Press.
- Norman, Jerry, and Tsu-lin Mei. 1976. The Austroasiatics in ancient south China: Some lexical evidence. *Monumenta Serica* 32: 274-301.
- Orleans, Leo A., ed. 1980. *Science in contemporary China*. Stanford: Stanford University Press.
- Paris, Marie-Claude, ed. 1980. *Les constructions en 'de' en chinois moderne*. Paris: Editions Langages Croises.
- Pelliot, Paul. 1904. Deux itinéraires de Chine en Inde a la fin du viie siècle. *BEFEO* 4: 131-413.
- Peyraube, Alain. 1977. La linguistique en Chine après la révolution culturelle. *Journal Asiatique* 265.1-2: 185-211.
- . 1986. History of the comparative construction in Chinese from the 5th century B.C. to the 14th century A.D. Paper presented to the 2d International Conference on Sinology, Taipei.
- . 1987. The double-object construction in *Lunyu* and *Mengzi*. In *Wang Li Memorial Volumes*, English volume, edited by the Chinese Language Society of Hong Kong, 331-58. Hong Kong: Joint Publishing Co.

- Pinnow, Heinz-Jürgen. 1959. *Versuch einer historischen lautlehre der Kharia-sprache*. Wiesbaden: Otto Harrassowitz.
- Pittman, Richard S. 1985. Voice register theory and the splitting of tonal systems. In Ratanakul, Thomas, and Premsrirat 1985, 23-33.
- Pulleyblank, E. G. 1984. *Middle Chinese: A study in historical phonology*. Vancouver: University of British Columbia Press.
- Pulleyblank, Edwin G. 1984b. Tonogenesis as an index of areal relationships in East Asia. Paper presented to the 17th STC, Eugene, Oregon.
- Qin Fengxiang. 1957. Zai4lun4 Bai2yu2 de xilshu3 wen4ti2 ji2 Bai2zu2 de xing2cheng2 he2 falzhan3 (Once again on the problem of genetic affiliation for Bai as related to the formation and development of the Bai nationality). In Yang Kun et al. 1957, 87-92.
- Ramsey, S. Robert. 1987. *The languages of China*. Princeton: Princeton University Press.
- Ratanakul, Suriya, David Thomas, and Suwilai Premsrirat. 1985. *Southeast Asian linguistic studies presented to Andre-G. Haudricourt*. Bangkok: Mahidol University.
- Refsing, Kirsten. 1986. *The Ainu language*. Arhus: Aarhus University Press.
- Rickford, John R. 1987. Decreolization paths for Guyanese singular pronouns. In Gilbert 1987, 130-38.
- Rocher, Emile. 1880. *La province chinoise du yün-nan*. Paris: Libraire de la Société Asiatique de l'Ecole des Langues Orientales Vivantes.

- Sagart, Laurent. 1984. Le destin des obstruantes sonores du Chinois ancien dans les dialects Min. *CLAO* 13.1: 91-99.
- Sanders, Robert M. 1987. *The four languages of "Mandarin."* Published as *Sino-Platonic Papers*, no. 4.
- Schafer, Edward H. 1961. Preliminary remarks on the structure and imagery of the "classical Chinese" language of the medieval period. *T'oung Pao* 50: 257-64.
- Schumann, John H. 1987. Utterance structure in basilectal speech. In Gilbert 1987, 139-60.
- Shaul, David L. 1982. Esselen structural prehistory. *BLS* 8: 205-18.
- Sherard, Michael. 1986. Morphological structure of the pronominal and verb systems in two pronominalized Himalayan languages. In McCoy and Light 1986, 172-99.
- Shi Jinbo. 1987. Shao3shu4 min2zu2 wen2zi4 wen2xian4 de shi3liao4 jia4zhi2 (The value of historical documents written in minority nationality scripts). In *Zhongguo minzu shi yanjiu* (Research on the history of China's nationalities), edited by Ma Dazheng and Zhou Yongyi. Beijing: Social Sciences Press.
- Shorto, H. L. 1962. *A dictionary of spoken Mon*. London: Oxford University Press.
- Smeall, Christopher. 1976. Grammaticalized verbs in Lolo-Burmese. *LTBA* 2.2: 273-87.
- Solnit, David B. 1984. Linguistic contact in ancient South China: The case of Hainan Chinese, Be, and Vietnamese. *BLS* 8.
- Staal, J. F. 1963. Sanskrit and Sanskritization. *JAS* 22: 261-75.

- Sun Taichu. 1957. Tan2 "Bai2wen2" (On "Bai script"). In Yang Kun et al. 1957, 120-22.
- Takakusa, Junjiro. 1896. *Record of the Buddhist religion as practiced in India and the Malay archipelago, by I-tsing*. Reprint edition, 1966. Delhi: n.p.
- Tambiah, Stanley J. 1976. *World conqueror and world renouncer*. Cambridge: Cambridge University Press.
- Thapar, Romila. 1973. *Aśoka and the decline of the Mauryas*. Delhi: Oxford University Press.
- Thomason, Sarah, and Terrence Kaufman. 1988. *Language contact, creolization, and genetic linguistics*. Berkeley: University of California Press.
- Thurgood, Graham. 1980. Consonants, phonation types, and pitch height. *CAAAL* 13: 207-19.
- . 1982. Review of *La langue bai: Phonologie et lexique* by Francois Dell. *Language* 58.3: 732.
- . 1982b. Subgrouping on the basis of shared phonological innovations: A Lolo-Burmese case study. *BLS* 8: 251-60.
- . 1983. Morphological innovation and subgrouping: Some Tibeto-Burman notes. *BLS* 9: 257-65.
- . 1983b. Pronouns, pronominalization, and the subgrouping of Tibeto-Burman. Paper presented to the 16th STC, Seattle.
- . 1984. The 'Rung' languages: A major new Tibeto-Burman subgroup. *BLS* 10: 338-49.

- . 1985. Exclusions and inclusions: The membership and subgrouping of Lolo. In *Proceedings of First Annual Meeting, Pacific Linguistics Conference*, edited by Scott DeLancey and Russell S. Tomlin, 447-58. Eugene: Department of Linguistics, University of Oregon.
- . 1985b. Pronouns, verb agreement systems, and the subgrouping of Tibeto-Burman. In Thurgood, Matisoff, and Bradley 1985, 376-400.
- . 1985c. Benedict's work: Past and present. In Thurgood, Matisoff, and Bradley 1985, 1-15.
- Thurgood, Graham, James A. Matisoff, and David Bradley, eds. 1985. *Linguistics of the Sino-Tibetan Area*. Canberra: Australian National University Press.
- Ting Pang-hsin. 1983. Derivation time of colloquial Min from archaic Chinese. *BIHP* 54.4: 1-14.
- Trautmann, Thomas R. 1987. *Lewis Henry Morgan and the invention of kinship*. Berkeley: University of California Press.
- Treistman, Judith M. 1972. *The prehistory of China*. New York: Natural History Press.
- Walton, Ronald. 1986. The Taishun phonological system: A descriptive study of a northeastern Min dialect. In McCoy and Light 1986, 422-77.
- Wang Ningsheng. 1980. *Yun2nan2 kao3gu3* (Archaeology of Yunnan). Kunming: Yunnan People's Press.

- Wang Wenzhao, ed. 1966. *Xu4 Yun2nan2 tong4zhi4 gao3* (Draft continuation of the Yunnan gazetteer, compiled in 1901). Taipei: Wenhai Press.
- Wang, William S-Y. 1967. Phonological features of tone. *Language* 43.
- . 1969. Competing changes as a cause of residue. *Language* 45.1: 9-25.
- Wang Yunfu. 1986. Nan2zhao4 he2 Bai2zu2 de ji3ge wen4ti2 (Several problems in connection with Nanzhao and the Bai nationality). In Nanzhao Historical Society 1986, 18-49.
- Weidert, Alfons. 1979. The Sino-Tibetan tonogenetic laryngeal reconstruction theory. *LTBA* 5.1: 49-127.
- Weinreich, Uriel, William Labov, and Marvin I. Herzog. 1968. Empirical foundations for a theory of language change. In *Directions for Historical Linguistics*, edited by W. P. Lehmann and Yakov Malkiel. Austin and London: University of Texas Press.
- Welch, Holmes, and Anna Seidel, eds. 1979. *Facets of Taoism: Essays in Chinese religion*. New Haven and London: Yale University Press.
- Wen You. 1940. Min2jia1yu2 zhong1 tong1yi4 zi4 zhi1 yan2jiu4 (A study of synonyms in the Minjia language). *Studia Serica*, vol.1, pt. 1, 1-25.
- Wheatley, Julian K. 1984. The role of verb serialization in word-order change. *BLS* 10: 350-59.
- . 1985. The decline of verb-final syntax in the Yi (Lolo) languages of southwestern China. In Thurgood, Matisoff, and Bradley 1985.

- Wiens, Herold Jacob. 1954. *China's march toward the tropics*. Hamden: Shoe String Press.
- Wiersma, Grace. 1982. 'Cheat', 'sleep', 'slaughter', and 'weep': Historical notes on the non-standard lexicon of Cantonese. Paper written for the course in historical semantics taught by James A. Matisoff at Berkeley, Spring 1982.
- . 1985. Toward a contrastive analysis of Hmong *li* and Mandarin *de*. Paper written for the course in linguistic field methods taught by James A. Matisoff at Berkeley, 1984-85.
- . 1987. Competing theories of genetic affiliation for Bai. Paper written for the course in historical comparative linguistics taught by Gary B. Holland at Berkeley, Spring 1987.
- . 1988. Chinese and Tibeto-Burman comparisons for Bai morphemes in marked phonation type {+P}. Paper presented to the 21st STC, Lund.
- . 1989. Bai dialect grammar in a discourse environment. Paper presented to the 22d STC, Honolulu.
- Wong Siu-lun. 1979. *Sociology and socialism in contemporary China*. London: Routledge & Kegan Paul.
- Xi Zhi [pen name of Zhang Huapeng]. 1988. Baiyu Jianchuan fangyan yu Dali fangyan yuxu bijiao (Word order comparisons between the Jianchuan and Dali dialects of Bai). *Yunnan Minzu Yuwen* 8: 69-72.
- Xie Jian, ed. 1980. *Zhong1yi4 ren2lei4xue2 ci2hui4* (Glossary of anthropology in Chinese translation). Hong Kong: Chinese University Press.

- . 1987. *Kun1ming2 dong1 jiao1 de Sa1mei2zu2* (The Samei people of the Kunming eastern suburb). Hong Kong: Chinese University Press.
- Xu Lin. 1984. *Mingdai Baiwen Gu Shanshi Yang Zong Muzhi yishi* (Translation and explication of the Ming "Funerary inscription of Elder Worthy Yang Zong" in Bai script). In *Essays in Memory of Lo Changpei*, edited by Fu Maoji et al. Beijing: Commercial Press.
- . 1986-88. *A study of the Bai story "The Huang family woman and the Vajracchedika"*. Published as CAAAL Monograph Series nos. 11 (March 1986) and 12 (February 1988). Tokyo: Institute of Asian and African Languages and Cultures.
- . 1988. *Baiyu huawen* (Spoken text materials in Bai). *Minzu Yuwen* 1988.3.
- Xu Lin and Zhao Yansun. 1964. *Baiyu gaikuang* (Outline of the Bai language). *Zhongguo Yuwen* 1964.4.
- . 1984. *Baiyu jianzhi* (Handbook of the Bai language). Beijing: Nationalities Press.
- Xu Tianxia et al. 1985. *Jizushan de chuanshuo* (Legends of Mount Jizu [Chickenfoot Mountain]). Kunming: Yunnan People's Press.
- Yan Yibing. 1965. The problem of the distinctions among the homophonous morphemes pronounced *de* and a critique of 'On Mandarin *de*' by Zhu Dexi [in Chinese]. *Zhongguo Yuwen* 137: 253-63.
- Yang Kun. 1957. *Shi2lun4 Yun2nan2 Bai2zu2 de xing2cheng2 he2 fa1zhan3 guo4cheng2* (Preliminary discussion on the process of ethnic differentiation and development of the Bai nationality). In Yang Kun et al. 1957, 1-11.

- Yang Kun et al. 1957. *Yun2nan2 Bai2tzu2 de qi3yuan2 he2 xing2cheng2 lun4wen2ji4* (Essays on the origins and formation of the Bai nationality). Kunming: Yunnan People's Press.
- Yang Shih-feng. 1969. *Report on a survey of the dialects of Yunnan*, vols. 1 & 2 [in Chinese]. Institute of History and Philology Special Publication no. 56. Taipei: Academia Sinica.
- Yang Xiandian, comp. 1988. *Xizhou zhi* (Treatise on Xizhou--a modern gazetteer of Xizhou). Dali: Nanzhao Historical Society.
- Yang Xiandian. 1989. *Nan2zhao4 Da4li3guo2 yan2yi4* (Romance of the Nanzhao and Dali kingdoms). Kunming: Yunnan People's Press.
- Yang Yongxin and Zhao Yansong. 1986. *Shi4lun4 Nan2zhao4 wang2shi4 de zu2shu3 wen4ti2* (Preliminary discussion on the problem of the ethnic affiliation of the Nanzhao ruling house). In *Nanzhao Historical Society 1986*, 1-17.
- Yau Shunchiu. 1986. *Classificateur bis*. Unpublished manuscript.
- . 1987. A cognitive approach to the genesis of nominal classifiers as observed in archaic Chinese. Unpublished manuscript.
- Yokoyama, Hiroko. 1987. *Dairi hyakuzoku no saiho kyoju kon* (Matrilocal marriages of the Dali Bai people). In *Gendai no shakai jinruigaku* (Modern social anthropology), vol. 1, edited by Ito Abito, Sekimoto Teruo, and Funabiki Takeo, 103-31. Tokyo: Tokyo University Press.
- . 1990. *Hyakuzoku--osusha no bunka o juyo shinagara ikiru minzoku* (The Bai people--a viable ethnic group incorporating multiple cultures). *Bunka Jinruigaku* 6.1.

- Yunnan Ethnohistory Editorial Group. 1977. *Yunnan gezu gudai shilue* (Outline of ancient history for the various nationalities of Yunnan). Kunming: Yunnan People's Press.
- Yunnan Province Communist Party Office of Policy Research. 1986. *Yun2nan2sheng3 qing2* (Yunnan Province handbook). Kunming: Yunnan Nationalities Press.
- Yunnan Province Editorial Group. 1983-86. *Bai2zu2 she4hui4 li4shi4 diao4cha2* (Survey of social history for the Bai nationality, pts. 1 & 2). Kunming: People's Press.
- . 1986. *Zhong1yang1 fang3wen4tuan2 di4'er4 fen1tuan2 yun2nan2 min2zu2 qing2kuang4 hui4ji2* (Compilation of reports on Yunnan nationalities by the Central Survey Team's second subteam). Kunming: Yunnan Nationalities Press.
- Zhan Chengxu. 1984. *Lue4lun4 Le1mo4ren2 she4hui4 de fa1zhan3* (Preliminary discussion of social development among the Lemo [Bai] people of Bijiang). *Minzuxue Yanjiu*, vol. 6. Published by the Research Society for Chinese Ethnology.
- Zhang Fusun. 1988. *Jian4chuan1 Bai2zu2 shuang1yu2 jiao4xue2 de you2lai2 ji2 qi2 fa1zhan3 qu1shi4* (Justification of the Jianchuan Bai bilingual teaching/learning method and its direction of development). *Yunnan Minzu Yuwen* 8: 23-26.
- Zhang Wenbo. 1986. *Da4li3zhou1 shuang1yu2 jiao4yu4 shi4 yan4 he2 chang2 jiu4* (Experiment and progress in bilingual education in Dali Prefecture). *Yunnan Minzu Yuwen*.

- Zhang Xilu. 1983. Bai2zu2 xing4ming2 chu1tan4 (Preliminary discussion of Bai surnames and personal names). In *Minzuxue Yanjiu*, vol. 5, 117-32. Published by the Research Society for Chinese Ethnology.
- Zhang Xilu and Zhang Liao. 1986. Lun4 Bai2zu2 gu2lao3 sheng4dian3 "huo3ba4jie2" (On the *huoba* festival, ancient emblem of the Bai nationality). In Nanzhao Historical Society 1986, 283-304.
- Zhang Xu. 1986. Bo2ren2 shi4 Bai2zu2 de xian1min2 zhi4yi2 (Doubts on [the proposition that] the Bo men are the precursors of the Bai nationality). In Nanzhao Historical Society 1986, 50-63.
- . 1986b. Nan2zhao4 he2man2 da4 xing4 ji2 qi2 zi4sun1 (The great families of the Nanzhao *heman* and their descendants). In Nanzhao Historical Society 1986, 64-84.
- . 1986c. Fo2jiao4 mi4zong1 zai4 Bai2zu2 di4qu4 de xing4qi3 he2 shuai1luo4 (The rise and decline of Buddhist tantra in the Bai region). In Nanzhao Historical Society 1986, 177-85.
- Zhang Zhigong. 1962. *Chuantong yuwen jiaoyu chutan* (Preliminary study of traditional language education). Shanghai: Education Press.
- Zhao Shiming et al. 1949. *Xin1zuan4 Yun2nan2 tong4zhi4* (New recension of the Yunnan gazetteer).
- Zhao Yansun. 1981. Bai2yu2 he2 Han4yu pu3tong1hua4 de dui4bi3 yan2jiu1 (Research on contrasts between the Bai language and *putonghua*). In *Minzu Yuwen lunji*, edited by the staff of *Minzu Yuwen*. Beijing: China Social Sciences Press.
- . 1982. Baiyu de xishu wenti (The problem of genetic classification for Bai). In *Minzu Yuwen yanjiu wenji*, 150-88. Qinghai: Nationalities Press.

- . 1987. Baiwen (Bai writing). In *Zhongguo minzu gu wenzi*.
Tianjin: Codex Press.
- . 1988. Bai2yu2 de ci2hui4 (The vocabulary of the Bai
language). *Yunnan Minzu Yuwen* 8: 61-68.
- . 1989. Bai bodyparts. Unpublished list collected for the Sino-
Tibetan Etymological Dictionary and Thesaurus Project at the
University of California, Berkeley, James A. Matisoff, principal
investigator.
- Zhao Yansun. *A Bai/English dictionary and historical appendix*,
translated and edited by G. Wiersma. In preparation.
- Zheng Chuanyin and Zhang Jian, comps. 1987. *Zhongguo minsu cidian* (A
dictionary of Chinese folklore). Hong Kong: Commercial Press.
- Zhu Dexi. 1961. Shuo "de" (On Mandarin *de*). Reprinted 1980 in Zhu
Dexi, *Xian4dai4 Han4yu2 yu2fa3 yan2jiu4* (Research on modern
Chinese grammar), 67-103. Beijing: Commercial Press.
- Zou Qimeng and Li Zhuoyun (Qing), comp. 1983. *Kangxi Heqingfu zhi*
(Gazetteer of the Heqing administrative territory compiled in the
Kangxi period). Xiaguan: Bureau of Culture of the Dali Bai
Autonomous Prefecture.

Appendices

Summary of Contents

Appendix 1 is comprised of transcribed excerpts from a corpus of recorded spoken texts from a Jianchuan speaker, the main source of Bai materials on which Chapter 3 is based. The total corpus amounts to some eight hours of continuous free monologue speech data. The transcribed portion amounts to about 5 percent of the whole. Texts 1, 2, 6, and 9 are included here and figure in the analysis of Chapter 3. Texts 3, 4, and 5 also exist in transcription but time constraints prevent their inclusion here. Variant spellings and tones appear with some regularity in the transcribed data and are discussed in terms of speaker variation from published Jianchuan norms in another paper elsewhere. Frequent instances of Chinese lexical substitution or possible instances of code-switching may be observed. This is a phenomenon that has probably increased opportunities for mutual intelligibility among speakers of divergent varieties of Bai in the past, and deserves fuller treatment. The texts that make up the entire corpus are listed below.

1.1 ɛ1.jui1 beats the duck (Recorded 15 January 1988)

1.2 Translation

2.1 ɛ1.jui1 pushes the millstone (Recorded 22 June 1988)

2.2 Translation

- 3.1 ɛ1.jui1 poles the boat (Recorded 24 June 1988)
- 3.2 Translation
- 4.1 ɛ1.jui1 fools the local scholar (Recorded 24 June 1988)
- 4.2 Translation
- 5.1 ɛ1.jui1 succeeds in the exam (Recorded 24 June 1988)
- 5.2 Translation
- 6.1 From the biography of Li Shaoni: 1 (Recorded 3 Feb. 1989)
- 6.2 Translation
- 7.1 From the biography of Li Shaoni: 2 (Recorded 10 Feb. 1989)
- 7.2 Translation
- 8.1 From the biography of Li Shaoni: 3 (Recorded 17 Feb. 1989)
- 8.2 Translation
- 9.1 From the biography of Li Shaoni: 4 (Recorded 24 Feb. 1989)
- 9.2 Translation
- 10.1 From the biography of Li Shaoni: 5 (Recorded 3 March 1989)
- 10.2 Translation

Appendix 2 contains a rhyming glossary of Jianchuan syllables with English translation for lexical items in which syllables occur.

Appendix 3 gives the distributions of consonant initials, tones, and rhymes for Jianchuan Bai in the form of a tabular chart. The speech of the consultant and the dialect summarized here from the published account (*Jianzhi*) are essentially the same language, a fact that may be confirmed by comparison of this distribution chart with sets of lexical tokens elicited from the consultant and described in another

paper elsewhere. This chart may also be compared to the one provided for Dali phonology by Dell 1981.

Appendix 4 contains illustrations consisting of photographs taken by the author in Jianchuan and Heqing Counties during May and June 1989. Plate 1 is a photograph taken at Jianchuan (old Jinhua Commandery) on May 14, 1989 and illustrating a portion of stone inscription using mainly a Siddham script, with Chinese graphs appearing at three points interspersed continuously with the inscribed nagari text. This fragment is now located in a courtyard adjacent to the Jianchuan county bureau of culture, along with a number of other fragmentary and whole tombstone and stele incriptions, some using the script illustrated here, some bilingual with separate faces of nagari and Chinese text, some using Chinese graphs exclusively. Plate 2 is a photograph of the old Confucian hall at Heqing Middle School taken on May 31, 1989. This school is the alma mater of the consultant (LSN) who provided the linguistic data appearing in Appendix 1 and analyzed in Chapter 4 of the present study, and he stands in front of the building in the photograph. Plate 3 is a photograph taken at the Beiya Lead Mine (Heqing County) compound on May 20, 1989. In it, the consultant (LSN) is seen explaining the principle of using a romanized system of orthography to represent the Bai language to a small impromptu audience of mineworkers and managers, all native speakers of Bai. Plate 4 is the photograph of a blackboard at the Xizhong Primary School (Jianchuan County) showing bilingual couplets of congratulatory verses, each line of verse represented alphabetically in romanised Bai with Chinese graphs of translation

appearing below each syllable. The photograph was taken on May 15, 1989 while classes were in session in the adjoining building. Plate 5 is a photograph taken on the same day illustrating celebratory couplets (*dui4lian2*) hung in the main reception room at the home of the principal of Xizhong Primary School. Below each Chinese graph appearing in the couplets is its Bai translation or reading represented alphabetically. Plate 6 is a group photograph taken again on the same day inside the Xizhong Primary School compound. The author (3rd right) is seated between the school principal (2nd right) and members of the school teaching staff. The consultant (LSN) appears at right. Plate 7 is a map of the Erhai region showing the relative proximity of locations mentioned in the text.

