

Abstract of dissertation  
entitled

**A Diachronic Comparative Analysis  
for  
the Phonology of Xiāng Dialects**

Submitted by

HUANG, Hongjiang

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Xiāng Dialect has been proposed as a sub-branch of Chinese for ninety years, though its status is still heavily contested among scholars. The lack of an identifiable uniquely shared innovation among the Xiāng dialects is a major obstacle faced with the efforts towards any taxonomic classification. Recent study has suggested disintegration of the proposed group into smaller units that carry certain phonological innovations among some of the subsets. In response, established on the ground of family tree model and applying the historical comparative method, this study has analyzed substantial published data on the Xiāng dialects, and ultimately put forward a proposal that the Xiāng dialects could form a single taxonomic group characterized by an early and distinct innovation.

The study starts from a propositional working hypothesis that an envisaged innovation constitutes both the sufficient and the necessary conditions for membership of Xiāng. From this starting point, a common phonological system is steadily reconstructed, with thirty two initials plus initial zero, seventy three finals, and eight tones. The result supports the hypothesis that the innovation in concern is uniquely shared by most dialects in the area traditionally proposed to be Xiāng speaking. Remarkably, this innovation is ancient in that it accompanied the division of Early Middle Chinese into Mandarin, Gàn, Hakka, and the Xiāng. Meanwhile, the prior suggestion on setting up a taxonomic group in central Xiāng area is denied. Implied by this result, the status of several dialects in the south of Húnán Province is subject to reconsideration for further studies.

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**A Diachronic Comparative Analysis**  
**for**  
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by  
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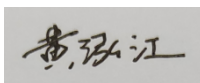
A dissertation  
submitted in partial fulfillment of the requirements  
for the Degree of Master of Arts  
at The University of Hong Kong

August 2022

## Declaration

I declare that this dissertation represents my own work, except where due acknowledgement is made, and that it has not been previously included in a thesis, dissertation, portfolio, individual project or report submitted to this University or to any other institution for a degree, diploma or other qualifications.

*Signed:*

A rectangular box containing a handwritten signature in black ink, which appears to read '黄红江' (Huang Hongjiang).

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HUANG, HONGJIANG

# 湘方言音系的歷時比較研究

摘要

黃泓江

自九十年前湘語初次被學術界提名為漢語一大分支以來，有關其地位的爭議在學者中異常激烈。其中，缺少一項可被識別的獨特共享創新，一直是湘方言的分類學研究面臨的主要障礙。近年來，有研究認為應當將湘語進行拆分，以便描述其中個別組團的某些共享創新。對此，這篇研究建基於歷時譜系樹架構，採取了歷史比較法手段，引用了公開詳實的數據，最終提出了湘方言可在一項早期的獨特共享創新之上構建單一共系群的看法。

本文首先將一個設想中的創新假定為判定湘語的充分必要條件。在此基礎上，本文構擬了一套擁有三十二個聲母外加零聲母、七十三個韻母及八個聲調的共同語音系。結果顯示，先前所假設的創新的確是多數傳統被認為屬於湘語的方言所共享的創新。更重要的是，這一獨特的創新還伴隨著早期中古漢語分化為官話、贛語、客家話和湘語的過程。同時，早前學者所提出在湘語中部單獨劃立一個類型學群落的建議遭到否決。研究結果還建議，湖南省南部若干處方言的地位應當重新進行考慮。

## **Acknowledgements**

The collection of data in this dissertation actually started several years ago. However, they are not compiled into a formal thesis till I was enrolled in the Master of Arts in the field of Linguistics at the University of Hong Kong. Consequently, I would like to express my gratitude towards my supervisor for this dissertation, Dr. Youngah Do, who has given kind suggestions on organizing the whole presentation structure of the thesis. My deepest gratitude would also go to Prof. Richard Van Ness Simmons from the School of Chinese, who is my sole academic referee to this programme. Without his precious help, this thesis would not have come to reality at this stage. I owe special thanks to Prof. Stephen Matthews, who has taken care of my study throughout the academic year and provided valuable supports to my applications for further education. I would thank Dr. Leo Francis Hoyer for his help on my formatting of this long thesis and Dr. Zoe Lam from UBC as well for her tireless guidance on feature representation of phonology. Additionally, Mr. Deng Kaichu from Changsha University personally mailed me his out-of-print work about Níngxiāng dialect during the apex of the coronavirus pandemic. I feel grateful for his generosity. Lastly, I would attribute my appreciation to my mother who has decided to spare no love supporting my study on linguistics. Xiāng is her mother tongue, and I hope this thesis would be a gift for my loved family and also the university.

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## **List of Abbreviations**

AH	Ānhu àDōngp íng 安化東坪 (Xu, 2004)
AH(MC)	Ānhu àM éch éng 安化梅城 (Bao, 2006; He, 2010)
AH(JP)	Ānhu àJi èp á 安化界牌 (Lei, 2007)
AR	Ānr én H ésh ì 安仁禾市 (Chen, 1995)
CCX	Common Central Xiāng (Coblin, 2011)
CD	Ch ángd éCity 常德 (Zheng, 1999)
CDC	Common Dialectal Chinese (Norman, 2006)
CG	Common G àn (Coblin, 2015)
CN	Ch ángn íng 常寧 (Wu, 1998)
CN(XL)	Ch ángn íng Xīl ù 常寧西路 (Yin, 2008)
CMX	Common Xiāng
CS	Ch ángshā City 長沙 (Hunansheng difangzhi bianzuan weiyuanhui, 2001)
CS <sub>2</sub>	Ch ángshā Old 長沙老派 (Bao et al., 1999)
CS(LD)	Ch ángshā Lu ód ài 長沙羅代 (Tang, 2017)
CX	Ch énxī 辰溪 (Xie, 2010)
DK	Dòngkǒu Sh íjiāng 洞口石江 (Wang, 2008)
DY	D àyōng 大庸 (Hunansheng difangzhi bianzuan weiyuanhui, 2001)
GY	Gu àny áng 灌陽 (Liu, 2002)
HD	H éngdōng D àpǔ 衡東大浦 (Deng, 2012)
HS	H éngshān 衡山 (Peng, 1999)
HT	H ùit óng Ru óshǔi 會同若水 (Hu, 2006)
HY	H éngy áng City 衡陽 (Hunansheng difangzhi bianzuan weiyuanhui, 2001; Li, 1986)
JS	J íhǒu 吉首 (Li, 2002)
LD	L óudǐ Lǎoch éng (L óudǐ Proper) 婁底老城 (Liu, 2001)
LD(JL)	L óudǐ Jiāol óng 婁底蛟龍 (Chen, 2006)

LD(WB)	Lóudǐ W ànbǎo 婁底萬寶 (Yu et al., 2021)
LH	L ónghuí T áohóng 隆回桃洪 (Zhang, 2005)
LP	L í píng 黎平 (Xiong, 2014)
LX	L úxī Xīnglóngchǎng 瀘溪興隆場 (Yin, 2007)
LY	L i ányu án Q i áotóu hé 漣源橋頭河 (Chen, 1999)
MC	Middle Chinese
ML(CL)	M ùluó Ch ánglè 汨羅長樂 (Chen, 2006)
ML(DJ)	M ùluó D àijīng 汨羅大荊 (Liu, 2011)
NX	N íngxiāng Hu ángc á 寧鄉黃材 (Deng, 2008)
PJ	P íngjiāng C áichuān 平江岑川 (Yi, 2020)
PX	P íngxiāng City 萍鄉 (Li & Wei, 1998)
QY	Q í yáng 祁陽 (Hunansheng difangzhi bianzuan weiyuanhui, 2001; Li, 1998)
QYS	Q i èy ùn System 切韻音系 (Pulleyblank, 1984)
QZ	Q u ánzhōu 全州 (Zhu, 2011)
SF	Shuāngfēng 雙峰 (Chen, 2006)
SF <sub>2</sub>	Shuāngfēng 雙峰 (Hunansheng gong’anting, 1993)
SF <sub>3</sub>	Shuāngfēng 雙峰 (Beijing daxue, 2003)
SF(HS)	Shuāngfēng H óngshāndì àn 雙峰洪山殿 (Zhu, 2010)
SF(HY)	Shuāngfēng H éy è 雙峰荷葉 (Bao, 2006)
SF(GT)	Shuāngfēng G ānt áng 雙峰甘棠 (Xu, 2006; Zhu, 2011)
SF(ZM)	Shuāngfēng Z ím énq i áo 雙峰梓門橋 (Bao, 2006)
SS	Sh áo shān R úy ì 韶山如意 (Xiang, 2010)
SS(DP)	Sh áo shān D àp íng 韶山大坪 (Wang, 2017)
SY	Sh ào yáng City 邵陽 (Hunansheng difangzhi bianzuan weiyuanhui, 2001; Chu, 1998)
SY(CL)	Sh ào yáng Ch ánglè 邵陽長樂 (Yuan, 2003)
TJ	T áo jiāng G āoqi áo 桃江高橋 (Zhang et al., 1988)
WG	Wǔgāng 武岡 (Hunansheng difangzhi bianzuan weiyuanhui, 2001)
XA	X i án’ān District 咸安區 (Wang, 2015)

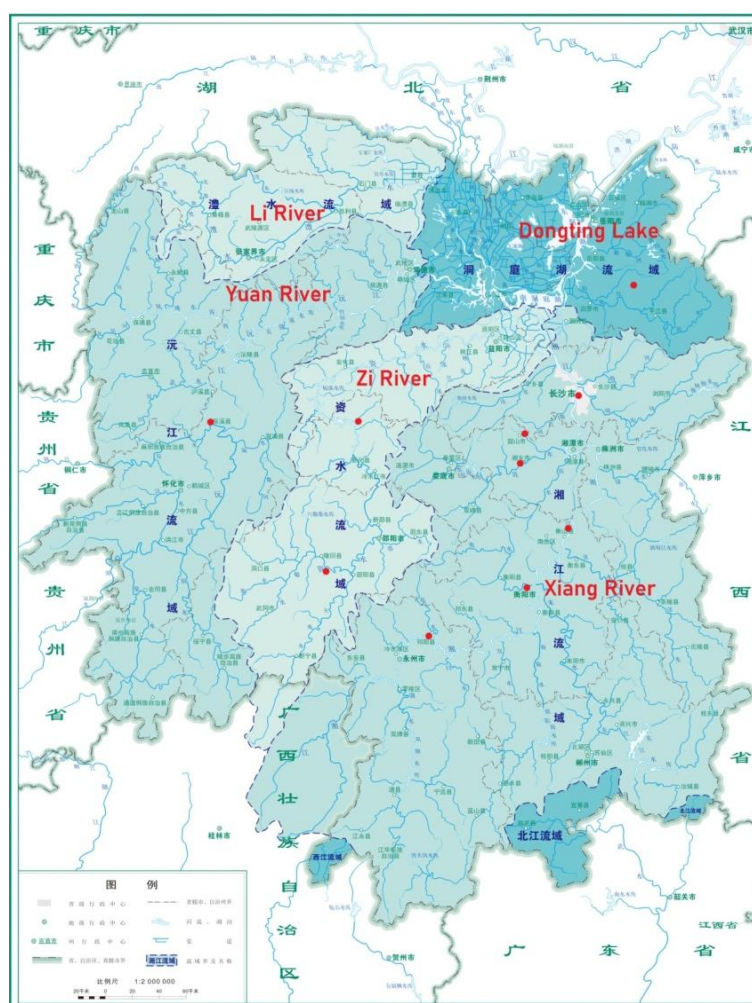
XH	Xīnhuà 新化 (Luo, 1998)
XH(BX)	Xīnhuà Báixī 新化白溪 (Liu, 2003)
XN	Xīnníng Jīnshí 新寧金石 (Ouyang, 2008)
XP	Xùpǔ 淑浦 (He, 1999)
XX	Xiāngxiāng 湘鄉 (Hunan difangzhi bianzuan weiyuanhui, 2001)
XX(QZ)	Xiāngxiāng Qízǐ 湘鄉棋梓 (L. Li, 2007)
YJ	Yúánhé 沅江 (Peng, 2006)
YeY	Yúèyáng City 岳陽 (Yueyangshi difangzhi bangongshi, 2002)
YeY(BX)	Yúèyáng Bǎixiáng 岳陽柏祥 (D. Li, 2007)
YeY(RJ)	Yúèyáng Róngjiāwān 岳陽榮家灣 (Bao, 2006)
YiY	Yìyáng City 益陽 (Zeng, 1995)
YX	Yǒngxīng 永興 (Hu, 2009)

Note: data of these dialects in this dissertation primarily come from the works cited in parenthesis unless specified other sources.

# 1. Introduction

## 1.1 Background

The dialects now denominated as Xiāng (湘語) situate mostly in Hún án (湖南) Province and in a small corner of the adjacent province of Guǎngxī (廣西) (General editors, 1987). The province of Hún án lies in the southern part of China, occupying the rugged terrain with hundreds of mountain ranges and river valleys that span an area of 210,334 square kilometers (Perdue, 1987). Its permanent resident population was 66.22 million as of the end of 2021 (Hunan government, 2022).



**Map 1.1: the watersheds of Hún án**

The topography of Hún án Province is tilted towards its northeast. It is bounded by the Mǔfù Mountain (幕阜山) ranges to its east, the Nánlǐng Mountain (南嶺) ranges to its south, and the Wǔlín Mountains (武陵山) and the Yúngù Plateau (雲貴

高原) to its west (Perdue, 1987). The major rivers that run across Húnán Province are the Xiāng River (湘江), the Zī River (資水), the Yuán River (沅江), and the Lǐ River (澧水). These rivers have their headstreams high up in the mountains and plateaus of the southern and western parts of the province and in neighboring provinces of Guǎngxī and Gùzhōu (貴州). For millions of years they have cut off the cliffs and rocks, roared all the way down towards the northeastern lowlands, eroded out plots of valleys and plains along their courses. All the four major rivers drain into the mighty Dòngtíng Lake (洞庭湖), situated in the northeastern corner and connects the Yangtze. The Xiāng River watershed occupies the biggest share in terms of both its area and population of the province (Tao et al., 2015), with most of the major cities including the provincial capital, Chángshā (長沙), situated within its range.

Before the Han Chinese massively migrated to the area, ‘sinicization of the southern Changjiang (Yangtze) basin was slow and not complete until the Tang dynasty’ (Ballard, 1981). Historically, the Xiāng watershed provided passageways for Han Chinese travelling between the Chinese central plains and the southern Lǐngnán (嶺南) area (Coblin, 2015, p. 289). Several major waves of southward migration towards south China (Coblin, 2002) facilitated the spread of Chinese languages in this area including what is known as Húnán Province. To the north of the province, where people are closer to the central plains, the Húběi (湖北) Province is home to the foundation of Southwestern Mandarin (Zhou & Lo, 1991). To the west among the mountains and hollows of the plateau are the predominantly Mandarin speaking Hànnán immigrants settled in recent centuries, and scattered minority groups who are speakers of numerous indigenous languages including Miao-Yao (Li, 1973; Downer, 1973). To the east, the Gàn (贛語) concentrates in and around the neighboring province of Jiāngxī (江西) (Coblin, 2015). To the south among the Nánlǐng Mountain ranges are the abounding Tǔhùà (土話) dialects that are difficult to classify within the Sinitic family (Wang, 2001). Beyond these Tǔhùà areas are the Hakka and Cantonese speaking area, known as Lǐngnán (Hashimoto, 1972).

Among the four major watersheds of Húnán Province, the Lǐ River watershed in the far north is predominantly Mandarin-speaking (General Editors, 1987). Dialects

that have been widely accepted as Xiāng mainly concentrate in the Xiāng and Zī River basins and a smaller portion of the middle Yu án River basin (Chen, 2006). There are also a few cities around Lake Dòngt íng that have been described as Xiāng-speaking, such as Yu ánjiāng (沅江) and M ù ó (汨羅). The majority of dialects focused in this dissertation are in the Xiāng and Zī River watersheds.

## 1.2 Literature Review

### 1.2.1 Studies with Emphasis on Investigations

Since the proposal of Xiāng as a unique branch among the Sinitic Languages by Dragunov in 1932 (Hashimoto, 1967), abundant studies on this newly recognized member have been carried out. The *Hunan fangyan diaocha baogao* (湖南方言調查報告, lit. an investigation report of the Hún án dialects) was published in 1974 whilst the investigation on which the report was based took place in the 1930s (Yang, 1974). The report provides to us with an earliest to date outline of 75 dialects in Hún án Province, including many Xiāng dialects. Considering its time and scale, this report is one of the most important scholarly written masterpieces in this field. However, the homosyllabic and lexicon lists recorded are exceptionally short for each of the dialects. The respondents were mostly young students around the age of 20 at the time of investigation and were studying in the provincial capital Ch ángshā. The author and investigators were aware of some of the potential problems arisen from this practice (Yang, 1974, p. 13). For example, a respondent could have been heavily influenced by the accent of the capital city and his fellow schoolmates. A lack of native environment may even drive a respondent into favoring cultural words over vernacular ones. In the brief discussion on dialect classification, Yang asserted the difficulty of dividing the dialects because gradual and minor changes usually accumulate beyond the border, and different dividing suggestions could be given based on the phonemes, the tonemes, or the lexicons. Hence, he adopted an approach that relies on counting the number of similar items among a basket of selected phonological features. Among the items he selected is the one of MC zhu ó 濁 initials (voiced initials), which has been widely referred to by later scholars as a key criterion for Xiāng identification. Yang's

approach can reflect the superficial affinity between two dialects to some degree, however fails to reveal any inherent connection.

There is a report of field investigation in Húnán Province published in the 1980s, which is named *Shō hōgen chōsa hōkoku* (湘方言調查報告, lit. an investigation report of dialects of Xiāng) (Nakajima, 1987). The word 湘 (Xiāng, Japanese Shō) in this context refers not to the language but an ‘ancient or literary appellation for the province of Húnán’ (Coblin, 2011, p. 1), as Nakajima has included dialects that is widely regarded as either Mandarin (such as Chēnzhōu 郴州) or Tǔhà (such as Línghú Cǎijiāpù 零陵蔡家鋪) of the province into his report. This report contains homophony syllabary lists for 13 dialects in Húnán Province, with brief discussions on the sound inventories and rules of combinations of the dialects. A lexicon list is provided for Hùitóng (會同) dialect. Chen (2006, p. 11) comments that Nakajima’s report has not only included limited Xiāng dialects, but also involved misreportings against the actual pronunciations. Nonetheless, this report has provided some of the earliest dataset for a few Xiāng dialects. Hunansheng gōng’ānting (湖南省公安廳) (1993) also published a report with detailed syllabary lists for 22 dialects. The stylistic arrangement of this report is to place the Chinese characters in the order of respective Mandarin pronunciations. The data is full and mostly accurate, with vernacular and literary markings where applicable.

From the late 1990s onwards a number of monographs based on investigations of one or a few Xiāng dialects have been published. These investigations have uncovered the phonological systems of several dozens of Xiāng dialects in considerable detail, and have laid the founding stones for inter-dialectal comparisons.

### 1.2.2 Synchronic Studies

The first comprehensive explanation on phonological features of Xiāng is the doctoral dissertation by Zhong (1997). He discovered that, firstly, the consonants derived from MC voiced consonants in the 15 dialects he recognized to be Xiāng are never blended with their voiceless aspirated counterparts, no matter the tones of the syllables that begin with these consonants are MC pínǚ (平, the Level Tone), shǎng



(上, the Rising Tone), qù (去, the Departing Tone), or rù (入, the Entering Tone). Secondly, two sets of MC retroflexes, the Zhī'èr (知二) and Zhuāng (莊), have merged in front of modern open vowels. The Zhī'èr (知二) comprises the set of retroflex stops while Zhuāng (莊) represents the retroflex sibilants in the reconstructed QYS system by Pulleyblank (1984). Thirdly, he found that MC alveolar nasal stop [n] and lateral approximant [l] have merged at syllable-initial positions. Fourthly, the plosive codas of MC \*Rù (入) tone syllables have been completely dropped. He then discussed nine phonological aspects about the preservations and mergers of MC categories, which all show some degree of internal variation among the 15 Xiāng dialects. After the discussion of phonology, Zhong turned to focus on phonetic topics. He analysed the physical characteristics of voiced initials in Xiāng, illustrated a chain shift in the vowels that he denotes as 'ai→a→o→u', and the vowel system, among a few other topics. Specifically, Zhong did not explain in the first place how the vowel shift was recognized as a chain shift. In summing up his discussion about push chain and drag chain, he admitted that it seems impossible to differentiate a push chain from a drag chain as late influence from Mandarin potentially blurred the pattern, and that possibly all the vowels have been moving in one direction spontaneously (也許由於後來官話的影響，推拉鏈的啟動者已經分不清是誰了。也許根本就不分什麼推鏈與拉鏈，推拉鏈僅僅是一種形象的說法，鏈上的音不約而同地向同一個方向移動是一種非生物性的協同行為) (Zhong, 1997, p. 28). However, Zhong made an impressive insight that there exists a pairing between the finals with and without codas during the shift (Zhong, 1997, p. 25). Moreover, Zhong noticed that the preservation of voiced consonants cannot delineate a clear boundary of Xiāng, as the dialects near the border of northeastern Húnán Province with Jiāngxī and Húběi preserve these consonants yet are conventionally considered Gǎn. He proposed a revision to the phonological identification criterion, where the voiced initials and the voiceless aspirated initials from MC are not merged regardless of environment (Zhong, 1997, p. 1). Furthermore, he suggested taking into account the mutual intelligibility and the chain shift for classification. The result turned out that several dialects in central Húnán forms a 'nuclear Xiāng (中心湘語)' while those surrounding this core area are

the ‘peripheral Xiāng (周邊湘語)’ (Zhong, 1997, p.40).

In the *Language atlas of China* (中國語言地圖集) as well as Bao’s *Xiang fangyan gaiyao* (湘方言概要, lit. the essentials of Xiāng dialects), the non-aspiration attribute of the MC voiced consonants is seen as a crucial indicator of a Xiāng Dialect (General editors, 1987; Bao, 2006). Bao (2006) analyses many phonological features of the 16 dialects that he designates Xiāng, and attaches a 1616-word syllabary for these dialects to the end. His work provides valuable raw data on many Xiāng dialects, and is an integrate study in exploring the synchronic phonological features of them. Bao affirms that the primary indicator of a Xiāng Dialect is that the MC voiced stops and affricates in modern shūshēng (舒聲) syllables, no matter voiced or unvoiced now, are usually non-aspirated (古全濁聲母舒聲字今逢塞音、塞擦音時，無論清濁，一般都念不送氣音) (Bao, 2006, p. 5). Bao admits following this statement that he uses the word *usually* because there are exceptions. The second indicator for a Xiāng dialect is stated to be the absence of MC plosive codas -p/t/k and of the glottal stop -ʔ (古塞音韻尾[-p -t -k]完全消失，也無喉塞尾[-ʔ]). The third indicator is that the main vowels of MC Xi èsh è(蟹攝), Jiǎsh è(假攝), and Guǒsh è(果攝) follow a pattern of [a], [o], and [u] in sequence respectively (蟹、假、果攝主要元音形成[a]、[o]、[u]序列). The fourth and last indicator is having five to seven tones, with MC \*Q ǔshēng (去聲) separated into yīnq ǔ(陰去) and y ángq ǔ(陽去) in most sub-dialects (聲調五至七類，絕大多數去聲分陰陽). Bao writes that whenever it is viable to classify a dialect using the first indicator or combining the first and the second indicators, the remaining indicators shall not be considered.

Chen (2006) takes a more conservative attitude towards the selection of criteria. Instead of setting a clear-cut benchmark, she proposes a comprehensive consideration of multiple phonetic features in addition to the use of a revised version of the status of MC voiced initials. She has acutely observed a discrepancy of MC voiced consonants among the southern subgroup of Xiāng dialects, where they commonly devoice within syllables bearing MC \*R ǔ(入) tone, while stay voiced in other tones. She puts a majority of her effort in exploring the phonetic realization of MC voiced initials among various Xiāng dialects in the search for an accurate description about the

evolution of this group of sounds. Chen does not seem to have understood the effect of diachronic sound change. Even though she has mentioned that MC *zhuó* 濁 initials, or the voiced consonants, of her own dialect (Liányuán Qiótúhéhé) has undergone opposite evolutions against the dialect (Lóudī) of her husband's parents, while notably the two dialects are still mutually intelligible and felt alike by speakers (筆者的公公婆婆是婁底人...我們在一起生活了十幾年，直到最近幾年調查婁底方言時才發現我們古全濁聲母的演變是兩種截然不同的類型。古全濁聲母的截然不同並沒有使人們覺得語言有很大差異，這是值得我們關注和思考的) (Chen, 2006, pp. 59-60), she has not questioned the authenticity of using *zhuó* 濁 initials as the primary indicator of Xiāng upon theoretical ground. Apart from the voiced initials, Chen also describes the vernacular and literary pairing in the finals (medials plus rhymes), and the mapping of modern tonemes to QYS tonemes. Nevertheless, her quoting of MC phonological categories in relation to Xiāng is only bringing together static data extracted from two panels of a time series for comparison, and is still largely synchronic and static in nature.

A trial for imposing historical insights has been taken by Zhou (2005). In her doctoral dissertation, she compares the 'unique' phonological attributes of 33 Xiāng dialects with that of Middle and Old Chinese. She has not explained in detail which aspects have been referred to as 'unique' underlying her principle of selection. As a consequence, her analysis is more like a 'pick-and-choose' scheme. Regarding the MC retroflexes and sibilants, she divides the 33 dialects into different groups merely according to their phonetic appearances. Thus she comes to the absurd conclusion that the realization of MC retroflex stops as alveolar stops in Xiāngxiāng and nearby dialects reflects a feature descended directly from Old Chinese (Zhou, 2005, p. 28), totally ignoring their multiple correspondences with MC (not to say Old Chinese) phonemes. This is, of course, not worth refuting. Unfortunately, the same type of mistake is found throughout the chapters of her dissertation. Failure in understanding the important disparity between phonetic and phonemic features certainly has reduced the authenticity of her analysis. Moreover, the evolutions identified by her are not distinguished between shared innovations and coincidences. For instance, dialects that

unvoice the MC voiced initials have been indistinctly grouped together and assigned the same weight with the other innovations. Notwithstanding, Zhou has made some meaningful discoveries. She correctly points to the fact that cross-dialect variations on some features, such as the weakening and loss of the nasal coda, reflect different stages of a sound change. Also, she has identified the nasalized vowels observed in dialects of Xiāngxiāng and Wǔgāng to have been assimilated by preceding nasals. In her conclusion, she erroneously combines the retentions with the innovations together into her formula aiming to compute a score of differentiation for each and every pair of the dialects. Overall, this piece of work is primarily based on synchronic affinities with a little comparison over time.

### 1.2.3 Diachronic Studies

Beyond the prevailing synchronic analyses of Xiāng phonology, a few pioneers have made remarkable progresses in the field of diachronic research.

A most significant contribution should be attributed to Coblin (2011). His study method is to ‘begin by adopting as a rule of thumb the working hypothesis that the Central Xiāng dialects constitute a valid genetic or taxonomic unit, characterized by interlinked shared tonal and syllable initial innovations’ (Coblin, 2011, p. 6). These innovations are supposed to constitute ‘both a necessary and a sufficient classificatory condition’ (Coblin, 2011, p. 6). He then reconstructs a phonological system for what he calls the Common Central Xiāng (CCX) based on historical comparative method, making use of 12 sub-dialects which mostly situate in the center of Húnán Province. The phonology is stratified, with a popular lexical layer and several late literary layers. Coblin finds that for these dialects ‘(i)n words belonging to the popular lexical layer, these yángǜ syllables shift to the upper departing (i.e. yīnqù 陰去) tone, and those having stop and affricate initials usually become voiceless aspirates’ (Coblin, 2011, p. 2). After reconstruction, Coblin discusses the hardening of earlier sibilants and several lexical items that he deems to be of diagnostic interest. He applies two tests on the vowel patterns between Norman’s CDC and that of Gǎn, that of southern Mandarin, and also that of CCX. The first test involves two final sets of CDC, the \*-ɔn set and

the \*-an set. Then is the second, the ong : eng : ang : iang : ing test. He concludes from the tests that the early layer of Central Xiāng is possibly closely linked with G àn, while the late layer is more Mandarin-like. The geographic isolation of Hùitóng from the other Central Xiāng dialects is explained to be the result of immigration and military expedition. In the final remarks Coblin confirms the validity of his working assumption that the chosen dialects in Central Húnán Province do help in delineating a taxonomic group featuring a uniquely shared innovation.

Coblin's reconstructed system contains 29 syllabic initials plus an initial zero, 53 syllabic finals, and seven tones. The 53 finals are formed by combining nine vowels, with additionally one rhotic ʐ and one syllabic nasal ŋ. This vowel system overall fits the 12 dialects he has selected. In contrast, the 29 initials do have shortcomings which will be illustrated in this thesis. His work has shed light on a taxonomic grouping of the dialects in Húnán Province with a clear and structural system. His delineated area of Central Xiāng is much smaller than the Xiāng in the conventional literature. Another comprehensive reconstruction of Xiāng is undertaken by Zhou (2015). He proposes a Proto-Xiāng phonology applying the historical comparative method. His unpublished manuscript makes use primarily of 24 dialects in Húnán Province for reconstruction. The geographic density of chosen dialects is not very high while covered a slightly larger area than that traditionally accepted as the Xiāng speaking region. Two features are identified by him, namely the literary - vernacular pairing, and the existence of an incomplete substrate layer which he denotes as stratum X. However Zhou has not pointed out a uniquely shared innovation.

Apart from systematic reconstructions, there are a few works reflecting certain aspects of the phonological history of Xiāng. Peng (2006) has studied the strata of voiced consonants, sibilants, and several finals of Xiāng dialects. He criticizes the application of historical comparative method in Chinese linguistics by attacking its lack of recognition on different strata. Alternatively, he takes the framework of Pan (2004; 2010) which assumes the northern lingua franca has constantly affected the southern dialects, resulting in layers of borrowings dated to multiple periods in the target dialect. The methodology is in itself a very constructive and attractive scheme.

Summarized from the approach of Pan (2004), the scheme requires recognition of the existence of potentially multiple strata within a modern phonological system as a first step. Then, a comparison between the modern dialect and the proto phonology (which is usually the QYS) is conducted. The aim of this step is to identify which modern categories are mapped to one QYS category. If many-to-one mapping is discovered, the third step would be deciding which modern categories are exotic and which are not. This step usually encounters cross-dialect comparisons. After identifying the true indigenous layers, the relatedness of each layer with QYS is analysed in order to put the strata in a time sequence. Pan insists that only after this step can historical comparative method be applied within each of the panels. As Pan's student, Peng tries to implement the framework to identify the strata in each of the sound categories he has selected in his thesis. He has overall dated each of the strata he recognizes in a logical and prompt manner. For instance, his analysis on the vernacular form [lei] of a few etymons including 呂 (Peng, 2006, pp. 105-107) as a late layer is impressive. According to Peng, most of the strata can be traced back at the farthest to MC. Several complex phonemic mappings from MC to modern Xiāng dialects are described. Although the dissertation has analysed the strata for each of the phonological categories separately, Peng has not set the separate strata into organized phonological systems. As such, he has not touched the discussion on the existence of a protoform for the Xiāng dialects or on the taxonomic grouping of Xiāng.

One of the most recent works studying a part of Xiāng phonology is the article by Wu (2018). Wu examines the proposed Tányùn (覃韻) and Tányùn (談韻) distinction in a few Xiāng dialects and reconstructs a final \*-oN for Tán (覃) that he suggests to incorporate into Coblin's Central Xiāng phonology. Wu makes creative assumptions that both QYS Tányùn (覃韻) final \*-əm and its corresponding Héyùn (合韻) final \*-əp have remnants \*-oN and \*-oʔ that could be identified distinctively in vernacular lexemes, and examines them carefully. Although the argumentation is not without flaw, and the finding does not directly lead to a discovery of any sound change, Wu's article has made a major contribution in that he has pointed to a highly potential direction to the search for an early and unique feature for the Xiāng dialects.

#### 1.2.4 Problems of Existing Research

Although apparent contributions and progresses have been made so far on the description and discussion of the classification of Xiāng, several important problems are still unresolved, which will be illustrated in this section. Moreover, new questions have arisen following the trials by different scholars in reconstructing a historical phonology of Xiāng dialects given their different scopes of delineation.

Zhong (1997) made obviously contradicting arguments in his dissertation. He did not succeed in proving the existence of a chain shift, yet insisted on using this unclear chain shift as one of his three criteria of identifying the Xiāng Dialect. The other two criteria are neither more logical nor plain. His phonological criterion of the division between MC voiced initials with MC voiceless aspirated initials is clearly a statement about retention. From a static point of view, it may work for a classification at a single time panel. However it can never apply to the linguistic reality where sound changes are in play. As for his mutual intelligibility criterion, there is not any quantification method that has been well established and widely accepted. Hence his delineation would not be deemed as a methodical one under dynamic linguistic pattern.

Among Bao's four indicators, the non-aspiration attribute is faced with fierce challenges from field investigation data. Many dialects widely accepted by scholars (including Bao) as Xiāng dialects like Xīnhuà (新化) (Luo, 1998) and Qíyáng (祁陽) (Li, 1998) do carry aspirated voiced stops and affricates that correspond to MC voiced consonants. His third indicator regarding the pattern of [a], [o], and [u] vowels is clearly not ubiquitous even within central Húnán. Furthermore, his arrangement of a hierarchical application for the indicators weakens their efficacy. What rule or assumption is behind the decision whether one indicator is 'viable' in defining a dialect Xiāng? Are those rules and assumptions, if exist, phonological, historical, or simply arbitrary? Bao has not specified it.

Peng (2006) correctly pointed to a late innovation of the hardening of retroflex affricates in Xiāngxiāng in response to the assertion made by Zhou (2005). However, he fails to recognize that many Xiāng dialects carry another layer that can be uniquely

mapped with QYS retroflex stops. For example, dialects around Sh ày áng have a few vernacular items bearing the initial t-. Table 1.1 lists the vernacular readings. When no corresponding layer of the expected form is recorded, a short level stroke is put in the cell. Data of Q ý áng comes from Li (1998) and QYS from Pulleyblank (1984).

**Table 1.1: initial t- mapped with QYS \*tr-**

	竹	長	漲	脹	砧	粥	掌	真
LH	tiu	tiã	tiã	tiã	tẽ	tʃiu	tʃõ	tʃẽ
SY(CL)	tiəu	tiã	tiã	tiã	-	teiəu	tʂã	tʂen
QY	tiu	tian	-	tian	-	teiu	teian	tein
HY	-	-	-	-	tin	teiu	teian	tein
QYS	*truwk	*trian <sup>?</sup>	*trian <sup>?</sup>	*trian <sup>h</sup>	*trim	*teuwk	*teian <sup>?</sup>	*tein

Although the lexemes are not large in number, they are significant among the vernacular layers. For a study with emphasis on analysing strata, Peng's omission of this type is not negligible.

A further drawback of Peng is that he rules out spontaneous innovations without explanation when analyzing, for instance, the Gēyùn (戈韻) finals. He claims that the final -u should be the original layer of early Xiāng that derived from \*-wo, while -o is borrowed from Mandarin (Peng, 2006, pp. 82-84). However, it is not the case that all Xiāng dialects discussed by Peng carry this -u. To name a few, Q ý áng and H áng y áng (衡陽) are among the notable ones that have none of the Gēyùn (戈韻) finals realized as -u. Claiming that -o is entirely exotic for Gēyùn (戈韻) finals is suggesting that the local layer of these dialects like Q ý áng and H áng y áng have been wiped out entirely. On the one hand, QYS Gēyùn (戈韻) contains several dozens of common etymons, including many basic lexemes such as 坐 (lit. to sit), 果 (lit. fruit), and 火 (lit. fire). If the entirety of this type of etymons has been replaced by exotic elements, then how much of the dialect is left to be recognized as Xiāng? Or is there any rationale behind the hypothetical replacement? On the other hand, the final \*-wo where all Xiāng dialects are supposed to have started from can yield either -u or -o. From a dynamic perspective, different dialects can undergo different sound changes spontaneously. Any phonetic similarity between a local syllable and a Mandarin one could be either a



borrowing or a result of paralleling evolutions. Prudent attitude should be taken when one conducts historical analysis.

As Coblin (2011, p.1) has argued regarding the study of Xiāng until then, ‘no one has suggested any uniquely shared innovation(s) that would characterize and delineate the group as a whole’. Although Coblin is among the first scholars to propose a shared innovation for Xiāng dialects strictly applying historical comparative methods, there are two problematic aspects in his approach. One is concerning his selection of dataset. The other is regarding the way he handles the data.

For the aspect of selection, there are at least three problems. Firstly, a thin set of data picked out from dialects over a large area preliminary for making the working assumption probably blurred the geographic distribution of the delineated group, and may have even overestimated the internal homogeneity of the attribute in concern. In fact, B áxī (白溪) dialect of Xīnhu à described by Liu (2003) is one of the noticeable counterexamples within a continuum of central Xiāng. Most of the \*Y ángrù syllables in B áxī’s popular layer do not change together with \*Yīnqù tone as expected.

Xīnhu à B áxī dialect has five tonemes: a yīnp íng (陰平), a y ángp íng (陽平), a shǎngshēng (上聲), a q ùshēng (去聲), and a r ùshēng (入聲). There is not a specific yīnqù (陰去) because it lacks a contrastive y ángqù (陽去). Interestingly, the MC \*Y ángrù (陽入) syllables about which Coblin cares the most have overwhelmingly stayed in the r ùshēng (入聲) tone. Out of the recorded 118 \*Y ángrù (陽入) syllables with voiced obstruent initials, only 10 are in the q ùshēng (去聲) category, with only one character 秩 bearing an aspirated affricate. For those syllables in r ùshēng (入聲), many actually bear contrastive voiced initials.

**Table 1.2: rù(入) and qù(去) tone syllables in XH(BX)**

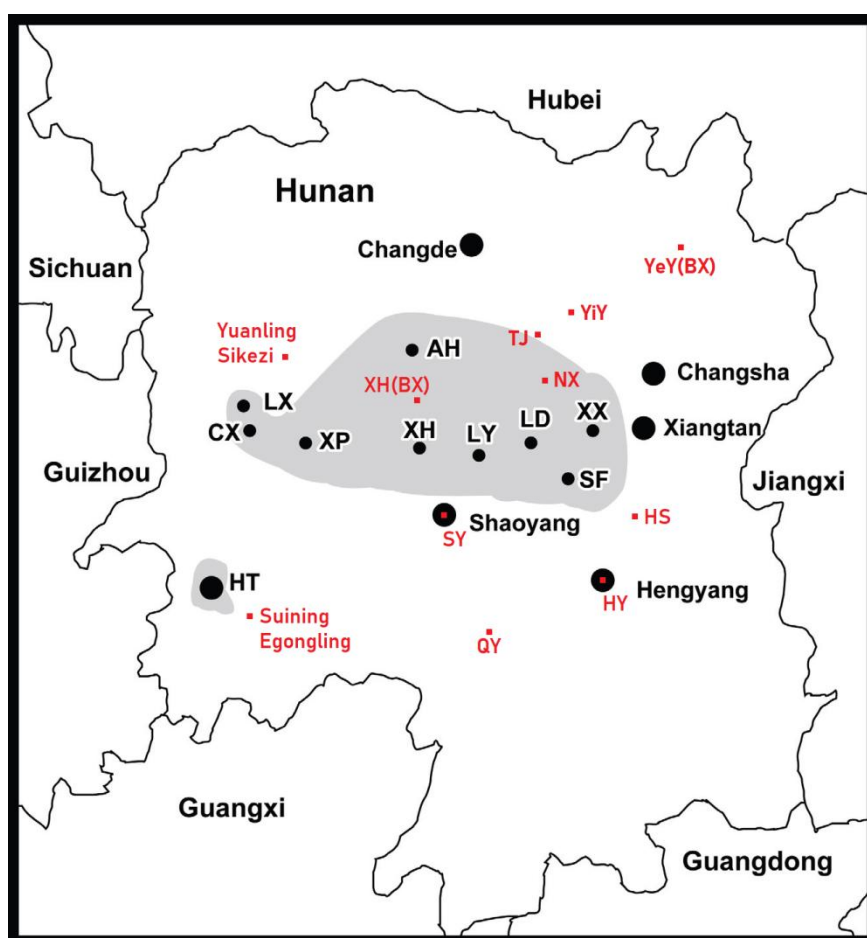
	拔	怕	霸	毒	兔	妒	鶴	貨
XH(BX)	b <sup>h</sup> a <sup>^</sup>	p <sup>h</sup> a <sup>^</sup>	pa <sup>去</sup>	d <sup>h</sup> u <sup>^</sup>	t <sup>h</sup> u <sup>去</sup>	tu <sup>去</sup>	yo <sup>^</sup>	xo <sup>去</sup>
QYS	*bɛ <sup>r</sup> t	*p <sup>h</sup> a <sup>rh</sup>	*pa <sup>rh</sup>	*dawk	*t <sup>h</sup> ɔ <sup>h</sup>	*tɔ <sup>h</sup>	*yak	*xwa <sup>h</sup>

In Table 1.2, all syllables with QYS obstruent codas (such as -t and -k) are from MC \*R ùshēng (入聲) tone, whereas all those ended with superscript -h are from MC

\*Qùshēng (去聲) tone. The voiced initials indicate yáng (陽) and otherwise yīn (陰). As such, syllable 拔 \*b<sup>h</sup>ɛ̃t is from \*Yángǜ (陽入) and 怕 \*p<sup>h</sup>a<sup>h</sup> is from \*Yīnqù (陰去), so on and so forth.

Although the syllable 怕 from MC \*Qùshēng (去聲) is realized as rùshēng (入聲) in Xīnhuà Bāxi, it is more likely the case that the \*Qùshēng (去聲) syllables with aspirated stops and affricates are merging into rùshēng (入聲), than the case where the \*Yángǜ (陽入) syllables had merged into \*Yīnqù (陰去) before they as a whole merge again into this rùshēng (入聲). The existence of voiced consonants in yángǜ (陽入) syllables indicates that the devoicing is far from complete. Likewise, syllables such as 兔 that still bear the qùshēng (去聲) proves that the aspirated qùshēng (去聲) have not merged with the yángǜ (陽入) syllables.

Secondly, some dialects geographically close to or even twined with the Central Xiāng Coblin delineated preserve a distinct yángǜ category with voiced consonants, like that in Bǎixiáng Township of Yúyáng (岳陽柏祥) described by D. Li (2007). Other related dialects have their vernacular \*Yángǜ (陽入) syllables merged either into yángpíng (陽平) like in Héngyáng, into shàngshēng (上聲) like in Héngshān (衡山), into yángqù (陽去) like in Shàoyáng (邵陽) and Wǔgāng (武岡), or into rùshēng (入聲) like in Qíyáng and in Yúnlíng Sǐkèzi (沅陵死客子), among others (Peng, 1999; Hunan sheng difangzhi bianzuan weiyuanhui, 2001; Jiang, 2012). Moreover, the \*Yángǜ (陽入) syllables mostly merge into yángshàng (陽上) in Sūnlíng Égōnglǐng (綏寧鵝公嶺), while two thirds of the yīnrù (陰入) syllables merge into yīnshàng (陰上) (Hu, 2007). Dialects like Yíyáng (益陽) and Táojiāng (桃江) have both their \*Yīnrù (陰入) and \*Yángǜ (陽入) merged into the yīnqù (陰去) tone, while many vernacular \*Yīnqù (陰去) syllables have merged into yángpíng (陽平), without any of such examples found from \*Yángǜ (陽入) syllables (Zhang et al., 1988; Zeng, 1995). This is yet another path of innovation. As shown in Map 1.2, these dialects are situated closely within a hundred kilometers from Central Xiāng and scattered in a somewhat crisscross pattern. The close ties between these dialects and Central Xiāng suggest that either the devoicing of \*Yángǜ (陽入) initials or the merger of \*Yángǜ (陽入) into other tones is potentially fairly recent phonemic innovation.



**Map 1.2: Coblin's Central Xiāng (shaded) and surrounding dialects**

A third problem is that the rate of change of \*Y ángrù (陽入) syllables in Central Xiāng never converges around a certain level, with dialects farther from the center showing lower rates until gradually disappears into edges. It makes the situation like a wave of diffusion (Wolfram & Schilling-Estes, 2003). Coblin is aware of this risk, yet he rules out the possibility of this kind of spread since it is ‘not the sort of feature that is easily borrowed’ (Coblin, 2011, p. 247). An alternative of a polycentric innovation model could eventually disintegrate his Central Xiāng as a taxonomic unit. Yet both are consistent with the observation in the area. For instance, Li ányu án (漣源) at the center of Central Xiāng has 90 lexemes from \*Y ángrù (陽入) shifted to yīnqù (陰去), while N íngxiāng (寧鄉) to its east has around 40 (Deng, 2008). If one goes farther east to Ch ángshā, the number will decrease to a dozen (Bao et al., 1999).

Consequently, it must be safer for us to assume that an independent \*Y ángrù (陽入) category, subject to various later innovations in different locales, had existed in the protolanguage, rather than to draw a clear isogloss based on the indistinct evolution pattern of \*Y ángrù (陽入) syllables. It will be expounded in section 4.3.

For the aspect of data handling, several additional problems are involved. These are mostly related with Coblin's decision on inclusion or exclusion of a combination of phonemes in the reconstructive process. For example, the reconstructed final \*-ya, as a vernacular form opposed to the literary final \*-ye, is questionable. Chen (2006, pp. 237-238) has noticed this variation and correctly recognizes it as an inter-speaker variation. In Coblin's dataset, however, Shuāngfēng (雙峰) is the only dialect that is recorded with such layers (Coblin, 2011, pp. 93-94). Unfortunately, if he were able to obtain more data from Shuāngfēng and compare them carefully, he would have been convinced that -ya and -ye are not contrastive finals, and that -ya (together with the allophone -ua) in Shuāngfēng and also in Xiāngxiāng (湘鄉) corresponds to -ye in Chénxī (辰溪) and \*-ye in his Common Central Xiāng as well. Please compare the Shuāngfēng data from six different sources below.

**Table 1.3: correspondence of SF final -ya**

	雪	決	缺	月	越	葉
SF	ɕya <sup>13</sup>	tua <sup>13</sup>	t <sup>h</sup> ua <sup>13</sup>	ya <sup>35</sup>	ya <sup>13</sup>	ia <sup>35</sup>
SF <sub>2</sub>	ɕya <sup>23</sup>	tua <sup>23</sup>	t <sup>h</sup> ua <sup>23</sup>	ya <sup>35</sup>	ya <sup>23</sup>	ia <sup>35</sup>
SF(ZM)	ɕya <sup>23</sup>	tuæ <sup>23</sup>	t <sup>h</sup> uæ <sup>23</sup>	uæ <sup>35</sup>	uæ <sup>23</sup>	ia <sup>35</sup>
SF(HY)	ɕya <sup>22</sup>	teya <sup>22</sup>	tɕ <sup>h</sup> ya <sup>22</sup>	ya <sup>35</sup>	ya <sup>35</sup>	ia <sup>35</sup>
SF(GT)	sue <sup>55</sup>	tue <sup>55</sup>	t <sup>h</sup> ue <sup>55</sup>	ue <sup>35</sup>	ue <sup>55</sup>	e <sup>35</sup>
SF(HS)	sue <sup>55</sup>	tue <sup>55</sup>	t <sup>h</sup> ue <sup>55</sup>	ue <sup>45</sup>	ue <sup>55</sup>	ie <sup>45</sup>
XX	ɕya <sup>23</sup>	tua <sup>23</sup>	t <sup>h</sup> ua <sup>23</sup>	ya <sup>23</sup>	ya <sup>23</sup>	ia <sup>45</sup>
SF <sub>3</sub> layer 1	ɕya <sup>23</sup>	tua <sup>23</sup>	t <sup>h</sup> ua <sup>23</sup>	ya <sup>35</sup>	ya <sup>23</sup>	ia <sup>35</sup>
SF <sub>3</sub> layer 2	sue <sup>23</sup> ; ɕye <sup>23</sup>	tue <sup>23</sup>	t <sup>h</sup> ue <sup>23</sup>	ue <sup>35</sup>	ue <sup>23</sup>	e <sup>35</sup>

For Shuāngfēng proper, only one source (SF<sub>3</sub>) supports a separation of two layers, while the other sources are without different layers at all. In SF<sub>3</sub>, whenever a final -ue is paired with a final -ua, a final -e will also pair with the final -ia (the combination [ie] is unfound in this dialect). Based on the data, a key question should be stressed. If one

is to reconstruct both \*-ya and \*-ye for the syllable 月, then why not reconstruct a final \*-ia in addition to \*-ie for syllables including 葉? Coblin (2011) has not explained this major problem. Instead, when introducing his reconstruction of \*-ie, he states that the forms of -e ‘probably represent borrowings from some later source’, and that the ‘source may have had final -e in these words’ rather than -ie because ‘(i)f it had -ie, then we must assume that the borrowing occurred after Central Xiāng \*-ie had shifted to Shuāngfēng -ia’ (Coblin, 2011, p. 138).

In fact, the finals -e, -ue, and -ye in SF<sub>3</sub> are equivalent in nature. They must be independent from a grand vowel shift from [e] to [a]. The shift not only involves \*-ie (which will be explained in Chapter 5), but also involves \*-ye and \*-ue. Note in Table 1.3 how the forms correspond across the upper seven rows. The cases of Shuāngfēng Gāntáng (雙峰甘棠) and Hóngshāndiàn (洪山殿) are most interesting. For all the characters listed in Table 1.3, their nuclei are all [e] in these two towns. The [e] here is the correspondence of [a] in other Shuāngfēng dialects and in Xiāngxiāng. The shift of [e] towards [a] in Shuāngfēng proper is evidently supported by that of Zǐménqiáo (梓門橋) dialect where the shift of \*-ue towards -ua is not synchronized and stays at -uæ with a slightly higher vowel, in contrast to -ua. This -uæ has created asymmetry in the phonological system of Zǐménqiáo dialect, as there is no such final like -æ, -iæ, or -yæ (by contrast, there are finals -a, -ia, -ua, -ya, as well as -ε, -iε, and -uε). Thus [æ] is marked in this dialect compared to [a] and [ε]. A cogent explanation for it would be that the final -uæ lags behind in a vowel shift from [æ] to [a]. Hence, the problematic variation recorded in Shuāngfēng proper is rationalized. A fraction of the speakers in Shuāngfēng proper chooses the lower nucleus [e] for all three finals -e/-ue/-ye because of either inter-dialectal influence, or simply that their accent is conservative. In either case, this solution is better than Coblin’s practice.

Another obvious example of oversight has to do with the retroflexes. Coblin introduces five syllables \*tʂi, \*tʂ<sup>h</sup>i, \*dʂi, \*ʂi, and \*ʐi for the etymons including 至, 齒, and 智 (Coblin, 2011, pp. 49-64). In so doing, he has erroneously ignored a key contrast associated with Lóudǐ (婁底) dialect’s data among these etymons within his Common Central Xiāng. Though he is well aware that some syllables like 芝 in

Lǒudǐ and adjacent dialects have apicalized while some others like 知 have not. Coblin (2011, p. 149) stated his ‘suspect that these dialects have borrowed apical final readings from more prestigious language types, such as Yangtze Watershed Mandarin or Chángshā’. If this is the case, it would be interesting how these dialects around and away from Lǒudǐ in Table 1.4 are spontaneously borrowing almost identical syllables while omitting others from one already blended category.

**Table 1.4: comparison of apical syllables**

	LD	LD(JL)	LD(WB)	XX(QZ)	HY	WG
芝	tsɿ <sup>44</sup>	tsɿ <sup>44</sup>	tsɿ <sup>44</sup>	tei <sup>55</sup>	tsɿ <sup>45</sup>	tsɿ <sup>55</sup>
紙	tsɿ <sup>42</sup>	tsɿ <sup>42</sup>	tsɿ <sup>31</sup>	tsɿ <sup>21</sup>	tsɿ <sup>33</sup>	tsɿ <sup>31</sup>
止	tsɿ <sup>42</sup>	tsɿ <sup>42</sup>	tsɿ <sup>31</sup>	tsɿ <sup>21</sup>	tsɿ <sup>33</sup>	tsɿ <sup>33</sup>
至	tsɿ <sup>35</sup>	tsɿ <sup>35</sup>	tsɿ <sup>45</sup>	tsɿ <sup>45</sup>	tsɿ <sup>24</sup>	tsɿ <sup>45</sup>
製	tsɿ <sup>35</sup>	tsɿ <sup>35</sup>	tsɿ <sup>45</sup>	tsɿ <sup>45</sup>	tsɿ <sup>24</sup>	tsɿ <sup>45</sup>
齒	ts <sup>h</sup> ɿ <sup>42</sup>	ts <sup>h</sup> ɿ <sup>42</sup>	ts <sup>h</sup> ɿ <sup>31</sup>	dz <sup>h</sup> ɿ <sup>21</sup>	-	ts <sup>h</sup> ɿ <sup>31</sup>
時	dzɿ <sup>13</sup>	ts <sup>h</sup> ɿ <sup>13</sup>	dzɿ <sup>13</sup>	dz <sup>h</sup> ɿ <sup>13</sup>	sɿ <sup>11</sup>	zɿ <sup>112</sup>
知	tei <sup>44</sup>	tei <sup>44</sup>	tei <sup>44</sup>	tei <sup>55</sup>	tei <sup>45</sup>	tei <sup>55</sup>
智	tei <sup>35</sup>	tei <sup>35</sup> ~ tsɿ <sup>35</sup>	tei <sup>45</sup>	tei <sup>45</sup>	tei <sup>24</sup>	tei <sup>45</sup>
池	dzi <sup>13</sup>	te <sup>h</sup> ɿ <sup>13</sup>	dzi <sup>13</sup>	dz <sup>h</sup> ɿ <sup>13</sup>	tei <sup>11</sup>	dzi <sup>112</sup>
持	dzi <sup>13</sup>	te <sup>h</sup> ɿ <sup>13</sup>	dzi <sup>13</sup>	dz <sup>h</sup> ɿ <sup>13</sup>	tei <sup>11</sup>	dzi <sup>112</sup>

The only irregularity here is syllable 芝 of Xiāngxiāng Q ǐ. H éng y áng is more than a hundred kilometers away from Lǒudǐ. So is Wǔgāng. This neat division across the dialects is highly impossible to have occurred by chance. One possible alternative to solve the puzzle is to suppose that all these dialects have borrowed at least one of the groups of syllables from some external sources. In doing so, one has to locate the prestigious dialect or dialects that carry this type of division. It can neither be Yangtze watershed Mandarin, nor can it be the provincial capital Chángshā. These two candidates have merged the two groups of syllables early. The remaining choice is to accept this division as a native feature. In this scenario, Xiāng dialects inherently evolved from a protolanguage that characterized the contrast of the two syllable groups. Chángshā merged the two as a local innovation, while Lǒudǐ is conservative. Fewer irregularities are expected to be explained in this way.

Apart from these problems during Coblin’s reconstruction, there is one more

issue that shall be pointed to. Coblin discovers the similar pattern between Central Xiāng and G àn from two tests on his Common Central Xiāng with Norman's CDC and other dialects. On this ground he suggests a certain link between early Central Xiāng and G àn group to be studied in the future. However, the similar patterns are both in terms of retention. As plain as it is, the two groups may have spontaneously retained the vowel patterns of an older form of their common ancestor. Thus, from the perspective of these tests, there should be no special conclusion made about the early layer of Common Central Xiāng regarding its relationship with any other group of dialects. Nevertheless it is not impossible that central Xiāng and G àn do share some sort of linkage back in history. Indeed, the historical relationship between Xiāng and G àn is largely understudied.

Considering the T ányùn (覃韻), or T án (覃) rhyme, syllables that Wu (2018) reconstructs as \*-oN, a key question is whether it is justifiable to make a contrast of this \*-oN against another CCX final, \*-uoN. In fact, no modern contrast between Wu's \*-oN and Coblin's \*-uoN could be identified so far in any Xiāng dialect. Wu suggests that Xiāngxiāng may be the only discovered exception as it has two T án (覃) rhyme syllables with final -iã. However, Xiāngxiāng's case is in itself problematic, as in the footnote of Wu's article he mentioned that the lack of -iã found for T ányùn (談韻) in Xiāngxiāng is 'possibly because of a lack in dataset at hand (也許是目前所見資料有限使然)', pointed out by reviewers (Wu, 2018). I shall also point to a possibility where the vernacular form [yĩã<sup>陽平</sup>] of the syllable 含 (Xiangxiang xianzhi bianzuan weiyuanhui, 1993), meaning to contain (in the mouth), may in fact be another etymon, 銜, which means to carry something using ones mouth. Wu's proposal of this syllable as a remnant carrying the T án (覃) rhyme final \*-oN is unsatisfactory. The other syllable, [kiã<sup>上</sup>], which means to cover something with a lid, is also contentious. In Yu ánjiāng dialect, an etymon is investigated with unidentified character, [kẽ<sup>上</sup>], means 蓋住, or to cover (by a lid) (Peng, 2006, p. 27). Its homophones include 梗, 哽, 埂, 梗, and 耿, none of which is of T án (覃) rhyme. Coincidentally, the final of these etymons in Xiāngxiāng is also -iã. A similar syllable recorded in H éngshān (衡山) as [kẽ<sup>上</sup>] (Peng, 1999, p. 93) further adds to the curious pattern. This coincidence

provokes our suspicion that the [kṣ̃<sup>上</sup>] in Yu ánjiāng and [kṣ̃̃<sup>上</sup>] in H éngshān may be cognates of [kiã<sup>上</sup>] in Xiāngxiāng. In fact, Xiāngxiāng's final -iã includes syllables that have probably lowered to it from a previous final \*-ě. This hypothetical development is directly parallel to the sound change proposed in Table 1.3 above, where \*-ie shifted to -ia in Shuāngfēng proper as well as Xiāngxiāng. Please compare the following syllables in Table 1.5. All merged syllables are shaded with the same colors.

**Table 1.5: correspondences for XX's -iã and -ia**

	根	革	結	間	甲
SF	kia <sub>陰平</sub>	kia <sub>陽平</sub>	kia <sub>陽平</sub>	kia <sub>陰平</sub>	ka <sub>陽平</sub>
XX	kiã <sub>陰平</sub>	kia <sub>陽平</sub>	kia <sub>陽平</sub>	kiã <sub>陰平</sub>	ka <sub>陽平</sub> 白 ~ kia <sub>陽平</sub> 文
XH(BX)	teiē <sub>陰平</sub>	teiē <sub>入</sub>	teiē <sub>入</sub>	kã <sub>陰平</sub>	teia <sub>入</sub>
YJ	kṣ̃ <sub>陰平</sub>	kə <sub>入</sub>	tei <sub>入</sub>	kã <sub>陰平</sub>	ka <sub>入</sub> 白 ~ teia <sub>入</sub> 文
HS	kṣ̃̃ <sub>陰平</sub>	ke <sub>入</sub>	teiē <sub>入</sub>	kṣ̃̃ <sub>陰平</sub> 白 ~ tṣ̃̃ <sub>陰平</sub> 文	ta <sub>入</sub>

Shuāngfēng and Xiāngxiāng dialects have experienced the proposed shift of \*-ie(ē) -> -ia(ã), and Shuāngfēng has de-nasalized the vowel [ã]. Conversely, dialects like Yu ánjiāng are more conservative. This proves that the final -iã in Xiāngxiāng corresponds to two finals in Yu ánjiāng, one being -ã, the other being -ě. If indeed the Xiāngxiāng [kiã<sup>上</sup>] is a cognate of Yu ánjiāng [kṣ̃<sup>上</sup>], we have to reconsider its function in predicting the pattern of T ányùn (覃韻) syllables. At this stage, Xiāngxiāng does not seem to support a separate \*-oN from \*-uoN.

The next question is about whether the selected dialects can reflect a distinct, unequivocal T án (覃) rhyme or not. For instance, Wu states that except for L óudǐ and Xiāngxiāng, syllables 塢 and 函 in all other dialects listed by him represent a distinct T án (覃) layer (Wu, 2018, p. 85-87). Here the case of H éngshān shall be taken for illustration. In H éngshān dialect, syllables with QYS \*-əm, \*-am, and \*-an have overwhelmingly evolved to the final -ǣ. There are, however, seven exceptions found. Table 1.6 lists all the relevant syllables provided in the homosyllabic list by Peng (1999). Homographs are attached with subscript numerals 1 and 2 according to the sequence of their appearances. A slash is used to separate between the syllables with coronal initials and those with dorsal initials.



**Table 1.6: QYS \*-əm/am/an mapping to HS**

HS -ǣ	HS -uēĩ	HS -ēĩ	QYS final
參蠶耽貪潭譚探南楠男婪嵐 / 感堪勘塹 <sub>1</sub> 砍坎含函涵 <sub>1</sub> 憾庵鶴暗	塹 <sub>2</sub>	涵 <sub>2</sub>	*-əm
暫鑿慚三叁擔 <sub>1</sub> 膽擔 <sub>2</sub> 談毯藍籃攬覽濫 / 甘柑敢惑喊	-	-	*-am
攢讚餐殘燦傘散 <sub>1</sub> 散 <sub>2</sub> 單丹蛋但旦誕彈 <sub>1</sub> 灘攤癱壇彈 <sub>2</sub> 檀坦袒炭歎難 <sub>1</sub> 攔欄蘭闌懶爛難 <sub>2</sub> / 幹 <sub>1</sub> 肝 <sub>1</sub> 趕桿稈 <sub>1</sub> 幹 <sub>2</sub> 幹 <sub>2</sub> 稈 <sub>2</sub> 寒 <sub>2</sub> 汗 <sub>2</sub> 幹贛刊看軒韓罕漢翰瀚汗 <sub>1</sub> 旱捍焊安鞍案按岸	肝 <sub>2</sub> 幹 <sub>2</sub> 稈 <sub>2</sub> 2寒 <sub>2</sub> 汗 <sub>2</sub>	-	*-an

Apparently, finals -uēĩ and -ēĩ here are exceptions. Wu (2018, p. 86) correctly identifies the exceptional syllable 涵 with final -ēĩ comes from a sound change of h(x)uēĩ > fuēĩ > fēĩ. To keep consistency with the original data, consonant [h] should be replaced by [x]. Hence, the only irregular realization is -uēĩ.

Wang (1969, p. 10) keenly pointed to a linguistic situation of competing changes, where ‘two (or more?) changes are applicable to the same subset of morphemes at the same time’, it would ‘leave residues which are the direct consequences of sound changes that were prevented from running their full course’. Pan (2006) proposes a statistical approach for examining the competing changes. His first step is to identify a potential sound change between the strata that conforms to phonetic regulations. If no such sound change could be verified, either one of the layers shall be borrowings. If a potential sound change is proposed, the second step is to calculate the rate of change (RoC). The third step is to compare this RoC with a potential phonetic environment. If it conforms to the distribution of that environment, a confirmation of endogenous competing sound changes could be concluded. Now the focus is to test whether Hángshān’s exceptions with final -uēĩ are residues or not.