Appendix 1

Texts and Translations

Text 1.1 (ε1.jui1 hits the duck)

- (1) [ke1.ϕε2 ηο9 ηο4 πε4.ηο4.ts17 no7 tϕā9 mu6.no7 ku2.s12 a9.tuē7
kō7.tuē7] (2) [ti9.ji2.tuē7 tϕā9 ηα6 πε4.xo2 tiū9 ϕi9.xuā6 no7
ε1.jy1 mu6 ku2.s12 a9.tuē7] (3) [tϕy1.su8 xue8.tse9 sua2 ts17
ηi9.kē6 tϕā9 no7 mo9.liā4 ε1.jy1 no9.ηi9 ts17 miū4.tshao4 mo9
tse5.ke2 no7 ηi9.kē6] (4) [mu6 xa9.tō6 pi9.tϕao1 ηi6.ku5]
(5) [ηε7 ηi9.kē6 ηi9 mo9 tiū9 tshō6.miū6] (6) [mu6 ti7.mo7.xo7
li6 ϕi9.xuā6 kō6 mo9 ηε5 yu4.s16] (7) [la8 mo9 yu4.tu2.s16 ka8
ts19] (8) [yu7.fy7.no7 mo9 khao9 tϕiū1.s11 li6 ts19.tso7]
(9) [ηε7 no9.ηi9 ma8 ϕi9.xuā6 tā6.kuā6] (10) [mo9 tsa8 ηi2.ts17
ko6 πε2.ϕε4.xo7 pa9.tϕi6.pa9.tā4] (11) [mo9 ui2 πε2.ϕε4.xo7 tsu6
se9.vy7 ko6 mo9 tse5.ke2 no7 yuo8.s11 li8 fē9.tō1.s11 li8 ti1.tsu9
lao9.tshe4 no9.xo7 to1.tsū7 thi9 πε2.ϕε4.xo7 tshy2.tϕhi2]
(12) [ke1.ηi2 ηο9 ϕi6 tϕā9 mu6.no7 a9.the6 ts17 mo9 tē2 ke6 ε1.jy1
tē2 ke6 no7 ku2.s12] (13) [ε1.jy1 ma6 xa9.tō6 ϕā7.tā7 ηi6.ku5]
(14) [mo9 ko6 mu6 ti7 kō7.ηi9 kō7.ts19.po7 ta9.ko6 tā6 ke4.ts16
ti1.tsu9 lao9.tshe4 ma6 u6.mu6.no7 li9 lao9.tshe4.tsu9 xue6.tse9 li9
lao9.the1.ji4 no9.xo7 ma6 pā6.kō6] (15) [ts16 li9 lao9.the1.ji4
no9.ηi9 ts17 sui6.zē6 mo9 ts17 tshe4.tsu9.xo7 no7 ji9.kē6 ηε7 mo9

the1 tçf1.li1.ts17 tçi6.xa2 la4] (16) [lē8.lo7.mo7 nɔ2 tsu6 mu6
 pã6.kõ6 ts16 ta4 lu7] (17) [nɛ7 kō6.tse5 ts16 a9.li6 li6 mo9
 nɪ9.kē6 no7 pã6.kō6.xo7 no7 ja8 khe6 z19] (18) [no9 nɔ2 mu6 mu6
 kō7.tçhē4 ka8.pe2 ti9.tē8 sã6.çui5 se2 mu6 ke5 s17.s17 lia4.s17.s17
 nu7 lē4] (19) [la8 ε1.jy1 mu6 nɪ6.ku5 ts16 xē8.s11 nɔ4 ka8.pe2
 se7] (20) [nɛ7 tse5 nu7 thu9 thiu9 ja8 tu2] (21) [ε1.jy1
 no9.nɪ9 tshu7 sua2 ts17 ke1.çə2 no9.nɪ2 çã9.pē1.fa8 nɔ2 tsu6.to6 mu6
 mu6 ke9 pi8] (22) [la8 a6.ta2 ts16 mo9 ts16.ke5 to5 ni6]
 (23) [a6.ta2 li9 lao9.tshe4.tsu9 no9.nɪ9 ts17 mu6 nui7.pho2 ts17 mo9
 mu6 pi9.tçao1 tçf1.s11 tçə2] (24) [mu6 nui7.pho2 ã7 no7 tçf7.ko4
 tçə2] (25) [ti6.tu6 tçə2 pe4.nɔ4.ts17 sua2 u6.mu6.no7 mu6 nui7.pho2
 no7 ti6.tu6 tçə2] (26) [ts16 tui7.tshu9 mo9 ã7 ya8 tui7]
 (27) [mo9 thiu9 ã7 tu2 ta4 tçf7.tshu9 ne5] (28) [la8 mu6.no7
 nui7.pho2 ti6.tu6 ts16 mo9 ts17 vu7.tã4 no7 ã7 ja8 tçhiu1.tshu9
 çã7.la4] (29) [s18.tçi1 li1.nɔ1 mo9 ã7 ja8 tçhiu1.tshu9 no9
 tçə2.ts17 çã9.pē1.fa8 yu8 to5 mo9 ke9] (30) [la8 ts17.a9.pu7 li9
 lao9.tshe4.tsu9 nɪ9 ku4 xa9.tō6] (31) [ma6 tse6.ts17 tsō6 no7 pe9
 tu2 ke4.ts17 tçhu6.yue6 a9.kho7 a9] (32) [pe9 tu2 tçhu6.yue6
 a9.kho7 ts16 mo9 a6.ta2 li9 lao9.tshe4.tsu9 nɪ9 ts17 mo9 thã7.tshe4
 la8 mo9 tiu9 çɪ9.xuã6 ju2 tçhu6.yue6 çã7.la4] (33) [la8 mo9 ju2
 tsh16 yu7.fy7.no7 ts16 mo9 pe2 tsh16] (34) [pe4 tsh16 yu7.fy7.no7
 ts16 ma6 tse6.ts17 tsō6 no7 ts17 ke2.piē2.xo7 ma6 ke6.tu5 fy6 yu8
 ke4.ts17 mu6 tse6.ts17 tsō6 no7] (35) [la8 ku4 ma6 tse6.ts17 tsō6
 no7 ji7 tsh16 tu2 se7.ti6] (36) [ji7 tsh16 se7.ti6 no9.ti6.ts17
 ke6.tu5 mu6 se7 ts16 mo9 pe4 tçə2 ua7.çã7] (37) [la8 mo9 ts17 ji7
 tçhi2 ti6.ts17 mo9 tsui4.khu7 tsui4.khu7 tçə2.ts17] (38) [la8

tuí7.tuí7.nu7 ā7 mo9 ts16 tiū9 sā6.ɸuí9 ko5.ko5 yu4 no7
 tɸhu6.yue6.kho7 s17.s17] (39) [ε1.jy1 no9.ɳi9 kē4 tu2 ts16 mo9
 tshu7] (40) [i1] (41) [no9 ti6.ts17 tɸhu6.yue6 no9.kho7 mu6
 ɳa2.fā2 no9.kho7 tiū9 sā6.ɸuí7 tɸhu6.yue6 a9.kho7 mu6] (42) [xo6
 la4] (43) [no9.pū6 ts16 ɳo9 tshu6 ɳo2 ɸā9.pē1.fa8 ɳo9 tshu6
 tsu6.to6 mu6 mu6 la4] (44) [la8 yu7.fy7.no7 ts17 a6.ta2
 tɸa6.tɸa6.xo6.xo6 tshe4.tsu9.ɳi9 xa9.tō6 ja8 mo7 tse5.ke2 ts17.a6.pū6
 ke2.pie2.xo7 ma6 pē4 ke6 a9.tu5 fy6 ke4 tu2 tse6.ts17.tsō6 no7]
 (45) [la8 ku4 mu6.ta2 ji8 tsh16 ti6] (46) [ji8 tsh16 ti6 la8 ma6
 ke6 no9.tu5 fy6 tsh16] (47) [fy6 tsh16 yu4.fy7.no7 ts16 tshe4.tsu9
 ɳi9 yu8] (48) [yu8 phia2 la4.yu8.ts16 ku4 mu6.ta2 ju2 tshā6.pē7]
 (49) [ju2 tshā6.pē7 ts16 a6.ta2 ε1.jy1 sua2 tso4 ts17]
 (50) [le8.lo4.mo7 tse6.ts19 tsō6 no7 tɸhu6.yue6 no9.kho7 no7 mu6
 ju2.ɸu9.tshy9] (51) [yu7.fu7.no7 ts16 mo9 ts17 no9.sua2]
 (52) [li9 lao9.tshe4.tsu9 li9 lao9.tshe4.tsu9 a6.ta2 tse6.ts17.tsō6
 no7 ts17 tɸhu6.yue6 no9.kho6 no7 a6.na2.ɳi9.ɳy9 mē4] (53) [la8 li9
 lao9.tshe4.tsu9 a9.tɸhē6 tu2 tshu7 sua2 ts17]
 (54) [tɸi4.tsua4.tɸe2 tɸhā9 ju2 s16 mo9 pi4] (55) [ya8.mu7.ts16
 mo9 ju2 ja8 tu2 la4] (56) [mo9 ts16 mo9 ɸā9.pē1.fa8 ɳi7.we1 ts17
 mu6 ɳui7.pho2 ti6.tu6 mo9 ā7 ja8 tu2 la4] (57) [ā7 khu7 ts16 mo9
 tshu7 ā7.tsō4 khu7 tɸhu6.yue6.kho7 no7] (58) [kē6 mu6 tɸa4.xo2 ɳo4
 mo9 tɸhā9 ju2 s12 lu7] (59) [la8 mo9 tshu6 a9.tshua2.ts17
 a9.ke9.xu7 ɳo4 mo9 ke4 ju2 s12] (60) [ju2 s12 la4.yu7 ts16 ju2
 phia2 mu6 tɸo2.kue6.ne5 xu9 ts16 mo9 ka2.tsō5 ts16 mo9 th' th'
 lia4.s17.s17 la4 no7 ts16] (61) [le8.lo4.mo7 mu6 mu6 ke6.s17
 a2.s17 lia4] (62) [tshu9.tsē5 ts17 a6.sē9 li6 suí7] (63) [la8

ts16 ju2 s16 se7 la4 ts16 mo9 tɕã9 ja8 ɕo9 ɕã4.la4] (64) [nɯ7.we1
 sua2 nɨ9.kẽ6 sua2 lu9.kho7 ts17 tɕhu6.ɣue6.kho7] (65) [la8 mo9
 tshu7 tshu4.ɕí6.tshu4.kã6 mo9 tshu7 tiũ9 ku4] (66) [tiũ9 ku4 mo9
 tshu7 ɕã9.pẽ1.fa8 ɲo2 ke4.ts16 ɲo2 paol.fy8 ke4.ts16 ɛ1.jy1 ka9]
 (67) [la8 ts17.a9.pũ6 ts16 mo9 pe2 tɕhi2] (68) [pe2 tɕhi2 la8.ɣu7
 no7.fy7.no7 ts16 tɕa6.tɕa6.xo6.xo6 mu6 ke2.piɛ2 s16.ɣu9 ma6 ke6
 no9.tw5 le9 fy6 ɣu8 ma6 tse6.ts19.tsõ6 no7] (69) [la8 mo9 tshu7
 ka2 mi7] (70) [ɛ1.jy1 sua2 no9.ne5 le9 xe4. s11 tse2 khua9.ji9
 ɕã9.pẽ1.fa8] (71) [la8 ts17.a9.pũ6 ts17 ma6 ke6 nu7.tw5 fy6 tshu6
 no7.fy7.nu7 ts16 mo9 tu5.po5.kho7 tã6 khu7 ka2 ã7 ts16 la4.ɣu7 ts16
 ma6 tshe4.tsu9.ɲi9 ma6 xa9.tõ6 ts17 to4 no7 pe4.tsh14 no7
 phao1.xu4.kho7] (72) [ɲo9 tshu7 ɲo4 ke4.ts16 phao1.xu4 no9.kho6
 s12 ke4.ts16 mu6 tse6.ts19.tsõ6 no7 ju2 tshã6.pe2 no7 tse6.ts19.tsõ6
 no7] (73) [la8 ts16 mo9 tshu7 u2 khu7 la4] (74) [li9
 lao9.tshe4.tsu9 li9 lao9.tshe4.tsu9 ma6 ke2.piɛ2.xo7 ma6 ke6.tw5 fy6
 ɣu8 nu6 tse6.ts19.tsõ6 no7 la4] (75) [ts16 tshe4.tsu9.po6 no9
 tu5.mu6.no7 sã2.tã2 no7 ke4.ts16 ma6 ke2.piɛ2.xo7 ma6 ke6 no9.tw5 mu6
 ji7 s16 mu6 se7 no9.ti6 no7 ɕã7.la4] (76) [le8 lu7.pũ6 no7 no9.pũ6
 ts16 mo9 kẽ4 tu2 ts16 mo9 tshu7 ku4.xa2 tsh16 ma6 ke6 no9.tw5 no7
 la4] (77) [la8 ke4 tu2 ts16 mo9 pi8.ɕy7 tã4 ma6 ke6.tw5]
 (78) [a6.ta2 ɛ1.jy1 sua2 li6 ju7.we1 ɕũ7.tɕhũ4 no9.tɕɛ2 la8 tshu7
 mu6 ɲo4 sua2 u2 khu7] (79) [a6.ta2 tshe4.tsu9 li6 ts17 sa8
 ke2.piɛ2 s16.ɣu9 tshu7 mo9 phõ7 ja2.ku6] (80) [le6 khu7 mu6 mu6
 ɕi5.ke6.tsu5.mo7.kho7] (81) [kẽ4 tu2 mu6.ta2 ts17 pe4.xua2.xua2
 no7 no9.kho7 no7 thsu7 ji9.we4 ts17 ma6 ke6 mo9.tw5 tshu7
 ɲo4.tɕhi2.ɲo4.ɣu4 mo9 tshu7 a9.pio6 tshu7 tẽ2 thũ6] (82) [tɕi8.kuo9

ts16 tẽ2 thw6 la4 ɣw7.fɣ7.no7 ts16 tçhẽ6 tw2 mw6 tshẽ6.tçhi7 ts16
 tshu7 sua2 tçhi6.li6.khy6.thã6] (83) [o9] (84) [ke6.tw5 ɣa8
 xẽ6.mẽ5] (85) [ke6 ts16 mo9 tshu7 ky8.ky8.ky8 s17 xẽ6.mẽ5 s17]
 (86) [tçhi6.li6.khy6.thã6 mo9 ka2 mi7 ts16 le8.lo4 nɔ4 mw6
 phao1.xu4.kho7 tẽ2 pho9 tẽ2 mo4.ɕu4 s16 la4] (87) [pe8 sã2 tsh16
 ke4.ts16 ɛ1.jy1 mw6 tã2 the6 ts16 mo9 le9 tçã9 ja8 ɕo9] (88) [tẽ2
 ts16 no9 nɔ4 nw6 ts12.tçi9 no7 phao1.xu4.kho7 tẽ2 kui4 s16]
 (89) [ɛ1.jy1 tẽ2 a9.pio7 s17 tsu6 ɛ1.jy1 mw6 tse9 tsu6.tseẽ5 tua4]
 (90) [le8 no9.ne5 tshu7 sua2 ja9.pa7 tsh18 xuã4.ɳi4]

Text 1.2 (Translation)

[] is interpolation, { } is free translation

(1) Today I'm telling some stories--one or two--in Bai words. (2) The first one [I'm] telling [is] one of the stories about ε jui, [stories] that we Bai-pl. like most. (3) As [we] know, or [we might] say that people tell it that way, this ε jui was a person of the Ming Dynasty time. (4) His home [was] rather poor. (5) Nevertheless, that person was most clever. (6) His father-and-mother-pl. also liked to press him to go and study. 7) And so he did study a few written words. (8) Afterwards, it's a fact that he even took the *jinshi* exam. (9) But, this person did not like to serve as an official. (10) He [would be] mingling back and forth among the common-folk-pl. all day. (11) He [would] do things for the common-folk-pl., struggle with those evil and reactionary landlord masters of that time, {extend sound/strength} for the common-folk-pl. (12) The one that I'll tell first today is him beating the chicken--the story about ε jui beating the chicken. (13) The ones in ε jui's family [were] rather poor. (14) He and his father--the two men together--served for the sake of the-ones-pl. {who belonged to} a landlord master--{he/they} is/are called Master Li or Grandpa Li--as their helpers. (15) Now then, this Grandpa Li, although he was a person {who belonged to} the masters-pl., nevertheless [instances of his being] extremely stingy [were] many-intens. SPRT. (16) EXPL. if [you] wanted to act as his helper, [it's] all right SPRT. (17) But, as for wages, not even one {bit} [would be] paid out to that person's

helpers-pl. (18) [If] you wanted a few {sous/CLF} of wages from him [it would be] something like the same as cutting off his flesh, just like that SPRT. (19) And so, as for ε jui's poverty, [it was such that he] should have been able to use a few {sous/CLF} anyway SPRT. (20) But [he] didn't get any money for a long, long time. (21) Thus, this ε jui said: "On this day [I] really must think of a way to make it embarrassing for him once SPRT." (22) And so, as for [what follows] here, how did he do it QPRT? (23) Here [then], this Master Li had--his eyes were--he-obj. [was] quite near-sighted. (24) What his eyes [could] see [was] a bit {near}. (25) "A bit squinty"--[if you] say it in Bai words, it's called "his eyes [having a property of being] a bit squinty." (26) As for distant places, he [could] not see far. (27) All he was able to see [was] near places SPRT! (28) And so, since his eyes [were] squinty, of course it's a fact that he didn't see things clearly SPRT-2. (29) Actually [it was a matter of] exploiting the situation about his not seeing clearly, to think of a way in order to fix him once. (30) And so, one time, [that] one Master Li was at home. (31) [What had been] put down there upon the top of their table [was] a snail SPRT. (32) Since [someone had] put down a snail, he--here [I should say that] [this] one Master Li was...he [was] greedy, and so of course he most loved to eat snails SPRT-2. (33) And so, as for [what he did] after having eaten it, he left. (34) As for [what happened] after he'd left, on the top of their table was--the neighbors-pl., their chicken came flying over onto the top of his table. (35) And so, there on the top of their table [it] had been able to let out a pile of shit.

(36) Having let out a pile of shit, this pile--as for the shit of chickens, it [is] certainly whitish SPRT-2. (37) And so, it was--the pile [that had been] let out, it [was] all coiled up, rather.

(38) And so, if [one should] look at it from a great distance, [it] most resembled a snail-like [thing] from inside a lake. (39) When this-one ε jui saw it, he just [said]: (40) "EXPL.!" (41) Well, doesn't this pile--the shape of this snail--[doesn't] this one most resemble a snail QPRT? (42) Good SPRT! (43) As for this time, I'll just have to think of a way [so] I [can] just make it embarrassing for him SPRT." (44) And so, [what happened] after this {is/fits} just right here: (one time, a time when the Master was not at home, the white chicken of the neighbors-pl. flew and landed on the top of the table. (45) And so, [while] sitting there [it] let out a pile. (46) Having let out a pile, so then this chicken {of theirs} flew [away]. (47) As for [what happened] after [it] had flown [away], the Master came [along]. (48) After [he] had arrived, [he] sat down there to eat a meal. (49) Well, just as he was eating the meal, at this point ε jui pronounced the following: (50) "EXPL. this snail [that's] on top of the table--{how} good to eat {it looks}!" (51) As for what followed, he had this to say: (52) "Master Li, Master Li! (This snail that's here on top of the table--whose-GEN. [is it] QPRT?" (53) So then, as soon as Master Li heard [this] he just said: (54) "[I] must {steal the opportunity to} eat it all up quick SPRT!" (55) Otherwise, he [would] not be able to eat [it] SPRT. (56) As for him [ε jui], the reason he [could] think of a way was that: his [Master Li's] eyes [having the property of being] squinty, he could

not see SPRT. (57) As for looking at [it], he [Master Li] just fixed [his] eyes on [it] {as an instance of} a snail. (58) [He] feared his friends-pl. [would] take it [and] {steal the opportunity to} eat [it] all up SPRT. (59) And so, {at one go} he just took it [by] pinching fingers [and] ate [it] all up. (60) As for [what happened] after eating [it] up, [he] ate {to the point where}, as for the inside of his mouth, as for his tasting [it], it's a fact that he [made a noise] "th' th' th'" just like that SPRT {and what then?} (61) EXPL. [how strong was] its-obj. chicken-shit [or] duck-shit likeness! (62) The stench was [such that] not even anyone [could] know. (63) And so then, as for having eaten up the shit SPRT, he [would] certainly {prefer not to} tell [about it] SPRT. (64) The reason [we could] say [was that] a person said [that] this {thing} was a snail. (65) And so, he [was] just {sick at heart}, he [was] just most vexed. (66) [Being] most vexed, he just thought of a way in order to [work] upon--in order to avenge [himself] upon ε jui once. (67) And so, there was one occasion [when] he went out. (68) As for [what happened] later after he went out, just right [then] this chicken of those near-residing neighbors of his came flying over again to the top of {they/their} table. (69) And so, he [ε jui] just thought a little. (70) ε jui said: "This matter again {is such that still} once more [I] might think of a way." (71) And so, as for [what happened] on the time [that] was after this chicken {of theirs} had flown away, [and] as for [what he] looked at a little [when] he raised up [his] head, [and] as for [what he thought] afterward, [it was that] {they/their} master had, in {their} home, a large,

porcelain teapot. (72) "I'll just take hold of this teapot [and] set it down upon the top of his table--the top of the table that's [used] for dining." (73) And so, as for [what he did then], he just began to shout: (74) "Master Li, Master Li! They--the neighbors-pl.-- {they/their} chicken [has] come flying over to the top of your table SPRT!" (75) Well now, the fact [is] that this Master-m. [had] just before [been] fooled, [and it was] certainly an instance [attributable] to {they/their} neighbors-pl. [and] this chicken of {theirs}, [and] its having let out this pile of its shit SPRT-2. (76) And so, as for this time, on this occasion, as for [what happened when] he saw [it], he just despised this chicken {of theirs} DAT SPRT. (77) And so, when [he] saw [it], he just had to beat {their} chicken. (78) At this point *ε* jui spoke too, because of this emotional {situation}, and so {what he} shouted [was] just: (79) At this point, the Master also was [in a condition created by the fact that] he [was] just running back over from the near-residing neighbors. (80) [He] seized upon a {sturdy-implement-mother} of his OBJ. (81) [In view of the fact that he] saw [that] this thing that was white all over was there, [he] just thought that [it] was that chicken {of theirs} [and] just {using every bit of strength} he just beat down on [it using] just one blow. (82) As for the result, as for [what happened] after he had beaten down on [it] SPRT, [and] as for its sound [which he] heard, [it] just said "t̄chi li khy thā̄." (83) "Oh! (84) The chicken doesn't cry out! (85) As for the chicken, it {actually} cries out like 'k̄y k̄y k̄y', like so." (86) As for [what] he thought [hearing] "t̄chi li khy thā̄," (EXPL. [he had]

taken his teapot [and] broken [it] by beating, broken [it] entirely to bits SPRT! (87) As for having {been} fooled in vain {by} ε jui's-GEN [intention this] time, he {preferred not to tell about it} even more. (88) "As for [who did the] beating, you took your own teapot [and] broke [it] completely by beating." (89) It was certainly not a case of ε jui beating [it], [and he] could not {pretend that} [it was] ε jui's-GEN fault [that] {caused it to happen}. (90) And so, [about] this matter [we may] just say [it's a case of] "the mute eating {bitter drugs/yellow lotus}."

Text 2.1 (ε1.jui1 pushes the millstone)

(1) [ke6.ŋi2 tsw7 kō6.jui9 i8 tço9 pa8 pa8 ñē9 lu8 ye8 ε6 s17 tçi7
 tu5 # ε6 s17 ε6 # tso4.pio7] (2) [a4 # lu8 ye8 ε6 s17 ε6]
 (3) [ke6.çε2 ŋo9 ju2 tʃuū9.pe6 tçā9 ε1.jui1 mu6 ku4.s17 kō7.tuē2]
 (4) [a9 tuē2 tsw7 ε1.jui1 tse7.ku7 # ε:7 # ŋuē5 ε:7 thui6 ŋuē5 nu7
 se9.γ7] (5) [a9.tuf7 tsw7 # ε:7 # tçhui6 ā6.ni6 tu5 nu7 mu6
 ku4.s16 # lia4.s17.s17 nu7 kō7 the7] (6) [çī6 tçā9 ke4.tsw7 # mo9
 ε:9 # thui6 ŋuē9 no7 ku4.s17] (7) [tʃe2.ku7 tsw6 a9 ŋī2 ε1.jui1 mu6
 khe6.tu5 fē7.khu7] (8) [tsw6 mu6 fy2 ā7 çā2.tā7 sō5] (9) [mu6
 fy2 a6 sō9 tsw6 mo9 ju2 mu6 s19 kō7 phu7 tsw7 yuo5 khu7 mu6 fy2 khu7
 no7] (10) [le8.lo7.mo7 tsw7 a8.jō5 a8.jō5 liā4.s17.s17 sγ5 lu7
 tçi.çi2.ko4.tua4] (11) [sui1.jē1 sui1.jē1 mo9 sō9 nu7
 tçi6.çi2.ko4.tua4 ñε7 ŋī2 mu6 sua2 mo9 tsw7 ua4.tsγ.ŋī5 #
 xā4.ŋγ4.tsw7 u6.mu6.no7 sua2 nu9.li6.nu9.pho7 # ŋa6 pe4.xo7 tsw7
 u6.mu6.no7 sua2 ne9 tsw7 ua4.ts12 ja4] (12) [la8 mo9 tsw7
 ua4.ts17.ŋī5 tsw7 # mo9 pi8.çui7 ŋo2 fē9.khu7 jī2 tsu6 zo4 su7]
 (13) [nu9 tshu7 nu7 tshε6.ku9 ne5 tse2 sγ4 tçε2 n16 pi8.çγ7 jī2
 fē6.khu7 jī2 tsu6.zo9.s17] (14) [la8 li9 lao9 tshε8.tsu6 ni2
 u6.mu6.no7 sua2 << ε1.jui1 # ke6.ŋi2 khe6.tu5 no9 pi8.çγ7 ŋo4 jy8 mu6
 tsw7 nu6 çi2 # çi2 ti6 no7 ts16.ke2.li6 ŋo4 ŋui5 çi2 mo6 pi8]
 (15) [ε1.jui1 sua2 ŋu6 fy2 a6 sγ9] (16) [fy2 a2 sγ5 li6 jī2 ŋui5
 tçhi7 mo6 pi8] (17) [la7 ε1.jui1 tshu7 lia4.s17.nu7 tçhē5 tu2 ja4
 nu7 tshē6 tsu7 ε1.jui1 tsu7 çā9.pē6.fa8 la4] (18) [tsw7 sua2 ŋī8
 sua2 tsw7 nu7 tā6 mo9 pā6 kō6 a9 tsw7 no7 ... nu7 kō7 tse5 ya8.mo7
 se7 # kō7 tse5 ya8.mo7 s17 nu7 fy5 khu7 tsw7 ŋō5 khu7 la4 ja4]