Firstly, Wu (2018) has pointed to it that Hángshān’s -uēĩ comes from an earlier \*-oN, where N denotes a certain type of nasal coda. Suppose this final participated in Sound Change A: \*-oN > \*-uoN > \*-ueN > \*-uē > -uēĩ. Within this chain of changes, the second, \*-uoN > \*-ueN, implies that N is probably an alveolar n or any coronal nasal. Otherwise, the motivation for [o] to move forward will be low. Alternatively, Sound Change B: \*-oN > \*-ɔN > \*-aN > \*-æN > \*-ǣ, is also feasible given N is a

coronal. Next, the RoC to -uěĩ after coronals is zero, as no exception follows coronal initials. The RoC after dorsals is  $2/27 = 7\%$  for QYS \*-əm, zero for \*-am, and  $5/62 = 8\%$  for \*-an. Dorsals certainly correlate with higher percentages. Considering the adjacent places of articulation between dorsals and the close back medial u-, it is very likely that the two sound changes are competing changes under the environment of [dorsal] \_\_ and the exceptional syllables with final -uěĩ are of residues in nature.

Now that -uěĩ is likely a residual form of \*-uon, Wu's flaw is also unveiled. Even if H éngshān once distinguished QYS \*-əm from \*-am, such conclusion cannot be reached from its data. It is possible that QYS \*-əm, \*-am, and \*-an had merged as \*-oN in H éngshān, and that Sound Change A required 'long spans of time to diffuse across the lexicon' (Wang, 1969, p. 10) so that only seven syllables had the chance to participate before Sound Change B altered the phonological environment. Since the absolute number of residues from QYS \*-əm is only two, it is not unusual to have none from \*-am, which ends fewer vernacular lexemes. As will be elaborated in this thesis, Wu probably has touched the truth with a wrong approach.

The problems discussed here urge us to reexamine the research on historical comparison among the various Xiāng dialects. It is worth noting that the diachronic study regarding Xiāng dialects still attracts much less attention from contemporary scholars, compared with that of other dialects and with other scopes of Xiāng. A prudent historical comparison with thorough excavation and screening of all the available data can be considerably helpful in setting up norms that divert the course of Xiāng study towards a more systematic and methodic subject at this early stage.

### 1.3 The Hypothesis and Methodology

'All linguistic reconstructions, by their very nature, are subject to revision.' (Norman, 1988) This study applies the methodology of Coblin (2011) with major revisions on the hypothetical shared innovation and on the approach of reconstruction. Specifically, an epenthetic glide \*u- between velar/laryngeal consonants and MC T án (覃) rhyme would serve as the **working assumption**. By taking Coblin's method, I have acknowledged its presumptions. For instance, there is a supposition of a 'family

tree model' (Coblin, 2011, p. 245; Geisler & List, 2013). The model assumes that the related Chinese dialects, including Xiāng, have splitted at some point in the past and diverged, whilst the task at present is to decide when and how the split occurred. Another supposition is that a protoform can be reconstructed by historical comparison. 'Chinese dialects are the organic, autochthonous descendants of Middle Chinese, and clearly should be the primary data on which any reconstruction of earlier stages of the language is based.' (Norman, 1988, p. 41) Likewise, the modern Xiāng dialects are the primary sources of reconstruction for their presumable protolanguage.

Though criticized by Peng (2006), the historical comparative method can indeed incorporate different strata into consideration. Throughout the studies taken by Coblin (2011) and Zhou (2015), identification and reconstruction of each of the literary and vernacular layers are common practices. It is lucky for this study that in most of the cases the sources already contain notations of 文 (literary) and 白 (vernacular), thus identifying the borrowings will occupy less of the effort. Norman puts it that 'it is essential to have a good knowledge of the national standard language and, in some cases, of the provincial or local standard as well; lacking such knowledge, the dialectologist will be hard-pressed to distinguish what is genuinely local in the dialect he is studying and what are importations from some type of standard language' (Norman, 1988, p. 4). This is one of the reasons Chángshā dialect is put into the ten base points. Nonetheless, tackling the strata still requires vigilance. For example, if a type of literary reading is observed in a single or an isolated dialect, while its form explicitly resembles either that in the local administrative center or Mandarin, it shall be excluded from the comparison with an explanation. The criticism of Peng (2006) on this ground is relatively weak, as 'most instances of borrowing can be recognized ... and factored out' (Harrison, 2003, p. 232).

Because the protolanguage is likely stratified, a scholar must explicitly point out the specific layer where a suggested shared innovation is located. However, nothing is known about any layer before the reconstruction of the protoform. To reconstruct the protoform, the study starts by selecting the dialects that have been observed with potentially a unique phonological feature. As a working assumption, these dialects are

assumed to form a taxonomic group marked by the suggested shared innovation. On this basis, a reconstruction with revised approach is conducted under the least upper bound strategy. Several innovations involving more dialects are analysed to verify the coherency of the reconstruction. After this step, the working assumption can be tested. If the proposed innovation forms an integral part of the popular layer of the protoform and is both shared and unique, the test would expect to turn a positive outcome.

Since the reconstruction approach is revised, several assumptions that underlie it shall be affirmed. Firstly, if a set of feature is attested concurrently in at least two non-neighboring dialects, it should be considered as a potential underlying feature in CMX. Secondly, if a set of feature is discovered only in isolation without any likely evolution, its status should be examined before put into reconstruction. Thirdly, endogenous process is considered as a priority. Fourthly, each layer shall form a higher level layer together with all the layers preceding it as priority, since given the condition earlier elements are expected to have participated in each of the subsequent phonological processes, but not vice versa.

#### **1.4 Selection of Dialects and Transcription Conventions**

For the ease of comparative analysis, 10 dialects are selected as the foundation for scrutiny. These dialects are termed the base points. Additionally, 18 dialects are selected as key references. Map 1.3 below marks the locations of the 28 dialects altogether. These dialects are either recorded in the respective materials to conform with the epenthetic medial \*u- in vernacular Tán (潭) rhyme, or are situated within an accent area that has such kind of reports. The dialects are geographically spread out across the major river basins and near the Dòngtíng Lake. The Xiāng River watershed holds the majority of Xiāng dialects, so around half of the dialects sit in this watershed. Another third sit in the Zī River watershed. This makes the representation as balanced as possible. Phonetically and phonologically, the dialects of the ten base points are reasonably apart from one another. Thus each dialect will hopefully contribute to the reconstructive process at a higher significance level.

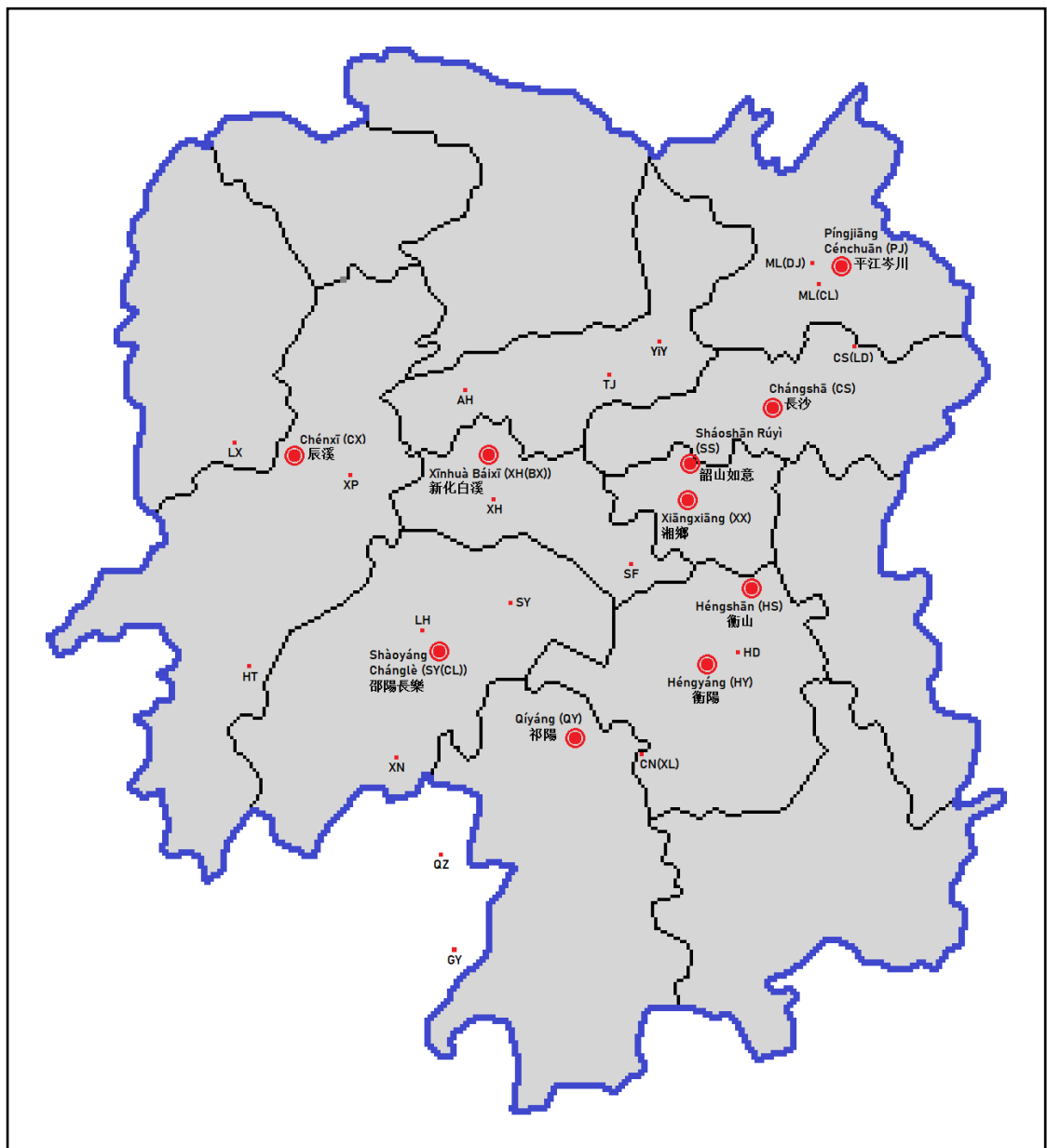
For the comparisons in Chapter 2 through Chapter 4, the convention is directly

acquired from Coblin (2011; 2015). Each etymon is listed followed by the Chinese character and its Pīnyīn romanization. Next to the Pīnyīn is the starred syllable from one scheme of QYS reconstruction (Pulleyblank, 1984), listed for reference. The QYS reconstructions are by no means any sort of starting point from which the CMX system is reconstructed, nor shall they be viewed as so. Pulleyblank has divided the MC into Early Middle Chinese (EMC) and Late Middle Chinese (LMC) (Pulleyblank, 1984), and the QYS reconstructions listed in this dissertation are exclusively from the EMC. Likewise, the term QYS is used interchangeably with MC for simplicity. Below the first line of the syllable is the raw data of the base points, which are listed by default, unless the source lacks record of a certain etymon. Each dialect is listed with its abbreviation, followed by the bracketed IPA transcription from the corresponding material (provided in the *List of Abbreviations* at the start of this dissertation). Additionally, eighteen supplementary points will be selectively referred to, especially where a phoneme or a syllable is better preserved among those dialects.

Though all the materials in the sources are in IPA format, there is one disparity on the diacritic applied for transcribing aspiration, where either a superscript ‘h’ or a reversed comma has been used by various authors. Throughout this dissertation, the dialect data and QYS reconstructions are all transcribed using the superscript ‘h’ for aspiration to keep the unity.

Each etymon or character usually carries one pronunciation. However, if two or more pronunciations in the source are provided, all the varieties are transcribed, unless specifically explained not to. The source may denote at least one of the varieties as ‘vernacular (白讀)’ or ‘literary (文讀)’, the accountability of which shall be trusted on principal. Throughout the reconstruction, variant pronunciations are separated by a tilde between their IPA transcriptions. For any vernacular pronunciation, a subscript character 白 will be attached next to its IPA transcription. Likewise, a subscript 文 will be attached to the literary reading as well. If there is more than one vernacular form of a single character, the subscripts will be 白 1, 白 2, so on and so forth. A few authors have not identified or marked 文 and 白 for some homographs. In this case, subscripts of 1, 2, and so on are employed.

Tones are typically suprasegmental and mapped one to one with individual syllables. All tones are indicated, unless irrelevant to the discussion, by a superscript to the right of the IPA letters. When tonal categories are the subject of discussion, characters denoting them will be used. Otherwise, all tones are transcribed using the conventional five-step notation (Maddieson, 1990). Despite its potential drawbacks, this convention is sufficient for the discussion and is convenient for transcription as it is used among the majority of source materials.



**Map 1.3: dialects selected for reconstruction**

Map 1.3 is a geographic illustration of the locations for the ten base points (in large circled dots) and eighteen supplementary points (in tiny squares) for CMX reconstruction in Chapter 2 through Chapter 4.

### **1.5 Limitations of the Study**

Apparently, as every historical reconstruction does, the limited data of modern dialects used for comparison may not reflect in every detail the whole picture of what a protolanguage would look like. By using the term limited data, two dimensions are implied as limited. On the one hand, the database of available dialects is limited. The selection of certain dialects for investigation is done by individual scholars. Some counties and cities in Húán have been investigated multiple times, while a few others have not been studied at all. This has created a discrepancy, where certain vital data (often expected to reveal a gradual shift or a sudden transilience of some linguistic units across space) is missing. On the other hand, due to limited time, strength, experience or knowledge of each individual scholar, their collected data for a certain dialect could be fairly insufficient for the purpose of this study.

Secondly, the reconstruction is always a simplification of much more complex phonological processes. For instance, continuous and extensive borrowing in history could stratify a multi-layer structure in the recipient language, especially when Chinese is the donor (Yeon-Ju & Sagart, 2008). Every phoneme reconstructed in CMX may or may not exist simultaneously to form a system that truly existed back in a point in time, especially when the time depth is as long as a millennium. Temporal limitation is one of the major obstacles facing the study (Harrison, 2003).

Thirdly, in addition to variations over time, a dialect or language can involve inter-speaker variations. ‘Every speech community has interspeaker variation at every level: in learners and in their input-givers; and in the core of the community and towards its peripheries.’ (Scobbie, 2005) Thus the dissertation resembles starting from one random variable with an unknown distribution towards estimating another random variable with possibly a different distribution.

Lastly, the study focuses just on the phonological attribute of Xiāng. It is not

impossible that other aspects, for instance the lexicon or the syntax, could convey more diachronic information. However, due to limited space and time, these topics are subject to future studies.

The dissertation, nonetheless, tries to approximate what is most probably true utilizing all the dataset that is available at present and the comparative methodology, in the aim of explaining the modern dialects and delineating a possible taxonomic group in terms of the phonological feature. The reconstructed phonemes are entirely configurational, with focus on topological abstraction rather than specific phonetic articulation. By selecting the representative dialects while making use of as many data as possible, the study tries to minimize the limitation on dataset. Moreover, during the whole comparative process, literary readings have been strictly separated from their vernacular counterparts and even from later borrowings, to the best of capability. An earlier layer will definitely coexist with a later layer, but not vice versa. In this sense, even though the reconstructed system could have diverged from what was the true target by some distance phonetically or phonemically, it can still be valid in explaining some debated aspects of the modern dialects that are left unresolved among scholars, given that substantially larger dataset has been incorporated compared to previous efforts and that considerable clarity is followed.

## 1.6 Summary of the Sound Inventories of the Base Points

This section summarizes the initial, final, and tonal systems of the ten representative dialects. All data are transcribed directly from respective materials listed in the *List of Abbreviations*.

### 1.6.1 Sounds of Chángshā (長沙), CS

Initials:

p	p <sup>h</sup>	m	f
t	t <sup>h</sup>	l	
ts	ts <sup>h</sup>	s	z
tɕ	tɕ <sup>h</sup>	ŋ	ɕ
k	k <sup>h</sup>	ŋ	x



∅

Finals:

a	o	ə		ɿ	ai	ei	au	əu	õ	ǎ	an	ən	ɱ	ŋ
ia	io	ie	i				iau	iəu		iẽ	ian	in		
ua		uə	u		uai	uei					uan	uən		
ya		ye		y	yai	yei				yẽ	yan	yn		

Tones:

yīnpíng	yángpíng	shàngshēng	yīnqù	yángqù	rùshēng
陰平	陽平	上聲	陰去	陽去	入聲
33	13	42	55	21	24

#### 1.6.2 Sounds of Chénxī (辰溪), CX

Initials:

p p<sup>h</sup> b m f v  
t t<sup>h</sup> d n l  
ts ts<sup>h</sup> dz s z  
tɕ tɕ<sup>h</sup> dʑ ʂ ʐ  
tɕ tɕ<sup>h</sup> dʑ ɕ  
k k<sup>h</sup> g ŋ x  
∅

Finals:

a	ɔ	o	e	ə		ɿ/ʅ	ai	ei	au	əu	aʊ	əʊ
ia	iɔ	io	ie	i			iei	iau	iəu	iaʊ	iəʊ	
ua		ue		u		uai	uei		uau			
ya		ye		y		yai	yei					

Tones:

yīnpíng	yángpíng	shàngshēng	yīnqù	yángqù
陰平	陽平	上聲	陰去	陽去
44	213	31	324	55

### 1.6.3 Sounds of Héngshān (衡山), HS

Initials:

p p<sup>h</sup> m f  
t t<sup>h</sup> l  
ts ts<sup>h</sup> s  
t̪ t̪<sup>h</sup>  
tɕ tɕ<sup>h</sup> ŋ ɕ  
k k<sup>h</sup> ŋ x  
∅

Finals:

ɑ æ o e ɿ u ei æu ǣ ɔ ẽ en m ŋ  
ia io ie i iæu iǣ iō ĭ ien  
ua uæ u uei uǣ uẽ uen  
ya yæ ye y yǣ yẽ yen

Tones:

yīnpíng	yángpíng	shàngshēng	yīnqù	yángqù	rùshēng
陰平	陽平	上聲	陰去	陽去	入聲
33	11	13	55	44	35

### 1.6.4 Sounds of Héngyáng (衡陽), HY

Initials:

p p<sup>h</sup> m f  
t t<sup>h</sup> n l  
ts ts<sup>h</sup> s

tɕ tɕ<sup>h</sup> ɕ  
 k k<sup>h</sup> ŋ x  
 Ø

Finals:

a o e ə ɿ ai ei au əu an en ən əŋ m̩ ɲ̩  
 ia io ie i iu iau ian ien in  
 ua ue ui u uai uan uen uən  
 ya ye y yen yn

Tones:

yīnpíng	yángpíng	shǎngshēng	yīnqù	yángqù	rùshēng
陰平	陽平	上聲	陰去	陽去	入聲
45	11	33	24	213	22

### 1.6.5 Sounds of Píngjiāng Cǎichuān (平江岑川), PJ

Initials:

p p<sup>h</sup> b m f  
 t t<sup>h</sup> d l  
 ts ts<sup>h</sup> dz s  
 tʂ tʂ<sup>h</sup> dʂ ʂ  
 tɕ tɕ<sup>h</sup> dʒ ɲ ɕ  
 k k<sup>h</sup> g ŋ x  
 Ø

Finals:

a o ɿ/ʅ ai ei au əu œy m̩ n̩ ɲ̩  
 ia iɛ i iau iəu  
 ua u uai uei  
 ya y

an	en	ən	ən	aŋ	oŋ	əŋ	aʔ	ɛʔ	øʔ	ɑʔ	oʔ	əuʔ	ɿʔ
ian		in	iaŋ	ioŋ	iəŋ	iaʔ	iɛʔ		ioʔ	iəuʔ	iʔ		
uan	uən	uən	uaŋ	uoŋ	uəŋ	ueʔ	uøʔ	uaʔ				uʔ	
yan		yn				yɛʔ						yʔ	

Tones:

yīnpíng	yángpíng	shǎngshēng	yīnqù	yángqù	rùshēng
陰平	陽平	上聲	陰去	陽去	入聲
55	23	53	34	21	4

#### 1.6.6 Sounds of Qíyáng (祁陽), QY

Initials:

p	p <sup>h</sup>	b	m	f	v
t	t <sup>h</sup>	d	l		
ts	ts <sup>h</sup>	dz	s	z	
tʃ	tʃ <sup>h</sup>	dʒ	ŋ	ʃ	ʒ
k	k <sup>h</sup>	g	ŋ	x	ɣ
∅					

Finals:

a	o	e	ə	ɿ	ai	ei	au	əu	an	ən	aŋ	oŋ	ŋ
ia	io	ie	i				iau	iəu	ian	in	iaŋ	ioŋ	
ua	ue		u		uai	uei			uan	uən	uaŋ		
ya	ye		y						yan	yn			

Tones:

yīnpíng	yángpíng	shǎngshēng	qùshēng	rùshēng
陰平	陽平	上聲	去聲	入聲
45	11	54	214	33

### 1.6.7 Sounds of Sháoshān Rúyì (韶山如意), SS

Initials:

p p<sup>h</sup> b m ɸ  
t t<sup>h</sup> d n  
ts ts<sup>h</sup> dz s  
tɕ tɕ<sup>h</sup> dʒ ɲ ʂ  
c c<sup>h</sup> ʃ ɲ ʑ  
k k<sup>h</sup> g ŋ x  
∅

Finals:

a ɔ ε ʊ ɿ/ʲ ʋ əu ǣ ě Ǿ ən aŋ m̩ n̩  
ia iɔ iε iʊ i iəu iǎ iən iaŋ  
ua uε u uei uǎ uĕ uən uaŋ

Tones:

yīnpíng	yángpíng	shàngshēng	yīnqù	yángqù	rùshēng
陰平	陽平	上聲	陰去	陽去	入聲
33	13	42	45	21	24

### 1.6.8 Sounds of Shàoyáng Chánglè (邵陽長樂), SY(CL)

Initials:

p p<sup>h</sup> b m f v  
t t<sup>h</sup> d n  
ts ts<sup>h</sup> dz s z  
tɕ tɕ<sup>h</sup> dʒ ɲ ʒ  
tɕ tɕ<sup>h</sup> dʒ ɲ ɕ z  
k k<sup>h</sup> g ŋ h ɦ  
∅

Finals:

a	o	ɿ/ʅ	ai	ei	au	əu	ã	õ	aŋ	eŋ	ŋ
ia	iɛ	io	i		iau	iəu	iã	iẽ	iõ	ieŋ	
ua	ue	u	uai	uei	uã	uən	ueŋ				
yɛ	y					yn	yeŋ				

Tones:

yīnpíng	yángpíng	yīnshàng	yángshàng	yīnqù	yángqù
陰平	陽平	陰上	陽上	陰去	陽去
55	12	42	21	35	24

#### 1.6.9 Sounds of Xīnhuà Báixī (新化白溪), XH(BX)

Initials:

p	p <sup>h</sup>	b <sup>h</sup>	m	f
t	t <sup>h</sup>	d <sup>h</sup>	l	
ts	ts <sup>h</sup>	dz <sup>h</sup>	s	
tʂ	tʂ <sup>h</sup>	dʂ <sup>h</sup>	ʂ	ʐ
tɕ	tɕ <sup>h</sup>	dʒ <sup>h</sup>	ɕ	ʑ
k	k <sup>h</sup>	g <sup>h</sup>	x	ɣ
∅				

Finals:

a	æ	o	ə	ɿ/ʅ	au	əu	ã	õ	aŋ	ŋ
ia	iɛ	iə	i	iu			iã	iẽ	in	
ua	uæ	uə	u				uã	uẽ	un	
ya	yɛ	yo	y				yẽ	yõ	yn	

Tones:

yīnpíng	yángpíng	shǎngshēng	qùshēng	rùshēng
---------	----------	------------	---------	---------

陰平	陽平	上聲	去	入聲
33	13	31	45	24

#### 1.6.10 Sounds of Xiāngxiāng (湘鄉), XX

Initials:

p   p<sup>h</sup>   b   m   ɸ   β  
 t   t<sup>h</sup>   d   n   ɭ  
 ts   ts<sup>h</sup>   dz   s  
 tɕ   tɕ<sup>h</sup>   dʒ   ʃ  
 tɕ   tɕ<sup>h</sup>   dʒ   ŋ   ɛ  
 k   k<sup>h</sup>   g   ŋ   x   ɣ  
 Ø

Finals:

a/ã   o   o/õ   ɿ/ʅ   ai   ao   ǎ   ʌn   aŋ   m̥   n̥   ŋ̊  
 ia   io   iu   i   ieɪ   iao   iã   iǎ   iĩ   iʌn   in   iaŋ  
 ua   u   uai   uei   uã   uʌn   uaŋ  
 ya   y/ỹ   yei   yĩ   yʌn

Tones:

yīnp ńg	y ǎnp ńg	shǎngshēng	yīnq ù	y ǎngq ù
陰平	陽平	上聲	陰去	陽去
55	23	21	45	22

## 2. Syllabic Initials of Common Xiāng

All the reconstructed syllabic initials for Common Xiāng are elaborated below:

p p<sup>h</sup> b m (v) f v  
 t t<sup>h</sup> d n l  
 ts ts<sup>h</sup> dz s z  
 tʃ tʃ<sup>h</sup> dʒ ʃ ʒ  
 ʈ ʈ<sup>h</sup> ɖ (ɟ)  
 k k<sup>h</sup> g ŋ x ɣ  
 Ø

There are in total 32 syllabic initials and an additional initial zero (Ø). The initials in parenthesis are problematic and will be discussed in the corresponding sections.

### 2.1 The Labials and Labiodentals

2.1.1 CMX \*p-. It is preserved in all of the dialects.

八 bā QYS \*pɛ̃<sup>r</sup>t

CS [pa<sup>˧</sup>]; CX [pɔ̃<sup>陽平</sup>]; HS [pa<sup>˧</sup>]; HY [pa<sup>˧</sup>]; PJ [paʔ<sup>˧</sup>]; QY [pa<sup>˧</sup>]; SS [pa<sup>˧</sup>]; SY(CL) [pa<sup>陰平</sup>]; XH(BX) [pa<sup>陰平</sup>]; XX [pa<sup>陽平</sup>]

CMX \*pat<sup>陽入</sup>

布 bù QYS \*pɔ̃<sup>h</sup>

CS [pu<sup>陰去</sup>]; CX [pu<sup>陰去</sup>]; HS [pu<sup>陰去</sup>]; HY [pu<sup>陰去</sup>]; PJ [pu<sup>陰去</sup>]; QY [pu<sup>去</sup>]; SS [pu<sup>陰去</sup>]; SY(CL) [pu<sup>陰去</sup>]; XH(BX) [pu<sup>去</sup>]; XX [pu<sup>陰去</sup>]

CMX \*pu<sup>陰去</sup>

邊 biān QYS \*pɛ̃n

CS [piẽ̃<sup>陰平</sup>]; CX [piẽ<sup>陰平</sup>]; HS [pĩ<sup>陰平</sup>]; HY [pien<sup>陰平</sup>]; PJ [pian<sup>陰平</sup>]; QY [pian<sup>陰平</sup>]; SS [pẽ̃<sup>陰平</sup>]; SY(CL) [piẽ̃<sup>陰平</sup>]; XH(BX) [piẽ̃<sup>陰平</sup>]; XX [pĩ<sup>陰平</sup>]

CMX \*piɛ̃n<sup>陰平</sup>



### 2.1.2 CMX \*p<sup>h</sup>-.

破 pò QYS \*p<sup>h</sup>wa<sup>h</sup>

CS [p<sup>h</sup>o<sup>陰去</sup>]; HS [p<sup>h</sup>u<sup>陰去</sup><sub>白</sub> ~ p<sup>h</sup>o<sup>陰去</sup><sub>文</sub>]; HY [p<sup>h</sup>o<sup>陰去</sup>]; PJ [p<sup>h</sup>o<sup>陰去</sup>]; QY [p<sup>h</sup>o<sup>去</sup>]; SS [p<sup>h</sup>o<sup>陰去</sup>]; SY(CL) [p<sup>h</sup>o<sup>陰去</sup>]; XH(BX) [p<sup>h</sup>o<sup>去</sup>]; XP [p<sup>h</sup>o<sup>陰去</sup>]; XX [p<sup>h</sup>o<sup>陰去</sup>]

CMX \*p<sup>h</sup>uo<sup>陰去</sup>

怕 pà QYS \*p<sup>h</sup>a<sup>rh</sup>

CS [p<sup>h</sup>a<sup>陰去</sup>]; CX [p<sup>h</sup>o<sup>陰去</sup>]; HS [p<sup>h</sup>a<sup>陰去</sup>]; HY [p<sup>h</sup>a<sup>陰去</sup>]; PJ [p<sup>h</sup>a<sup>陰去</sup>]; QY [p<sup>h</sup>a<sup>去</sup>]; SS [p<sup>h</sup>ua<sup>陰去</sup>]; SY(CL) [p<sup>h</sup>a<sup>陰去</sup>]; XP [p<sup>h</sup>o<sup>陰去</sup>]; XH(BX) [p<sup>h</sup>a<sup>入</sup>]; XX [p<sup>h</sup>o<sup>陰去</sup>]

CMX \*p<sup>h</sup>a<sup>陰去</sup>

Some southern dialects have a few syllables recorded as vernacular forms bearing this initial p<sup>h</sup>-, contrary to their literary forms with the regular fricative initial f-. The plosive form is likely a residue of MC \*p<sup>h</sup>-. As such, two layers are reconstructed for these syllables in CMX. The literary one is the more regular correspondence and both forms coexist as popular layers.

蜂 fēng QYS \*p<sup>h</sup>uawŋ

CS [xən<sup>陰平</sup>]; CX [fəw<sup>陰平</sup>]; HS [p<sup>h</sup>en<sup>陰平</sup><sub>白</sub> ~ fen<sup>陰平</sup><sub>文</sub>]; HY [p<sup>h</sup>əŋ<sup>陰平</sup><sub>白</sub> ~ xən<sup>陰平</sup><sub>文</sub>]; PJ [fəŋ<sup>陰平</sup>]; QY [p<sup>h</sup>oŋ<sup>陰平</sup><sub>白</sub> ~ foŋ<sup>陰平</sup><sub>文</sub>]; SS [xuən<sup>陰平</sup>]; SY(CL) [p<sup>h</sup>ə<sup>陰平</sup><sub>白</sub> ~ fə<sup>陰平</sup><sub>文</sub>]; XH(BX) [xun<sup>陰平</sup>]; XX [xuən<sup>陰平</sup>]

CMX \*p<sup>h</sup>uŋ<sup>陰平</sup><sub>白</sub> ~ \*fuŋ<sup>陰平</sup><sub>文</sub>

2.1.3 CMX \*b-. It is well preserved in some of the dialects like in Q ǎng, and partially preserved in non-r-ùshēng syllables of C ǎchuān, P ǎngjiāng. In many other dialects this initial has devoiced into either p- or p<sup>h</sup>- under various conditions. For example in Ch ǎngshā, all the initials from CMX \*b- have devoiced into p-. Thus the distinction between syllables originated from CMX \*b- and \*p- in Ch ǎngshā dialect is maintained only by their tones. Although the material from Xīnhuà B ǎxī suggests aspiration of this initial, aspiration is itself not phonemic and not reconstructed for CMX voiced initials.

盤 pán QYS \*bwan

CS [pō<sup>陽平</sup>]; CX [be<sup>陽平</sup>]; HS [p<sup>h</sup>ēi<sup>陽平</sup>]; HY [puen<sup>陽平</sup>]; PJ [bən<sup>陽平</sup>]; QY [ban<sup>陽平</sup>]; SS [buē<sup>陽平</sup>]  
白 ~ bō<sup>陽平</sup>文]; SY(CL) [bā<sup>陽平</sup>]; XH(BX) [b<sup>h</sup>ō<sup>陽平</sup>]; XX [biā<sup>陽平</sup>]

CMX \*bən<sup>陽平</sup>

薄 báo ~ bó QYS \*bak

CS [po<sup>入</sup>]; CX [p<sup>h</sup>au<sup>陰去</sup>白 ~ po<sup>陽平</sup>文]; HS [p<sup>h</sup>o<sup>上</sup>]; HY [po<sup>陽平</sup>]; PJ [p<sup>h</sup>oʔ<sup>入</sup>]; QY [bo<sup>入</sup>]; SS  
[pʊ<sup>入</sup>]; SY(CL) [bo<sup>陽去</sup>]; XH(BX) [po<sup>入</sup>]; XX [p<sup>h</sup>o<sup>陰去</sup>]

CMX \*bək<sup>陽入</sup>

The vernacular form of 薄 in Chénxī is irregular.

A few syllables demonstrate a contrast between bilabial stop initial as vernacular form and fricative initial as literary form. This is parallel to the p<sup>h</sup>- : f- pair discussed in section 2.1.2.

浮 fú QYS \*buw

CS [xəu<sup>陽平</sup>]; CX [bau<sup>陽平</sup>白 ~ xu<sup>陽平</sup>文]; HS [p<sup>h</sup>ou<sup>陽平</sup>白 ~ fu<sup>陽平</sup>文]; HY [pau<sup>陽平</sup>白 ~ xəu<sup>陽平</sup>文]; PJ [bu<sup>陽平</sup>白1 ~ fœy<sup>陽平</sup>白2 ~ fu<sup>陽平</sup>文]; QY [fəu<sup>陽平</sup>]; SS [xəu<sup>陽平</sup>]; SY(CL) [bau<sup>陽平</sup>];  
XH(BX) [fiə<sup>陽平</sup>]; XX [bao<sup>陽平</sup>白 ~ yuai<sup>陽平</sup>文]

CMX \*bœu<sup>陽平</sup>白 ~ \*vœu<sup>陽平</sup>文

2.1.4 CMX \*m-. It is preserved in most dialects. In Xiāngxiāng this initial assimilates the vowel that follows it and turns the latter into a nasalized vowel.

梅 méi QYS \*mwəj

CS [mei<sup>陽平</sup>]; CX [mei<sup>陽平</sup>]; HS [mei<sup>陽平</sup>]; HY [mei<sup>陽平</sup>]; PJ [mēi<sup>陽平</sup>]; QY [mei<sup>陽平</sup>]; SS  
[mɛ<sup>陽平</sup>]; SY(CL) [mei<sup>陽平</sup>]; XH(BX) [mə<sup>陽平</sup>]; XX [mai<sup>陽平</sup>]

CMX \*muoi<sup>陽平</sup>

買 mǎi QYS \*ma<sup>rj</sup>?

CS [mai<sup>上</sup>]; CX [ma<sup>上</sup>白 ~ mai<sup>上</sup>文]; HS [mæ<sup>陽去</sup>白 ~ mæ<sup>上</sup>文]; HY [mai<sup>上</sup>]; PJ [mai<sup>上</sup>]; QY  
[mai<sup>上</sup>]; SS [mā<sup>上</sup>]; SY [mai<sup>上</sup>]; XH(BX) [mæ<sup>上</sup>]; XX [mā<sup>上</sup>]

CMX \*mai<sup>陽上</sup>

A few syllables have vernacular m- initial opposed to certain literary forms in many of the dialects. The literary readings are usually realized as fricatives or initial zero. The two forms are reconstructed separately for CMX. This vernacular form is also an incomplete layer, like the cases of \*p<sup>h</sup>- and \*b-. The literary form will be discussed in section 2.1.5.

蚊 wén QYS \*mun

CS [uən<sup>陽平</sup>]; CX [vei<sup>陽平</sup>]; HS [mien<sup>陰平</sup><sub>白</sub> ~ ueŋ<sup>陽平</sup><sub>文</sub>]; HY [mən<sup>陰平</sup><sub>白</sub> ~ fən<sup>陽平</sup><sub>文</sub>]; PJ [uən<sup>陽平</sup>]; QY [mən<sup>陰平</sup><sub>白</sub> ~ vən<sup>陽平</sup><sub>文</sub>]; SS [uən<sup>陽平</sup>]; SY(CL) [meŋ<sup>陰平</sup><sub>白</sub> ~ veŋ<sup>陽平</sup><sub>文</sub>]; XH(BX) [min<sup>陰平</sup><sub>白</sub> ~ un<sup>陽平</sup><sub>文</sub>]; XX[min<sup>陰平</sup><sub>白</sub> ~ uən<sup>陽平</sup><sub>文</sub>]

CMX \* mən<sup>陰平</sup><sub>白</sub> ~ \*vən<sup>陽平</sup><sub>文</sub>

2.1.5 CMX \*v-. This is an initial exclusively reconstructed as a literary initial. Very limited knowledge is available about when this layer was actually incorporated as part of CMX. Conversely, the CMX system could have had \*v- from the very beginning, since it is the more regular form observed among modern Xiāng dialects. In order to reconcile both possibilities, a separate initial for these widespread literary readings is reconstructed alongside the vernacular initial.

The phonetic value of this initial is indeed close to the initial \*v- of section 2.1.7. To differentiate the two, the labiodental fricative [v] can be articulated with a stronger constriction. Additionally, this approximant can potentially confuse with u-, though they usually appear in different tones. Nonetheless, to account for this, all the syllables with initial zero could be realized with an extra onset glottal stop [ʔ] as the surface representation, though it is not of necessity.

望 wàng QYS \*muəŋ<sup>h</sup>

CS [uan<sup>陰去</sup>]; CX [vau<sup>陽去</sup>]; HS [mō<sup>陰去</sup><sub>白1</sub> ~ mō<sup>陽去</sup><sub>白2</sub> ~ ō<sup>陽去</sup><sub>文</sub>]; HY [man<sup>陽去</sup><sub>白</sub> ~ fan<sup>陽去</sup><sub>文</sub>]; PJ [uoŋ<sup>陽去</sup>]; QY [vaŋ<sup>去</sup>]; SS [uaŋ<sup>陽去</sup><sub>白</sub> ~ uaŋ<sup>陰去</sup><sub>文</sub>]; SY(CL) [vā<sup>陽去</sup>]; XH(BX) [ō<sup>去</sup>]; XX [maŋ<sup>陰去</sup><sub>白1</sub> ~ uaŋ<sup>陽去</sup><sub>白2</sub> ~ uaŋ<sup>陰去</sup><sub>文</sub>]

CMX \*mōŋ<sup>陽去</sup><sub>白</sub> ~ vōŋ<sup>陽去</sup><sub>文</sub>

The irregular yīn (陰) tone of the vernacular syllable 望 in Hóngshān is isolated. Chángshā's yīnqù (陰去) tone here is also not reconstructed (please see section 4.2.3).

尾 wěi QYS \*muj<sup>2</sup>

CS [uei<sup>上</sup>]; CX [vi<sup>上</sup>]; HS[mĩ<sup>陰去</sup><sub>白</sub> ~ uei<sup>上</sup><sub>文</sub>]; HY [ui<sup>上</sup>]; PJ [uei<sup>上</sup>]; QY [vi<sup>去</sup>]; SS [uei<sup>上</sup>];  
SY(CL) [mi<sup>陰上</sup><sub>白</sub> ~ vi<sup>陽上</sup><sub>文</sub>]; XH(BX) [ŋ<sup>上</sup><sub>白</sub> ~ uə<sup>上</sup><sub>文</sub>]; XX [uei<sup>上</sup>]  
CMX \*mi<sup>陽上</sup><sub>白</sub> ~ \*vi<sup>陽上</sup><sub>文</sub>

The vernacular form in Hóngshān bears an irregular tone. The syllabic [ŋ] of Xīnhuà might be a residue from a sound change \*mi > \*ŋ > ŋ, as in the nearby dialect of Lěngshǔijiāng Duóshān (冷水江鐸山), this etymon is read [ŋ<sup>上</sup>] (Li, 2020).

2.1.6 CMX \*f-. This fricative is realized in Sháoshān and Xiāngxiāng as bilabial fricative [ɸ] when followed by vowel [u], and has changed to a velar fricative [x] when followed by the other finals. When \*f- precedes the CMX finals \*-uŋ and \*-oŋ, it commonly merges with \*x-.

富 fù QYS \*puw<sup>h</sup>

CS [fu<sup>陰去</sup>]; CX [fu<sup>陰去</sup>]; HS [fu<sup>陰去</sup>]; HY [fu<sup>陰去</sup>]; PJ [fu<sup>陰去</sup>]; QY [fu<sup>陰去</sup>]; SS [ɸu<sup>陰去</sup>];  
SY(CL) [fu<sup>陰去</sup>]; XH(BX) [xu<sup>去</sup>]; XX [ɸu<sup>陰去</sup>]  
CMX \*fu<sup>陰去</sup>

飛 fēi QYS \*puj

CS [fei<sup>陰平</sup>]; CX [fi<sup>陰平</sup>]; HS [fei<sup>陰平</sup>]; HY [fei<sup>陰平</sup>]; PJ [fi<sup>陰平</sup>]; QY [fi<sup>陰平</sup>]; SS [xuei<sup>陰去</sup>];  
SY(CL) [fi<sup>陰平</sup>]; XH [fɿ<sup>陰平</sup>]; XX [xuei<sup>陰平</sup>]  
CMX \*fi<sup>陰平</sup>

風 fēng QYS \*puwŋ

CS [xən<sup>陰平</sup>]; CX [fəw<sup>陰平</sup>]; HS [fen<sup>陰平</sup>]; HY [xəŋ<sup>陰平</sup>]; PJ [fəŋ<sup>陰平</sup>]; QY [foŋ<sup>陰平</sup>]; SS [xuən<sup>陰平</sup>];  
SY(CL) [fɛ̃<sup>陰平</sup>]; XH(BX) [xun<sup>陰平</sup>]; XX [xuən<sup>陰平</sup>]  
CMX \*fuŋ<sup>陰平</sup>

放 fang QYS \*puɑŋ<sup>h</sup>

CS [fan<sup>陰去</sup>]; CX [fau<sup>陰去</sup>]; HS [xɔ̃<sup>陰去</sup>]; HY [fan<sup>陰去</sup>]; PJ [xəŋ<sup>陰去</sup> 白 ~ foŋ<sup>陰去</sup> 文]; QY [faŋ<sup>陰去</sup>]; SS [xaŋ<sup>陰去</sup>]; SY(CL) [huǎ<sup>陰去</sup>]; XH(BX) [xɔ̃<sup>去</sup>]; XX [xaŋ<sup>陰去</sup>]

CMX \*fəŋ<sup>陰去</sup>

The P ǎngjiāng vernacular final -əŋ here is an isolated irregular form. In H ǎngshān the syllable [xɔ̃] with any tone has free variation of [xŋ]. They could result from \*xəŋ > \*xuŋ > \*x<sup>w</sup>ŋ > \*xŋ > xŋ. The latter forms are omitted herein.

2.1.7 CMX \*v-. This fricative is well preserved in Q ǎng. It is realized as voiced bilabial fricative [β] preceding the final -u and otherwise as voiced velar fricative [ɣ] in Xiāngxiāng. Sh ǎoshān is roughly like Xiāngxiāng only that its \*ɣ- and \*β- have devoiced to x- and φ-.

父 fù QYS \*buǎ<sup>?</sup>

CS [fu<sup>陰去</sup>]; CX [fu<sup>陽去</sup>]; HS [fu<sup>陽去</sup>]; HY [fu<sup>陽去</sup>]; PJ [fu<sup>陽去</sup>]; QY [vu<sup>去</sup>]; SS [φu<sup>陽去</sup> 白 ~ φu<sup>陰去</sup> 文]; SY(CL) [vu<sup>陽去</sup>]; XH(BX) [xu<sup>去</sup>]; XX [βu<sup>陽去</sup>]

CMX \*vu<sup>陽去</sup>

凡 fán QYS \*buam

CS [fan<sup>陽平</sup>]; CX [fe<sup>陽平</sup>]; HS [fǣ<sup>陽平</sup>]; HY [fan<sup>陽平</sup>]; PJ [fan<sup>陽平</sup>]; QY [van<sup>陽平</sup>]; SS [xuǎ<sup>陽平</sup>]; SY(CL) [vaŋ<sup>陽平</sup>]; XH(BX) [b<sup>h</sup>ǎ<sup>陽平</sup>]; XX [ɣuǎ<sup>陽平</sup>]

CMX \*ban<sup>陽平</sup> 白 ~ \*van<sup>陽平</sup> 文

Just like the initial \*f-, when \*v- is followed by finals \*-uŋ and \*-əŋ, it commonly merges with \*ɣ-.

房 fáng QYS \*buɑŋ

CS [fan<sup>陽平</sup>]; CX [fau<sup>陽平</sup>]; HS [xɔ̃<sup>陽平</sup>]; HY [fan<sup>陽平</sup>]; PJ [xəŋ<sup>陽平</sup> 白 ~ foŋ<sup>陽平</sup> 文]; QY [vaŋ<sup>陽平</sup>]; SS [xaŋ<sup>陽平</sup>]; SY(CL) [vǎ<sup>陽平</sup>]; XH(BX) [b<sup>h</sup>ɔ̃<sup>陽平</sup> 白 ~ ɣɔ̃<sup>陽平</sup> 文]; XX [ɣaŋ<sup>陽平</sup>]

CMX \*bəŋ<sup>陽平</sup> 白 ~ vəŋ<sup>陽平</sup> 文

The P ǎngjiāng literary form is possibly a modern borrowing.

## 2.2 The Dentals

### 2.2.1 CMX \*t-

多 duō QYS \*ta

CS [to<sup>陰平</sup>]; CX[to<sup>陰平</sup>]; HS [to<sup>陰平</sup>]; HY [to<sup>陰平</sup>]; PJ [to<sup>陰平</sup>]; QY [to<sup>陰平</sup>]; SS [tu<sup>陰平</sup>];  
SY(CL) [to<sup>陰平</sup>]; XH(BX) [to<sup>陰平</sup>]; XX [tu<sup>陰平</sup>]  
CMX \*to<sup>陰平</sup>

得 děi/dé QYS \*tək

CS [tə<sup>入</sup>]; CX [tai<sup>陽平</sup>]; HS [tie<sup>入</sup><sub>白</sub> ~ tæ<sup>入</sup><sub>文</sub>]; HY [te<sup>入</sup>]; PJ [tɛʔ<sup>入</sup>]; QY [te<sup>入</sup>]; SS [tɛ<sup>入</sup>];  
SY(CL) [tiɛ<sup>陰平</sup>]; XH(BX) [tiɛ<sup>入</sup>]; XX [tia<sup>陽平</sup>]  
CMX \*tɛk<sup>陰入</sup>

A few syllables have vernacular forms with a dental stop initial t-, as opposed to their literary forms with regular affricate initials. They are found in dialects such as Qíyáng and Chánglètǒu of Shàoyáng. This vernacular form can be mapped to QYS Zhīmǔ (知母) initial \*tr-. However, they are small in number, usually no more than a dozen, out of roughly a hundred. The regular form is the literary one. Consequently, what is marked 文 (literary) of this type is also in the popular layer.

長 zhǎng QYS \*triɑŋ<sup>?</sup>

CS [tsan<sup>上</sup>]; CX [tɕau<sup>上</sup>]; HS [tɕō<sup>上</sup>]; HY [tɕian<sup>上</sup>]; PJ [tɕoŋ<sup>上</sup>]; QY [tɕian<sup>上</sup><sub>白</sub> ~ tɕiɑŋ<sup>上</sup><sub>文</sub>];  
SS [tɕaŋ<sup>上</sup>]; SY(CL) [tiã<sup>陰上</sup><sub>白</sub> ~ tɕã<sup>陰上</sup><sub>文</sub>]; XH(BX) [tɕyō<sup>上</sup>]; XX [taŋ<sup>上</sup>]  
CMX \*tiɔŋ<sup>陰上</sup><sub>白</sub> ~ \*tɕiɔŋ<sup>陰上</sup><sub>文</sub>

Xiāngxiāng's [taŋ] does not correspond to this vernacular layer. The CMX post-alveolar affricates in Xiāngxiāng have hardened to [t], [t<sup>h</sup>], and [d], leaving them superficially similar to this vernacular t-. This hardening, \*tɕi- > \*tɕ- > \*t- > t-, is a rather recent innovation not shared by many other Xiāng dialects. Please compare the syllable 掌 in the following dialects.

掌 zhǎng QYS \*tɕian<sup>?</sup>

CS [tsan<sup>上</sup>]; CX [tɕau<sup>上</sup>]; HS [tɕō<sup>上</sup>]; HY [tɕian<sup>上</sup>]; PJ [tɕioŋ<sup>上</sup>]; QY [tɕiɑŋ<sup>上</sup>]; SS [tɕaŋ<sup>上</sup>];  
SY(CL) [tɕã<sup>陰上</sup><sub>文</sub>]; XH(BX) [tɕyō<sup>上</sup>]; XX [taŋ<sup>上</sup>]

CMX \*tʃiəŋ<sup>陰上</sup> 文

## 2.2.2 CMX \*t<sup>h</sup>-

鐵 tiě QYS \*t<sup>h</sup>et

CS [t<sup>h</sup>ie<sup>入</sup>]; CX [t<sup>h</sup>ie<sup>陽平</sup>]; HS [t<sup>h</sup>ie<sup>入</sup>]; HY [t<sup>h</sup>ie<sup>入</sup>]; PJ [t<sup>h</sup>iɛʔ<sup>入</sup>]; QY [t<sup>h</sup>ie<sup>入</sup>]; SS [t<sup>h</sup>ie<sup>入</sup>];  
SY(CL) [t<sup>h</sup>ie<sup>陰平</sup>]; XH(BX) [t<sup>h</sup>i<sup>陰平</sup>]; XX [t<sup>h</sup>ia<sup>陽平</sup>]

CMX \*t<sup>h</sup>iɛt<sup>陰入</sup>

貪 tān QYS \*t<sup>h</sup>əm

CS [t<sup>h</sup>an<sup>陰平</sup>]; CX [t<sup>h</sup>e<sup>陰平</sup>]; HS [t<sup>h</sup>ǣ<sup>陰平</sup>]; HY [t<sup>h</sup>an<sup>陰平</sup>]; PJ [t<sup>h</sup>ən<sup>陰平</sup>]; QY [t<sup>h</sup>an<sup>陰平</sup>]; SS [t<sup>h</sup>ǎ<sup>陰平</sup>];  
SY(CL) [t<sup>h</sup>aŋ<sup>陰平</sup>]; XH(BX) [t<sup>h</sup>ǎ<sup>陰平</sup>]; XX [t<sup>h</sup>iǎ<sup>陰平</sup>]

CMX \*t<sup>h</sup>ən<sup>陰平</sup>

## 2.2.3 CMX \*d-. It has devoiced in several of the dialects.

地 dì QYS \*di<sup>h</sup>

CS [ti<sup>陰去</sup>]; CX [ti<sup>陽去</sup> ~ tie<sup>陽去</sup>]; HS [ti<sup>陽去</sup>]; HY [ti<sup>陽去</sup>]; PJ [di<sup>陽去</sup>]; QY [di<sup>去</sup>]; SS [ti<sup>陽去</sup>];  
SY(CL) [di<sup>陽去</sup>]; XH(BX) [d<sup>h</sup>i<sup>陰平</sup> 白 ~ d<sup>h</sup>i<sup>入</sup> 文]; XX [di<sup>陽去</sup>]

CMX \*di<sup>陽去</sup>

塘 táng QYS \*daŋ

CS [tan<sup>陽平</sup>]; CX [dau<sup>陽平</sup>]; HS [t<sup>h</sup>ō<sup>陽平</sup>]; HY [tan<sup>陽平</sup>]; PJ [doŋ<sup>陽平</sup>]; QY [daŋ<sup>陽平</sup>]; SS [daŋ<sup>陽平</sup>];  
SY(CL) [dā<sup>陽平</sup>]; XH(BX) [d<sup>h</sup>ō<sup>陽平</sup>]; XX [daŋ<sup>陽平</sup>]

CMX \*doŋ<sup>陽平</sup>

Parallel to the t- initial in 2.2.1, some syllables of QYS Chéngmǔ (澄母) initials in Qíyáng have voiced stop [d] as the initial in vernacular forms. The literary form in Píngjiāng Cénchuān bears an aspirated voiceless initial instead of a voiced one. This is probably an inter-dialectal or modern borrowing, as are many literary readings there. The 文 form in Shàoyáng is of unknown origin. These are not compared.

沉 chén QYS \*drim

CS [tsən<sup>陽平</sup>]; CX [dʒei<sup>陽平</sup> ~ dzei<sup>陰去</sup>]; HS [tien<sup>陽平</sup><sub>白</sub> ~ t<sup>h</sup>en<sup>陽平</sup><sub>文</sub>]; HY [tein<sup>陽平</sup>]; PJ [dzən<sup>陽平</sup><sub>白</sub> ~ tʂ<sup>h</sup>ən<sup>陽平</sup><sub>文</sub>]; QY [din<sup>陽平</sup><sub>白</sub> ~ dʒin<sup>陽平</sup><sub>文</sub>]; SS [dzən<sup>陽平</sup>]; SY(CL) [dʒen<sup>陽平</sup><sub>白</sub> ~ dʒen<sup>陽去</sup><sub>文</sub>]; XH(BX) [dʒ<sup>h</sup>ən<sup>陽平</sup>]; XX [dʌn<sup>陽平</sup>]  
 CMX \*din<sup>陽平</sup><sub>白</sub> ~ \*dʒin<sup>陽平</sup><sub>文</sub>

2.2.4 CMX \*n-. This nasal stop is preserved in Chángxī and Héngyáng. In many other dialects, it has merged with the lateral [l] before [-high] vowels and before vowel [u]. The \*n- commonly palatalizes before the high front vowels [i] and [y]. Assimilation has turned the following vowels nasalized in some dialects. In Chánglè of Shàoyáng, this nasal initial is dropped in the literary form of the syllable 泥. However the nasalized final -iẽ indicates its former presence.

腦 nǎo QYS \*naw<sup>2</sup>

CS [lau<sup>上</sup>]; CX [nau<sup>上</sup>]; HS [lou<sup>上</sup>]; HY [nau<sup>上</sup>]; PJ [lau<sup>上</sup>]; QY [lau<sup>上</sup>]; SS [nɔ<sup>上</sup>]; SY(CL) [nau<sup>陰上</sup>]; XH(BX) [lau<sup>上</sup>]; XX [lao<sup>上</sup>]  
 CMX \*nau<sup>陽上</sup>

泥 ní QYS \*nɛj

CS [n̥i<sup>陽平</sup>]; CX [ni<sup>陽平</sup>]; HS [n̥i<sup>陽平</sup>]; HY [ni<sup>陽平</sup>]; PJ [n̥i<sup>陽平</sup>]; QY [n̥i<sup>陽平</sup>]; SS [nẽ<sup>陽平</sup>]; SY(CL) [nuei<sup>陽平</sup><sub>白</sub> ~ iẽ<sup>陽平</sup><sub>文</sub>]; XH(BX) [i<sup>陽平</sup>]; XX [n̥i<sup>陽平</sup>]  
 CMX \*nɛi<sup>陽平</sup><sub>白</sub> ~ \*ni<sup>陽平</sup><sub>文</sub>

Some syllables corresponding to QYS R ǔ (日母) characters have vernacular forms with this initial, compared to the literary forms (to be discussed in 2.5.4) with usually continuant initials. These vernacular examples usually do not exceed a dozen in amount, and are considered as a residue layer.

熱 rè QYS \*ɲiat

CS [ye<sup>入</sup>]; CX [zɛ<sup>陽平</sup>]; HS [ɲɛ<sup>上</sup>]; HY [ɛie<sup>陽平</sup>]; PJ [ɲieʔ<sup>入</sup>]; QY [ɲie<sup>入</sup><sub>白</sub> ~ ʒie<sup>入</sup><sub>文</sub>]; SS [ie<sup>入</sup>]; SY(CL) [iẽ<sup>陰去</sup><sub>白</sub> ~ ʒiɛ<sup>陽去</sup><sub>文</sub>]; XH(BX) [zɛ<sup>入</sup>]; XX [ia<sup>陽平</sup>]  
 CMX \*niet<sup>陽入</sup><sub>白</sub> ~ \*ɲiet<sup>陽入</sup><sub>文</sub>



2.2.5 CMX \*l-. This final is preserved in most Xiāng dialects. Though in Chénxī, it hardened into a voiced stop [d] before the high front vowels [i] and [y].

來 l<sup>á</sup> QYS \*ləj

CS [lai<sup>陽平</sup>]; CX [lai<sup>陽平</sup>]; HS [læ<sup>陽平</sup>]; HY [lai<sup>陽平</sup>]; PJ [lei<sup>陽平</sup>]; QY [lai<sup>陽平</sup>]; SS [ne<sup>陽平</sup>]; SY(CL) [lai<sup>陽平</sup>]; XH(BX) [lə<sup>陽平</sup>]; XX [lai<sup>陽平</sup>]

CMX \*loi<sup>陽平</sup>

力 l<sup>ì</sup> QYS \*lik

CS [li<sup>入</sup>]; CX [di<sup>陽平</sup>]; HS [li<sup>入</sup>]; HY [li<sup>陽平</sup>]; PJ [liʔ<sup>入</sup>]; QY [li<sup>入</sup>]; SS [ni<sup>入</sup>]; SY(CL) [ni<sup>陰去</sup>]; XH(BX) [li<sup>去</sup>]; XX [li<sup>陰去</sup>]

CMX \*lit<sup>陽入</sup>

## 2.3 The Alveolar Sibilants

In the environment where the preceding vowel or glide is [+high, -back], these initials are commonly palatalized into palatal or post-alveolar initials. Meanwhile, the velar consonants (to be introduced in 2.6) under the same condition tend to undergo similar palatalization, resulting in a frequently observed merger. Several conservative dialects have been recorded unfinished with this sound change, though.

**Table 2.1: contrast between \*tsi- set with \*ki- set**

	SS	SY(CL)	XX	CS	CMX
1. 際	tsi <sup>45</sup>	tsi <sup>35</sup>	tei <sup>45</sup>	tei <sup>55</sup>	*tsi <sup>陰去</sup>
2. 記	ci <sup>45</sup>	tei <sup>35</sup>	ki <sup>45</sup>	tei <sup>55</sup>	*ki <sup>陰去</sup>
3. 酒	tsiəu <sup>42</sup>	tsiəu <sup>42</sup>	tei <sup>21</sup>	teiəu <sup>42</sup>	*tsiu <sup>陰上</sup>
4. 九	ciəu <sup>42</sup>	teiəu <sup>42</sup>	kiei <sup>21</sup>	teiəu <sup>42</sup>	*kiu <sup>陰上</sup>
5. 前	dze <sup>13</sup>	dziẽ <sup>12</sup>	dzi <sup>23</sup>	teiẽ <sup>13</sup>	*dzien <sup>陰上</sup>
6. 鉗	jẽ <sup>13</sup>	dziẽ <sup>12</sup>	gi <sup>23</sup>	teiẽ <sup>13</sup>	*gien <sup>陰上</sup>
7. 蛆	ts <sup>h</sup> i <sup>33</sup>	te <sup>h</sup> y <sup>55</sup>	te <sup>h</sup> yei <sup>55</sup>	te <sup>h</sup> i <sup>33</sup>	*ts <sup>h</sup> y <sup>陰平</sup>
8. 區	tɕ <sup>h</sup> ɿ <sup>33</sup>	te <sup>h</sup> y <sup>55</sup>	t <sup>h</sup> y <sup>55</sup>	te <sup>h</sup> y <sup>33</sup>	*k <sup>h</sup> y <sup>陰平</sup>

Note that in Chénghā and Shóshān the contrast of the last pair is also reflected in vowels, where the final \*-y unrounded to -i after alveolar sibilants. The dialect of Shòyáng Chénglè has lost the contrast before vowel [y].

2.3.1 CMX \*ts-. This initial is preserved well in dialects like that of Sh áoshān and Sh àoy áng Ch ángl è. In many other dialects, the initial is palatalized to alveolo-palatal tɕ or post-alveolar [tʃ] before high front vowels [i] and [y].

走 zǒu QYS \*tsow<sup>2</sup>

CS [tsəu<sup>上</sup>]; CX [tsai<sup>上白</sup> ~ tsəu<sup>上文</sup>]; HS [tɕie<sup>上</sup>]; HY [tsəu<sup>上</sup>]; PJ [tsəu<sup>上</sup>]; QY [tsəu<sup>上</sup>]; SS [tsio<sup>上白</sup> ~ tsəu<sup>上文</sup>]; SY(CL) [tsei<sup>陰上</sup>]; XH(BX) [tso<sup>上</sup>]; XX [tsai<sup>上</sup>]

CMX \*tsəu<sup>陰上</sup>

酒 jiǔ QYS \*tsuw<sup>2</sup>

CS [tɕiəu<sup>上</sup>]; CX [tɕiəu<sup>上</sup>]; HS [tɕiəu<sup>上</sup>]; HY [tɕiəu<sup>上</sup>]; PJ [tɕiəu<sup>上</sup>]; QY [tʃiəu<sup>上</sup>]; SS [tsiəu<sup>上</sup>]; SY(CL) [tsiəu<sup>陰上</sup>]; XH(BX) [tɕiəu<sup>上</sup>]; XX [tɕiei<sup>上</sup>]

CMX \*tsiu<sup>陰上</sup>

罩 zhào QYS \*tra<sup>上</sup>w<sup>h</sup>

CS [tsau<sup>陰去</sup>]; CX [tsau<sup>陰去</sup>]; HS [tsou<sup>陰去</sup>]; HY [tsau<sup>陰去</sup>]; PJ [tsau<sup>陰去</sup>]; QY [tsau<sup>去</sup>]; SS [tsə<sup>陰去</sup>]; SY(CL) [tsau<sup>陰去</sup>]; XH(BX) [tsau<sup>去</sup>]; XX [tsao<sup>陰去</sup>]

CMX \*tsau<sup>陰去</sup>

2.3.2 CMX \*ts<sup>h</sup>-. It goes under paralleling changes with \*ts-.

青 qīng QYS \*ts<sup>h</sup>ɛŋ

CS [tɕ<sup>h</sup>in<sup>陰平</sup>]; CX [ts<sup>h</sup>ei<sup>陰平</sup>]; HS [tɕ<sup>h</sup>iǎ̃<sup>陰平白</sup> ~ tɕ<sup>h</sup>ien<sup>陰平文</sup>]; HY [tɕ<sup>h</sup>iaŋ<sup>陰平白</sup> ~ tɕ<sup>h</sup>in<sup>陰平文</sup>]; PJ [tɕ<sup>h</sup>iaŋ<sup>陰平</sup>]; QY [tʃ<sup>h</sup>iaŋ<sup>陰平白</sup> ~ tʃ<sup>h</sup>in<sup>陰平文</sup>]; SS [ts<sup>h</sup>iən<sup>陰平</sup>]; SY(CL) [tɕ<sup>h</sup>iǎ̃<sup>陰平白</sup> ~ ts<sup>h</sup>en<sup>陰平文</sup>]; XH(BX) [tɕ<sup>h</sup>iǎ̃<sup>陰平白</sup> ~ tɕ<sup>h</sup>in<sup>陰平文</sup>]; XX [tɕ<sup>h</sup>iō̃<sup>陰平白</sup> ~ tɕ<sup>h</sup>in<sup>陰平文</sup>]

CMX \*ts<sup>h</sup>iaŋ<sup>陰平白</sup> ~ ts<sup>h</sup>iŋ<sup>陰平文</sup>

初 chū QYS \*tɕ<sup>h</sup>iǎ̃

CS [ts<sup>h</sup>əu<sup>陰平</sup>]; CX [ts<sup>h</sup>əu<sup>陰平</sup>]; HS [ts<sup>h</sup>əu<sup>陰平</sup>]; HY [ts<sup>h</sup>u<sup>陰平</sup>]; PJ [ts<sup>h</sup>əu<sup>陰平</sup>]; QY [ts<sup>h</sup>u<sup>陰平</sup>]; SS [ts<sup>h</sup>əu<sup>陰平</sup>]; SY(CL) [ts<sup>h</sup>u<sup>陰平</sup>]; XH(BX) [ts<sup>h</sup>u<sup>陰平</sup>]; XX [tɕ<sup>h</sup>iei<sup>陰平</sup>]

CMX \*ts<sup>h</sup>u<sup>陰平</sup>

2.3.3 CMX \*dz-. This initial is devoiced in some of the dialects such as Ch ángshā, H éngshān, and H éngy áng. Paralleling changes align with that of \*ts-.

在 z ài QYS \*dzəj<sup>2</sup>

CS [tsai<sup>陽去</sup><sub>白</sub> ~ tsai<sup>陰去</sup><sub>文</sub>]; CX [tsai<sup>陽去</sup>]; HS [tsæ<sup>陽去</sup>]; HY [tsai<sup>陽去</sup>]; PJ [dzei<sup>陽去</sup>]; QY [dzai<sup>去</sup>]; SS [dze<sup>陽去</sup><sub>白</sub> ~ tse<sup>陰去</sup><sub>文</sub>]; SY(CL) [dzei<sup>陽上</sup><sub>白</sub> ~ dzei<sup>陽去</sup><sub>文</sub>]; XH(BX) [dz<sup>h</sup>æ<sup>陰平</sup><sub>白</sub> ~ dz<sup>h</sup>æ<sup>入</sup><sub>文</sub>]; XX [dzai<sup>陽去</sup>]

CMX \*dzai<sup>陽上</sup>

柴 ch ái QYS \*dza<sup>1</sup>j

CS [tsai<sup>陽平</sup>]; CX [dzai<sup>陽平</sup>]; HS [ts<sup>h</sup>æ<sup>陽平</sup>]; HY [tsai<sup>陽平</sup>]; PJ [dzai<sup>陽平</sup><sub>白</sub> ~ ts<sup>h</sup>ai<sup>陽平</sup><sub>文</sub>]; QY [dzai<sup>陽平</sup>]; SS [dza<sup>陽平</sup>]; SY(CL) [dzai<sup>陽平</sup>]; XH(BX) [dz<sup>h</sup>æ<sup>陽平</sup>]; XX [dza<sup>陽平</sup>]

CMX \*dzai<sup>陽平</sup>

The literary form in P íngjiāng is possibly a borrowing from Mandarin.

秦 q ín QYS \*dzin

CS [tein<sup>陽平</sup>]; CX [dziei<sup>陽平</sup>]; HS [te<sup>h</sup>ien<sup>陽平</sup>]; HY [tein<sup>陽平</sup>]; PJ [dzin<sup>陽平</sup>]; QY [dzin<sup>陽平</sup>]; SS [dziən<sup>陽平</sup>]; SY(CL) [dzen<sup>陽平</sup>]; XH(BX) [dz<sup>h</sup>in<sup>陽平</sup>]; XX [dzin<sup>陽平</sup>]

CMX \*dzin<sup>陽平</sup>

瓷 c í QYS \*dzi

CS [tsɿ<sup>陽平</sup>]; CX [dzɿ<sup>陽平</sup>]; HS [ts<sup>h</sup>ɿ<sup>陽平</sup>]; HY [tsɿ<sup>陽平</sup>]; PJ [dzɿ<sup>陽平</sup><sub>白</sub> ~ ts<sup>h</sup>ɿ<sup>陽平</sup><sub>文</sub>]; QY [zɿ<sup>陽平</sup>]; SS [dzɿ<sup>陽平</sup>]; SY(CL) [dzɿ<sup>陽平</sup>]; XH(BX) [dz<sup>h</sup>ɿ<sup>陽平</sup>]; XX [dzɿ<sup>陽平</sup>]

CMX \*dzɿ<sup>陽去</sup>

2.3.4 CMX \*s-.

心 x īn QYS \*sim

CS [ɛin<sup>陰平</sup>]; CX [sei<sup>陰平</sup>]; HS [eien<sup>陰平</sup>]; HY [ɛin<sup>陰平</sup>]; PJ [ɛin<sup>陰平</sup>]; QY [fin<sup>陰平</sup>]; SS [sien<sup>陰平</sup>]; SY(CL) [seŋ<sup>陰平</sup>]; XH(BX) [ɛin<sup>陰平</sup>]; XX [ɛin<sup>陰平</sup>]

CMX \*sin<sup>陰平</sup>

傘 sǎn QYS \*san<sup>?</sup>

CS [san<sup>上</sup>]; CX [se<sup>上</sup>]; HS [sǎ<sup>上</sup>]; HY [san<sup>上</sup>]; PJ [san<sup>上</sup>]; QY [san<sup>上</sup>]; SS [sǎ<sup>上</sup>]; SY(CL) [saŋ<sup>陰上</sup>]; XH(BX) [sǎ<sup>上</sup>]; XX[ɕiǎ<sup>上</sup>]

CMX \*san<sup>陰上</sup>

曬 sh ài QYS \*sa<sup>r</sup>h

CS [sai<sup>陰去</sup>]; CX [sa<sup>陰去</sup>]; HS [sæ<sup>陰去</sup>]; HY [sai<sup>陰去</sup>]; PJ [sai<sup>陰去</sup>]; QY [sai<sup>去</sup>]; SS [sa<sup>陰去</sup>]; SY(CL) [sai<sup>陰去</sup>]; XH(BX) [sæ<sup>去</sup>]; XX [so<sup>陰去</sup>]

CMX \*sai<sup>陰去</sup>

The vowel of 曬 in Xiāngxiāng is irregular.

2.3.5 CMX \*z-. This voiced fricative has merged into the CMX initial \*dz- in many dialects. However, Xīnhuà mostly preserves this contrast.

**Table 2.2: contrast between \*z- and \*dz-**

	辭	慈	尋	秦	像	匠
XH	z <sup>13</sup>	dz <sup>h 13</sup>	zin <sup>13</sup>	dz <sup>h in 13</sup>	zi <sup>33</sup> ~ ei <sup>45</sup>	dz <sup>h i<sup>33</sup></sup>
CMX	*z <sup>陽平</sup>	*dz <sup>陽平</sup>	*zin <sup>陽平</sup>	*dzin <sup>陽平</sup>	*zi <sup>陽去</sup>	*dzi <sup>陽去</sup>

尋 x ún QYS \*zim

CS [tein<sup>陽平</sup>]; CX [ɕeyei<sup>陽平</sup>]; HS [tɕ<sup>h</sup>ien<sup>陽平</sup> 白 ~ sen<sup>陽平</sup> 文]; HY [tein<sup>陽平</sup>]; PJ [dzin<sup>陽平</sup>]; QY [dzin<sup>陽平</sup>]; SS [dziən<sup>陽平</sup>]; SY(CL) [dzen<sup>陽平</sup>]; XH [zin<sup>陽平</sup>]; XX [dzin<sup>陽平</sup>]

CMX \*zin<sup>陽平</sup>

The form of 尋 in Chénxī is irregular, possibly a late borrowing from the north.

詞 c í QYS \*zi

CS [tsɿ<sup>陽平</sup>]; CX [dzɿ<sup>陽平</sup>]; HS [ts<sup>h</sup>ɿ<sup>陽平</sup>]; HY [tsɿ<sup>陽平</sup>]; PJ [dzɿ<sup>陽平</sup> 白 ~ ts<sup>h</sup>ɿ<sup>陽平</sup> 文]; QY [zɿ<sup>陽平</sup>]; SS [dzɿ<sup>陽平</sup>]; SY(CL) [dzɿ<sup>陽平</sup>]; XH [zɿ<sup>陽平</sup>]; XX [dzɿ<sup>陽平</sup>]

CMX \*zɿ<sup>陽平</sup>

When followed by final -y, this \*z- is slightly better preserved as fricatives in a few dialects. However the vernacular and literary pair of 徐 in P íngjiāng is the inverse of that in Sh áoshān. It could be explained as inter-dialect borrowing.

徐 xú QYS \*ziǎ

CS [ei<sup>陽平</sup>]; CX [ey<sup>陽平</sup>]; HY [tey<sup>陽平</sup>]; PJ [dzi<sup>陽平</sup> 白 ~ ei<sup>陽平</sup> 文]; QY [dzy<sup>陽平</sup>]; SS [si<sup>陽平</sup> 白 ~ dzi<sup>陽平</sup> 文]; SY(CL) [dzy<sup>陽平</sup>]; XH(BX) [zy<sup>陽平</sup>]; XX [dzyei<sup>陽平</sup>]

CMX \*zy<sup>陽平</sup>

## 2.4 The Post-alveolar Sibilants

To reconstruct this group of initials, a choice between post-alveolar sibilants and retroflex sibilants has to be decided, as there are somewhat fewer dialects carrying the former than those bearing the latter. The two sets rarely co-occur in one phonological system. In consideration of distancing them from the retroflex stops to be introduced in section 2.5, the post-alveolar set has been applied. Nevertheless this is a phonemic representation, so choosing either set for the CMX reconstruction would work in constituting a coherent phonological structure.

This group of initials tends to delete the following glide i- in many of the Xiāng dialects. In dialects like Ch ángshā, they have further apicalized into alveolar sibilants before non-high vowels. For the dialects that preserve glide i- after this group of initials, merger of CMX post-alveolar sibilants with alveolars is usually completed, like the cases in H éngy áng and Q íy áng. Sh àoy áng Ch ángl è dialect is one of a few noticeable exceptions, though.

**Table 2.3: contrast between \*tʃ- set and \*ts- set**

	宙	就	展	剪	責	則
SY(CL)	dziəu <sup>24</sup>	dziəu <sup>24</sup>	teiẽ <sup>42</sup>	tsiẽ <sup>42</sup>	teiẽ <sup>55</sup>	tsiẽ <sup>55</sup>
CMX	*dziu <sup>陽去</sup>	*dziu <sup>陽去</sup>	*tʃien <sup>陰上</sup>	*tsien <sup>陰上</sup>	*tʃek <sup>陰入</sup>	*tsək <sup>陰入</sup>

2.4.1 CMX \*tʃ-. Xīnhu à B áxī dialect is among the most conservative ones that phonemically retain this set of initials preceding open vowels. In most other dialects it has merged into the initial \*ts- with varying degrees. Those not merged are usually

followed by CMX glide \*i-/y- and are either realized as retroflex affricates (like [tʂ]) or as palatal affricates (like [tɕ]). Xiāngxiāng has probably experienced a fortition process where the post-alveolar or retroflex affricates have merged into dental stops before the medial \*i- or \*y-.

渣 zhā QYS \*tʂa<sup>ɿ</sup>

CS [tsa<sup>陰平</sup>]; CX [tsɔ<sup>陰平</sup>]; HS [tsa<sup>陰平</sup>]; HY [tsa<sup>陰平</sup>]; PJ [tsa<sup>陰平</sup>]; QY [tsa<sup>陰平</sup>]; SY(CL) [tsa<sup>陰平</sup>]; XH(BX) [tʂa<sup>陰平</sup>]; XX [tso<sup>陰平</sup>]

CMX \*tʃa<sup>陰平</sup>

張 zhāng QYS \*triɑŋ

CS [tsan<sup>陰平</sup>]; CX [tʂau<sup>陰平</sup>]; HS [tʂō<sup>陰平</sup>]; HY [tɕiaŋ<sup>陰平</sup>]; PJ [tʂoŋ<sup>陰平</sup>]; QY [tʃiaŋ<sup>陰平</sup>]; SS [tʂaŋ<sup>陰平</sup>]; SY(CL) [tʂã<sup>陰平</sup>]; XH(BX) [tɕyō<sup>陰平</sup>]; XX [taŋ<sup>陰平</sup>]

CMX \*tʃioŋ<sup>陰平</sup>

摘 zhāi QYS \*trɛ<sup>ɿ</sup>ʃk

CS [tsə<sup>入</sup>]; CX [tsai<sup>陽平</sup>]; HS [tsa<sup>入</sup><sub>白</sub> ~ tsæ<sup>入</sup><sub>文</sub>]; HY [tsua<sup>入</sup><sub>白</sub> ~ tsue<sup>入</sup><sub>文</sub>]; PJ [tsaʔ<sup>入</sup>]; QY [tsa<sup>入</sup><sub>白</sub> ~ tse<sup>入</sup><sub>白</sub>]; SS [tsa<sup>入</sup><sub>白</sub> ~ tse<sup>入</sup><sub>文</sub>]; SY(CL) [tsa<sup>陰平</sup>]; XH(BX) [tʂa<sup>陰平</sup>]; XX [tsua<sup>陽平</sup> ~ tɕia<sup>陽平</sup>]

CMX \*tʃak<sup>陰入</sup><sub>白</sub> ~ tʃɛk<sup>陰入</sup><sub>文</sub>

皺 zhòu QYS \*tʂuw<sup>h</sup>

CS [tsəu<sup>陰去</sup>]; CX [tsəu<sup>陰去</sup>]; HS [tɕie<sup>陰去</sup>]; HY [tsəu<sup>陰去</sup>]; PJ [tsəu<sup>陰去</sup>]; QY [tsəu<sup>去</sup>]; SS [tsio<sup>陰去</sup>]; SY(CL) [tsei<sup>陰去</sup>]; XH(BX) [tʂəu<sup>去</sup>]; XX [tsai<sup>陰去</sup>]

CMX \*tʃɛu<sup>陰去</sup>

## 2.4.2 CMX \*tʃ<sup>h</sup>-.

鏜 chān QYS \*tʂ<sup>h</sup>ɛ<sup>ɿ</sup>n<sup>?</sup>

CS [ts<sup>h</sup>an<sup>上</sup>]; CX [ts<sup>h</sup>e<sup>上</sup>]; HS [ts<sup>h</sup>æ<sup>上</sup>]; HY [ts<sup>h</sup>an<sup>上</sup>]; PJ [ts<sup>h</sup>an<sup>上</sup>]; QY [ts<sup>h</sup>an<sup>上</sup>]; SS [ts<sup>h</sup>ã<sup>上</sup>]; SY(CL) [ts<sup>h</sup>aŋ<sup>陰上</sup>]; XH(BX) [tʂ<sup>h</sup>ã<sup>上</sup>]; XX [tɕ<sup>h</sup>iã<sup>上</sup>]

CMX \*tʃ<sup>h</sup>an<sup>陰上</sup>

拆 chāi QYS \*tr<sup>h</sup>afjk

CS [ts<sup>h</sup>ə<sup>˧</sup>]; CX [ts<sup>h</sup>ai<sup>陽平</sup>]; HS [ts<sup>h</sup>a<sup>˧</sup><sub>白</sub> ~ ts<sup>h</sup>æ<sup>˧</sup><sub>文</sub>]; HY [ts<sup>h</sup>e<sup>˧</sup>]; PJ [ts<sup>h</sup>aʔ<sup>˧</sup>]; QY [ts<sup>h</sup>e<sup>˧</sup>];

SS [ts<sup>h</sup>ɛ<sup>˧</sup>]; SY(CL) [ts<sup>h</sup>a<sup>陰平</sup><sub>白</sub> ~ tɕ<sup>h</sup>iɛ<sup>陰平</sup><sub>文</sub>]; XH(BX) [tɕ<sup>h</sup>ə<sup>˧</sup>]; XX [ts<sup>h</sup>o<sup>陽平</sup>]

CMX \*tʃ<sup>h</sup>ak<sup>陰入</sup><sub>白</sub> ~ \*tʃ<sup>h</sup>ɛk<sup>陰入</sup><sub>文</sub>

This initial is sometimes de-aspirated given that it has apicalized to an alveolar fricative. The tone of 齒 in Sh àoy áng Ch ángl è is irregular.

齒 chǐ QYS \*tɕ<sup>h</sup>iʔ

CS [ts<sup>h</sup>ɿ<sup>˨˩˦</sup>]; CX [tɕ<sup>h</sup>ɿ<sup>˨˩˦</sup>]; HS [ts<sup>h</sup>ɿ<sup>˨˩˦</sup>]; PJ [tɕ<sup>h</sup>ɿ<sup>˨˩˦</sup>]; QY [tsɿ<sup>˨˩˦</sup>]; SS [tɕ<sup>h</sup>ɿ<sup>˨˩˦</sup>]; SY(CL) [tsɿ<sup>陰去</sup>];

XH(BX) [tɕ<sup>h</sup>ɿ<sup>˨˩˦</sup>]; XX [tɕ<sup>h</sup>ɿ<sup>˨˩˦</sup>]

CMX \*tʃ<sup>h</sup>i<sup>陰上</sup>

2.4.3 CMX \*dʒ-. It has devoiced in some dialects.

柱 zhù QYS \*druǎʔ

CS [tɕy<sup>陽去</sup><sub>白</sub> ~ tɕy<sup>陰去</sup><sub>文</sub>]; CX [tɕu<sup>陽去</sup>]; HS [tɕy<sup>陽去</sup>]; HY [tɕy<sup>陽去</sup>]; PJ [dʒy<sup>陽平</sup>]; QY [dʒy<sup>去</sup>];

SS [dʒɿ<sup>陽去</sup><sub>白</sub> ~ tɕɿ<sup>陰去</sup><sub>文</sub>]; SY(CL) [dʒy<sup>陽上</sup>]; XH(BX) [dʒ<sup>h</sup>y<sup>˨˩˦</sup>]; XX [dy<sup>陽去</sup>]

CMX \*dʒy<sup>陽上</sup>

H ángshān has a free variation [tɕ] in addition to [tɕy]. Herein only [tɕy] is taken for reconstruction.

直 zhí QYS \*drik

CS [tsɿ<sup>˧</sup>]; CX [tɕ<sup>h</sup>ɿ<sup>陰去</sup>]; HS [tɕ<sup>h</sup>i<sup>˧</sup>]; HY [tɕi<sup>陽平</sup>]; PJ [tɕ<sup>h</sup>ɿʔ<sup>˧</sup>]; QY [dʒi<sup>˧</sup>]; SS [tɕ<sup>h</sup>ɿ<sup>陰去</sup><sub>白</sub> ~

tɕ<sup>h</sup>ɿ<sup>˧</sup><sub>文</sub>]; SY(CL) [dʒɿ<sup>陽去</sup>]; XH(BX) [tɕɿ<sup>˧</sup>]; XX [tɕ<sup>h</sup>ɿ<sup>陰去</sup>]

CMX \*dʒit<sup>陽入</sup>

床 chuáng QYS \*dzɿaŋ

CS [tɕyan<sup>陽平</sup>]; CX [dzau<sup>陽平</sup>]; HS [ts<sup>h</sup>ō<sup>陽平</sup>]; HY [tsuan<sup>陽平</sup>]; PJ [dʒoŋ<sup>陽平</sup>]; QY [dzuan<sup>陽平</sup>];

SS [dʒaŋ<sup>陽平</sup>]; SY(CL) [dzuǎ<sup>陽平</sup>]; XH(BX) [dz<sup>h</sup>ō<sup>陽平</sup>]; XX [dʒaŋ<sup>陽平</sup>]

CMX \*dʒuəŋ<sup>陽平</sup>

#### 2.4.4 CMX \*ʃ-.

沙 shā QYS \*ʃa<sup>r</sup>

CS [sa<sup>陰平</sup>]; CX [sɔ<sup>陰平</sup>]; HS [sa<sup>陰平</sup>]; HY [sa<sup>陰平</sup>]; PJ [sa<sup>陰平</sup>]; QY [sa<sup>陰平</sup>]; SS [sua<sup>陰平</sup>];  
SY(CL) [sa<sup>陰平</sup>]; XH(BX) [ʃa<sup>陰平</sup>]; XX [so<sup>陰平</sup>]

CMX \*ʃa<sup>陰平</sup>

師 shī QYS \*ʃi

CS [ʃi<sup>陰平</sup>]; CX [ʃi<sup>陰平</sup>]; HS [ʃi<sup>陰平</sup>]; HY [ʃi<sup>陰平</sup>]; PJ [ʃi<sup>陰平</sup>]; QY [ʃi<sup>陰平</sup>]; SS [ʃi<sup>陰平</sup>]; SY(CL)  
[ʃi<sup>陰平</sup>]; XH(BX) [ʃi<sup>陰平</sup>]; XX [ʃi<sup>陰平</sup>]

CMX \*ʃi<sup>陰平</sup>

燒 shāo QYS \*ɕiauw

CS [sau<sup>陰平</sup>]; CX [ɕau<sup>陰平</sup>]; HS [ɕiou<sup>陰平</sup>]; HY [ɕiau<sup>陰平</sup>]; PJ [ɕau<sup>陰平</sup>]; SS [ɕɔ<sup>陰平</sup>]; SY(CL)  
[ɕiau<sup>陰平</sup>]; XH(BX) [eyo<sup>陰平</sup>]; XX [ɕiao<sup>陰平</sup>]

CMX \*ʃieu<sup>陰平</sup>

#### 2.4.5 CMX \*ʒ-. It has devoiced in many of the dialects.

是 shì QYS \*dzia<sup>?</sup>

CS [ʃi<sup>陽去</sup> 白 ~ ʃi<sup>陰去</sup> 文]; CX [ʃi<sup>陽去</sup>]; HS [ʃi<sup>陽去</sup>]; HY [ʃi<sup>陽去</sup>]; PJ [ʃi<sup>陽去</sup>]; QY [ʒi<sup>去</sup>]; SS [ʃi<sup>陽去</sup> 白 ~ ʃi<sup>陰去</sup> 文]; SY(CL) [ʒi<sup>陽上</sup> 白 ~ ʒi<sup>陽去</sup> 文]; XH(BX) [ʃi<sup>去</sup>]; XX [dzɿ<sup>陽去</sup>]

CMX \*ʒi<sup>陽上</sup>

神 shén QYS \*ʒin

CS [ʃən<sup>陽平</sup>]; CX [ʃei<sup>陽平</sup>]; HS [ɕien<sup>陽平</sup>]; HY [ɕin<sup>陽平</sup>]; PJ [ʃən<sup>陽平</sup>]; QY [ʒin<sup>陽平</sup>]; SS [ʃən<sup>陽平</sup>]; SY(CL) [ʒen<sup>陽平</sup>]; XH(BX) [ʒən<sup>陽平</sup>]; XX [ʒin<sup>陽平</sup>]

CMX \*ʒin<sup>陽平</sup>

### 2.5 The Retroflexes

Evidence from various Xiāng dialects supports the separation of this group of



initials from the alveolar as well as the post-alveolar affricates. Although it is not impossible to make the contrast configured in finals than in initials in the expense of adding a new vowel to the inventory, introducing this set of retroflex stops would provide a simple and neat phonological resolution. This is because the syllabic positions for post-alveolar initials, such as \*tʃ̺ and \*tʃ̺i, have already been occupied (please refer to sections 2.4.1 through 2.4.3). This problem will be further discussed in section 3.2.5 when introducing the corresponding finals. Table 2.4 below compares 17 syllables across four Xiāng dialects.

**Table 2.4: two types of retroflex patterns**

	HY	SY(CL)	CX	XX
1. 知	tei <sup>45</sup> ~ tei <sup>24</sup>	tʂ̺ <sup>55</sup> ~ tʂ̺ <sup>35</sup>	tʂ̺ <sup>44</sup>	tʂ̺ <sup>55</sup>
2. 智	tei <sup>24</sup>	tʂ̺ <sup>35</sup>	tʂ̺ <sup>324</sup>	tʂ̺ <sup>45</sup>
3. 癡	te <sup>h,45</sup> ɿ	-	tʂ̺ <sup>h,44</sup>	tʂ̺ <sup>h,55</sup>
4. 遲	tei <sup>11</sup>	dz̺ <sup>12</sup>	dz̺ <sup>324</sup>	dz̺ <sup>23</sup>
5. 池	tei <sup>11</sup>	dz̺ <sup>12</sup>	dz̺ <sup>324</sup>	dz̺ <sup>23</sup>
6. 持	tei <sup>11</sup>	dz̺ <sup>12</sup>	dz̺ <sup>324</sup>	dz̺ <sup>23</sup>
7. 治	tei <sup>213</sup>	dz̺ <sup>24</sup>	tʂ̺ <sup>324</sup>	dz̺ <sup>22</sup>
8. 支	ts̺ <sup>45</sup>	ts̺ <sup>55</sup>	tʂ̺ <sup>44</sup>	tʂ̺ <sup>55</sup>
9. 紙	ts̺ <sup>33</sup>	ts̺ <sup>42</sup>	-	tʂ̺ <sup>21</sup>
10. 至	ts̺ <sup>24</sup>	ts̺ <sup>35</sup>	tʂ̺ <sup>324</sup>	tʂ̺ <sup>45</sup>
11. 志	ts̺ <sup>24</sup>	ts̺ <sup>35</sup>	tʂ̺ <sup>324</sup>	tʂ̺ <sup>45</sup>
12. 翅	ts̺ <sup>24</sup>	ts̺ <sup>55</sup>	tʂ̺ <sup>324</sup>	tʂ̺ <sup>45</sup>
13. 屍	s̺ <sup>45</sup>	s̺ <sup>55</sup>	ʂ̺ <sup>44</sup>	ʂ̺ <sup>55</sup>
14. 始	s̺ <sup>33</sup>	s̺ <sup>42</sup>	ʂ̺ <sup>31</sup>	ʂ̺ <sup>55</sup>
15. 時	s̺ <sup>11</sup>	dz̺ <sup>12</sup>	ʂ̺ <sup>213</sup>	dz̺ <sup>23</sup>
16. 是	s̺ <sup>213</sup>	z̺ <sup>21</sup> ~ z̺ <sup>24</sup>	ʂ̺ <sup>55</sup>	dz̺ <sup>22</sup>
17. 示	s̺ <sup>213</sup>	z̺ <sup>24</sup>	ʂ̺ <sup>55</sup>	dz̺ <sup>22</sup>

In this Table, the upper seven lexemes behave differently from the lower ten in Hóngyáng and Shàoyáng. Xiāngxiāng's exceptions came from dz̺ > dz̺ conditioned on yángqù (陽去) tone. The lexemes are sharply divided in two across four dialects, which is unlikely to be the result of borrowing. It is thus reasonable to reconstruct separate syllabic categories in CMX for the two groups of syllables. The upper group is designated Group A and the lower Group B. The initials of Group A shall bear the

feature [-anterior] compared to the post-alveolar ones of Group B, as the former is less prone to apicalization. Though either palatal affricates ([tɕ], [tɕʰ], and [dʒ]) or palatal stops would fit into the reconstructed CMX without much problem, it is worth noting that in QYS the initials are reconstructed as retroflex stops for Group A syllables and palatal sibilants for Group B (Pulleyblank, 1984). If we would take this reconstruction as one of a faithful approximation to QYS, and if we supposedly believe that CMX is a daughter of either QYS or a historical dialect fairly similar to it, we shall not feel reluctant on applying these retroflex stops to the CMX phonological reconstruction, so long as we are dealing with phonemic notations.

2.5.1 CMX \*t̪-. None of the dialects has preserved this initial phonetically.

知 zhī QYS \*triǎ

CS [tsɿ<sup>陰平</sup>]; CX [tɕɿ<sup>陰平</sup>]; HS [tɕi<sup>陰平</sup>]; HY [tɕi<sup>陰平</sup> ~ tɕi<sup>陰去</sup>]; PJ [tɕɿ<sup>陰平</sup>]; QY [tʃi<sup>陰平</sup>]; SS [tɕɿ<sup>陰平</sup>]; SY(CL) [tɕɿ<sup>陰平</sup> ~ tɕɿ<sup>陰去</sup>]; XH(BX) [tɕɿ<sup>陰平</sup>]; XX [tɕɿ<sup>陰平</sup>]

CMX \*t̪i<sup>陰平</sup>

置 zhì QYS \*tri<sup>h</sup>

CS [tsɿ<sup>陰去</sup>]; CX [tɕɿ<sup>陰去</sup>]; HS [tɕi<sup>陰去</sup>]; HY [tɕi<sup>陰去</sup> ~ tsɿ<sup>陰去</sup>]; PJ [tɕɿ<sup>陰去</sup>]; QY [tʃi<sup>去</sup>]; SS [tɕɿ<sup>陰去</sup>]; SY(CL) [tsɿ<sup>陰去</sup>]; XH(BX) [tɕ<sup>h</sup>ɿ<sup>入</sup>]; XX [tɕɿ<sup>陰去</sup>]

CMX \*t̪i<sup>陰去</sup>

The form of 置 in Xīnhuà Bǎixī is irregular. The apicalized form in Héngyáng possibly involves inter-dialectal borrowing.

2.5.2 CMX \*t̪<sup>h</sup>-. It has merged into \*ts<sup>h</sup>- in Chángshā and Shàoyáng proper. This final is relatively rare.

癡 chī QYS \*tr<sup>h</sup>iǎ

CS [ts<sup>h</sup>ɿ<sup>陰平</sup>]; CX [tɕ<sup>h</sup>ɿ<sup>陰平</sup>]; HS [tɕ<sup>h</sup>i<sup>陰平</sup>]; HY [tɕ<sup>h</sup>i<sup>陰平</sup>]; PJ [tɕ<sup>h</sup>ɿ<sup>陰平</sup>]; QY [tʃ<sup>h</sup>i<sup>陰平</sup>]; SS [tɕ<sup>h</sup>ɿ<sup>陰平</sup>]; SY [ts<sup>h</sup>ɿ<sup>陰平</sup>]; XH(BX) [tɕ<sup>h</sup>ɿ<sup>陰平</sup>]; XX [tɕ<sup>h</sup>ɿ<sup>陰平</sup>]

CMX \*t̪<sup>h</sup>i<sup>陰平</sup>

2.5.3 CMX \*ɖ-. This initial is fully or partially devoiced in Chángshā, Chénxī, Héngyáng, and Xīnhuà Bāxī. In Xīnhuà it is aspirated.

池 chí QYS \*driǎ

CS [tsɿ<sup>陽平</sup>]; CX [dʑɿ<sup>陽平</sup>]; HS [tɕʰi<sup>陽平</sup>]; HY [tɕei<sup>陽平</sup>]; PJ [dʑɿ<sup>陽平</sup>]; QY [dʑi<sup>陽平</sup>]; SS [dʑɿ<sup>陽平</sup>]; SY(CL) [dʑɿ<sup>陽平</sup>]; XH(BX) [dʑɿ<sup>陽平</sup>]; XX [dʑɿ<sup>陽平</sup>]

CMX \*ɖi<sup>陽平</sup>

治 zhì QYS \*dri<sup>h</sup>

CS [tsɿ<sup>陽去</sup>]; CX [tʂɿ<sup>陰去</sup>]; HS [tɕei<sup>陽去</sup>]; HY [tɕei<sup>陽去</sup>]; PJ [dʑɿ<sup>陽去</sup>]; QY [dʑi<sup>去</sup>]; SS [tʂɿ<sup>陰去</sup>]; SY(CL) [dʑɿ<sup>陽去</sup>]; XH(BX) [tʂɿ<sup>陽去</sup>]; XX [dʑɿ<sup>陽去</sup>]

CMX \*ɖi<sup>陽去</sup>

2.5.4 CMX \*ɭ-. Parallel with \*v- in 2.1.5, this initial is a literary form. However it is the regular correspondence to MC R mǔ (日母) with most popular lexemes, and has been reconstructed as the main layer of CMX. The two forms in Shàoyáng Chánglè for lexeme 然 are likely both derivatives of an earlier [ziẽ], evidenced from the nearby Cǎiqiáo dialect (Wang, 2013, p. 242).

日 rì QYS \*nit

CS [ʒɿ<sup>入</sup>]; CX [ʒɿ<sup>陰去</sup> ~ ʂ<sup>上</sup>]; HS [ɳi<sup>入</sup>]; HY [ɕei<sup>陽平</sup>]; PJ [ɳi<sup>入</sup>]; QY [ɳi<sup>入</sup> ~ ʒi<sup>入</sup>]; SS [ɳẽ<sup>入</sup> ~ ʒɿ<sup>入</sup>]; SY(CL) [ɳ<sup>陰平</sup> ~ ʒɿ<sup>陽去</sup>]; XH(BX) [ɳ<sup>陰平</sup> ~ dʑɿ<sup>入</sup>]; XX [i<sup>陽平</sup>]

CMX \*nit<sup>陽入</sup> ~ \*ɭit<sup>陽入</sup>

然 rán QYS \*njan

CS [yẽ<sup>陽平</sup>]; CX [ʒẽ<sup>陽平</sup>]; HS [i<sup>陽平</sup>]; HY [ɕien<sup>陽平</sup>]; PJ [yan<sup>陽平</sup>]; QY [ʒian<sup>陽平</sup>]; SS [ẽ<sup>陽平</sup>]; SY(CL) [iẽ<sup>陽平</sup> ~ ʒiẽ<sup>陽平</sup>]; XH(BX) [ʒẽ<sup>陽平</sup>]; XX [iĩ<sup>陽平</sup>]

CMX \*ɭien<sup>陽平</sup>

The special rhotic vowel [ə̃] is reconstructed as \*ɭi. It syllabified into a syllabic approximant \*ɭ before vocalizing to [ə̃]. The vernacular form of 兒 [ɿ] in Shàoshān is likely a fortition from \*ɭ.

兒 ㄦ QYS \*niǎ

CS [ə<sup>陽平</sup>]; CX [ǣ<sup>陽平</sup> ~ ǣ<sup>陰去</sup>]; HS [u<sup>陽平</sup>]; HY [ə<sup>陽平</sup>]; PJ [æy<sup>陽平</sup>]; QY [ǣ<sup>陽平</sup>]; SS [ʒ<sup>陽平</sup>  
白 ~ ɛ<sup>陽平</sup><sub>文</sub>]; SY(CL) [ei<sup>陽平</sup>]; XH(BX) [ə<sup>陽平</sup>]; XX [ai<sup>陽平</sup>]

CMX \*ɿ<sup>陽平</sup>

耳 ㄝ QYS \*ni<sup>?</sup>

CS [ə<sup>上</sup>]; CX [ǣ<sup>上</sup>]; HS [u<sup>上</sup>]; HY [ə<sup>上</sup>]; PJ [æy<sup>上</sup>]; QY [ǣ<sup>上</sup>]; SS [ɛ<sup>上</sup>]; SY(CL) [ei<sup>陰上</sup>];  
XH(BX) [ə<sup>上</sup>]; XX [ai<sup>上</sup>]

CMX \*ɿ<sup>陰上</sup>

## 2.6 The Velars

2.6.1 CMX \*k-. This initial is better preserved in Xiāngxiāng. In many dialects it has experienced palatalization before the closed front vowels [i] and [y]. As Sháo shān dialect has later merged the glide \*y- into u-, the corresponding palatal initials have apicalized to retroflexes.

幹 g ㄢ QYS \*kan<sup>h</sup>

CS [kan<sup>陰去</sup>]; CX [ke<sup>陰去</sup>]; HS [kǣ<sup>陰去</sup>]; HY [kan<sup>陰去</sup>]; PJ [k ɒ̃<sup>陰去</sup>]; QY [kan<sup>去</sup>]; SS [kǎ<sup>陰去</sup>];  
SY(CL) [kaŋ<sup>陰去</sup>]; XH(BX) [kǎ<sup>去</sup>]; XX [kuǎ<sup>陰去</sup>]

CMX \*kɒ̃<sup>陰去</sup>

見 ji ㄢ QYS \*ken<sup>h</sup>

CS [teiē<sup>陰去</sup>]; CX [teie<sup>陰去</sup>]; HS [teĩ<sup>陰去</sup>]; HY [teien<sup>陰去</sup>]; PJ [teian<sup>陰去</sup>]; QY [tʃian<sup>去</sup>]; SS [cē<sup>陰去</sup>];  
SY(CL) [teiē<sup>陰去</sup>]; XH(BX) [teiē<sup>去</sup>]; XX [kiĩ<sup>陰去</sup>]

CMX \*kien<sup>陰去</sup>

卷 juǎn QYS \*kwian<sup>?</sup>

CS [teyē<sup>上</sup>]; CX [teye<sup>上</sup>]; HS [tuēĩ<sup>上</sup>]; HY [teyen<sup>上</sup>]; PJ [teyan<sup>上</sup>]; QY [tʃyan<sup>上</sup>]; SS [tʃuē<sup>上</sup>];  
SY(CL) [teye<sup>陰上</sup>]; XH(BX) [teyēĩ<sup>上</sup>]; XX [tyĩ<sup>上</sup>]

CMX \*kyen<sup>陰上</sup>

### 2.6.2 CMX \*k<sup>h</sup>-.

開 kái QYS \*k<sup>h</sup>əj

CS [k<sup>h</sup>ai<sup>陰平</sup>]; CX [k<sup>h</sup>e<sup>陰平</sup>]; HS [k<sup>h</sup>æ<sup>陰平</sup>]; HY [k<sup>h</sup>ai<sup>陰平</sup>]; PJ [k<sup>h</sup>ei<sup>陰平</sup>]; QY [k<sup>h</sup>ai<sup>陰平</sup>]; SS [k<sup>h</sup>ɛ<sup>陰平</sup>]; SY(CL) [k<sup>h</sup>ai<sup>陰平</sup>]; XH(BX) [k<sup>h</sup>ə<sup>陰平</sup>]; XX [k<sup>h</sup>uai<sup>陰平</sup>]

CMX \*k<sup>h</sup>ɔi<sup>陰平</sup>

起 qǐ QYS \*k<sup>h</sup>i<sup>?</sup>

CS [tɕ<sup>h</sup>i<sup>上</sup>]; CX [tɕ<sup>h</sup>i<sup>上</sup>]; HS [ɕi<sup>上白</sup> ~ tɕ<sup>h</sup>i<sup>上文</sup>]; HY [tɕ<sup>h</sup>i<sup>上</sup>]; PJ [tɕ<sup>h</sup>i<sup>上</sup>]; QY [ʃi<sup>上白</sup> ~ tɕ<sup>h</sup>i<sup>上</sup>]; SS [tɕ<sup>h</sup>i<sup>上</sup>]; SY(CL) [tɕ<sup>h</sup>i<sup>陰上</sup>]; XH(BX) [tɕ<sup>h</sup>i<sup>上</sup>]; XX [k<sup>h</sup>i<sup>上</sup>]

CMX \*k<sup>h</sup>i<sup>陰上</sup>

2.6.3 CMX \*g-. It is devoiced in Chángshā, Hóngshān, and Hóngyáng dialects. In Chénxī and Bǎxī of Xīnhuà it is partially devoiced. It is aspirated in Xīnhuà and partially so in Hóngshān.

強 qiáng QYS \*giaŋ

CS [tɕian<sup>陽平</sup>]; CX [dziau<sup>陽平</sup>]; HS [t<sup>h</sup>ɔ̃<sup>陽平</sup>]; HY [tɕian<sup>陽平</sup>]; PJ [dzioŋ<sup>陽平</sup>]; QY [dʒiaŋ<sup>陽平</sup>]; SS [ʃaŋ<sup>陽平</sup>]; SY(CL) [dzã<sup>陽平</sup>]; XH(BX) [tɕ<sup>h</sup>iã<sup>陽平</sup>]; XX [giaŋ<sup>陽平</sup>]

CMX \*giɔŋ<sup>陽平</sup>

狂 kuáng QYS \*guaŋ

CS [kuan<sup>陽平</sup>]; CX [guau<sup>陽平</sup>]; HS [xɔ̃<sup>陽平</sup>]; HY [kuan<sup>陽平</sup>]; PJ [goŋ<sup>陽平</sup>]; QY [guan<sup>陽平</sup>]; SS [guaŋ<sup>陽平</sup>]; SY [guã<sup>陽平</sup>]; XH(BX) [k<sup>h</sup>ɔ̃<sup>陽平</sup>]; XX [gaŋ<sup>陽平</sup>]

CMX \*guɔŋ<sup>陽平</sup>

舅 jiù QYS \*guw<sup>?</sup>

CS [tɕiəu<sup>陰去</sup>]; CX [tɕiəu<sup>陽去</sup>]; HS [tɕəu<sup>陽去</sup>]; HY [tɕiəu<sup>陽去</sup>]; PJ [dziəu<sup>陽去</sup>]; QY [dʒiəu<sup>陽去</sup>]; SS [ʃiəu<sup>陽去</sup> ~ ciəu<sup>陰去</sup>]; SY(CL) [dziəu<sup>陽去</sup>]; XH(BX) [dz<sup>h</sup>iu<sup>上</sup>]; XX [giei<sup>陽去</sup>]

CMX \*giu<sup>陽上</sup>

2.6.4 CMX \*ŋ-. This velar nasal is better preserved in Hóngyáng.

There is a trend in Xiāng dialects for the zero-initial syllables beginning with non-high vowels to add an epenthetic ɲ- at the onset. The contrast between a syllable of CMX \*ɲ- initial with one of originally zero-initial thus depends on the tone, where the former usually bears a yáng (陽) tone (shaded in Table 2.5) while the latter yīn (陰) tone. Varying degrees of admixture are observed in these dialects. The common direction is for yáng (陽) tone syllables to merge into yīn (陰). Table 2.5 shows five contrastive pairs in vernacular layers of four dialects.

**Table 2.5: comparison between \*ɲ- and initial zero**

CMX	CX	HY	PJ	SS
呆 *ɲɔi <sup>陽平</sup>	ɲai 陽平	ɲai 陽平	ɲai 陽平	ɲɛ 陽平
哀 *ɔi <sup>陰平</sup>	ɲai 陰平	ɲai 陰平	ɲai 陰平	ɲɛ 陰平
礙 *ɲɔi <sup>陽去</sup>	ɲai 陽去	ɲai 陽去	-	ɲɛ 陽去
愛 *ɔi <sup>陰去</sup>	ɲai 陰去	ɲai 陰去	ɲei 陰去	ɲɛ 陰去
藕 *ɲɛu <sup>陽上</sup>	ɲəu 上	ɲəu 上	ɲəu 上	ɲio 上
嘔 *ɛu <sup>陰上</sup>	ai 上	əu 上	ɲəu 上	ɲio 上
岸 *ɲɔn <sup>陽去</sup>	ɲai 陽去	ɲan 陰去	ɲɔn 陽去	uĩ 陽去
暗 *ɔn <sup>陰去</sup>	ɲɛ 陰去	ɲan 陰去	ɲɔn 陰去	uĩ 陰去
驗 *ɲien <sup>陽去</sup>	nie 陽去	ɲien 陽去	ɲian 陽去	ɲĩ 陽去
燕 *ien <sup>陰去</sup>	ie 陰去	ien 陰去	ian 陰去	ĩ 陰去

The tone for 岸 in Héngyáng is irregular. Notwithstanding, a distinctive \*ɲ- can be reconstructed for these syllables in contrast to initial zero based on their respective tonal categories.

岸 àn QYS \*ɲan<sup>h</sup>

CS [ɲan<sup>陽去</sup><sub>白</sub> ~ ɲan<sup>陰去</sup><sub>文</sub>]; CX [ɲai<sup>陽去</sup>]; HS [ɲǣ<sup>陽去</sup>]; HY [ɲan<sup>陰去</sup>]; PJ [ɲɔn<sup>陽去</sup>]; QY [ɲan<sup>去</sup>]; SS [ɲō<sup>陽去</sup><sub>白1</sub> ~ ɲǎ<sup>陽去</sup><sub>白2</sub> ~ ɲǎ<sup>陰去</sup><sub>文</sub>]; SY(CL) [ɲaŋ<sup>陰去</sup>]; XH(BX) [ǎ<sup>去</sup>]; XX [ua<sup>陽去</sup>]

CMX \*ɲɔn<sup>陽去</sup>

礙 ài QYS \*ɲɛj<sup>h</sup>

CS<sub>2</sub> [ɲai<sup>陽去</sup><sub>白</sub> ~ ɲai<sup>陰去</sup><sub>文</sub>]; CX [ɲai<sup>陽去</sup>]; HS [ɲǣ<sup>陽去</sup>]; HY [ɲan<sup>陽去</sup>]; ML(CL) [ɲa<sup>陽去</sup><sub>白</sub> ~ ɲa<sup>陰去</sup><sub>文</sub>]; QY [ɲai<sup>去</sup>]; SS [ɲɛ<sup>陰去</sup>]; SY(CL) [ɲai<sup>陰去</sup>]; XH(BX) [ǣ<sup>去</sup>]; XX[uai<sup>上</sup> ~ uai<sup>陽去</sup>]

CMX \*ɲɔi<sup>陽去</sup>

In Shàoyáng Chánglè, this initial has hardened to the voiced velar stop [g] preceding open vowels in syllables that are without nasal elements. These hardened pronunciations are recorded as ‘vernacular’. The literary form is ŋ-, possibly an inter-dialectal borrowing. The first person singular pronoun in Hángshān involves certain inflectional changes associated with its tone. It is out of the scope of this dissertation and is omitted herein.

我 wǒ QYS \*ŋɑ<sup>?</sup>

CS [ŋo<sup>上</sup>]; CX [ŋo<sup>上</sup>]; HS [ŋo<sup>上</sup>]; HY [ŋo<sup>上</sup>]; PJ [ŋo<sup>上</sup>]; QY [ŋo<sup>上</sup>]; SS [ŋo<sup>上</sup>]; SY(CL) [go<sup>陽上</sup>白 ~ ŋo<sup>陰上</sup>文]; XH(BX) [o<sup>上</sup>]; XX [ŋ<sup>上</sup>白 ~ ŋō<sup>上</sup>文]

CMX \*ŋo<sup>陽上</sup>

CMX initial \*ŋ- before high vowels tends to palatalize in most of the dialects even including Hángyáng. Yet the contrast has largely persisted here.

**Table 2.6: contrast between \*ŋi- and \*ni-**

	HY	CMX
宜 QYS	ŋi <sup>11</sup>	*ŋi <sup>陽平</sup>
尼 QYS	ni <sup>11</sup>	*ni <sup>陽平</sup>
驗 QYS	ŋien <sup>213</sup>	*ŋien <sup>陽去</sup>
念 QYS	nien <sup>213</sup>	*nien <sup>陽去</sup>
仰 QYS	ŋian <sup>33</sup>	*ŋian <sup>陽上</sup>
讓 QYS	nian <sup>213</sup> 白 ~ cian <sup>213</sup> 文	*nian <sup>陽去</sup> 白 ~ *tʃian <sup>陽去</sup> 文
愚 QYS	ŋy <sup>11</sup>	*ŋy <sup>陽平</sup>
女 QYS	ny <sup>33</sup>	*ny <sup>陽上</sup>
虐 QYS	nio <sup>11</sup>	*ŋiək <sup>陽入</sup>
弱 QYS	nio <sup>11</sup>	*niək <sup>陽入</sup>

業 yè QYS \*ŋiap

CS [ŋie<sup>入</sup>]; CX [nie<sup>陽平</sup>]; HS [ŋe<sup>入</sup>]; HY [ŋie<sup>陽平</sup>]; PJ [ŋieʔ<sup>入</sup>]; QY [ŋie<sup>入</sup>]; SS [ŋie<sup>入</sup>]; SY(CL) [iẽ<sup>陰平</sup>]; XH(BX) [iẽ<sup>去</sup>]; XX [ŋiã<sup>陽平</sup>]

CMX \*ŋiet<sup>陽入</sup>

Shàoyáng and Xīnhuà's -iẽ is nasalized before the drop of a previous \*ŋ-.

For those syllables with a final -u, the CMX \*ŋ- is deleted in most of the dialects. However, \*ŋu could still be reconstructed from Xiāngxiāng and Shuāngfēng dialects.

**Table 2.7: comparison between \*ŋu and \*u**

	吾	悟	烏	惡
SF	ŋəu <sup>13</sup>	ŋəu <sup>22</sup>	əu <sup>55</sup>	əu <sup>35</sup>
XX	ŋõ <sup>23</sup>	ŋõ <sup>22</sup>	u <sup>55</sup>	u <sup>45</sup>
CMX	*ŋu 陽平	*ŋu 陽去	*u 陰平	*u 陰去

Xiāngxiāng's final \*-u is lowered and nasalized after nasal initials.

In MǐuóChánglè, The syllable 外 bears a velar nasal ŋ- in its popular layer.

外 wǎi QYS \*ŋwaj<sup>h</sup>

CS [uai<sup>陽去</sup> 白 ~ uai<sup>陰去</sup> 文]; CX [uai<sup>陽去</sup>]; HS [uæ<sup>陽去</sup>]; HY [uai<sup>陽去</sup>]; ML(CL) [ŋa<sup>陽去</sup> ~ ua<sup>陽去</sup>]; PJ [uai<sup>陽去</sup>]; QY [ɣuai<sup>去</sup>]; SS [uɛ<sup>陽去</sup> 白 ~ uɛ<sup>陰去</sup> 文]; SY(CL) [uei<sup>陰去</sup>]; XH(BX) [uə<sup>去</sup>]; XX [uai<sup>陽去</sup>]  
CMX \*ŋuəi<sup>陽去</sup>

A few syllables have literary counterparts that begin with initial zero. These are certainly late borrowings associated with cultural words or cultural usages.

牙 yǎo QYS \*ŋa<sup>r</sup>

CS [ŋa<sup>陽平</sup> 白 ~ ia<sup>陽平</sup> 文]; CX [ŋɔ<sup>陽平</sup>]; HS [ŋa<sup>陽平</sup> 白 ~ ia<sup>陽平</sup> 文]; HY [ŋa<sup>陽平</sup> 白 ~ ia<sup>陽平</sup> 文]; PJ [ŋa<sup>陽平</sup> 白 ~ ia<sup>陽平</sup> 文]; QY [ŋa<sup>陽平</sup> 白 ~ ia<sup>陽平</sup> 文]; SS [ŋa<sup>陽平</sup> 白 ~ ia<sup>陽平</sup> 文]; SY(CL) [ga<sup>陽平</sup> 白 ~ ŋa<sup>陽平</sup> 文]; XH(BX) [a<sup>陽平</sup> 白 ~ ia<sup>陽平</sup> 文]; XX [ŋõ<sup>陽平</sup>]  
CMX \*ŋa<sup>陽平</sup> 白 ~ \*ia<sup>陽平</sup> 文

2.6.5 CMX \*x-. It is more prone to sound change than other velars even in Xiāngxiāng. When it precedes the vowel [u] or the glide u-, it merges with [f] in some dialects through \*xu- > \*fu- > \*f-. When it is followed by high front vowels [i] and [y], it usually palatalizes to the alveolo-palatal [ɕ], and may further apicalize to [ʃ]. In



Sh áoshān dialect it is not that front and only palatalizes to [ç].

灰 hūi QYS \*xwəj

CS [fei<sup>陰平</sup>]; CX [xuei<sup>陰平</sup>]; HS [fei<sup>陰平</sup>]; HY [fei<sup>陰平</sup>]; PJ [fi<sup>陰平</sup><sub>白</sub> ~ fei<sup>陰平</sup><sub>文</sub>]; QY [xuei<sup>陰平</sup>];

SS [xuei<sup>陰平</sup>]; SY(CL) [huei<sup>陰平</sup>]; XH(BX) [xuə<sup>陰平</sup>]; XX [xuai<sup>陰平</sup>]

CMX \*xuoi<sup>陰平</sup>

香 xiāng QYS \*xiaŋ

CS [eian<sup>陰平</sup>]; CX [eiau<sup>陰平</sup>]; HS [eiō<sup>陰平</sup>]; HY [eian<sup>陰平</sup>]; PJ [eioŋ<sup>陰平</sup>]; QY [jiaŋ<sup>陰平</sup>]; SS

[ɣiaŋ<sup>陰平</sup>]; SY(CL) [ɣã<sup>陰平</sup>]; XH(BX) [eyō<sup>陰平</sup>]; XX [eian<sup>陰平</sup>]

CMX \*xiōŋ<sup>陰平</sup>

Most Xiāng dialects have merged the CMX syllables \*xu with \*fu. However, Xīnn íng (新寧), Ānhu à Jì p ǎi (安化界牌), as well as Gu àny áng (灌陽) dialect in the nearby Guǎngxī Province contrasts the two sets.

**Table 2.8: comparison between \*xu and \*fu**

	呼	虎	敷	府
XN	xu <sup>44</sup>	xu <sup>53</sup>	fu <sup>44</sup>	fu <sup>53</sup>
GY	xu <sup>13</sup>	xu <sup>55</sup>	fu <sup>13</sup>	fu <sup>55</sup>
CMX	*xu <sup>陰平</sup>	*xu <sup>陰上</sup>	*fu <sup>陰平</sup>	*fu <sup>陰上</sup>

2.6.6 CMX \*ɣ-. This initial is generally preserved in Xiāngxiāng and Q í y áng. It went through dramatic sound changes in dialects like Ch ángshā and H éng y áng, where it devoiced to x- before non-high vowels, to ɕ- before high front vowels, and follows subsequent innovations respectively. In Sh àoy áng there is \*ɣu- > \*vu- > v-. Just like the case with \*xu and \*fu, merger of \*ɣu and \*vu is widespread, except in Gu àny áng. Here, CMX \*ɣ- has devoiced to x- before final -u, while CMX \*v- is devoiced to f-.

**Table 2.9: comparison between \*ɣu and \*vu**

	胡	互	符	附
GY	xu <sup>33</sup>	xu <sup>35</sup>	fu <sup>33</sup>	fu <sup>35</sup>
CMX	*ɣu <sup>陽平</sup>	*ɣu <sup>陽去</sup>	*vu <sup>陽平</sup>	*vu <sup>陽去</sup>

鞋 xi é QYS \*ɣaŋ

CS [xai<sup>陽平</sup>]; CX [xa<sup>陰去</sup>]; HS [xæ<sup>陽平</sup>]; HY [xai<sup>陽平</sup>]; PJ [xai<sup>陽平</sup>]; QY [ɣai<sup>陽平</sup>]; SS [xa<sup>陽平</sup>];  
SY(CL) [hai<sup>陽平</sup>]; XH(BX) [ɣæ<sup>陽平</sup>]; XX [ɣa<sup>陽平</sup>]

CMX \*ɣai<sup>陽平</sup>

熊 xi óng QYS \*wuwŋ

CS [ein<sup>陽平</sup>]; CX [eiəu<sup>陽平</sup>]; HS [eyen<sup>陽平</sup>]; HY [ein<sup>陽平</sup>]; PJ [eiəŋ<sup>陽平</sup>]; QY [ɰion<sup>陽平</sup>]; SS  
[ɣən<sup>陽平</sup>]; SY(CL) [ɣəŋ<sup>陽平</sup>]; XH(BX) [te<sup>h</sup>yn<sup>陽平</sup>]; XX [ɣin<sup>陽平</sup>]

CMX \*ɣiuŋ<sup>陽平</sup>

Xīnhuà's merger of \*ɣ- into \*g- is confined to the position preceding \*-iuŋ.

It is common in many dialects that \*ɣ- is selectively deleted before a glide u-. The original initial is reconstructed mainly thanks to the conservative Q ŷ áng dialect. The situation looks like a lexical diffusion that has stopped some time in the past, yet the motivation is unclear. The zero-initial forms are treated as irregularities, and no additional layer is reconstructed for them.

話 hu à QYS \*ɣwaŋ<sup>h</sup>

CS [fa<sup>陽去</sup><sub>白</sub> ~ fa<sup>陰去</sup><sub>文</sub>]; CX [xua<sup>陽去</sup>]; HS [ua<sup>陽去</sup><sub>白</sub> ~ fa<sup>陽去</sup><sub>文</sub>]; HY [fa<sup>陽去</sup> ~ ua<sup>陽去</sup>]; PJ [fa<sup>陽去</sup>]; QY [ua<sup>去</sup><sub>白</sub> ~ ua<sup>去</sup><sub>文</sub>]; SS [ua<sup>陽去</sup><sub>白</sub> ~ ua<sup>陰去</sup><sub>文</sub>]; SY(CL) [va<sup>陽去</sup>]; XH(BX) [xua<sup>入</sup>]; XX  
[o<sup>陽去</sup>]

CMX \*ɣua<sup>陽去</sup>

回 h úi QYS \*ɣwəŋ

CS [fei<sup>陽平</sup>]; CX [uei<sup>陽平</sup><sub>白</sub> ~ xuei<sup>陽平</sup><sub>文</sub>]; HS [fei<sup>陽平</sup>]; HY [fei<sup>陽平</sup>]; PJ [fei<sup>陽平</sup>]; QY [ɣuei<sup>陽平</sup>]; SS [xuei<sup>陽平</sup>]; SY(CL) [uei<sup>陽平</sup>]; XH(BX) [ɣuə<sup>陽平</sup>]; XX [ɣuai<sup>陽平</sup>]

CMX \*ɣuəi<sup>陽平</sup>

位 w à QYS \*ɣwi<sup>h</sup>

CS [uei<sup>陽去</sup><sub>白</sub> ~ uei<sup>陰去</sup><sub>文</sub>]; CX [uei<sup>陽去</sup>]; HS [uei<sup>陽去</sup>]; HY [ui<sup>陽去</sup>]; PJ [uei<sup>陽去</sup>]; QY [ɣuei<sup>去</sup>];

SS [uei<sup>陽去</sup><sub>白</sub> ~ uei<sup>陰去</sup><sub>文</sub>]; SY(CL) [uei<sup>陰去</sup>]; XH(BX) [uə<sup>去</sup>]; XX [uei<sup>陽去</sup>]

CMX \*yuei<sup>陽去</sup>

王 wáng QYS \*yuan

CS [uan<sup>陽平</sup>]; CX [uau<sup>陽平</sup>]; HS [ō<sup>陽平</sup>]; HY [uan<sup>陽平</sup>]; PJ [uoŋ<sup>陽平</sup>]; QY [yuan<sup>陽平</sup>]; SS [uan<sup>陽平</sup>]; SY(CL) [vā<sup>陽平</sup>]; XH(BX) [ō<sup>陽平</sup>]; XX [uan<sup>陽平</sup>]

CMX \*yuoŋ<sup>陽平</sup>

In Hóngshān the lexeme 王 has another free variation [ŋ<sup>陽平</sup>]. This is similar to the case of lexeme 放 introduced in section 2.1.6. Variations of this type are not included for reconstruction.

## 2.7 The Zero Initial

Before non-high vowels, initial zero is commonly replaced by an epenthetic velar stop [ŋ]. The detail has been discussed in section 2.6.4. The literary reading of the syllable 鴨 should be a late borrowing from the north.

鴨 yā QYS \*ʔa<sup>r</sup>p

CS [ŋa<sup>入</sup><sub>白</sub> ~ ia<sup>入</sup><sub>文</sub>]; CX [ɔ<sup>陰平</sup>]; HS [a<sup>入</sup><sub>白</sub> ~ ia<sup>入</sup><sub>文</sub>]; HY [ŋa<sup>入</sup><sub>白</sub> ~ ia<sup>入</sup><sub>文</sub>]; PJ [ŋpʔ<sup>入</sup>]; QY [ia<sup>入</sup>]; SS [ŋā<sup>入</sup><sub>白</sub> ~ ia<sup>入</sup><sub>文</sub>]; SY(CL) [a<sup>陰平</sup>]; XH(BX) [ia<sup>入</sup>]; XX [ŋā<sup>陽平</sup>]

CMX \*at<sup>陰入</sup><sub>白</sub> ~ \*iat<sup>陰入</sup><sub>文</sub>

Before closed vowels, initial zero is unchanged in most of the dialects.

移 yí QYS \*jiǎ

CS [i<sup>陽平</sup>]; CX [i<sup>陽平</sup>]; HS [i<sup>陽平</sup>]; HY [i<sup>陽平</sup>]; PJ [i<sup>陽平</sup>]; QY [i<sup>陽平</sup>]; SS [i<sup>陽平</sup>]; SY(CL) [i<sup>陽平</sup>]; XH(BX) [i<sup>陽平</sup>]; XX [i<sup>陽平</sup>]

CMX \*i<sup>陽平</sup>

遠 yuǎn QYS \*wuan<sup>?</sup>

CS [yē<sup>上</sup>]; CX [ye<sup>上</sup>]; HS [yē<sup>上</sup>]; HY [yen<sup>上</sup>]; PJ [yan<sup>上</sup>]; QY [yan<sup>上</sup>]; SS [uē<sup>上</sup>]; SY(CL) [ye<sup>陰上</sup>]; XH(BX) [yē<sup>上</sup>]; XX [yī<sup>上</sup>]

CMX \*yēn<sup>陰上</sup>

彎 wān QYS \*ʔwa<sup>r</sup>n

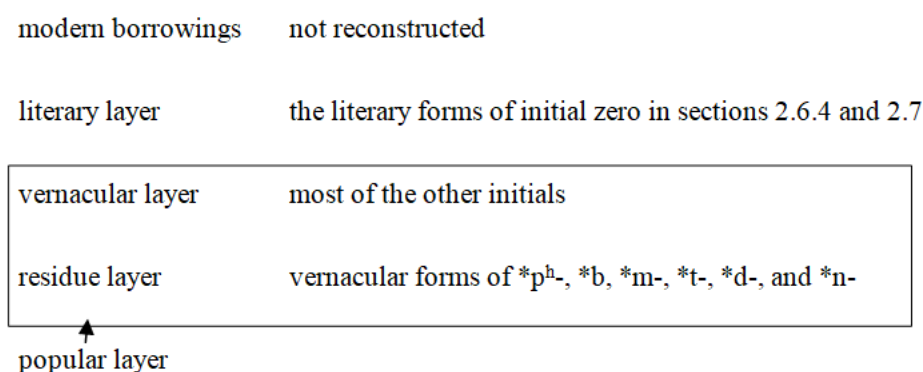
CS [uan<sup>陰平</sup>]; CX [ue<sup>陰平</sup>]; HS [uǣ<sup>陰平</sup>]; HY [uen<sup>陰平</sup>]; PJ [uan<sup>陰平</sup>]; QY [uan<sup>陰平</sup>]; SS [uǣ<sup>陰平</sup>]; SY(CL) [uǣ<sup>陰平</sup>]; XH(BX) [uǣ<sup>陰平</sup>]; XX [uǣ<sup>陰平</sup>]

CMX \*uan<sup>陰平</sup>

## 2.8 Summary of CMX Initials

As the reconstruction process shows, the CMX initial system is stratified. The vernacular forms observed for initials \*p<sup>h</sup>-, \*b-, \*m-, \*t-, \*d-, and \*n- are incomplete, and may reflect remnants of an ancient stratum. Their corresponding literary forms are the more regular realizations and are in fact not in the literary layer of CMX.

After reconstruction of the CMX initials, it is obvious that Coblin's 30 initials cannot cover these dialects. An additional set of retroflex stops is the key difference. Moreover, CMX initials are apparently conservative, especially when compared to the 25 initials reconstructed for the nearby Common Gàn (CG) (Coblin, 2015, p. 37). So far no potentially shared innovation has been identified to root in the initials. The next step is to reconstruct the finals.