(19) [la8 mo9 tshu7 mi2.ɕi6 yuo5 khu7 mu6 fy5 khu7 no7 mi2.ɕi6 a9
 tshe4 ɲue5 # ε7 # ɲue5 xe7 la4 # ɲue5 mo9 ju6 mo6 tsw7] (20) [tsw6
 mo9 mo9 ti8 khu7 ke4.tsw6 ɲue5 kho7 nu7 mu6 mu6 kua2 kua2 no7 # ja4]
 (21) [ti8 khu7 mu6 no7 tsw6 mo9 tshu7 lia4.s17.nu7 mi2 lu7 me5 ...
 ji2 tsw6 mo9 tshu7 sua2 s17 mu6 fy2 ā6 ne5 ne5 tshu6 sē7 # sē7 # sŷ4
 nu7 ne5 tshu7 tshē6 # tshē6 tshe7 tshu6 tɕa2.tsw7 # tshē6 se7 tshu6
 tɕa2.tsw7] (22) [la8 mo9 tshu7 ɕi6.khu7 a9 ke2 tsw6 mo9 tsū7 tse6
 thui6 khu7 thui6 khu7 ke2 tsw6 tso4.kua2 nu7 jī2 sua2 tsw7 # a6.ta2
 ɲue5.kho7 no7 nu7 mu6 pao9 kua2 nu7 kā2 khu7 mu6 # kā2 khu7 mu6 fy5
 khu9 no7] (23) [tsw6 fy5 kho7 nu7 mu6 tiū4 khu7 tiū4 la8 mo8
 tɕā1.s17 nu7 tsw7 se6.jī2 mo9 mu6 sŷ5 ne5 tu2 sŷ5 ɕy8 nu7 tɕe2.tsw7]
 (24) [la8 mo9 mi2.ɕi6 tsuī4 tsw7 mo9 tsim7 sē4 fy2 kho7 nu7 mu6 sŷ5
 ne5 tui7 # tshē6 se9 tshu7 tɕe2.tsw7] (25) [sū1.zē1 ɲue5 khu7 ɲue5
 khu7 tsw7 a6.ta2 li8 lao9 tshe4.tsu9 li6 mo9 li6 tɕā9 mu6 fy2 a6 sŷ5
 # mo9 li6 tɕā9 mu6 fy2 a6 sŷ5] (26) [ε8 # li9 lao9 tshe8.tsu7 sua2
 << ε8 jo2 ε8 jo2 ɲu6 fy2 ɲu6 fu2.kho7 li6 sō5 khu7 la4 >>]
 (27) [la8 ε1.jui1 tɕhē6 tu2 lu7 ε1.jui1 ɲi5 tsw7 ɕi6.khu7 mo9 tshu7
 ta5 tsu9 ji8 la4] (28 [ε7 nu7 sua2 << ke6.ɕe2 ɲi2 to5 s17 mo9 the6
 pi8] (29) [mu6 nu7 a6.ta2 xa9 tu2 tshy6 (ne5 (ɲo9 (sā7.tā7 (la4
 (ja4 >>] (30) [la8 ε1.jui1 nu7 ɲi5 tshu7 # ε1.jui1 ɲi5 tsw7 sua2
 tsw7 << a7.ja7 li9 lao9 tshe4.tsu4 ɲu6 fy2 a6 sō4 tɕi6.ɕi2.ko4.tua4
 ne5 ne5 tɕā6.s17 ɲo9 ɲue5 tshu7 ne5 ti6 ε2 ne5 ɲo9 tshū6 ju2 u6 tshu7
 jī2 mo9 tshu7 ɲue5 xū7 tshu6 la4] (31) [kā7 ɕi6.ɣo4 nu7 kā7
 nā6.ɲui6 no9 nā6.ɲui6 no9] (32) [no9 u6 nu7 a6.sē7 ɲue5 tsw7 ɲu6
 fy2 a6 sŷ5 ne5 ne5 tsw7 tse9 z17 to9 a4 >>] (33) [tsw6 li9 lao9
 tshe4.tsu4 tɕhē6 tu2 mu6 no7 tshē6] (34) [la8 mo9 mo9 a8 sua2 tsw7

<< ε8 # mu6 fy5 a6 sγ5 tsw6 nɔ4 tsw7 ɲuē5 ju6 mu6 tshw7 nu7 ne5 nɔ4
mu9 ji2 xū2 tshw2] (35) [tsw6 no9 tse5.ke2 ɲw6 fy2 a2 li6 sγ5]
(36) [tsw6 ɲw6 fy2 a2 li6 sγ4 tsw7 ɔŋo9 li6 f16.pw9.f16 ɲuē5 ɲuē5
ne5 nu7 tshw6 tsu7 kho9.nū8 jō4 ɲw6 fy2 a6 sγ4 ne5 tsw7 ɲuē5 xū7
tshw6 la4 >>] (37) [tsw6 # tshw6 # a6.ta2 tse2.kw7 ε1.jui1 ne5 ne5
xā6 tɕhi7 mu6 # xā6 tɕhi7 ke4.tsw6 li9 lao9 tshε4.tsu4 mu6 ɕā9 pā6
nu7 ne5 la4] (38) [la8 mo9 tshu7 sua2 tsw7 pw6 tɕa5 pa5 ji2 s17 ja4
tɕa5 pa5 ji2 s17 thui6 khw7 mo9 sua2 tsw7 # << ε7 li9 lao9
tshε4.tsu4 no9 ɕi6 a9 pie2 ɲuē5] (39) [a6.ta2 ɲw6 fy2 ā7 tsw7 lw6
lw6 sua2 no9 tse5.ke2 ɲo9 ji2 tse2 # tse2 tse2 thui6 mo9 no9 ke2
thui6 tsw7 mo9 nu7 tshε6 ti7 xū6 tshw6 >>] (40) [la8 li9 lao9
tshε4.tsu4 tsw7 tɕhē6 tu2 mu6 a6.ta2 tɕhē6 tu2 sua2 tsw7 << mo9 ju2
mu6 fy2.kho7 ni6 ji9.tɕi7 ɲuē5 mu6 ɲuē5 khw7 tsw7 ɲw6 fy2 a6 sγ4 nu7
ni6 to9 sū7 tshw7 la4 >>] (41) [li9 lao9 tshε4.tsu4 tse2 nɔ2 mu6
ɲuē5 mu6 mu6 ɲuē5.kho7 nu7 mu6 kua9 kua9 ne5 tsw7 tɕhao9 γw8]
(42) [tshu7 tsw7 no9 ju2 nu6 fy2.kho7 li6 ji2 xū7 tshw7 tsw7 ɲo9 li6
pi9.ɕy8 nɔ2 ɲw6 fy2.kho7 ji2 xw7 tshw6 mo9 pi8] (43) [la8 mo9
tshu7 tɕhā9 xw7 kua5 kua5 mo9 tshu7 ku4 a6.ta2 ɲuē5 # ja4]
(44) [ɲuē5 khw7 tsw6 # a6.ta2 # mu6 # ɲuē5 khw7 ke2 tsw6 ke2 tsw6
mo9 tsw6 mu6 # mu6 fy2.kho7 tsw7 sē6 tsw7 # tso4.kua2 li6 ni6 tse9
tshε2 tɕa4 s19 s19 s19] (45) [la8 lw7 lw7 ɲuē5 tsw7 mu5 ū6 tsw7
ɲuē5 khw7 ɲuē5 khw7 tsw6 mo9 ju2 mu6 jy7 mu6 tshw6 mo9 kō9 tiw7 #
tsw7 ju2 mo0 ɲuē5 tshw2] (46) [se7 ε1.jui1 (ɲuē5 tshw2 a9 tiw2 #
li9 lao9 tshε8.tsu9 ts16.tɕi6 tsw7 ɲuē5 tshw2 kō7 tiw7] (47) [tsw6
tsw7 a6.ta2 a9 tiw7 le # tsw6 a6.ta2 ε1.jui1 ne7] (48) [kē2 nu6
sua2 tsw7 mo9 ji9.tɕi7 ɲuē5 tshw2 kō7 tiw7] (49) [la8 tsw7 tse4

tsw6 a9 tiw7 # tse4 tsw7 a9 tiw7 tsw7 a6.ta2 to9 ni2] (50) [tshu7
 tsa8 tsw7 mo9 kō7 mo9 tçhã9 mu6 ɲuẽ5.kho7 mu6 kua5 kua7] (51) [<<
 a7 ja7 li9 lao9 tshe4.tsu7 no9 no9 no9 ju2 ɲo9 ɲuẽ5 lu7 a6.ta2 ɲu6
 fÿ2 ã7 tse2 ya8.mo7 tse2 tse2 sō4 nu7 ne6 tsw7 ya8.mo7 # xũ9 kã6.tçĩ7
 a4] (52) [no9 s17 ɲo9 ɣu8 # no9 s17 ɲo9 ɣu8 ɲu6 ɲuẽ5 kɛ4]
 (53) [tsw7 mo9 tça9 pa7 ji6.s17 nu7 ɣu8 tçhã9 mo9 mu6 ɲuẽ5.kho7 mu6
 kua5 kua7 no7] (54) [la8 tsw6 li9 lao9 tshe4.tsu4 sua2 õ:::54+
 tsw6 s17 no9 xũ7 tsw6 tao4 pu4 ti9 ɲo9 tsẽ2 xũ8] (55) [la8 # li9
 lao9 tshe4.tsu4 ɲĩ5 tshu7 sua2 tsw7 # << ɛ4 # tsw6 no9 xũ7 tsw6 tao4
 pu9 tsw7 ɲu6 fÿ2 a6 li6 tse2 sÿ4 (la4] (56) [tsw6 ɲu6 fÿ2 ã6 tsw6
 ju2 a6 xũ7] (57) [tsw6 ɲo9 li6 pi8.çy7 ji2 ɲo9 tse2 ɲuẽ5 piɛ2 >>]
 (58) [la8 li9 lao9 tshe4.tsu4 ɲĩ5 tshu7 tsw7 ɲo2 lɛ9 ti6 khu7 kua4
 kua7 tsw7 ũ6 tsw7 ji2 khuã6.khuã6.çi6.çi6 ɲuẽ5 ɲuẽ5 ɲuẽ5 ɲuẽ8]
 (59) [mo9 tshu7 ɲo4 mu6 # mu6 ɲy7 mu6 tshu7 mu7 ti9 çi7 tiw2 lu7 ju2
 tsw6 ju2 mu6 ɲuẽ5 kã6.tçĩ9 tçhẽ6] (60) [tsw6 ɛ1.jui1 ɲĩ5 tshu7 tsw7
 lɔ8 tu8 jy4 tshu7 tsw7 ɛ4 khu7] (61) [khue4 khu7 ke4.tsw6 a6.ta2
 mu6 # xo9 ke7 mu6 mu6 mu6 mu6 fÿ2 ɣu8 nu6 khue6 # tshe7 ti6 khue7 nu7
 nɛ7 tsw7 mo9 ko4 mu6 tu2 # ã6 thiw7 ã6 no9 nu7 # ço2.çi8 la4]
 (62) [tshu7 ɲã5 pẽ7 a6] (63) [ɛ7 no9 ɲi5 tsw7 sua2 tshu7 ku4.s14
 tshu7 no9 the6 tshu7 lia4.s17.s17 nu7 tçã9 la4]

Text 2.2 (Translation)

(1) Today is western calendar 1988, sixth month, twenty- how many? twenty-second, right? (2) Sixth month, twenty-second. (3) Today I want to get ready to tell two stories about ε1.jui1. (4) One is [about] ε1.jui1, the {affair = story} of [his] pushing the millstone. (5) One is the story of [his] weighing the cat, two [stories] like that. (6) First [I will] tell {about} the story of [when] he pushed the millstone. (7) As for this [one], one day ε1.jui1 got up in the morning. (8) As for [what happened then], his stomach hurt a lot. (9) His stomach, as for [the way it] hurt, he wanted his two hemp mats, {in order to} enclose his stomach. (10) Boy-oh-boy, [it] was itchy-itchy, hurting unbearably like that. (11) Although the way it hurt was unbearable, what [we] should say is that he was a "wadze"--the Chinese call it a slave--we Bai-PLSUF say he was a wadze. (12) Well, so the fact that he was a wadze [meant that] he must get up and go in to do work. (13) What this [means] is that {even if} [his] body hurt a little bit QPRT, [he] must go in and get up, go in and do work. (14) Well then Old Master Li called [to] him saying, "ε1.jui1, this morning you must grind the corn very fine, no matter what." (15) ε1.jui1 said: "My stomach hurts." (16) "Even if [your] stomach does hurt, [you] have to grind it up fine. (17) Well so [when] ε1.jui1 heard those sounds like that, ε1.jui1 just started to think of a way. (18) What [we] should say [here] is that {while} serving as his servant ... there was no pay. Being without pay made him get crazy, get yellow. (19) Well so on one hand he just enclosed

his stomach, [while] on the other hand he {pushed on} the millstone, ground the rice, [while] the millstone {ate it up}. (20) As for [what he was doing it was] that he lifted up on the millstone's {stick = axle}. (21) As for lifting up on it, he just thought like this ... all the way along he just said [that] his stomach knew: {what was} hurting had just swollen up a little. (22) Well so having just suffered awhile he {really = firmly} grasped [the millstone and] started pushing at it awhile, and having [done that], I daresay he was--here, against the millstone's handle [he] {propped up ?} his stomach. (23) As for the stomach, {its = it was} starting to push up, and so I daresay he was really in a lot of pain. (24) Well then {while} he was turning round [the millstone] he was {knowing = feeling} the pain of his stomach--it had swelled up a little bit. (25) He ground wholeheartedly, and here Old Master Li also said that his stomach hurt. (26) Yes, Old Master Li said, "Aiya, aiya my stomach, my stomach is starting to hurt too!" (27) Well then, as ε1.jui1 heard this his suffering [was such that he] made a decision. (28) So [he] said "Today [I] ought to {bribe = cheat} him one time! (29) His [usual way] here is always to {take = make} me get the worst of it, like that." (30) Well then ε1.jui1 just--what ε1.jui1 said was, "Aiya, Old Master Li, my stomach hurts unbearably, and just now what I ground up, what I lifted and put together, I've {succeeded in = been able to} eat and drink, that is, {entering it = doing it} has ground [my stomach pain] all better! (31) [I should] say {words = something}, say {thank you, thank you}. (32) What do you call it, grinding is what's fixed my stomach pain!" (33) As for [what

happened next], Old Master Li heard these sounds. (34) Well then, he said, "Hey! As for his stomach hurting, what he used was grinding to make it--the pain--to make it go ahead and get all better.

(35) As for me, now my stomach hurts too. (36) As for my stomach, it hurts too, I wonder with a good grind, just maybe I would cure my stomach's pain too--grind it all better!" (37) As for this--here now $\epsilon 1.jui1$ detected that Old Master Li was about to get to work.

(38) Well so he just said, "This time I'll fool around." Fooling around, he started to push and said, "Ai, Old Master Li, don't grind for awhile yet. (39) Here--my stomach is--you said now I {should} still push it this time, [so I want to] push it {to the point that} the swelling is all better." (40) Well then Old Master Li heard {what he said here} and said, "So he wants [to heal] his stomach, does he? [He's] already ground it {a lot} and what about the fact that my stomach hurts--[he's going to] {bribe = cheat} me good!

(41) Old Master Li {went ahead and} grabbed up the stick from his millstone. (42) Well it's like this: "You want your stomach to get better, and so I just have to make my stomach get better too."

(43) Well so he just took away the stick and he just stayed there and ground, like that. (44) As for [what he] ground--here--the stuff--his stomach was deep [in it]--it really looked like a pile, all joined together. (45) Well so [with all] this grinding [he] {dream inhale = dreamt of} grinding and grinding [so that when] he wanted to {exchange = change places with $\epsilon 1.jui1$ } [he had already ground] two {turns}--[he] wanted to get it all ground up.

(46) {But?}, $\epsilon 1.jui1$ ground up one {turn}, and Old Master Li would

grind up two {turns} himself. (47) As for [how they did it], here one {turn}, and again as for [what happened then], here ε1.jui1 would take it. (48) [I'm] afraid to say that he had already ground up two {turns}. (49) Well so [they would] break off [at] one turn--breaking off [at] one turn [would make] {a lot here??}. (50) It was only that he stole away the stick of the millstone. (51) "Aiya, Old Master Li, you wanted me to grind, and here my stomach has no more--there's no more pain: quite finished! (52) You made me come and I ground one time." (53) In fact he was fooling around and came to take away the stick of the millstone. (54) Well then Old Master Li said, "Oooh, so I made you come and therefore {there's no way for} me to pile up a cure!" (55) Well, Old Master Li just said, "Ha! You came and then {there was no}--my stomach still hurts! (56) That is, as for my stomach, I want it to get better. (57) That is, I too must go ahead and grind some more." (58) Well then Old Master Li just took up the stick again, inhaled, and went on slowly grinding, grinding, grinding. (59) Having [ground] what was near him, going on for four {turns}, as for what he wanted, it was to grind [everything] all up. (60) As for ε1.jui1, he just got to {exchange = turn over} [the work] and thus he kept quiet. (61) He leaned [idly] on--here, in his room--his side, [he] came and collapsed--leaning {naked as a babe} he got over it and only then could he look down and rest. (62) So he just recuperated. (63) Well this person, we might say, this story is just told like that.

Text 6.1 (From LSN Bio:1)

(1) [ɲo9 ts17 pɛ4.xo7] (2) [ke6.ɕɛ2 ɕã7 ju2 s16 ɲo9 tɕã9 ɲo9 se9 mo9 tse5.ke2 nu7 s19.y7] (3) [sua2 ts16 sua2 se9 mo9 tse5.ke2 nu7 s19.y7 ɲo9 pi8.ɕy8 ɲo4 sa8 tsu9.tsõ6 no7 tɕã9 thw7 ts16 mu6.tu2 ɲo4 mo9 tɕã9 tʃhĩ6.tʃhu9] (4) [ɲo9 tsu9.tɕ18 tsui1 tshu7 tsw7 a6.na2.xo7 ni6] (5) [ɲo9 tɕhẽ6 tu2 ɲu6 ti7 tɕã9] (6) [nyɛ4.lɛ4 tsui1 tsu7 no7 tsu9.tɕ18 tse2 u6 << nã9.tɕĩ7 ɲĩ1 thiẽ7 fy5 lio9 su6 ɲuẽ8 ta1 s14 tɕhiao4 >> no9 ɲi5.kẽ6] (7) [yu7.fy7.no7 nu7 sue4 ke4.tsw6 mi4.tshao4 no7 pu1.tui1] (8) [yu8 phia2 ke4.tsw6 juĩ4.nã4] (9) [kuã4 ke4.ts16 juĩ4.nã4 nu7 se9.y7] (10) [tsu6 xũ9 kho9.nũ7 tsw7 ɲa6 pu1 # tsu9.pu1 no7 ɲi5.kẽ6 no7 xo7 tsw7 nã4.tɕĩ6 ni6 jĩ6 thiẽ7 fy5 lio9 su6 ɲue5 no7 tɕui6.tui6 no7 jĩ5.kẽ6] (11) [na8 yu8 phia2 no7 juĩ4.na5 tse2.ku2 s18 tɕi2 ɲẽ4 xuɛ2.tsw7 ɛ1 s12 tɕi2 ɲẽ4 no7 yu7.fy7.no7 tsw7 lo8 tɕi6 ke4.tsw6 ɲo9 nỹ5 la4] (12) [lo8 tɕi6 ke4.ts16 ɲo9 nỹ5 la4 yu7.fy7.no7 tsw6 pi5.na5 ts17 ta2.li9 tsy9.fy5 no7 ko6 pɛ4.xo7 ku4 sã6 tɕĩ7 no7 tse2.ke2 lo8 yue7 no7 ɲi5.kẽ6] (13) [tsw6 ma6 tsw6 ɲi2 # ɲi2 piɛ2 vu2 ɲi2 tshũ4.tɕɛ2 li8 ɲɛ8] (14) [la8 yu7.fy7.no7 xũ8 kho9.nũ9 tshu7 tsw7 piɛ2 ke4.ts16 pɛ4.xo7 yu8 tsu6 fy5] (15) [la8 tshu7 ku4 juĩ4.nã5 tshu7 tshũ4.tɕɛ2 la4] (16) [ts16 pia2 ke4.tsw6 pɛ4.xo7 yu8 tsu6 y5 yu7.fy7.nu7 tsw6 khuã6.khuã6.ɕi6.ɕi6 tu2 ma6 tshu7 a9 ɕẽ6 phia2 ɕẽ6 no7 yu8.fy7.no7 tsw6 lu8 ke4.ts16 pɛ4.xo7 ma6 tɕi9.fy5 a9 no7] (17) [pɛ4.ko7 ma6 tɕi9.fy5 no7 tsw7 lu6 ke4 a6.na2 ni6] (18) [tsui1 tshu9 tsw7 ke4.ts16 lu8 ke4.ts16 ke4.tsw6 tɕĩ4.tɕhuĩ2 no7 me7.tũ6 # tɕĩ4.tɕhuĩ2 nu7 me7.tũ6] (19) [la8 ke4.tsw6 phia2

ke4.tsw6 a6.na2 tse5.ke2 ne6] (20) [phia2 ke4.tsw6 ji8 pa8 yu9 tci9
 nɛ4] (21) [ji8 pa8 yu9 tci9 nɛ4 tsw6 tshu7 tsw7 tũ9.jui2 ɲo4
 tse5.ke2 ja8 sua2 khu4 tsw6 tshu7 tsw7 j18 tchi7 s16 tci9 # ja4]
 (22) [yue8.tse7 tshu7 ne6 ne6 ne6 # ne6 ku2 tse5.ke2 nu7 mu9 jã4]
 (23) [tsw7 ji8 pa8 yu9 tci9 ɲi4 mo9 tse5.ke2 tsw6 tse7.ku7 juif4.nã5
 nu7 se7.yui6 tsh16 cy2 # me5 ã7.tiũ6 mo9 ne9 ku7 tse2 a8.mo7]
 (24) [mo9 tse5.ke2 tsw7 tchuif4 kue8 nu7 çui4 nu7 s16 tsw7 tse7.ku7
 tsw7.ku7 fa8.sũ2 la4 ke4.tsw6 ja9.phie7 tsã6.tfu7] (25) [fa8.sũ2
 la4 ja9.phie7 tsã6.tfu7 yu7.fy7.no7 tse4.no6 sua2 tsw7 # la8 ta2.li9
 tso6 yu9 no7 xo6.xui7.ts17 a9.ɲi5 mu6 miw6 u6 to6 vũ5 ço6 # mo9
 nf9.to6 nõ9.mif4 tchi9.ji6] (26) [khã1.tçao7 ke4.tsw6 tsw7.ku7 tchif4
 xuã4 tfhao4 mu6 mu6 tsu6.tsw7] (27) [tshu7 tsw7 ya8 jõ4 ke4.tsw6
 nõ4.mif4.xo7 tsu6 tsõ6 tçe6 xo7 ma5 tsu6.tsw7 ne4 tçiao6 tsw7 ke4.tsw6
 kuẽ7.fy5] (28) [no9 nu7 tsẽ6 mo9 tse5.ke2 tçã9 khu7 tsw7 ji8 ko2
 ku8.mif4 nu7 tçui9 tõ6 # ja4 ku8.mif4 nu7 tçui8 tõ6] (29) [nɛ6 sua2
 tu6 sua2 mo9 tchi8.ji6 mo9 ju7 tẽ2 tchif4.tfhao4] (30) [tsw6
 tsu2.ko2 mu6 nɛ4 çif6 tu2 ke4.tsw6 pe4.xo7 ma6 ɲi5.keẽ2 # xo6 çu7 xo6
 ma6 ɲi5.keẽ6] (31) [tsw6 mu9 tsũ7 ko6 tsw7 ke4.tsw6 tfif4.tfao4 nu7
 tsũ6.fy5 # a2 tsu7 tsũ6 to8 ke4.tu2 tchi9.fy7 # tsũ6 to8 tci9.fy8]
 (32) [la8 tsũ7 to8 tci9.fy7 yu9 tsw7 yu9 mo9 tshu7 jo9.s17.xo6 tsw6
 mo9 ts17 xo6.xui7.ts17.xo7 çe4 ko4 yu8 mo9 tse5.ke2 tsw6 xã4.ɲy4.tsw7
 u6 # u6.mu6.no7 sua2 tshu7 tsw7 xui4 xã6 çã7 tsũ7 # xui4 xã6 çã7
 tsũ7] (33) [j18.tçif6.fã6 mu6 pu9 tsw7 fã6 nu7 tsw7 xui4 pe8 çã7
 tfũ7] (34) [tshu7 s... tsw7 pe4.xo6 ɲõ4 ts16.tfi7 ã6 tse2 tsw6 #
 ts16.tfi7 tsw6 xã4.xo7 # ja4] (35) [la8 pe4.xo7 tsw2.ku7 tsw2.ku7
 nu6 tfui7 tsu6 nu6 til.phẽ5 nu7 # til.phẽ5 nu7 tça2 # tsw6 xã4 #