**Figure 2.1: a diagram for layers of CMX initials**

### 3. Syllabic Finals of Common Xiāng

All the reconstructed syllabic finals in CMX are elaborated below:

Finals without consonantal codas

a ɔ ε                      ɿ/ʅ ai ɔi ei au eu  
 (ia) iɔ (iɛ) i iu                      (iai)                      (iau) iɛu  
 ua uɔ                      u                      uai uɔi uɛi  
 ya yɔ (yɛ)                      y                      yɛi

Finals with consonantal codas

an ɔn                      ən aŋ                      ɔŋ əŋ                      at ət                      ət ak ɔk ɛk  
 (ian) iɛn in iaŋ (iɔŋ)                      iɔŋ iŋ iuŋ (iat) iɛt it iak ɔk iuk  
 uan uɔn                      un uaŋ                      uɔŋ uəŋ uŋ uat uət                      ut uak                      uɛk uk  
    yɛn yn yaŋ                      yɔŋ                      yɛt yt

In total there are 73 finals. Those in parenthesis are problematic in various aspects and will be discussed in respective sections.

#### 3.1 Finals Ended with Syllabic Open Vowels

3.1.1 CMX \*-a. It is raised to -ɔ in Chénxī and -o in Xiāngxiāng. Sháo shān's diphthong is described as [ɰa] after labials by the source. It might have come from \*-a > \*-ɔ > \*-uɔ > \*-ua, yet the origin requires further examination.

罵 m à QYS \*ma<sup>rh</sup>

CS [ma<sup>陽去</sup><sub>白</sub> ~ ma<sup>陰去</sup><sub>文</sub>]; CX [mɔ<sup>陽去</sup>]; HS [ma<sup>陽去</sup>]; HS [ma<sup>陽去</sup>]; PJ [ma<sup>陽去</sup>]; QJ [ma<sup>去</sup>];

SS [mua<sup>陽去</sup><sub>白</sub> ~ mua<sup>陰去</sup><sub>文</sub>]; SY(CL) [ma<sup>陰平</sup>]; XH(BX) [ma<sup>陽平</sup><sub>白</sub> ~ ma<sup>去</sup><sub>文</sub>]; XX [mō<sup>陽去</sup>]

CMX \*ma<sup>陽去</sup>

The rule for tonal correspondence will be covered in Chapter 4.

茶 chá QYS \*dra<sup>r</sup>

CS [tsa<sup>陽平</sup>]; CX [dzɔ<sup>陽平</sup>]; HS [ts<sup>h</sup>a<sup>陽平</sup>]; HY [tsua<sup>陽平</sup><sub>白</sub> ~ tsa<sup>陽平</sup><sub>文</sub>]; PJ [dza<sup>陽平</sup>]; QY [dza

<sup>陽平</sup>]; SS [dza<sup>陽平</sup><sub>白</sub> ~ dzua<sup>陽平</sup><sub>文</sub>]; SY(CL) [dza<sup>陽平</sup>]; XH(BX) [dz<sup>h</sup>a<sup>陽平</sup>]; XX [dzo<sup>陽平</sup>]

CMX \*dʒa<sup>陽平</sup>

Héngyáng's vernacular final -ua is a local innovation (see section 3.7.4).

A number of syllables with velar initials preceding \*-a have two layers. One is a popular, vernacular layer with the final -a or its equivalent. The other is a literary layer with final -ia or its equivalent, to be introduced in 3.1.3. Chángshá's vernacular 家 comes from its lexicon list.

家 jiā QYS \*ka<sup>r</sup>

CS [ka<sup>陰平</sup><sub>白</sub> ~ tɕia<sup>陰平</sup><sub>文</sub>]; CX [ka<sup>上</sup> ~ kɔ<sup>陰平</sup> ~ tɕia<sup>陰平</sup>]; HS [ka<sup>陰平</sup><sub>白</sub> ~ tɕa<sup>陰平</sup><sub>文</sub>]; HY [ka<sup>陰平</sup><sub>白</sub> ~ tɕia<sup>陰平</sup><sub>文</sub>]; PJ [ka<sup>陰平</sup><sub>白</sub> ~ tɕia<sup>陰平</sup><sub>文</sub>]; QY [ka<sup>陰平</sup><sub>白</sub> ~ tɕia<sup>陰平</sup><sub>文</sub>]; SS [ka<sup>陰平</sup><sub>白</sub> ~ cia<sup>陰平</sup><sub>文</sub>]; SY(CL) [ka<sup>陰平</sup><sub>白</sub> ~ tɕia<sup>陰平</sup><sub>文</sub>]; XH(BX) [tɕia<sup>陰平</sup>]; XX [ka<sup>陰去</sup> ~ ko<sup>陰去</sup><sub>白</sub> ~ kio<sup>陰去</sup><sub>文</sub>]  
CMX \*ka<sup>陰去</sup><sub>白</sub> ~ \*kia<sup>陰去</sup><sub>文</sub>

Specifically, Chénxī and Xiāngxiāng seemingly have an additional layer for this etymon 家. However, the lexeme listed as use-case reveals that they are possibly remnants of their old forms left unaltered as unstressed syllables. This is especially evident in Chénxī where a change in tone is observed. The syllable is pronounced [ka<sup>31</sup>] with a falling shǎng (上) tone after a stressed syllable, instead of its originally higher level tone (44) of yīnpíng (陰平).

下 xià QYS \*ɣa<sup>r?</sup>

CS [xa<sup>陽去</sup><sub>白1</sub> ~ ɕia<sup>陽去</sup><sub>白2</sub> ~ ɕia<sup>陰去</sup><sub>文</sub>]; CX [xa<sup>上</sup><sub>白</sub> ~ ɕia<sup>陽去</sup><sub>文</sub>]; HS [xa<sup>陽去</sup><sub>白</sub> ~ ɕia<sup>陽去</sup><sub>文</sub>]; HY [xa<sup>陽去</sup><sub>白</sub> ~ ɕia<sup>陽去</sup><sub>文</sub>]; PJ [xa<sup>陽去</sup>]; QY [ɣa<sup>去</sup><sub>白</sub> ~ ɕia<sup>去</sup><sub>文</sub>]; SS [ɕia<sup>陽去</sup><sub>白</sub> ~ ɕia<sup>陰去</sup><sub>文</sub>]; SY(CL) [ɕia<sup>陽上</sup><sub>白</sub> ~ zia<sup>陽去</sup><sub>文</sub>]; XH(BX) [zia<sup>入</sup>]; XX [ɣo<sup>陽去</sup><sub>白</sub> ~ ɣio<sup>陽去</sup><sub>文</sub>]  
CMX \*ɣa<sup>陽上</sup><sub>白</sub> ~ \*ɣia<sup>陽去</sup><sub>文</sub>

3.1.2 CMX \*-ia. This is possibly a late borrowing from a northern dialect or northern dialects. It only precedes velar initials and initial zero. Its corresponding vernacular layer is \*-a. In dialects like Xiāngxiāng, the nucleus is raised to [o].

價 jià QYS \*ka<sup>h</sup>

CS [tɕia<sup>陰去</sup>]; CX [tɕia<sup>陰去</sup>]; HS [tɕa<sup>陰去</sup>]; HY [tɕia<sup>陰去</sup>]; PJ [tɕia<sup>陰去</sup>]; QY [tɕia<sup>去</sup>]; SS [cia<sup>陰</sup>

去]; SY(CL) [tɕia<sup>陰去</sup>]; XH(BX) [tɕia<sup>去</sup>]; XX [kio<sup>陰去</sup>]

CMX \*kia<sup>陰去</sup>

衙 yá QYS \*ŋa<sup>r</sup>

CS [ia<sup>陽平</sup>]; CX [ia<sup>陽平</sup>]; HS [ia<sup>陽平</sup>]; HY [ia<sup>陽平</sup>]; PJ [ia<sup>陽平</sup>]; QY [ia<sup>陽平</sup>]; SS [ŋa<sup>陽平</sup> 白 ~ ia<sup>陽平</sup> 文]; SY(CL) [ia<sup>陽平</sup>]; XH(BX) [ia<sup>陽平</sup>]; XX [ŋō<sup>陽平</sup>]

CMX \*ŋa<sup>陽平</sup> 白 ~ \*ia<sup>陽平</sup> 文

3.1.3 CMX \*-ua. Its nucleus was raised to [o] in Xiāngxiāng and has subsequently lost the glide u-.

抓 zhuā QYS \*tɕa<sup>r</sup>w

CS [tɕya<sup>陰平</sup>]; CX [tsua<sup>陰平</sup>]; HS [ya<sup>上</sup> 白1 ~ tua<sup>上</sup> 白2 ~ tua<sup>陰平</sup> 文]; HY [tsua<sup>陰平</sup>]; PJ [tsa<sup>陰平</sup>]; QY [tsua<sup>陰平</sup>]; SS [tɕua<sup>陰平</sup> 白 ~ tsua<sup>陰平</sup> 文]; SY [tsua<sup>陰平</sup>]; XH(BX) [tɕya<sup>陰平</sup>]; XX [tso<sup>陰平</sup>]

CMX \*tɕua<sup>陰平</sup>

The vernacular forms of 抓 in Hóngshān are possibly some other etymons.

瓜 guā QYS \*kwa<sup>r</sup>

CS [kua<sup>陰平</sup>]; CX [kua<sup>陰平</sup>]; HS [kua<sup>陰平</sup>]; HY [kua<sup>陰平</sup>]; PJ [kua<sup>陰平</sup>]; QY [kua<sup>陰平</sup>]; SS [kua<sup>陰平</sup>]; SY(CL) [kua<sup>陰平</sup>]; XH(BX) [kua<sup>陰平</sup>]; XX [ko<sup>陰平</sup>]

CMX \*kua<sup>陰平</sup>

3.1.4 CMX \*-ya. This is a peripheral final found with a few vernacular lexemes. It contrasts another vernacular final \*-yo (to be introduced in 3.1.8) in Hóngyáng, Lúxī Xīnglóngchǎng (瀘溪興隆場), Póngjiāng, and Qíyáng dialects.

**Table 3.1: contrast between \*-ya and \*-yo**

	HY	LX	PJ	QY	CMX
茄	tɕia <sup>11</sup>	dzya <sup>24</sup>	dzia <sup>23</sup> 白	dzia <sup>11</sup>	*gya <sup>陽平</sup> 白
癩	tɕya <sup>11</sup>	-	dzya <sup>23</sup>	dzya <sup>11</sup>	*gyo <sup>陽平</sup> 白
靴	ɕya <sup>45</sup> 白	ɕio <sup>33</sup> 白	ɕya <sup>55</sup>	ɕya <sup>45</sup> 白	*xyo <sup>陰平</sup> 白

茄 qi é QYS \*gia

CS [tɕie<sup>陽平</sup>]; CX [dzja<sup>陽平</sup>]; HS [t<sup>h</sup>ua<sup>陽平</sup>]; HY [tɕia<sup>陽平</sup>]; PJ [dzia<sup>陽平</sup> 白 ~ tɕi<sup>h</sup>ɛ<sup>陽平</sup> 文]; QY [dzia<sup>陽平</sup>]; SS [jia<sup>陽平</sup>]; SY(CL) [dzia<sup>陽平</sup> 白 ~ dʒie<sup>陽平</sup> 文]; XH(BX) [dzia<sup>陽平</sup>]; XX [do<sup>陽平</sup> ~ gio<sup>陽平</sup>]

CMX \*gya<sup>陽平</sup> 白 ~ \*gie<sup>陽平</sup> 文

The consonant of the literary form of 茄 in P ǎngjiāng C ǎnchuān is irregular.

3.1.5 CMX \*-ɔ. Ch ǎnxī's regular realization is -o, and lowers to -ɔ only in yīnqù (陰去) and y ǎngq ǜ (陽去) tones. The detail will be covered in section 5.1.4.

籬 lu ó QYS \*la

CS [lo<sup>陽平</sup>]; CX [lo<sup>陽平</sup> ~ lo<sup>陰去</sup>]; HS [lo<sup>陽平</sup>]; HY [lo<sup>陽平</sup>]; PJ [lo<sup>陽平</sup>]; QY [lo<sup>陽平</sup>]; SS [lo<sup>陽平</sup>]; SY(CL) [lo<sup>陽平</sup>]; XH(BX) [lo<sup>陽平</sup>]; XX [lo<sup>陽平</sup>]

CMX \*lo<sup>陽平</sup>

個 g è QYS \*ka<sup>h</sup>

CS [ko<sup>陰去</sup>]; CX [kɔ<sup>陰去</sup>]; HS [ko<sup>陰去</sup>]; HY [ko<sup>陰去</sup>]; PJ [ko<sup>陰去</sup>]; QY [ko<sup>去</sup>]; SS [kɔ<sup>陰去</sup>]; SY(CL) [ko<sup>陰去</sup>]; XH(BX) [ko<sup>去</sup>]; XX [kɔ<sup>陰去</sup>]

CMX \*kɔ<sup>陰去</sup>

3.1.6 CMX \*-io. This final is the vernacular form against \*-iɛ. It has lowered to -ia in a number of dialects. When preceded by CMX post-alveolar initials, its glide i- is commonly deleted. Contrast between \*-io and \*-ia/-a is observed mainly in western Hún ǎn Province, shown in Table 3.2. The vernacular form [sio<sup>42</sup>] for syllable 灑 in L ǔxī Xīnglóngchǎng may represent an unidentified etymon, and is not compared here. Ch ǎnxī raises the final to -io in shǎng (上) tone, otherwise retains -io.

**Table 3.2: contrast between \*-io and \*-ia**

	捨	灑	爺	衙	野	雅
CX	ʂo <sup>31</sup>	sa <sup>31</sup>	io <sup>213</sup> 白	ia <sup>213</sup>	io <sup>31</sup> 白	ia <sup>31</sup>
LX	ʂo <sup>42</sup>	sa <sup>42</sup> 文	io <sup>24</sup> 白	ia <sup>24</sup>	io <sup>42</sup> 白	ia <sup>42</sup>
CMX	*ʃio <sup>陰上</sup>	*ʃa <sup>陰上</sup>	*io <sup>陽平</sup> 白	*ia <sup>陽平</sup>	*io <sup>陰上</sup> 白	*ia <sup>陰上</sup>



姐 jiě QYS \*tsiaʔ

CS [tɕie<sup>上</sup>]; CX [tɕio<sup>上白</sup> ~ tɕie<sup>上文</sup>]; HS [tɕia<sup>上白</sup> ~ tɕie<sup>上文</sup>]; HY [tɕia<sup>上白</sup> ~ tɕie<sup>上文</sup>]; PJ [tɕia<sup>上</sup>]; QY [tɕia<sup>上白</sup> ~ tɕie<sup>上文</sup>]; SS [tsia<sup>上白</sup> ~ tsie<sup>上文</sup>]; SY(CL) [tsi<sup>上白</sup> ~ tsie<sup>上文</sup>]; XH(BX) [tɕia<sup>上白</sup> ~ tɕie<sup>上文</sup>]; XX [tɕia<sup>陰去白</sup> ~ tɕio<sup>上文</sup>]  
CMX \*tsio<sup>上白</sup> ~ \*tsie<sup>上文</sup>

The vernacular forms of 姐 in Shàoyáng Chánglè and Xiāngxiāng are irregular. Hángshān's 姐 contains several variations that differ in tones. These forms are not considered for reconstruction.

扯 chě QYS \*tɕʰiaʔ

CS [tɕʰə<sup>上</sup>]; CX [tɕʰo<sup>上</sup>]; HS [tɕʰa<sup>上白</sup> ~ tɕʰie<sup>上文</sup>]; HY [tɕʰia<sup>上白</sup> ~ tɕʰie<sup>上文</sup>]; PJ [tɕʰa<sup>上</sup>]; QY [tɕʰia<sup>上白</sup> ~ tɕʰie<sup>上文</sup>]; SS [tɕʰua<sup>上白</sup> ~ tɕʰε<sup>上文</sup>]; SY(CL) [tɕʰa<sup>上白</sup> ~ tɕʰie<sup>上文</sup>]; XH(BX) [tɕʰa<sup>上</sup>]; XX [tʰo<sup>上</sup>]  
CMX \*tɕʰio<sup>上白</sup> ~ \*tɕʰie<sup>上文</sup>

爺 yé QYS \*jia

CS [ia<sup>陽平白</sup> ~ ie<sup>陽平文</sup>]; CX [io<sup>陽平白</sup> ~ ie<sup>陽平文</sup>]; HS [ia<sup>陽平白</sup> ~ ie<sup>陽平文</sup>]; HY [ia<sup>陽平白</sup> ~ ie<sup>陽平文</sup>]; PJ [ia<sup>陽平白</sup> ~ ie<sup>陽平文</sup>]; QY [ia<sup>陽平白</sup> ~ ie<sup>陽平文</sup>]; SS [ia<sup>陽平白</sup> ~ ie<sup>陽平文</sup>]; SY(CL) [ia<sup>陽平</sup>]; XH(BX) [ie<sup>陽平</sup>]; XX [io<sup>陽平</sup>]  
CMX \*io<sup>陽平白</sup> ~ \*ie<sup>陽平文</sup>

3.1.7 CMX \*-uo. In Húnán Province, this final contrasts \*-ɔ in a few dialects like Hángshān and Píngjiāng. Outside the province, Quánzhōu (全州) dialect in nearby Guǎngxī has been recorded as the most conservative in preserving this group of finals following coronal and velar initials.

The CMX \*-uo monophthongized into Hángshān \*-u. Then, the dialect went through a sound change: \*-u > \*-əu > -æu, after coronals. The literary forms are possibly either late borrowings or results from competing changes. No different layers in the CMX are reconstructed here.

**Table 3.3: contrast between \*-uɔ and \*-ɔ**

	螺	鍋	火	羅	哥
HS	læu <sup>11</sup> <sub>白</sub> ~ lo <sup>11</sup> <sub>文</sub>	ku <sup>33</sup> <sub>白</sub> ~ ko <sup>33</sup> <sub>文</sub>	fu <sup>13</sup> <sub>白</sub> ~ xo <sup>13</sup> <sub>文</sub>	lo <sup>11</sup>	ko <sup>33</sup>
QZ	luo <sup>13</sup>	kuo <sup>33</sup>	xuo <sup>53</sup>	lo <sup>13</sup>	ko <sup>33</sup>
CMX	*luɔ <sup>陽平</sup>	*kuɔ <sup>陰平</sup>	*xuɔ <sup>陰上</sup>	*lɔ <sup>陽平</sup>	*kɔ <sup>陰平</sup>

婆 pó QYS \*bwa

CS [po<sup>陽平</sup>]; CX [bo<sup>陽平</sup>]; HS [p<sup>h</sup>u<sup>陽平</sup><sub>白</sub> ~ p<sup>h</sup>o<sup>陽平</sup><sub>文</sub>]; HY [po<sup>陽平</sup>]; PJ [bu<sup>陽平</sup>]; QY [bo<sup>陽平</sup>];  
SS [bʊ<sup>陽平</sup>]; SY(CL) [bo<sup>陽平</sup>]; XH(BX) [b<sup>h</sup>o<sup>陽平</sup>]; XX [bʊ<sup>陽平</sup>]

CMX \*buɔ<sup>陽平</sup>

鎖 suǒ QYS \*swa<sup>?</sup>

CS [so<sup>上</sup>]; CX [so<sup>上</sup>]; HS [so<sup>上</sup>]; HY [so<sup>上</sup>]; PJ [so<sup>上</sup>]; QY [so<sup>上</sup>]; SS [sʊ<sup>上</sup>]; SY(CL) [so<sup>陰上</sup>];  
XH(BX) [so<sup>上</sup>]; XX [sʊ<sup>上</sup>]

CMX \*suɔ<sup>陰上</sup>

過 guò QYS \*kwa<sup>h</sup>

CS [ko<sup>陰去</sup>]; CX [kɔ<sup>陰去</sup>]; HS [ku<sup>陰去</sup><sub>白</sub> ~ ko<sup>陰去</sup><sub>文</sub>]; HY [ko<sup>陰去</sup>]; PJ [ku<sup>陰去</sup>]; QY [ko<sup>去</sup>]; SS  
[ku<sup>陰去</sup><sub>白</sub> ~ ko<sup>陰去</sup><sub>文</sub>]; SY(CL) [ko<sup>陰去</sup>]; XH(BX) [ko<sup>去</sup>]; XX [ku<sup>陰去</sup><sub>白</sub> ~ kʊ<sup>陰去</sup><sub>文</sub>]

CMX \*kuɔ<sup>陰去</sup>

3.1.8 CMX \*-yɔ. This is a relatively rare final found in vernacular layer only.

靴 xuē QYS \*xua

CS [ɛye<sup>陰平</sup>]; CX [ɛye<sup>陰平</sup>]; HS [ɛya<sup>陰平</sup>]; HY [ɛya<sup>陰平</sup><sub>白</sub> ~ ɛye<sup>陰平</sup><sub>文</sub>]; PJ [ɛya<sup>陰平</sup>]; QY [ɣya<sup>陰平</sup><sub>白</sub> ~ ɣye<sup>陰平</sup><sub>文</sub>]; SS [ɣua<sup>陰平</sup>]; SY(CL) [ɛye<sup>陰平</sup>]; XH(BX) [ɛia<sup>陰平</sup>]; XX [ɛio<sup>陰平</sup>]

CMX \*xyɔ<sup>陰平</sup><sub>白</sub> ~ \*xyɛ<sup>陰平</sup><sub>文</sub>

癩 quē QYS \*gua

CS [tɛya<sup>陽平</sup> ~ tɛye<sup>陽平</sup>]; CX [tɛya<sup>陽平</sup>]; HS [t<sup>h</sup>ua<sup>陽平</sup>]; HY [tɛya<sup>陽平</sup>]; NX [tɕua<sup>陽平</sup>]; PJ  
[dzya<sup>陽平</sup>]; QY [dʒya<sup>陽平</sup>]; SY [dzia<sup>陽平</sup>]; XH [zɿa<sup>陽平</sup>]; XX [do<sup>陽平</sup>]

CMX \*gyo<sup>陽平</sup><sub>白</sub> ~ \*gye<sup>陽平</sup><sub>文</sub>

3.1.9 CMX \*-ε. It is an ancient residue found only in a few vernacular forms of QYS Yúyùn (魚韻) syllables, usually with dorsal initials. It is usually unfronted to -ə, and may undergo \*-ə > \*-u > -i subsequently. Lexeme 鋸 has yet another vernacular final \*-ai, evidenced from Chénxī, Héngshān, and Xiāngxiāng. Thus, three layers are reconstructed, though their exact relationship requires further study.

鋸 jù QYS \*kiǎ<sup>h</sup>

CS [kə<sup>陰去</sup><sub>白</sub> ~ tɛy<sup>陰去</sup><sub>文</sub>]; CX [ka<sup>陰去</sup><sub>白1</sub> ~ ki<sup>陰去</sup><sub>白2</sub> ~ tɛy<sup>陰去</sup><sub>文</sub>]; HS [kə<sup>陰去</sup><sub>白</sub> ~ tɛy<sup>陰去</sup><sub>文</sub>]; HY [tɛy<sup>陰去</sup>]; PJ [tɛi<sup>陰去</sup><sub>白</sub> ~ tɛy<sup>陰去</sup><sub>文</sub>]; QY [tɕy<sup>去</sup>]; SS [kɛ<sup>陰去</sup><sub>白</sub> ~ tɕy<sup>陰去</sup><sub>文</sub>]; SY(CL) [tɛy<sup>陰去</sup>]; XH(BX) [tɛy<sup>去</sup>]; XX [ka<sup>陰去</sup><sub>白1</sub> ~ ki<sup>陰去</sup><sub>白2</sub> ~ ty<sup>陰去</sup><sub>文</sub>]

CMX \*kai<sup>陰去</sup><sub>白1</sub> ~ \*kɛ<sup>陰去</sup><sub>白2</sub> ~ \*ky<sup>陰去</sup><sub>文</sub>

去 qù QYS \*k<sup>h</sup>iǎ<sup>h</sup>

CS [k<sup>h</sup>ə<sup>陰去</sup><sub>白</sub> ~ tɛ<sup>h</sup>y<sup>陰去</sup><sub>文</sub>]; CX [k<sup>h</sup>e<sup>陽平</sup><sub>白</sub> ~ tɛ<sup>h</sup>y<sup>陰去</sup><sub>文</sub>]; HS [k<sup>h</sup>u<sup>陰去</sup><sub>白1</sub> ~ xu<sup>陰去</sup><sub>白2</sub> ~ tɛ<sup>h</sup>y<sup>陰去</sup><sub>文</sub>]; HY [k<sup>h</sup>e<sup>去</sup><sub>白</sub> ~ tɛ<sup>h</sup>y<sup>陰去</sup><sub>文</sub>]; PJ [tɛ<sup>h</sup>i<sup>陰去</sup>]; QY [k<sup>h</sup>e<sup>去</sup><sub>白</sub> ~ tɕ<sup>h</sup>y<sup>去</sup><sub>文</sub>]; SS [c<sup>h</sup>i<sup>陰去</sup><sub>白</sub> ~ tɕ<sup>h</sup>y<sup>陰去</sup><sub>文</sub>]; SY(CL) [tɛ<sup>h</sup>i<sup>陰去</sup><sub>白</sub> ~ tɛ<sup>h</sup>y<sup>陰去</sup><sub>文</sub>]; XH(BX) [tɛ<sup>h</sup>i<sup>入</sup><sub>白</sub> ~ tɛ<sup>h</sup>y<sup>入</sup><sub>文</sub>]; XX [k<sup>h</sup>i<sup>陰去</sup><sub>白</sub> ~ t<sup>h</sup>y<sup>陰去</sup><sub>文</sub>]

CMX \*k<sup>h</sup>ɛ<sup>陰去</sup><sub>白</sub> ~ \*k<sup>h</sup>y<sup>陰去</sup><sub>文</sub>

3.1.10 CMX \*-ie. This final contains syllables in literary readings that are possibly borrowed from some northern source. The corresponding popular finals are \*-ya and \*-io introduced in 3.1.4 and 3.1.6. It is monophthongized to -e or -ə after CMX post-alveolar initials in many dialects.

者 zhě QYS \*teia<sup>?</sup>

CS [tsə<sup>上</sup>]; CX [tɕe<sup>上</sup>]; HS [tæ<sup>上</sup><sub>白</sub> ~ te<sup>上</sup><sub>文</sub>]; HY [teie<sup>上</sup>]; PJ [tɕa<sup>上</sup>]; QY [tɕie<sup>上</sup>]; SS [tɕe<sup>上</sup>]; SY(CL) [teie<sup>陰上</sup>]; XH(BX) [tɕə<sup>上</sup>]; XX [tia<sup>上</sup>]

CMX \*tɕio<sup>陰上</sup><sub>白</sub> ~ \*tɕie<sup>陰上</sup><sub>文</sub>

瀉 xiè QYS \*sia<sup>h</sup>

CS [ɕie<sup>入</sup>]; CX [ɕie<sup>陰去</sup>]; HS [ɕia<sup>陰去</sup><sub>白</sub> ~ ɕie<sup>陰去</sup><sub>文</sub>]; HY [ɕia<sup>陰去</sup><sub>白</sub> ~ ɕie<sup>陰去</sup><sub>文</sub>]; PJ [ɕia<sup>陰去</sup><sub>白</sub> ~

ɕie<sup>陰去</sup><sub>文</sub>]; QY [jie<sup>去</sup>]; SS [sie<sup>入</sup>]; SY(CL) [sie<sup>陰去</sup>]; XH(BX) [ɕie<sup>去</sup>]; XX [ɕio<sup>陰去</sup>]

CMX \*sio<sup>陰去</sup><sub>白</sub> ~ \*sie<sup>陰去</sup><sub>文</sub>

The tones for Shǎoshān and Chángshā's 瀉 are irregular.

3.1.11 CMX \*-yɛ. This final is also found in literary readings that are possibly borrowed from some northern source. Its corresponding vernacular form is \*-yɔ.

### 3.2 Finals Ended with Syllabic Closed Vowels

3.2.1 CMX \*-i. A few etymons have vernacular final \*-ɛi (to be discussed in 3.3.6).

比 bǐ QYS \*pji<sup>2</sup>

CS [pi<sup>上</sup>]; CX [pi<sup>上</sup>]; HS [pi<sup>上</sup>]; HY [pi<sup>上</sup>]; PJ [pi<sup>上</sup>]; QY [pi<sup>上</sup>]; SS [pi<sup>上</sup>]; SY(CL) [pi<sup>陰上</sup>]; XH(BX) [pi<sup>上</sup>]; XX [pi<sup>上</sup>]

CMX \*pi<sup>陰上</sup>

旨 zhǐ QYS \*tei<sup>2</sup>

CS [tsɿ<sup>上</sup>]; CX [tɕɿ<sup>上</sup>]; HS [tsɿ<sup>上</sup>]; HY [tsɿ<sup>上</sup>]; PJ [tɕɿ<sup>上</sup>]; QY [tsɿ<sup>上</sup>]; SS [tɕɿ<sup>上</sup>]; SY(CL) [tsɿ<sup>上</sup>]; XH(BX) [tɕɿ<sup>上</sup>]; XX [tɕɿ<sup>上</sup>]

CMX \*tɕi<sup>陰上</sup>

基 jī QYS \*ki

CS [tei<sup>陰平</sup>]; CX [tei<sup>陰平</sup>]; HS [tei<sup>陰平</sup>]; HY [tei<sup>陰平</sup>]; PJ [tei<sup>陰平</sup>]; QY [tɕi<sup>陰平</sup>]; SS [ci<sup>陰平</sup>]; SY(CL) [tei<sup>陰平</sup>]; XH(BX) [tei<sup>陰平</sup>]; XX [ki<sup>陰平</sup>]

CMX \*ki<sup>陰平</sup>

The final \*-i can follow the labiodental initials \*f- and \*v-, although epenthesis of a vowel [e] in between is not uncommon.

非 fēi QYS \*puj

CS [fei<sup>陰平</sup>], CX [fi<sup>陰平</sup> ~ fei<sup>陰平</sup>]; HS [fei<sup>陰平</sup>]; HY [fei<sup>陰平</sup>]; PJ [fi<sup>陰平</sup>]; QY [fi<sup>陰平</sup>]; SS [xuei<sup>陰平</sup>]; SY(CL) [fi<sup>陰平</sup>]; XH(BX) [xuə<sup>陰平</sup>]; XX [xuei<sup>陰平</sup>]

CMX \*fi<sup>陰平</sup>

肥 fái QYS \*buj

CS [fei<sup>陽平</sup>], CX [vi<sup>陽平</sup>]; HS [fei<sup>陽平</sup>]; HY [fei<sup>陽平</sup>]; PJ [fi<sup>陽平</sup>]; QY [vi<sup>陽平</sup>]; SS [xuei<sup>陽平</sup>];  
SY(CL) [vi<sup>陽平</sup>]; XH [b<sup>h</sup>i<sup>陽平</sup><sub>白</sub> ~ vɿ<sup>陽平</sup><sub>文</sub>]; XH(BX) [yue<sup>陽平</sup>]; XX [yuei<sup>陽平</sup>]

CMX \*bi<sup>陽平</sup><sub>白</sub> ~ vi<sup>陽平</sup><sub>文</sub>

3.2.2 CMX \*-u. In dialects like Chángshā and Chénxī, there is a vowel breaking rule: Ø → ə / [+coronal, +consonantal] \_\_ u, resulting in -əu. Hóngshān undergoes a further change to -æu, while Sháoishān changes to -əu. In Xiāngxiāng, this final has drastically changed to -iei following CMX alveolar sibilants. The possible process is \*-u > \*-əu > \*-eu > \*-ieu > \*-iey > -iei. Some dialects have lowered the [u] to [ʊ] or [o] when following nasals, including Pángjiāng.

墓 mù QYS \*mɔ<sup>h</sup>

CS [mo<sup>陰去</sup>]; CX [mu<sup>陽去</sup>]; HS [mu<sup>陽去</sup>]; HY [mu<sup>陽去</sup>]; PJ [mo<sup>陽去</sup>]; QY [mu<sup>去</sup>]; SS [mo<sup>陽去</sup><sub>白</sub> ~ mɔ<sup>陰去</sup><sub>文</sub>]; SY(CL) [mɔ̃<sup>陰去</sup>]; XH(BX) [mo<sup>去</sup>]; XX [mɔ̃<sup>陽去</sup>]

CMX \*mu<sup>陽去</sup>

組 zǔ QYS \*tsɔ<sup>?</sup>

CS [tsəu<sup>上</sup>]; CX [tsəu<sup>上</sup>]; HS [tsæu<sup>上</sup>]; HY [tsu<sup>上</sup>]; PJ [tsəu<sup>上</sup>]; QY [tsu<sup>上</sup>]; SS [tsəu<sup>上</sup>];  
SY(CL) [tsu<sup>陰上</sup>]; XH(BX) [tsu<sup>上</sup>]; XX [tɕiei<sup>上</sup>]

CMX \*tsu<sup>陰上</sup>

故 gù QYS \*kɔ<sup>h</sup>

CS [ku<sup>陰去</sup>]; CX [ku<sup>陰去</sup>]; HS [ku<sup>陰去</sup>]; HY [ku<sup>陰去</sup>]; PJ [ku<sup>陰去</sup>]; QY [ku<sup>陰去</sup>]; SS [ku<sup>陰去</sup>];  
SY(CL) [ku<sup>陰去</sup>]; XH(BX) [ku<sup>去</sup>]; XX [ku<sup>陰去</sup>]

CMX \*ku<sup>陰去</sup>

3.2.3 CMX \*-iu. This final contains a glide i- and a nucleus [u]. Hóngyáng, Qíyáng, and Shàoyáng Chánglè have preserved the glide i- in all environments. This glide is deleted in some other dialects where the preceding initial is realized (or had been

realized) as a retroflex sibilant. Xiāngxiāng experienced a most radical sound change among the dialects. The final is realized as -iei. Its possible sound change route was \*-iu > \*-iəu > \*-ieu > \*-iey > -iei.

醜 chǒu QYS \*tɕ<sup>h</sup>uw<sup>?</sup>

CS [tɕ<sup>h</sup>əu<sup>上</sup>]; CX [tɕ<sup>h</sup>əu<sup>上</sup>]; HS [tɕ<sup>h</sup>æu<sup>上</sup>]; HY [tɕ<sup>h</sup>iu<sup>上</sup>]; PJ [tɕ<sup>h</sup>əu<sup>上</sup>]; QY [tɕ<sup>h</sup>iəu<sup>上</sup>]; SS [tɕ<sup>h</sup>əu<sup>上</sup>]; SY(CL) [tɕ<sup>h</sup>iəu<sup>陰上</sup>]; XH(BX) [tɕ<sup>h</sup>əu<sup>上</sup>]; XX [tɕ<sup>h</sup>iei<sup>上</sup>]

CMX \*tɕ<sup>h</sup>iu<sup>陰上</sup>

修 xiū QYS \*suw

CS [ɕiəu<sup>陰平</sup>]; CX [ɕiəu<sup>陰平</sup>]; HS [ɕiæu<sup>陰平</sup>]; HY [ɕiu<sup>陰平</sup>]; PJ [ɕiəu<sup>陰平</sup>]; QY [ɕiəu<sup>陰平</sup>]; SS [ɕiəu<sup>陰平</sup>]; SY(CL) [ɕiəu<sup>陰平</sup>]; XH(BX) [ɕiu<sup>陰平</sup>]; XX [ɕiei<sup>陰平</sup>]

CMX \*siu<sup>陰平</sup>

油 yóu QYS \*juw

CS [iəu<sup>陽平</sup>]; CX [iəu<sup>陽平</sup>]; HS [iæu<sup>陽平</sup>]; HY [iu<sup>陽平</sup>]; PJ [iəu<sup>陽平</sup>]; QY [iəu<sup>陽平</sup>]; SS [iəu<sup>陽平</sup>]; SY(CL) [iəu<sup>陽平</sup>]; XH(BX) [iu<sup>陽平</sup>]; XX [iei<sup>陽平</sup>]

CMX \*

3.2.4 CMX \*-y. This final is well preserved in H éngy áng, Q ǐ y áng, and Sh àoy áng. In Ch ángshā, H éngshān, Sh áoshān, and P íngjiāng, the final has unrounded to -i after CMX alveolar initials. Under the same environment, it has diphthongized to -iu in Xīnhu à and changed to -yei in Xiāngxiāng. In Ch énxī, it has unfronted to -u following local retroflex initials. Notably, X ǔpǔ dialect has apicalized and unrounded this \*-u after CMX post-alveolar initials to -ɿ. Sh áoshān's \*-y following post-alveolars, velars, and initial zero has apicalized to -ɿ.

取 qǔ QYS \*ts<sup>h</sup>uǎ<sup>?</sup>

CS [tɕ<sup>h</sup>i<sup>上</sup>]; CX [tɕ<sup>h</sup>y<sup>上</sup>]; HS [tɕ<sup>h</sup>i<sup>上</sup>]; HY [tɕ<sup>h</sup>y<sup>上</sup>]; PJ [tɕ<sup>h</sup>i<sup>上</sup>]; QY [tɕ<sup>h</sup>y<sup>上</sup>]; SS [ts<sup>h</sup>i<sup>上</sup>]; SY(CL) [tɕ<sup>h</sup>y<sup>陰上</sup>]; XH(BX) [tɕ<sup>h</sup>iu<sup>上</sup>]; XP [tɕ<sup>h</sup>y<sup>上</sup>]; XX [tɕ<sup>h</sup>yei<sup>上</sup>]

CMX \*ts<sup>h</sup>y<sup>陰上</sup>

樹 shù QYS \*dzuǎʔ

CS [ɕy<sup>陽去</sup><sub>白</sub> ~ ɕy<sup>陰去</sup><sub>文</sub>]; CX [ɕu<sup>陽去</sup>]; HY [ɕy<sup>陽去</sup>]; PJ [ɕy<sup>陽去</sup>]; QY [ʒy<sup>去</sup>]; SS [ɕy<sup>陽去</sup><sub>白</sub> ~ ɕy<sup>陰去</sup><sub>文</sub>]; SY(CL) [zy<sup>陽去</sup>]; XH(BX) [zy<sup>陰平</sup><sub>白</sub> ~ zy<sup>入</sup><sub>文</sub>]; XP [ɕy<sup>陽去</sup>]; XX [ɕy<sup>陽去</sup>]

CMX \*ʒy<sup>陽去</sup>

居 jū QYS \*kiǎ

CS [tɕy<sup>陰平</sup>]; CX [tɕy<sup>陰平</sup>]; HS [tɕy<sup>陰平</sup>]; HY [tɕy<sup>陰平</sup>]; PJ [tɕy<sup>陰平</sup>]; QY [tɕy<sup>陰平</sup>]; SS [tɕy<sup>陰平</sup>]; SY(CL) [tɕy<sup>陰平</sup>]; XH(BX) [tɕy<sup>陰平</sup>]; XP [tɕy<sup>陰平</sup> ~ tɕy<sup>陽去</sup>]; XX [ty<sup>陰平</sup>]

CMX \*ky<sup>陰平</sup>

A few etymons contain contrasts in vernacular against literary readings. Those vernacular ones bear this final \*-y (subject to later innovations), while the literary ones bear the final \*-yei. Please refer to section 3.3.8.

吹 chūi QYS \*tɕ<sup>h</sup>wiǎ

CS [tɕ<sup>h</sup>yei<sup>陰平</sup>]; CX [tɕ<sup>h</sup>u<sup>陰平</sup><sub>白</sub> ~ tɕ<sup>h</sup>uei<sup>陰平</sup><sub>文</sub>]; HS [tɕ<sup>h</sup>y<sup>陰平</sup><sub>白</sub> ~ ts<sup>h</sup>ei<sup>陰平</sup><sub>文</sub>]; HY [tɕ<sup>h</sup>y<sup>陰平</sup><sub>白</sub> ~ ts<sup>h</sup>ui<sup>陰平</sup><sub>文</sub>]; PJ [tɕ<sup>h</sup>y<sup>陰平</sup>]; QY [ts<sup>h</sup>uei<sup>陰平</sup>]; SS [tɕ<sup>h</sup>uei<sup>陰平</sup>]; SY(CL) [tɕ<sup>h</sup>y<sup>陰平</sup><sub>白</sub> ~ ts<sup>h</sup>uei<sup>陰平</sup><sub>文</sub>]; XH(BX) [ts<sup>h</sup>ə<sup>陰平</sup>]; XP [tɕ<sup>h</sup>u<sup>陽去</sup><sub>白</sub> ~ ts<sup>h</sup>uei<sup>陰平</sup><sub>文</sub>]; XX [t<sup>h</sup>y<sup>陰平</sup><sub>白</sub> ~ t<sup>h</sup>yei<sup>陰平</sup><sub>文</sub>]

CMX \*tɕ<sup>h</sup>y<sup>陰平</sup><sub>白</sub> ~ \*tɕ<sup>h</sup>yei<sup>陰平</sup><sub>文</sub>

3.2.5 CMX \*-ɿ/-ʅ. This pair of allophones can only occur after sibilant initials. They are phonetically close to high front apical vowels or syllabic approximants. In CMX the final \*-ɿ always follows an alveolar sibilant, while \*-ʅ always follows a post-alveolar sibilant.

子 zǐ QYS \*tsiʔ

CS [tsɿ<sup>上</sup>]; CX [tsɿ<sup>上</sup>]; HS [tsɿ<sup>上</sup>]; HY [tsɿ<sup>上</sup>]; PJ [tsɿ<sup>上</sup>]; QY [tsɿ<sup>上</sup>]; SS [tsɿ<sup>上</sup>]; SY(CL) [tsɿ<sup>陰上</sup>]; XH(BX) [tsɿ<sup>上</sup>]; XX [tsɿ<sup>上</sup>]

CMX \*tsɿ<sup>陰上</sup>

四 sì QYS \*si<sup>h</sup>

CS [sɿ<sup>陰去</sup>]; CX [sɿ<sup>陰去</sup>]; HS [sɿ<sup>陰去</sup>]; HY [sɿ<sup>陰去</sup>]; PJ [sɿ<sup>陰去</sup>]; QY [sɿ<sup>去</sup>]; SS [sɿ<sup>陰去</sup>]; SY(CL)

[sɿ<sup>陰去</sup>]; XH(BX) [sɿ<sup>去</sup>]; XX [sɿ<sup>陰去</sup>]

CMX \*sɿ<sup>陰去</sup>

事 sh ì QYS \*dzɿ<sup>h</sup>

CS [sɿ<sup>陽去</sup> 白 ~ sɿ<sup>陰去</sup> 文]; CX [sɿ<sup>陽去</sup>]; HS [sɿ<sup>陽去</sup>]; HY [sɿ<sup>陽去</sup>]; PJ [sɿ<sup>陽去</sup>]; QY [zɿ<sup>去</sup>]; SS [sɿ<sup>陽去</sup> 白 ~ sɿ<sup>陰去</sup> 文]; SY(CL) [zɿ<sup>陽去</sup>]; XH(BX) [ɣɿ<sup>去</sup>]; XX [dzɿ<sup>陽去</sup>]

CMX \*ɿ<sup>陽去</sup>

士 sh ì QYS \*dzɿ<sup>?</sup>

CS [sɿ<sup>陰去</sup>]; CX [sɿ<sup>陽去</sup>]; HS [sɿ<sup>陽去</sup>]; HY [sɿ<sup>陽去</sup>]; PJ [sɿ<sup>陽去</sup>]; QY [zɿ<sup>去</sup>]; SS [sɿ<sup>陰去</sup>]; SY(CL)

[zɿ<sup>陽去</sup>]; XH(BX) [ɣɿ<sup>去</sup>]; XX [dzɿ<sup>陽去</sup>]

CMX \*ɿ<sup>陽去</sup>

This pair of finals is in contrast to the final \*-i. It is illustrated in Tables 3.3 and 3.4 by comparing the examples from five Xiāng dialects.

**Table 3.4: contrast between \*tsɿ- set and \*tsi- set**

	XH	XH(BX)	ML(DJ)	CX	PJ	CMX
紫	tsɿ <sup>21</sup>	tsɿ <sup>31</sup>	tsɿ <sup>42</sup>	tsɿ <sup>31</sup>	tsɿ <sup>53</sup>	*tsɿ
思	sɿ <sup>33</sup>	sɿ <sup>33</sup>	sɿ <sup>33</sup>	sɿ <sup>44</sup>	sɿ <sup>55</sup>	*sɿ
擠	tei <sup>21</sup>	tei <sup>31</sup>	tsi <sup>42</sup>	tei <sup>31</sup>	tei <sup>53</sup>	*tsi
西	ei <sup>33</sup>	ei <sup>33</sup>	si <sup>33</sup>	ei <sup>44</sup>	ei <sup>55</sup>	*si

In Table 3.4, all five dialects have final -ɿ for syllables 紫 and 思, and final -i for syllables 擠 and 西. It is clear that the finals for the first two syllables shall be reconstructed as \*-ɿ while for the last two as \*-i in CMX.

**Table 3.5: two types of apical patterns**

	XH	XH(BX)	ML(DJ)	CX	PJ	QYS
師	ɕɿ <sup>33</sup>	ɕɿ <sup>33</sup>	ɕɿ <sup>33</sup>	sɿ <sup>44</sup>	sɿ <sup>55</sup>	*ɕi
士	ɕɿ <sup>45</sup>	ɕɿ <sup>45</sup>	ɕɿ <sup>11</sup>	sɿ <sup>44</sup>	sɿ <sup>21</sup>	*dzɿ
屍	ɕɿ <sup>33</sup>	ɕɿ <sup>33</sup>	ɕɿ <sup>33</sup>	ɕɿ <sup>44</sup>	ɕɿ <sup>55</sup>	*ei
市	ɕɿ <sup>45</sup>	ɕɿ <sup>45</sup>	ɕɿ <sup>11</sup>	ɕɿ <sup>55</sup>	ɕɿ <sup>21</sup>	*dzi



In Table 3.5, the situation is more of interest. All of these four syllables bear the same final -ŋ in Xīnhuà, Xīnhuà Bāxī, and Mǎluó Dǎjīng. By contrast, the first two syllables, namely 師 and 士, bear a different final -ɿ in Chénxī and Píngjiāng. Thus we have to separate these two syllables from the others in the reconstruction.

During EMC, the syllables 師 and 士 bore retroflex sibilant initials, whereas 屍 and 市 bore palatal sibilant initials (Pulleyblank, 1984). For reconstructing CMX, one may want to design different initials rather than finals to 師 and 士 against 屍 and 市. However it would work better the other way around. Recall that a separate set of retroflex stops has been introduced in section 2.5, though for another group of syllables. Now the pieces are put together as a whole picture and the design shall be justified. Table 3.6 lists the etymons across several selected Xiāng dialects.

**Table 3.6: three types of apical contrasts**

	XH(BX)	CX	PJ	HY	QY	CMX
1. 知	tʂɿ <sup>33</sup>	tʂɿ <sup>44</sup>	tʂɿ <sup>55</sup>	tɕi <sup>45</sup>	tʃi <sup>45</sup>	*tʃi
2. 癡	tʂ <sup>h</sup> ɿ <sup>33</sup>	tʂ <sup>h</sup> ɿ <sup>44</sup>	tʂ <sup>h</sup> ɿ <sup>55</sup>	tɕ <sup>h</sup> i <sup>45</sup>	tʃ <sup>h</sup> i <sup>45</sup>	*tʃ <sup>h</sup> i
3. 治	tʂ <sup>h</sup> ɿ <sup>24</sup>	tʂɿ <sup>55</sup>	dʒɿ <sup>21</sup>	tɕi <sup>213</sup>	dʒi <sup>214</sup>	*dʒi
4. 芝	tʂɿ <sup>33</sup>	tʂɿ <sup>44</sup>	tʂɿ <sup>55</sup>	tsɿ <sup>45</sup>	tsɿ <sup>45</sup>	*tʃi
5. 翅	tʂɿ <sup>45</sup>	tʂɿ <sup>324</sup>	tʂ <sup>h</sup> ɿ <sup>34</sup>	tsɿ <sup>24</sup>	tsɿ <sup>214</sup>	*tʃ <sup>h</sup> i
6. 市	ʃɿ <sup>45</sup>	ʃɿ <sup>55</sup>	ʃɿ <sup>21</sup>	sɿ <sup>213</sup>	ʒɿ <sup>214</sup>	*ʒi
7. 滓	tʂɿ <sup>31</sup>	tsɿ <sup>31</sup>	tsɿ <sup>53</sup>	tsɿ <sup>33</sup>	tsɿ <sup>54</sup>	*tʃɿ
8. 獅	ʃɿ <sup>33</sup>	sɿ <sup>44</sup>	sɿ <sup>55</sup>	sɿ <sup>45</sup>	sɿ <sup>45</sup>	*ʃɿ
9. 士	ʃɿ <sup>45</sup>	sɿ <sup>55</sup>	sɿ <sup>21</sup>	sɿ <sup>213</sup>	ʒɿ <sup>214</sup>	*ʒɿ

Table 3.6 draws our attention to the fact that the etymons 滓, 獅 and 士 are among a group that is most prone to apicalization across different dialects. Lying in between are the etymons 芝, 翅, and 市, which are less prone. Etymons 知, 癡, and 治 are least likely to apicalize among all three groups. Consequently, the combination of post-alveolar initials (which could have been realized as retroflex sibilants, as introduced in section 2.4) with apical vowel [ɿ] should naturally be reserved for the group of syllables including etymons 7, 8, and 9. The same class of initials could also combine with a high front vowel [i], producing another group of sounds that are

second in place to apicalize. This group shall be reserved, clearly, for those etymons 4 through 6. It is then inevitable to introduce a new set of phonemes for the etymons 1 through 3, which has been described in section 2.5. Their place of articulation is, among the three groups, the farthest from the alveolar ridge, thus is the last one to be assimilated with that of the alveolar sibilants.

There are some dialects that have merged all three groups of syllables into the alveolar sibilant group, such as Chángshā.

### 3.3 Finals Ended with the Coda -i

3.3.1 CMX \*-ai. This final has monophthongized to -a in Chénxī, Sháoishān, and Xiāngxiāng dialects.

拜 pǎi QYS \*pɛ̃<sup>r</sup>j<sup>h</sup>

CS [pai<sup>陰去</sup>]; CX [pa<sup>陰去</sup>]; HS [pæ<sup>陰去</sup>]; HY [pai<sup>陰去</sup>]; PJ [pai<sup>陰去</sup>]; QY [pai<sup>去</sup>]; SS [pa<sup>陰去</sup>]; SY(CL) [pai<sup>陰去</sup>]; XH(BX) [pæ<sup>去</sup>]; XX [pa<sup>陰去</sup>]

CMX \*pai<sup>陰去</sup>

街 jiē QYS \*ka<sup>r</sup>j

CS [kai<sup>陰平</sup>]; CX [ka<sup>陰平</sup> ~ kai<sup>陰平</sup>]; HS [kæ<sup>陰平</sup>]; HY [kai<sup>陰平</sup>]; PJ [kai<sup>陰平</sup><sub>白</sub> ~ tɕiɛ<sup>陰平</sup><sub>文</sub>]; QY [kai<sup>陰平</sup>]; SS [ka<sup>陰平</sup>]; SY(CL) [kai<sup>陰平</sup>]; XH(BX) [kæ<sup>陰平</sup>]; XX [ka<sup>陰平</sup>]

CMX \*kai<sup>陰平</sup><sub>白</sub> ~ \*kiai<sup>陰平</sup><sub>文</sub>

3.3.2 CMX \*-iai. This is the literary form against the local \*-ai. It contains only a few syllables and should be a rather late borrowing from the north.

諧 xié QYS \*ɣɛ̃<sup>r</sup>j

CS [xai<sup>陽平</sup>]; CX [ɛie<sup>陽平</sup>]; HS [xæ<sup>陽平</sup>]; PJ [xai<sup>陽平</sup>]; QY [ɣai<sup>陽平</sup>]; SY [ɣai<sup>陽平</sup>]; XH(BX) [ɛie<sup>陽平</sup>]; XP [ha<sup>陽平</sup>]; XX [ɣa<sup>陽平</sup><sub>白</sub> ~ ɣia<sup>陽平</sup><sub>文</sub>]

CMX \*ɣai<sup>陽平</sup><sub>白</sub> ~ ɣiai<sup>陽平</sup><sub>文</sub>

3.3.3 CMX \*-uai. This final follows velars and initial zero only.

乖 guāi QYS \*kwẽ<sup>r</sup>j

CS [kuai<sup>陰平</sup>]; CX [kua<sup>陰平</sup> ~ kuai<sup>陰平</sup>]; HS [kuæ<sup>陰平</sup>]; HY [kuai<sup>陰平</sup>]; PJ [kuai<sup>陰平</sup>]; QY [kuai<sup>陰平</sup>]; SS [kua<sup>陰平</sup>]; SY [kuai<sup>陰平</sup>]; XH(BX) [kuæ<sup>陰平</sup>]; XX [kua<sup>陰平</sup>]

CMX \*kuai<sup>陰平</sup>

懷 huái QYS \*ɣwe<sup>r:h</sup>

CS [fai<sup>陽平</sup>]; CX [xuai<sup>陽平</sup>]; HS [uæ<sup>陽平</sup> ~ fæ<sup>陽平</sup>]; HY [fai<sup>陽平</sup>]; PJ [fai<sup>陽平</sup>]; QY [ɣuai<sup>陽平</sup>]; SS [xua<sup>陽平</sup>]; SY(CL) [vai<sup>陽平</sup>]; XH(BX) [ɣuæ<sup>陽平</sup>]; XX [ɣua<sup>陽平</sup>]

CMX \*ɣuai<sup>陽平</sup>

3.3.4 CMX \*-ɔi. This final does not follow labials. It commonly changes to -ai in most of the dialects. Púngjiāng Cénchuān fronted the vowel [ɔ] to [ɛ], resulting in -ɛi. Shǎoshān simplifies -ɛi to -ɛ. In Xiāngxiāng, the vowel [ɔ] diphthongizes to [ua], unless preceded by alveolar sibilants or laterals, giving rise to the local final -uai. In Xīnhuà Bǎxī it monophthongizes to either [æ] or [ə] without clear condition. Possibly there were two competing changes in place, where the merger with \*-ai eventually dominated and led to \*-ai > -æ, resulting in more syllables with -æ than with -ə.

代 dài QYS \*dɔj<sup>h</sup>

CS [tai<sup>陰去</sup>]; CX [tai<sup>陽去</sup>]; HS [tæ<sup>陽去</sup>]; HY [tai<sup>陽去</sup>]; PJ [dɛi<sup>陽去</sup>]; QY [dai<sup>去</sup>]; SS [dɛ<sup>陽去</sup> ~ tɛ<sup>陰去</sup>]; SY(CL) [dai<sup>陽去</sup>]; XH(BX) [tæ<sup>去</sup>]; XX [duai<sup>陽去</sup>]

CMX \*dɔi<sup>陽去</sup>

來 lái QYS \*ləj

CS [lai<sup>陽平</sup>]; CX [lai<sup>陽平</sup>]; HS [læ<sup>陽平</sup>]; HY [lai<sup>陽平</sup>]; PJ [lei<sup>陽平</sup>]; QY [lai<sup>陽平</sup>]; SS [nɛ<sup>陽平</sup>]; SY(CL) [nai<sup>陽平</sup>]; XH(BX) [lɐ<sup>陽平</sup>]; XX [lai<sup>陽平</sup>]

CMX \*ləi<sup>陽平</sup>

改 gǎi QYS \*kəj<sup>?</sup>

CS [kai<sup>上</sup>]; CX [kai<sup>上</sup>]; HS [kæ<sup>上</sup>]; HY [kai<sup>上</sup>]; PJ [kɛi<sup>上</sup>]; QY [kai<sup>上</sup>]; SS [kɛ<sup>上</sup>]; SY(CL) [kai<sup>陰上</sup>]; XH(BX) [kæ<sup>上</sup>]; XX [kuai<sup>上</sup>]

CMX \*kɔi<sup>陰上</sup>

3.3.5 CMX \*-uoi. This final can principally follow every CMX initial except the labiodental and retroflex ones. It is not contrastive to \*-ɔi when following labials. Although no modern Xiāng dialect is discovered to contain a glide u- in the labial-initial syllables like 杯 and 梅, the reason for reconstructing this \*-uoi following labials is that they behave like those other \*-uoi instead of like \*-ɔi in most of the dialects. The nucleus [ɔ] has largely fronted to [e] in most Xiāng dialects. Xiāngxiāng, in contrast, have seen its break into [ua], resulting in -uai after non-labial initials and -ai after labial initials, thus contrasting the \*-uei in section 3.3.7.

配 pǎi QYS \*p<sup>h</sup>wəj<sup>h</sup>

CS [p<sup>h</sup>ei<sup>陰去</sup>]; CX [p<sup>h</sup>ei<sup>陰去</sup>]; HS [p<sup>h</sup>ei<sup>陰去</sup>]; HY [p<sup>h</sup>ei<sup>陰去</sup>]; PJ [p<sup>h</sup>ei<sup>陰去</sup>]; QY [p<sup>h</sup>ei<sup>陰去</sup>]; SS [p<sup>h</sup>ɛ<sup>陰去</sup>]; SY(CL) [p<sup>h</sup>ei<sup>陰去</sup>]; XH(BX) [p<sup>h</sup>ə<sup>陰去</sup>]; XX [p<sup>h</sup>ai<sup>陰去</sup>]

CMX \*p<sup>h</sup>uoi<sup>陰去</sup>

堆 dūi QYS \*twəj

CS [tei<sup>陰平</sup>]; CX [tuei<sup>陰平</sup>]; HS [tei<sup>陰平</sup>]; HY [tui<sup>陰平</sup>]; PJ [tei<sup>陰平</sup>]; QY [tuei<sup>陰平</sup>]; SS [te<sup>陰平</sup>]; SY(CL) [tuei<sup>陰平</sup>]; XH(BX) [tə<sup>陰平</sup>]; XX [tuai<sup>陰平</sup>]

CMX \*tuoi<sup>陰平</sup>

匯 hùi QYS \*ɣwəj<sup>2</sup>

CS [fei<sup>陽去</sup>]; CX [xuei<sup>陽平</sup>]; HS [fei<sup>陽去</sup>]; HY [fei<sup>陽去</sup>]; PJ [fɛi<sup>陽去</sup>]; QY [yuei<sup>陽去</sup>]; SS [xuei<sup>陽去</sup>]; SY(CL) [vei<sup>陽去</sup>]; XH(BX) [xuə<sup>陽去</sup>]; XX [yuai<sup>陽去</sup>]

CMX \*ɣuoi<sup>陽去</sup>

3.3.6 CMX \*-ei. This initial contrasts \*-i in Chángshā, Pángjiāng, Qíyáng, Xīnhuà Bǎixī, and Shàoyáng Chánglè. However no dialect is known to contrast every pair, as sound change of \*-ei > -i is very common. Syllables containing \*-ei mostly belong to QYS Xièshè (蟹攝), apart from a few with bilabial initials. Table 3.7 elaborates these contrasts, showing only the vernacular form wherever applicable.

**Table 3.7: contrast between \*-ei and \*-i**

	CS	PJ	QY	XH(BX)	CMX
迷 QYS *mɛj	mei <sup>13</sup>	mi <sup>23</sup>	mi <sup>11</sup>	mi <sup>13</sup>	*mei <sup>陽平</sup>
彌 QYS *mjiǎ	mi <sup>13</sup>	mi <sup>23</sup>	mi <sup>11</sup>	min <sup>13</sup>	*mi <sup>陽平</sup>
廢 QYS *puaj <sup>h</sup>	fei <sup>55</sup>	fɛi <sup>34</sup>	fi <sup>214</sup>	fə <sup>45</sup>	*fei <sup>陰去</sup>
費 QYS *p <sup>h</sup> uj <sup>h</sup>	fei <sup>55</sup>	fi <sup>34</sup>	fi <sup>214</sup>	xuə <sup>45</sup>	*fi <sup>陰去</sup>
製 QYS *tɛiaj <sup>h</sup>	tsɿ <sup>55</sup>	tɕɿ <sup>34</sup>	tʃi <sup>214</sup>	tɕɿ <sup>45</sup>	*tʃei <sup>陰去</sup>
至 QYS *tɛi <sup>h</sup>	tsɿ <sup>55</sup>	tɕɿ <sup>34</sup>	tsɿ <sup>214</sup>	tɕɿ <sup>45</sup>	*tʃi <sup>陰去</sup>

閉 pì QYS \*pɛj<sup>h</sup>

CS [pei<sup>陰去</sup>]; CX [pi<sup>陰去</sup>]; HS [pi<sup>陰去</sup>]; HY [pi<sup>陰去</sup>]; PJ [pi<sup>陰去</sup>]; QY [pi<sup>去</sup>]; SS [pɛ<sup>陰去</sup>];  
SY(CL) [pi<sup>陰去</sup>]; XH(BX) [pi<sup>去</sup>]; XX [pi<sup>陰去</sup>]

CMX \*pɛi<sup>陰去</sup>

備 bǎi QYS \*bi<sup>h</sup>

CS [pei<sup>陰去</sup>]; CX [pi<sup>陽去</sup><sub>白</sub> ~ pei<sup>陽去</sup><sub>文</sub>]; HS [pi<sup>陽去</sup><sub>白</sub> ~ pei<sup>陽去</sup><sub>文</sub>]; HY [pi<sup>陽去</sup>]; PJ [bi<sup>陽去</sup>]; QY [bi<sup>去</sup>]; SS [pɛ<sup>陰去</sup>]; SY(CL) [bi<sup>陽去</sup>]; XH(BX) [b<sup>h</sup>i<sup>入</sup>]; XX [bi<sup>陽去</sup>]

CMX \*bɛi<sup>陽去</sup>

The literary readings in Chénxī and Hénghān are possibly modern borrowings.

肺 fěi QYS \*puaj<sup>h</sup>

CS [fei<sup>陰去</sup>]; CX [fi<sup>陰去</sup>]; HS [fei<sup>陰去</sup>]; HY [fei<sup>陰去</sup>]; PJ [fei<sup>陰去</sup>]; QY [fi<sup>去</sup>]; SS [xuei<sup>陰去</sup>];  
SY(CL) [fi<sup>陰去</sup>]; XH(BX) [fə<sup>去</sup>]; XX [xuei<sup>陰去</sup>]

CMX \*fei<sup>陰去</sup>

細 xì QYS \*sɛj<sup>h</sup>

CS [ɛi<sup>陰去</sup>]; CX [ɛi<sup>陰去</sup>]; HS [ɛi<sup>陰去</sup>]; HY [ɛi<sup>陰去</sup>]; PJ [ɛi<sup>陰去</sup>]; QY [ʃi<sup>去</sup>]; SS [si<sup>陰去</sup>]; SY(CL)  
[sai<sup>陰去</sup><sub>白</sub> ~ si<sup>陰去</sup><sub>文</sub>]; XH(BX) [ɛi<sup>去</sup>]; XX [ɛi<sup>陰去</sup>]

CMX \*sɛi<sup>陰去</sup><sub>白</sub> ~ \*si<sup>陰去</sup><sub>文</sub>

Yu èyáng Bǎixiáng also has a vernacular form [se] that corresponds to \*sɛi. The -i observed in the other dialects may be the result of change \*-ei > -i after coronals.

3.3.7 CMX \*-uei. The nucleus has lowered to a after retroflexes in many dialects.

衰 shuāi QYS \*ɕwi

CS [eyai<sup>陰平</sup>]; CX [suai<sup>陰平</sup>]; HS [sæ<sup>陰平</sup>]; HY [suai<sup>陰平</sup>]; PJ [sai<sup>陰平</sup>]; QY [suai<sup>陰平</sup>]; SS [sɛ<sup>陰平</sup>]; SY [suai<sup>陰平</sup>]; XB(BX) [sæ<sup>陰平</sup>]; XX [suai<sup>陰去</sup>]

CMX \*ɕuei<sup>陰去</sup>

葵 kúí QYS \*gjiwi

CS [kuei<sup>陽平</sup>]; CX [guei<sup>陽平</sup>]; HS [k<sup>h</sup>uei<sup>陽平</sup>]; HY [kui<sup>陽平</sup>]; PJ [guei<sup>陽平</sup>]; QY [guei<sup>陽平</sup>]; SS [guei<sup>陽平</sup>]; SY(CL) [guei<sup>陽平</sup>]; XH(BX) [g<sup>h</sup>uə<sup>陽平</sup>]; XX [guei<sup>陽平</sup>]

CMX \*guei<sup>陽平</sup>

3.3.8 CMX \*-yei. It forms minimal pairs against \*-uei in Chángshā and Yìyáng after initial zero. This final has a vernacular form \*-y, usually after coronals. It is likely a result of \*-yei > \*-yi > -y, yet both forms have been reconstructed.

**Table 3.8: contrast between \*yei and \*uei**

	CX	YiY	CMX
銳	yei <sup>55</sup>	ye <sup>53</sup>	*yei <sup>陰去</sup>
慰	uei <sup>55</sup>	uəi <sup>53</sup>	*uei <sup>陰去</sup>

歲 sùi QYS \*swiaj<sup>h</sup>

CS [sei<sup>陰去</sup>]; CX [ɕy<sup>陰去</sup><sub>白</sub> ~ suei<sup>陰去</sup><sub>文</sub>]; HS [ɕi<sup>陰去</sup><sub>白</sub> ~ sei<sup>陰去</sup><sub>文</sub>]; HY [sui<sup>陰去</sup>]; PJ [ɕi<sup>陰去</sup>]; QY [suei<sup>去</sup>]; SS [sɛ<sup>陰去</sup>]; SY(CL) [ɕl<sup>陰去</sup><sub>白</sub> ~ suei<sup>陰去</sup><sub>文</sub>]; XH(BX) [sə<sup>去</sup>]; XX [ɕyei<sup>陰去</sup>]

CMX \*sy<sup>陰去</sup><sub>白</sub> ~ \*syɛi<sup>陰去</sup><sub>文</sub>

鍾 chúí QYS \*drwiă

CS [tɕeyei<sup>陽平</sup>]; CX [dzɯ<sup>陽平</sup>]; HS [tɕ<sup>h</sup>y<sup>陽平</sup><sub>白</sub> ~ ts<sup>h</sup>ei<sup>陽平</sup><sub>文</sub>]; HY [tsui<sup>陽平</sup>]; PJ [dzɿ<sup>陽平</sup>]; QY [dzuei<sup>陽平</sup>]; SS [dzuei<sup>陽平</sup>]; SY [dzuei<sup>陽平</sup>]; XH(BX) [dz<sup>h</sup>ə<sup>陽平</sup>]; XX [dy<sup>陽平</sup><sub>白</sub> ~ dyei<sup>陽平</sup><sub>文</sub>]

CMX \*dʒy<sup>陽平</sup><sub>白</sub> ~ \*dʒyei<sup>陽平</sup><sub>文</sub>

水 shǔi QYS \*ɕwi<sup>?</sup>

CS [ɛyei<sup>上</sup>]; CX [ɕu<sup>上白</sup> ~ ɕuei<sup>上文</sup>]; HS [ɛy<sup>上白</sup> ~ sei<sup>上文</sup>]; HY [ɛy<sup>上白</sup> ~ sui<sup>上文</sup>]; PJ [ɛy<sup>上</sup>];  
 QY [suei<sup>上</sup>]; SS [ɕuei<sup>上</sup>]; SY(CL) [ɛy<sup>陰上</sup>]; XH(BX) [ɛy<sup>上</sup>]; XX [xy<sup>上</sup>]  
 CMX \*ɣy<sup>陰上白</sup> ~ \*ɣyei<sup>陰上文</sup>

### 3.4 Finals Ended with the Coda -u

3.4.1 CMX \*-au. This final is raised to -ou in Hóngshān and monophthongized to -o in Sháoshān.

寶 bǎo QYS \*paw<sup>?</sup>

CS [pau<sup>上</sup>]; CX [pau<sup>上</sup>]; HS [pou<sup>上</sup>]; HY [pau<sup>上</sup>]; PJ [pau<sup>上</sup>]; QY [pau<sup>上</sup>]; SS [pɔ<sup>上</sup>];  
 SY(CL) [pau<sup>陰上</sup>]; XH(BX) [pau<sup>上</sup>]; XX [pao<sup>上</sup>]  
 CMX \*pau<sup>陰上</sup>

巢 cháo QYS \*dza<sup>r</sup>w

CS [tsau<sup>陽平</sup>]; CX [dzau<sup>陽平</sup>]; HS [ts<sup>h</sup>ou<sup>陽平</sup>]; HY [tsau<sup>陽平</sup>]; PJ [dzau<sup>陽平</sup>]; QY [dzau<sup>陽平</sup>];  
 SS [dzɔ<sup>陽平</sup>]; SY(CL) [dzau<sup>陽平</sup>]; XH(BX) [dz<sup>h</sup>au<sup>陽平</sup>]; XX [dzao<sup>陽平</sup>]  
 CMX \*dzau<sup>陽平</sup>

Several syllables with velar and laryngeal initials reflect the vernacular \*-au against literary \*-iau contrasts.

教 jiào QYS \*ka<sup>r</sup>w

CS [tɕiau<sup>陰去</sup>]; CX [kau<sup>陰去白</sup> ~ tɕiau<sup>陰去文</sup>]; HS [kou<sup>陰去白</sup> ~ ʔou<sup>陰去文</sup>]; HY [kau<sup>陰去白</sup> ~ tɕiau<sup>陰去文</sup>]; PJ [kau<sup>陰去白</sup> ~ tɕiau<sup>陰去文</sup>]; QY [tɕiau<sup>去</sup>]; SS [kɔ<sup>陰去白</sup> ~ cio<sup>陰去文</sup>]; SY(CL) [kau<sup>陰去白</sup> ~ tɕiau<sup>陰去文</sup>]; XH(BX) [tɕiə<sup>去</sup>]; XX [kao<sup>陰去白</sup> ~ kiao<sup>陰去文</sup>]  
 CMX \*kau<sup>陰去白</sup> ~ \*kiau<sup>陰去文</sup>

敲 qiāo QYS \*k<sup>h</sup>a<sup>r</sup>w

CS [k<sup>h</sup>au<sup>陰平</sup>]; CX [k<sup>h</sup>au<sup>陰平</sup>]; HS [k<sup>h</sup>ou<sup>陰平白</sup> ~ t<sup>h</sup>ou<sup>陰平文</sup>]; HY [k<sup>h</sup>au<sup>陰平</sup>]; PJ [k<sup>h</sup>au<sup>陰平白</sup> ~ tɕ<sup>h</sup>iau<sup>陰平文</sup>]; QY [k<sup>h</sup>au<sup>陰平</sup>]; SS [k<sup>h</sup>ɔ<sup>陰平</sup>]; SY(CL) [k<sup>h</sup>au<sup>陰平白</sup> ~ tɕ<sup>h</sup>iau<sup>陰平文</sup>]; XH(BX) [k<sup>h</sup>au<sup>陰平白</sup> ~ tɕ<sup>h</sup>iə<sup>陰平文</sup>]; XX [k<sup>h</sup>ao<sup>陰平</sup>]  
 CMX \*k<sup>h</sup>au<sup>陰平文</sup> ~ k<sup>h</sup>iau<sup>陰平白</sup>

3.4.2 CMX \*-iau. This is a literary final opposed to \*-au introduced in 3.4.1. It is perhaps fairly late, yet is not uncommon. It contrasts the CMX final \*-ieü in Hùitóng and Sūn íng Wǔyáng (綏寧武陽) (Zhou, 2010). Table 3.9 lists four of these pairs in Hùitóng dialect. Vernacular forms of the four syllables on the left are omitted.

**Table 3.9: contrast between \*-iau and \*-ieü**

	交	狡	教	孝	澆	繳	叫	曉
HT	teiau <sup>212</sup>	teiau <sup>24</sup>	teiau <sup>45</sup>	ɛiau <sup>45</sup>	teieu <sup>212</sup>	teieu <sup>24</sup>	teieu <sup>45</sup>	ɛieu <sup>24</sup>
CMX	*kiaü 陰平	*kiaü 陰上	*kiaü 陰去	*xiaü 陰去	*kieü 陰平	*kieü 陰上	*kieü 陰去	*xieü 陰上

3.4.3 CMX \*-eu. This final is subject to later sound changes in most of the dialects. In Chénxī and Xiāngxiāng, its route is possibly \*-eu > \*-ey > \*-ei > ai. However, the bilabial nasal [m] in Chénxī probably have assimilated the following \*-eu early prior to the sound change, diverted it into CMX \*-uŋ which later became -əu. Hénghān dialect has deleted the coda \*-u, and then added a glide i- when preceded by coronals. In dialects like Hùitóng, Sháoshān, and Chánglè of Shàoyáng, the CMX \*-eu has merged with either CMX \*-ieü or \*-iu. These dialects sometimes borrow from other dialects forming a literary layer. In Píngjiāng, this final only merges with CMX \*-ieü when it follows bilabial nasal [m].

畝 mǔ QYS \*mow<sup>?</sup>

CS [məu<sup>上</sup>]; CX [məu<sup>上</sup>]; HS [mæ<sup>上</sup>]; HT [mieu<sup>上</sup>]; HY [məu<sup>上白</sup> ~ miau<sup>上文</sup>]; PJ [miau<sup>上</sup>]; QY [mu<sup>上</sup>]; SS [məu<sup>上</sup>]; SY(CL) [mieu<sup>上白</sup> ~ məu<sup>上文</sup>]; XH(BX) [miə<sup>上</sup>]; XX [mai<sup>上</sup>]

CMX \*mēu 陽上

偷 tōu QYS \*t<sup>h</sup>ow

CS [t<sup>h</sup>əu<sup>陽平</sup>]; CX [t<sup>h</sup>ai<sup>陰平</sup>]; HS [t<sup>h</sup>ie<sup>陰平</sup>]; HT [t<sup>h</sup>ieu<sup>陰平白</sup> ~ t<sup>h</sup>ou<sup>陰平文</sup>]; HY [t<sup>h</sup>əu<sup>陰平</sup>]; PJ [t<sup>h</sup>əu<sup>陰平</sup>]; QY [t<sup>h</sup>əu<sup>陰平</sup>]; SS [t<sup>h</sup>iə<sup>陰平白</sup> ~ t<sup>h</sup>əu<sup>陰平文</sup>]; SY(CL) [t<sup>h</sup>ei<sup>陰平白</sup> ~ t<sup>h</sup>ieu<sup>陰平文</sup>]; XH(BX) [t<sup>h</sup>iə<sup>陰平</sup>]; XX [t<sup>h</sup>ai<sup>陰平</sup>]

CMX \*t<sup>h</sup>ēu 陰平



樓 lóu QYS \*low

CS [ləu<sup>陽平</sup>]; CX [lai<sup>陽平</sup>]; HS [lie<sup>陽平</sup>]; HT [liɛu<sup>陽平</sup>]; HY [ləu<sup>陽平</sup>]; PJ [ləu<sup>陽平</sup>]; QY [ləu<sup>陽平</sup>]; SS [nəu<sup>陽平</sup>]; SY(CL) [nei<sup>陽平</sup><sub>白</sub> ~ niəu<sup>陽平</sup><sub>文</sub>]; XH(BX) [liə<sup>陽平</sup>]; XX [lai<sup>陽平</sup>]

CMX \*ləu<sup>陽平</sup>

厚 hòu QYS \*ɣow<sup>2</sup>

CS [xəu<sup>陽去</sup><sub>白</sub> ~ xəu<sup>陰去</sup><sub>文</sub>]; CX [xai<sup>陽去</sup>]; HS [xe<sup>陽去</sup>]; HT [xiɛu<sup>陽去</sup>]; HY [xəu<sup>陽去</sup>]; PJ [xəu<sup>陽去</sup>]; QY [ɣəu<sup>陽去</sup>]; SS [ɣəu<sup>陽去</sup><sub>白</sub> ~ xəu<sup>陰去</sup><sub>文</sub>]; SY(CL) [hei<sup>陽上</sup><sub>白</sub> ~ hɛu<sup>陽去</sup><sub>文</sub>]; XH(BX) [xə<sup>陰平</sup><sub>白</sub> ~ xə<sup>入</sup><sub>文</sub>]; XX [ɣai<sup>陽去</sup>]

CMX \*ɣeu<sup>陽上</sup>

3.4.4 CMX \*-ieu. Hùtóng has preserved its phonetic value (discussed in section 3.4.2). In most other dialects this final has merged with the final \*-iau. When preceded by CMX alveolar initials, this final commonly drops its glide i-, which is the case in many dialects such as Chángshā and Píngjiāng. It is simplified to -yo after CMX post-alveolars and otherwise to -iə in Xīnhuà Shàoyáng Chánglè dialect might have experienced \*-iau > \*-ieu > \*-eu > \*-ey > -ei for [+anterior] onset syllables in its local stratum, and borrowed from nearby dialects the literary form -iau. The CMX final \*-eu have experienced paralleling changes in Chánglè

表 biǎo QYS \*piaw<sup>2</sup>

CS [piau<sup>上</sup>]; CX [piau<sup>上</sup>]; HS [piou<sup>上</sup>]; HT [piɛu<sup>上</sup>]; HY [piau<sup>上</sup>]; PJ [piau<sup>上</sup>]; QY [piau<sup>上</sup>]; SS [pio<sup>上</sup>]; SY(CL) [pei<sup>陰上</sup><sub>白</sub> ~ piau<sup>陰上</sup><sub>文</sub>]; XH(BX) [piə<sup>上</sup>]; XX [piao<sup>上</sup>]

CMX \*piɛu<sup>陰上</sup>

消 xiāo QYS \*siaw

CS [ɛiau<sup>陰平</sup>]; CX [ɛiau<sup>陰平</sup>]; HS [ɛiou<sup>陰平</sup>]; HT [ɛieu<sup>陰平</sup>]; HY [ɛiau<sup>陰平</sup>]; PJ [ɛiau<sup>陰平</sup>]; QY [ɣiau<sup>陰平</sup>]; SS [sio<sup>陰平</sup>]; SY(CL) [sei<sup>陰平</sup><sub>白</sub> ~ ɛiau<sup>陰平</sup><sub>文</sub>]; XH(BX) [ɛiə<sup>陰平</sup>]; XX [ɛiao<sup>陰平</sup>]

CMX \*siɛu<sup>陰平</sup>

趙 zhào QYS \*driaw<sup>?</sup>

CS [tsau<sup>陰去</sup>]; CX [tɕau<sup>陽去</sup>]; HS [təu<sup>陽去</sup>]; HT [tɕeu<sup>陽去</sup>]; HY [tɕiau<sup>陽去</sup>]; PJ [dʒau<sup>陽去</sup>]; QY [dʒiau<sup>去</sup>]; SS [dʒɔ<sup>陽去</sup><sub>白</sub> ~ tɕɔ<sup>陰去</sup><sub>文</sub>]; SY(CL) [dʒiau<sup>陽去</sup>]; XH(BX) [tɕ<sup>h</sup>yo<sup>入</sup>]; XX [dao<sup>陽去</sup>]  
CMX \*dʒieu<sup>陽去</sup>

窯 yáo QYS \*jiaw

CS [iau<sup>陽平</sup>]; CX [iau<sup>陽平</sup>]; HS [iou<sup>陽平</sup>]; HT [iɐu<sup>陽平</sup>]; HY [iau<sup>陽平</sup>]; PJ [iau<sup>陽平</sup>]; QY [iau<sup>陽平</sup>]; SY(CL) [ziau<sup>陽平</sup>]; XH(BX) [iə<sup>陽平</sup>]; XX [iao<sup>陽平</sup>]  
CMX \*iɐu<sup>陽平</sup>

### 3.5 Finals Ended with the Coda -n

Before starting this section, readers shall be reminded that there is no nasal coda in Chénxī. CMX nasal codas are vocalized, with \*-n largely changed to -i and \*-ŋ to -u. The remainders have ceded to open syllables.

3.5.1 CMX \*-an. The nucleus is raised to [æ] in Hángshān and [e] in Chénxī. Hángshān's [æ] is nasalized and the coda -n is deleted. Chénxī is one step further with no nasal feature preserved. The coda -n has velarized to -ŋ in Shàoyáng Chánglè. In Xiāngxiāng, the final diphthongizes to -iǎ. The sound change could have been \*-an > \*-æ̃ > \*-ẽ > \*-iẽ > -iǎ.

慢 màn QYS \*ma<sup>r</sup>n<sup>h</sup>

CS [man<sup>陽去</sup><sub>白</sub> ~ man<sup>陰去</sup><sub>文</sub>]; CX [me<sup>陽去</sup>]; HS [mǣ<sup>陽去</sup>]; HY [man<sup>陽去</sup>]; PJ [man<sup>陽去</sup>]; QY [man<sup>去</sup>]; SS [mǎ<sup>陽去</sup><sub>白</sub> ~ mǎ<sup>陰去</sup><sub>文</sub>]; SY(CL) [maŋ<sup>陰平</sup>]; XH(BX) [mǎ<sup>陰平</sup><sub>白</sub> ~ mǎ<sup>去</sup><sub>文</sub>]; XX [miǎ<sup>陽去</sup>]  
CMX \*man<sup>陽去</sup>

談 tán QYS \*dam

CS [tan<sup>陽平</sup>]; CX [de<sup>陽平</sup>]; HS [t<sup>h</sup>ǣ<sup>陽平</sup>]; HY [tan<sup>陽平</sup>]; PJ [dan<sup>陽平</sup>]; QY [dan<sup>陽平</sup>]; SS [dǎ<sup>陽平</sup>]; SY(CL) [daŋ<sup>陽平</sup>]; XH(BX) [d<sup>h</sup>ǎ<sup>陽平</sup>]; XX [diǎ<sup>陽平</sup>]  
CMX \*dan<sup>陽平</sup>

山 shān QYS \*ʂɛ̃n

CS [san<sup>陰平</sup>]; CX [se<sup>陰平</sup>]; HS [sã̃<sup>陰平</sup>]; HY [san<sup>陰平</sup>]; PJ [san<sup>陰平</sup>]; QY [san<sup>陰平</sup>]; SS [sã̃<sup>陰平</sup>];

SY(CL) [saŋ<sup>陰平</sup>]; XH(BX) [ʂã̃<sup>陰平</sup>]; XX [ɕiã̃<sup>陰平</sup>]

CMX \*ʃan<sup>陰平</sup>

閒 xián QYS \*ɣɛ̃n

CS [xan<sup>陽平</sup>]; CX [xe<sup>陽平</sup> ~ ɕie<sup>陽平</sup>]; HS [xã̃<sup>陽平</sup>]; HY [xan<sup>陽平</sup>]; PJ [xan<sup>陽平</sup> ~ ɕian<sup>陽平</sup>];

QY [ɣan<sup>陽平</sup>]; SS [ɣã̃<sup>陽平</sup>]; SY(CL) [ɦian<sup>陽平</sup>]; XH(BX) [ɣã̃<sup>陽平</sup>]; XX [ɣiã̃<sup>陽平</sup>]

CMX \*ɣan<sup>陽平</sup> ~ ɣian<sup>陽平</sup>

3.5.2 CMX \*-ian. This is a final restricted to the literary layer relative to \*-an. Táojiāng dialect preserves its contrast against CMX final \*-ien to be introduced in section 3.5.6. The contrast is also found in Mǎlú Chánglè Héngshān, and Sháoishān, though fewer pairs are retained. Most of the other dialects have no contrast observed for this pair of finals. In Table 3.10, only the literary readings, wherever applicable, are selected for comparison.

Table 3.10: contrast between \*-ian and \*-ien

	簡	艦	閒	雁	檢	見	嫌	厭
TJ	teian <sup>53</sup>	teian <sup>55</sup>	teian <sup>13</sup>	ian <sup>55</sup>	teie <sup>53</sup>	teie <sup>55</sup>	teie <sup>13</sup>	ie <sup>55</sup>
ML(CL)	teĩ <sup>24</sup>	teĩ <sup>45</sup>	eiã <sup>13</sup>	iã <sup>21</sup>	teĩ <sup>24</sup>	teĩ <sup>45</sup>	ei <sup>13</sup>	i <sup>45</sup>
CMX	*kian <sup>陰上</sup>	*kian <sup>陰去</sup>	*ɣian <sup>陽平</sup>	*ian <sup>陽去</sup>	*kien <sup>陰上</sup>	*kien <sup>陰去</sup>	*ɣien <sup>陽平</sup>	*ien <sup>陰去</sup>

閒 jiàn QYS \*kɛ̃n<sup>h</sup>

CS [kan<sup>陰去</sup>]; CX [ke<sup>陰去</sup>]; HS [kã̃<sup>陰去</sup> ~ tã̃<sup>陰去</sup>]; HY [kan<sup>陰去</sup> ~ teien<sup>陰去</sup>]; PJ [kan<sup>陰去</sup>

白 ~ teian<sup>陰去</sup>]; QY [kan<sup>陰去</sup>]; SS [kã̃<sup>陰去</sup>]; SY(CL) [kaŋ<sup>陰去</sup>]; XH(BX) [kã̃<sup>陰去</sup>]; XX [kiã̃<sup>陰去</sup>]

CMX \*kan<sup>陰去</sup> ~ \*kian<sup>陰去</sup>

3.5.3 CMX \*-uan.

問 shuān QYS \*ʂwãn

CS [ɕyan<sup>陰平</sup>]; CX [sue<sup>陰平</sup>]; HS [sã̃<sup>陰平</sup>]; HY [suen<sup>陰平</sup>]; PJ [san<sup>陰平</sup>]; QY [suan<sup>陰平</sup>]; SS

[sǎ<sup>陰平</sup>]; SY(CL) [suǎ<sup>陰平</sup>]; XH(BX) [sǒ<sup>陰平</sup>]; XX [suǎ<sup>陰平</sup>]

CMX \*ɸuan<sup>陰平</sup>

關 guān QYS \*kwa<sup>ɾ</sup>n

CS [kuan<sup>陰平</sup>]; CX [kue<sup>陰平</sup>]; HS [k<sup>h</sup>uǎ<sup>陰平</sup><sub>白</sub> ~ kuǎ<sup>陰平</sup><sub>文</sub>]; HY [kuen<sup>陰平</sup>]; PJ [kuan<sup>陰平</sup>]; QY [kuan<sup>陰平</sup>]; SS [kuǎ<sup>陰平</sup>]; SY [kuǎ<sup>陰平</sup>]; XH(BX) [kuǎ<sup>陰平</sup>]; XX [kuǎ<sup>陰平</sup>]

CMX \*kuan<sup>陰平</sup>

3.5.4 CMX \*-ɔn. This final does not follow labials. It is fronted to -ɔ̃n in P íngjiāng and is generally well preserved there, except for a few irregularities. In Xiāngxiāng, the vowel [ɔ] has broken into [ua] in the environment preceded by velar initials or initial zero, and has otherwise changed to [ia] in parallel with final \*-an in section 3.5.1. Chénxī dialect has a few lexemes with this final changed to -ue after velar initials, while Sh áoshān also has a few changed to -uě/-ǒ, in their vernacular layers respectively. In other dialects, this CMX \*-ɔn commonly merges with \*-an.

男 nán QYS \*nəm

CS [lan<sup>陽平</sup>]; CX [ne<sup>陽平</sup>]; HS [lǎ<sup>陽平</sup>]; HY [nan<sup>陽平</sup>]; PJ [lɔ̃n<sup>陽平</sup>]; QY [lan<sup>陽平</sup>]; SS [nǎ<sup>陽平</sup>]; SY(CL) [naŋ<sup>陽平</sup>]; XH(BX) [lǎ<sup>陽平</sup>]; XX [niǎ<sup>陽平</sup>]

CMX \*nɔ̃n<sup>陽平</sup>

柑 gān QYS \*kam

CS [kan<sup>陰平</sup>]; CX [kue<sup>陰平</sup><sub>白</sub> ~ ke<sup>陰平</sup><sub>文</sub>]; HS [kǎ<sup>陰平</sup>]; HY [kan<sup>陰平</sup>]; PJ [kɔ̃n<sup>陰平</sup>]; QY [kan<sup>陰平</sup>]; SS [kǎ<sup>陰平</sup>]; SY(CL) [kaŋ<sup>陰平</sup>]; XH(BX) [kǎ<sup>陰平</sup>]; XX [kuǎ<sup>陰平</sup>]

CMX \*kɔ̃n<sup>陰平</sup>

感 gǎn QYS \*kəm<sup>?</sup>

CS [kan<sup>上</sup>]; CX [ke]; HS [kǎ<sup>上</sup>]; HY [kan<sup>上</sup>]; PJ [kɔ̃n<sup>上</sup>]; QY [kan<sup>上</sup>]; SS [kǎ<sup>上</sup>]; SY(CL) [kaŋ<sup>上</sup>]; XH(BX) [kǎ<sup>上</sup>]; XX [kuǎ<sup>上</sup>]

CMX \*kɔ̃n<sup>陰上</sup>

看 k àn QYS \*k<sup>h</sup>an<sup>h</sup>

CS [k<sup>h</sup>an<sup>陰去</sup>]; CX [k<sup>h</sup>e<sup>陰去</sup>]; HS [k<sup>h</sup>æ<sup>陰去</sup>]; HY [k<sup>h</sup>ai<sup>陰去</sup>]; PJ [k<sup>h</sup>an<sup>陰去</sup>]; QY [k<sup>h</sup>an<sup>去</sup>]; SS [k<sup>h</sup>uẽ<sup>陰去</sup><sub>白1</sub> ~ k<sup>h</sup>õ<sup>陰去</sup><sub>白2</sub> ~ k<sup>h</sup>ã<sup>陰去</sup><sub>文</sub>]; SY(CL) [k<sup>h</sup>aŋ<sup>陰去</sup>]; XH(BX) [k<sup>h</sup>ã<sup>入</sup>]; XX [k<sup>h</sup>uã<sup>陰去</sup>]  
CMX \*k<sup>h</sup>ɔn<sup>陰去</sup>

The first vernacular final -uẽ in Sh áoshān is described as confined to elderly use. The two layers are not reconstructed separately since they are very likely endogenous. This kind of sound change will be covered in section 5.1.1.

3.5.5 CMX \*-uɔn. It contrasts \*-uan in Ch ángshā and P íngjiāng, and also in Xīnhu à after non-coronals. Within this category, the syllables preceded by labials are reconstructed with \*-uɔn instead of \*-ɔn because they behave similarly with those \*-uɔn syllables following other initials in most of the dialects.

滿 mǎn QYS \*mwan<sup>2</sup>

CS [mõ<sup>上</sup>]; CX [me<sup>上</sup>]; HS [mẽĩ<sup>上</sup>]; HY [muen<sup>上</sup>]; PJ [mɔn<sup>上</sup>]; QY [man<sup>上</sup>]; SS [muẽ<sup>上</sup><sub>白1</sub> ~ mõ<sup>上</sup><sub>白2</sub> ~ mǎ<sup>上</sup><sub>文</sub>]; SY(CL) [beŋ<sup>陽平</sup><sub>白</sub> ~ mǎ<sup>陰上</sup><sub>文</sub>]; XH(BX) [mõ<sup>上</sup>]; XX [miǎ<sup>上</sup>]  
CMX \*muɔn<sup>陽上</sup>

The vernacular form of 滿 in Sh àoyáng Ch ánglè is irregular, probably of a different etymon.

團 tu án QYS \*dwan

CS [tõ<sup>陽平</sup>]; CX [due<sup>陽平</sup> ~ due<sup>陰去</sup>]; HS [t<sup>h</sup>ẽĩ<sup>陽平</sup>]; HY [tuen<sup>陽平</sup>]; PJ [dɔn<sup>陽平</sup>]; QY [duan<sup>陽平</sup>]; SS [duẽ<sup>陽平</sup><sub>白</sub> ~ dõ<sup>陽平</sup><sub>文</sub>]; SY(CL) [duǎ<sup>陽平</sup>]; XH(BX) [d<sup>h</sup>õ<sup>陽平</sup>]; XX [duǎ<sup>陽平</sup>]  
CMX \*duɔn<sup>陽平</sup>

官 guān QYS \*kwan

CS [kõ<sup>陰平</sup>]; CX [kue<sup>陰平</sup>]; HS [kuẽĩ<sup>陰平</sup>]; HY [kuen<sup>陰平</sup>]; PJ [kuɔn<sup>陰平</sup>]; QY [kuan<sup>陰平</sup>]; SS [kõ<sup>陰平</sup>]; SY(CL) [kuǎ<sup>陰平</sup>]; XH(BX) [kuẽ<sup>陰平</sup>]; XX [kuǎ<sup>陰平</sup>]  
CMX \*kuɔn<sup>陰平</sup>

塢 k àn QYS \*k<sup>h</sup>əm<sup>h</sup>

CS [k<sup>h</sup>õ<sup>陰去</sup>]; HS [k<sup>h</sup>uẽĩ<sup>陰平</sup> 白 ~ k<sup>h</sup>æ̃<sup>陰去</sup> 文]; HY [k<sup>h</sup>uen<sup>陰去</sup>]; HT [k<sup>h</sup>uẽ̃<sup>陰去</sup>]; ML(CL) [k<sup>h</sup>õ̃<sup>陰去</sup>];  
 QY [k<sup>h</sup>uan<sup>陰去</sup>]; SY [k<sup>h</sup>uã̃<sup>陰去</sup>]; XH [k<sup>h</sup>õ̃<sup>陰去</sup>]; XP [k<sup>h</sup>uẽ̃<sup>上</sup> ~ k<sup>h</sup>uẽ̃<sup>陰去</sup>]; XX [k<sup>h</sup>uã̃<sup>陰去</sup>]  
 CMX \*k<sup>h</sup>uõn<sup>陰去</sup>

As stated in the beginning, this 塢 is one of the pivotal etymons that are expected to justify Xiāng. Xùpǔ's material marks shǎng (上) tone in the homosyllabic list but is found with yīnqù (陰去) tone in the lexicon list. The latter seems to be the regular one, though I have included both. The literary form in Hóngshān is clearly a modern borrowing not used in everyday speech.

There is a certain level of mixture between \*-uõn and \*-õn in P níngjiāng. This phenomenon will be discussed in detail in Chapter 5.

寬 kuān QYS \*k<sup>h</sup>wan

CS [k<sup>h</sup>õ̃<sup>陰平</sup>]; CX [k<sup>h</sup>uẽ<sup>陰平</sup>]; HS [k<sup>h</sup>uẽĩ̃<sup>陰平</sup>]; HY [k<sup>h</sup>uen<sup>陰平</sup>]; PJ [k<sup>h</sup>ɔ̃<sup>陰平</sup>]; QY [k<sup>h</sup>uan<sup>陰平</sup>];  
 SS [k<sup>h</sup>uẽ̃<sup>陰平</sup> 白 ~ k<sup>h</sup>õ̃<sup>陰平</sup> 文]; SY(CL) [k<sup>h</sup>uã̃<sup>陰平</sup>]; XH(BX) [k<sup>h</sup>uẽ̃<sup>陰平</sup>]; XX [k<sup>h</sup>uã̃<sup>陰平</sup>]  
 CMX \*k<sup>h</sup>uõn<sup>陰平</sup>

3.5.6 CMX \*-ien. Loss of the coda and nasalization of the nucleus is common among Xiāng dialects. When this final follows a retroflex sibilant, its glide i- is prone to be deleted in many dialects. Xiāngxiāng's tɕɿ can derive from \*tɕiɛn > \*tɕɛn > \*tɕẽ̃ > \*tɕõ̃ > \*tɕə̃ > tɕɿ. The local retroflex sibilants have caused the addition of a glide u- in P níngjiāng and Sh áoshān.

面 miàn QYS \*mjian<sup>h</sup>

CS [miẽ̃<sup>陽去</sup> 白 ~ miẽ̃<sup>陰去</sup> 文]; CX [miẽ<sup>陽去</sup>]; HS [mĩ<sup>陽去</sup>]; HY [mien<sup>陽去</sup>]; PJ [mian<sup>陽去</sup>]; QY [mian<sup>去</sup>]; SS [mẽ̃<sup>陽去</sup> 白 ~ mẽ̃<sup>陰去</sup> 文]; SY(CL) [miẽ̃<sup>陰平</sup>]; XH(BX) [miẽ̃<sup>陰平</sup> 白 ~ miẽ̃<sup>去</sup> 文]; XX [mĩ<sup>陽去</sup>]  
 CMX \*mien<sup>陽去</sup>

展 zhǎn QYS \*trian<sup>?</sup>

CS [tɕõ̃<sup>上</sup>]; CX [tɕẽ<sup>上</sup>]; HS [tɕĩ̃<sup>上</sup>]; HY [tɕien<sup>上</sup>]; PJ [tɕuan<sup>上</sup>]; QY [tɕian<sup>上</sup>]; SS [tɕuẽ̃<sup>上</sup>];  
 SY(CL) [tɕiẽ̃<sup>陰上</sup>]; XH(BX) [tɕə̃<sup>上</sup>]; XX [tɕɿ<sup>上</sup>]

CMX \*tʃiɛn<sup>陰上</sup>

謙 qiān QYS \*k<sup>h</sup>ɛm

CS [tɕ<sup>h</sup>iẽ<sup>陰平</sup>]; CX [tɕ<sup>h</sup>iẽ<sup>陰平</sup>]; HS [tɕ<sup>h</sup>i<sup>陰平</sup>]; HY [tɕ<sup>h</sup>iɛn<sup>陰平</sup>]; PJ [tɕ<sup>h</sup>ian<sup>陰平</sup>]; QY [tʃ<sup>h</sup>ian<sup>陰平</sup>];  
SS [c<sup>h</sup>ẽ<sup>陰平</sup>]; SY(CL) [tɕ<sup>h</sup>iẽ<sup>陰平</sup>]; XH(BX) [tɕ<sup>h</sup>iẽ<sup>陰平</sup>]; XX [k<sup>h</sup>iĩ<sup>陰平</sup>]

CMX \*k<sup>h</sup>iɛn<sup>陰平</sup>

3.5.7 CMX \*-yɛn. When preceded by laterals, this final commonly merges to \*-iɛn. However the glide y- persists for the etymon 聯, meaning to sew, in a few dialects around Chénxī.

聯 lián QYS \*ljian

CS<sub>2</sub> [liẽ<sup>陽平</sup>]; CX [dye<sup>陽平</sup><sub>白</sub> ~ die<sup>陽平</sup><sub>文</sub>]; HS [li<sup>陽平</sup> ~ ɲi<sup>陽平</sup>]; HY [lie<sup>陽平</sup>]; PJ [lian<sup>陽平</sup>]; QY [lian<sup>陽平</sup>]; SS [nẽ<sup>陽平</sup>]; SY(CL) [niẽ<sup>陽平</sup>]; XH(BX) [liẽ<sup>陽平</sup>]; XX [niĩ<sup>陽平</sup>]

CMX \*lyɛn<sup>陽平</sup>

專 zhuān QYS \*tɕwian

CS [tɕyẽ<sup>陰平</sup>]; CX [tɕyẽ<sup>陰平</sup>]; HS [tuẽi<sup>陰平</sup>]; HY [tɕyɛn<sup>陰平</sup>]; PJ [tɕyan<sup>陰平</sup>]; QY [tʃyan<sup>陰平</sup>];  
SS [tɕuẽ<sup>陰平</sup>]; SY(CL) [tɕyẽ<sup>陰平</sup>]; XH(BX) [tɕyẽ<sup>陰平</sup>]; XX [tyĩ<sup>陰平</sup>]

CMX \*tʃyɛn<sup>陰平</sup>

軟 ruǎn QYS \*ɲwian<sup>?</sup>

CS [yẽ<sup>上</sup>]; CX [ɰue<sup>上</sup>]; HS [ɲuẽi<sup>上</sup>]; HY [nyɛn<sup>上</sup>]; PJ [yan<sup>上</sup>]; QY [ɰyan<sup>去</sup>]; SS [ɲuẽ<sup>上</sup>];  
SY(CL) [zyɛ<sup>陽上</sup>]; XH(BX) [yẽ<sup>上</sup>]; XX [ɲỹ<sup>上</sup> ~ yĩ<sup>上</sup>]

CMX \*nyɛn<sup>陽上</sup><sub>白</sub> ~ ɲyɛn<sup>陽上</sup><sub>文</sub>

3.5.8 CMX \*-ən. The Xiāngxiāng nucleus [ə] is raised to [i] following bilabials, lowered to [ʌ] following labiodentals, and broken to [ia] elsewhere. The breaking might come from \*-ən > \*-en > \*-ẽ > \*-iẽ > -iǎ. The latter part is the same as that of \*-an in section 3.5.1. Hángyáng and Xīnhuà's \*-ən after bilabials is raised to -in. Xīnhuà Bǎixī is unique in having changed to -yn following CMX labiodentals. The

possible route for it is projected to be \*fən > \*fin > \*fuin > \*xuin > \*xyin > ɛyn.

本 bĕn QYS \*pwən<sup>?</sup>

CS [pən<sup>上</sup>]; CX [pei<sup>上</sup>]; HS [pieŋ<sup>上</sup>]; HY [pin<sup>上</sup>]; PJ [pən<sup>上</sup>]; QY [pən<sup>上</sup>]; SS [pən<sup>上</sup>];  
SY(CL) [peŋ<sup>陰上</sup>]; XH(BX) [pin<sup>上</sup>]; XX [pin<sup>上</sup>]

CMX \*pən<sup>陰上</sup>

分 fĕn QYS \*pun

CS [fən<sup>陰平</sup>]; CX [fei<sup>陰平</sup>]; HS [feŋ<sup>陰平</sup>]; HY [fən<sup>陰平</sup>]; PJ [fən<sup>陰平</sup>]; QY [fən<sup>陰平</sup>]; SS [xuən<sup>陰平</sup>];  
SY(CL) [feŋ<sup>陰平</sup>]; XH(BX) [ɛyn<sup>陰平</sup>]; XX [xuən<sup>陰平</sup>]

CMX \*fən<sup>陰平</sup>

森 sĕn QYS \*ɣim

CS [sən<sup>陰平</sup>]; CX [sei<sup>陰平</sup>]; HS [sɛi<sup>陰平</sup>]; HY [sen<sup>陰平</sup>]; PJ [sen<sup>陰平</sup>]; QY [sən<sup>陰平</sup>]; SS [sən<sup>陰平</sup>];  
SY(CL) [seŋ<sup>陰平</sup>]; XH(BX) [ɣən<sup>陰平</sup>]; XX [eiã<sup>陰平</sup>]

CMX \*ɣən<sup>陰平</sup>

很 hĕn QYS \*ɣən<sup>?</sup>

CS [xən<sup>上</sup>]; CX [xei<sup>上</sup>]; HS [xɛi<sup>陰平</sup><sub>白</sub> ~ xɛi<sup>上</sup><sub>文</sub>]; HY [xen<sup>上</sup>]; PJ [xen<sup>上</sup>]; QY [ɣən<sup>上</sup>]; SS  
[ ɣ<sup>上</sup><sub>白</sub> ~ xən<sup>上</sup><sub>文</sub>]; SY(CL) [ɦeŋ<sup>陽上</sup>]; XH(BX) [xən<sup>上</sup>]; XX [eiã<sup>上</sup>]

CMX \*ɣən<sup>陽上</sup><sub>白</sub> ~ xən<sup>陰上</sup><sub>文</sub>

3.5.9 CMX \*-in. When the preceding post-alveolar initials are realized as retroflexes, the nucleus would usually become a schwa. Notably, Sh ày áng Ch ángl è dialect has merged all the syllables in this group from \*-in into -eŋ.

貧 p ín QYS \*bin

CS [pin<sup>陽平</sup>]; CX [bei<sup>陽平</sup>]; HS [p<sup>h</sup>ieŋ<sup>陽平</sup>]; HY [pin<sup>陽平</sup>]; PJ [bin<sup>陽平</sup>]; QY [bin<sup>陽平</sup>]; SS  
[biən<sup>陽平</sup>]; SY(CL) [beŋ<sup>陽平</sup>]; XH(BX) [b<sup>h</sup>in<sup>陽平</sup>]; XX [bin<sup>陽平</sup>]

CMX \*bin<sup>陽平</sup>

鎮 zh ěn QYS \*trin<sup>h</sup>



CS [tsən<sup>陰去</sup>]; CX [tsei<sup>陰去</sup>]; HS [teŋ<sup>陰去</sup>]; HY [tein<sup>陰去</sup>]; PJ [tʂən<sup>陰去</sup>]; QY [tʃin<sup>去</sup>]; SS [tʂən<sup>陰去</sup>]; SY(CL) [tʂeŋ<sup>陰平</sup>]; XH(BX) [tʂən<sup>去</sup>]; XX [tʌn<sup>陰去</sup>]

CMX \*tʃin<sup>陰去</sup>

The tone of 鎮 in Shàoyáng Chánglè is irregular.

金 jīn QYS \*kim

CS [tein<sup>陰平</sup>]; CX [teiei<sup>陰平</sup>]; HS [teŋ<sup>陰平</sup>]; HY [tein<sup>陰平</sup>]; PJ [tein<sup>陰平</sup>]; QY [tʃin<sup>陰平</sup>]; SS [ciən<sup>陰平</sup>]; SY(CL) [tʂeŋ<sup>陰平</sup>]; XH(BX) [tein<sup>陰平</sup>]; XX [kin<sup>陰平</sup>]

CMX \*kin<sup>陰平</sup>

3.5.10 CMX \*-un. In dialects like Chángshā and Pángjiāng, this initial is unrounded after coronal initials, resulting in a final -ən. In a possible chain of sound change, the CMX \*-ən preceded by coronals had fronted to -en in Pángjiāng (see 3.5.8) so the two finals do not merge here.

輪 lún QYS \*lwən

CS [lən<sup>陽平</sup>]; CX [luei<sup>陽平</sup>]; HS [leŋ<sup>陽平</sup>]; HY [luən<sup>陽平</sup>]; PJ [lən<sup>陽平</sup>]; QY [lən<sup>陽平</sup>]; SS [nən<sup>陽平</sup>]; SY(CL) [neŋ<sup>陽平</sup>]; XH(BX) [lin<sup>陽平</sup>]; XX [nuʌn<sup>陽平</sup>]

CMX \*lun<sup>陽平</sup>

棍 gùn QYS \*kwən<sup>h</sup>

CS [kuən<sup>陰去</sup>]; CX [kuei<sup>陰去</sup>]; HS [kueŋ<sup>陰去</sup>]; HY [kuən<sup>陰去</sup>]; PJ [kuən<sup>陰去</sup>]; QY [kuən<sup>去</sup>]; SS [kuən<sup>陰去</sup>]; SY(CL) [kueŋ<sup>陰去</sup>]; XH(BX) [kun<sup>去</sup>]; XX [kuʌn<sup>陰去</sup>]

CMX \*kun<sup>陰去</sup>

3.5.11 CMX \*-yn. It has changed to -uən in Sháoshān as the dialect repels the y-glide. This final, when preceded by alveolar initials, is unstable. In many dialects like Chángshā and Hángyáng, the nucleus was possibly dissimilated backwardly by [+anterior] feature of both the initials and the coda, resulting in its merger with \*-un. In other dialects like Pángjiāng, its roundness has been dropped after alveolars, and the final merges into \*-in.

旬 xún QYS \*zwin

CS [sən<sup>陽平</sup>]; CX [suei<sup>陽平</sup><sub>白</sub> ~ ɛyei<sup>陽平</sup><sub>文</sub>]; HS [seŋ<sup>陽平</sup>]; HY [tsuən<sup>陽平</sup>]; PJ [ɕin<sup>陽平</sup>]; QY [dzən<sup>陽平</sup>]; SS [dzən<sup>陽平</sup>]; SY(CL) [dzuei<sup>陽平</sup>]; XH(BX) [ɕyn<sup>陽平</sup>]; XX [dzuən<sup>陽平</sup>]  
CMX \*zyn<sup>陽平</sup>

準 zhǔn QYS \*təwin<sup>?</sup>

CS [təyn<sup>上</sup>]; CX [tʂuei<sup>上</sup>]; HS [tueŋ<sup>上</sup>]; HY [təyn<sup>上</sup>]; PJ [təyn<sup>上</sup>]; QY [tsuən<sup>上</sup>]; SS [tʂuən<sup>上</sup>]; SY(CL) [tʂueŋ<sup>陰上</sup>]; XH(BX) [təyn<sup>上</sup>]; XX [tuən<sup>上</sup>]  
CMX \*tʃyn<sup>陰上</sup>

永 yǒng QYS \*wia<sup>ʔ</sup>jŋ<sup>?</sup>

CS [yn<sup>上</sup>]; CX [yei<sup>上</sup> ~ iəu<sup>上</sup>]; HS [yeŋ<sup>上</sup>]; HY [yn<sup>上</sup>]; PJ [yn<sup>上</sup>]; QY [yn<sup>上</sup>]; SS [uən<sup>上</sup>];  
SY(CL) [yeŋ<sup>陰上</sup>]; XH(BX) [yn<sup>上</sup>]; XX [yən<sup>上</sup>]  
CMX \*yn<sup>陰上</sup>

### 3.6 Finals Ended with the Coda -ŋ

3.6.1 CMX \*-aŋ. This final is widely attested in the popular layer, and is usually the corresponding vernacular form opposed to the literary final \*-əŋ (see section 3.6.10). It has lost its coda and nasalized to -ã in Shàoyáng and -õ in Hénghān and Xiāngxiāng. Note that the nasalized vowels are commonly found moving in parallel with the change of their oral counterparts. In Hénghān \*-aŋ merged into \*-əŋ before nasalizing to \*-õ and is then parallel to \*-ɔ. Likewise Xiāngxiāng's \*-aŋ nasalized to the intermediate \*-ã and changed in parallel with \*-a introduced in 3.1.1. As mentioned in 3.5, the coda \*-ŋ has mostly softened to -u in Chénxī.

彭 péng QYS \*ba<sup>ʔ</sup>jŋ

CS [pən<sup>陽平</sup>]; CX [bəu<sup>陽平</sup>]; HS [p<sup>h</sup>ɛi<sup>陽平</sup>]; HY [puen<sup>陽平</sup>]; PJ [paŋ<sup>陽平</sup>]; QY [bən<sup>陽平</sup>]; SS [bən<sup>陽平</sup>]; SY(CL) [beŋ<sup>陽平</sup>]; XH(BX) [b<sup>h</sup>ən<sup>陽平</sup>]; XX [biã<sup>陽平</sup>]  
CMX \*baŋ<sup>陽平</sup><sub>白</sub> ~ \*bəŋ<sup>陽平</sup><sub>文</sub>

爭 zhēng QYS \*tʂɛ<sup>ʔ</sup>jŋ

CS [tsən<sup>陰平</sup>]; CX [tsei<sup>陰平</sup>]; HS [tsō<sup>陰平</sup><sub>白</sub> ~ tsēi<sup>陰平</sup><sub>文</sub>]; HY [tsen<sup>陰平</sup>]; PJ [tsaŋ<sup>陰平</sup>]; QY [tsən<sup>陰平</sup>]; SS [tsən<sup>陰平</sup>]; SY(CL) [tseŋ<sup>陰平</sup>]; XH(BX) [tʂən<sup>陰平</sup>]; XX [tsō<sup>陰平</sup><sub>白</sub> ~ tɕiã<sup>陰平</sup><sub>文</sub>]  
 CMX \*tʃaŋ<sup>陰平</sup><sub>白</sub> ~ \*tʃəŋ<sup>陰平</sup><sub>文</sub>

Note that the material of Hóngshān recorded an additional reading [tsǎ̃] for syllable 爭. However the author clarified that it is borrowed from nearby Xiāngtán (湘潭) dialect and is relatively less in use (Peng, 1999, p. 85). Hence, this layer has not been included in our reconstruction.

坑 kēng QYS \*k<sup>h</sup>aŋ<sup>h</sup>

CS [k<sup>h</sup>ən<sup>陰平</sup>]; CX [k<sup>h</sup>ei<sup>陰平</sup>]; HS [k<sup>h</sup>ō<sup>陰平</sup><sub>白</sub> ~ k<sup>h</sup>en<sup>陰平</sup><sub>文</sub>]; HY [k<sup>h</sup>en<sup>陰平</sup>]; PJ [k<sup>h</sup>aŋ<sup>陰平</sup><sub>白</sub> ~ k<sup>h</sup>en<sup>陰平</sup><sub>文</sub>]; QY [k<sup>h</sup>ən<sup>陰平</sup>]; SY(CL) [k<sup>h</sup>ǎ<sup>陰平</sup>]; XH(BX) [k<sup>h</sup>ō<sup>陰平</sup>]; XX [k<sup>h</sup>ō<sup>陰平</sup>]  
 CMX \*k<sup>h</sup>aŋ<sup>陰平</sup><sub>白</sub> ~ k<sup>h</sup>əŋ<sup>陰平</sup><sub>文</sub>

Hóngshān's literary final -eŋ is a modern borrowing more recent than -ēi.

硬 y ñg QYS \*ŋeŋ<sup>h</sup>

CS [ŋən<sup>陽去</sup><sub>白</sub> ~ ŋən<sup>陰去</sup><sub>文</sub>]; CX [ŋei<sup>陽去</sup>]; HS [ŋēi<sup>陽去</sup>]; HY [ŋen<sup>陽去</sup>]; PJ [ŋaŋ<sup>陽去</sup>]; QY [ŋən<sup>陽去</sup>]; SS [ŋən<sup>陽去</sup><sub>白</sub> ~ ŋən<sup>陰去</sup><sub>文</sub>]; SY(CL) [ŋǎ<sup>陰平</sup><sub>白</sub> ~ ŋeŋ<sup>陰去</sup><sub>文</sub>]; XH(BX) [au<sup>陰平</sup>]; XX [ŋō<sup>陽去</sup><sub>白</sub> ~ ŋiǎ<sup>陽去</sup><sub>文</sub>]  
 CMX \*ŋaŋ<sup>陽去</sup><sub>白</sub> ~ \*ŋəŋ<sup>陽去</sup><sub>文</sub>

The form of 硬 in Xīnhuà Bǎixī possibly comes from a nasalized vowel or diphthong through \*-ō > \*-ōũ > \*ǎũ > -au.

3.6.2 CMX \*-iaŋ. This is a popular vernacular final with a corresponding literary form \*-iŋ. It has deleted its coda and nasalized in Hóngshān, Sháoishān and Shàoyáng. In Xiāngxiāng it has further shifted to -iō. The shift of this final with the nasalized vowel [ō] is parallel to Xiāngxiāng's shift of finals \*-ia and \*-io towards -io shown in sections 3.1.2 and 3.1.6.

病 b ñg QYS \*biaŋ<sup>h</sup>

CS [pin<sup>陽去</sup><sub>白</sub> ~ pin<sup>陰去</sup><sub>文</sub>]; CX [pei<sup>陽去</sup>]; HS [piǎ<sup>陽去</sup><sub>白</sub> ~ pien<sup>陽去</sup><sub>文</sub>]; HY [pian<sup>陽去</sup><sub>白</sub> ~ pin<sup>陽去</sup><sub>文</sub>]; PJ [bian<sup>陽去</sup>]; QY [bian<sup>陽去</sup><sub>白</sub> ~ bin<sup>陰去</sup><sub>文</sub>]; SS [biǎ<sup>陽去</sup><sub>白</sub> ~ piən<sup>陰去</sup><sub>文</sub>]; SY(CL) [biǎ<sup>陽去</sup><sub>白</sub> ~

beŋ<sup>陽去</sup><sub>文</sub>]; XH(BX) [p<sup>h</sup>iã<sup>陰平</sup><sub>白</sub> ~ b<sup>h</sup>in<sup>入</sup><sub>文</sub>]; XX [bið<sup>陽去</sup><sub>白</sub> ~ bin<sup>陽去</sup><sub>文</sub>]

CMX \*biaŋ<sup>陽去</sup><sub>白</sub> ~ \*biŋ<sup>陽去</sup><sub>文</sub>

聲 shēng QYS \*eiajŋ

CS [sən<sup>陰平</sup>]; CX [ɕei<sup>陰平</sup>]; HS [eiã<sup>陰平</sup><sub>白</sub> ~ eien<sup>陰平</sup><sub>文</sub>]; HY [eian<sup>陰平</sup><sub>白</sub> ~ ein<sup>陰平</sup><sub>文</sub>]; PJ [ɕaŋ<sup>陰平</sup><sub>白</sub> ~ ɕən<sup>陰平</sup><sub>文</sub>]; QY [ʃin<sup>陰平</sup>]; SS [ɕã<sup>陰平</sup><sub>白</sub> ~ ɕən<sup>陰平</sup><sub>文</sub>]; SY(CL) [ɕeŋ<sup>陰平</sup>]; XH(BX) [ɕən<sup>陰平</sup>]; XX [eið<sup>陰平</sup><sub>白</sub> ~ eiɒn<sup>陰平</sup><sub>文</sub>]

CMX \*ɕiaŋ<sup>陰平</sup><sub>白</sub> ~ \*ɕiŋ<sup>陰平</sup><sub>文</sub>

頸 jǐng QYS \*kjaŋ<sup>?</sup>

CS [tɕin<sup>上</sup>]; CX [tɕiau<sup>上</sup><sub>白</sub> ~ tɕiei<sup>上</sup><sub>文</sub>]; HS [tã<sup>上</sup><sub>白</sub> ~ teŋ<sup>上</sup><sub>文</sub>]; HY [tɕian<sup>上</sup><sub>白</sub> ~ tɕin<sup>上</sup><sub>文</sub>]; PJ [tɕiaŋ<sup>上</sup>]; QY [tɕiaŋ<sup>上</sup><sub>白</sub> ~ tɕin<sup>上</sup><sub>文</sub>]; SS [ciã<sup>上</sup><sub>白</sub> ~ ciən<sup>上</sup><sub>文</sub>]; SY(CL) [tɕã<sup>上</sup>]; XH(BX) [tɕiã<sup>上</sup><sub>白</sub> ~ tɕin<sup>上</sup><sub>文</sub>]; XX [kið<sup>上</sup><sub>白</sub> ~ kin<sup>上</sup><sub>文</sub>]

CMX \*kiaŋ<sup>上</sup><sub>白</sub> ~ \*kiŋ<sup>上</sup><sub>文</sub>

3.6.3 CMX \*-uaŋ. The literary form is \*-un.

橫 h éng QYS \*ɣwaŋ

CS [fən<sup>陽平</sup>]; CX [uei<sup>陽平</sup>]; HS [feŋ<sup>陽平</sup>]; HY [fən<sup>陽平</sup>]; PJ [uaŋ<sup>陽平</sup>]; QY [ɣuən<sup>陽平</sup>]; SS [xuən<sup>陽平</sup>]; SY(CL) [ueŋ<sup>陽平</sup>]; XH(BX) [xun<sup>陽平</sup>]; XX [ɣuɒn<sup>陽平</sup>]

CMX \*ɣuaŋ<sup>陽平</sup><sub>白</sub> ~ \*ɣun<sup>陽平</sup><sub>文</sub>

3.6.4 CMX \*-yaŋ. This is a peripheral final limited to a few examples with initial zero. Its corresponding literary form is \*-yn.

縈 y íng QYS \*ʔwiajŋ

CS<sub>2</sub> [ian<sup>陰平</sup><sub>白</sub> ~ yn<sup>陰平</sup><sub>文</sub>]; HS [yã<sup>陰平</sup>]; HY [yn<sup>陰平</sup>]; ML(CL) [yã<sup>陰平</sup>]; XH [ið<sup>陰平</sup>]; XP [i<sup>陽平</sup>]; XX [ið<sup>陰平</sup><sub>白</sub> ~ yɒn<sup>陽平</sup><sub>文</sub>]

CMX \*yaŋ<sup>陰平</sup><sub>白</sub> ~ \*yn<sup>陽平</sup><sub>文</sub>

3.6.5 CMX \*-iəŋ. This is a problematic final as it may not have been borrowed at the time of CMX. It contrasts final \*-iəŋ in Xīnhuà while contrasts \*-iaŋ in P íngjiāng

and Xiāngxiāng. Only relevant layers are picked for comparison in Table 3.11.

**Table 3.11: contrasts among \*-iəŋ, \*-iəŋ, and \*-iaŋ**

	XH	XH(BX)	PJ	XX
江 CMX *kiəŋ <sup>陰平</sup>	tei <sup>33</sup>	tei <sup>33</sup>	tei <sup>55</sup>	kiaŋ <sup>55</sup>
腔 CMX *k <sup>h</sup> iəŋ <sup>陰平</sup>	te <sup>h</sup> i <sup>33</sup>	te <sup>h</sup> i <sup>33</sup>	te <sup>h</sup> i <sup>55</sup>	k <sup>h</sup> iaŋ <sup>55</sup>
姜 CMX *kiəŋ <sup>陰平</sup>	tey <sup>33</sup>	tey <sup>33</sup>	tɕəŋ <sup>55</sup>	kiaŋ <sup>55</sup>
享 CMX *xiəŋ <sup>陰上</sup>	ey <sup>21</sup>	ey <sup>31</sup>	eiəŋ <sup>53</sup>	eiəŋ <sup>21</sup>
輕 CMX *k <sup>h</sup> iaŋ <sup>陰平</sup>	te <sup>h</sup> i <sup>33</sup>	te <sup>h</sup> i <sup>33</sup>	te <sup>h</sup> iaŋ <sup>55</sup>	k <sup>h</sup> i <sup>55</sup>
頸 CMX *kiaŋ <sup>陰上</sup>	tei <sup>21</sup>	tei <sup>31</sup>	teiaŋ <sup>53</sup>	ki <sup>21</sup>

降 xiáng QYS \*ɣa<sup>1</sup>wəŋ

CS [eian<sup>陽平</sup>]; CX [eiau<sup>陽平</sup>]; HS [te<sup>h</sup>i<sup>33</sup>]; HY [xan<sup>陽平</sup> ~ eian<sup>陽平</sup>]; PJ [eiəŋ<sup>陽平</sup>]; QY [dʒian<sup>陽平</sup>]; SS [ɕian<sup>陽平</sup>]; SY(CL) [iā<sup>陽平</sup>]; XH(BX) [eiā<sup>陽平</sup>]; XX [ɣian]

CMX \*ɣəŋ<sup>陽平</sup> ~ \*ɣiəŋ<sup>陽平</sup>

3.6.6 CMX \*-əŋ. This initial is commonly unrounded to -aŋ in many dialects. In some dialects the coda -ŋ is further fronted to -n or directly deleted, with the nucleus assimilated to a nasalized vowel.

唐 táng QYS \*daŋ

CS [tan<sup>陽平</sup>]; CX [dau<sup>陽平</sup>]; HS [t<sup>h</sup>ɔ̃<sup>陽平</sup>]; HY [tan<sup>陽平</sup>]; PJ [doŋ<sup>陽平</sup>]; QY [daŋ<sup>陽平</sup>]; SS [daŋ<sup>陽平</sup>]; SY(CL) [dā<sup>陽平</sup>]; XH(BX) [d<sup>h</sup>ɔ̃<sup>陽平</sup>]; XX [daŋ<sup>陽平</sup>]

CMX \*dəŋ<sup>陽平</sup>

岡 gāng QYS \*kaŋ

CS [kan<sup>陰平</sup>]; CX [kau<sup>陰平</sup>]; HS [kɔ̃<sup>陰平</sup>]; HY [kan<sup>陰平</sup>]; PJ [koŋ<sup>陰平</sup>]; QY [kaŋ<sup>陰平</sup>]; SS [kaŋ<sup>陰平</sup>]; SY(CL) [kā<sup>陰平</sup>]; XH(BX) [kɔ̃<sup>陰平</sup>]; XX [kaŋ<sup>陰平</sup>]

CMX \*kəŋ<sup>陰平</sup>

Several lexemes after velar initials show contrasts between vernacular final \*-əŋ and literary final \*-iəŋ, which has been introduced in section 3.6.5. However there is a noticeable issue regarding the vernacular forms for lexemes 江 and 講 in Hóngyáng.

They both bear a final -uan, opposed to the regular -an form. In this thesis they are treated as irregularities. Nonetheless these irregular pronunciations might indicate an archaic layer of MC Division II syllables.

講 jiǎng QYS \*ka<sup>r</sup>wŋ<sup>?</sup>

CS [kan<sup>上白</sup> ~ teian<sup>上文</sup>]; CX [kau<sup>上白</sup> ~ teiau<sup>上文</sup>]; HS [kō<sup>上白</sup> ~ tō<sup>上文</sup>]; HY [kuan<sup>上白</sup> ~ teian<sup>上文</sup>]; PJ [koŋ<sup>上</sup>]; QY [kaŋ<sup>上白</sup> ~ tʃiaŋ<sup>上文</sup>]; SS [kaŋ<sup>上白</sup> ~ ciaŋ<sup>上文</sup>]; SY(CL) [kã<sup>陰上白</sup> ~ tʃã<sup>陰上文</sup>]; XH(BX) [kō<sup>上白</sup> ~ teiã<sup>上文</sup>]; XX [kaŋ<sup>上白</sup> ~ kiaŋ<sup>上文</sup>]

CMX \*kəŋ<sup>陰上白</sup> ~ \*kiaŋ<sup>陰上文</sup>

### 3.6.7 CMX \*-iəŋ.

良 liáng QYS \*liaŋ

CS [lian<sup>陽平</sup>]; CX [diau<sup>陽平</sup>]; HS [liō<sup>陽平</sup>]; HY [lian<sup>陽平</sup>]; PJ [lioŋ<sup>陽平</sup>]; QY [liaŋ<sup>陽平</sup>]; SS [liaŋ<sup>陽平</sup>]; SY(CL) [niã<sup>陽平</sup>]; XH(BX) [liã<sup>陽平</sup>]; XX [niaŋ<sup>陽平</sup>]

CMX \*lioŋ<sup>陽平</sup>

上 shàng QYS \*dziaŋ<sup>?</sup>

CS [san<sup>陽去白</sup> ~ san<sup>陰去文</sup>]; CX [sau<sup>陽去</sup>]; HS [eiō<sup>陽去</sup>]; HY [eian<sup>陽去</sup>]; PJ [soŋ<sup>陽去</sup>]; QY [ziaŋ<sup>去</sup>]; SS [ʃaŋ<sup>陽去白</sup> ~ ʃaŋ<sup>陰去文</sup>]; SY(CL) [zã<sup>陽上白</sup> ~ zã<sup>陽去文</sup>]; XH [zyō<sup>上白</sup> ~ zyō<sup>去文</sup>]; XX [yiaŋ<sup>陽去</sup>]

CMX \*zioŋ<sup>陽上</sup>

陽 yang QYS \*jiaŋ

CS [ian<sup>陽平</sup>]; CX [iau<sup>陽平</sup>]; HS [iō<sup>陽平</sup>]; HY [ian<sup>陽平</sup>]; PJ [ioŋ<sup>陽平</sup>]; QY [iaŋ<sup>陽平</sup>]; SS [iaŋ<sup>陽平</sup>]; SY(CL) [iã<sup>陽平</sup>]; XH(BX) [yō<sup>陽平</sup>]; XX [iaŋ<sup>陽平</sup>]

CMX \*ioŋ<sup>陽平</sup>

3.6.8 CMX \*-uəŋ. There is a tendency to delete the glide \*u- in many dialects, particularly following the post-alveolar initials.