xā4.xo7 nu6 mo9 tē1.pio7 sū6 jī7 xā4.xo7 sū6 su7 ko4 mu6.tu2 ji2
 lo6.tçi6 ke4 mu6.tu2 ji2 sū6.tshē5 # ja4 fa8.tfā7 sū6.tshē5 ko9
 sū6.tshē5 xuo8.tō6] (36) [la8 tsw6 la8 mu6 kē6 nu6 ne4 tshu7
 jo9.s12.xo6 tsw7 mu6 tçhi9.ji6 pu6.tui4 nu7 ne4 tshu7 xo6.xui7 no7
 pu6.tui4 nu7 ne4 mo9 tsw7 pi9.tçao7 tu8.s12.tçē2] (37) [jo9.s12.xo1
 tsw6 pe4.xo7 tshā6.tçao6 no7 pu6.tui6 tshu7 tū9.jy7 sua2 tsw7 tçhī4
 tçao4 nu7 mu6 pu1.tui1 le5 tē8.s12.tçē2] (38) [la8 fē7.tsū6 sua2
 tsw7 çao2.tçi6.çao2.tā4 # çao2.tçi6.çao2.tā4] (39) [la7 tsu7 mo9
 tse5.kē2 tsw6 u6.mu6.no7 sua2 tsw7 piū7 xuā6 ma5 luē4 no7 mē5 # piū7
 xuā6 ma5 luē4] (40) [la8 tshu7 sua2 tsw7 tsw7 ā6.tiū9 thu6 tua4]
 (41) [tçi9.fy7.nu7 ā6.tiū7 thu6 tua4] (42) [la8 tsw7 a9.pū6 tsw6
 ŋa6 # ŋa6 ku4 no7 ŋa6 ju2 mo9 ju2 tsw7 se9 mē7.tū6 nu7 ke4.tsw6 se9
 tsō6 a6] (43) [ju2 nu2 ju2 çao2.tçi6.çao2.tā4] (44) [la8 tshu7
 tçao8 ju2 tshu7 ŋu2 tsw6 khu6 kā6 tçi9 tçhē6 la4] (45) [la8 tsw6
 ku4 ke4 mu6.ta2 nu7 pe4 çē2 nu7 xo6 tshu7 tsw7 tsu9.jo7 tsw7 pe4.xo7
 la4 ŋuē5.tçhuē5 nu7 pe4.xo7] (46) [la8 tshu7 mu5 mu5 sā4 tshu6
 la4] (47) [la8 tçhi4 tçō7 mu6.fy7.γu9 tshu7 tsw7 ŋu6 ŋa6 tsu9 mo6
 nu7 xo7 ja4] (48) [tsw7 ue6 nu7 ke4.ts16 hao4 pil ke4.tsw6
 ke4.tsw6 tsw7.ku7 tsw7.ku7 çao4 tfā7] (49) [la8 tshu7 a9 pū6 tsw7
 ma5 thu6 phia2 ke4.tsw6 no9 tse5.kē2 ŋa6 xa9.ty6 tsw7 ku4 γu8]
 (50) [tshu7 tsw7 tçi4.tçhuē6 no7 ke4.tsw6 ku5 γu8] (51) [tsw6 mu5
 nu6 pia2 ku5 γu8 tçē2 no9 nu7 ke4.tsw6 mo9 tshu7 lu9 ne1 a6.xē2 nu7
 mu5 ne2 pia2 tsw7 ku5 γu8 ni6] (52) [ko5 γu8 tsw6 mu6 nu7 tsw7
 ji8.ko6 nē4.khuā6] (53) [tshu7 tsw7 tsu7 pī6 nu7 nē4.khuā6 me5]
 (54) [tsw6 tsu7 pī6 nu7 nē4.khuā6 no7 ne5 tsw7 mu6 tçhī8 tçhao4
 tçū1.fy9 mo9 tse5.kē2 mo9 to9 tu2 ji2.ko2 mē1.kuē2 nu7 ji2.ko2

thio4.jo8] (55) [sua2 tsw7 ɲo4 tsu7 pi6 nu7 ɲē4.khua6 nu7 ni9 mu6
 su4 zo8 nu7 mu6 tse5 nu7 tse2 tɕiao6 ts17 ke4.tsw6 ɲiū9.kuē2.xo7 tsu6
 # tā4 tsw7 ji9.ku7 tse2 tse2.ku2 ma6 # tē5 ma6 tse5 # a4]
 (56) [ju2 mu6 tse5 nu7 ne5 si6 khu7] (57) [la8 tsw6 ɲi2 pe4
 ke4.tsw6 ɲiū9.kuē2.xo7 tsw7 phe4 khuē5] (58) [la8 ɲiū9.kuē2.xo7
 ku4 mu6.ta2 thɿ4 s18 yu8 ku4 ta1.li9 tfo7 no7 se8 tu2 ji2.ko2 # kō7
 su6 # ja4] (59) [la8 ji2 tɕu6 li9 ke4.tsw6 tɕhio9.xo6 ɲē5.khua6]
 (60) [ɲo4 kuā4 tɕhio9.xo6 ɲē5.khua6 nu7 mo9 sui4 so4] (61) [la8
 kue8.mi4.tā4 mo9 ku6 nu7 tɕū6.fy5 kui6 # sue6 ts17 sū6.tsw7 ji2
 tɕhī4.tɕhao4 mo9 tse5.ke2 nu7 tsū6.fy5 tshu7 ji9.tɕī7 kui6.tiu6 thw6
 la4] (62) [tɕhio9.xo6 ɲē5.khua6 pu8.nū7 tsua2 pi7 tsua2 tiū7 #
 ja4] (63) [ɲo4 pao9.tsū6 tɕhiao4.xo6 ɲē5.khua6 nu7 sū4.tɕhē4]
 (64) [ʒū1.xo7 ti1.fā7 no7 po9.tɕā9 tɕa8 tɕa8 tɕā7 no9 xo7 # pu8.nū9
 ku4 mu6.ta2 ju2 ke4.fy2 # ke4 me7] (65) [tsw7.ku7 ke4 kue7 #
 pu6.tɕuū9 ke4] (66) [pu6.tɕuū9 kē4 la8 tsu7 ku4 mu6.ta2 nu7
 fā2.sū6 tā7 kō7 no9 xo7 tsw7 pi9.tɕao6 ā7.tiū6 tɕe2] (67) [a4 mu6
 sū9.xuo8 sū9.tɕhē5 pi9.tɕao6 ā9.ti7] (68) [la8 ɲa6 tsu9.pu6 no7 xo7
 tsw7 mu9 tu2 phia2 ke4.tsw6 mu6.ta2 tsw6 tshu7 mo9 tshu7 ɕā7 tui6 no7
 tshu7 mu6 sū9.xuo8 tsw7 pi9.tɕao7 ā9.tiū7 tɕe2] (69) [le8 tshu7
 khe6.s17 tsw7 ke4.tsw6 lu6 tɕi6 ke4.tsw6 # ɲa4 # ke4.ts16 ke4.ts16
 tsw7.ku7 kua5 yu8 no7 tse2.ku2 ɲa6 u2.mu6.no7 tɕī6.ts17 no7 # ɲa4
 kua5 yu8 nu7 tɕī6 ts17 no7] (70) [la8 ɲu6 ti7 tɕā9 s17 ɲo9 tsw6
 sua2 tsw7 ɲa6 tsui1 tsu7 no7 sa8 khu9 ta5 yu8 thw6 pia2 ke4.tsw6 kua5
 yu8 no7 ɲa6 tsu9 pu7 ne5 u2 mu6 miē4 tsw7 u6 li9 thiē6 fy8 # li9
 thiē6 fy8] (71) [tshu7 s18 pa8 ts17 li9 lu7 li9 mo9 tsw5]
 (72) [xe6 tshu7 nu7 thiē6 mo9 tsw5] (73) [ɕiū1 fy7 nu7 fy7 mo9

ts15] (74) [tsui1 tsu7 no7 ku9 po6 ji5 tshu7 n̄i5 la4 # ja4]
 (75) [la8 mo9 ku4 kua5 yu8 ke5.tsu6 ŋa6 tɕi6 ts17 no7 nu7 nu7 nu7
 su4 po4 ta2 ne5 no7 # ja4] (76) [su4 po4 ta2 ne5 no7 tshu7
 sũ9.xuo8 thw6 n̄a9 sã7 tɛ6 # sã7 tɛ6] (77) [s11 tɛ6 tsu7 phia2 ŋw6
 ti7 no9 pe7 no7 # ja4] (78) [phia2 ŋw6 ti7 no7 pe7 nu7 tsu6 tshu7
 ŋw6 ti7 mu6 miẽ2 w6 tsu7 w6 li9 tshũ5 pao9] (79) [li9 tshu7 xɛ9
 s17 j19 pa8 ts17 no7 li9 # ja4] (80) [ts17.ko7 tshũ4 tsu7 tshũ4
 kō7 no7 tshũ4] (81) [pao9 tsu7 pao9 pe6 no7 pao9] (82) [ŋɛ5
 tsu7 ŋw6 ti7 mu6 miẽ2] (83) [la8 ŋw6 ti7 tsu7 lɛ8 tsu6 piɛ6 tu2
 ke4.tsu6 la7 ke6 mɛ9 no7 # ɛ4 # tsu2.ku2 tsu2.ku2 pe4 n̄y6 n̄a4 no7
 n̄i5] (84) [ɛ5 # tsu2.ku2 ɕɛ2 n̄ã6 # ɕɛ2 n̄ã6] (85) [n̄u7 mu6 mo9
 mu6 miẽ2 tu2 a6.xẽ2 tao6.ti6 w6 a6.sẽ9 ni6 ŋo9 li6 a8 suẽ6 #
 (laughter) # a4] (86) [ŋo9 ko1.tɕhy6 tu6 n̄uĩ5.xo7 mu6 miẽ2 nu7 na5
 a8 w6 a6 ɕa7 la8 tshu7 w6 mu6 no7 jã5 s17] (87) [n̄ã4 jɛ8 ji6 tsu7
 a6.sẽ7 ni6 ŋo9 li6 no9 tɛ5.kɛ2 ŋo9 li6 sua2 thiw6 tua4]
 (88) [fẽ8.tsũ6 tsu7 ŋw6 mo7 tsu6 mo9 ɕẽ5 jã6] (89) [ŋw6 ti7 tsu7
 ɕẽ9 li9 # ɕẽ9 li9 # a4] (90) [la8 tsu6 tshu7 ŋo9 tɕhẽ6 tu2 ŋw6 ti7
 ma6 tɕã9 tsu7 ŋw6 ti7 ti9 kẽ2 tshu7 tsu7 tɛ4 fɣ7 sua2 mo9 tɛ5.kɛ2]

Text 6.2 (Translation)

(1) I am [one of the] Bai-PLSUF. (2) Today maybe [you'd] like to have me tell about things {from} the time when I was young. (3) As for {what it means to say} "things {from} the time when I was young," I must {start to} tell from the early [times] {just after that = in order to} tell it correctly. (4) Who-PLSUF were {my} earliest ancestors QPRT? (5) I heard my father tell about [this]. (6) [My] original earliest ancestor is still called the person {from} the Four Great Dynasties, the Heavenly Domain of Liu, Song, and Wang at Nanjing. (7) Later, [he] {followed after = joined} a brigade of the Ming Dynasty. (8) [He] came to Yunnan. (9) [He] {served officially = managed} in the affairs of Yunnan. (10) That is to say, it is quite possible that our ancestors were people [who had belonged to] the militia of the Nanjing Heavenly Domain of Liu, Song, and Wang. (11) Well then, ten or twenty-odd years after [having] come to Yunnan, [he] {dropped plow = settled down} {for the benefit of} my [family]. (12) Having {settled down} {for the benefit of} my [family], after that [he] was {very close to = the same as} the bamboo hat people who live in the Dali territory alongside the Bai-PLSUF. (13) That is to say, as for them, [they] even sought matchmakers [and] sought to {establish families = get married}. (14) Well then, afterwards very possibly [they] were {set upright = established} {in the position of = as} the grandfathers of the Bai-PLSUF. (15) And so they stayed in Yunnan and {established families = got married}. (16) As for [what happened] after they

became the {grandfathers} of the Bai-PLSUF, after they very slowly [they] got their surnames, [first] one surname, [then] eight surnames, [they] {settled} in the {territory} of the Bai-PLSUF.

(17) Where was the {territory} of the Bai-PLSUF {settled} QPRT?

(18) The very earliest was {settled} at Madeng, in Jianchuan [county]. (19) Well then, at what time [have we] arrived QPRT?

(20) [It] had gotten to be about 1850. (21) As for the year 1850 {or thereabouts}, in other words [if] we don't speak of the time [as] the tenth plus seven-odd centuries [we'll be wrong]. (22) Or perhaps it was [at] that time, like that. (23) That is, as for the time {around} 1850, the social situation in Yunnan was not yet very stable.

(24) That time was [when] all over the nation the Opium War was occurring. (25) After the Opium War had occurred, [we] may say in passing, well [there was] a Muslim person in Dali prefecture whose name was Du Wenxiu [and] who led a peasant uprising. (26) [He] resisted against the rulers of the Qing dynasty. (27) That is, [he] didn't [just] {lift up} the peasants a little and turn against the rulers [or] resist against the officials. (28) What this was, really, [if we] start to tell about that time, was the {mouth + cave = opening} of a revolution. (29) But, [I should] say, that uprising {was intended to} strike at the Qing dynasty. (30) As for {what he did}, [he] got together with a person {who belonged to} the Bai-PLSUF, the person [whose name was] Hou Xiaohou ((?)). (31) In other words, that whole [affair] was [directed] against the Qing dynasty, and so [they] attacked the territory. (32) Well, [they would] hold the territory [they] attacked, [and] as for [what

happened while] holding it, sometimes they--the Moslems--came and killed [people who] at that time {were considered} Chinese-PLSUF, [and it] was called the Moslem-Chinese struggle. (33) Actually the real nature of it was a Moslem-Bai struggle. (34) That is to say, the Bai-PLSUF {saw falsely = considered} themselves to be in fact Chinese-PLSUF, like that. (35) Well then, the earliest {position} of the Bai-PLSUF was [in] {representing business = doing business for} the Han-PLSUF--[having acted as] the {hands and feet} of the Han-PLSUF, [and having] sought to {settle down}, [they] sought to develop [their own] productive [capacities] and to pursue the activities of production. (36) Well, as for [what they] {took}, [I'm] afraid sometimes the troops in revolt would {take}--the Moslem troops would {take} a considerable {advantage}. (37) As for [what happened] sometimes, the brigades to which the Bai people {belonged}, [which] were in fact the brigades of the Ming dynasty, would also {get the advantage}. (38) Well anyway [we may] say that [they were] killing [each other] back and forth. (39) Well then, as for that time, it is known as the military faction {stirring up disorder}. (40) Well then, [we might] say [it] was impossible to put [it] down. (41) In the {territory} [it] could not be put down. (42) Well then, as for one time [it was happening at] {the place where} we lived, {where} we used to [be], that is, at Xizhong {near} Madeng. (43) What [they] got used to [was] killing each other back and forth. (44) Well then, as for [what they could] eat it was extremely lacking! (45) So, as for those who lived there, the {common people} were mainly Bai-PLSUF, completely Bai-PLSUF. (46) Well then, [they]

had rubbed each other [the wrong way]. (47) Well then, among them (inside their ranks) were a few of my--our grandmother's [people]-PLSUF. (48) [They] gathered in defeat at (we may say) at this village. (49) Well then, at a certain time [they] pulled up [their crops] at the [place where] our home was at this time in Qiaohou. (50) That is, at Qiaohou in Jianchuan [county]. (51) That is, [it] {dawned upon} [their] coming to {borrow = take up} residence, this [was] at--where was it that {he = they} {settled down}, that [it] {dawned upon} [their] coming to live? (52) As for Qiaohou, it was a salt mine. (53) That is, [it was] just a mine that [specialized in] boiling salt. (54) As for this salt-boiling mine, it had {gotten = signed} an American treaty through bribery during the time of the Qing dynasty government. (55) [It was] said that [they] would take the income of the salt boiling people, their money, [after] giving it to the salt miners-PLSUF, [they would] collect this money of theirs. (56) [They] wanted their money [in order to] join it all up together. (58) Well then the English-PLSUF, at the same time as living there, came to live at a company [place] in [the village of] 世8.倂2 in Dali Prefecture. (59) Well so [they] {disposed of = treated} this place {as being located in} the salt mine at Qiao4.hou4. (60) [They] {intended to} manage the tax payments of the Qiao4.hou4 salt mine. (61) Well so the KMT government of that time, although [they] had already {disposed of = treated} the government of Qing times for good... (62) The salt mine at Qiaohou was unable to {mine steadily}. (63) [They] {intended to} guarantee the production of the Qiao4.hou4 salt mine. (64) [People]-PLSUF of

any place [who want to] safeguard the whole [place] cannot [just] stay there and {try to} seize nourishment and seize horses.

(65) This [kind of] seizure [they are] not permitted to {do}.

(66) Well then, the revolutionized officials-PLSUF who lived there {enjoyed} relative {peace}. (67) PRT their living and production were rather {peaceful}. (68) Well then, our ancestor-PLSUF dreamed {to the point = that} as for that place, it was appropriate, that life [there] would be rather peaceful. (69) Well, and so at first [they] {settled down} at Qiao4.hou4, this [place] that we call "Gold"--like that, at Gold in Qiao4.hou4. (70) Well then, what my father has told me is that our earliest ancestor who came secretly from the inside to Qiao4.hou4 was called Li Tianfu. (71) That is, the "Li" character with {4 plus 8}. (72) The "Tian" character [meaning] blue skies. (73) The "Fu" character [meaning] happiness. (74) The earliest {ancestor} [was] just ... like that. (75) Well so he lived at Qiao4.hou4, on a hillside {near} our Gold. (76) On the hillside [they] lived for two or three generations--three generations.

(77) [By the time of] the fourth generation, [we] reach my fathers generation, like that. (78) Having reached my father's generation, my father's name was Li Chengbao. (79) The "Li" is still the "Li" with 4 and 8 ... like that. (80) This "Cheng" is the "Cheng" {that means} "succeed." (81) "Bao" is the "Bao" {that means} (82) What [we've] gone to is my father's name... (83) Well then my father also asked about the chicken's crow--this Bai girl who was [named] Yang.

(84) You see, [she was] surnamed Yang. (85) But what my mother's given name really was QPRT, even I didn't know (laughter). (86) In

the past, when I {met up with} a woman, it would be difficult [if I] didn't call her name, that's for sure, and so [I'll] call her Miss Yang. (87) Who Yang Yanyi ((?)) was QPRT, even I am unable to say at this time. (88) Anyway, as for my mother's surname, [it was] Yang. (89) My father was surnamed Li. (90) Well, so as for [all the above], I heard my father tell about [it], my father himself [would] say [it] in passing, at that time.

Text 9.1 (From LSN Bio: 4)

- (1) [ke6.ɕe2 ɲo9 tse2 pu9.tshō7 kau6.tsō6 mo9 tse5.ke2 no7 se9.vu7 a9.ja4] (2) [tu5.pū6 ɲo4 tɕi7.pū9.ʃā6 ɲo4 kau6.tsō6 sā6 ʃua2 no7 ts17.ko7 ɲu6 tsh17.tɕi7 no7 sū6.xuo8 ɲu6 tsh17.tɕi7 no7 li9.ɕā9 ε6.xau6 ts17.ko7 no9.li8 fū6.to6 ko8.tsō9 tʃhī9.khuā6 ji8.tʃu7.phia2 khō9 ta1.ɕo8 no7 tʃhī9.khuā6 tɕi7.pū9.ʃā6 tɕā9 tshu7 tɕhē6 la4]
- (3) [ɲe7 tɕhi4.tha7 fā7.miē6 nu7 tʃhī9.khuā6 nu7 ɲo9 ts17 ɣa8.mo7.ts17 ke6.sō6] (4) [ts17 ke6.ɕe2 xē6.miε4 n17 tse2.ka2 kau6.tsō6 mo9 tse5.ke2 no7 tɕhi4.tha6 ji9 fā7.miē6 nu7 se9.vu7 mu6.tɕa4 nu7 se9.vu7 ne2 ɲo9 mi2.khu7 nu7 tse2.ts17 mu6.no7 ji4.s19 pi7.tɕo6 tɕhō6 tɕe2 nu7 se9.vu7 ja4] (5) [ɲo9 tse2 tɕā9 mu6.no7 ka8 the6] (6) [ku4 kau6.tsō6 tse5.ke2 tsw8.tu8 ɲo9 ts16.ko7 kau6.ɕiū7 tsw8.tu8 ɲo9 ɕi9.xuā6 ɲa4.s17.s17 no7 s19.vu7 a9.the6 ts17 a6.se9 ni7] (7) [ts17 ɲu6 tshē6.ku9.ɲi9 ts17 ji4.tɕhie2 ni6 ɲo9 ts17 ke6.sā6 tu6 la4] (8) [ji8 ɣu6 sua2 ts16 se9 mo9 tse5.ke2 xa9.tō6 ɲi1.ku5] (9) [ts16.ko7 ju2 ũ2 pi9.tɕo7 tsha7]
- (10) [tsu7 sua2 ku4 kue8.miū4.tā7 tse2.ku7 se4.ke4.xu9 ku1 to4 khu7 no7 s16.ts17.ɲi5.xo2 tsw6 xā9.tsh17.xo9.tsh17 tɕi6.pū9.sā6 ts17 liā4.s17.s17 no7 tɕhī9.khuā6 la4] (11) [na7 ɲa6.mu6.ta2 ts17 sua2 ts17 tsu7.pī6 tsu7.pī6 ts17 ku4 tsu7.pī6 nu7 su9.khui6 no7]
- (12) [tε2.xuā6 la8 pi7.tso6 tshau4.su7 pi7.tso6 tshau4.su7]
- (13) [na7 se9 ɲi5 ts17 sua2 kuā6.tɕi6 jē7 nu7 ts16 ku6 nu6 xo2 no7 to2 no7 xo2 lia4 ni6 tu2 nu7 pi7.tɕo6 tɕi6] (14) [sue1.ʒū1 ɲo9 ts17 se9.se9 nu7 se9.vu7 ɲo9 tse8 no7 ko7 nu7 ε8.ɲī9 tɕi6.ts17 pe4 fy7]
- (15) [tē2.xuā6 vε7.xuā6 ɲe9 ts17 ɲo9 tse2 ts16.ko7 tsū7.tsū6 no7 a9

sē2] (16) [tsu8 tso4 s17 a9 sū6] (17) [pɛ7 ja4 tsū6 tse5
 lia4.s17 nu7 ts17 ŋɔ9 tsu6.jɔ6 kɔ4 ŋiū7] (18) [phiū4.tshā4 no7
 fā6.tɕa6 lɔ7 ɕɔ6.ɕi8 liā4.s17 ɛ8.ŋī1 tɕi6.ts17 pɛ4 fy6] (19) [kō6
 mu6 ti9.mo9.xo2 ɣa8 vē7.xuā6] (20) [vē7.xuā6 tsu9.ji8 lɔ9.tō6
 tuā1.liē1 ts17 ŋɔ9 xɛ8 ts16 tɕi1.tshā1 tshā7.tɕɛ2] (21) [tu9.pū6
 ts16 kō7 ŋua2.fy7.no7 sū7.xuo7 ts17 phū7.tɕi6.phū7.tē2] (22) [ɛ6
 se9 mo9 tse5.ke2 tu6 ŋi1.ku5 ɛ8 ts16 tshu7 tshɛ2 ko2 ta9 tɕi9 tsw7]
 (23) [ŋɛ7 tsa8.ŋi2.ts17 nu7 tshɛ2 ko2 ta9 tɕi9 tsw7] (24) [tshɛ2
 ko2 ta9 tɕi9 tsw7 tsw7 a6.sē7 ni2] (25) [tshu7 tsw7 ŋɛ5 tso4 khw7
 tua4] [ja] (26) [kɛ2 li6 sū6 tse2 kɛ2 li6 ts16 tso4 khw7 tua4]
 (27) [la8 tshu7 tsw7 sē6 ts17 ta9 tshu6 tɕɔ8] (28) [la6 tsu7
 tshɛ2 ko2 ta9 tɕi9 tsw7] (29) [liā4.s17 ni6 tsō7 tɕhiu9.khuā7 ju2
 tshu6 tui6 ji9.tɕhie8 ʒū4 tshē6.ku9.ŋi9 no7 mu7 tɕi1.khā7 nu7
 pi9.tsu6 so6.tɔ T?? ɕā7.tā7 no7 jī4.ɕā4 nu7 mu7 ja4] (30) [la7 ji8
 pe2 nu7 ji8 nu7 pi9.tɕɔ6 tā6.po4] (31) [se9 mo9 tse5.ke2 nu7 thio9
 tɕiū7 ni2] (32) [la8 tsu7 ŋɔ9 ta6.kɛ6 ts17 sua2 ɣu4 ɕau9.ɕɔ8 mo9
 tse5.ke2 ŋɔ9 tsu7 ko6 ŋu6 ti7 tɕɛ2 sua2] (33) [a6.ta2 ŋu6
 khue9.pi6-pho7 no7 ŋu6 khue9.pi6-pho7 no7 ke4.ts17 se9 ko2.ts12-pho7
 mu6 mu6 mu6 mu6 kua2.tu5-pho7 no7 ŋɔ9 ts17 tɕy6.tu2 sua2 nu7 mu6 fy2
 ts17 sē6 tɔ2 sē6 tsw7 ku1.tsua2 ku1.tsua2 tsw6 s17 liā4.s17.s17 no7
 sō4 a6] (34) [a9 ŋua2 tse6 ŋi2 sō4 liā4.s17 a9.pū6 kō7.pū6]
 (35) [a9 sua2 mo9 tse6 sō4 kɛ6 tɕhi7.pia2.pū6] (36) [ŋɛ6 s19 mo9
 tse5.ke2 tsw6 tse5 xa9.tō6.xu9 khuū6.nā5 tse5 ɣa8.mo7 tsw7 ā7.pē9 ni6
 ā7 khw7 tua4] (37) [nu7 sua2 nu7 nu7 suā6 pē9 nɛ6 tsw7 mu6 lia4
 ɣa8 jiu4.ɕā4 ke4.ts16 ts16.kɔ2 ɣu4.s16 lɔ4] (38) [ɣa8 jiu4.ɕā4
 ke4.ts16 ŋɔ9 thio6.thio6.pe2.pe2 ja4] (39) [ɣa8 jiu4.ɕā4