雙 shuāng QYS \*ʃa<sup>r</sup>wŋ

CS [eyan<sup>陰平</sup>]; CX [sau<sup>陰平</sup>]; HS [sō<sup>陰平</sup>]; HY [suan<sup>陰平</sup>]; PJ [soŋ<sup>陰平</sup>]; QY [suan<sup>陰平</sup>]; SS

[saŋ<sup>陰平</sup>]; SY(CL) [suã<sup>陰平</sup>]; XH(BX) [sõ<sup>陰平</sup>]; XX [saŋ<sup>陰平</sup>]

CMX \*ɟuəŋ<sup>陰平</sup>

廣 guǎng QYS \*kwaŋ<sup>2</sup>

CS [kuan<sup>上</sup>]; CX [kuau<sup>上</sup>]; HS [kõ<sup>上</sup>]; HY [kuan<sup>上</sup>]; PJ [koŋ<sup>上</sup>]; QY [kuaŋ<sup>上</sup>]; SS [kaŋ<sup>上</sup>];  
SY(CL) [kuã<sup>上</sup>]; XH(BX) [kõ<sup>上</sup>]; XX [kaŋ<sup>上</sup>]

CMX \*kuəŋ<sup>陰上</sup>

黃 huáng QYS \*ɣwaŋ

CS [uan<sup>陽平</sup>]; CX [uau<sup>陽平</sup>]; HS [xõ<sup>陽平</sup>]; HY [fan<sup>陽平</sup> ~ uan<sup>陽平</sup>]; PJ [foŋ<sup>陽平</sup>]; QY [ɣuaŋ<sup>陽平</sup>];  
SS [xaŋ<sup>陽平</sup>]; SY(CL) [vã<sup>陽平</sup>]; XH(BX) [ɣõ<sup>陽平</sup>]; XX [ŋ<sup>陽平</sup><sub>白1</sub> ~ uaŋ<sup>陽平</sup><sub>白2</sub> ~ ɣaŋ<sup>陽平</sup><sub>文</sub>]

CMX \*ɣuəŋ<sup>陽平</sup>

3.6.9 CMX \*-yəŋ. This final occurs in the vernacular layer only. It has merged with \*-yaŋ in Xīnhuà and with \*-iəŋ in Héngyáng, Qíyáng, Shàoyáng, and Xiāngxiāng. Contrasts against \*-iəŋ, \*-iəŋ, and \*-iaŋ are observed in dialects like Lóngshuǐ (隆回) and Píngjiāng. Though final \*-yaŋ has not been recorded in many of the dialects, it differs from \*-yəŋ in Mǎlù Chánglè. Table 3.12 lists the comparison across the dialects. Only relevant layers are picked.

Table 3.12: distinct \*-yəŋ

	LH	XH	PJ	ML(CL)
框 CMX *k <sup>h</sup> yəŋ <sup>陰平</sup>	tʃ <sup>h</sup> ia <sup>55</sup>	tɕ <sup>h</sup> iã <sup>33</sup>	k <sup>h</sup> oŋ <sup>55</sup>	t <sup>h</sup> oŋ <sup>33</sup>
腔 CMX *k <sup>h</sup> iəŋ <sup>陰平</sup>	tʃ <sup>h</sup> õ <sup>55</sup>	tɕ <sup>h</sup> iã <sup>33</sup>	tɕ <sup>h</sup> ioŋ <sup>55</sup>	t <sup>h</sup> oŋ <sup>33</sup>
羌 CMX *k <sup>h</sup> iəŋ <sup>陰平</sup>	tʃ <sup>h</sup> õ <sup>55</sup>	tɕ <sup>h</sup> yõ <sup>33</sup>	tɕ <sup>h</sup> ioŋ <sup>55</sup>	-
輕 CMX *k <sup>h</sup> iaŋ <sup>陰平</sup>	tʃ <sup>h</sup> ia <sup>55</sup>	tɕ <sup>h</sup> iã <sup>33</sup>	tɕ <sup>h</sup> iaŋ <sup>55</sup>	tɕ <sup>h</sup> iã <sup>33</sup>
縈 CMX *yaŋ <sup>陰平</sup>	-	iã <sup>33</sup>	-	yã <sup>33</sup>

筐 kuāng QYS \*k<sup>h</sup>uaŋ

CS [k<sup>h</sup>uan<sup>陰平</sup>]; CX [k<sup>h</sup>uau<sup>陰平</sup>]; HS [t<sup>h</sup>õ<sup>陰平</sup><sub>白</sub> ~ k<sup>h</sup>õ<sup>陰平</sup><sub>文</sub>]; HY [k<sup>h</sup>an<sup>陰平</sup>]; PJ [k<sup>h</sup>uoŋ<sup>陰平</sup>];  
QY [tʃ<sup>h</sup>iaŋ<sup>陰平</sup><sub>白</sub> ~ k<sup>h</sup>uaŋ<sup>陰平</sup><sub>文</sub>]; SS [c<sup>h</sup>iaŋ<sup>陰平</sup>]; SY(CL) [tɕ<sup>h</sup>ã<sup>陰平</sup>]; XH(BX) [tɕ<sup>h</sup>iã<sup>陰平</sup>]; XX [k<sup>h</sup>iaŋ<sup>陰平</sup>]

CMX \*k<sup>h</sup>yəŋ<sup>陰平</sup> 白 ~ \*k<sup>h</sup>uəŋ<sup>陰平</sup> 文

3.6.10 CMX \*-əŋ. This final contrasts \*-ən in Chánǐng Xīlù (常寧西路, the western part of Chánǐng) and, to a lesser extent, in Yìyáng and Shuāngfēng Héyè. The other dialects have overwhelmingly merged them. Table 3.13 lists four of these pairs in Chánǐng and Yìyáng.

**Table 3.13: contrast between \*-əŋ and \*-ən**

	崩	奔	蹭	襯	僧	森	衡	痕
CN(XL)	peŋ <sup>55</sup>	pen <sup>55</sup>	ts <sup>h</sup> əŋ <sup>35</sup>	tɕ <sup>h</sup> in <sup>35</sup>	seŋ <sup>55</sup>	sen <sup>55</sup>	ɣeŋ <sup>11</sup>	ɣen <sup>11</sup>
YiY	pən <sup>33</sup>	pən <sup>33</sup>	ts <sup>h</sup> ɿŋ <sup>13</sup>	ts <sup>h</sup> ən <sup>53</sup>	sɿŋ <sup>33</sup>	-	ɿŋ <sup>13</sup>	ɿ <sup>13</sup>
CMX	*pəŋ <sup>陰平</sup>	*pən <sup>陰平</sup>	*ts <sup>h</sup> əŋ <sup>陰去</sup>	*tɕ <sup>h</sup> ən <sup>陰去</sup>	*səŋ <sup>陰平</sup>	*ʃən <sup>陰平</sup>	*ɣəŋ <sup>陰平</sup>	*ɣən <sup>陰平</sup>

The form of 襯 in western Chánǐng is somewhat irregular, yet otherwise the pattern of contrast is clear. Xiāng dialects that still retain this type of contrast are extremely rare. Even in Chánǐng, the boundary between \*-əŋ and \*-ən is getting blurred. However the direction of merger is rather straightforward in the corpus of Chánǐng Xīlù only \*-əŋ is merging into \*-ən, but not vice versa. Thus it is totally possible that some syllables originally from the \*-əŋ group had just merged into \*-ən at the time of investigation. The direction in Yìyáng is different, where those \*-əŋ following CMX labials and post-alveolars are merging into \*-ən, while the opposite direction prevails elsewhere. It also rings us the bell about the urgency for field investigations, that more sophisticated data would help the reconstruction of a more accurate CMX phonology.

燈 dēng QYS \*təŋ

CN(XL) [teŋ<sup>陰平</sup>]; CS [tən<sup>陰平</sup>]; CX [tei<sup>陰平</sup>]; HS [tēi<sup>陰平</sup>]; HY [ten<sup>陰平</sup>]; PJ [ten<sup>陰平</sup>]; QY [tən<sup>陰平</sup>]; SS [tən<sup>陰平</sup>]; SY(CL) [teŋ<sup>陰平</sup>]; XH(BX) [tiē<sup>陰平</sup>]; XX [tiā<sup>陰平</sup>]

CMX \*təŋ<sup>陰平</sup>

層 céng QYS \*dzəŋ

CN(XL) [dzeŋ<sup>陽平</sup>]; CS [tsən<sup>陽平</sup>]; CX [dzei<sup>陽平</sup>]; HS [ts<sup>h</sup>ēi<sup>陽平</sup>]; HY [tsen<sup>陽平</sup>]; PJ [dzen<sup>陽</sup>]



平]; QY [dzən<sup>陽平</sup>]; SS [dzən<sup>陽平</sup>]; SY(CL) [dzeŋ<sup>陽平</sup>]; XH(BX) [dz<sup>h</sup>ən<sup>陽平</sup>]; XX [dzia<sup>陽平</sup>]  
CMX \*dzəŋ<sup>陽平</sup>

Xīnhuà seems to have experienced competing changes leading to either -ən or -iě.

哽 gěng QYS \*ka<sup>r</sup>jŋ?

CN(XL) [keŋ<sup>上</sup>]; CS [kən<sup>上</sup>]; CX [kei<sup>上</sup>]; HS [k<sup>h</sup>õ<sup>上</sup><sub>白</sub> ~ kēi<sup>上</sup><sub>文</sub>]; HY [ken<sup>上</sup>]; PJ [ken<sup>上</sup>];

QY [kən<sup>去</sup>]; SS [kən<sup>上</sup>]; SY [kən<sup>上</sup>]; XH [kõ<sup>上</sup>]; XX [kõ<sup>上</sup><sub>白</sub> ~ kiã<sup>上</sup><sub>文</sub>]

CMX \*kaŋ<sup>陰上</sup><sub>白</sub> ~ \*kəŋ<sup>陰上</sup><sub>文</sub>

The tone of 哽 in Q<sup>ý</sup>áng is irregular, possibly a misreading.

3.6.11 CMX \*-iŋ. This is a final found to be distinguished from \*-in only in Chángnóng Xīlù. Its phonetic value in the CMX system might well have been iəŋ, which aligns with \*-əŋ and \*-uəŋ better. However since there is not a contrast found, a simpler \*-iŋ has been adopted to denote this group of syllables. It also serves as the literary form against \*-iaŋ.

**Table 3.14: contrast between \*-iŋ and \*-in**

	兵	亭	映	賓	林	印
CN(XL)	piŋ <sup>55</sup>	diŋ <sup>11</sup>	iŋ <sup>35</sup>	pin <sup>55</sup>	din <sup>11</sup>	in <sup>35</sup>
CMX	*piŋ <sup>陰平</sup>	*diŋ <sup>陽平</sup>	*iŋ <sup>陰去</sup>	*pin <sup>陰平</sup>	*lin <sup>陽平</sup>	*in <sup>陰去</sup>

There are no syllables with CMX alveolar or post-alveolar initials found in this group of -iŋ in Chángnóng. Applying strictly the least upper bound strategy, the combination of CMX post-alveolars with \*-iŋ has been ruled out. A potential problem associated here is that this final is fairly eccentric within the system in that it cannot follow coronal sibilants, while all the other finals that begin with a vowel i (excluding borrowings) can. Thus it is risky of inefficacy to cover potentially conservative dialects around Chángnóng that has not yet been discovered by scholars. In fact, Chángnóng Xīlù itself is experiencing a process of -iŋ mixing into -in (though not vice versa). It is likely that this dialect had possessed -iŋ following coronal sibilants. Nonetheless, the study adheres to a rather conservative attitude.

Qu ánhōu dialect may also drop a hint on the same issue. A few syllables that are usually unrounded in most other dialects appear rounded here. Table 3.15 illustrates these examples, together with QYS reconstructions.

**Table 3.15: final -yeŋ in QZ**

	乘	繩	蠅	剩	神	腎
QZ	zyeŋ <sup>13</sup>	zyeŋ <sup>13</sup>	zyeŋ <sup>13</sup>	zyeŋ <sup>35</sup>	ziŋ <sup>13</sup>	ziŋ <sup>35</sup>
QYS	*ziŋ	*ziŋ	*jiŋ	*ziŋ <sup>h</sup>	*zin	*dziŋ <sup>?</sup>

The four syllables on the left contrasts the last two. What is interesting is that the final -yeŋ is not found for etymons with QYS \*-in (or \*-im). The presence of the glide y- is possibly related to the contrast, yet the mechanism is unclear. Conversely, the syllables ended by -yeŋ might be part of a lexical diffusion, and the fact that they are confined to \*-iŋ is only coincidental.

Nevertheless, one should keep in mind that this reconstructed final \*-iŋ is subject to further revision once there is more updated data supporting such a revamp.

平 p íng QYS \*biaŋ

CN(XL) [biaŋ<sup>陽平</sup><sub>白</sub> ~ biŋ<sup>陽平</sup><sub>文</sub>]; CS [pin<sup>陽平</sup>]; CX [bei<sup>陽平</sup>]; HS [p<sup>h</sup>iã<sup>陽平</sup><sub>白</sub> ~ p<sup>h</sup>ien<sup>陽平</sup><sub>文</sub>]; HY [pian<sup>陽平</sup><sub>白</sub> ~ pin<sup>陽平</sup><sub>文</sub>]; PJ [biaŋ<sup>陽平</sup>]; QY [bin<sup>陽平</sup>]; SS [biən<sup>陽平</sup>]; SY(CL) [biã<sup>陽平</sup><sub>白</sub> ~ beŋ<sup>陽平</sup><sub>文</sub>]; XH(BX) [b<sup>h</sup>in<sup>陽平</sup>]; XX [biō<sup>陽平</sup><sub>白</sub> ~ bin<sup>陽平</sup><sub>文</sub>]

CMX \*biaŋ<sup>陽平</sup><sub>白</sub> ~ \*biŋ<sup>陽平</sup><sub>文</sub>

迎 y íng QYS \*ŋiaŋ

CN(XL) [iŋ<sup>陽平</sup>]; CS [in<sup>陽平</sup>]; HY [ŋin<sup>陽平</sup>]; PJ [in<sup>陽平</sup>]; QY [in<sup>陽平</sup>]; SS [niən<sup>陽平</sup>]; SY(CL) [ieŋ<sup>陽平</sup>]; XH(BX) [in<sup>陽平</sup>]; XP [ŋi<sup>陽平</sup>]; XX [ŋin<sup>陽平</sup>]

CMX \*ŋiŋ<sup>陽平</sup>

3.6.12 CMX \*-uəŋ. This final is reconstructed because in a few dialects such as Ānhu à(安化), there are several etymons with final -əŋ, contrasting local counterparts of CMX \*-uŋ origin. These etymons are merged with \*-uŋ among the majority of Xiāng Dialects, for example Sh àoy áng. It is illustrated in Table 3.16. S ĵ hóng of

Yu ánjiāng (沅江四季紅) is an emigrant community originated from Ānhu à and the same pattern of evolution can be found there (Zang, 2007).

**Table 3.16: contrasts among \*-uəŋ, \*-uŋ, and \*-əŋ**

	轟	弘	宏	烘	紅	亨	恆
AH	xən <sup>33</sup>	ɣən <sup>13</sup>	ɣən <sup>13</sup>	xoŋ <sup>33</sup>	ɣoŋ <sup>13</sup>	xən <sup>33</sup>	ɣən <sup>13</sup>
SY	xuŋ <sup>55</sup>	ɣuŋ <sup>11</sup>	ɣuŋ <sup>11</sup>	xuŋ <sup>55</sup>	ɣuŋ <sup>11</sup>	xən <sup>55</sup>	ɣən <sup>11</sup>
CMX	*xuəŋ <sup>陰平</sup>	*ɣuəŋ <sup>陽平</sup>	*ɣuəŋ <sup>陽平</sup>	*xuŋ <sup>陰平</sup>	*ɣuŋ <sup>陽平</sup>	*xəŋ <sup>陰平</sup>	*ɣəŋ <sup>陽平</sup>

Additionally, two lexemes in Qu ánhōu dialect from this group occupy a separate syllabic position of their own (a *syllabeme* (Nhan, 1984), as used in some East Asian language studies), though the phonetic values have changed quite a lot compared to CMX reconstruction. This material has facilitated the reconstruction of a separate final \*-uəŋ. The possible sound change is \*xuəŋ > \*xuəŋ > \*fuəŋ > fəŋ.

**Table 3.17: CMX \*-uəŋ in QZ**

	轟	掬	烘	亨	昏
QZ	fəŋ <sup>33</sup>	fəŋ <sup>33</sup>	xoŋ <sup>33</sup>	xəŋ <sup>33</sup>	fəŋ <sup>33</sup>
CMX	*xuəŋ <sup>陰平</sup>	*xuəŋ <sup>陰平</sup>	*xuŋ <sup>陰平</sup>	*xəŋ <sup>陰平</sup>	*xun <sup>陰平</sup>

3.6.13 CMX \*iuŋ. This final has mostly merged with \*-uŋ in dialects like Ch ángshā, unless following CMX velar fricatives or initial zero. There are some syllables that have literary forms of \*-uŋ opposed to \*-iuŋ. These literary readings are skeptically inter-dialect borrowings, yet more data is needed for further clarification. In principal they have been reconstructed separately.

濃 n óng QYS \*ɲuawŋ

CS [lən<sup>陽平</sup>]; CX [niəu<sup>陽平</sup> ~ nəu<sup>陽平</sup>]; HS [lən<sup>陽平</sup>]; HY [lən<sup>陽平</sup>]; PJ [lən<sup>陽平</sup>]; QY [loŋ<sup>陽平</sup>]; SS [nən<sup>陽平</sup>]; SY(CL) [nə̃<sup>陽平</sup>]; XH [yn<sup>陽平</sup> 白 ~ lən<sup>陽平</sup> 文]; XH(BX) [lən<sup>陽平</sup>]; XX [nən<sup>陽平</sup>]

CMX \*niuŋ<sup>陽平</sup> 白 ~ nuŋ<sup>陽平</sup> 文

衝 chōng QYS \*tə<sup>h</sup>uawŋ

CS [ts<sup>h</sup>ən<sup>陰平</sup>]; CX [tɕ<sup>h</sup>əu<sup>陰平</sup>]; HS [t<sup>h</sup>ueŋ<sup>陰平</sup>]; HY [ts<sup>h</sup>əŋ<sup>陰平</sup>]; PJ [tɕ<sup>h</sup>iəŋ<sup>陰平</sup>]; QY [ts<sup>h</sup>oŋ<sup>陰平</sup>]; SS [tɕ<sup>h</sup>ən<sup>陰平</sup>]; SY(CL) [tɕ<sup>h</sup>ə̃<sup>陰平</sup>]; XH [tɕ<sup>h</sup>yn<sup>陰平</sup>]; XX [t<sup>h</sup>ʌn<sup>陰平</sup>]

CMX \*tɕ<sup>h</sup>iuŋ<sup>陰平</sup>

共 gòng QYS \*guawŋ<sup>h</sup>

CS [kən<sup>陽去</sup> ~ kən<sup>陰去</sup>]; CX [tɕeiəu<sup>陽去</sup> ~ kəu<sup>陽去</sup>]; HS [keŋ<sup>陽去</sup>]; HY [kəŋ<sup>陽去</sup>]; PJ [gəŋ<sup>陽去</sup>]; QY [goŋ<sup>去</sup>]; SS [gən<sup>陽去</sup> ~ kən<sup>陰去</sup>]; SY(CL) [gə̃<sup>陽去</sup>]; XH(BX) [xən<sup>入</sup>]; XX [gʌn<sup>陽去</sup>]

CMX \*giuŋ<sup>陽去</sup> ~ \*guŋ<sup>陽去</sup>

用 yòng QYS \*juawŋ<sup>h</sup>

CS [in<sup>陽去</sup> ~ in<sup>陰去</sup>]; CX [iəu<sup>陽去</sup>]; HS [yeŋ<sup>陽去</sup>]; HY [in<sup>陽去</sup>]; PJ [iəŋ<sup>陽去</sup>]; QY [ioŋ<sup>去</sup>]; SS [iən<sup>陽去</sup> ~ iən<sup>陰去</sup>]; SY(CL) [iə̃<sup>陰平</sup>]; XH(BX) [yn<sup>去</sup>]; XX [iʌn<sup>陽去</sup>]

CMX \*iuŋ<sup>陽去</sup>

3.6.14 CMX \*-uŋ. In dialects like Chángshā, Hángshān, Sháoshān, and Xiāngxiāng, this final has merged with \*-əŋ and \*-ən.

逢 féng QYS \*buawŋ

CS [xən<sup>陽平</sup>]; CX [fəu<sup>陽平</sup>]; HS [feŋ<sup>陽平</sup>]; HY [xəŋ<sup>陰平</sup>]; PJ [fəŋ<sup>陽平</sup>]; QY [voŋ<sup>陽平</sup>]; SS [xuən<sup>陽平</sup>]; SY(CL) [və̃<sup>陽平</sup>]; XH(BX) [xun<sup>陽平</sup>]; XX [yʌn<sup>陽平</sup>]

CMX \*vuŋ<sup>陽平</sup>

送 sàng QYS \*sowŋ<sup>h</sup>

CS [sən<sup>陰去</sup>]; CX [səu<sup>陰去</sup>]; HS [seŋ<sup>陰去</sup>]; HY [səŋ<sup>陰去</sup>]; PJ [səŋ<sup>陰去</sup>]; QY [soŋ<sup>去</sup>]; SS [sən<sup>陰去</sup>]; SY(CL) [sə̃<sup>陰去</sup>]; XH(BX) [sən<sup>去</sup>]; XX [sʌn<sup>陰去</sup>]

CMX \*suŋ<sup>陰去</sup>

### 3.7 Finals Ended with the Coda -t

The presence of voiceless stops in the coda position is attested from Pángjiāng dialect and from Luódǎ (羅代) dialect of Chángshā. The syllables involved are MC

Rùshēng (入聲) syllables. In a number of other Xiāng dialects, these syllables have dropped their plosive codas. However, they either remain in a separate tonal category, or behave distinctively in sound changes.

**Table 3.18: different behaviors of \*-it**

	PJ	CS(LD)	QY	XP	CMX
濕	ɲʔ <sup>入</sup>	ɲʔ <sup>入</sup>	ʃi <sup>入</sup>	ɲ <sup>陽平</sup>	*ʃit <sup>陰入</sup>
十	ɲʔ <sup>入</sup>	ɲʔ <sup>入</sup>	ʒi <sup>入</sup>	ɲ <sup>陽平</sup> ~ ɲ <sup>陰去</sup>	*ʒit <sup>陽入</sup>
詩	ɲ <sup>陰平</sup>	ɲ <sup>陰平</sup>	sɿ <sup>陰平</sup>	sɿ <sup>陰平</sup>	*ʃi <sup>陰平</sup>
始	ɲ <sup>上</sup>	ɲ <sup>陽去</sup>	sɿ <sup>上</sup>	sɿ <sup>上</sup>	*ʃi <sup>陰上</sup>
世	ɲ <sup>陰去</sup>	ɲ <sup>陰去</sup>	ʃi <sup>去</sup>	sɿ <sup>陰去</sup>	*ʃei <sup>陰去</sup>
時	ɲ <sup>陽平</sup>	ɲ <sup>陽平</sup>	ʒi <sup>陽平</sup>	sɿ <sup>陽平</sup>	*ʒi <sup>陽平</sup>
是	ɲ <sup>陽去</sup>	ɲ <sup>陽去</sup>	ʒi <sup>去</sup>	sɿ <sup>陽去</sup>	*ʒi <sup>陽上</sup>

In Table 3.18, Q ŷ á ng dialect maintains a separate tone for the \*Rùshēng (入聲) syllables in spite there is no coda left. In Xùpǔ, where not even a separate tone is observed for the syllables in concern, the retroflex initials from \*Rùshēng (入聲) tone are not as prone to apicalization as those otherwise.

No Xiāng dialect investigated so far has retained the phonetic value of coda \*-t. However, the contrasts below is better explained by the presence of \*-t and \*-k.

**Table 3.19: contrast between \*-t with \*-k**

	PJ	CX	XX	CMX
插	ts <sup>h</sup> ɑʔ <sup>入</sup>	ts <sup>h</sup> ɔ <sup>陽平</sup>	ts <sup>h</sup> a <sup>陽平</sup>	*tʃ <sup>h</sup> at <sup>陰入</sup>
拆	ts <sup>h</sup> aʔ <sup>入</sup>	ts <sup>h</sup> ai <sup>陽平</sup>	ts <sup>h</sup> o <sup>陽平</sup>	*tʃ <sup>h</sup> ak <sup>陰入</sup> 白 ~ *tʃ <sup>h</sup> ɛk <sup>陰入</sup> 文
合	x ɔʔ <sup>入</sup>	xɔ <sup>陰去</sup>	xua <sup>陰去</sup>	*ɣɔt <sup>陽入</sup>
鶴	xoʔ <sup>入</sup>	xɔ <sup>陽去</sup>	xɔ <sup>陰去</sup>	*ɣok <sup>陽入</sup>
骨	kuɛʔ <sup>入</sup>	kuei <sup>陽平</sup> 白 ~ ku <sup>陽平</sup> 文	kuei <sup>陽平</sup> 白 ~ ku <sup>陽平</sup> 文	*kut <sup>陰入</sup> 白 ~ *kuk <sup>陰入</sup> 文
谷	kuʔ <sup>入</sup>	kəu <sup>陽平</sup> 白 ~ ku <sup>陽平</sup> 文	ku <sup>陽平</sup>	*kuk <sup>陰入</sup>

It would be theoretically equivalent if we have chosen to reconstruct different sets of nuclei instead of the codas. However, this would expand the number of nucleal vowels to almost double the size of what CMX has now. By reconstructing \*-t and \*-k, the complexity of CMX system is considerably lower. Moreover, they are largely in parallel with the codas \*-n and \*-ŋ reconstructed in sections 3.5 and 3.6, resulting in a

much more symmetric system.

### 3.7.1 CMX \*-at.

發 fā QYS \*puat

CS [fa<sup>˥</sup>]; CX [fə<sup>陽平</sup>]; HS [fa<sup>˥</sup>]; HY [fa<sup>˥</sup>]; PJ [faʔ<sup>˥</sup>]; QY [pa<sup>˥</sup>]; SS [xua<sup>˥</sup>]; SY(CL) [fa<sup>陰平</sup>]; XH(BX) [fa<sup>˥</sup>]; XX [xua<sup>陽平</sup>]

CMX \*fat<sup>陰入</sup>

Some lexemes have a literary reading in addition to this vernacular \*-at one.

夾 jiá QYS \*ke<sup>r</sup>p

CS [ka<sup>˥</sup><sub>白</sub> ~ teia<sup>˥</sup><sub>文</sub>]; CX [kə<sup>陽平</sup><sub>白</sub> ~ teia<sup>陰去</sup><sub>文</sub>]; HS [ka<sup>˥</sup><sub>白</sub> ~ ta<sup>˥</sup><sub>文</sub>]; HY [ka<sup>˥</sup><sub>白</sub> ~ teia<sup>˥</sup><sub>文</sub>]; PJ [kaʔ<sup>˥</sup><sub>白</sub> ~ teiaʔ<sup>˥</sup><sub>文</sub>]; QY [ka<sup>˥</sup><sub>白</sub> ~ tʃia<sup>˥</sup><sub>文</sub>]; SS [ka<sup>˥</sup><sub>白</sub> ~ cia<sup>˥</sup><sub>文</sub>]; SY(CL) [ka<sup>陰平</sup>]; XH(BX) [eia<sup>˥</sup>]; XX [ka<sup>陽平</sup>]

CMX \*kat<sup>陰入</sup><sub>白</sub> ~ \*kiat<sup>陰入</sup><sub>文</sub>

### 3.7.2 CMX \*-iat. This final is the literary layer against \*-at.

甲 jiǎ QYS \*ka<sup>r</sup>p

CS [ka<sup>˥</sup><sub>白</sub> ~ teia<sup>˥</sup><sub>文</sub>]; CX [kə<sup>陽平</sup><sub>白</sub> ~ teia<sup>陰去</sup><sub>文</sub>]; HS [ta<sup>˥</sup>]; HY [teia<sup>˥</sup>]; PJ [kaʔ<sup>˥</sup>]; QY [tʃia<sup>˥</sup>]; SS [ka<sup>˥</sup><sub>白</sub> ~ cia<sup>˥</sup><sub>文</sub>]; SY(CL) [tʃa<sup>陰平</sup>]; XH(BX) [teia<sup>˥</sup>]; XX [ka<sup>陽平</sup><sub>白</sub> ~ kia<sup>陽平</sup><sub>文</sub>]

CMX \*kat<sup>陰入</sup><sub>白</sub> ~ \*kiat<sup>陰入</sup><sub>文</sub>

壓 yā QYS \*ʔa<sup>r</sup>p

CS [ŋa<sup>˥</sup><sub>白</sub> ~ ia<sup>˥</sup>]; CX [ɔ<sup>陽去</sup><sub>白</sub> ~ ia<sup>陰去</sup><sub>文</sub>]; HS [ia<sup>˥</sup>]; HY [ŋa<sup>陽去</sup><sub>白</sub> ~ ia<sup>˥</sup>]; PJ [iaʔ<sup>˥</sup>]; QY [ia<sup>˥</sup>]; SS [ia<sup>˥</sup>]; SY(CL) [ia<sup>陰平</sup>]; XH(BX) [ia<sup>˥</sup>]; XX [ŋã<sup>陽平</sup><sub>白</sub> ~ ia<sup>陽平</sup><sub>文</sub>]

CMX \*at<sup>陰入</sup><sub>白</sub> ~ \*iat<sup>陰入</sup><sub>文</sub>

The vernacular forms of 壓 in Chénxī and Héngyáng are irregular.

### 3.7.3 CMX \*-uat.

刷 shuā QYS \*ʃwa<sup>r</sup>t

CS [ɕya<sup>˥</sup>]; CX [sua<sup>陰去</sup>]; HS [sa<sup>˥</sup>]; HY [sua<sup>˥</sup>]; PJ [saʔ<sup>˥</sup>]; QY [sua<sup>˥</sup>]; SS [sua<sup>˥</sup>]; SY(CL) [sa<sup>陰平</sup>]; XH(BX) [sa<sup>陰平</sup>]; XX [sua<sup>陽平</sup>]

CMX \*ɕuat<sup>陰入</sup>

刮 guā QYS \*kwa<sup>ɿ</sup>t

CS [kua<sup>ʌ</sup>]; CX [kua<sup>陰去</sup>]; HS [kua<sup>ʌ</sup> ~ kua<sup>陰平</sup>]; HY [kua<sup>ʌ</sup>]; PJ [kuaʔ<sup>ʌ</sup>]; QY [kua<sup>ʌ</sup><sub>白</sub> ~ ko<sup>ʌ</sup><sub>文</sub>]; SS [kua<sup>ʌ</sup>]; SY(CL) [kua<sup>陰平</sup>]; XH(BX) [kua<sup>陰平</sup>]; XX [kua<sup>陽平</sup>]

CMX \*kuat<sup>陰入</sup>

3.7.4 CMX \*-ɔt. For syllables with coronal onsets, this final experienced lowering \*-ɔt > \*-at in most of the dialects except for P níngjiāng. In Sh áoshān and Xiāngxiāng, it merges with \*-uɔt (to be introduced in section 3.7.5) and then to -ue and -ua after velars in their vernacular strata. The H éngy áng final -ua is possibly a result of u-enpenthesis from a lexical diffusion confined to syllables with sibilant onsets, and the literary forms may have been borrowed recently.

**Table 3.20: HY's final -ua**

	雜	捺	摘	沙	塔
HY	tsua <sub>白</sub> ~ tsa <sub>文</sub>	tsua <sub>白</sub> ~ tsa <sub>文</sub>	tsua <sub>白</sub> ~ tsa <sub>文</sub>	sua <sub>白</sub> ~ sa <sub>文</sub>	t <sup>h</sup> a
QY	dza	dza	t <sup>h</sup> sa <sub>白</sub> ~ t <sup>h</sup> se <sub>白</sub>	sa	t <sup>h</sup> a
CMX	*dzɔt	*dʒa	*tʃak	*ʃa	*t <sup>h</sup> at

雜 z á QYS \*dzəp

CS [tsa<sup>ʌ</sup>]; CX [tsə<sup>陽平</sup>]; HS [ts<sup>h</sup>a<sup>上</sup>]; HY [tsua<sup>陽平</sup><sub>白</sub> ~ tsa<sup>陽平</sup><sub>文</sub>]; PJ [ts<sup>h</sup>əʔ<sup>ʌ</sup>]; QY [dza<sup>ʌ</sup>]; SS [tsa<sup>ʌ</sup>]; SY(CL) [tsa<sup>陰去</sup>]; XH(BX) [tsa<sup>ʌ</sup>]; XX [tsa<sup>陽平</sup>]

CMX \*dzɔt<sup>陽入</sup>

葛 gě QYS \*kat

CS [ko<sup>ʌ</sup>]; CX [ko<sup>陽平</sup>]; HS [ko<sup>ʌ</sup>]; HY [ko<sup>ʌ</sup>]; PJ [kəʔ<sup>ʌ</sup>]; QY [ko<sup>ʌ</sup>]; SS [kue<sup>ʌ</sup><sub>白</sub> ~ ku<sup>ʌ</sup><sub>文</sub>]; SY [ko<sup>ʌ</sup>]; XH(BX) [ko<sup>ʌ</sup>]; XX [kua<sup>陽平</sup>]

CMX \*kɔt<sup>陰入</sup>

3.7.5 CMX \*-uɔt. Merger of \*-uɔt with \*-ɔt is common. Its nucleus has fronted to

[ø] in P ǎngjiāng and [e/a] in H ǎngyáng. Many dialects experienced breakup of \*-ot into -ua and -ue. The Xiāngxiāng case is parallel to that of finals \*-iet, \*-yēt, \*-ək, and \*-uək to be introduced in their respective sections.

鉢 bō QYS \*pwat

CS [po<sup>˧</sup>]; CX [po<sup>陽平</sup>]; HS [po<sup>˧</sup>]; HY [pe<sup>˧</sup><sub>白</sub> ~ po<sup>˧</sup><sub>文</sub>]; PJ [pø<sup>˧</sup>]; QY [po<sup>˧</sup>]; SS [pe<sup>˧</sup><sub>白</sub> ~ po<sup>˧</sup><sub>文</sub>]; SY(CL) [po<sup>陰平</sup>]; XH(BX) [po<sup>˧</sup>]; XX [pia<sup>陽平</sup>]

CMX \*puot<sup>陰入</sup><sub>白</sub> ~ \*pøk<sup>陰入</sup><sub>文</sub>

撮 cuō QYS \*ts<sup>h</sup>wat ~ \*tswat

CS [ts<sup>h</sup>o<sup>˧</sup>]; CX [ts<sup>h</sup>o<sup>陽平</sup> ~ ts<sup>h</sup>ɔ<sup>陰去</sup>]; HS [ts<sup>h</sup>o<sup>˧</sup> ~ tso<sup>˧</sup>]; HY [tsua<sup>˧</sup><sub>白</sub> ~ tsue<sup>˧</sup><sub>文</sub>]; ML(CL) [tsø<sup>˧</sup>]; QY [tsua<sup>˧</sup><sub>白</sub> ~ tso<sup>˧</sup><sub>文</sub>]; SY(CL) [tsa<sup>陰平</sup><sub>白</sub> ~ tso<sup>陰去</sup><sub>文</sub>]; XH [tsa<sup>陰平</sup><sub>白1</sub> ~ ts<sup>h</sup>o<sup>陰平</sup><sub>白2</sub> ~ tso<sup>˧</sup><sub>文</sub>]; XX [teya<sup>陽平</sup>]

CMX \*tsuot<sup>陰入</sup><sub>白1</sub> ~ \*ts<sup>h</sup>uot<sup>陰入</sup><sub>白2</sub> ~ \*tsøk<sup>陰入</sup><sub>文</sub>

活 huó QYS \*ɣwat

CS [xo<sup>˧</sup>]; CX [xɔ<sup>陰去</sup>]; HS [fæ<sup>上</sup><sub>白</sub> ~ xo<sup>上</sup><sub>文</sub>]; HY [fe<sup>陽平</sup>]; PJ [fø<sup>˧</sup><sub>白</sub> ~ uø<sup>˧</sup><sub>文</sub>]; QY [ɣue<sup>˧</sup>]; SS [xɔ<sup>陰去</sup>]; SY(CL) [ho<sup>陰去</sup>]; XH(BX) [xo<sup>˧</sup>]; XX [xuai<sup>陰去</sup>]

CMX \*ɣuot<sup>陽入</sup><sub>白</sub> ~ \*ɣøk<sup>陽入</sup><sub>文</sub>

The irregular final (instead of \*xua) found in Xiāngxiāng for the lexeme 活 is conditioned on the tone, which will be discussed in section 5.1.1. Q ǎng's case is likely the same, preceding its merger of \*Yǐnqù (陰去) and \*Y ǎngqù (陽去) tones.

恰 gé QYS \*kəp

CS [ko<sup>˧</sup>]; HS [ko<sup>˧</sup>]; HY [kua<sup>˧</sup>]; HT [ko<sup>上</sup>]; ML(CL) [kø<sup>˧</sup>]; QY [kua<sup>˧</sup>]; SY [ko<sup>˧</sup>]; XH [kua<sup>陰平</sup>]; XX [kua<sup>陽平</sup>]

CMX \*kuot<sup>陽入</sup>

3.7.6 CMX \*-iet. It has monophthongized to -ø after retroflexes in P ǎngjiāng. Its realization in Xiāngxiāng could be a result of the sound change: \*-iet > \*-iɛ > -ia.

列 liè QYS \*liat



CS [lie<sup>˥</sup>]; CX [die<sup>陽平</sup>]; HS [lie<sup>˥</sup>]; HY [lie<sup>陽平</sup>]; PJ [liɛʔ<sup>˥</sup>]; QY [lie<sup>˥</sup>]; SS [niɛ<sup>˥</sup>];  
 SY(CL) [niɛ<sup>陰去</sup>]; XH(BX) [lie<sup>˥</sup>]; XX [lia<sup>陽平</sup>]  
 CMX \*liɛt<sup>陽入</sup>

折 zhé QYS \*tɕiat

CS [tsə<sup>˥</sup>]; CX [tɕe<sup>陽平</sup>]; HS [tɕie<sup>˥</sup>]; HY [tɕie<sup>˥</sup>]; PJ [tɕøʔ<sup>˥</sup>]; QY [tɕie<sup>˥</sup>]; SS [tɕe<sup>˥</sup>];  
 SY(CL) [tɕie<sup>陰平</sup>]; XH(BX) [tɕə<sup>˥</sup>]; XX [tia<sup>陽平</sup>]  
 CMX \*tɕiɛt<sup>陰入</sup>

葉 yè QYS \*jiap

CS [ie<sup>˥</sup>]; CX [ie<sup>陽平</sup>]; HS [ie<sup>上</sup>]; HY [ie<sup>˥</sup>]; PJ [iɛʔ<sup>˥</sup>]; QY [ie<sup>˥</sup>]; SS [iɛ<sup>˥</sup>]; SY(CL) [iɛ<sup>陰去</sup>];  
 XH(BX) [ie<sup>去</sup>]; XX [ia<sup>陰去</sup>]  
 CMX \*iɛt<sup>陽入</sup>

3.7.7 CMX \*-yɛt. The glide y- changes to i- after CMX alveolar initials in many dialects. Xiāngxiāng, again, experienced the lowering of \*-yɛt > \*-yɛ > -ya.

雪 xuě QYS \*swiat

CS [ɕie<sup>˥</sup>]; CX [ɕye<sup>陽平</sup>]; HS [ɕie<sup>˥</sup>]; HY [ɕye<sup>˥</sup>]; PJ [ɕiɛʔ<sup>˥</sup>]; QY [ɕye<sup>˥</sup>]; SS [siɛ<sup>˥</sup>];  
 SY(CL) [ɕye<sup>陰平</sup>]; XH(BX) [ɕi<sup>陰平</sup>]; XX [ɕya<sup>陽平</sup>]  
 CMX \*syɛt<sup>陰入</sup>

月 yuè QYS \*ɲuat

CS [ye<sup>˥</sup>]; CX [nye<sup>陽平</sup> ~ ye<sup>陽平</sup>]; HS [yæ<sup>上</sup> ~ yæ<sup>˥</sup>]; HY [ye<sup>陽平</sup>]; PJ [yɛʔ<sup>˥</sup>]; QY [ye<sup>˥</sup>];  
 SS [ue<sup>˥</sup>]; SY(CL) [ye<sup>陰去</sup>]; XH(BX) [yɛ<sup>˥</sup>]; XX [ya<sup>陽平</sup>]  
 CMX \*ɲyɛt<sup>陽入</sup>

3.7.8 CMX \*-ət. This final becomes -u after labials in most of the dialects except P níngjiāng. When preceded by CMX post-alveolar initial, it possibly went through \*-ət > \*-it > \*-it > -i in Xīnhuà Chénxī's recordings of this final, except for the vernacular form of 物, are likely of modern origin as the tones are unexpected.

不 bù QYS \*put

CS [pu<sup>˥</sup>]; CX [pu<sup>陰去</sup>]; HS [pu<sup>˥</sup>]; HY [pu<sup>˥</sup>]; PJ [pɛʔ<sup>˥</sup>]; QY [pu<sup>˥</sup>]; SS [pu<sup>˥</sup>]; SY(CL) [pu<sup>陰去</sup>]; XH(BX) [pu<sup>˥</sup>]; XX [pu<sup>陽平</sup>]

CMX \*pət<sup>陰入</sup>

物 wù QYS \*mut

CS [u<sup>˥</sup>]; CX [ve<sup>陰去</sup><sub>白</sub> ~ u<sup>陰去</sup><sub>文</sub>]; HS [u<sup>˥</sup>]; HY [fu<sup>陽平</sup>]; PJ [uɛʔ<sup>˥</sup>]; QY [ve<sup>˥</sup>]; SS [u<sup>˥</sup>]; SY(CL) [vu<sup>陽去</sup>]; XH(BX) [u<sup>˥</sup>]; XX [u<sup>陰去</sup>]

CMX \*vət<sup>陽入</sup>

佛 fófú QYS \*but

CS [fu<sup>˥</sup>]; CX [fu<sup>陽平</sup>]; HS [fu<sup>˥</sup>]; HY [fu<sup>陽平</sup>]; PJ [fɛʔ<sup>˥</sup>]; QY [fe<sup>˥</sup> ~ vu<sup>˥</sup>]; SS [ɸu<sup>˥</sup>]; SY(CL) [fu<sup>陰去</sup>]; XH(BX) [ɣu<sup>˥</sup>]; XX [ɸu<sup>陽平</sup>]

CMX \*vət<sup>陽入</sup>

蝨 shī QYS \*ʂit

CS [sə<sup>˥</sup>]; CX [ʂɿ<sup>陰平</sup>]; HS [sæ<sup>˥</sup>]; HY [se<sup>˥</sup>]; ML(CL) [si<sup>˥</sup>]; QY [se<sup>˥</sup>]; SS [sɛ<sup>˥</sup>]; SY(CL) [sie<sup>陰平</sup>]; XH(BX) [ɛi<sup>陰平</sup>]; XX [ɛia<sup>陽平</sup>]

CMX \*ʂət<sup>陰入</sup>

3.7.9 CMX \*-it. No Xiāng dialect has been described to distinguish a separate \*-ik from \*-it. As such, the CMX system does not contain a final \*-ik. Within final \*-it, there are some literary readings in opposition to their vernacular counterpart \*-iak, to be introduced in section 3.8.2.

筆 bǐ QYS \*pit

CS [pi<sup>˥</sup>]; CX [pi<sup>陽平</sup>]; HS [pi<sup>˥</sup>]; HY [pi<sup>˥</sup>]; PJ [piʔ<sup>˥</sup>]; QY [pi<sup>˥</sup>]; SS [pi<sup>˥</sup>]; SY(CL) [pi<sup>陰平</sup>]; XH(BX) [pi<sup>˥</sup>]; XX [pi<sup>陽平</sup>]

CMX \*pit<sup>陰入</sup>

踢 tī QYS \*t<sup>h</sup>ɛjk

CS [t<sup>hi</sup> <sup>入</sup>]; CX [t<sup>hi</sup> <sup>陽平</sup>]; HS [t<sup>hi</sup> <sup>入</sup>]; HY [t<sup>hi</sup> <sup>入</sup>]; PJ [t<sup>hia</sup> <sup>入</sup>]; QY [t<sup>hi</sup> <sup>入</sup>]; SS [t<sup>hi</sup> <sup>入</sup>]; SY(CL)  
[t<sup>hia</sup> <sup>陰平</sup> <sub>白</sub> ~ t<sup>hi</sup> <sup>陰平</sup> <sub>文</sub>]; XH(BX) [t<sup>hia</sup> <sup>陰平</sup> <sub>白</sub> ~ t<sup>hi</sup> <sup>陰平</sup> <sub>文</sub>]; XX [t<sup>hio</sup> <sup>陽平</sup> <sub>白</sub> ~ t<sup>hi</sup> <sup>陽平</sup> <sub>文</sub>]  
CMX \*t<sup>hiak</sup> <sup>陰入</sup> <sub>白</sub> ~ t<sup>hit</sup> <sup>陰入</sup> <sub>文</sub>

十 sh í QYS \*dzip

CS [sɿ <sup>入</sup>]; CX [ɣɿ <sup>陰去</sup>]; HS [ɕi <sup>上</sup>]; HY [ɕi <sup>陽平</sup>]; PJ [ɣɿʔ <sup>入</sup>]; QY [ʒi <sup>入</sup>]; SS [ɣɿ <sup>陰去</sup>]; SY(CL)  
[ɣɿ <sup>陰去</sup>]; XH(BX) [ɣɿ <sup>去</sup>]; XX [ɣɿ <sup>陰去</sup>]  
CMX \*ʒit <sup>陽入</sup>

3.7.10 CMX \*-ut. Its vernacular form have merged into \*-uei in Ānhuà Chénxī, Héngyáng, Xīnhuà and Xiāngxiāng, after velar initials. In Píngjiāng and Qíyáng, it merges with CMX \*-uek, in vernacular layer. The corresponding literary layer of this final is merged with \*-uk.

猝 cù QYS \*ts<sup>h</sup>wət

AH [ts<sup>h</sup>ei <sup>入</sup>]; CS [ts<sup>h</sup>əu <sup>陽平</sup>]; CX [ts<sup>h</sup>əu <sup>陰去</sup>]; HY [ts<sup>h</sup>u <sup>入</sup>]; QY [ts<sup>h</sup>u <sup>入</sup>]; SS [ts<sup>h</sup>əu <sup>入</sup>]; SY  
[ts<sup>h</sup>uei <sup>陽去</sup> <sub>白</sub> ~ ts<sup>h</sup>u <sup>入</sup> <sub>文</sub>]; XP [ts<sup>h</sup>uei <sup>陰去</sup>]; XH(BX) [ts<sup>h</sup>u <sup>入</sup>]  
CMX \*ts<sup>h</sup>ut <sup>陰入</sup> <sub>白</sub> ~ \*ts<sup>h</sup>uk <sup>陰入</sup> <sub>文</sub>

骨 gǔ QYS \*kwət

CS [ku <sup>入</sup>]; CX [kuei <sup>陽平</sup> <sub>白</sub> ~ ku <sup>陽平</sup> <sub>文</sub>]; HS [kuei <sup>入</sup> <sub>白</sub> ~ ku <sup>入</sup> <sub>文</sub>]; HY [kui <sup>入</sup> <sub>白</sub> ~ ku <sup>入</sup> <sub>文</sub>]; PJ  
[kuɛʔ <sup>入</sup>]; QY [ku <sup>入</sup>]; SS [kuɛ <sup>入</sup> <sub>白</sub> ~ ku <sup>入</sup> <sub>文</sub>]; SY(CL) [kuɛ <sup>陰平</sup> <sub>白</sub> ~ ku <sup>陰平</sup> <sub>文</sub>]; XH(BX) [kuə  
<sup>陰平</sup> <sub>白</sub> ~ ku <sup>入</sup> <sub>文</sub>]; XX [kuei <sup>陽平</sup> <sub>白</sub> ~ ku <sup>陽平</sup> <sub>文</sub>]  
CMX \*kut <sup>陰入</sup> <sub>白</sub> ~ \*kuk <sup>陰入</sup> <sub>文</sub>

3.7.11 CMX \*-yt. This final commonly merges with \*-ut following dentals and alveolars.

卒 zú QYS \*tswit

CS [tsəu <sup>入</sup>]; CX [tsəu <sup>陽平</sup>]; HS [tsei <sup>入</sup>]; HY [tɕei <sup>入</sup>]; ML(CL) [tsəu <sup>入</sup>]; QY [tsu <sup>入</sup>]; SS  
[tsəu <sup>入</sup>]; SY(CL) [tsəu <sup>陰去</sup>]; XH(BX) [tsu <sup>入</sup>]; XX [tɕeyi <sup>陽平</sup>]  
CMX \*tsyt <sup>陰入</sup>

出 chū QYS \*tɕʰwit

CS [tɕʰy<sup>˧</sup>]; CX [tɕʰu<sup>陰平</sup>]; HS [tɕʰy<sup>˧</sup>]; HY [tɕʰy<sup>˧</sup>]; PJ [tɕʰyʔ<sup>˧</sup>]; QY [tɕʰy<sup>˧</sup>]; SS [tɕʰu<sup>˧</sup>];

SY(CL) [tɕʰy<sup>陰平</sup>]; XH(BX) [tɕʰy<sup>˧</sup>]; XX [tʰy<sup>陽平</sup>]

CMX \*tɕʰyt<sup>陰入</sup>

域 yù QYS \*wik

CS [y<sup>˧</sup>]; CX [y<sup>陽去</sup>]; HS [y<sup>陽去</sup>]; HY [y<sup>˧</sup> ~ i<sup>˧</sup>]; PJ [yʔ<sup>˧</sup>]; QY [y<sup>去</sup>]; SS [ɥ<sup>陰去</sup>]; SY(CL)

[y<sup>陰去</sup>]; XH(BX) [y<sup>陽平</sup>]; XX [y<sup>陰去</sup>]

CMX \*yt<sup>陽入</sup>

### 3.8 Finals Ended with the Coda -k

3.8.1 CMX \*-ak. The corresponding literary reading of this final is \*-ek.

白 bái QYS \*ba<sup>˧</sup>jk

CS [pə<sup>˧</sup>]; CX [phai<sup>陰去</sup>]; HS [p<sup>h</sup>a<sup>上白</sup> ~ pæ<sup>上文</sup>]; HY [pe<sup>陽平</sup>]; PJ [p<sup>h</sup>aʔ<sup>˧</sup>]; QY [be<sup>˧</sup>]; SS

[pɛ<sup>˧</sup>]; SY(CL) [biɛ<sup>陽去</sup>]; XH(BX) [pə<sup>˧</sup>]; XX [p<sup>h</sup>o<sup>陰去白</sup> ~ pia<sup>陽平文</sup>]

CMX \*bak<sup>陽入白</sup> ~ \*bɛk<sup>陽入文</sup>

擇 zhái/zé QYS \*dra<sup>˧</sup>jk

CS [ts<sup>h</sup>ə<sup>˧</sup>]; CX [ts<sup>h</sup>e<sup>˧</sup>]; HS [ts<sup>h</sup>æ<sup>˧</sup>]; HY [tse<sup>˧</sup>]; PJ [ts<sup>h</sup>aʔ<sup>上白</sup> ~ ts<sup>h</sup>ɛʔ<sup>上文</sup>]; QY [dze<sup>˧</sup>]; SS

[ts<sup>h</sup>ɛ<sup>˧</sup>]; SY(CL) [ts<sup>h</sup>a<sup>陰去白</sup> ~ tɕ<sup>h</sup>iɛ<sup>陰去文</sup>]; XH(BX) [tɕ<sup>h</sup>iɛ<sup>˧</sup>]; XX [ts<sup>h</sup>o<sup>陰去</sup>]

CMX \*dʒak<sup>陽入白</sup> ~ \*dʒɛk<sup>陽入文</sup>

客 kè QYS \*k<sup>h</sup>a<sup>˧</sup>jk

CS [k<sup>h</sup>ə<sup>˧</sup>]; CX [khai<sup>陽平</sup>]; HS [k<sup>h</sup>a<sup>上白</sup> ~ k<sup>h</sup>e<sup>上文</sup>]; HY [k<sup>h</sup>a<sup>上白</sup> ~ k<sup>h</sup>e<sup>上文</sup>]; PJ [k<sup>h</sup>aʔ<sup>˧</sup>]; QY

[k<sup>h</sup>a<sup>上白</sup> ~ k<sup>h</sup>e<sup>上文</sup>]; SS [k<sup>h</sup>ɛ<sup>˧</sup>]; SY(CL) [k<sup>h</sup>a<sup>陰平白</sup> ~ k<sup>h</sup>ei<sup>陰平文</sup>]; XH(BX) [k<sup>h</sup>a<sup>陰平白</sup> ~ k<sup>h</sup>ə<sup>˧</sup>

文]; XX [k<sup>h</sup>o<sup>陽平</sup> ~ k<sup>h</sup>ia<sup>陽平</sup>]

CMX \*k<sup>h</sup>ak<sup>陰入白</sup> ~ k<sup>h</sup>ɛk<sup>陰入文</sup>

3.8.2 CMX \*-iak. The corresponding literary reading of this final is \*-it.

劈 pī QYS \*p<sup>h</sup>ɛjk

CS [p<sup>h</sup>i<sup>˧</sup>]; CX [p<sup>h</sup>i<sup>陽平</sup>]; HS [p<sup>h</sup>ia<sup>入白</sup> ~ p<sup>h</sup>i<sup>入文</sup>]; HY [p<sup>h</sup>ia<sup>入白</sup> ~ p<sup>h</sup>i<sup>入文</sup>]; PJ [p<sup>h</sup>iaʔ<sup>˧</sup>]; QY [p<sup>h</sup>i<sup>入</sup>]; SS [p<sup>h</sup>ia<sup>入白</sup> ~ p<sup>h</sup>i<sup>入文</sup>]; SY(CL) [p<sup>h</sup>ia<sup>陰平白</sup> ~ p<sup>h</sup>i<sup>陰平文</sup>]; XH(BX) [p<sup>h</sup>i<sup>入</sup>]; XX [p<sup>h</sup>io<sup>陽平白</sup> ~ p<sup>h</sup>i<sup>陽平文</sup>]

CMX \*p<sup>h</sup>iak<sup>陰入白</sup> ~ \*p<sup>h</sup>it<sup>陰入文</sup>

石 shí QYS \*dziajk

CS [ʃi<sup>入</sup>]; CX [ʃɿ<sup>陰去</sup>]; HS [ɕia<sup>上白</sup> ~ ɕi<sup>上文</sup>]; HY [ɕia<sup>陽平白</sup> ~ ɕi<sup>陽平文</sup>]; PJ [ʃaʔ<sup>˧</sup>]; QY [ʒia<sup>入白</sup> ~ ʒi<sup>入文</sup>]; SS [ʃua<sup>陰入白</sup> ~ ʃɿ<sup>入文</sup>]; SY(CL) [ʃa<sup>陰入白</sup> ~ ʃɿ<sup>陰去文</sup>]; XH(BX) [ʃa<sup>去</sup>]; XX [ɕio<sup>陰去白</sup> ~ ʃɿ<sup>陰去文</sup>]

CMX \*ʒiak<sup>陽入白</sup> ~ \*ʒit<sup>陽入文</sup>

3.8.3 CMX \*-uak. This is a peripheral final. It is found contrastive against \*-uat in M lúóCh ángl èand dialects around L óudǐ.

Table 3.21: contrast between \*-uak and \*-uat

	劃	滑	罰
ML(CL)	ua <sup>43</sup> ~ fa <sup>43</sup>	ua <sup>43</sup>	fa <sup>43</sup>
CMX	*yuak <sup>陽入</sup>	*yuat <sup>陽入</sup>	*vat <sup>陽入</sup>

3.8.4 CMX \*-ɔk. A few syllables of this group preceded by velar initials have a corresponding literary final \*-iɔk.

落 l ào/lu ò QYS \*lak

CS [lo<sup>入</sup>]; CX [lo<sup>陰去白</sup> ~ lo<sup>陽平文</sup>]; HS [lo<sup>上</sup>]; HY [lo<sup>陽平</sup>]; PJ [loʔ<sup>˧</sup>]; QY [lo<sup>入</sup>]; SS [no<sup>陰去</sup>]; XH(BX) [lo<sup>去</sup>]; XX [lo<sup>陰去</sup>]

CMX \*lɔk<sup>陽入</sup>

The Ch énxī difference in vowel height is due to a change in tone, which will be explained in section 5.1.4.

戳 chuō QYS \*tṣ<sup>h</sup>a<sup>r</sup>wk

CS [tṣ<sup>h</sup>o<sup>入</sup>]; CX [tṣ<sup>h</sup>ɔ<sup>陰去</sup>]; HS [tṣ<sup>h</sup>o<sup>入</sup>]; HY [tṣ<sup>h</sup>o<sup>入</sup>]; PJ [tṣ<sup>h</sup>oʔ<sup>˧</sup>]; QY [tṣ<sup>h</sup>o<sup>入</sup>]; SS [tṣ<sup>h</sup>o<sup>入</sup>];

SY(CL) [ts<sup>h</sup>o<sup>陰去</sup>]; XH(BX) [dz<sup>h</sup>o<sup>上</sup>]; XX [ts<sup>h</sup>o<sup>陽平</sup> ~ ts<sup>h</sup>o<sup>陰去</sup>]

CMX \*tʰɔk<sup>陰入</sup>

The form of 戩 in Xīnhuà Bǎixī is irregular.

學 xué QYS \*yǎ<sup>r</sup>wk

CS [ɛio<sup>上</sup>]; CX [xɔ<sup>陰去</sup> ~ ɛio<sup>陽平</sup>]; HS [xo<sup>上</sup> ~ ɛio<sup>上</sup>]; HY [ɛio<sup>陽平</sup>]; PJ [k<sup>h</sup>oʔ<sup>上</sup> ~ ɛioʔ<sup>上</sup>]; QY [ʒio<sup>上</sup>]; SS [ɟio<sup>上</sup>]; SY(CL) [ʂo<sup>陰去</sup> ~ ɛye<sup>陰去</sup>]; XH(BX) [ɛyo<sup>上</sup>]; XX [xu<sup>陰去</sup> ~ ɛio<sup>陽平</sup>]

CMX \*yɔk<sup>陽入</sup> ~ \*yɔk<sup>陽入</sup>

The literary form of 學 in Shàoyáng Chánglè is probably a recent borrowing from Standard Mandarin xué[ɛye].

### 3.8.5 CMX \*-iɔk.

削 xiāo/xuē QYS \*siak

CS [ɛio<sup>上</sup>]; CX [ɛio<sup>陽平</sup>]; HS [ɛio<sup>上</sup>]; HY [ɛio<sup>上</sup>]; PJ [ɛioʔ<sup>上</sup>]; QY [ʃio<sup>上</sup>]; SS [siəu<sup>上</sup>]; SY(CL) [siəu<sup>陰平</sup>]; XH(BX) [ɛiə<sup>陰平</sup>]; XX [ɛio<sup>陽平</sup>]

CMX \*siɔk<sup>陰入</sup>

勺 sháo QYS \*dziak

CS [sau<sup>陽平</sup>]; CX [ʂo<sup>陰去</sup>]; HS [ɛio<sup>上</sup>]; HY [teio<sup>上</sup>]; QY [ʃio<sup>上</sup>]; SS [ɟio<sup>上</sup>]; SY(CL) [ʂo<sup>陰去</sup>]; XH(BX) [ɛyo<sup>上</sup>]; XP [so<sup>陰去</sup>]; XX [ɛio<sup>陰去</sup>]

CMX \*ʒiɔk<sup>陽入</sup>

The forms of 勺 in Chángshā and Héngyáng are irregular.

藥 yào QYS \*jiak

CS [io<sup>上</sup>]; CX [io<sup>陽平</sup>]; HS [io<sup>上</sup>]; HY [io<sup>陽平</sup>]; PJ [ioʔ<sup>上</sup>]; QY [io<sup>陽平</sup>]; SS [io<sup>上</sup>]; SY(CL) [io<sup>陰去</sup>]; XH(BX) [yo<sup>去</sup>]; XX [io<sup>陽平</sup>]

CMX \*iɔk<sup>陽入</sup>

### 3.8.6 CMX \*-ɛk. The Xiāngxiāng lowering, \*-ɛk > \*-ɛ > \*-iɛ > -ia, is parallel to

\*-iet in 3.7.6.

北 běi QYS \*pək

CS [pə<sup>˥</sup>]; CX [pe<sup>陽平</sup>]; HS [pæ<sup>˥</sup>]; HY [pe<sup>˥</sup>]; PJ [pɛʔ<sup>˥</sup>]; QY [pe<sup>˥</sup>]; SS [pɛ<sup>˥</sup>]; SY(CL) [piɛ<sup>陰平</sup>]; XH(BX) [pə<sup>˥</sup>]; XX [pia<sup>陽平</sup>]

CMX \*pək<sup>陰入</sup>

伯 bó QYS \*pa<sup>˥</sup>jk

CS [pə<sup>˥</sup>]; CX [pai<sup>陽平</sup>]; HS [pa<sup>白</sup> ~ pæ<sup>文</sup>]; HY [pa<sup>˥</sup> ~ pe<sup>˥</sup>]; PJ [paʔ<sup>˥</sup>]; QY [pe<sup>˥</sup>]; SS [pua<sup>˥</sup> ~ pɛ<sup>˥</sup>]; SY(CL) [piɛ<sup>陰平</sup>]; XH(BX) [pə<sup>˥</sup>]; XX [po<sup>陽平</sup> ~ pia<sup>陽平</sup>]

CMX \*pak<sup>陰入</sup><sub>白</sub> ~ \*pɛk<sup>陰入</sup><sub>文</sub>

勒 lēi/lè QYS \*lək

CS [lə<sup>˥</sup>]; CX [le<sup>陽平</sup>]; HS [lie<sup>上</sup>]; HY [le<sup>陽平</sup>]; ML(CL) [lɔ<sup>˥</sup>]; QY [le<sup>˥</sup>]; SS [nɛ<sup>˥</sup>]; SY(CL) [niɛ<sup>陰去</sup>]; XH(BX) [lə<sup>去</sup>]; XX [lia<sup>陽平</sup>]

CMX \*lək<sup>陽入</sup>

3.8.7 CMX \*-uek. Xiāngxiāng lowers it to -ua.

國 guó QYS \*kwək

CS [kuə<sup>˥</sup>]; CX [kue<sup>陽平</sup>]; HS [kuæ<sup>˥</sup>]; HY [kue<sup>˥</sup>]; PJ [kuɛʔ<sup>˥</sup>]; QY [kue<sup>˥</sup>]; SS [kuɛ<sup>˥</sup>]; SY(CL) [kuɛ<sup>陰平</sup>]; XH(BX) [kuæ<sup>˥</sup>]; XX [kua<sup>陽平</sup>]

CMX \*kuək<sup>陰入</sup>

或 huò QYS \*ɣwək

CS [xo<sup>˥</sup>]; CX [xue<sup>陽平</sup>]; HS [fæ<sup>上</sup>]; HY [fe<sup>陽平</sup>]; PJ [fɛʔ<sup>˥</sup>]; QY [ɣue<sup>˥</sup>]; SS [xo<sup>˥</sup>]; SY(CL) [hue<sup>陰去</sup>]; XH(BX) [xuæ<sup>去</sup>]; XX [xua<sup>陽平</sup>]

CMX \*ɣuek<sup>陽入</sup>

The forms of 或 in Chángshā and Sháoishān may be borrowings.