xuo8.tō4] (40) [nu9 sua2 ts17 pe4 a9.pio2 ne2 tsw7 tsa8.ts17 ko7
 no7 mu9 sō4 khu7 mo9 tse5.ke2 tsw6 ku6.tsua2 ku6.tsua2] (41) [tsw6
 mo9 tse5.ke2 ku6.tā7.tā7] (42) [tsw6 mo9 tse5.ke2 tso4.kua2
 tso4.kua2 ɸā7.tā7 nā5.ko2] (43) [le8 ji9.tɸhie8 no7 sua2 u6 mie4
 tsw7 u6 a6.xē9 pē9 li6] (44) [mu6 pē9 mu6 mie4 ni6 sua2 u6 thu7
 tua4] [ja4] (45) [la8 tsu7 tsū7 ni6.tsō7 mao9.pī6 ji8.ts1 taē7
 phia2 ke4.ts16 tshu6.tsō6.xu9] (46) [la8 tshu6.tsō6.xu9 tsw6
 ts17.ko7 xē8.s16 se7 jī2 fā6.tɸe2 lo7 yu4.s16 liā4.tsw7 ja8 fy6 tsw7
 pe2 phia2 thu9 tu7 no7 ni6] [pe2 phia2 tɸi6.pū9.sā6 pe2 tshu6 pā4
 thu7 tu2 ni6 ŋo9 pu6 kā9 ku4 thu6 ɸo9.ɸi8] (47) [tsw7 jao1 ku4
 thu6 ɸo9.ɸi8 tsw7 pā6.ko7 tsō7.tho7 ji8.ko7 tsō7.tho7 tē4 ku7 tshu6
 tā4 khu7 tsw6 tsu7 ko4 khu7 tsu7 tsu7 tsw4 khu7 thu7 tua4 la4]
 (48) [ya8 thu7 ku4 tsw7 tē2 khue6] [ja8.mo7.tsw7 a6.ta2
 khue6.ti7.ka6-ne5] [ja4] (49) [ya8.mo7.tsw7 a6.ta2 khue9.pi6-pho
 no7 mu6 mu6 mu6 # mu6 mu6 mu6 kua4 tse2 tse2 ya8 tsu7 # le8.lo7.mo7
 sō4 tɸiū1.ɸi2.ko4.tua4] (50) [tsw7 li6 tsw7 khu7 thu6 tua4]
 (51) [tsw7 a9.pū6 nu6 ŋo9 tsw7 tse2 nu7 sua2 tsw7 ŋo9 sa8 ɸy6.thā6
 fā4.tɸe2 pia2 xo7 phia2 ku4 yu8] (52) [la8 ŋo9 thu2 tu2 nu6 tsw7
 ŋo9 ɸā6 zu6 pe9 tsw7 tsw6 ku4 ke4.ts16 pe9 thu7 tu6 nu7 ɸā6 zu6 pe9
 tsw7 # ɸā6 tsw6 pe9 tsw7] (53) [ŋo9 mo9 tse5.ke2 tsw6 ŋo9 xē8 jī6
 tsw6 se9 tɸe2 ɸi9.xuā6 tse2 phu6 kho4 tɸhī4 no7 mo9 ja4] (54) [la8
 ŋo9 ku4 tshu7 ku4 sē4 ŋi5.kē2 a9.ŋi5 kō7.ŋi5 thō9.ɸye8 ne6 ŋo9 tse2
 khu9 tim9 tɸe2 tā6 ɸiū7 tshu7 ŋe9 tshu7 phu6 tshu6 kā7 tshē6 tshu7
 ŋi5.kē2 tshu7 ɸā6 s16 ta4] (55) [s18 le4 fŷ7 tsō6 tsu7 sua2 tsw7
 u2 mu6.no7 xā8 ju2 xua6 tsw7 ko2 no9 mu6 tse5.ke2 lia4.s17 ke4 ts17]
 (56) [a9 ke4 tsw6 ne4 ni6] (57) [a9 tsw8 tsw7 khu6 nu7 ti7 mo9

kho7 tsw7 ʔul*** lia4.s17.s17 nm7 tsw5 nm7 tsw7 a6.sē9 li6 suē7 #
 ja4] (58) [tshu7 sē6 jī7 tshu7 tshue7 tsua4 fē4 khw7 tshue7 tsua4
 fē4 khw7 lia4.s17 nm7 xuā7 tçi6 xuā tā4] (59) [ɲa4 ko2 pho7 tsw7
 mu6 mu6 mu6 # ko2 pho7 tsw7 sua2 tsw5 khw7 liw5 ni6 a9 ke8 tsw6 ku7
 tsw6 khua9*** lia4.s17 ma9 sū6 nm7 tsua4 thw7 ke4.ts16 tse2.kw7 thu7
 thu7 tse4 no7 la4] (60) [le8 tsu7 ŋw6 tshē6.kw7 ɲi5 mo9 tse5.ke2
 tsha6 thw7 tsha6 thw7 nē6 lia4.s17 no7 pu6 no7 # ja] (61) [nu7 ue6
 nu7 nē7 nu7 tsu6 tsw7 sua2 ɣw4.s16 li6 ji9.tçiū7 tçā6 tshu7
 ji9.tçhē8] (62) [tsu9 jɔ6 tsw7 ko2 pho7 nu6 sō4 tshu6 ke6 sã6 çi7
 gwa2 tsw7 kō7 kho6 nu6 tçi2 mi2 thua9 lu7] (63) [tçā6 tshu7
 ji9.tçhē8 u7 nē8 tsw6 ji9.tçiū7 nu6 tçā9 ko2 la4] (64) [tshu7 sua2
 lia4.s17 ni6 tsō7 tçhiū4.khuā6 ji8.ts16 ɲiē4 çy6 ku4 phia2 ke4.ts16
 tshu6.tsō6 pi9.je8 ni6 sao6 ue7 pi9 ço9.çyē8 mo9 tse5.ke2 tsw7
 ke9.sã6 thw7 tçē2.tsw7] (65) [jī6.ue7 tshu6.tsō6 pi9.je8 mo9
 tse5.ke2 tsw6 tuā1.liē1 sū9.thi9 liā4.s17 xē8.s16 tse4 lao9.s16.xo2
 mu6 ɲi5 tā6 ço6 lu9] (66) [khue6 xuo9.tō6 tshā7.tçē7 nu7 tçi6]
 (67) [khe6.tm2 fē6 khw7 tse2 jī5 tshā7 pho9 tē2 pho9 liā4.s17.s17
 lu7] (68) [tw8 tɔ6 nu7 tuā1.liē1 nu7 tçi9.xue6 pi9.tço6 tçi6]
 (69) [la8 tshu7 thi9 tsw7 sã6 tse6 tshu7 ε2 ɲi4.tçi8 tshu7 sã6
 ɲi4.tçi8 tsw7 pi9 tshu7.tsō7 ji8 ɲi4.tçi8 mo9 tse5.ke2 xē8.s16
 ço7.çu7 tçi8 la4] (70) [ɲɛ7 sua2 tsū7 tsū7 no7 sua2 tsw7 tse4 tsw7
 ɲi4 ɲue4.tçhuī6 ɲi4 ke9.sē6 nu7 nu7 tse2 ya8.mo7]
 (71) [ɣu7.fy7.nu7 tsw6 ɣw4 phia2 ke4.tsw6 kao7.tsō6 fy8 ɣw4 tsw6
 tshu7 phia2 ke4.tsw6 kɔ7 ε2 kɔ7 sã6 nu7 tshu6 jo4 xū9 ta2 no7 ke9.sã6
 la4] (72) [la8 ɣu7.fy7.nu7 tsw6 ɲo9 mi2 khw7 tsw7 lia4.s17 nm7
 s19.γ7] (73) [ue4 a6.xē9 nu7 ŋw6 tshē6.kw7 nu7 pi9.tço6 tçhō6 tçē2

ni6] (74) [kɔ6.tsõ6 mo9 tse5.ke2 tsw6 tshẽ6.ku7 ne5 ɸã6.tã6 ɸo9
ja4] (75) [ɸo9 nu7 mu6 ue4 a6.xẽ9 nu7 ɸo9 ni6] (76) [tsu9.jɔ6
tsu7 liã4.s17.nu7 ɲo9 ɲo9 tsu6 tu2 liã4.s17.nu7 kõ7 the6] (77) [a9
the6 tsu7 ɲo9 phiũ4.tshã4 tse2.ku7 tɸiũ6.tshã7 tɸiẽ6.s17 tuã1.liẽ1]
(78) [a6.ta2 ɸo4.khẽ5 tsu7 xuo8.tɸhiũ6 tsõ7.ɸye8 lu7 ɸo4.khẽ5 tsẽ5
tsẽ5 mo9 jã4] (79) [tsu7 ku6 fã7 juĩ4 kẽ6 tsu7 s16 kõ7 li9]
(80) [tsu7 mu6 mu6 mu6 mu6 # mu6 tsõ4 tshu7 lu9 mo9 jã4]
(81) [ɸo4.khẽ6 nu7 tsẽ5 tsẽ5 tsu7 nu6 mo9 nu6 tsu7 tse5.tɸhy6.tɸhy6
ja4] (82) [mu6 nu7 tse5.tɸhy6.tɸhy6 lu7 tsu7 mu6 ɲua2.fy2.nu7 tsu6
mu6 thu9 jɔ6 pi9.tɸɔ6 pe9] (83) [la8 ɲo9 xã6 tsu7 jĩ2 khe6.tu2
tshu6.la4 ɸy6.thã6 sã6 tshu8 tsho7 tɸhy8 lu7 ɸy6.thã6 tɸi8.thi9 tshu8
tsho7 ji9.uai7 tse2 tsu7 pã6 ko7 tsõ7 tho7 nu7 s16.tɸhĩ8]
(84) [fẽ7.tsũ6 ɲo9 tsu7 ue4.ɰao4 khu7 tsu7 tshu6.tsõ6 ɲo9 jĩ8.ne4 #
ɲo9 tshu7 ue4.ɰao4 khu7 pu6 tse5 tɸhuĩ6 nu7 tɸhuĩ6 nu7 tɸhuĩ6]
(85) [xa7.ts16.jĩ6.ts16 jĩ7 pho6 a6 tɸhuĩ6 # a4] (86) [la8 nu7
ne6 ɲo9 tshu7 tɸiũ6.tshã7 tɸiẽ6 tshu7 tuã1.liẽ1] (87) [la8 tsu7.ku7
tsu7.ku7 ne7 nu7 tsu7 ji8 tsõ9 fã7.s16] (88) [ti9 ɛ1 tsõ7 fã7.s16
tsu6 ɲo9 tshã6.tɸie6 ke4.ts16 nã5.tɸhio7 tue1]

Text 9.2 (Translation)

(1) Today I still [want to] add [something about] the events {during} the time [I was in] upper middle school. (2) {Last time} [I] basically {finished} telling everything about my own life, my own ideals and struggles {during} [my] three years of upper middle school {for you}, all the way up to the {time when} [I] took the university entrance exam. (3) But, {why don't} I introduce [some] things about other aspects [of that time]? (4) As for this evening, I've just thought of [some] events {surrounding} one other aspect of that time [in] upper middle school, events whose meaning is rather nice. (5) [So] I'll narrate a few more scenes of that. (6) What one thing [do you think] it was that made me happy, {something like that} when I was in upper middle school? (7) As for my body, I've managed to improve [on it] in every respect. (8) One [thing I haven't] mentioned is [that] when [I] was young my home was poor. (9) That is, [what we] ate and drank was somewhat deficient. (10) That is to say, children growing up in that world of the Guomindang ... everyone [of them] had basically that kind of conditions. (11) Well then our home was, let's say, at the salt-boiling {mine.} (12) [We] dug ore, and so it was rather damp, rather damp. (13) Well then the small-fry, you could say, as for arthritis, that kind like the old folks, the big folks [get], those who got it were quite numerous. (14) Although I was [only in my] childhood, I often {went over} into the mines. (15) Digging ore and carrying ore, however, I still did not really know [much] about. (16) [If I would] do a job [I'd get] a few {lit.

one or three} hundred, like that, [but] to earn [regular] money, I never did it that way. (17) But [during] ordinary holidays, vacations and such [I would] go into the mines. (18) [But] I didn't dig and carry ore with my parents. (19) Still, as for {participating in} manual labor, I often [did that]. (20) [So] as for before, [I] was in continual contact {lit. running back and forth in} with the life outside [of school]. (21) As for [how I] went around, because when [I was] young [I was] poor, [I] {went around like a} "bare footed earth treader." (22) Like [that], the whole day long [I went around as a] bare footed earth treader. (23) Well then, what [sort of thing] is a bare footed earth treader? (24) It's just [someone who] can't put on shoes. (25) [It's] like that. (26) And as for straw sandals, even those I couldn't put on. (27) Well, it was just like "treading on red feet." (28) Well [I was a] bare footed earth treader. (29) {But} that kind of conditions, for every person, the health of [a person's] body must suffer a lot of interference like that. (30) Well, [and also my] clothing was very poor. (31) [So that was] how things were in my childhood. (32) Well, so when [I was] probably about in primary school, I said to my father: (33) "Here, my leg, around my ankle, [around] its bone--I {remember saying}--around there, it hurts just like it was pinched freezing cold, deep down." (34) In one month [it] still [might] {start} hurting like that once or twice. (35) Within one year, then, I'm afraid it {would therefore} hurt seven or eight times. (36) But, as for when I was young, since in [our] family [there were] difficulties and there wasn't any money, [if you wanted to] {see a doctor about}

an illness [you] wouldn't be able to {see about} it. (37) But, I should say [that] illness certainly didn't interfere with [my] studies. (38) [It] didn't interfere with me going around here and there, like that. (39) [It] didn't interfere with [my] activities. (40) {If I say it} wasn't an illness, then as for when it started to hurt [as if my] foot were being pinched, it [would be] pinched freezing cold. (41) That is, at that time I felt deep, deep cold. (42) That is, at that time it was really very hard for me to bear. (43) Well then, to talk about all of this, give it a name, what was the illness called then? (44) That illness, its name--[I] couldn't pronounce it. (45) It's like that. (46) Well then [I] {bore up under} this kind of problem all the way up to [when I was] in lower middle school. (47) So then as for [being in] lower middle school, [I] still {would go back and forth between} holidays and study, like that, {running} back to, getting as far [on] the road as, basically having gotten halfway [along] the road {then what?} I didn't dare to sit down and rest. (48) That is, [if I] wanted to sit down and rest it would be half an hour [or] one hour [before I'd] start trembling, and having done that [I] couldn't stand up again. (49) Maybe through [my] achilles tendon, or maybe here [in my] crotch, or maybe here [in my] leg, {the/its} bone [would] still--or else maybe--wow, [it would] hurt unbearably. (50) [I] couldn't even stand up. (51) There was one time [when] I had--[you might] say--returned home on a holiday from school. (52) So then, along the {way}, I took a rest, that is, I sat down on a stool to take a rest. (53) [Since] at that time I was still rather young, [I] still loved the harmonica and such. (54) So then,

I just sat and played [for] one or two classmates, {but} [since] I was still a little bit {shy} (worried) [I] would only have blown a few sounds [while] people took it easy. (55) [You could] say [it was] about {five} minutes, that is, {as the saying goes} [at] one time [I would play] {about as long as it takes to} {have a smoke}. (56) As for one time, {what do you think} [happened] QPRT? (57) As soon as I stood up, {my} head was whirling around like that [and I was] soaked [with so much sweat that I] didn't know anything [that was happening]. (58) Well {the reason was that} [I] got up {so} fast {that} [I] swayed back and forth. (59) Yes, and as for [my] foot, you might ask {what happened} [when I] stood up--{this time} it hurt like {SOMPHON} [so that I] fell down by the right side of the road. (60) So then, my body was defective [to the extent that] {things like this} [would happen], you see. (61) What [I was] doing (or what I did), you might say [I] have already told all about [my] studies. (62) The important thing is [that] in three or four months [my] foot would have hurt {maybe around} two times. (63) [I] have told [you] everything, you see, {already/before} [I] told [it to you]. (64) So we could say that this kind of condition, all the time [I was] studying up until the time of lower middle school graduation, {what do you think?} [it was] actually improved a little bit over the time [when I was in] primary school. (65) As for [the reason], at that time when [I] graduated from lower middle school, [my] training in {bodybuilding} and such was really [due to] the goodness of [my] wrestling teachers. (66) [There were] many [opportunities to] participate in other activities [than study]. (67) In the morning

[when I] got up [I] {still had to} eat breakfast and chop [wood].
(68) My own opportunities for training were relatively many. (69) So then, compared to [my] first year of lower middle school, [my] {hand to hand wrestling} in second year and third year was very good indeed. (70) But, to tell the real truth, [my] wrestling was still not as much improved as [my] {weightlifting}. (71) As for later on, as for [how it was after I] studied on to upper middle school, [by the time I] had gotten up to second and third year, there was a very great improvement. (72) So, as for [what happened] later on, I think [it was] something like that. (73) [But] why is it that my body [turned out] so well? (74) As for when [I was in] upper middle school, [my] body was really excellent. (75) [If it was] excellent, then why was it excellent? (76) The important [reason] is like this: I did two things like this. (77) One thing was [that] I always (usually) practiced "fighting hand." (78) Here [I should say something about] the Heqing middle school, the Heqing city wall, {what that was like}. (79) [It] was, maybe, four miles all the way around. (80) The top of it came down like that. (81) The city wall of Heqing was, it was {symmetrical}, like so. (82) [Although] it was {symmetrical} the land [lying] outside it was quite flat. (83) Well then, what I {recall} is that in the morning, outside of horsing around at school, horsing around together, there was still about half an hour of {stuff to do}. (84) Anyway, I would go up around it, go up to the top, I would {procrastinate} and go up around [on] that wall, balancing [myself]. (85) Everybody [would] go in [and] run around balancing [on it], you see. (86) Well, so the second [thing

is that] I usually practiced "fighting hand." (87) Well, this second [thing] is one aspect [of it]. (88) As for the second aspect, I participated in the basketball team.

Appendix 2
 Rhyming Glossary of Jianchuan Bai Syllables
 with English Translations

	Rhyme: -i	p-
ant	pi21+po21+	
dragonfly 5	tɕi55ko55lo55yo21+pi21+ɕo21+	
taro	pi21+th̃55	
bedbug	pi55si55tsi33	
blow (wind)	pi55si55tsho44+	
left side	pi55fɿ33	
wind	pi55si55	
thigh 2	khue31pi55	
low	pi33	
fountain pen 2	sui31pi35	
pencil 2	tɕhẽ33pi35	
palmbark cape	pi31se44+	
		ph-
cheap	phi55ji44+	
malaria 2	fɛ44+phi55vu31	
slow	phi55	

criticize phi33phiū42+

m-

root mi44+

forget 2 phe44+mi42+qi55

neck 3 ky42+ly42+mi42+

noodles 2 mo44+mi42+xē55

mirror 2 kē42+mi42+

square 2 qi44+mi42+qi44+ky44+

wheat flour 2 mo44+mi42+

tears mi42+qī42+

cotton mi55xua55

moon mi55ηua44+

think over mi33

tq-

economics 2 tqū33tqi55+

plan tqi55+xua55+

technique tqi55+su35

secretary 2 sy33tqi55+

autumn 2 tqhw55tqi44+

leech tqi44+

spring 2 tshy55tqi44+

summer 2 yo21+tqi44+

winter 2 ty55tqi44+

bear (v.)	tɕi42+xɛ̃55
fast	tɕi42+tsua42+
chase	tɕi42+
expel	tɕi42+tɕhi44+
ADV quickly	tɕi42+tɕi42+tsua42+tsua42+
KIN BCF 2	jɿ̃33tɕi42+
hunt	tɕi42+sɿ42+
KIN BCM	tɕi42+tsi33
earthworm	tɕi21+ke55tsɿ̃21+
bracelet	tɕi21+
flag	tɕi21+
yesterday	tɕi21+jĩ44+
sing	tɕi21+khy44+
BPback 3	to42+ko42+tɕi55
dragonfly	tɕi55ko55lo55yo21+pi21+ɕo21+
PRON how much	tɕi55ɕu33
pumpkin	tɕi55kua55
melon	tɕi55kua55
plough	tɕi55ku55
kerchief 2	su44+tɕi55
many	tɕi55
pigeon	tɕi55ku55
hungry	tɕi55kha44+
winnowing fan 3	po33mo33tɕi55
armpit 3	jō21+mo33tɕi33kã42+
aircraft 2	fe33tɕi33

pull B	tçi33
machine	tçi33tçi55+
tractor 3	tho33la33tçi33
chest 3	çĩ55kho55tçi33
economize	tçi35jo35
positive	tçi35tçi35
working class 4	kõ33sũ42+kẽ33tçi35
earth	tçi31
clear sky 2	xẽ55tçi31xu33
dry field 2	kã55tçi31
overcast 2	xẽ55tçi31tshu33
scissors	tçi31ta55

tçh-

automobile	tçi55+tshe33
highway	tçi55+tshe33lu55+
machine 2	tçi33tçi55+
exit 2	ŋe21+tçi44+
expel 2	tçi42+tçi44+
lacquer	tçi44+
NUM seven	tçi44+
seventh month	tçi44+ŋua44+
sound 2	tshẽ55tçi44+
strength	tçi44+yu42+
fertilizer	tçi55tshu33

eggplant	tɕhi55tsi33
ash (plant)	tɕhi55su55
manure	tɕhi55
maggot	tɕhi55tsɿ̃21+
thorn	tɕhi31

j-

communism 4	kō55+tshē̃31tsy31ji55+
NUM 100 million	ji55+
idea	ji55+tɕē̃55+
socialism 4	sɛ55+xui55+tsy31ji55+
first day 3	ŋua44+xē̃55ji44+
cheap 2	phi55ji44+
eleventh day 2	tse42+ji44+
NUM eleven 2	tse42+ji44+
NUM twenty one 2	ni31ji44+
NUM one	ji44+
KIN FF 2	ɛ55ji42+
wear	ji42+
CLF-armspan	ji21+
look for B	ji21+
garment	ji55
knife	ji55tã55
kitchen knife 3	tshuã33tshu31ji55tã55
waist	ji55kua44+
sleeve	ji55tu21+

wing	ji33khy55
NUM one C	ji35
chair	ji31tsi33
sharp	ji31

ç-

fourth month	çi44+ɲua44+
flea 2	khuã33çi44+
NUM four	çi44+
louse (body)	çi44+
square	çi44+mi42+çi44+ky44+
forget 3	phe44+mi42+çi55
tin	çi55
die	çi33
chairman 2	tsy31çi35
NUM twenty 2	ni31çi31
like	çi31xuã55

t-

peanut	ti55+çõ33tsi31
before now	tuw21+ɲy55
hawk	ti55lu33ua42+
horn (woodwind)	ti55tẽ44+
KIN F 2	a31ti33
enemy	ti35suã42+

NUM ordinal eight	ti31pia44+
NUM ordinal five	ti31ŋy33
NUM ordinal one	ti31ji44+

th-

develop	thi42+kao33
improve	thi42+kao33
ladder 2	tsu21+thi55
KIN YS 2	jŷ33thi33
KIN YB 2	a31thi33

n-

mud	ni21+ue55
cat 2	ã55ni55
grasp	ni55
NUM twenty	ni31çi31

l-

triumph 2	sū55+li55+
butterfly 2	ko55li44+
also	li55
fruit 2	çui55li55ta21+se44+xu33
ADV surely 3	tsi55ke21+li55
manage 2	kuẽ31li31

prime minister 2	tsõ31li31
repair 2	ço55li31
	ts-
freedom	tsi55+jo42+
comrade 2	thõ42+tsi55+
politics 2	tsũ55tsi55+
first month	tsi55ɲua44+
oil	tsi55
loom	tsi55se44+tça44+
celebrate new year 2	ko42+tsi55ɲua44+
weave	tsi55
table	tsi55tsi33
last year 2	na21+tsi55
struggle 2	to55tsũ55
ADV surely	tsi55ke21+li55
sugarcane 2	kã55tsi55
cart 2	tshe55tsi33
day after tomorrow	tsi33jɸ44+
girl 3	jɸ33na42+tsi33
chili 2	la35tsi33
arm 3	su33pã31tsi33
finger 3	su33tu21+tsi33
bedbug 3	pi55si55tsi33
chair 2	ji31tsi33
all 3	tsa35ke21+tsi33

hail 3	sui44+ua42+tsi33
brush 2	sua55tsi33
bat 3	po55po44+tsi33
eggplant 2	t̄hi55tsi33
boy 3	çao31xo31tsi33
CLF-knife	tsi33
insane person 2	vu21+tsi33
lightning flash (v.) 2	sē21+tsi33phiw44+
platter 2	pā21+tsi33
KIN CM	tsi33jī21+
man	tsi33jī21+
market	tsi33
KIN BCM 2	t̄i42+tsi33
kidney 2	jao55tsi33
lick	tsi33
paper	tsi33
mosquito 2	mo44+tsi33
teeth	tsi33pa44+
throat 2	ku21+tsi33te44+
swallow 3	xē55ŋe33tsi33
whip 3	mɛ33piao55tsi33
window 2	tshuā55tsi33
table 2	tsi55tsi33
student 3	ɣw42+sɣ55tsi33
sparrow 2	tso44+tsi33
stockings 2	va55tsi33

shop 2	phu31tsi33
sand 2	so55tsi33
hat 2	mao44+tsi31
bullet	tsi31tã55
mosquito net 2	tsã44+tsi31
peanut 3	ti55+çõ33tsi31
persimmon 2	tha44+tsi31
silk cloth 2	tsho55tsi31

tsh-

lose B	tshi55
spit	tshi55
transport	tshi55
CLF-foot	tshi33

s-

bedbug 2	pi55si55tsi33
blow (wind) 2	pi55si55tsho44+
ADV INTENS 2	tso35si55
KIN MS 3	a31ŋy33si55
wind 2	pi55si55
excrement	si33
land (dry) 2	thu33si33
ramie	si33
thought	si33çã31

suffer defeat	si35pɛ44+
begin 2	khe33si31
cooked rice 2	xɛ55si31
second month	si31ŋua44+

Rhyme: -i p-

change	pi42+
mucus	pi21+ɕi21+
braid 3	tu21+ma55pi55
plait	pi55
salt	pi55
roll up	pi55

ph-

overflow B	phi33
sun 2	ji44+phi31

tɕ-

arrow	tɕi42+
CLF-catty	tɕi55
bear	tɕi55
gold	tɕi55
pointed	tɕi55
tendon	tɕi55

CLF-pair	tɕi33	
near	tɕi33	
		tɕh-
NUM thousand	tɕhi55	
hot (pepper)	tɕhi55	
shallow	tɕhi33	
		j-
enter 2	ɣu35ji44+	
day	ji44+	
hot (weather) 2	ũ31ji44+	
young	ji44+sua44+se31	
yesterday 2	tɕi21+ji44+	
sun	ji44+phi31	
today 2	ke55ji44+	
CLF-person	ji21+	
boat	ji21+su55	
elderly person 2	ku33ji21+	
guest 2	khe44+ji21+	
KIN H 2	po55ji21+	
PRON EGO 3	tu42+ta55ji21+	
man 2	tsi33ji21+	
KIN W 2	vu33ji21+	
person	ji21+kẽ55	

rich 2	ko21+jí21+po55
KIN CM 2	tsi33jí21+
KIN CF 2	jǎ33jí21+
woman 2	jǎ33jí21+
silver	jí21+
sickle	jí21+
poor	jí55ku21+
NUM zero	jí55
tobacco (cured)	jí33

ç-

tears 2	mi42+çí42+
look for	çí21+
mucus 2	pí21+çí21+
firewood	çí55
KIN FYBW 2	a31çí55sũ31
new	çí55
heart	çí55
ADV slowly 3	khuã55khuã55çí55çí55
chest	çí55kho55tçí33
saliva	çí55ny44+tse44+
believe in	çí31

t-

cinema	tí55+jũ31
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electric lite	ti55+tu33	
telephone	ti55+xua55+	
	Rhyme: -e	p-
suffer defeat 2	si35pe44+	
NUM hundred	pe44+	
daytime	pe42+tsy42+ji44+	
cabbage	pe42+tshu31	
lock 2	tso42+pe42+	
lazy	pe42+jo33ku33	
white	pe42+	
draw harrows	pe21+	
pay for	pe21+	
		ph-
forget	phe44+mi42+ci55	
bladder	phe55u33	
rice gruel	phe55vu42+	
soft	phe55	
		v-
write	ve42+	

f-

fat (meat)	fɛ44+
malaria	fɛ44+phi55vu31
pay (wages)	fɛ44+
marry (give) 2	tɛ44+fɛ44+jỹ33

m-

crawl	mɛ44+
buy	mɛ42+
crow (v.)	mɛ21+
light	mɛ21+
thunder 2	xẽ55mɛ21+
frog 2	õ21+mɛ55
horse	mɛ33
whip	mɛ33piao55tsi33

tɕ-

borrow/lend	tɕɛ44+
beautiful 2	xã55tɕɛ42+

tɕh-

kick	tɕhɛ44+
vomit	tɕhɛ44+

		ɸ-
day B	ɸɛ44+	
henceforth 2	ɣu33ɸɛ44+	
		t-
representative	tɛ55+pio31	
marry (give)	tɛ44+fɛ44+jɿ̄33	
blind person 2	ŋui33tɛ55	
		th-
attitude	thɛ55+tu55+	
thunder (v.) 2	xɛ̄55thɛ44+	
		n-
let fall	nɛ42+thw55	
		ts-
fodder 2	te42+tɛɛ44+	
narrow	tɛɛ44+	
milk 2	pa42+tɛɛ44+	
saliva 3	ɸī55ŋɣ44+tɛɛ44+	
eleventh day	tɛɛ42+jɿ44+	
fifteenth day	tɛɛ42+ŋɣ33	
pick up	tɛɛ42+	

right side	tse42+fy33
NUM eleven	tse42+ji44+
NUM ten	tse42+
thirtieth day 2	sã55tse42+
tenth day 3	ŋua44+xẽ55tse42+
tenth month	tse42+ŋua44+
sixteenth day	tse42+fy44+
time (span/point)	tse21+kẽ44+
stupid	tse35to35

tsh-

red	tshẽ44+
cart	tshẽ55tsi33
automobile 2	tq̃hi55+tshe33
highway 2	tq̃hi55+tshe33lu55+
train 2	xo31tshe33
policy 2	tsũ55tshe35

s-

commune head	se55+tsã31
commune 2	kõ33se55+
socialism	se55+xui55+tsy31ji55+
cut crop	se44+
fruit 4	çui55li55ta21+se44+xu33
establish 2	tçẽ55se35

easy 2	ɣo42+sɛ31
affair	sɛ31vu33
k-	
fingernail 3	su33tu21+kɛ44+
good C	kɛ44+
husks 2	tshō55kɛ44+
seize	kɛ44+
time (span/point) 2	tɕɛ21+kɛ44+
expensive	kɛ42+to42+
price	kɛ42+
trim	kɛ42+
wages 2	ɣu42+kɛ42+
all 2	tɕa35kɛ21+tɕi33
meat	kɛ21+
ADV surely 2	tɕi55kɛ21+li55
earthworm 2	tɕi21+kɛ55tɕȳ21+
mouth 2	tɕui33kɛ55
stem	kɛ55kua44+
this year	kɛ55tɕi55
working class 3	kō33sū42+kɛ33tɕi35
liberate	kɛ31fã55+
revise	kɛ31
reform (land tenure) 2	thu31kɛ31

kh-

guest	khe44+jf21+
host	khe44+tsu33po55
saddle 2	ã55khe44+
morning	khe55tu21+
begin	khe33si31
hold meeting	khe33xui55+

γ-

bottom	γe33fy33no33
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x-

cooked rice	xe55si31
skirt	xe31ku31

η-

forehead	ηe44+te44+
yoke	ηe44+ne21+
hard	ηe42+
exit	ηe21+tqhi44+
go	ηe21+
sprout	ηe21+
swallow 2	xẽ55ηe33tsi33

0-

KIN FF ε55ji42+
 mute person ε33po55

Rhyme: -ē p-

method pē55+fa35
 magpie pē42+tçha44+vu55
 flat pē21+
 plain pē21+tā31
 split open pē55
 plank pē33
 take B pē33
 cure 2 xā55pē31
 get sick pē31sȳ31

f-

turn over (reform) fē33sū33
 oppose fē31tui55+
 reactionary fē31tō55+

tç-

idea 2 ji55+tçē55+
 in advance tçē42+tu21+
 after B tçē42+γu33

nail to (v.)	tqẽ42+
establish	tqẽ55se35
nail	tqẽ55
pull	tqẽ55
well	tqẽ33
inspect	tqẽ31tsha42+
shave (head)	tqẽ31

tqh-

blue	tqhẽ55
listen	tqhẽ55
thin (liquid)	tqhẽ55
pencil	tqhẽ33pi35

j-

experience 2	tqũ33jẽ55+
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q-

county head	qẽ55+tsã31
line (polit.) 3	tsõ31lu55+qẽ55+
surname	qẽ42+
fishy (smell)	qẽ55
awaken	qẽ55qẽ55
smoke 2	xui33qẽ55
star	qẽ55

advanced	qẽ33tqũ55+	
		t-
forge (iron)	tẽ44+the44+	
fight 2	sã55tẽ44+	
dig	tẽ44+	
horn (woodwind) 2	ti55tẽ44+	
strike B	tẽ44+	
		ts-
ADV often 2	tsõ21+tsẽ42+	
city (wall)	tsẽ21+	
needle	tsẽ55	
true	tsẽ55	
pillow	tsẽ33tu21+	
		tsh-
body	tshẽ55ku31	
pot	tshẽ55	
light (weight)	tshẽ55	
sound	tshẽ55tqhi44+	
shadow 2	kẽ33tshẽ55	
swell	tshẽ55	
sleep	tshẽ33	

communism 2	kõ55+tshẽ31tsy31ji55+
produce 2	sũ33tshẽ31

s-

god	sẽ21+
lightning flash (v.)	sẽ21+tsi33phiw44+
throw	sẽ21+
doctor 2	jo44+sẽ55
deep	sẽ55
mushroom	sẽ33
PRON what 2	a55sẽ31

k-

mirror	kẽ42+mi42+
fear (v.)	kẽ55
person 2	ji21+kẽ55
copper	kẽ33
shadow	kẽ33tshẽ55

x-

first day 2	ɲua44+xẽ55ji44+
fifth day 2	ɲua44+xẽ55ɲɣ33
bear (v.)2	tɕi42+xẽ55
noodles 3	mo44+mi42+xẽ55
raw	xẽ55

radish	xē55tshu31
third day 2	ŋua44+xē55sā55
tenth day 2	ŋua44+xē55tse42+
wet	xē55
second day 2	ŋua44+xē55ne44+
soup	xē55

Rhyme: -γ f-

belly	fγ44+
NUM six	fγ44+
sixth month	fγ44+ŋua44+
sixteenth day 2	tse42+fγ44+
saw	fγ42+tshe44+
bee	fγ55
fly (v.)	fγ55
smallpox	fγ55
bottom 2	γe33fγ33no33
right side 2	tse42+fγ33
left side 2	pi55fγ33
top 2	tō33fγ33no33
fortunate 2	ɸū55fγ35
government 2	tsū55+fγ31

t-

get angry	tγ42+
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		th-
sprout (v.)	thγ31ŋε21+	
		n-
dragon	ny21+	
pus	ny21+	
		l-
green	ly44+	
neck 2	ky42+ly42+mi42+	
		ts-
candle 2	la44+tsy44+	
bamboo	tsy44+	
bamboo shoot	tsy44+çui33	
daytime 2	pε42+tsy42+ji44+	
cooked	tsy42+	
bug	tsy21+	
child 2	sy55tsy33jγ33	
boil (trs.)	tsy33	
democracy 2	miw42+tsy31	
chopsticks	tsy31	
communism 3	kō55+tshē31tsy31ji55+	
chairman	tsy31çi35	

neck	ky42+ly42+mi42+
horn (antler)	ky44+
sit	ky42+
shout	ky55
ghost	ky33
mantis	ky33suā33ma33ke55
kneel	ky31

kh-

folk song	khy44+
crooked	khy44+
nose 2	ŋy21+khy44+tu21+
sing 2	tɕi21+khy44+
wing 2	ji33khy55
snake	khy33
nest	khy31

ŋ-

carpenter	ŋy44+tɕō42+
saliva 2	ɕi55ŋy44+tse44+
dream 2	mu31ŋy42+
NUM ten thousand	ŋy42+
cloud	ŋy21+
nose	ŋy21+khy44+tu21+
yellow	ŋy21+

before now 2	tu21+ŋɣ55
fish	ŋɣ55
front 2	tu21+ŋɣ55
fifth day 3	ŋua44+xɛ̃55ŋɣ33
fifteenth day 2	tse42+ŋɣ33
fifth month	ŋɣ33ŋua44+
KIN MS 2	a31ŋɣ33si55
NUM five	ŋɣ33
sweet 2	kã55ŋɣ33
tail	ŋɣ33tɿ̃55
thing	ŋɣ33tã42+

Rhyme: -ɿ̃

f-

fat (person)	fɿ̃21+
distribute	fɿ̃55
letter 2	sɣ55fɿ̃55

j-

child 3	sɣ55tsɣ33jɿ̃33
girl	jɿ̃33na42+tsi33
marry (give) 3	te44+fɛ44+jɿ̃33
KIN CF	jɿ̃33jĩ21+
KIN YS	jɿ̃33thi33
KIN BCF	jɿ̃33tɕi42+
woman	jɿ̃33jĩ21+

		ɸ-
elephant	ɸỹ21+	
		t-
cave	tỹ44+	
copper B	tỹ21+	
eleventh month	tỹ55ɲua44+	
east	tỹ55	
household (home) 2	xa31tỹ55	
tail 2	ɲɣ33tỹ55	
winter	tỹ55tɕi44+	
		th-
taro 2	pi21+thỹ55	
bucket	thỹ31	
		ts-
plant (v.)	tsỹ42+	
release	tsỹ42+	
earthworm 3	tɕi21+kɛ55tsỹ21+	
maggot 2	tɕhi55tsỹ21+	
hoe	tsỹ21+	
bell	tsỹ55	
cup	tsỹ55	

liquor	ts̄33	
heavy	ts̄33	
seed	ts̄33	
		tsh-
spring	tsh̄55t̄ci44+	
scallion	tsh̄55	
		s-
painful	s̄31	
get sick 2	p̄31s̄31	
		k-
centipede 2	vu55k̄55	
deaf person	k̄55tu21+po21+	
river	k̄55	
soldier	k̄55	
	Rhyme: -e	p-
walk	pe44+	
insert	pe42+	
bathe 2	se33pe21+	
CLF-bowl	pe21+	
exploit	pe21+khua44+	

chaff 2	tshõ55pe21+
mouth B 2	tçui33pe21+
skin	pe21+

ph-

tear	phe55
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f-

aircraft	fe33tçi33
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m-

coal	me42+
door	me21+
close eyes	me55
eyebrow 2	ɲui33me55
tomorrow	me55ji44+
late	me33
uncooked rice	me33

tç-

unite 2	thuẽ42+tçe35
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t-

forehead 2	ŋɛ44+te44+
throat 3	ku21+tsi33te44+
root B	te44+
fodder	te42+tse44+
boar (wild) 2	tso42+te42+
pig	te42+

th-

forge (iron) 2	tɛ̃44+the44+
iron	the44+
untie	the44+

n-

NUM twelve 2	tse42+ne44+
NUM two B	ne44+
KIN FM 2	a31ne44+
second day 3	ŋua44+xɛ̃55ne44+
take	ne44+
dirty 2	tsha55+ne42+
smelt (steel)	ne42+kā55
basket 2	tu55ne21+
yoke 2	ŋɛ44+ne21+

ts-

again	tse14+
break off	tse42+tshu55
tongue	tse42+
money	tse21+

tsh-

saw 2	fy42+tshe44+
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s-

cloth	se44+
palmbark cape 2	pi31se44+
leaf	se44+
loom 2	tsi55se44+tqa44+
bathe	se33pe21+
wash	se33
small	se31
young 3	ji44+sua44+se31

k-

bowl	ke42+
chicken	ke55
grasshopper 3	suã31ma31ke55
mantis 4	ky33suã33ma33ke55

hen	ke55mo33	
ulcer	ke55jo33	
rooster	ke55po55	
today	ke55ji44+	
		kh-
lame person	khe44+ko44+	
		ŋ-
shoes	ŋe21+	
	Rhyme: -ē	ts-
pile up	tsē33	
		s-
egg	sē42+	
play 2	ua42+sē42+	
lay (eggs)	sē42+	
temple	sē55	
west	sē55	
dye	sē33	
know	sē33	
understand B	sē33	

		k-
see B2	xā55kē42+	
light (v.)	kē31	
		kh-
lead by nose	khē55	
		x-
clear sky	xē55tɕi31xu33	
overcast	xē55tɕi31tshw33	
nighttime	xē55mie42+	
swallow	xē55ŋɛ33tsi33	
sky	xē55	
thunder	xē55mɛ21+	
		0-
swallow (v.)	ē42+	
	Rhyme: -a	p-
collapse	pa44+	
teeth 2	tsi33pa44+	
breast	pa42+	
milk	pa42+tsɛ44+	
stool	pa42+tu55	

		ph-
harrows	pha55	
		v-
stockings	va55tsi33	
		f-
method 2	pē55+fa35	
		m-
hair (fur)	ma21+	
pull up	ma21+	
hair (head) 2	tu21+ma55	
braid 2	tu21+ma55pi55	
push	ma55	
PRON 3d p.	ma55	
full	ma33	
mantis 3	ky33suā33ma33ke55	
grasshopper 2	suā31ma31ke55	
bamboo hat	ma31ka44+la44+	
turn the back B	ma31	
		tç-
join together	tça44+	

loom 3	tsi55se44+tqa44+
friend 2	[mu55]tqa42+[mu55]ɲu21+
peasant 3	tsu55tsuã55tqa55xo44+
nation 2	kuɛ35tqa33
false	tqa31

tqh-

add to (punctuate)	tqha44+
otter 2	ɸui33tqha44+
magpie 2	pɛ̃42+tqha44+vu55

j-

return	ja44+ku55
NEG PRT C	ja35

ɸ-

slaughter	ɸa44+
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t-

mighty 2	ui31ta55+
KIN ES 2	a31ta55+
PRON there B2	mu55ta44+
PRON here B2	a55ta44+
dance (v.)	ta42+ko33

help	ta42+γw42+
trample	ta42+
bow	ta21+la21+kō55
fruit 3	çui55li55ta21+se44+xw33
peach	ta21+
tremble 2	ju21+ta21+khw33
answer	ta55jũ44+
KIN FEB 2	a31ta55ta55
kitchen knife 4	tshuã33tshw31ji55tã55
scissors 2	tçi31ta55
steal	ta31

th-

persimmon	tha44+tsi31
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n-

PRON which 2	a55na44+
PRON where 2	a55na44+γw42+
girl 2	jÿ33na42+tsi33
difficult	na21+
last year	na21+tsi55
PRON 2d p.	na55

l-

bamboo hat 3	ma31ka44+la44+
candle	la44+tsy44+
bow 2	ta21+la21+kō55
tear off	la55
tractor 2	tho33la33tçi33
chili	la35tsi33

ts-

all	tša35kε21+tsi33
ADV INTENS	tša35si55

tsh-

dirty	tsha55+ne42+
thin (person)	tsha44+jo31
inspect 2	tçε̃31tsha42+

s-

run	sa44+
span across	sa42+

k-

granary	ka44+
bamboo hat 2	ma31ka44+la44+

hold in mouth	ka21+	
tell	ka31	
		kh-
hungry 2	tɕi55kha44+	
thirsty	kha44+	
		x-
household (home)	xa31t̃55	
		ŋ-
bite	ŋa44+	
gnaw	ŋa44+	
sweat	ŋa21+	
PRON 1st p. EX	ŋa55	
		0-
duck	a44+	
PRON here B	a55ta44+	
PRON what	a55sɛ̃31	
NEG EXIST.	a35mo33	
NEG PRT (b)	a35	
CLF-half	a31po21+	
KIN ES	a31ta55+	

PRON who	a31to21+	
NUM one B	a31	
NEG PRT	a31	
NEG COPULA	a31pio33	
	Rhyme: -ã	p-
leopard	pã42+	
hoof	pã21+	
platter	pã21+tsi33	
move	pã21+	
washbasin 4	se33tçui33ŋui33pã21+	
CLF-dry litre	pã55	
arm 2	su33pã31tsi33	
puttees	pã31thui31	
		f-
liberate 2	ke31fã55+	
model 2	mo42+fã55+	
		tçh-
rob	tçhã31	
		j-
praise 2	piao31jã42+	

potato	jā42+jui44+
kindling	jā42+xo31
twelfth month	jā42+ɲua44+
PRON 1st p. INCL	jā55
ɸ-	
rest	ɸā55
thought 2	si33ɸā31
t-	
thing 2	ɲɣ33tā42+
phlegm	tā21+
bullet 2	tɕi31tā55
PRON EGO 2	tɕu42+tā55jĩ21+
KIN FEBW 2	a31tā55mo33
lift up	tā55
knife 2	ji55tā55
courage	tā33to42+
gall bladder	tā33
communist party 3	kō55+tshē31tā31
plain 2	pē21+tā31
party member	tā31juē42+

		th-
school 2	ꞗu55thã55	
		n-
south	na21+	
		ts-
mosquito net	tsã44+tsi31	
county head 2	ꞗẽ55+tsã31	
commune head 2	sẽ55+tsã31	
minister 2	pu55+tsã31	
		tsh-
factory 2	kõ33tshã31	
		s-
fight	sã55tẽ44+	
assist (mutual)	sã55uĩ42+	
NUM thirteen 2	tse42+sã55	
NUM three	sã55	
meet up with	sã55to55	
third month	sã55ŋua44+	
third day 3	ŋua44+xẽ55sã55	

k-

cadre	kā55+pu55+
armpit 4	jō21+mo33tçi33kā42+
strike	kā42+
dry field	kā55tçi31
clean	kā55tçũ42+
dry	kā55
liver	kā55
high	kā55
teach	kā55
smelt (steel) 2	ne42+kā55
sweet	kā55ŋγ33
sugarcane	kā55tçi55
steel	kā55
dare	kā31
heroic 2	jō31kā31

kh-

hump (v.)	khā42+
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x-

Chinese	xā42+xo44+
bank 2	jũ42+xā42+
beautiful	xā55tçε42+
cure	xā55pẽ31

graze (trns.)	xā55
look at	xā55
see B	xā55kē42+

0-

cat	ā55ni55
saddle	ā55khe44+
look at B	ā33
see	ā33tu44+

Rhyme: -u

p-

north	pu44+
float	pu42+
interest (money) 2	mu55pu21+
axe	pu33
KIN WF 3	to31su33pu33
pond	pu33

ph-

blow (mouth)	phu55
lid	phu31

m-

ink	mu44+
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wheat	mu44+
fog	mu21+kõ42+
friend	[mu55]tça42+[mu55]ɲu21+
PRON there B	mu55ta44+
maize 2	jui55mu55
ADV just before now	mu55tu35
interest (money)	mu55pu21+
year after next	mu55ɣu33sua44+
KIN WM 3	to31su33mu33
KIN FSH 3	a31ku55mu33
dream	mu31ɲɣ42+
grave	mu31
PRON there	mu31ɣu42+
PRON that	mu31

tç-

NUM nine	tçu33
ninth month	tçu33ɲua44+
leap ahead 2	jao31tçu31

tçh-

autumn	tçhw55tçi44+
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j-

eat jw44+
stockade village jw44+u31

t-

get (obtain) tw44+
remember 2 tsw44+tw44+
win tw44+
see 2 ā33tw44+
PRON EGO tw42+tā55jī21+
finger 2 sw33tw21+tsi33
CLF-chicken tw21+
hair (head) tw21+ma55
ear 2 jw̄33tw21+kuā55
deaf person 2 kȳ55tw21+po21+
day bfr yesterday tw21+[zō33]jī44+
braid tw21+ma55pī55
in advance 2 tçē42+tw21+
bone 2 kua44+tw21+
front tw21+ŋy55
pillow 2 tsē33tw21+
head tw21+po21+
nose 3 ŋy21+khy44+tw21+
morning 2 khe55tw21+
sleeve 2 ji55tw21+

year before last	tu21+sua44+
sieve 2	lo21+tu21+
shoulder 2	po33tu21+
basket	tu55ne21+
stool 2	pa42+tu55
CLF-dry decalitre	tu33
wait for	tu33
ADV just before now 2	mu55tu35
beans	tu31

th-

descend	thu55
let fall 2	ne42+thu55

n-

collapse B	nu33
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l-

PRON this	lu31
PRON here	lu31yu42+
ADV now	lu31ku55

ts-

remember	tsu44+tu44+
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ladder	tsw21+thi55
wolf	tsw21+
house	tsw21+xo31
soak	tsw21+
EXISTENTIAL V	tsw33
be in/at	tsw33
COPULA	tsw33
pillar	tsw33
host 2	khe44+tsw33po55
China fir tree 2	so44+tsw31
branch	tsw31ku55
CLF-tree	tsw31
pine tree 2	ɕõ21+tsw31
rectification	tsw31fõ33
written word 2	sy55tsw31
stand on foot	tsw31
willow tree 2	yu33tsw31
tree	tsw31

tsh-

tie B	tshw44+
break off 2	tse42+tshw55
obstruct	tshw55
smash 2	pho31tshw55
short	tshw55
overcast 3	xẽ55tɕi31tshw33

ugly	tshu33
cabbage 2	pe42+tshu31
dish (cuisine)	tshu31
garden	tshu31suā55
kitchen knife 2	tshuā33tshu31ji55tā55
radish 2	xē55tshu31
vegetables	tshu31

s-

rest B	su44+
kerchief	su44+tçi55
set aside	su44+
understand	su44+
count	su55
harvest/receive	su55
repay	su55
finger	su33tu21+tsi33
arm	su33pā31tsi33
hand	su33
KIN WM 2	to31su33mu33
ring	su33ku55

k-

tie	ku44+
rescue	ku42+

hate (v.)	ku42+
flow	ku21+
ride (horse)	ku21+
sell	ku21+
cold (weather)	ku55
plough 2	tɕi55ku55
pigeon 2	tɕi55ku55
key 2	tso42+ku55
ADV now 2	lu31ku55
ladle out	ku55
return 2	ja44+ku55
lazy 3	pɛ42+jo33ku33
revolution	ku35miu55+
body 2	tshɛ̃55ku31
old (former)	ku31
	kh-
bloom	khɯ55xo55
open	khɯ55
surround 2	ui55khɯ33
tremble 3	ju21+ta21+khɯ33
inside	khɯ31no33
	ɣ-
PRON where 3	a55na44+ɣɯ42+