In Héngdōng Dàpǔ (衡東大浦) dialect, an etymon 郭 (QYS \*kwək) is recorded with two layers. The literary form corresponds to CMX \*-ɔk like in most other Xiāng while the vernacular form corresponds to \*-uek. It is still unclear whether it implies in

CMX a separate final of its own or merely some kind of borrowing.

**Table 3.22: a possible \*-uək in HD**

	郭	國	各
HD	kue <sup>213</sup> <sub>白</sub> ~ ko <sup>213</sup> <sub>文</sub>	kue <sup>213</sup>	ko <sup>213</sup>
HY	ko <sup>22</sup>	kue <sup>22</sup>	ko <sup>22</sup>
CMX	*kuək <sub>陰入 白</sub> ~ *kək <sub>陰入 文</sub>	*kuək <sub>陰入</sub>	*kək <sub>陰入</sub>

Another syllable recorded in Hángdōng Dǎpǔ that shows this pattern is [k<sup>h</sup>ue<sup>213</sup>], possibly a vernacular reading of the etymon 擴 (QYS \*k<sup>h</sup>wak), meaning to expand, used for the movement of fish gills (Deng, 2012, p. 26).

3.8.8 CMX \*-uk. This final has changed to -əu following coronal initials, or lowered to -o following the initial m-, in many dialects. This is parallel to the sound change of \*-u in section 3.2.2. The breakup to -əu in Chénxī also happens following velars. It is highly possible to have changed before the drop of its coda \*-k, so as to maintain its contrast against \*-u.

木 mù QYS \*mowk

CS [mo<sup>˧</sup>]; CX [mu<sup>陽平</sup>]; HS [mu<sup>˧</sup>]; HY [mu<sup>˧</sup>]; PJ [moʔ<sup>˧</sup>]; QY [mu<sup>˧</sup>]; SS [mʊ<sup>˧</sup>]; SY(CL) [mǝ<sup>陰平</sup>]; XH(BX) [mo<sup>陰平</sup>]; XX [mǝ<sup>陽平</sup>]

CMX \*muk<sub>陽入</sub>

服 fú QYS \*buwk

CS [fu<sup>˧</sup>]; CX [fu<sup>陽平</sup>]; HS [fu<sup>上</sup>]; HY [fu<sup>陽平</sup>]; PJ [fuʔ<sup>˧</sup>]; QY [vu<sup>˧</sup>]; SS [ɸu<sup>˧</sup>]; SY(CL) [fu<sup>陰去</sup>]; XH(BX) [ɣu<sup>˧</sup>]; XX [ɸu<sup>陰去</sup>]

CMX \*vuk<sub>陽入</sub>

讀 dú QYS \*dowk

CS [təu<sup>˧</sup>]; CX [t<sup>h</sup>əu<sub>陰去 白</sub> ~ təu<sub>陽平 文</sub>]; HS [t<sup>h</sup>æu<sup>上</sup>]; HY [tu<sup>陽平</sup>]; PJ [t<sup>h</sup>əuʔ<sup>˧</sup>]; QY [du<sup>˧</sup>]; SS [t<sup>h</sup>əu<sub>陰去 白</sub> ~ təu<sub>陽平 文</sub>]; SY(CL) [du<sup>陽去</sup>]; XH(BX) [d<sup>h</sup>u<sup>˧</sup>]; XX [t<sup>h</sup>u<sub>陰去 白</sub> ~ tu<sub>陽平 文</sub>]

CMX \*duk<sub>陽入</sub>



哭 kū QYS \*k<sup>h</sup>owk

CS [k<sup>h</sup>u<sup>˧</sup>]; CX [k<sup>h</sup>əu<sup>陽平</sup><sub>白</sub> ~ k<sup>h</sup>u<sup>陽平</sup><sub>文</sub>]; HS [k<sup>h</sup>u<sup>˧</sup>]; HY [k<sup>h</sup>u<sup>˧</sup>]; PJ [k<sup>h</sup>uʔ<sup>˧</sup>]; QY [k<sup>h</sup>u<sup>˧</sup>];

SS [k<sup>h</sup>u<sup>˧</sup>]; SY(CL) [k<sup>h</sup>u<sup>陰平</sup>]; XH(BX) [k<sup>h</sup>u<sup>陰平</sup>]; XX [k<sup>h</sup>u<sup>陽平</sup>]

CMX \*k<sup>h</sup>uk<sup>陰入</sup>

3.8.9 CMX \*-iuk. This final does not follow labials. When following coronals, its glide i- is commonly deleted in dialects like Chángshā. It has a literary final \*-uk that follows coronals, and \*-yt otherwise. These literary readings could have originated from inter-dialect borrowing. Nonetheless, two different layers in the CMX have been reconstructed respectively.

六 liù QYS \*luwk

CS [ləu<sup>˧</sup>]; CX [ləu<sup>陽平</sup>]; HS [læu<sup>˧</sup>]; HY [liu<sup>陽平</sup>]; PJ [ləuʔ<sup>˧</sup>]; QY [liəu<sup>˧</sup><sub>白</sub> ~ lu<sup>˧</sup><sub>文</sub>]; SS

[nəu<sup>˧</sup>]; SY(CL) [niəu<sup>陰去</sup>]; XH(BX) [liu<sup>去</sup>]; XX [liei<sup>陽平</sup>]

CMX \*liuk<sup>陽入</sup><sub>白</sub> ~ \*luk<sup>陽入</sup><sub>文</sub>

祝 zhù QYS \*təuwk

CS [tsəu<sup>˧</sup>]; CX [tʂəu<sup>陽平</sup>]; HS [tæu<sup>˧</sup>]; HY [təiu<sup>˧</sup><sub>白</sub> ~ tsu<sup>˧</sup><sub>文</sub>]; PJ [tʂəuʔ<sup>˧</sup>]; QY [tsu<sup>˧</sup>];

SS [tʂəu<sup>˧</sup>]; SY(CL) [tsu<sup>陰平</sup>]; XH(BX) [tʂəu<sup>˧</sup>]; XX [tiei<sup>陽平</sup>]

CMX \*tʃiuk<sup>陰入</sup><sub>白</sub> ~ \*tsuk<sup>陰入</sup><sub>文</sub>

曲 qǔ QYS \*k<sup>h</sup>uawk

CS [tɕ<sup>h</sup>iəu<sup>˧</sup>]; CX [tɕ<sup>h</sup>iəu<sup>陽平</sup><sub>白</sub> ~ tɕ<sup>h</sup>y<sup>陽平</sup><sub>文</sub>]; HS [tɕ<sup>h</sup>æu<sup>˧</sup>]; HY [tɕ<sup>h</sup>iəu<sup>˧</sup><sub>白</sub> ~ tɕ<sup>h</sup>y<sup>˧</sup><sub>文</sub>]; PJ

[tɕ<sup>h</sup>iəuʔ<sup>˧</sup>]; QY [tɕ<sup>h</sup>y<sup>˧</sup>]; SS [c<sup>h</sup>iəu<sup>˧</sup>]; SY(CL) [tɕ<sup>h</sup>y<sup>陰平</sup>]; XH(BX) [tɕ<sup>h</sup>iəu<sup>˧</sup>]; XX [k<sup>h</sup>iei<sup>陽平</sup>]

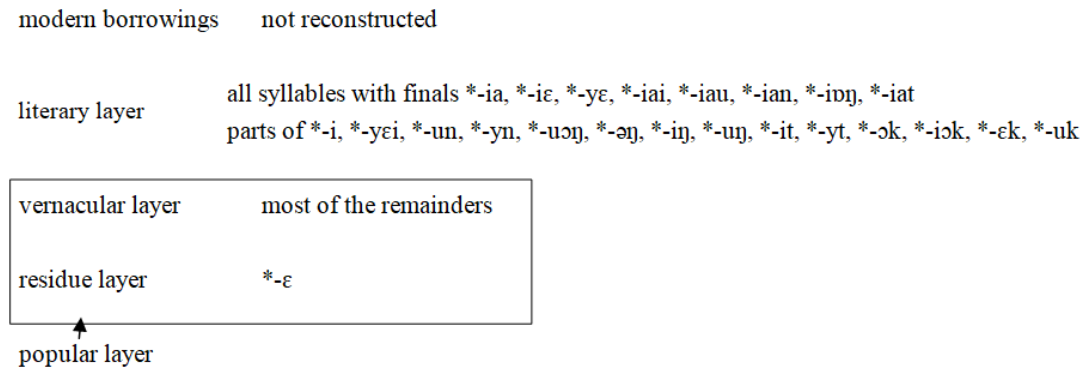
CMX \*k<sup>h</sup>iuk<sup>陰入</sup><sub>白</sub> ~ k<sup>h</sup>yt<sup>陰入</sup><sub>文</sub>

### 3.9 Summary of CMX Finals

Compared to the initials, the CMX final system is even more heavily stratified. Ancient residue has been found with the final \*-ε, while literary-only initials include \*-ia, \*-ie, \*-ye, \*-iai, \*-iau, \*-ian, \*-iəŋ, and \*-iat. The final system is affected by

exogenous elements deeply. In sections 3.5.5 and 3.7.5, two vernacular syllables are reconstructed to carry the finals \*-uon and \*-uot, while the QYS forms are \*-əm and \*-əp respectively. It confirms the prior assumption that the presence of an excrescent glide u- of these syllables should be part of the common language.

Before analyzing the nature of this conjectural feature, I need to respond to the final system reconstructed by Coblin, which is fundamentally different from that of CMX. The whole set of finals reconstructed with plosive codas in sections 3.7 and 3.8 are exclusively absent from Coblin’s Common Central Xiāng (Coblin, 2011). This is, at least partially, due to the disparity in our presumptions about what is a potentially shared innovation. From Coblin’s perspective, the QYS \*Y ángr ǜ (陽入) tone syllables, originally bearing final obstruents, are no longer in a distinct toneme and must have merged into \*Yīnq ǜ (陰去) syllables. I will, in the following chapter, demonstrate that these finals with obstruent codas must constitute distinct tonemes, and that the merger of \*Y ángr ǜ (陽入) with \*Yīnq ǜ (陰去) in some dialects is not as ancient as what Coblin has suggested.



**Figure 3.1: a diagram for layers of CMX finals**

## 4. Tones of Common Xiāng

At least seven different tonemes can be identified by simple comparison.

**Table 4.1: seven distinct tonemes**

	1. 衣	2. 移	3. 以	4. 意	5. 異	6. 一	7. 亦
QY	i <sup>45</sup>	i <sup>11</sup>	i <sup>54</sup>	i <sup>214</sup>	i <sup>214</sup>	i <sup>33</sup>	i <sup>33</sup>
XX	i <sup>55</sup>	i <sup>23</sup>	i <sup>21</sup>	i <sup>45</sup>	i <sup>22</sup>	i <sup>23</sup>	i <sup>45</sup>

From both dialects we know that syllables 1, 2, and 3 should have distinct tonemes each. Q y á ng demonstrates that 4 and 5 collectively bear a different tone from any one of the others, and so do 6 and 7. Referring back to Xiāngxiāng we know that the tones of 4 and 5 should be set apart, and so is true for 6 and 7.

Sh ào y á ng Ch á ng l è in Table 4.2 demonstrates that one more toneme is needed.

**Table 4.2: the 8th tone evidenced in SY(CL)**

	1. 單	2. 膽	3. 擔	4. 壇	5. 淡	6. 蛋
SY(CL)	taŋ <sup>55</sup>	taŋ <sup>42</sup>	taŋ <sup>35</sup>	daŋ <sup>12</sup>	daŋ <sup>31</sup>	daŋ <sup>24</sup>
XX	tiā <sup>55</sup>	tiā <sup>21</sup>	tiā <sup>45</sup>	diā <sup>23</sup>	diā <sup>22</sup>	diā <sup>22</sup>

In Xiāngxiāng and most other Xiāng dialects, the merger of the tones for the fifths and sixths syllables in Table 4.2 happened at a relatively recent stage. It will be discussed in section 4.2.2.

The reconstructed syllabic tonemes with names and respective pitches in CMX are listed below.

*Yīnp íng	*Yīnshǎng	*Yīnqù	*Yīnrù
陰平	陰上	陰去	陰入
55	42	35	<u>34</u>

*Y á ngp íng	*Y á ngshǎng	*Y á ngqù	*Y á ngrù
陽平	陽上	陽去	陽入
12	32	33	<u>24</u>

The underlined pitches indicate short durations. Notions of \*Yīn (陰) and \*Yáng (陽) follow the traditional convention that the former is resulted from QYS voiceless onsets while the latter from voiced onsets.

#### 4.1 Tones from the Yīn (陰) Category

4.1.1 CMX \*Yīnpíng (陰平). The actual pitch is reconstructed to be a high level tone 55. In many dialects the pitch has lowered to 44 or 33, whilst the contour is usually level.

東 dōng QYS \*tɔwŋ

CS [tən<sup>33</sup>]; CX [təu<sup>44</sup>]; HS [tɛŋ<sup>33</sup>]; HY [təŋ<sup>45</sup>]; PJ [təŋ<sup>55</sup>]; QY [toŋ<sup>45</sup>]; SS [tən<sup>33</sup>]; SY(CL) [tə̃<sup>55</sup>]; XH(BX) [tən<sup>33</sup>]; XX [tɒn<sup>55</sup>]

CMX \*tuŋ<sup>55</sup>

窩 wō QYS \*wa

CS [o<sup>33</sup>]; CX [o<sup>44</sup>]; HS [o<sup>33</sup>]; HY [xo<sup>45</sup>]; PJ [o<sup>55</sup>]; QY [xo<sup>45</sup>]; SS [o<sup>33</sup>]; SY(CL) [u<sup>55</sup>]; XH(BX) [o<sup>33</sup>]; XX [u<sup>55</sup> ~ k<sup>h</sup>u<sup>55</sup>]

CMX \*uɔ<sup>55</sup>

The forms of 窩 (lit. nest or lair) in Hángyáng, Qíyáng, and the alternative reading [k<sup>h</sup>u] in Xiāngxiāng are irregular, possibly being another etymon 窠 kē (lit. nest; QYS \*k<sup>h</sup>wa).

4.1.2 CMX \*Yīnshàng (陰上). The actual pitch is reconstructed to be a mid-falling tone 42. It may evolve to a higher 53, or a lower 31. Hángyáng might have dropped the final falling part and Hángshān further lowers the onset pitch.

懂 dǒng QYS \*tɔwŋ<sup>?</sup>

CS [tən<sup>42</sup>]; CX [təu<sup>31</sup>]; HS [tɛŋ<sup>13</sup>]; HY [təŋ<sup>33</sup>]; PJ [təŋ<sup>53</sup>]; QY [toŋ<sup>54</sup>]; SS [tən<sup>42</sup>]; SY(CL) [tə̃<sup>42</sup>]; XH(BX) [tən<sup>31</sup>]; XX [tɒn<sup>21</sup>]

CMX \*tuŋ<sup>42</sup>

火 huǒ QYS \*xwɑʔ

CS [xo<sup>42</sup>]; CX [xo<sup>31</sup>]; HS [fu<sup>13</sup> 白 ~ xo<sup>13</sup> 文]; HY [xo<sup>33</sup>]; PJ [xo<sup>53</sup>]; QY [xo<sup>54</sup>]; SS [xo<sup>42</sup>];  
SY(CL) [xo<sup>42</sup>]; XH(BX) [xo<sup>31</sup>]; XX [xo<sup>21</sup>]

CMX \*xuɔ<sup>42</sup>

4.1.3 CMX \*Yīnqù (陰去). The actual pitch is reconstructed to be a high rising tone 35. It becomes higher in dialects like Chángshā and Hángshān, and lower in Hángyáng and Qíyáng.

凍 dòng QYS \*toŋ<sup>h</sup>

CS [tən<sup>55</sup>]; CX [təu<sup>324</sup>]; HS [teŋ<sup>55</sup>]; HY [təŋ<sup>24</sup>]; PJ [təŋ<sup>34</sup>]; QY [toŋ<sup>214</sup>]; SS [tən<sup>45</sup>];  
SY(CL) [tə̃<sup>35</sup>]; XH(BX) [tən<sup>45</sup>]; XX [tən<sup>45</sup>]

CMX \*tuŋ<sup>35</sup>

貨 huò QYS \*xwɑ<sup>h</sup>

CS [xo<sup>55</sup>]; CX [xo<sup>324</sup>]; HS [xo<sup>55</sup>]; HY [xo<sup>24</sup>]; PJ [xo<sup>34</sup>]; QY [xo<sup>214</sup>]; SS [xo<sup>45</sup>]; SY(CL)  
[xo<sup>35</sup>]; XH(BX) [xo<sup>45</sup>]; XX [xo<sup>45</sup>]

CMX \*xuɔ<sup>35</sup>

4.1.4 CMX \*Yīnrù (陰入). The actual pitch is reconstructed to be a half mid-rising tone 34 with a short duration. This tone is lowered and merged with yángpíng (陽平) in Chénxī and Xiāngxiāng. It becomes higher in Shàoyáng Chánglè and has merged with yīnpíng (陰平) there.

縮 suō QYS \*ɣuwk

CS [səu<sup>24</sup>]; CX [səu<sup>213</sup>]; HS [səu<sup>35</sup>]; HY [su<sup>22</sup>]; PJ [səu<sup>24</sup>]; QY [su<sup>33</sup>]; SS [səu<sup>24</sup>];  
SY(CL) [su<sup>55</sup>]; XH(BX) [so<sup>24</sup>]; XX [ɛiei<sup>23</sup>]

CMX \*suk<sup>34</sup>

The vowel in Xīnhuà Bǎixī for this character possibly comes from Mandarin.

一 yī QYS \*ʔjit

CS [i<sup>24</sup>]; CX [i<sup>213</sup>]; HS [i<sup>35</sup>]; HY [i<sup>22</sup>]; PJ [i<sup>24</sup>]; QY [i<sup>33</sup>]; SS [i<sup>24</sup>]; SY(CL) [i<sup>55</sup>]; XH(BX)

[i<sup>24</sup>]; XX [i<sup>23</sup>]

CMX \*it<sup>34</sup>

## 4.2 Tones from the Y áng (陽) Category

4.2.1 CMX \*Y ángp íng (陽平). The actual pitch is reconstructed to be a low rising tone 12.

同 tóng QYS \*down

CS [tən<sup>13</sup>]; CX [dəw<sup>213</sup>]; HS [t<sup>h</sup>en<sup>11</sup>]; HY [tən<sup>11</sup>]; PJ [dəŋ<sup>23</sup>]; QY [don<sup>11</sup>]; SS [dən<sup>13</sup>]; SY(CL) [dɛ̃<sup>12</sup>]; XH(BX) [d<sup>h</sup>ən<sup>13</sup>]; XX [dɛ̃n<sup>23</sup>]

CMX \*duŋ<sup>12</sup>

鵝 é QYS \*ŋa

CS [o<sup>13</sup>]; CX [ŋo<sup>213</sup>]; HS [ŋo<sup>11</sup>]; HY [ŋo<sup>11</sup>]; PJ [ŋo<sup>23</sup>]; QY [ŋo<sup>54</sup>]; SS [ŋo<sup>13</sup>]; SY(CL) [go<sup>12</sup> 白 ~ ŋo<sup>12</sup> 文]; XH(BX) [o<sup>13</sup>]; XX [ŋõ<sup>23</sup>]

CMX ŋo<sup>12</sup>

4.2.2 CMX \*Y ángshǎng (陽上). The actual pitch is reconstructed to be a low falling tone 32. Most dialects have merged it with \*Y ángqù (陽去) upon the condition of following [-sonorant] initials, usually restricted to plosives, affricates, and fricatives. Otherwise, the tone is merged with \*Y īnshǎng (陰上). Evidence for a late merger of \*Y ángshǎng (陽上) and \*Y ángqù (陽去) tones that conditioned on changed initials is found from comparing Q y áng and P íngjiāng dialects.

Table 4.3: QY's special merger

	舞	晚	網	尾	乳	擾	軟	忍
PJ	u <sup>上</sup>	uan <sup>上</sup>	uoŋ <sup>上</sup>	uei <sup>上</sup>	y <sup>上</sup>	iau <sup>上</sup>	yan <sup>上</sup>	yn <sup>上</sup>
QY	vu <sup>去</sup>	van <sup>去</sup>	vaŋ <sup>去</sup>	vi <sup>去</sup>	zy <sup>去</sup>	ziau <sup>去</sup>	zyan <sup>去</sup>	zin <sup>去</sup>
SY(CL)	vu <sup>陽上</sup>	vaŋ <sup>陽上</sup>	vã <sup>陽上</sup>	vi <sup>陽上</sup>	zy <sup>陽上</sup>	ziau <sup>陽上</sup>	zye <sup>陽上</sup>	zeŋ <sup>陽上</sup>
CMX	*u <sup>陽上</sup>	*uan <sup>陽上</sup>	*uoŋ <sup>陽上</sup>	*ui <sup>陽上</sup>	*iy <sup>陽上</sup>	*iiau <sup>陽上</sup>	*iyen <sup>陽上</sup>	*iin <sup>陽上</sup>

Residual forms are not listed in Table 4.3. Syllables here all bear the shǎng (上)

tone in P ńgjiāng dialect and most other dialects as well. However in Q ́y ́ng, these syllables are in the qù(去) tone with their initials realized as voiced fricatives. It can be explained by a conjecture that the initial of these syllables in Q ́y ́ng has hardened to a fricative before the merger of \*Y ́ngshǎng (陽上) and \*Y ́ngqù (陽去) tones conditioned on [-sonorant] syllabic onsets. By contrast, the initials of these syllables softened to initial zero in P ńgjiāng before a similar merger.

**Table 4.4: mismatch of \*Y ́ngshǎng (陽上) among PJ, QY, and SY(CL)**

	雨	乳	豎	樹	預
PJ	y <sup>上</sup>	y <sup>上</sup>	ɛy <sup>陽去</sup>	ɛy <sup>陽去</sup>	y <sup>陽去</sup>
QY	y <sup>上</sup>	ʒy <sup>去</sup>	ʒy <sup>去</sup>	ʒy <sup>去</sup>	y <sup>去</sup>
SY(CL)	y <sup>陰上</sup>	ʒy <sup>陽上</sup>	ʒy <sup>陽上</sup>	ʒy <sup>陽去</sup>	y <sup>陰去</sup>
CMX	*y <sup>陰上</sup>	*.ly <sup>陽上</sup>	*ʒy <sup>陽上</sup>	*ʒy <sup>陽去</sup>	*y <sup>陽去</sup>

In Table 4.4, syllables bearing the qù(去) tone, no matter yīn or y ́ng, are shaded, while those with shǎng (上) tone are not. Both P ńgjiāng and Q ́y ́ng's zero initial syllables bear shǎng (上) tone (yīn or y ́ng are not specified for Shǎng tone here). The difference is that a fricative initial ʒ- is found in Q ́y ́ng for the syllable 乳 while zero in P ńgjiāng. For Sh ày ́ng Ch ́ngl è the distribution is the same with CMX. This divergence between QY and PJ is clearly related to their realizations of respective initials. For PJ, there should have been \*.ly > \*y before a split of \*Y ́ngshǎng (陽上), the latter of which conditioned on some type of constriction at the syllabic onset. By contrast, there should have been \*.ly > ʒy in QY before this same split.

重 zhòng QYS \*druawŋ<sup>?</sup>

CS [tsən<sup>21</sup><sub>白</sub> ~ tsən<sup>55</sup><sub>文</sub>]; CX [tɕəu<sup>55</sup>]; HS [tueŋ<sup>44</sup>]; HY [tsəŋ<sup>213</sup>]; PJ [dzəŋ<sup>21</sup>]; QY [dzoŋ<sup>214</sup>]; SS [dzən<sup>21</sup><sub>白</sub> ~ tɕən<sup>45</sup><sub>文</sub>]; SY(CL) [dzẽ<sup>21</sup><sub>白</sub> ~ dzẽ<sup>24</sup><sub>文</sub>]; XH(BX) [tɕ<sup>h</sup>yn<sup>24</sup>]; XX [dʌn<sup>22</sup>]

CMX \*dʒiuŋ<sup>32</sup>

坐 zuò QYS \*dzwa<sup>?</sup>

CS [tso<sup>21</sup><sub>白</sub> ~ tso<sup>55</sup><sub>文</sub>]; CX [tso<sup>55</sup>]; HS [tso<sup>44</sup>]; HY [tso<sup>213</sup>]; PJ [dzo<sup>21</sup>]; QY [dzo<sup>214</sup>]; SS

[dzo<sup>21</sup><sub>白</sub> ~ tso<sup>45</sup><sub>文</sub>]; SY(CL) [dzo<sup>31</sup>]; XH [dz<sup>h</sup>o<sup>21</sup>]; XX [dzo<sup>22</sup>]

CMX \*dzuo<sup>32</sup>

Sh àoy áng Ch ángl è has undergone a local change where the \*Y ángshǎng (陽上) syllables shifted to yīnshǎng (陰上) tone conditioned on nasal onsets (which is further conditioned on the finals, see section 2.6.4).

我 wǒ QYS \*ŋɑ<sup>?</sup>

CS [ŋo<sup>42</sup>]; CX [ŋo<sup>31</sup>]; HS [ŋo<sup>13</sup>]; HY [ŋo<sup>33</sup>]; PJ [ŋo<sup>53</sup>]; QY [ŋo<sup>54</sup>]; SS [ŋo<sup>42</sup>]; SY(CL) [go<sup>31</sup><sub>白</sub> ~ ŋo<sup>42</sup><sub>文</sub>]; XH(BX) [o<sup>31</sup>]; XX [ŋ<sup>21</sup><sub>白</sub> ~ ŋõ<sup>21</sup><sub>文</sub>]

CMX \*ŋɔ<sup>32</sup>

4.2.3 CMX \*Y ángqù (陽去). The actual pitch of this tone is reconstructed to be a mid-level 33. It can evolve to low falling or low rising in different dialects. For most dialects, this tone has merged with \*Y ángshǎng (陽上). In the area near Ch ángshā (including Sh áoshān), syllables from this tone usually have a literary reading with a yīnqù (陰去) tone, which is probably a late borrowing from the north. Since this phenomenon is not widespread, the yīnqù (陰去) layer is not compared. In Q í áng, \*Y ángqù (陽去) has merged with \*Yīnqù (陰去) tone.

In Sh àoy áng Ch ángl è syllables from this tone merge with yīnp íng (陰平) when following [+sonorant] initials in its vernacular layer, and merge with yīnqù (陰去) for literary readings. The latter is possibly borrowed from nearby Sh àoy áng City, because Sh àoy áng dialect has experienced a shift of \*Y ángqù (陽去) syllables to the local yīnqù (陰去) tone conditioned on [+sonorant] onsets. Details will be discussed in the following sections.

洞 dòng QYS \*down<sup>h</sup>

CS [tən<sup>21</sup><sub>白</sub> ~ tən<sup>55</sup><sub>文</sub>]; CX [təu<sup>55</sup>]; HS [teŋ<sup>44</sup>]; HY [təŋ<sup>213</sup>]; PJ [dəŋ<sup>21</sup>]; QY [don<sup>214</sup>]; SS [dən<sup>21</sup><sub>白</sub> ~ tən<sup>45</sup><sub>文</sub>]; SY(CL) [dǎ<sup>24</sup>]; XH(BX) [d<sup>h</sup>ən<sup>33</sup>]; XX [dɿn<sup>22</sup>]

CMX \*duŋ<sup>33</sup>

餓 è QYS \*ŋɑ<sup>h</sup>



CS [o<sup>21</sup><sub>白</sub> ~ o<sup>55</sup><sub>文</sub>]; CX [ɲo<sup>55</sup>]; HS [ɲo<sup>44</sup>]; HY [ɲo<sup>213</sup>]; PJ [ɲo<sup>21</sup>]; QY [ɲo<sup>214</sup>]; SS [ɲo<sup>21</sup><sub>白</sub> ~ ɲo<sup>45</sup><sub>文</sub>]; SY(CL) [ɲo<sup>55</sup>]; XH(BX) [o<sup>45</sup>]; XX [ɲø<sup>22</sup>]  
CMX \*ɲɔ<sup>33</sup>

The case of Xīnhuà Bǎixī is interesting. Here, many syllables from yángqù (陽去) have merged with either yīnpíng (陰平), which is mid-level 33, or rùshēng (入聲), which is mid-rising 24. Specifically, those in the yīnpíng (陰平) tone are marked in the source as vernacular forms. It is possible that the merger of \*Yángqù (陽去) with \*Yīnpíng (陰平) was a local innovation, and Bǎixī borrowed from another prestigious dialect the literary readings of the original \*Yángqù (陽去) cognates with a mid-rising tone. The ideal candidate for the source language is the dialect of Shàoyáng proper. During Míng and Qīng Dynasties, Xīnhuà County was under the administration of Bǎoqīngfǔ (寶慶府) (Luo, 1998, pp. 2-3), located in nowadays Shàoyáng City. The yángqù (陽去) tone in Shàoyáng bears exactly the mid-rising tone 24.

**Table 4.5: XH(BX)'s realization of \*Yángqù (陽去) obstruents**

	地	樹	限	步
XH(BX)	d <sup>h</sup> i <sup>33</sup> <sub>白</sub> ~ d <sup>h</sup> i <sup>24</sup> <sub>文</sub>	zy <sup>33</sup> <sub>白</sub> ~ zy <sup>24</sup> <sub>文</sub>	ɣã <sup>33</sup> <sub>白</sub> ~ ɣã <sup>24</sup> <sub>文</sub>	b <sup>h</sup> u <sup>33</sup> <sub>白</sub> ~ b <sup>h</sup> u <sup>24</sup> <sub>文</sub>
SY	di <sup>24</sup>	zy <sup>24</sup>	ɣã <sup>24</sup>	bu <sup>24</sup>

Additionally, the \*Yángqù (陽去) syllables with sonorant initials in the literary layer of Xīnhuà Bǎixī behave similarly with those in Shàoyáng as well. Unlike typical dialects that can separate \*Yángqù (陽去) from \*Yīnqù (陰去) such as Xiāngxiāng, Shàoyáng have merged those \*Yángqù (陽去) syllables with sonorant initials into its yīnqù (陰去) tone 35. Coincidentally, the literary forms of these syllables in Xīnhuà Bǎixī bear the high-rising qùshēng (去聲) tone 45.

**Table 4.6: XH(BX)'s realization of \*Yángqù (陽去) sonorants**

	帽	累	面
XH(BX)	mau <sup>33</sup> <sub>白</sub> ~ mau <sup>45</sup> <sub>文</sub>	lɐ <sup>33</sup> <sub>白</sub> ~ lɐ <sup>45</sup> <sub>文</sub>	miẽ <sup>33</sup> <sub>白</sub> ~ miẽ <sup>45</sup> <sub>文</sub>
SY	mau <sup>35</sup>	nuei <sup>35</sup>	miẽ <sup>35</sup>
XX	mao <sup>22</sup>	luai <sup>22</sup>	miĩ <sup>22</sup>

This is again likely to be affected by Sh àoy áng. There is not a tone with the pitch of 35 in Xīnhu à so 45 would be an optimal target. Recent influence from Mandarin might be an additional stimulating factor.

4.2.4 CMX \*Y ángrù (陽入). The actual pitch of this tone is reconstructed to be a mid-rising tone 24 with a short duration. Its pitch contour is very similar to that of \*Yīnqù (陰去), so that many dialects including Xiāngxiāng have finally merged these two tones after the loss of plosive codas.

It is merged with \*Yīnrù (陰入) tone in Ch ángshā and P íngjiāng. Ch énxī's \*Y ángrù (陽入) tone has only merged with \*Yīnqù (陰去) after plosives, affricates, and fricatives, with the majority of the remainder merged with \*Y ángp íng (陽平). in H éngshān it has merged with shǎngshēng (上聲). In H éngyáng it merges with \*Y ángp íng (陽平). It has merged with y ángqù (陽去) tone in Sh àoy áng after bilabial initials, and mostly with \*Yīnqù (陰去) otherwise.

It is worth noting that the voiced plosives and affricates of \*Y ángrù (陽入) syllables are more likely to be unvoiced in a number of dialects, relative to those in the other tones. This could be attributed to the higher pitch of \*Y ángrù (陽入) relative to the other y áng (陽) tones.

別 bi é QYS \*biat

CS [p<sup>h</sup>ie<sup>24</sup> ~ pie<sup>24</sup>]; CX [p<sup>h</sup>ie<sup>324</sup> 白 ~ pie<sup>213</sup> 文]; HS [p<sup>h</sup>ie<sup>13</sup> ~ pie<sup>35</sup>]; HY [pie<sup>11</sup>]; PJ [p<sup>h</sup>ieʔ<sup>4</sup>]; QY [bie<sup>33</sup>]; SS [p<sup>h</sup>ie<sup>24</sup>]; SY(CL) [bie<sup>24</sup>]; XH(BX) [pie<sup>24</sup>]; XX [p<sup>h</sup>ia<sup>23</sup> ~ p<sup>h</sup>ia<sup>45</sup>]

CMX \*biet<sup>24</sup>

盒 hé QYS \*yəp

CS [xo<sup>24</sup>]; CX [xɔ<sup>324</sup>]; HS [xɑ<sup>13</sup> 白 ~ xo<sup>13</sup> 文]; HY [xo<sup>陽平</sup>]; PJ [xøʔ<sup>4</sup>]; QY [yɔ<sup>33</sup>]; SS [xo<sup>24</sup>]; SY(CL) [ho<sup>35</sup>]; XH(BX) [xo<sup>24</sup>]; XX [xuai<sup>45</sup>]

CMX \*yət<sup>24</sup>

The vernacular form in H éngshān is irregular.

### 4.3 Justification for a Separate \*Y ángrù (陽入) from \*Yīnqù (陰去)

Now we can turn back to one of the key problems associated with Coblin's CCX. Recall he proposes a shift of MC \*Y ángrù (陽入) syllables to \*Yīnqù (陰去), 'with concomitant change of voiced stops and affricates to voiceless aspirates' (Coblin, 2011, p. 245). If this shift is indeed early, we shall expect it with all daughter languages.

The reconstructed CMX toneme \*Y ángrù (陽入) largely overlaps the QYS tone \*Y ángrù (陽入), because, by definition of convention, the notion yáng (陽) is bound to voiced onsets, while the \*Rù (入) tone syllables ended with plosive codas. In this section CMX tonemes shall be used interchangeably with QYS tonemes.

#### 4.3.1 Evidence from Xīnhuà Bǎixī

As mentioned in Chapter 1, Coblin's first challenge comes from Xīnhuà To recapitulate, there are five tones in Xīnhuà Bǎixī dialect, transcribed in section 1.6.9. Herein notations *tone 1* through *tone 5* (as shown in Table 4.7) will be used instead of the tone names for Xīnhuà Bǎixī dialect.

**Table 4.7: tones of XH(BX)**

1. 陰平	2. 陽平	3. 上聲	4. 去聲	5. 入聲
33	13	31	45	24

To stand with the conclusion by Coblin (2011), a single toneme comprised of \*Y ángrù (陽入) plus \*Yīnqù (陰去) is expected among Central Xiāng continuum, no matter what subsequent sound change undergoes.

The focus here is to decide the mapping rules of CMX \*Y ángrù (陽入) tone in relation with \*Yīnqù (陰去), so the following part will ignore syllables from the other tones for simplicity of analysis.

As noted in 4.2.3, the feature of onset seems to have affected the evolution of tones. Thus the tones should be analysed in order to restore the tonal categories before any relevant tonal process. The first analysis would be on the syllables with CMX obstruent, or [-sonorant] initials. Table 4.8 lists the modern tones for all of this type of \*Y ángrù (陽入) syllables in the material for this dialect.

**Table 4.8: tones of \*Y ángrù (陽入) obstruents in XH(BX)**

XH(BX) syllables with [-sonorant] onsets from QYS *Y ángrù (陽入) tone	modern tone
宅	3
擲秩十什拾石舌惑縛熟	4
蟄侄直植植日實食蝕敵狄笛及集輯疾極籍藉寂習襲席夕局朮述或拔伐筏罰踏沓達闌札鋤雜洽狹峽匣挾轄劃白帛核轍攝嚼勃泊薄鐸奪合盒活獲鶴鑿昨濁勺苟學僕瀑突獨讀牘犢毒複佛服伏族俗續鐳逐贖淑蜀屬別跌疊磔牒蝶諫特截賊澤擇杰協穴絕掘倔	5

The rate for syllables with [-sonorant] onsets from QYS \*Y ángrù (陽入) tone merging into tone 5 is 91%. Those few merging into tones 3 and 4 have no particular environment identified. For instance, the onset of 擲 is [-aspiration] while that of 秩 is [+aspiration]. Meanwhile, both [-aspiration] and [+aspiration] onsets are observed in large numbers for the syllables with tone 5, which is surely the regular target

Table 4.9 lists the modern tones of all [+sonorant] onset syllables from \*Y ángrù. Subscript numeral 1 denotes the vernacular forms and numeral 2 the literary.

**Table 4.9: tones of \*Y ángrù (陽入) sonorants in XH(BX)**

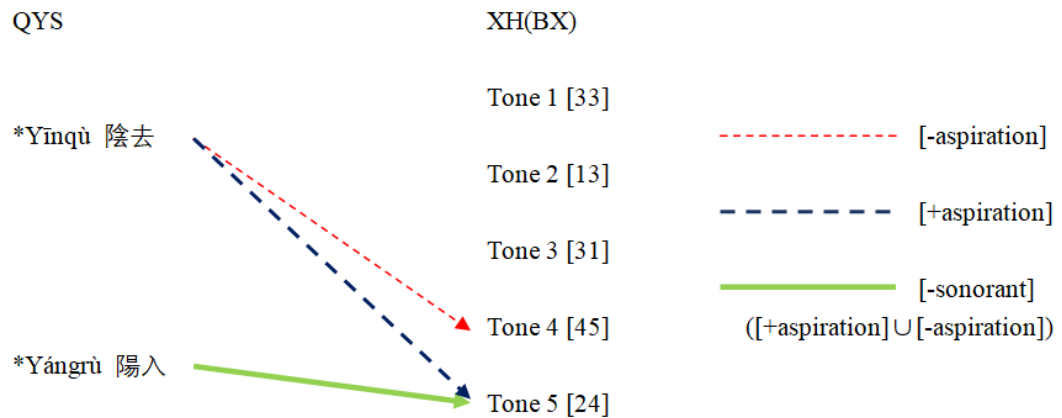
XH(BX) syllables with [+sonorant] onsets from QYS *Y ángrù (陽入) tone	modern tone
抹臘 <sub>1</sub> 蠟 <sub>1</sub> 拉木鑊鹿 <sub>1</sub> 綠 <sub>1</sub> 肉 <sub>1</sub> 日 <sub>1</sub>	1
域	2
覓密蜜立笠粒栗力溺歷匿翼亦譯疫役玉獄臘 <sub>2</sub> 蠟 <sub>2</sub> 辣捋肋勒幕寞陌日落烙駱酪洛絡樂藥鑰躍樂勿六篋葉頁腋液略掠額 <sub>1</sub> 業	4
逆入納捺滑猾襪滅沒墨默麥脈額 <sub>2</sub> 莫摸穆牧末沫鄂若弱虐瘡岳祿陸錄綠 <sub>2</sub> 鹿 <sub>2</sub> 物律率育慾浴獵列烈裂劣聶鑷躡悅閱月越曰粵孽	5

The rate for syllables with [+sonorant] onsets from QYS \*Y ángrù (陽入) tone merging into tone 1 is 9%, into tone 4 is 44%, and into tone 5 is 46%. The division is without clear environment, yet tone 1 is the toneme that hosts the largest number of vernacular readings. Considering the frequency of usage, their percentage is of higher significance. In this regard, all the tones 1, 4, and 5 in Table 4.9 shall be considered regular targets for \*Y ángrù (陽入) with [+sonorant] onsets.

The feature of sonority is one of the dominant factors affecting the split of \*Y ángrù (陽入) tone syllables, whilst aspiration is not.

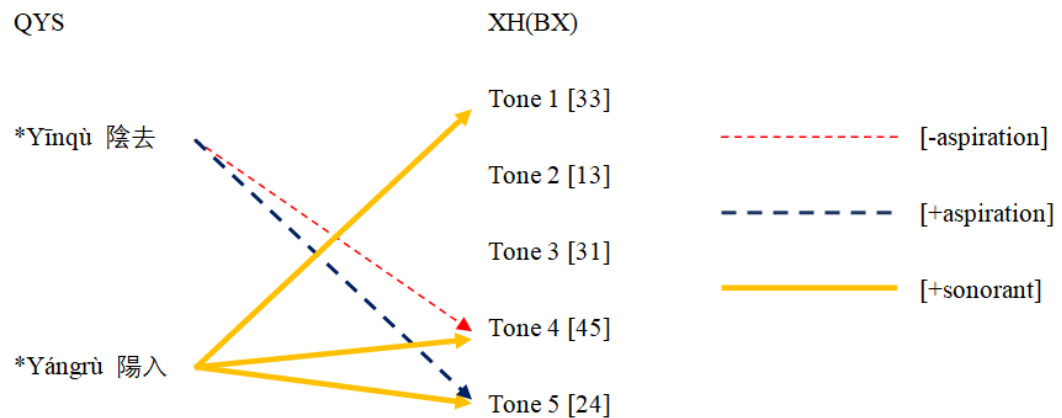
Now we can turn to \*Yīnqù (陰去) syllables. The observable pattern appears that syllables with [+aspiration] onsets prefer in tone 5; otherwise in tone 4. The same split has been described by Chen (2006, p. 158). Only 23 (out of about 400) exceptional syllables with [+aspiration] are found in tone 4, with no environment identified. As the division for \*Yīnqù (陰去) syllables is relatively neat, they are not transcribed to this section. Now the Yīnqù (陰去) syllables shall be treated as the control group to see how the \*Yángù (陽入) syllables behave relative to them.

The pattern for [-sonorant] onset syllables is depicted in Figure 4.1.



**Figure 4.1: the pattern of \*Yángù (陽入) with [-sonorant] onsets**

The pattern for [+sonorant] onset syllables is depicted in Figure 4.2.



**Figure 4.2: the pattern of \*Yángù (陽入) with [+sonorant] onsets**

On the one hand, the evolution of the [-sonorant] onset syllables from \*Y ángrù (陽入) tone is incompatible with that from \*Yīnqù (陰去) tone. On the other hand, that of the [+sonorant] onset syllables from \*Y ángrù (陽入) does not match with those from \*Yīnqù (陰去) as well. Thus \*Y ángrù (陽入) and \*Yīnqù (陰去) tones cannot trace back to a single toneme in Xīnhuà Bǎixī at all. Evidently, there is no such justification for an early merger between \*Y ángrù (陽入) and \*Yīnqù (陰去) syllables for this dialect. Since Bǎixī is within the continuum of Coblin's Central Xiāng, it becomes highly questionable whether the hypothetical shift proposed by him is an early and shared innovation or not.

#### 4.3.2 Evidence from Ānhuà

The second challenge comes from data in Ānhuà Coblin (2011) includes Ānhuà (Máchéng) described by Bao (2006) as one of the Central Xiāng dialects. This dialect has the entirety of \*Rù (入) tone merged with \*Yīnqù (陰去). It seems reasonable to assume that the \*Y ángrù (陽入), which is part of \*Rù (入) tone, has merged with \*Yīnqù (陰去) early. However, It will be shown in this section how this is not an evidence favorable for Coblin's inclusion of Ānhuà into his Central Xiāng.

Ānhuà Máchéng dialect has six tones, listed in Table 4.10. Within the Chinese name for tone 5 (次陰去), the first character 次 (cì) means 'secondary' (Coblin, 2011, p. 7). The meaning already implies that the tone is an allo-tone of another tone.

**Table 4.10: tones of AH(MC)**

1. 陰平	2. 陽平	3. 上聲	4. 陰去	5. 次陰去	6. 陽去
33	13	31	45	24	21

Máchéng dialect has one feature in common with Xīnhuà Bǎixī that its syllables from MC \*Yīnqù (陰去) have splitted according to aspiration. Those with [+aspiration] onsets are in tone 5, otherwise are in tone 4. Phonologically, the two tones form a single toneme. If we combine the fourth and the fifth tones together, it will result in a

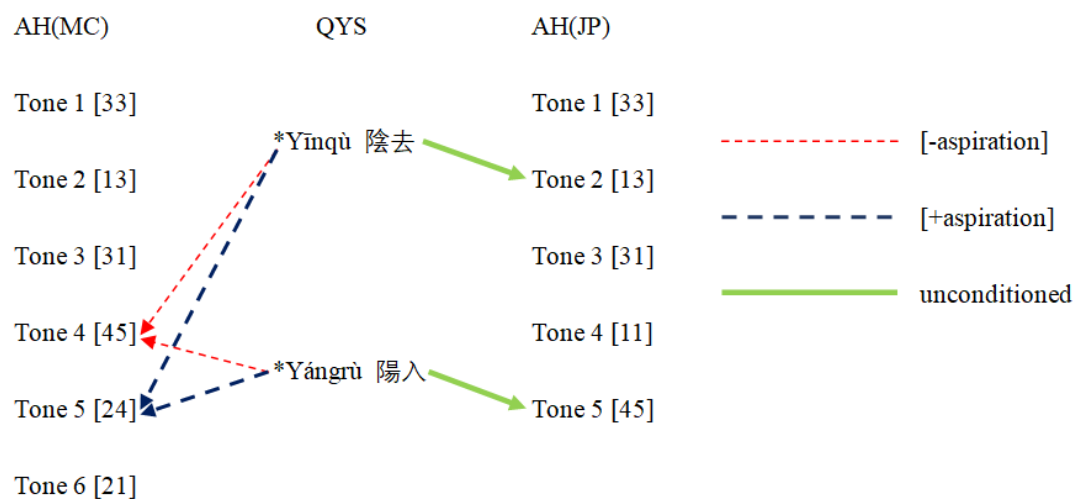
five-tone system. Since we are looking at actual tonal evolutions, the allo-tones are part of our interest and should be kept separate.

Ānhu à Ji èp á is located not far from M ách éng, while there are interesting tonal mappings to be explored between the two dialects. A list of the five tones in Ji èp á dialect is elaborated in Table 4.11 below.

**Table 4.11: tones of AH(JP)**

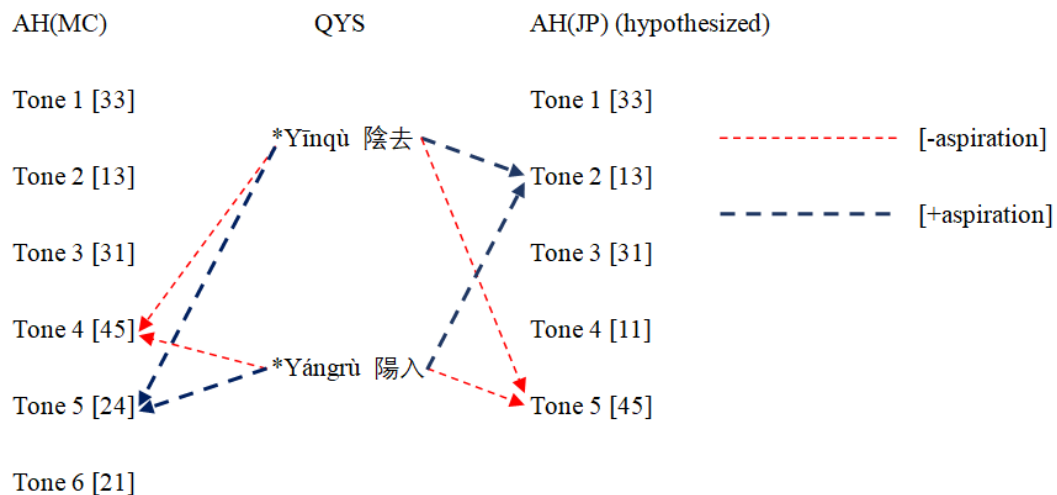
1. 陰平	2. 陽平	3. 上聲	4. 去聲	5. 入聲
33	13	31	11	45

Lei (2007, pp. 95-97) enumerated that slightly less than half of the MC \*Yīnqù (陰去) syllables are in Ji èp á's tone 2, though they are usually vernacular forms. By contrast, slightly more than half of these syllables are in tone 5 and this is the literary layer. Since a number count does not reflect the situation from a frequency count, it is reasonable to expect a much higher percentage of vernacular \*Yīnqù syllables bearing tone 2 in everyday speech. Ignoring the literary layer, the changes of tones from MC to these two dialects are depicted below.



**Figure 4.3: from QYS to AH(MC) and AH(JP)**

Now consider a hypothetical shift for Ji èp á as in Figure 4.4.



**Figure 4.4: result of hypothetical shift in AH(JP)**

Regarding the \*Yīnqù (陰去) and \*Yánggrù (陽入) syllables, it is realizable for Jièpǎ dialect to undergo such a split conditioned on the feature of aspiration, where [-aspiration] onset syllables of \*Yīnqù (陰去) tone shift from tone 2 to tone 5 and [+aspiration] onset syllables of \*Yánggrù (陽入) tone shift from tone 5 to tone 2. Researchers have found that ‘the onset F0 of a tone is higher following unaspirated consonants than following aspirated consonants’ (Xu & Xu, 2003), and suggested that the mechanism behind a lower F0 caused by aspiration is likely related to a lower Closing Quotient (Qx) associated with aspirated initials (Zhang, 2009). Thus from the perspectives of both phonetics and phonology, the hypothetical shift in Figure 4.4 is theoretically feasible. The pattern of Ānhuà Jièpǎ’s \*Yīnqù (陰去) and \*Yánggrù (陽入) syllables would become identical to that of Máchéng once it had completed this hypothetical shift. In other words, the current situation in Ānhuà Máchéng can be a later stage from the pattern observed in Jièpǎ.

According to Lei (2007), both Jièpǎ and Máchéng belong to the Qiánxiāng accent (前鄉話) opposing to the Hòuxiāng accent (後鄉話) within Ānhuà County. Having all the analysis at hand, a conclusion with confidence can be made that it is not more possible for Ānhuà Máchéng to have merged \*Yīnqù (陰去) and \*Yánggrù (陽入) tones before a tonal split conditioned on aspiration as assumed by Coblin, than to have experienced a late merger resulted from such a tonal split.



### 4.3.3 A Possibly Ongoing Shift

The merger of \*Yīnqù (陰去) and \*Yángù (陽入) in central Húnán Province is likely fairly late. In fact, Shàoyáng dialect may be a remnant example at a stage of pre-merger of the two tones. This dialect has the following tonal inventories.

**Table 4.12: tones of SY**

1. 陰平	2. 陽平	3. 上聲	4. 陰去	5. 陽去	6. 入聲
55	12	42	35	24	33

Shàoyáng dialect does not distinguish tone 4 and tone 5 phonemically, as its tone 4 contains only [-voice, -aspiration] or [+sonorant] initials, while tone 5 contains only [+voice, -sonorant] or [+aspiration] initials. Herein the two tones are collectively named as the qù (去) tone. Note that \*Yīnqù (陰去) is within it. From the material of Shàoyáng, 68 popular etymons of MC \*Yángù (陽入) origin are found in the qù (去) tone, listed in Table 4.13.

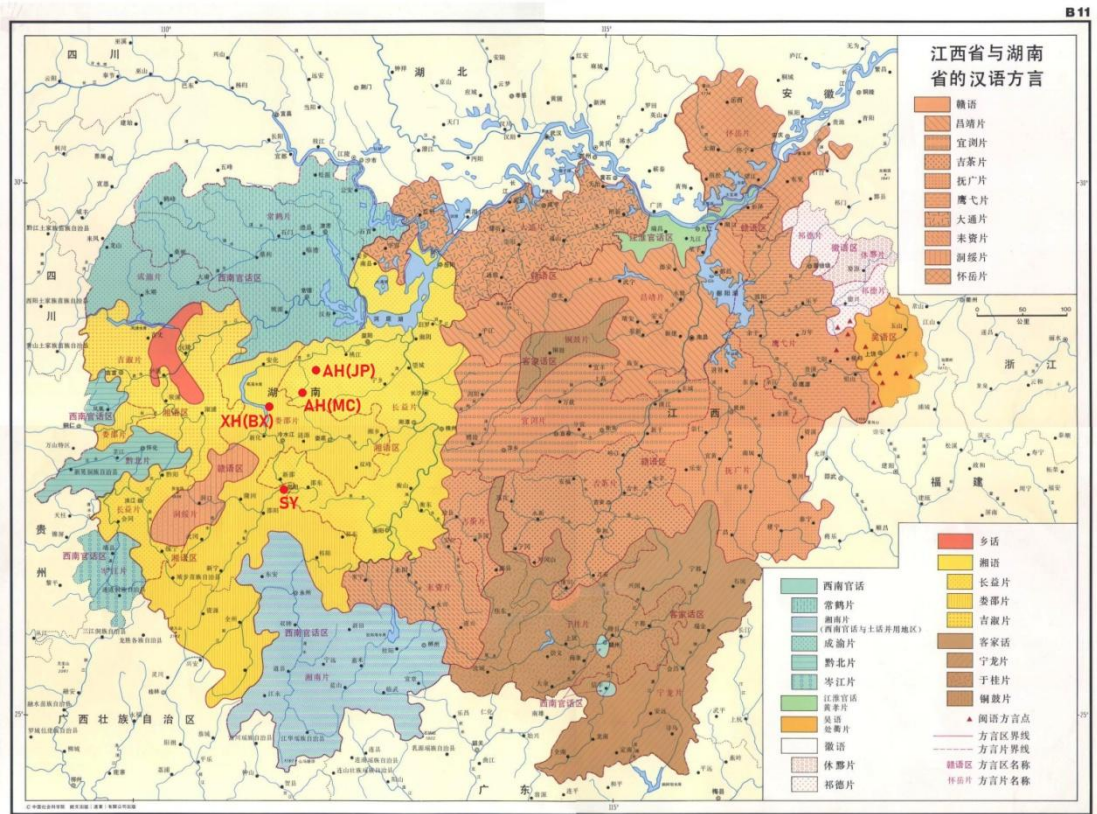
**Table 4.13: \*Yángù (陽入) syllables in qù (去) tone of SY**

Initial feature	plosive & affricate onsets	other onsets
[+voice, -sonorant]	賊擇昨屨讀褥辱	日熱襪肉若弱物勿入
[-voice] or [+sonorant]	直值沓鑿弼極白帛薄	舌伐筏石莫鄂歷曆立笠粒栗匿逆易亦 譯翼磔液腋葉嚼勺六陆斛猾滑劃術述 律域疫役玉獄慾浴育鬱絕

Shàoyáng has undergone a devoicing of obstruent initials of its \*Yángù (陽入) syllables. Those devoiced plosives and affricates are mostly aspirated. Yet, 16 popular lexemes are left with voiced obstruents blocked from this process. If all these voiced plosives and affricates were devoiced into the lower row, the situation would then appear identical to the ‘shared innovation’ suggested by Coblin (2011), where the \*Yángù (陽入) syllables in the popular layer totally shift into \*Yīnqù (陰去), with the voiced stops and affricates changing to voiceless aspirates.

Map 4.1 dots the locations of the four dialects discussed in section 4.3. The

original map is from the *Language atlas of China* (General Editors, 1987).



Map 4.1: locations of AH(MC), AH(JP), XH(BX), and SY dialects

#### 4.4 Summary of CMX Tones

Eight tonemes have been evidently reconstructed in the CMX system. Notably, the distinct \*Y ǎngrù (陽入) reconstructed in 4.2.4 disagrees with Coblin's Central Common Xiāng. The necessity of a separate \*Y ǎngrù (陽入) tone has been prudently justified. The flaw in Coblin's proposal has also been explained. The next steps would be 1) to test the coherency and explanatory power of CMX system on a larger dataset not confined to the 28 dialects selected for reconstruction; 2) to verify the uniquely shared innovation hypothesized in the very beginning of this thesis; and 3) to look for more potentially uniquely shared innovations, if any.

## 5. The Innovations

This chapter will explain several important innovations subsequent to CMX that have shaped the outline of some subsets of modern Xiāng dialects, and demonstrate one of the decisive innovations that have possibly marked the early formation of the common language of Xiāng.

### 5.1 Subsequent Innovations

#### 5.1.1 Evolution Associated with Vowel [ɔ]

Among the 73 CMX finals reconstructed in Chapter 3, \*-ɔi, \*-ɔn and \*-ɔt are among the most unstable ones. The nucleus [ɔ] features a back and rounded open vowel, while the codas [i], [n] and [t] are all front and closed. This contradiction in position of the tongue means that the movement of the articulator during production of these finals can be relatively large. A gestural blend is to be caused (Kochetov, 2009), since ‘the phonetic plan for an utterance places competing demands upon a single articulator’ (Garrett & Johnson, 2013), which could then trigger a sound change.

**Table 5.1: comparison of \*-ɔi**

	代	海	害	對	灰	會
CS	tai	xai	xai	tei	fei	fei
PJ	dɛi	k <sup>h</sup> ɛi	xɛi	tei	fi ~ fei	fei
SF	due	xue	yue	tue	xue	yue
LD	due	xue	yue	tue	xue	yue
XX	duai	xuai	yuai	tuai	xuai	yuai
CMX	*dɔi	*xɔi	*yɔi	*tuɔi	*xuɔi	*yuɔi

**Table 5.2: comparison of \*-ɔn**

	簪	肝	感	汗	鑽	官	管	換
CS	tsan	kan	kan	xan	tsõ	kõ	kõ	xõ
PJ	tsən	kuən	kən	xən	tsən	kuən	kuən	fən
SF	tsia	kua	kia	yua	tsua	kua	kua	yua
LD	tsã	kuê	kuê	yuê	tsuê	kuê	kuê	yuê
XX	teiã	kuã	kuã	yuã	tsuã	kuã	kuã	yuã
CMX	*tsɔn	*kɔn	*kɔn	*yɔn	*tsuɔn	*kuɔn	*kuɔn	*yuɔn

**Table 5.3: comparison of \*-ot**

	葛	渴	盒	括	闊	活
CS	ko	k <sup>h</sup> o	xo	kua	k <sup>h</sup> o	xo
PJ	køʔ	k <sup>h</sup> øʔ	xøʔ	kuøʔ	k <sup>h</sup> oʔ	føʔ ~ uøʔ
SF	kua	k <sup>h</sup> ua	xua	kua	k <sup>h</sup> ua	xua
LD	kue	k <sup>h</sup> o	xue	kue	k <sup>h</sup> ue	xue
XX	kua	k <sup>h</sup> ua	xuai	kua	k <sup>h</sup> ua	xuai
CMX	*kɔt	*k <sup>h</sup> ɔt	*ɣɔt	*kuɔt	*k <sup>h</sup> uɔt	*ɣuɔt

There are at least two strategies observed in order to resolve the competing demands. One is to change the nucleus into a front vowel, like in Chángshā and P íngjiāng in Table 5.1. The other is to change the coda, usually by deleting it, like Chángshā in Table 5.3.

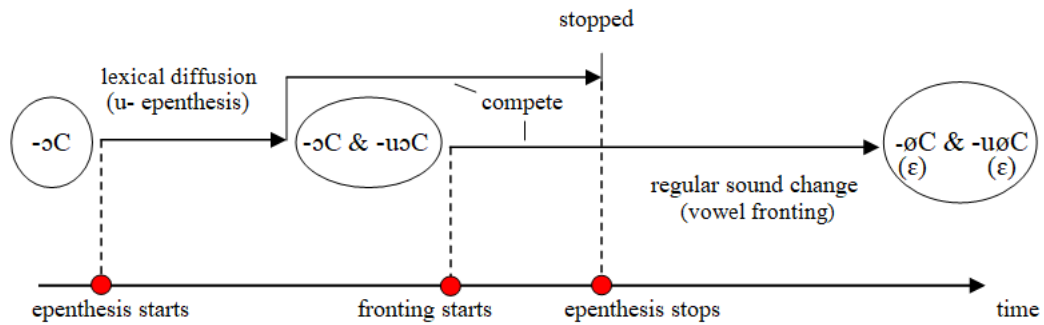
The lexeme 括 in Chángshā is irregular, possibly a misreading affected by the very similar character 刮 with pronunciation [kua<sup>24</sup>]. Xiāngxiāng dialect carries two finals, -ua and -uai, in Table 5.3. It does not imply a separate syllable ought to be reconstructed, though. The final -uai is confined to CMX \*Y ángrù (陽入) syllables that evolve into XX's 陰去 tone (see section 4.2.4). Only three lexemes, namely 捋 [luai<sup>陰去</sup>], 盒 [xuai<sup>陰去</sup>], and 活 [xuai<sup>陰去</sup>], are of this kind. They may represent a residue layer before a merger of \*-ot/-uot with \*-uat.

For the shaded syllables, an excrescent glide u- is observed. They always merge with the local syllables on the right hand side of the tables. P íngjiāng and Shuāngfēng in Table 5.2 both have some syllables (e.g. 肝) carrying the glide while some others (e.g. 感) not. The P íngjiāng and Shuāngfēng forms are neither close to Mandarin nor to Chángshā, suggesting them quite unlikely to be borrowings. The alternation is to consider a sound change.

As observed, the presence of u- tends to be more common for syllables beginning with velar initials, possibly associated with their much backer and closer places of articulation. The condition for this u- epenthesis can be projected as such that the main vowels must contain a feature bundle of [+back, +round], and that velar initials have reinforced this condition. It is not difficult to discover that this condition is in direct competition with the vowel shifts resulted from the gestural blend. This is, in fact, the

key to explain the intra-dialect variations.