KIN H (b) 2	so42+γw42+
PRON there 2	mw31γw42+
PRON here 2	lw31γw42+
learn	γw42+
help 2	ta42+γw42+
read aloud	γw42+
KIN CFH 3	jγ̃33so42+γw42+
student	γw42+sγ55tsi33
strength 2	tçhi44+γw42+
wages	γw42+kε42+
back	γw33no33
after	γw33
henceforth	γw33çε44+
next year	γw33sua44+
year after next 2	mw55γw33sua44+
willow tree	γw33tsu31
enter	γw35jî44+
come	γw35
leak	γw31

x-

black	xw44+
crow	xw44+vu55
stand on foot B	xw55
fruit 5	çui55li55ta21+sε44+xw33
thread 2	xo55xw33

		ŋ-
friend 4	[mɯ55]tɕa42+[mɯ55]ŋw21+	
yellow ox	ŋw21+	
ox	ŋw21+	
water buffalo 2	ɕui33ŋw21+	
		0-
curse	ɯ44+	
marry (take)	ɯ55vu33	
		tʳ-
in advance B	tʳɯ21+	
	Rhyme: -ũ	v-
culture	vuũ42+xua55	
		f-
workpoints 2	kõ33fũ33	
		tɕ-
advanced 2	ɕẽ33tɕũ55+	
clean 2	kã55tɕũ42+	
experience	tɕũ33jẽ55+	

economics	tɕũ33tɕi55+
invade	tɕũ33nio35
tight	tɕũ31
diligent 2	tɕhũ55tɕhũ31

tɕh-

diligent	tɕhũ55tɕhũ31
cool	tɕhũ55liã55
comm. youth league 2	kõ55+tɕhũ33thuẽ42+

j-

answer 2	ta55jũ44+
CLF-rope	jũ42+
bank	jũ42+xã42+
tender	jũ21+
ear	jũ33tu21+kuã55
noon	jũ33tũ31
hero	jũ33ɕõ42+
cinema 2	tĩ55+jũ31

ɕ-

happy 2	kao55ɕũ44+
fortunate	ɕũ55fɣ35

t-

bore into B	tũ42+
wear (on head)	tũ42+
lamp	tũ55
electric lite 2	tĩ55+tũ33
equality 2	phiũ42+tũ31
noon 2	juũ33tũ31

ts-

correct	tsũ55+tçho35
government	tsũ55+fy31
guess	tsũ42+
politics	tsũ55tsi55+
policy	tsũ55tshē35
steam (v.)	tsũ55

s-

responsibility	sũ55+vu55+
triumph	sũ55+li55+
enemy 2	ti35sũ42+
people	sũ42+mim42+
worker 2	kõ33sũ42+
fly (n.)	sũ21+
produce	sũ33tshē31
hygiene 2	ui55+sũ33

turn over (reform) 2	fě33sũ33	
KIN FYBW 3	a31ɸĩ55sũ31	
		k-
thick	kũ33	
		x-
socialism 2	sɛ55+xui55+tsɿ31ji55+	
		0-
drink	ũ33	
hot (weather)	ũ31jĩ44+	
	Rhyme: -u	p-
cadre 2	kã55+pu55+	
minister	pu55+tsã31	
embrace	pu33	
full stomach	pu33	
mend	pu33	
KIN FYB 2	a31pu35	
		ph-
grape	phu55thao55	

mat	phu31
shop	phu31tsi33
	v-
responsibility 2	sū55+vu55+
hatch	vu44+
warm 2	uī55vu44+
bore into	vu42+
rice gruel 2	phɛ55vu42+
stomach	vu42+
insane person	vu21+tsi33
bird	vu55tso44+
centipede	vu55kȳ55
crow 2	xu44+vu55
magpie 3	pɛ̄42+tɕha44+vu55
prick	vu55
affair 2	sɛ31vu33
marry (take) 2	u55vu33
owe	vu33
KIN CMW 2	tsi33vu33
rain	vu33ɕui33
KIN W	vu33jī21+
turn the back	vu33
malaria 3	fɛ44+phi55vu31

j-

tremble	ju21+ta21+khu33
education 2	tqao55+ju35

q-

sprout B	qu55
school	qu55thã55
few	qu33
PRON how much 2	tqi55qu33

t-

attitude 2	the55+tu55+
strike c	tu33

th-

land (dry)	thu33si33
road	thu33
reform (land tenure)	thu31ke31

l-

line (polit.) 2	tsõ31lu55+qẽ55+
highway 3	tqhi55+tshε33lu55+
railroad 2	thiε35lu55+
hawk 2	ti55lu33ua42+

ts-

assist (mutual) 32	xu55+tsu44+
peasant	tsu55tsuã55tça55xo44+
make/do	tsu55
early	tsu33

tsh-

coarse	tshu55
sniff	tshu55
fertilizer 2	tçhi55tshu33
grass	tshu33
fry	tshu33
immediately	tshu33
nationality 2	miũ42+tshu35
foul-smelling	tshu31

s-

boat 2	jĩ21+su55
ash (plant) 2	tçhi55su55
lose	su33
technique 2	tçi55+su35

k-

bridge	ku21+
--------	-------

poor 2	ji55ku21+
throat	ku21+tsi33te44+
branch 2	tsu31ku55
KIN FS 2	a31ku55
ring 2	su33ku55
thick (liquid)	ku55
elderly person	ku33ji21+
drum	ku33
old (person)	ku33
old (food)	ku33
broom 2	tsui44+ku31
skirt 2	xe31ku31
story	ku31xua44+

kh-

lack	khu55
bitter	khu33
be able	khu33
tired 2	so55khu33
wither	khu31

y-

beard	yu21+
-------	-------

x-

endorse 2	jō31xu55+
assist (mutual) B	xu55+tsu44+
protect 2	pao31xu55+
clear sky 3	xē55tqi31xu33
good	xu33

0-

consciousness 2	tqo35u55+
mistake 2	tsho55+u55+
bladder 2	phe55u33
cattle pen	u31
stockade village 2	jw44+u31

Rhyme: -o

p-

clap hands	po44+
bat 2	po55po44+tsi33
KIN MSH 2	a31po44+
thin	po42+
CLF-half 2	a31po21+
ant 2	pi21+po21+
deaf person 3	kγ55tu21+po21+
head 2	tu21+po21+
beside	po21+no33
bat	po55po44+tsi33

KIN H	po55ji21+
host 3	khe44+tsu33po55
mute person 2	e33po55
rich 3	ko21+ji21+po55
teacher 2	sy55po55
rooster 2	ke55po55
winnow	po33
shoulder	po33tu21+
quilt 2	lo31po31

ph-

cucumber	pho44+
smash	pho31tshu55
split (wood)	pho31

m-

noodles	mo44+mi42+xē55
mosquito	mo44+tsi33
wheat flour	mo44+mi42+
fine	mo42+
model	mo42+fā55+
flee	mo21+
sharpen	mo21+
armpit 2	jō21+mo33tqi33kā42+
KIN FEBW 3	a31tā55mo33

KIN MBW 3	a31tqo55mo33
hen 2	ke55mo33
KIN M 2	a31mo33
NEG EXIST. 2	a35mo33
winnowing fan 2	po33mo33tqi5b
PRON 3d s.	mo31
NEG IMP. PRT 2	jō44+mo31

tq-

KIN MB 2	a31tqo55+
KIN MBW 2	a31tqo55mo33
consciousness	tqo35u55+

tqh-

ball	tqho42+
correct 2	tsū55+tqho35

j-

doctor	jo44+sē55
medicine	jo44+
freedom 2	tsi55+jo42+
lazy 2	pe42+jo33ku33
strong point	jo33tiē31
ulcer 2	ke55jo33

economize 2	tɕi35jo35	
thin (person) 2	tsha44+jo31	
		ɸ-
rot	ɸo42+	
dragonfly 6	tɕi55ko55lo55yo21+pi21+ɸo21+	
repair	ɸo55li31	
		t-
drip (v.)	to44+	
CLF-drops	to44+	
expensive 2	kɛ42+to42+	
BPback	to42+ko42+tɕi55	
courage 2	tã33to42+	
large	to42+	
PRON who 2	a31to21+	
sugar 2	so55to21+	
hit target 2	tsõ42+to55	
meet up with 2	sã55to55	
struggle	to55tsw55	
stupid 2	tse35to35	
KIN WM	to31sw33mu33	
		th-
gong	tho55lo55	

rabbit	tho55lo44+
tractor	tho33la33tçi33
CLF-handspan	tho31

n-

CLF-"ounce"	no42+
agriculture	no42+niε35
floss sheep	no55jō21+
back 2	γu33no33
brains	no33
bottom 3	γε33fγ33no33
outside 2	ηua44+no33
inside 2	khu31no33
top 3	tō33fγ33no33
beside 2	po21+no33
PRON 2d s.	no31

l-

ice 2	so55lo44+
rabbit 2	tho55lo44+
sieve	lo21+tu21+
tiger	lo21+
dragonfly 3	tçi55ko55lo55γo21+pi21+ço21+
gong 2	tho55lo55
backward	lo35xo55+

retreat	lo31
quilt	lo31po31
bird 2	vu55tso44+
plough (v.)	tso44+
sparrow	tso44+tsi33
boar (wild)	tso42+te42+
chop off	tso44+
chew	tso42+
fruit (v.)	tso42+kho33
lock	tso42+pe42+
key	tso42+ku55
say	tso42+
stone	tso42+khui55
tea	tso21+
lean (meat)	tso33
cooperate 2	xo35tso35

ts-

tsh-

mistake	tsho55+u55+
blow (wind) 3	pi55si55tsho44+
sweep	tsho44+
twist (thread)	tsho44+
silk cloth	tsho55tsi31

s-

China fir tree	so44+tsu31
rope	so44+
KIN H (b)	so42+yu42+
KIN CFH 2	jỹ33so42+yu42+
ice	so55lo44+
sand	so55tsi33
sugar	so55to21+
tired	so55khu33
laugh	so31
wristwatch	so31piao31
urine	so31

k-

foot	ko44+
CLF-"acre"	ko44+
broadcast	ko44+
lame person 2	khe44+ko44+
BPback 2	to42+ko42+tçi55
bury	ko42+
cross over	ko42+
pass through	ko42+
celebrate new year	ko42+tsi55ɲua44+
goat	ko42+jõ21+
earrings 2	jũ33ko21+

love	ko21+
lake	ko21+
rice	ko21+
rich	ko21+jĩ21+po55
sea	ko21+
dragonfly 2	tɕi55ko55lo55yo21+pi21+ɕo21+
butterfly	ko55li44+
grow up	ko55
dance (v.) 2	ta42+ko33
KIN EB 2	a31ko33
song	ko33

kh-

weep	kho44+
CLF-money	kho55
ditch	kho55
rice huller 2	tui42+kho55
mill 2	ɲui42+kho55
chest 2	ɕĩ55kho55tɕi33
CLF-kernel	kho33
fruit (v.) 2	tso42+kho33

y-

easy	yo42+sɛ31
hole	yo42+ɲui33

rain (v.) 2	vu33yo42+
dragonfly 4	tqi55ko55lo55yo21+pi21+co21+
monkey	yo21+suā55
summer	yo21+tqi44+

x-

backward 2	lo35xo55+
Chinese 2	xā42+xo44+
peasant 4	tsu55tsuā55tqa55xo44+
peace	xo42+phiū42+
flower	xo55
bloom 2	khw55xo55
patterned	xo55
thread	xo55xw33
cooperate	xo35tso35
boy 2	qao31xo31tsi33
kindling 2	jā42+xo31
shine on	xo31
train	xo31tshε33
house 2	tsw21+xo31

η-

PRON 1st s.	ηo31
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		0-
irrigate	o44+	
	Rhyme: -ō	ph-
run B	phō33	
		f-
rectification 2	tsw31fō33	
		tɕ-
carpenter 2	ŋɣ44+tɕō42+	
		tɕh-
good B	tɕhō55	
		j-
NEG IMP. PRT	jō44+mo31	
want	jō44+	
glorious 2	kuā33jō42+	
use	jō42+	
armpit	jō21+mo33tɕi33kā42+	
sheep	jō21+	
KIN EB (B)	jō55	

itchy	jō33
endorse	jō31xu55+
heroic	jō31kā31

φ-

hero 2	jū33φō42+
pine tree	φō21+tsu31
fragrant	φō55
trunk	φō55
peanut 2	ti55+φō33tsi31

t-

movement (polit.) 2	juf55+tō55+
labor 2	lao42+tō55+
mobilize	tō55+juē42+
reactionary 2	fē31tō55+
chop up	tō42+
choose	tō42+
talk	tō21+
top	tō33fy33no33

th-

comrade	thō42+tsi55+
---------	--------------

ts-

masses 2	tɕhuɪ42+tsõ55+
jump	tsõ44+
hit target	tsõ42+to55
intestine	tsõ42+
shoot at	tsõ42+
bed	tsõ21+
long	tsõ21+
ADV often	tsõ21+tsẽ42+
hide (trns.)	tsõ21+
pack into	tsõ55
ascend	tsõ33
prime minister	tsõ31li31
line (polit.)	tsõ31lu55+çẽ55+

tsh-

gun	tshõ44+
clever	tshõ55miw55
chaff	tshõ55pe21+
husks	tshõ55kɛ44+
salty	tshõ31

z-

day bfr yesterday 2	tu21+[zõ33]jɪ44+
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s-

frost	sō55
loose	sō55
bear (v.) B	sō33
send off	sō33

k-

communism	kō55+tshē31tsy31ji55+
fog 2	mu21+kō42+
dew	kō42+çui33
bow B	kō55
bow 3	ta21+la21+kō55
ginger	kō55
factory	kō33tshā31
commune	kō33se55+
industry	kō33nie35
NUM two	kō33
worker	kō33sū42+
workpoints	kō33fū33
dry (v. trns.)	kō31
roast	kō31

kh-

CLF-clothing	khō55
make bed	khō55

		x-
pheasant	xõ42+	
		0-
frog	õ21+mε55	
goose	õ21+	
	Rhyme: -ie	p-
ask	piε44+	
wall	piε44+	
discard	piε55	
		ph-
overflow	phiε44+	
steep	phiε55	
		m-
dark	miε42+	
nighttime 2	xẽ55miε42+	
castrate	miε55	
name	miε55	
perish 2	çac33miε35	

		th-
railroad	thiε35lu55+	
		n-
agriculture 2	no42+niε35	
industry 2	kõ33niε35	
	Rhyme: -iẽ	p-
move B	piẽ42+	
bottle	piẽ21+	
		t-
strong point 2	jo33tiẽ31	
shortcoming 2	tɕhui35tiẽ31	
	Rhyme: -ia	p-
eighth month	pia44+ɲua33+	
NUM eight	pia44+	
bark	pia42+	
		ph-
arrive	phia44+	
lungs	phia44+	

		m-
NEG IMP. PRT (b)	mia44+	
soak B	mia44+	
		n-
sorghum 2	kao55nia55	
	Rhyme: -iã	l-
cool 2	tɕhũ55liã55	
measure (cloth)	liã55	
	Rhyme: -iu	ph-
lightning flash (v.) 3	sẽ21+tɕi33phiw44+	
		m-
revolution 2	ku35miw55+	
democracy	miw42+tsɿ31	
clever 2	tshõ55miw55	
	Rhyme: -iũ	ph-
equality	phiũ42+tuũ31	
criticize 2	phi33phiũ42+	
peace 2	xo42+phiũ42+	

		m-
bright 2	kuã33miu42+	
people 2	suĩ42+miu42+	
nationality	miu42+tshu35	
		t-
ADV most	tiũ31	
		l-
lead (v.)	liũ31tao55+	
	Rhyme: -ui	tɕ-
claw	tɕui21+	
hammer	tɕui21+	
face	tɕui33ŋui33	
mouth	tɕui33ke55	
washbasin 2	se33tɕui33ŋui33pã21+	
elect 2	ɕueĩ31tɕui31	
		tɕh-
cricket	tɕhui33tɕhui33	
shortcoming	tɕhui35tiẽ31	

j-

potato 2	jã42+jui44+
maize	jui55mu55

ç-

fruit	çui55li55ta21+se44+xu33
paddy field	çui33tçi31
dew 2	kõ42+çui33
ink (liquid) 2	mu44+çui33
otter	çui33tçha44+
rain 2	vu33çui33
water	çui33

t-

oppose 2	fẽ31tui55+
rice huller	tui42+kho55

th-

puttees 2	pã31thui31
-----------	------------

l-

roll	lui42+
take off	lui55

ts-

broom	tsui44+ku31
wring out	tsui44+

tsh-

twist B	tshui31
---------	---------

s-

hail	sui44+ua42+tsi33
snow	sui44+
founth pen	sui31pi35

k-

spider	kui33
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kh-

stone 2	tso42+khui55
---------	--------------

x-

hold meeting 2	khε33xui55+
lime	xui55
fire	xui33
smoke	xui33çẽ55

ŋ-

mill	ŋui42+kho55
round	ŋui21+
blind person	ŋui33tə55
eye	ŋui33
hole 2	yo42+ŋui33
washbasin 3	se33tɕui33ŋui33pā21+

o-

hygiene	ui55+sū33
feed (suckle)	ui42+
surround	ui55khu33
mighty	ui31ta55+

Rhyme: -uī

tɕh-

masses	tɕhuī42+tsō55+
weigh	tɕhuī55
CLF-inch	tɕhuī31

j-

movement (polit.)	juī55+tō55+
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ɕ-

bamboo shoot 2	tsy44+ɕuī33
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t-

straight	tui55
aright	tui55
distant	tui33

l-

discuss 2	thao31luf55+
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ts-

revolve	tsuf42+
bricks	tsuf55

0-

assist (mutual) 2	sã55uf42+
grind (rice)	uf42+
warm	uf55vu44+

Rhyme: -ue

ts-

fall	tsue44+
------	---------

tsh-

book 2	sy55tshue44+
--------	--------------

k-

bad	kuɛ42+
nation	kuɛ35tɕa33

kh-

lean against	khue55
thigh	khue31pi55

ŋ-

tile	ŋue42+
roof beam	ŋue21+

o-

askew	ue55
mud 2	ni21+ue55

Rhyme: -uẽ

j-

commune member 2	se55+juẽ42+
party member 2	tã31juẽ42+
mobilize 2	tõ55+juẽ42+
team member 2	thuẽ42+juẽ42+

		ɸ-
publicize	ɸuẽ33tshuẽ42+	
elect	ɸuẽ31tɸui31	
		th-
comm. youth league 3	kõ55+tɸhuĩ33thuẽ42+	
team member	thuẽ42+juẽ42+	
unite	thuẽ42+tɸe35	
gulp	thuẽ55	
		ts-
ear (grain)	tsuẽ33	
		tsh-
publicize 2	ɸuẽ33tshuẽ42+	
		k-
horizontal	kuẽ21+	
manage	kuẽ31li31	
	Rhyme: -ua	t-
dull	tua31	

l-

roll up B lua44+

ts-

fast 2 tɕi42+tsua42+

ADV quickly 3 tɕi42+tɕi42+tsua42+tsua42+

s-

blood sua44+

age sua44+

say B sua44+

year sua44+

brush sua55tsi33

cheat sua31

k-

bone kua44+tu21+

CLF-stick kua44+

hang up (suspend) kua44+

waist 2 ji55kua44+

stem 2 kɛ55kua44+

stick kua42+

melon 2 tɕi55kua55

pumpkin 2 tɕi55kua55

scrape (scale fish)

kua55

kh-

exploit 2

pe21+khua44+

pick

khua44+

wide

khua44+

x-

plan 2

tɕi55+xua55+

telephone 2

tʃi55+xua55+

boil (intrans.)

xua44+

story 2

ku31xua44+

culture 2

vũ42+xua55

cotton 2

mi55xua55

ŋ-

eighth month 2

pia44+ŋua33+

fourth month 2

ɕi44+ŋua44+

first day

ŋua44+xɛ̃55ji44+

fifth day

ŋua44+xɛ̃55ŋy33

outside

ŋua44+no33

celebrate new year 3

ko42+tsi55ŋua44+

month

ŋua44+

second day

ŋua44+xɛ̃55ne44+

eleventh month 2

tɕ̃55ŋua44+

		0-
hail 2	sui44+ua42+tsi33	
play	ua42+sẽ42+	
pit	ua42+	
hawk 3	ti55lu33ua42+	
	Rhyme: -uã	ts-
peasant 2	tsu55tsuã55tça55xo44+	
		tsh-
kitchen knife	tshuã33tshw31ji55tã55	
window	tshuã55tsi33	
cut	tshuã33	
		s-
calculate	suã42+	
garden 2	tshw31suã55	
monkey 2	yo21+suã55	
KIN GCM	suã55	
KIN GCF 2	jỹ33suã55	
sour	suã55	
mantis 2	ky33suã33ma33ke55	
grasshopper	suã31ma31ke55	
garlic	suã31	

k-

ear 3	jũ33tu21+kuã55
official	kuã55
trousers	kuã55
bright	kuã33miu42+
glorious	kuã33jõ42+

kh-

ADV slowly	khuã55khuã55çĩ55çĩ55
flea	khuã33çĩ44+
dog	khuã33

x-

sweet potato	xuã42+tshy31
like 2	çĩ31xuã55

Rhyme: -ao

p-

report	pao55+kao55+
wrap	pao55
protect	pao31xu55+

ph-

artillery	phao44+
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		m-
hat	mao44+tsi31	2
		tɕ-
education	tɕao55+ju35	
		j-
kidney	jao55tsi33	
leap ahead	jao31tɕī31	
		ɕ-
perish	ɕao33mie35	
boy	ɕao31xo31tsi33	
		t-
lead (v.) 2	līī31tao55+	
		th-
grape 2	phu55thao55	
discuss	thao31luĩ55+	
		l-
labor	lao42+tõ55+	

		ts-
appeal to 2	xao55+tsao55+	
		tsh-
soap	tshao31piao55	
		k-
report 2	pao55+kao55+	
happy	kao55qũ44+	
sorghum	kao55nia55	
develop 2	thi42+kao33	
improve 2	thi42+kao33	
		x-
appeal to	xao55+tsao55+	
	Rhyme: -io	p-
NEG COPULA 2	a31pio33	
representative 2	te55+pio31	
		m-
vertical	mio42+	

n-

invade 2

tɕũ33nio35

Rhyme: -iao

p-

soap 2

tshao31piao55

whip 2

mɛ33piao55tsi33

praise

piao31jã42+

wristwatch 2

so31piao31

Appendix 3

Table A3.1: Co-occurrences in standard Jianchuan Bai (distribution of consonant initials, simple-vowel rhymes, and tones)

	i	ĩ	ε	ẽ	γ	ỹ	e	ē	a	ā	u	ũ	u	o	ō	
p-																
1				C										C		
2			✓				✓		✓		✓				✓	
4		✓	✓	✓			✓		✓	✓	✓				✓	
5	✓	✓	✓	✓			✓				✓	✓			✓	
6	✓	✓		✓						✓					✓	
7	✓			✓							✓			✓	✓	
8	C													✓		
9	✓			✓						✓						✓
	i	ĩ	ε	ẽ	γ	ỹ	e	ē	a	ā	u	ũ	u	o	ō	
ph-																
1																
2			✓												✓	
4																
5																
6	✓		✓				✓		✓		✓			C		
7	C	✓														
8																✓
9		✓									✓		✓	✓		

	i	ī	ε	ē	γ	ȳ	e	ē	a	ā	u	ū	u	o	ō	
v-																
1																C
2																✓
4			✓										C			✓
5																✓
6									C							✓
7																✓
8																
9																✓

	i	ī	ε	ē	γ	ȳ	e	ē	a	ā	u	ū	u	o	ō	
f-																
1										C						
2			✓		✓											
4					✓											
5						✓										
6					✓	✓										
7				C	✓		C					C				C
8					C				C							
9				C	C											

	i	ī	ε	ē	γ	ȳ	e	ē	a	ā	ш	ū	u	o	ō	
m-																
1																
2	✓		✓								✓				✓	
4	✓		✓				✓								✓	
5			✓				✓		✓		✓				✓	
6	✓		✓				✓		✓		✓					
7	✓		✓				✓		✓		✓				✓	
8																
9									✓		✓				✓	

	i	ī	ε	ē	γ	ȳ	e	ē	a	ā	ш	ū	u	o	ō	
tç-																
1	c			c								c			✓	
2	✓		✓						✓							
4	✓	✓	✓	✓					✓			c				✓
5	✓															
6	✓	✓		✓					✓						✓	
7	✓	✓		✓					c		✓	c				
8	c						c								c	
9	✓			✓					c?			✓				

	i	ī	ε	ē	γ	ȳ	e	ē	a	ā	ш	ū	u	o	ō	
tqh-																
1	C															
2	✓		✓						✓							
4															✓	
5																
6	✓	✓		✓							✓	C				✓
7		✓		C								C				
8																C
9	✓									✓		C				

	i	ī	ε	ē	γ	ȳ	e	ē	a	ā	ш	ū	u	o	ō	
j-																
1	C			C												
2	C?	✓							✓		✓	C		✓	✓	
4	✓									✓		✓		C	✓	
5	✓	✓										✓	✓			✓
6	✓	✓								✓						
7	✓	✓				✓						✓		✓	✓	
8	C								✓					C	C	
9	✓											C		✓	C	

	i	ī	ε	ē	γ	ȳ	e	ē	a	ā	ш	ū	u	o	ō
φ-															
1				⊘											
2	✓		✓						✓			⊘			
4		✓		✓										✓	⊘
5		✓				✓								✓	✓
6	✓	✓		✓						✓		⊘	✓	⊘	✓
7	✓			⊘									✓		✓
8	⊘														
9	✓	⊘								⊘					

	i	ī	ε	ē	γ	ȳ	e	ē	a	ā	ш	ū	u	o	ō
t-															
1	✓	⊘	⊘						✓				⊘		⊘
2			✓	✓		✓	✓		✓		✓			✓	
4					✓		✓		✓	✓	✓	✓		✓	✓
5						✓			✓	✓	✓			✓	✓
6	✓		✓			✓			✓	✓	✓	✓		✓	
7	✓									✓	✓	⊘	✓		✓
8	⊘										✓			✓	
9	⊘								✓	✓	✓	✓		✓	

	i	ī	ε	ē	γ	ȳ	e	ē	a	ā	ш	ū	u	o	ō	
th-																
1			✓													
2			✓				✓		✓							
4	с															с
5																
6	✓					✓			✓	✓				✓		
7	✓													✓	с	
8																
9					✓	✓								с	✓	

	i	ī	ε	ē	γ	ȳ	e	ē	a	ā	ш	ū	u	o	ō	
n-																
1																
2							✓		✓							
4			✓				✓		✓						✓	
5	✓				✓		✓		✓							
6	✓								✓						✓	
7											✓				✓	
8																
9	✓															✓

	i	ī	ε	ē	γ	ȳ	e	ē	a	ā	u	ū	u	o	ō	
1-																
1	⊘												⊘			
2	✓				✓				✓						✓	
4					✓											
5									✓						✓	
6	✓								✓						✓	
7									⊘					✓		
8									⊘						⊘	
9	⊘										✓				✓	

	i	ī	ε	ē	γ	ȳ	e	ē	a	ā	u	ū	u	o	ō	
ts-																
1	⊘											⊘				⊘
2			✓		✓		✓		✓		✓		⊘	✓	✓	
4			✓	✓	✓	✓	✓					✓		✓	✓	
5			✓	✓	✓	✓	✓				✓			✓	✓	
6	✓			✓		✓					⊘	✓	✓		✓	
7	✓			✓	✓	✓		✓			✓		✓	✓	✓	
8			✓						✓						⊘	
9	✓				✓					⊘	✓					⊘

	i	ī	ε	ē	γ	ȳ	e	ē	a	ā	ш	ū	u	o	ō	
tsh-																
1									✓							с
2			✓				✓		✓		✓					✓ ✓
4									с							
5																
6	✓		✓	✓	✓	✓					✓		✓	✓	✓	✓
7	✓		с	✓							✓		✓			
8			с										с			
9				с	✓				с		✓		✓			✓

	i	ī	ε	ē	γ	ȳ	e	ē	a	ā	ш	ū	u	o	ō	
z-																
1																
2																
4																
5																
6																
7																✓
8																
9																

	i	ī	ε	ē	γ	ȳ	e	ē	a	ā	u	ū	u	o	ō	
s-																
1			c									c				
2			✓				✓		✓		✓				✓	
4					✓			✓	✓			c			✓	
5				✓								✓				
6	✓			✓	✓			✓		✓	✓		✓	✓	✓	✓
7	✓			✓	✓		✓	✓			✓	c	✓		✓	
8	c			c											c	
9	✓		✓	✓	✓	✓	✓					✓			✓	

	i	ī	ε	ē	γ	ȳ	e	ē	a	ā	u	ū	u	o	ō	
k-																
1										c						c
2			✓		✓				✓		✓				✓	
4			✓	✓	✓		✓	✓		✓	✓			✓	✓	✓
5			✓						✓		✓		✓	✓		
6			✓	✓	✓	✓	✓			✓	✓		✓	✓	✓	✓
7			c	✓	✓						✓	✓	✓	✓	✓	✓
8											c					
9			c		✓		✓	✓	✓	c?	✓		✓		✓	✓

	i	ī	ε	ē	γ	ȳ	e	ē	a	ā	u	ū	u	o	ō	
kh-																
1																
2			✓		✓		✓		✓						✓	
4										✓						
5																
6			✓		✓			✓			✓		✓	✓	✓	✓
7			ε		✓						✓		✓	✓		
8																
9					✓						✓		✓			

	i	ī	ε	ē	γ	ȳ	e	ē	a	ā	u	ū	u	o	ō	
γ-																
1																
2																
4											✓				✓	
5													✓	✓		
6																
7			✓								✓					
8											✓					
9											✓					

	i	ī	ε	ē	γ	ȳ	e	ē	a	ā	ш	ū	u	o	ō	
x-																
1														с	с	
2											✓				✓	
4										✓					с	✓
5																
6			✓	✓				✓		✓	✓				✓	
7											✓			✓		
8																с
9			✓						✓							✓

	i	ī	ε	ē	γ	ȳ	e	ē	a	ā	ш	ū	u	o	ō	
η-																
1																
2			✓		✓				✓							
4			✓		✓											
5			✓		✓		✓		✓		✓					
6					✓				✓	✓						
7			✓		✓					✓						
8																
9																✓

	i	ī	ε	ē	ɤ	ȳ	e	ē	a	ā	u	ū	u	o	ō	
0-																
1																C
2									✓		✓				✓	
4							✓									
5																✓
6			✓						✓		✓					
7			✓									✓	✓			
8									✓							
9									✓			✓	✓			

Table A3.2: Co-occurrences in standard Jianchuan Bai (distribution of consonant initials, complex-vowel rhymes, and tones)

	ui	uī	ue	uē	ua	uā	iu	iū	io	ia	iā	iε	iē	iao	ao	
p-																
1																C
2										✓		✓				
4										✓		✓				
5												✓				
6												✓		✓	✓	
7									✓							
8																
9									C					C	C	

	ui uí	ue uē	ua uā	iu iū	io	ia iā	iε iē	iao	ao
ph-									
1									
2				✓		✓	✓		✓
4				c					
5									
6							✓		
7									
8									
9									

	ui uí	ue uē	ua uā	iu iū	io	ia iā	iε iē	iao	ao
v-									
1									
2									
4									
5									
6									
7									
8									
9									

	ui uī	ue uē	ua uā	iu iū	io	ia iā	ie iē	iao	ao
f-									
1									
2									
4									
5									
6									
7									
8									
9									

	ui uī	ue uē	ua uā	iu iū	io	ia iā	ie iē	iao	ao
m-									
1				c					
2						✓			c
4				c c	✓		✓		
5									
6				✓			✓		
7									
8							c		
9									

	ui	uī	ue	uē	ua	uā	iu	iū	io	ia	iā	iε	iē	iao	ao
tϕ-															
1															c
2															
4															
5		✓													
6															
7		✓													
8															
9		c													

	ui	uī	ue	uē	ua	uā	iu	iū	io	ia	iā	iε	iē	iao	ao
tϕh-															
1															
2															
4						c									
5															
6													✓		
7		✓													
8		c													
9													✓		

	ui uí	ue uē	ua uā	iu iū	io	ia iā	iε iē	iao	ao
j-									
1									c
2	✓								
4									c
5									
6	✓								✓
7									
8									
9									c

	ui uí	ue uē	ua uā	iu iū	io	ia iā	iε iē	iao	ao
g-									
1									
2									
4									
5									
6	✓								
7	✓	✓							c
8									
9									✓

	ui uí	ue uē	ua uā	iu iū	io	ia iā	ie iē	iao	ao
t-									
1	c								c
2									
4	✓								
5									
6		✓							
7		✓							
8									
9			✓	✓			c		

	ui uí	ue uē	ua uā	iu iū	io	ia iā	ie iē	iao	ao
th-									
1									
2									
4			c						
5									
6			✓						✓
7									
8							c		
9	✓								c

	ui uī	ue uē	ua uā	iu iū	io	ia iā	ie iē	iao	ao
n-									
1									
2									
4									
5									
6						c			
7									
8						c?	c		
9									

	ui uī	ue uē	ua uā	iu iū	io	ia iā	ie iē	iao	ao
1-									
1		c							
2			✓						
4	✓								c
5									
6	✓						✓		
7									
8									
9						c			

	ui	uī	ue	uē	ua	uā	iu	iū	io	ia	iā	ie	iē	iao	ao
ts-															
1															c
2	✓		✓												
4		✓			✓										
5															
6		✓													
7				✓											
8															
9															

	ui	uī	ue	uē	ua	uā	iu	iū	io	ia	iā	ie	iē	iao	ao
tsh-															
1															
2			✓												
4				c											
5															
6															
7															
8															
9	✓														✓

ui uī ue uē ua uā iu iū io ia iā ie iē iao ao

z-

1

2

4

5

6

7

8

9

ui uī ue uē ua uā iu iū io ia iā ie iē iao ao

s-

1

2 ✓

4

5

6 ✓

7

8

9 c c

	ui uī	ue uē	ua uā	iu iū	io	ia iā	ie iē	iao	ao
k-									
1									c
2			✓						
4		✓	✓						
5		✓							
6			✓						c
7	✓								c
8		c							
9			c						

	ui uī	ue uē	ua uā	iu iū	io	ia iā	ie iē	iao	ao
kh-									
1									
2			✓						
4									
5									
6	✓	✓							
7									
8									
9		✓							

ui uī uε uē ua uā iw iū io ia iā iε iē iao ao

γ-

1

2

4

5

6

7

8

9

ui uī uε uē ua uā iw iū io ia iā iε iē iao ao

x-

1

C

C

C

2

✓

4

5

6

✓

✓

7

✓

8

9

	ui uī	ue uē	ua uā	iu iū	io	ia iā	iε iē	iao	ao
η-									
1									
2			✓						
4	✓	✓							
5	✓	✓							
6									
7	✓								
8									
9									

	ui uī	ue uē	ua uā	iu iū	io	ia iā	iε iē	iao	ao
0-									
1	c								
2									
4	✓ ✓		✓						
5									
6	✓ ✓	✓							
7									
8									
9	c								

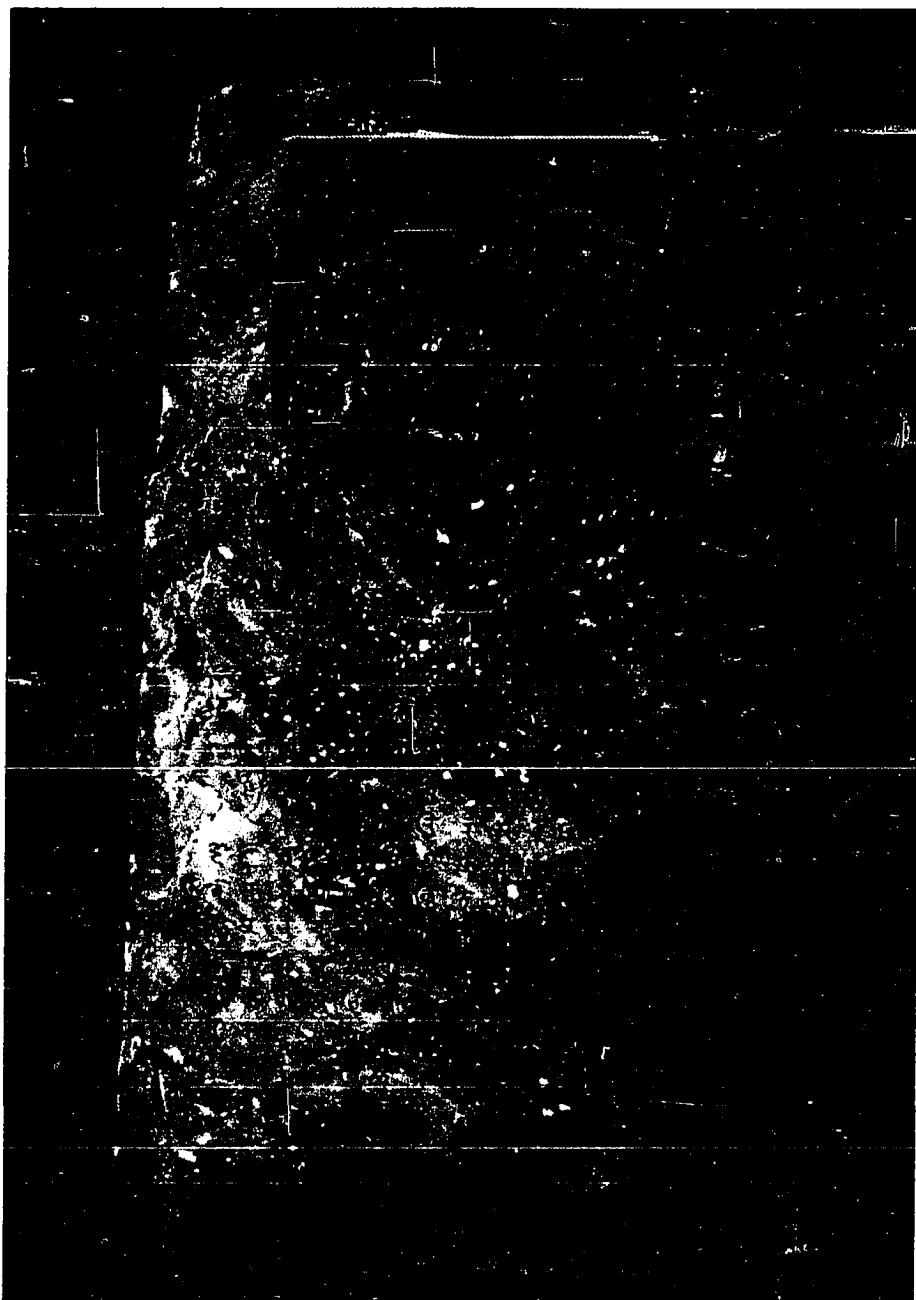


PLATE 1: Nagari inscription at Jianchuan city (old Jinhua Commandery), Jianchuan County (May 14, 1989)



PLATE 2: Confucian hall at Heqing Middle School, alma mater of the consultant (LSN), who appears at right (May 31, 1989)

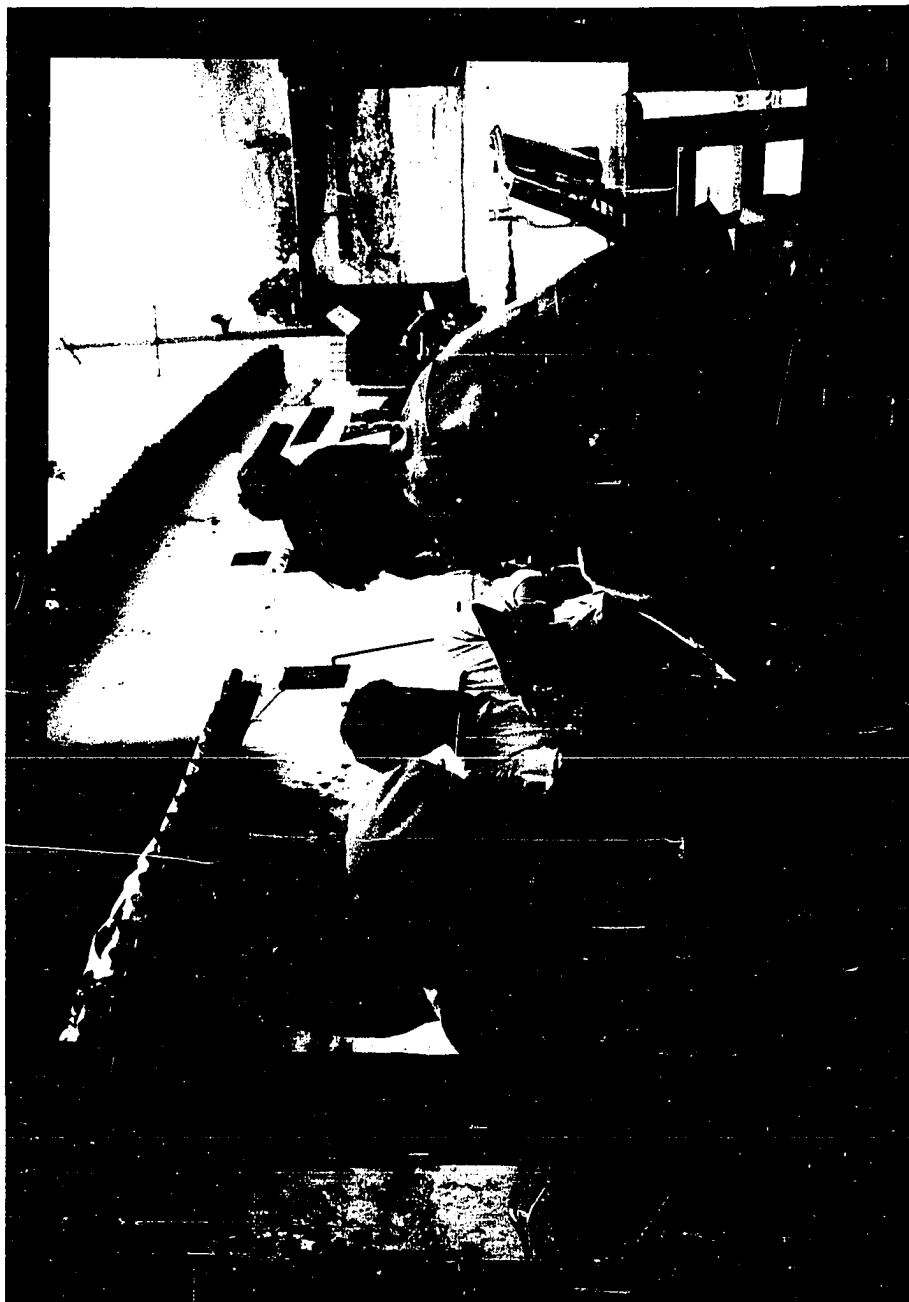


PLATE 3: Beiya Lead Mine, LSN explaining Bai romanisation to Bai-speaking workers and managers
(May 20, 1989)

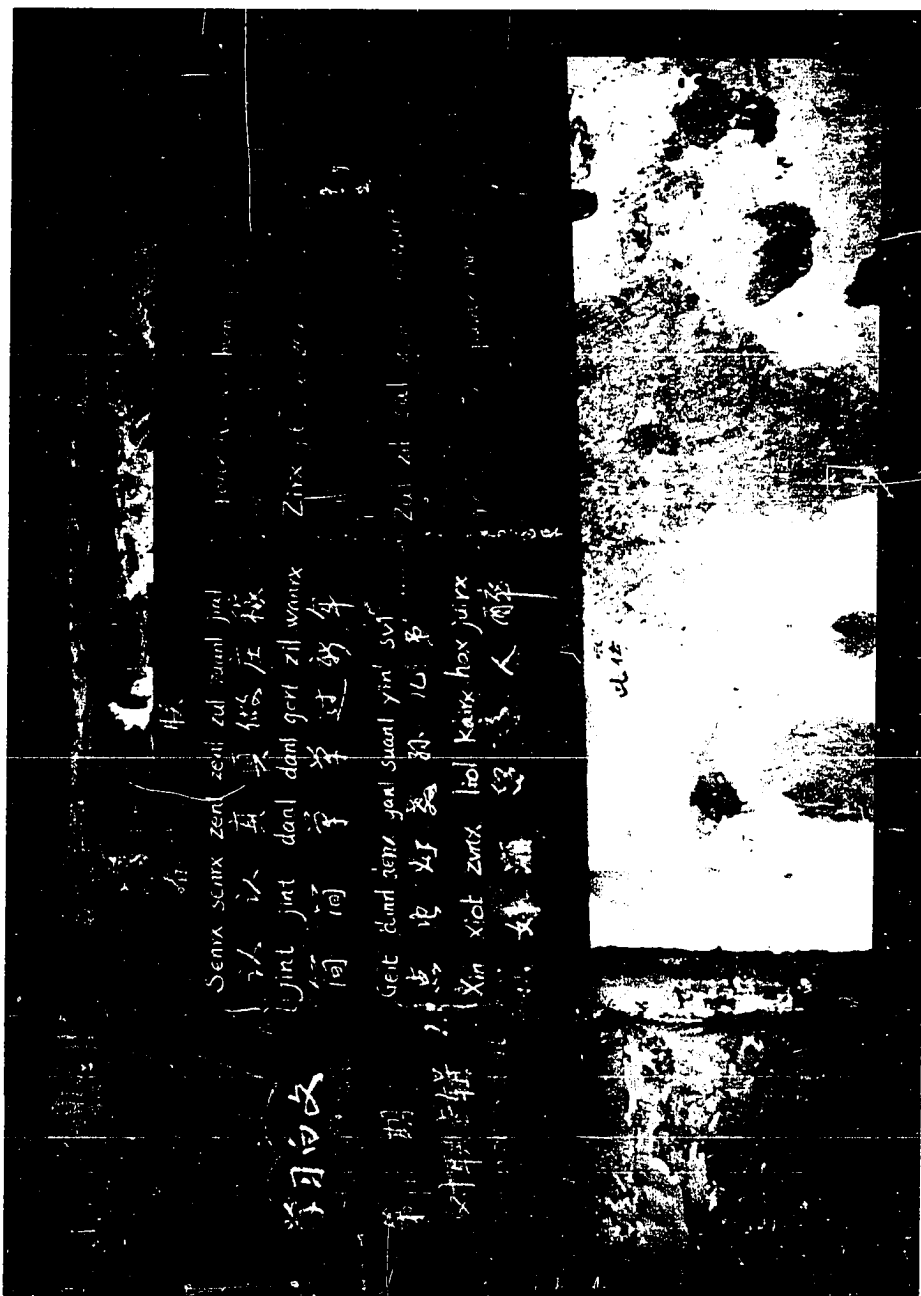


PLATE 4: Blackboard at Xizhong Primary School, Jianchuan County, showing bilingual verse couplets for teaching romanised Bai script (May 15, 1989)



PLATE 5: Ceremonial couplets at the home of Xizhong Primary School principal, showing romanised Bai readings below Chinese graphs (May 15, 1989)

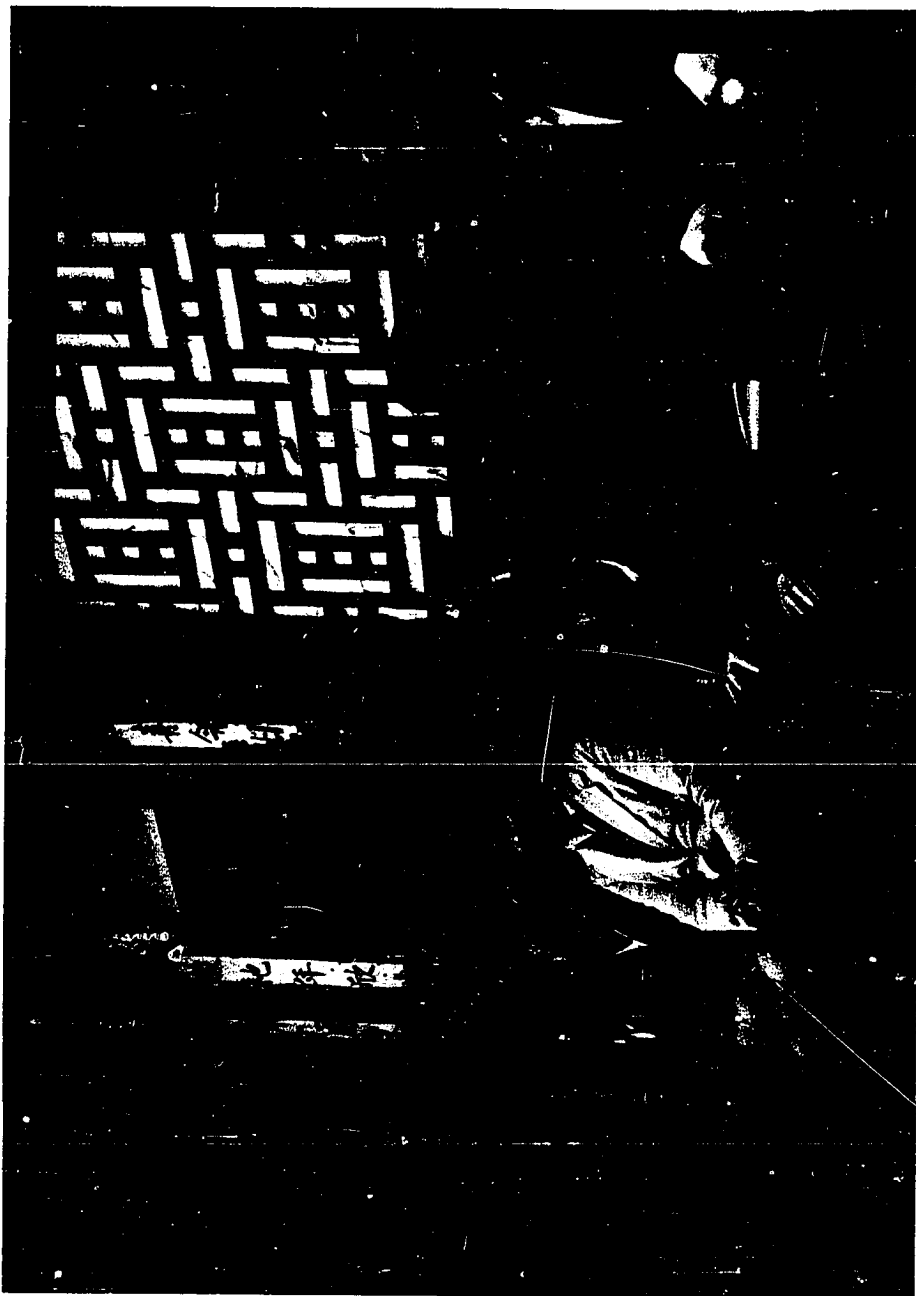


PLATE 6: Principal (2nd right) and teaching staff of Xizhong Primary School, with LSN (extreme right) and author (3d right) (May 15, 1989)