Regular sound change is usually gradual and continuous; in contrast, lexical diffusion is the result of abrupt substitution (Labov, 2020). The epenthesis of medial u- is more likely to be the result of lexical diffusion. Any intermediate stage between the presence and absence of the glide u- seems not very meaningful. Moreover, lexical diffusion has been found usually starting from words with higher frequency of usage (Bybee, 2002). For Xiāng dialects, the lexeme 肝 (lit. liver) is far more basic in everyday speech compared with the cultural word 感 (lit. to experience). Five other lexemes in P íngjiāng dialect have also participated in the epenthesis, all of which are basic words like 乾 (lit. dry) and 桿 (lit. a stick). Thus the sound change procedure of finals \*-ɔi/ɔn/ɔt is pictured in Figure 5.1.



**Figure 5.1: evolution procedure of CMX \*-ɔi/ɔn/ɔt**

A summary for the evolution of CMX \*-ɔi/ɔn/ɔt in P íngjiāng, Shuāngfēng, L óudǐ, and Xiāngxiāng is as follows. Firstly, a glide u- is added word by word between the initials and rhymes. Xiāngxiāng went through the epenthesis almost completely. P íngjiāng has only run over a smaller portion in the high frequency lexemes. Secondly, the codas triggered a gradual shift of the main vowel forwardly. It competes in speed with the previous sound change. Thirdly, the vowel shift ended with [-back, -round] vowels in SF, LD, and XX dialects. The first sound change in these dialects also stopped henceforth. The main vowel in PJ ended with the feature [-back, +round]. After this, the codas are dropped in SF, LD, and XX dialects.

### 5.1.2 The Shift of CMX Final \*-aŋ

Coblin (2011) reconstructs this final to be CCX \*-ɔŋ, as it does appear to show [+back] and [+round] features in a number of dialects of central Húánán. In contrast, \*-aŋ is reconstructed by him for another group of syllables. For comparison, please refer to Table 5.4. The abbreviation in bracket (ver.) refers to vernacular forms.

**Table 5.4: CCX and CMX handlings for syllables 生 and 桑**

	CCX	LD	CMX
生 (ver.)	*sɔŋ <sup>陰平 白</sup>	sɔ̃ <sup>陰平 白</sup>	*ʃaŋ <sup>陰平 白</sup>
桑	*saŋ <sup>陰平</sup>	sɔŋ <sup>陰平</sup>	*sɔŋ <sup>陰平</sup>

There is an obvious problem here. While both the pronunciations of 生 and 桑 contain a mid-open back rounded vowel ɔ in Lódǐ dialect, only one of them have been reconstructed as such in the common language. If the CCX final \*-ɔŋ aims to explain this feature of lexeme 生, then how would it cater for the same feature of lexeme 桑? Or shall we reconstruct two finals both with [+back, +round] nuclei?

Before solving this puzzle, we have to examine the data of various Xiāng dialects. How the two sets differ in these dialects will be decisive for interpretation.

**Table 5.5: comparison between 生 syllables and 桑 syllables**

	生 (ver.)	坑 (ver.)	桑	糠
LD(WB)	sɔŋ <sup>陰平 白</sup>	k <sup>h</sup> ɔŋ <sup>陰平</sup>	sɔŋ <sup>陰平</sup>	k <sup>h</sup> ɔŋ <sup>陰平</sup>
SF	saŋ <sup>陰平 白</sup>	-	saŋ <sup>陰平</sup>	k <sup>h</sup> aŋ <sup>陰平</sup>
SF(HS)	saŋ <sup>陰平 白</sup>	-	saŋ <sup>陰平</sup>	k <sup>h</sup> aŋ <sup>陰平</sup>
SF(GT)	saŋ <sup>陰平 白</sup>	k <sup>h</sup> aŋ <sup>陰平</sup>	saŋ <sup>陰平</sup>	k <sup>h</sup> aŋ <sup>陰平</sup>
SF(HY)	saŋ <sup>陰平 白</sup>	-	saŋ <sup>陰平</sup>	k <sup>h</sup> aŋ <sup>陰平</sup>
XH	sɔ̃ <sup>陰平 白</sup>	k <sup>h</sup> ɔ̃ <sup>陰平</sup>	sɔ̃ <sup>陰平</sup>	k <sup>h</sup> ɔ̃ <sup>陰平</sup>
XH(BX)	-	k <sup>h</sup> ɔ̃ <sup>陰平</sup>	sɔ̃ <sup>陰平</sup>	k <sup>h</sup> ɔ̃ <sup>陰平</sup>
XP	-	k <sup>h</sup> ã <sup>陰平</sup>	sã <sup>陰平</sup>	k <sup>h</sup> ã <sup>陰平</sup>
PJ	saŋ <sup>陰平 白</sup>	k <sup>h</sup> aŋ <sup>陰平 白</sup>	soŋ <sup>陰平</sup>	k <sup>h</sup> oŋ <sup>陰平</sup>
LD	sɔ̃ <sup>陰平 白</sup>	k <sup>h</sup> ɔ̃ <sup>陰平 白</sup>	sɔŋ <sup>陰平</sup>	k <sup>h</sup> ɔŋ <sup>陰平</sup>
LD(JL)	so <sup>陰平 白</sup>	k <sup>h</sup> o <sup>陰平</sup>	soŋ <sup>陰平</sup>	k <sup>h</sup> oŋ <sup>陰平</sup>
LY	sɔ̃ <sup>陰平 白</sup>	k <sup>h</sup> ɔ̃ <sup>陰平</sup>	soŋ <sup>陰平</sup>	k <sup>h</sup> oŋ <sup>陰平</sup>
SF(ZM)	sɔ̃ <sup>陰平 白</sup>	-	saŋ <sup>陰平</sup>	k <sup>h</sup> aŋ <sup>陰平</sup>
XX	sɔ̃ <sup>陰平 白</sup>	k <sup>h</sup> ɔ̃ <sup>陰平</sup>	saŋ <sup>陰平</sup>	k <sup>h</sup> aŋ <sup>陰平</sup>
XX(QZ)	sɔ̃ <sup>陰平 白</sup>	k <sup>h</sup> ɔ̃ <sup>陰平</sup>	saŋ <sup>陰平</sup>	g <sup>h</sup> aŋ <sup>陰平</sup>

Since some dialects may not have a corresponding vernacular reading recorded for the etymon 生, one additional pair of characters, namely 坑 and 糠, are included for comparison in Table 5.5.

It is clear that the finals of 生 and 坑 form one set, while those of 桑 and 糠 form another set. An important observation is that whenever a dialect contrasts the two sets and the nucleus of the first set features [+back, +round] (shaded rows), the final never carries any coda. This observation prompts us to consider whether the feature is actually conditioned on something else. To see the potential pattern clearer, the shaded dialects from Table 5.5 have been sorted out. This time the second set is replaced with a third set. The syllables chosen are 查 and 家, both with the CMX final \*-a.

**Table 5.6: nasalized - oral vowel pairing**

	生 (ver.)	坑 (ver.)	查	家 (ver.)
LD	s <sup>h</sup> õ <sup>陰平</sup> <sub>白</sub>	k <sup>h</sup> õ <sup>陰平</sup> <sub>白</sub>	dzo <sup>陽平</sup>	kõ <sup>陰平</sup> <sub>白</sub>
LD(JL)	so <sup>陰平</sup> <sub>白</sub>	k <sup>h</sup> o <sup>陰平</sup>	ts <sup>h</sup> o <sup>陽平</sup>	ko <sup>陰平</sup> <sub>白</sub>
LY	sõ <sup>陰平</sup> <sub>白</sub>	k <sup>h</sup> õ <sup>陰平</sup>	tsõ <sup>陽平</sup>	kõ <sup>陰平</sup> <sub>白</sub>
SF(ZM)	sõ <sup>陰平</sup> <sub>白</sub>	-	dzo <sup>陽平</sup>	ko <sup>陰平</sup> <sub>白</sub>
XX	sõ <sup>陰平</sup> <sub>白</sub>	k <sup>h</sup> õ <sup>陰平</sup>	dzo <sup>陽平</sup>	ko <sup>陰平</sup> <sub>白</sub>
XX(QZ)	sõ <sup>陰平</sup> <sub>白</sub>	k <sup>h</sup> õ <sup>陰平</sup>	dz <sup>h</sup> o <sup>陽平</sup>	ko <sup>陰平</sup> <sub>白</sub>
CMX	*jaŋ <sup>陰平</sup> <sub>白</sub>	*k <sup>h</sup> aŋ <sup>陰平</sup> <sub>白</sub>	*dʒa <sup>陽平</sup>	*ka <sup>陰平</sup> <sub>白</sub>

Interestingly, the finals of syllables 生, 坑, 查, and 家 always have the same oral features in each of these dialects. These vowels are parallel with each other and always feature the same vowel heights. For example, when the vowel of 查 is [o], the vowel of 生 will either be [õ] or [o]. One possible explanation for these dialects is that the syllables 生 and 坑 had their vowels nasalized and codas deleted, before they are ‘paired’ with the syllables of oral origin such as 查 and 家. When nasal vowels are paired with their oral counterparts, they are expected to participate in the same sound changes that alter their places of articulation. Under this conjecture, the final of 生 started from CMX \*-aŋ and went under assimilation to \*-ãŋ, then lost its coda to \*-ã; It hooks up with CMX \*-a since this step. When the vowel raising rule to

be introduced in section 5.1.4 was predominant in the area, finals \*-a and \*-ã went through this change together, where a feature bundle [+back, +round] was configured for the nucleus of the syllables. Later, Lóudǐ Jiāolóng and Li ányu án dialects lost the respective nasalization. Syllables like 桑 never joined the change.

One fascinating characteristic of this conjecture is that it spares the slot of CMX \*-əŋ for syllables like 桑, incorporating their [+back, +round] feature, while stays compatible with the same feature observed for syllables like 生 in central Hún án. A second advantage is to have perfectly explained the disparity observed between Li ányu án and Xiāngxiāng. In Table 5.5, Li ányu án's 生 syllables carry a lower vowel compared with the 桑 syllables. On the contrary, Xiāngxiāng's vowels are exactly the opposite. With this conjecture of nasalized - oral vowel pairing at hand, the mismatch is not at all troublesome to explain starting from CMX system.

Xīnhu à follows another possible trajectory in line with this conjecture. In this dialect, CMX \*-aŋ merged into \*-əŋ in the first place. The merged final \*-əŋ was later 'paired' with a different oral final, \*-ɔ, instead of \*-a, after its loss of coda.

**Table 5.7: pairing of XH**

	生	桑	左	查
XH	sō <sub>陰平 白</sub>	sō <sub>陰平</sub>	tso <sub>上</sub>	dz <sup>h</sup> a <sub>陽平</sub>
CMX	*ʃaŋ <sub>陰平 白</sub>	*səŋ <sub>陰平</sub>	*tsɔ <sub>陰上</sub>	*dʒa <sub>陽平</sub>

Other dialects may pair up various finals. The nasalized - oral vowel paring is not necessarily a shared innovation, yet is frequently attested among Xiāng. This pairing is instructive in that it demonstrates how a single phonetic feature could intervene in broader phonological processes, shaping the final system of a dialect.

### 5.1.3 Vowel Lowering in Central Xiāng

In Chapter 1, two paralleling sound changes in Shuāngfēng and Xiāngxiāng were proposed (please refer to Table 1.3 and Table 1.5). In this section, the subject will be interpreted in detail. What can be observed from the materials and Chapter 3 is that Xiāngxiāng has merged a lot of CMX finals into local finals of -ia and -iã. Section



5.1.2 discussed about the nasalized - oral vowel pairing. The question is what role it has played in shaping the final structure of Xiāngxiāng. Table 5.8 lists some relevant syllables in Xiāngxiāng and several nearby cities and counties.

**Table 5.8: vowel lowering towards ia**

	三	奸	曾	跟	節	結	責	克	壓
SF	sia	kia	tsia	kia	tsia	kia	tsia	k <sup>h</sup> ia	ia
XX	ɕiã	kiã	teiã	kiã	teia	kia	teia	k <sup>h</sup> ia	ia
SF(HY)	sã	kã	teiã	kiã	teia	teia	teia	k <sup>h</sup> ia	ia
SF(ZM)	sã	kã	teiã	kiã	teia	kia	teia	k <sup>h</sup> ia	ia
SS(DP)	sã	kã	tsiẽ	ciẽ	tsie	ciẽ	tsie	c <sup>h</sup> ie	ia
LD	sã	kã	tsẽ	kẽ	tse	ke	tse	k <sup>h</sup> e	ia
LD(JL)	sa	ka	tse	ke	tse	ke	tse	k <sup>h</sup> e	ia
SF(GT)	sã	kã	tsai	kai	tse	ke	tse	k <sup>h</sup> e	ia
SS	sã	kã	tsẽ	cẽ	tsie	ciẽ	tse	k <sup>h</sup> ie	ia
XX(QZ)	sã	kã	tsã	kã	teia	tia	tse	g <sup>h</sup> e	ia
LY	sa	ka	tse	ke	tsi	ki	tse	k <sup>h</sup> ie	ia
CMX	*san	*kan	*tsəŋ	*kən	*tsiet	*kiet	*tʃek	*k <sup>h</sup> ek	*iat

In Table 5.8, the cells of merged finals in each dialect are shaded respectively using the same colors. From bottom to top, mergers accumulate. Thus each dialect resembles a cross section sampled from a process of ongoing mergers. XX(QZ) is as conservative as LY in terms of the contrasts preserved. However it underwent the lowering \*-ie > -ia. If \*-iet and \*-ek merged, the result is a dialect like LD. The merged final (possibly \*-e or \*-ε) could diphthongize to \*-ie before it lowers to -ia, like SS(DP). The nasal and oral pairs follow the same trend. SF is the most radical dialect blending all categories together. SF(HY) and SF(ZM) have merged the oral finals, yet keep distant among the nasal ones. Both dialects joined the lowering \*-ie > -ia. While SF(ZM) did not pair its nasal finals with oral counterparts, SF(HY) has paired \*-əŋ with \*-e. This dialect keeps the contrast between CMX finals \*-əŋ and \*-ən, leaving the latter unpaired. Referring to the sound change of oral counterparts on the right, a good estimate for the intermediate stage between \*-əŋ and -iã is \*-ẽ.

Many dialects in Table 5.8 evincibly paired the oral and nasal finals at the stage of \*-e and \*-ẽ. In this way both -ie > -ia and -iẽ > -iã thrive. In comparison, SF(GT)

failed to pair the finals, impeded by the sound change  $*-\text{ən} > *-\tilde{\text{e}}\text{ĩ} > *-\tilde{\text{e}}\text{ĩ} > *-\text{ei} > -\text{ai}$ . For XX and SF, likely a sound change  $*-\text{an} > *-\tilde{\text{a}} > *-\tilde{\text{e}}$  was completed before the pairing. In conclusion,  $\text{e} > \text{ia}$  is a common sound change for oral and nasal finals. The degree of merger at the time of pairing yields different lowering outcomes.

The pattern is still attractive when a rounded medial (i.e., u- or y-) is introduced. Recall that paralleling evolutions for the nuclei  $*-\text{y}\text{e}$  and  $*-\text{i}\text{e}$  were proposed in the introduction when discussing Coblin's CCX. This time, the focus is on the nucleus. For each dialect in Table 5.9, if the qualities of nuclei are indifferentiable regardless of nasalization, the cells will be colored the same. A markedly parallel pattern is clearly observed between finals with and without rounded medials. Once again, SF is the most radical dialect while LY and XX(QZ) are the most conservative.

**Table 5.9: parallel lowering towards ya and ua**

	官	關	說	決	國	刮	節	結	克	壓
SF	kua	kua	eya	tua	kua	kua	tsia	kia	k <sup>h</sup> ia	ia
XX	kuã	kuã	eya	tua	kua	kua	teia	kia	k <sup>h</sup> ia	ia
SF(HY)	kuã	kuã	eya	teya	kua	kua	teia	teia	k <sup>h</sup> ia	ia
SF(ZM)	kuã	kuã	eya	tuæ	kuæ	kua	teia	kia	k <sup>h</sup> ia	ia
SS(DP)	kuẽ	kuã	ɣue	tue	kuẽ	kua	tsie	cie	c <sup>h</sup> ie	ia
LD	kuẽ	kuã	eye	teye	kue	kua	tse	ke	k <sup>h</sup> e	ia
LD(JL)	kue	kua	eye	ɬue	kue	kua	tse	ke	k <sup>h</sup> e	ia
SF(GT)	kaŋ	kuã	eye	tue	kue	kua	tse	ke	k <sup>h</sup> e	ia
SS	kuẽ	kuã	ɣue	tɕue	kuẽ	kua	tsie	cie	k <sup>h</sup> e	ia
XX(QZ)	kuã	kuã	eya	ɬya	kue	kua	teia	tia	g <sup>h</sup> e	ia
LY	kue	kua	xui	kui	kuẽ	kua	tsi	ki	k <sup>h</sup> ε	ia
CMX	*kuən	*kuan	*ɣyɛt	*kyɛt	*kuɛk	*kuat	*tsiet	*kiet	*k <sup>h</sup> ɛk	*iat

SF(ZM) missed the pairing so it has a final  $-\text{u}\text{æ}$  lagged behind in contrast to  $-\text{ua}$ , causing a major assymetry. As explained in section 1.2.4, the final  $-\text{u}\text{æ}$  is relatively marked in SF(ZM). SF(GT) did not join the  $*-\text{u}\text{ən} > *-\text{uen}$  sound change.

Evidently, the vowel lowering of  $[\text{e}]$  to  $[\text{a}]$  is an innovation found for a handful of dialects in central Húnán. The incongruous orders of pairing among these dialects suggest that the innovation is more likely to be polyphyletic rather than shared.

#### 5.1.4 The Vowel Shift in Central and Western Xiāng

Zhong (1997) analysed the chain shift, namely  $a > o > u$ , in Xiāng dialects. Bao (2006) took this shift as one of his primary criteria for Xiāng Dialect identification. Among all the dialects that have been examined for this dissertation, the shift occurs primarily in two pockets of central and western Húnán Province. In the following three Tables, Púngjiāng is listed as the control group. The literary readings (abbr. lit.) are listed wherever no vernacular (abbr. ver.) layer is found with those specific CMX finals (please refer to Chapter 3 for detailed discussions).

**Table 5.10: shifts of \*-ai, \*-a, and \*-ɔ**

	柴	界 (ver.)	查	架 (ver.)	左	個
XX	dza <sup>陽平</sup>	ka <sup>陰去</sup>	dzo <sup>陽平</sup>	ko <sup>陰去</sup>	tsu <sup>上</sup>	ku <sup>陰去</sup>
LD	dza <sup>陽平</sup>	ka <sup>陰去</sup>	dzo <sup>陽平</sup>	ko <sup>陰去</sup>	tsu <sup>上</sup>	ko <sup>陰去</sup>
CX	dza <sup>陽平</sup>	ka <sup>陰去</sup>	dzo <sup>陽平</sup>	ko <sup>陰去</sup>	tsu <sup>上</sup>	ko <sup>陰去</sup>
XP	dza <sup>陽平</sup>	ka <sup>陰去</sup>	dzo <sup>陽平</sup>	ko <sup>陰去</sup>	tsu <sup>上</sup>	ku <sup>陰去</sup>
PJ	dzai <sup>陽平</sup>	kai <sup>陰去</sup>	dza <sup>陽平</sup>	ka <sup>陰去</sup>	tsu <sup>上</sup>	ko <sup>陰去</sup>
CMX	*dzai <sup>陽平</sup>	*kai <sup>陰去</sup>	*dʒa <sup>陽平</sup>	*ka <sup>陰去</sup>	*tsu <sup>陰上</sup>	*ku <sup>陰去</sup>

**Table 5.11: shifts of \*-iai, \*-ia, and \*-io**

	諧 (lit.)	涯 (lit.)	加 (lit.)	夏 (lit.)	姐 (ver.)	爺 (ver.)
XX	ɣia <sup>陽平</sup>	ɲia <sup>陽平</sup>	kio <sup>陰平</sup>	ɣio <sup>陽去</sup>	teio <sup>上</sup>	io <sup>陽平</sup>
LD	-	-	teio <sup>陰平</sup>	zio <sup>陽去</sup>	tsio <sup>上</sup>	io <sup>陽平</sup>
CX	ɛie <sup>陽平</sup>	ia <sup>陽平</sup>	teia <sup>陰平</sup>	ɛia <sup>陽去</sup>	teio <sup>上</sup>	io <sup>陽平</sup>
XP	ɛie <sup>陽平</sup>	io <sup>陽平</sup>	tein <sup>陰平</sup>	ein <sup>陽去</sup>	tein <sup>上</sup>	io <sup>陽平</sup>
PJ	-	ia <sup>陽平</sup>	teia <sup>陰平</sup>	ɛia <sup>陽去</sup>	teia <sup>上</sup>	ia <sup>陽平</sup>
CMX	*ɣiai <sup>陽平</sup>	*ɲiai <sup>陽平</sup>	*kia <sup>陰平</sup>	*ɣia <sup>陽去</sup>	*tsio <sup>陰上</sup>	*io <sup>陽平</sup>

**Table 5.12: shifts of \*-uai, \*-ua, and \*-uo**

	乖	壞	瓜	話	過 (ver.)	禾 (ver.)
XX	kua <sup>陰平</sup>	ɣua <sup>陽去</sup>	ko <sup>陰平</sup>	o <sup>陽去</sup>	ku <sup>陰去</sup>	u <sup>陽平</sup>
LD	kua <sup>陰平</sup>	ɣua <sup>陽去</sup>	ko <sup>陰平</sup>	o <sup>陽去</sup>	ku <sup>陰去</sup>	u <sup>陽平</sup>
CX	kua <sup>陰平</sup>	xuai <sup>陽去</sup>	kua <sup>陰平</sup>	xua <sup>陰去</sup>	ko <sup>陰去</sup>	o <sup>陽平</sup>
XP	kua <sup>陰平</sup>	hue <sup>陽去</sup>	kuo <sup>陰平</sup>	huo <sup>陽去</sup>	ko <sup>陰去</sup>	o <sup>陽平</sup>
PJ	kuai <sup>陰平</sup>	fai <sup>陽去</sup>	kua <sup>陰平</sup>	fa <sup>陽去</sup>	ku <sup>陰去</sup>	u <sup>陽平</sup>
CMX	*kuai <sup>陰平</sup>	*ɣuai <sup>陽去</sup>	*kua <sup>陰平</sup>	*ɣua <sup>陽去</sup>	*kuo <sup>陰去</sup>	*ɣuo <sup>陽平</sup>

As introduced in sections 3.1.5 and 3.1.6, Chénxī has a unique local innovation

where its finals are divided according to tones. The CMX final \*-iɔ is raised to -io wherever the syllable bears a shǎng (上) tone but stays as -iɔ elsewhere. Conversely, the CMX \*-ɔ and \*-uɔ are realized as -ɔ when the syllable bears either a yīnqù (陰去) or a yángqù (陽去) tone. Otherwise, they are -o. This type of phenomenon has been studied by Cao (2009) and Chen (2012). Cao (2009) terms it as the *final variation with tones*, and elaborated with experimental statistics that the divergence in vowel height is correlated with tonal duration.

For convenience, a notation of *final series* shall be used in this section to encapsulate all finals that differ only in the glides. For example, the finals \*-ai, \*-iai, and \*-uai would constitute a single final series termed the *\*-ai series*. In conventional Chinese Dialectology, the *\*-ai series* belongs to Xi èshè (蟹攝), the *\*-a series* belongs to Jiǎshè (假攝), and the *\*-ɔ series* belongs to Guǒshè (果攝). Noticeably, the shift has covered literary readings of XX and LD.

XX and LD are in central Húnán, whereas CX and XP are in western Húnán. For the central pair, the *\*-ai series* has always dropped the vocalic coda -i, becoming -a; the *\*-a series* has been raised and rounded to -ɔ (LD) and then to -o (XX); the *\*-ɔ series* has usually diverged according to respective glides. The rule of divergence for the *\*-ɔ series* is as follows. Final \*-ɔ is raised to -o (LD) and -u (XX). Final \*-iɔ stays unchanged (LD) and blends with \*-ia, before raising to -io (XX). Final \*-yɔ merges with \*-iɔ. Final \*-uɔ, however, is assimilated to -u in the vernacular layer.

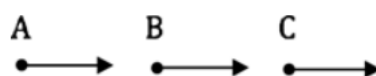
Situation for the western pair is not as neat. Noticeably, their realizations of the CMX *\*-ai series* are much vulnerable to changes in comparison to the *\*-a series* and the *\*-ɔ series*. The realization of the final \*-iai is divided conditioned possibly on the preceding initial. So is the realization of final \*-uai.

The literary final \*-iai is evidenced from neighboring dialects. Sections 3.7.6 and 5.1.3 discussed the innovation of CMX \*-iet where -e lowers to -ia. A challenge is that the syllable 諧 [ɣia] can arguably derive from a borrowed form like \*ɣiɛ instead of from \*ɣiai. Although the sound change can no longer be traced in XX proper, it has left clues in nearby SS(DP). This dialect has a vowel [ɛ] that is not merged with [a]. Etymon 諧 is read [ɣia] there. Thus it is not from an earlier \*ɣiɛ.

**Table 5.13: contrast of final -ia against -ie**

	甲	峽	諧	懈	壓	劫	革	克	協	頁
SS(DP)	cia	ɕia	<b>yia</b>	ɣia	ia	ciɛ	ciɛ	c <sup>h</sup> iɛ	ɕiɛ	iɛ
XX	kia	ɕia	<b>yia</b>	ɣia	ia	kia	kia	k <sup>h</sup> ia	ɕia	ia

‘A chain shift is a series of two or more sound changes that are related through a kind of chain reaction.’ (Gordon, 2011) A chain could be either a drag chain or a push chain. Gordon uses the following figure 5.2 in explaining two types of chain shifts defined by him. ‘If the chain of events begins with C evacuating its home space, which inspires B to shift into that space and eventually A to move into B’s original space, then the shift represents a drag chain ... If it begins at the other end with A moving into B’s territory, which then leads B to invade C’s space, then the shift represents a push chain.’ (Gordon, 2011)



**Figure 5.2: chain shift**

Now suppose the situation described by Tables 5.10 through 5.12 for the dialects of XX, LD, CX, and XP is the result of one or several strings of chain shifts.

Firstly, The XX and LD cases cannot result from a drag chain. If it were a drag chain, it would imply that the *\*-ɔ series* moved in the first place. However, what we observe from Table 5.11 is that LD’s *\*-ia* is already raised to *-iɔ* (and XX *-iɔ*) without the change of the final *\*-iɔ*.

Secondly, The XP and CX cases cannot result from a push chain. Likewise, if it were a push chain, it would imply that the *\*-ai series* moved in the first place before the *\*-a series* which then moved before the *\*-ɔ series*. However, the XP syllable *\*yua* (話) in Table 5.12 has already moved to *huɔ*, while the syllable *\*yuai* (壞) has not moved closer to *\*-ua* in any sense. Similarly, final *\*-uɔ* in CX has moved to *-o* with

non-qù(去) tones, whilst its final \*-ua has not moved to -ɔ so far.

However, can the CX case result from a drag chain? If it were, we would expect CMX \*ka (架) in Table 5.10 to have changed after \*kɔ (個). Instead, we have 架 and 個 both realized as [kɔ<sup>陰去</sup>] in CX. Unfortunately, this refutation does not stand. From our knowledge about CX, the regular realization of CMX \*-ɔ in this dialect is -o. The syllable 個 is lowered to [kɔ<sup>陰去</sup>] conditioned on its tone. In other words, it is still possible that CX only underwent -o > -ɔ / {tone} after a drag chain.

Scholars working on Xiāng dialects have been debating on the nature of the vowel shift. Some scholars argue that the series of Xi è (蟹), Jiǎ (假), and Guǒ (果) finals participated in a push chain (Peng, 2006, 2010; Qu, 2018), while some others argue it to be a drag chain (Bei, 2013).

A few scholars believe there is not a chain shift involved. Li and Zhao claim that there were no Xi èshè (蟹攝) finals such as \*-iai or \*-uai in place that would push the finals \*-ia (假開三) and \*-ua (假合二) towards higher positions (Li & Zhao, 2016). However, the existence of \*-uai is plain to see. As for \*-iai, it is indeed a literary final, yet it has clearly shifted to -ia in XX. Table 5.11 have not listed any LD syllable with final \*-iai, though there is one in the material that possibly came from \*-iai. It is 孩 (lit. child), recorded to be [ɛia<sup>陽平</sup>]. In fact, the lack of syllables corresponding to \*-iai in several modern sub-dialects does not weaken the possibility of a past chain shift. Three reasons would justify this claim. Firstly, there are syllables with final -ia in LD dialect (and many sister dialects in Húnán) that corresponds to CMX \*-iat, instead of the Xi èshè (蟹攝) \*-iai. For instance, there are roughly a dozen characters like 甲 [tɕia<sup>陽平</sup>], 洽 [tɕ<sup>h</sup>ia<sup>陽平</sup>], 峽 [ɛia<sup>陰去</sup>], and so on. They could have acted as pushers. One can by no means rule these syllables out from a proposed chain shift, unless there is strong evidence suggesting their total absence in the vowel space during the time of the shift. Secondly, a lexeme may fade in use over time. What we can observe today is only the result of changes in the past. Potential syllables with final \*-iai could have played a role during the shift before they disappeared. Finally yet importantly, XX proves that at least one syllable with \*-iai had participated in a vowel shift. Otherwise, its [ɣia<sup>陽平</sup>] (諧) would be left unexplained.

To conclude, if the shifts are of chain shifts in nature, there must have been push chains in central Hún ǎn and drag chains in western Hún ǎn. Alternatively, the vowels may have shifted spontaneously in parallel. With either trajectory, the shifts constitute local level innovations starting from the vowel pattern of CMX, and cannot serve as the taxonomic identification for Xiāng.

## 5.2 The Early Innovation of MC T ǎn (覃) and H é(合) Rhymes

### 5.2.1 The Proposal

In the popular layer, a few lexemes related to agricultural activities and rural objects are special. These syllables come from MC T ǎn (覃) rhyme which is without a medial, yet in sections 3.5.5 and 3.7.5 they have been reconstructed with a glide u-. Three of them, namely 塍, 函, and 涵, have been examined by Wu (2018).

The etymons are not always recorded in the homosyllabic lists of Xiāng dialects. There are several possible reasons. Most importantly, the characters of these etymons are relatively uncommon in standard Mandarin. Many of them are not among the 13 T ǎn (覃) rhyme etymons in the archetypal homosyllabary list for Chinese dialect investigations (Institute of Linguistics, CASS, 1981), which are mostly bookish from the standpoint of Xiāng dialects. If the investigator is not a speaker of the investigated dialect, there is a good chance for these vernacular lexemes to be neglected. A second reason is that these lexemes typically pertain to pre-modern objects and activities. If the signified is itself unheard of for the investigator, the chance for the signifier to be recorded is low. For instance, though the character 涵 is not rare, its literary reading has been recorded as the sole reading in many materials. From the lexicon list of Lóudǐ we already know that there is a word [yuẽ<sup>陽平</sup>.dɿŋ<sup>陽平</sup>.ŋã̃<sup>上</sup>] that refers to a tiny drainage outlet at the foot of an exterior wall (which is seen under traditional cottages rather than modern apartments), and that its first syllable [yuẽ<sup>陽平</sup>] is proved to be a vernacular form of 涵 (Wu, 2018). Unfortunately, for many investigators, words of this type are out of their survey lists. Notwithstanding, it does not imply that these lexemes are rare of their kind within either T ǎn (覃) rhyme or the popular layer.

Apart from these five syllables, another candidate is attested at times mostly in a

lexeme that refers to a set of pestle with mortar. For example it is [tue<sup>陰去</sup>.k<sup>h</sup>ua<sup>上</sup>] in Shuāngfēng. The first syllable in this lexeme means a stick used as a pestle or hammer and is undoubtedly the etymon 碓 (Mandarin dùì). The second one is debatable. Chen (2006, p. 244) and Luo (2006, p. 55) both suggest the etymon 窠 (Mandarin kuǎn), which has meanings including emptiness, a hollow or gap, to wither, and also the rule (Morrison, 1822, p. 499; Hanyu da cidian bianzuan weiyuanhui et al., 1991, p. 481; Hanyu da zidian bianzuan weiyuanhui, 2010, pp. 2933-2934). Besides, another etymon 坎 (Mandarin kǎn) can mean a sink, a pit, a concavity, or a small earthen vessel (Morrison, 1822, p. 356; Hanyu da cidian bianzuan weiyuanhui et al., 1991, p. 1056; Hanyu da zidian bianzuan weiyuanhui, 2010, p. 457). Both 窠 and 坎 are from the shǎng (上) tone. It seems from the meanings that 坎 coincides better with a mortar. Possibly Chen and Luo have chosen 窠 instead to explain the glide u- in this syllable. As we will see, the glide is a shared innovation among Xiāng dialects for Tán (覃) rhyme syllables under certain conditions.

The data of Lóng hú (LH) and Yì yáng (YiY) in Table 5.14 comes from the word lists of Zhang (2013) and Cui (1998) respectively. Not surprisingly, many sources have not specified the correct etymons. In Table 5.14, the true characters are listed in place for these cognates. Literary readings are omitted.

**Table 5.14: pattern of QYS \*-əm and \*-wan**

	塢	函	涵	坎	寬	換
HS	k <sup>h</sup> uēi <sup>陰去</sup>	fēi <sup>陽平</sup>	fēi <sup>陽平</sup>	-	k <sup>h</sup> uēi <sup>陰平</sup>	fēi <sup>陽去</sup>
LH	k <sup>h</sup> ō <sup>陰去</sup>	ō <sup>陽平</sup>	-	k <sup>h</sup> ō <sup>上</sup>	k <sup>h</sup> ō <sup>陰平</sup>	yō <sup>陽去</sup>
LY	k <sup>h</sup> uε <sup>陰去</sup>	xuε <sup>陽平</sup>	xuε <sup>陽平</sup>	-	k <sup>h</sup> uε <sup>陰平</sup>	xuε <sup>陽去</sup>
NX	k <sup>h</sup> ŋ <sup>陰去</sup>	xŋ <sup>陽平</sup>	xŋ <sup>陽平</sup>	-	k <sup>h</sup> ŋ <sup>陰平</sup>	xŋ <sup>陽去</sup>
SF	k <sup>h</sup> ua <sup>陰去</sup>	yua <sup>陽平</sup>	-	k <sup>h</sup> ua <sup>上</sup>	k <sup>h</sup> ua <sup>陰平</sup>	yua <sup>陽去</sup>
SY	-	vā <sup>陽平</sup>	-	k <sup>h</sup> uā <sup>上</sup>	k <sup>h</sup> uā <sup>陰平</sup>	vā <sup>陽去</sup>
XH	k <sup>h</sup> ō <sup>陰去</sup>	yō <sup>陽平</sup>	-	-	k <sup>h</sup> ō <sup>陰平</sup>	yō <sup>陰平</sup>
XP	k <sup>h</sup> uē <sup>陰去</sup>	-	-	k <sup>h</sup> uē <sup>上</sup>	k <sup>h</sup> uē <sup>陰平</sup>	xuē <sup>陽去</sup>
YiY	k <sup>h</sup> ō <sup>陽平</sup>	ō <sup>陽平</sup>	-	-	k <sup>h</sup> ō <sup>陰平</sup>	ō <sup>去</sup>
QYS	*k <sup>h</sup> əm <sup>h</sup>	*yəm	*yəm	*k <sup>h</sup> əm <sup>?</sup>	*k <sup>h</sup> wan	*ywan <sup>h</sup>

The lexical items are frequently attested to have merged with the syllables of MC



final \*-wan in various Xiāng dialects that have word lists available.

Corresponding to T ǎn (覃) rhyme is H é(合) rhyme bearing the MC R ù(入) tone and it is sometimes covered under the term T ǎn (覃) rhyme for convenience. In QYS, T ǎn (覃) and H é(合) are reconstructed to be \*-əm and \*-əp (Pulleyblank, 1984). Wu (2018) has identified two lexemes 佢 and 罍 of this type. Two more are added for checking: 合 (lit. to close, join, or conform) and 盒 (lit. box).

**Table 5.15: pattern of QYS \*-əp and \*-wat**

	佢	合	盒	罍	闊
CS <sub>2</sub>	ko <sup>^</sup>	xo <sup>^</sup>	xo <sup>^</sup>	o <sup>^</sup>	k <sup>h</sup> o <sup>^</sup>
HS	ko <sup>^</sup>	xo <sup>上</sup>	xo <sup>上</sup>	o <sup>^</sup>	k <sup>h</sup> o <sup>^</sup>
LY	kue <sup>^</sup>	xue <sup>^</sup> ~ xue <sup>陰去</sup>	xue <sup>陰去</sup>	ue <sup>^</sup>	k <sup>h</sup> ue <sup>^</sup>
ML(CL)	kø <sup>^</sup>	xø <sup>^</sup>	xø <sup>^</sup>	ŋø <sup>^</sup>	k <sup>h</sup> ø <sup>^</sup>
NX	kue <sup>^</sup>	xue <sup>^</sup>	xue <sup>陰去</sup>	ue <sup>^</sup>	k <sup>h</sup> ue <sup>^</sup>
SF	kua <sup>陽平</sup>	xua <sup>陰去</sup>	xua <sup>陰去</sup>	-	k <sup>h</sup> ua <sup>陽平</sup>
SY	ko <sup>^</sup>	xo <sup>^</sup>	xo <sup>^</sup>	-	k <sup>h</sup> o <sup>^</sup>
YiY	ko <sup>^</sup>	xo <sup>^</sup>	xo <sup>^</sup>	o <sup>^</sup>	k <sup>h</sup> o <sup>^</sup>
QYS	*kəp	*ɣəp	*ɣəp	*ʔəp	*k <sup>h</sup> wat

All these syllables behave alike across the listed Xiāng dialects. It shall be noted that Li ányu ǎn has a syllable [k<sup>h</sup>ue<sup>^</sup>] marked as vernacular form of character 寬 (lit. width; QYS \*k<sup>h</sup>wan) (Chen, 1999, p. 60). This lexeme should be the synonym 闊 (lit. width; QYS \*k<sup>h</sup>wat) instead, as it bears the r ù(入) tone.

Xiāngyīn (湘陰) Dialect demonstrates that possibly two more candidates shall be taken into consideration. The first one is recorded as [kuei<sup>陰去</sup>] and its etymon has been identified to be 合 (Sun, 2012). It denotes a unit of capacity for solids and is recorded with a cognate [kø<sup>^</sup>] in M ǎu ó Ch ǎngl è (Chen, 2006, p. 77) and [ko<sup>^</sup>] in Y ỳ áng (Cui, 1998, p. 57). The other candidate is 掩 (lit. to hide the fire) with the pronunciation of [uei<sup>陰去</sup>] (Sun, 2012). Its cognates are also recorded in Ch ǎngshā, Y ỳ áng, and M ǎu ó (Bao et al., 1999, p. 69; Cui, 1998, p. 58; Chen, 2006, p. 77). The two lexemes both originated from MC H é(合) rhyme syllables.

For dialects in Table 5.15 like Ch ǎngshā, syllables with CMX \*-ot and \*-uot have basically merged. To verify if glide u- had existed, one has to turn to the conservative

dialects such as T ǎojiāng and Qu ǎnzhōu. Please refer to Table 5.16.

**Table 5.16: contrast between CMX \*-ɔt and \*-uɔt**

	CS <sub>2</sub>	TJ	QZ	CMX	QYS
闊	k <sup>h</sup> o <sup>˧</sup>	k <sup>h</sup> uuu <sup>˧</sup>	k <sup>h</sup> uo <sup>陰平</sup>	*k <sup>h</sup> uɔt <sup>陰入</sup>	*k <sup>h</sup> wat
渴	k <sup>h</sup> o <sup>˧</sup>	k <sup>h</sup> o <sup>˧</sup>	-	*k <sup>h</sup> ɔt <sup>陰入</sup>	*k <sup>h</sup> at
磕	k <sup>h</sup> o <sup>˧</sup>	k <sup>h</sup> o <sup>˧</sup>	k <sup>h</sup> o <sup>陰平</sup>	*k <sup>h</sup> ɔt <sup>陰入</sup>	*k <sup>h</sup> ap

A major phonetic property of the ten vernacular T ǎn (覃) and H é (合) rhyme syllables discussed above is that they exclusively begin with either velar consonants or initial zero. The QYS reconstruction reveals that the initial zero possibly was a glottal plosive. Thus, the common environment of all these syllables is having a velar or laryngeal initial. When comparing the phonetic realization of them from the listed Xiāng dialects with their QYS reconstructions, it is easy to identify the excrescent glide u- before their nuclei. This additional glide is highly correlated with the merger of QYS \*-əm with \*-wan as well as \*-əp with \*-wat in the dialects listed in Table 5.14 and Table 5.15. Inspired by the distribution of the merger, this thesis proposes that there was a phonetic rule governing the early common language. It can be written as:

$$\emptyset \rightarrow u(w) / [+consonantal, +back] \_ \emptyset [+consonantal, +labial, -continuant]$$

The feature [+back] refers to the places of constriction behind the soft palate.

Wu (2018) has concluded that the T ǎn (覃) and H é (合) rhymes after velar initials could be reconstructed differently from the T ǎn (談) rhyme and its correspondent H é (盍) rhyme, respectively.

In H ún ǎn Province, however, most of the dialects have mixed T ǎn (覃) and T ǎn (談) rhymes with at least a third final. For example, many dialects have merged QYS \*-am with \*-an or \*-wan, together with the literary layer of \*-əm. This fact has created a major problem. That is, we have to clarify whether the proposed \*u- epenthesis for the vernacular \*-əm is after its merger with QYS \*-am and \*-an or not. The same question goes for vernacular \*-əp as well.

### 5.2.2 Examination of the Vernacular Tán (覃) Rhyme Syllables

To dig into the nature of Tán (覃) rhyme among Xiāng, the dialects feasible for comparison should be sorted out. Dialects around Pángjiāng Cǎnchuān are pivotal. This is because these dialects preserve a rare three-way contrast of CMX finals \*-uən : \*-ən : \*-an. We can start by analyzing Pángjiāng. All lexemes originated from MC Tán (覃) rhyme are set aside for the time being.

Table 5.17 and Table 5.18 have listed the first and second groups of lexemes (homographs separated).

**Table 5.17: first group**

Lexemes	PJ	CMX
1.官倌棺觀 <sub>1</sub> 冠 <sub>2</sub> 管館貫灌罐觀 <sub>2</sub> 冠 <sub>2</sub>	kuən	*kuən
2.歡喚喚煥渙	fən	*xuən
3.緩換	fən	*yüən
4.完	uən	*yüən
5.碗宛宛婉腕	uən	*uən

**Table 5.18: second group**

Lexemes	PJ	CMX
寬款	k <sup>h</sup> ən	*k <sup>h</sup> uən

Quite obviously, the final -uən in Pángjiāng can go after the initial k- but never after k<sup>h</sup>- or x-. It has been discussed in section 2.6.5 that Pángjiāng merges CMX \*xu- into f-. In this case, \*xuən is realized as [fən]. In Table 5.18, the CMX \*k<sup>h</sup>uən evolves into [k<sup>h</sup>ən] by uən > ən / k<sup>h</sup>\_. Consequently, the first and second groups of lexemes (i.e. the lexemes in Table 5.17 and Table 5.18) form a complementary distribution. They can be termed the *uən Syllables*.

Table 5.19 lists a third group of lexemes. One of them carries dual readings.

**Table 5.19: third group**

Lexemes	PJ	CMX
1.肝桿擻趕	kuən	*kən
2.乾	kuən 白 ~ kən 文	*kən

Table 5.20 lists a fourth group of lexemes.

**Table 5.20: fourth group**

Lexemes	PJ	CMX
1. 甘柑泔敢橄竿贛幹	k ɔ̃n	*kɔ̃n
2. 岸	ŋ ɔ̃n	*ŋɔ̃n
3. 憇𪔐罕漠	x ɔ̃n	*xɔ̃n
4. 寒韓旱焊汗翰	x ɔ̃n	*ɣɔ̃n
5. 安鞍按案	ŋ ɔ̃n	*ɔ̃n

The lexemes in Table 5.19 have undergone the \*u- glide epenthesis introduced in section 5.1.1. To recapitulate, this recent lexical diffusion is limited to a subgroup of Xiāng dialects. They can be termed the *ɔ̃n Syllables* jointly with those in Table 5.20.

Table 5.21 lists the last group of lexemes. The pair of homographs in Row 8 comes from CMX \*k<sup>h</sup>ɔ̃n. It can be deduced that the realization of [k<sup>h</sup>an] is either a borrowing (Mandarin kàn; Chángshā [k<sup>h</sup>an]) or the result of extrusion from a sound change \*k<sup>h</sup>uɔ̃n > k<sup>h</sup>ɔ̃n. In either case, they do not belong to the group constituted by the remainders in Table 5.21. The latter shall be termed the *an Syllables*.

**Table 5.21: fifth group**

Syllables	PJ	CMX
1. 𪔐简	kan	*kan 白 ~ kian 文
2. 減碱监艰间 <sub>1</sub> 拣柬间 <sub>2</sub> 奸肩	kan 白 ~ teian 文	*kan 白 ~ kian 文
3. 眼颜雁	ŋan	*ŋan 白 ~ ian 文
4. 喊	xan	*xan
5. 銜陷限菟	xan	*ɣan 白 ~ ɣian 文
6. 咸闲	xan 白 ~ eian 文	*ɣan 白 ~ ɣian 文
7. 晏	ŋan	*an
8. 看 <sub>1</sub> 看 <sub>2</sub>	k <sup>h</sup> an	*k <sup>h</sup> ɔ̃n

Theoretically, there should have been an etymon 𪔐 (Mandarin qī àn) that would bear a vernacular reading [k<sup>h</sup>an] in P níngjiāng. However, the material only provides its literary reading [tɕ<sup>h</sup>ian]. Luckily, a vernacular reading [g<sup>h</sup>an] is recorded in the word list of Yu èy áng Bǎixi áng. This dialect has experienced a similar \*g<sup>h</sup>uɔ̃n > g<sup>h</sup>ɔ̃n sound

change, where  $g^h$ - corresponds to  $k^h$ - in P ńgjiāng. Consequently, the lexeme 寬 is read  $[g^h\text{ən}]$  whereas 看 is read  $[g^h\text{an}]$ .

The following Table lists the *uən Syllables*, the *ən Syllables*, and the *an Syllables* of several nearby dialects. Note that they all highly coincide with those in P ńgjiāng. A few *ən syllables* in M ńuó Ch ńngl ẹ carry additional literary readings with the -an final and are certainly borrowings. These borrowings are not included for comparison.

**Table 5.22: comparison of the *uən*, *ən*, and *an* syllables**

	<i>uən Syllables</i>	<i>ən Syllables</i>	<i>an Syllables</i>
ML(CL)	kuõ:官 倌 棺 觀 管 館 貫 灌 罐 冠 k <sup>h</sup> õ:寬 款 xõ:歡 獲 喚 煥 緩 皖 uõ:完 換 碗 宛 婉 腕	kõ:柑 乾 <sub>1</sub> 幹 kuõ:肝 乾 <sub>2</sub> 稭 趕 k <sup>h</sup> ã:看 xõ:愁 鼾 漢 寒 韓 旱 焊 汗 ŋõ:岸 安 案	kã:減 監 鑒 艦 間 <sub>1</sub> 艱 簡 揀 間 <sub>2</sub> 奸 xã:喊 鹹 陷 銜 閒 限 覓 ŋã:眼 顏 晏
YeY(RJ)	ku ɛn:官 觀 管 館 灌 冠 g <sup>h</sup> ɛn:寬 款 xu ɛn:歡 喚 完 緩 換 u ɛn:丸 碗	k ɛn:甘 柑 敢 肝 乾 幹 g <sup>h</sup> ɛn:看 x ɛn:漢 寒 韓 旱 汗 ŋ ɛn:岸 安 案	kan:減 監 艱 間 奸 xan:喊 鹹 銜 閒 覓 ŋan:眼 顏 雁 晏
YeY(BX)	k ɛn:官 棺 觀 <sub>1</sub> 冠 <sub>1</sub> 管 館 貫 灌 罐 觀 <sub>2</sub> 冠 <sub>2</sub> g <sup>h</sup> ɛn:寬 款 f ɛn:歡 喚 煥 完 緩 換 v ɛn:丸 碗 剗 碗	k ɛn:甘 柑 汨 敢 橄 肝 乾 竿 稭 擗 幹 g <sup>h</sup> ɛn:看 x ɛn:愁 酣 鼾 罕 漢 寒 韓 旱 焊 汗 翰 ŋ ɛn:岸 安 鞍 按 案	kan:減 檻 監 間 <sub>1</sub> 艱 簡 柬 揀 禡 間 <sub>2</sub> 澗 鐫 奸 g <sup>h</sup> ɛn:嵌 xan:喊 鹹 陷 餒 銜 閒 限 覓 ŋan:眼 顏 雁 晏
PJ	ku ɛn:官 倌 棺 觀 <sub>1</sub> 冠 <sub>2</sub> 管 館 貫 灌 罐 觀 <sub>2</sub> 冠 <sub>2</sub> k <sup>h</sup> ɛn:寬 款 f ɛn:歡 喚 煥 煥 緩 換 u ɛn:完 碗 宛 婉 腕	k ɛn:甘 柑 汨 敢 橄 竿 贛 幹 ku ɛn:肝 桿 稭 擗 趕 乾 k <sup>h</sup> ɛn:看 x ɛn:愁 鼾 罕 漢 寒 韓 旱 焊 汗 翰 ŋ ɛn:岸 安 鞍 按 案	kan:減 碱 檻 監 艰 间 <sub>1</sub> 简 揀 柬 间 <sub>2</sub> 奸 肩 xan:喊 咸 陷 銜 闲 限 范 ŋan:眼 颜 雁 晏

Now we can turn back to the question: are the vernacular T ńn (覃) rhyme syllables merged with the *uən Syllables*, the *ən Syllables*, or the *an Syllables*? M ńuó and P ńgjiāng both have several *ən Syllables* mixed into *uən Syllables*, thus should be ruled out for discussion. As vernacular readings usually exist within specific lexical contexts and a lexicon list is available from Yu ẹy ńng B ńixi ńng, the straightforward solution is to check the words in the lexicon of this dialect. Please refer to Table 5.23

for the lexemes from Yu èy áng Bǎixi áng.

**Table 5.23: YeY(BX)’s lexical matching**

lexeme of YeY(BX)	塹 (a high earthen step)	函心 (the heart)
pronunciation	g <sup>h</sup> ɔ̃n <sup>35</sup>	v ɔ̃n <sup>24</sup> . ɛiɔ̃n <sup>33</sup>
match	<i>u ɔ̃n Syllables</i>	<i>u ɔ̃n Syllables</i>

The first syllable v ɔ̃n for heart is undoubtedly a member of the *u ɔ̃n Syllables*. Although we were unsure about the status of [g<sup>h</sup> ɔ̃n], it now justifiably belongs to the *u ɔ̃n Syllables* as well. By contrast, T án (談) rhyme syllables such as 甘, 憨, and 酣 are clearly the *ɔ̃n Syllables*. There is one last question left for this dialect. Is the vernacular reading of 函 itself some form of residue? The likelihood, however, is considerably low. No evidence supporting a sound change from the *ɔ̃n Syllables* to the *u ɔ̃n Syllables* can be provided. In Yu èy áng Bǎixi áng, the epenthetic glide \*u- is thus unique to vernacular T án (覃) rhyme syllables. Accordingly, the cognates in the sister dialects are likewise members from the *u ɔ̃n Syllables*.

The situation for some relatively distant Xiāng dialects is nuanced. Take Lóudī and Li ányu án as examples. The *u ɔ̃n Syllables* and the *ɔ̃n Syllables* have completely merged in LD, and are partially blended in LY, shown in Table 5.24.

**Table 5.24: LD and LY’s blurred cases**

	<i>u ɔ̃n Syllables</i>				<i>ɔ̃n Syllables</i>			
Syllable	官	館	換	碗	肝	敢	汗	案
LD	kuẽ	kuẽ	yuẽ	uẽ	kuẽ	kuẽ	yuẽ	uẽ
LY	kue	kue	xue	ue	kue	ka	xue	a
CMX	*kuɔ̃n	*kuɔ̃n	*yuɔ̃n	*uɔ̃n	*kɔ̃n	*kɔ̃n	*yɔ̃n	*ɔ̃n

It is hard to set apart T án (覃) from T án (談) for LD since they are equally likely to have come from the *u ɔ̃n Syllables* or the *ɔ̃n Syllables*. LY is tricky as there are two finals mapped with the *ɔ̃n Syllables*. The vernacular T án (覃) rhyme lexeme 函 [xue] seems to be undecided between the *u ɔ̃n Syllables* and the *ɔ̃n Syllables*. One may want to argue that as long as QYS \*-əm is found mapped with final -ue while \*-am is not, we should feel comfortable about the claim that \*-əm is not merged with \*-am in this

dialect whatsoever. This perspective, however, ignores the subsequent phonological and lexical procedures of a dialect. As for the LY case, what if the dialect was subject to the following overlapping and irreversible sound changes, where: 1) \*-ən merged with \*-an as a gradual regular sound change; and 2) \*-ən diffused into \*-uən as a lexeme by lexeme diffusion? In this case, it is likely that the reason for the vernacular etymons 肝, 汗, and 勘 carrying the final -ue is because they are the forerunners of sound change number two! Wu's inference that the Li ányu án lexeme for the heart, [xue<sup>陽平</sup>. ein<sup>陰平</sup>], can serve to support a T án (覃) / T án (談) distinction (Wu, 2018) is untenable. Scholars should always keep alert on any potential subsequent innovation that could cover up a previous contrast.

The Xīnhu à cognate [yō<sup>陽平</sup>. ein<sup>陰平</sup>] faces a similar though relatively weakened challenge. In this dialect, the *ən Syllables* have merged into the *an Syllables*. The final -ō is composed primarily of the *uən Syllables*. It is more likely that [yō] in Xīnhu à comes from the *uən Syllables* than [xue] in Li ányu án does, yet the likelihood that this [yō] is an unchanged remnant of \*-ən > \*-an cannot be ruled out for certain before we have examined the cases in Yu èy áng and P ngjiāng. Now that the status of vernacular T án (覃) syllables of Yu èy áng Bǎixi áng have been justified as the *uən Syllables*, we can reasonably deduce with confidence that the cognates from Xīnhu à with the final -ō are of \*-uən > -ō origin.

As introduced in the first chapter, it has been observed before the selection of the 28 dialects for reconstruction that most Xiāng dialects have correspondents of the lexical items merged with the *uən Syllables* or at least with a potentially traceable glide u-, as long as a sufficient lexicon list is provided. Some examples are 坎 [k<sup>h</sup>ue] of Chénxī, 勘 and 坎 [k<sup>h</sup>ue] of Wǔgāng (Liao, 2011, p. 95; p. 99), 勘 [k<sup>h</sup>uə] of Ānhu à Ji èp á (Lei, 2007, p. 48), among many others. It is highly possible that all sub-dialects have shared this innovation in the vernacular layer.

### 5.2.3 Examination of the Vernacular H é(合) Rhyme Syllables

Just like the loophole in explaining T án (覃) rhyme, Wu (2018) has made another oversight when examining the vernacular H é(合) rhyme syllables. The lexeme [kue<sup>^</sup>]

(佻) recorded in Lóudǐ provides little information about a separate H é (合) rhyme. A counter-argument could be easily made that the final -ue in Lóudǐ may represent one that mixes H é (合) rhyme with the CMX final \*-ɔt including H é (盍) rhyme. Table 5.25 lists all the rù (入) tone syllables with final -ue after velar initials and initial zero. The CMX reconstruction for H é (合) rhyme is purposely left unfilled.

**Table 5.25: LD's blurred case**

LD syllables	CMX final	QYS final
割 kue; 喝 xue; 歐 ue	*-ɔt	*-at
括 𪛗 kue; 闊 k <sup>h</sup> ue; 活 xue	*-uɔt	*-wat
佻 kue; 鵠合盒 xue; 罍 ue	?	*-əp
國 kue; 或惑 xue	*-uɛk	*-wək
獲 xue	*-uɛk 文	*-we <sup>r</sup> jk
越曰粵月捩 ue	*-yɛt	*-uat

The Lóudǐ final -ue contains syllables from both CMX \*-ɔt and \*-uɔt. Evidently, there has to be an epenthesis of \*u- glide for CMX \*-ɔt, which came from QYS \*-at, before it reaches -ue. The absence of H é (盍) rhyme syllables could be that they are relatively rare and unpopular, so that Lóudǐ dialect has replaced them with the literary final -o. In fact, only one H é (盍) rhyme syllable preceded by velar initial, 磕, is provided in the archetypal word list for Chinese dialect investigations (Institute of Linguistics, CASS, 1981, p. 31). This character means ‘the sound of two stones striking against each other’ or to knock the forehead for ancient ceremonial purpose (Morrison, 1822, p. 475; Hanyu da zidian bianzuan weiyuanhui et al., 2010, pp. 2618-2619). It is not a popular word in Húnán Province after all. This is not of much significance, as what has been proposed is the epenthesis of \*u- glide for the H é (合) rhyme syllables after velars and laryngeals. As long as we make sure that there is not a second epenthesis for CMX \*-ɔt that could cover up the proposed sound change (like the case of Lóudǐ), the demonstration will be clean and simple.

Unlike the syllables with CMX nasal codas, Most Xiāng dialects including those around P íngjiāng have, to varying degrees, mixed up the CMX finals \*-uɔt and \*-ɔt after velar consonants. Meanwhile, Xīnhuà is likely an exception and is worthwhile



for discussion. Only vernacular readings are of concern here.

**Table 5.26: XH's contrast between -ua and -o**

	恰	脫	掙	括	曙	葛	磕
XH	kua <sup>陰平</sup>	t <sup>h</sup> a <sup>陰平</sup>	la <sup>去</sup>	kua <sup>陰平</sup>	ua <sup>陰平</sup>	ko <sup>入</sup>	k <sup>h</sup> o <sup>入</sup>
CMX	?	*t <sup>h</sup> uot <sup>陰入</sup>	*luot <sup>陽入</sup>	*kuot <sup>陰入</sup>	*uot <sup>陰入</sup>	*kɔt <sup>陰入</sup>	*k <sup>h</sup> ɔt <sup>陰入</sup>

When preceded by coronal initials, Xīnhuà's glide u- is always dropped. The [t<sup>h</sup>a] and [la] in Table 5.26 come from the earlier forms \*t<sup>h</sup>ua and \*lua respectively. The syllable 恰 [kua<sup>陰平</sup>] cannot come from \*kɔt, because CMX final \*-ɔt has changed to -o in Xīnhuà. Although a vernacular reading [kua<sup>陰平</sup>] is recorded in Xīnhuà's material for the character 割 (CMX \*kɔt; QYS \*kat; lit. to cut), its status is in doubt. There is another candidate, 銛 (Mandarin guā; QYS \*kwat), which also means to cut (Hanyu da zidian bianzuan weiyuanhui et al., 2010, p. 4520), that should be the true etymon. The material of Qíyáng dialect faces with the same issue. The recorded lexeme 割, pronounced as [kua<sup>33</sup>], creates incongruity of its kind. Instead of 割, it is suggested here that the correct etymon for this cognate shall be 銛, reconstructed as CMX \*kuot<sup>陰入</sup>. Without any explicit evidence for a sound change \*-ɔt > -ua, the Xīnhuà lexeme 恰 [kua<sup>陰平</sup>] is unlikely a residue from CMX \*-ɔt.

Lěngshǔijiāng Duóshān (冷水江鐸山) is situated closely to the east of Xīnhuà. Duóshān dialect's -ɛ corresponds to Xīnhuà's -a. For example, the lexeme 脫 is [t<sup>h</sup>ɛ<sup>33</sup>] and 掙 is [lɛ<sup>45</sup>] (Li, 2020). In addition to 恰, the material of this dialect has one more lexeme to add into our inventory for vernacular Hé(合) rhyme. In the homosyllabic list, there is a word with no character identified, [fɛ<sup>45</sup>], meaning to close the door tight (Li, 2020). Since the dialect has merged all xu- into f-, this syllable is probably a vernacular reading of the etymon 合, meaning to close or fit.

Many Xiāng dialects do possess the cognates which the investigators may fail to identify. For instance in Shàoyáng dialect, Chu (1998, p. 146) recorded a lexeme, 角孽 [ko<sup>入</sup>.ŋiɛ<sup>入</sup>], with the meaning explained as 'children quarrelling with each other'. Another material of the same dialect has correctly identified the first etymon to be 恰 instead of 角 (Shaoyangshi difangzhi bianzuan weiyuanhui, p. 158).

Now that two lexemes 佻 and 合 are verified to have rooted from CMX \*-uot, the epenthesis of glide \*u- alone for vernacular H é(合) rhyme is proven. The unfilled syllable in Table 5.26 should justifiably carry a final \*-uot. However, lexemes 盒, 罍, 合 (a unit), and 爇 introduced in section 5.2.1 cannot be verified to correspond with \*-uot. More detailed investigations may uncover the mystery. To conclude, the glide u- marks a distinct vernacular H é(合) rhyme for the early common language.

#### 5.2.4 Remarks on the Innovation of T án (覃) and H é(合) Rhymes

A striking significance of the sound change discussed in this section 5.2 is its potential antiquity. The merger of QYS T ányùn (覃韻) with T ányùn (談韻) in Common Chinese is as early as mid-Tang Dynasty (Huang, 1995, p. 175), that is, around the 8th century. The direction of this merger is proposed to be \*-əm lowering towards \*-am (Huang, 1995, p. 175). Huang uses \*am to denote T án (談) rhyme, which Pulleyblank (1984) denotes as \*am. Despite a contradiction on the backness of the vowel, the two sets of reconstructions are largely compatible. I will continue to adopt the one set by Pulleyblank (1984) for consistency. In Pulleyblank's introduction of his study on MC, he points to the vital division between Early Middle Chinese and Late Middle Chinese: '(b)y the end of the 7th century, perhaps even sooner, there is evidence of the emergence of ... Late Middle Chinese (LMC).' (Pulleyblank, 1984, p.3) In this LMC system, T án (覃) and T án (談) rhymes have merged as \*-am, while H é (合) and H é(盍) rhymes have merged as \*-ap. The historical period is in line with that suggested by Huang (1995). Therefore, a common precursor for vernacular Xiāng and modern Mandarin could not be set later than mid-Tang Dynasty.

In the neighboring dialect G àn (贛語), T án (覃) and T án (談) rhymes have not been found to contrast after velars or laryngeals. In the Common G àn (CG) system, a final \*-om is reconstructed for both the T án (覃) rhyme syllable 感, as well as for the T án (談) rhyme syllable 敢 (Coblin, 2015, p. 148). Coblin argues that the earliest substratum of G àn Dialect is from the stage of Pre-Yǒngjiā Chinese (PYJ) before the year 316. (Coblin, 2015, p.335) The second stratum, which contains the richest lexical layers of G àn, is formed between Yǒngjiā and Ān-Shǐ periods (Coblin, 2015, pp.

337-342), that is, from year 316 towards the later half of the 8th century. As no similar epenthesis found in CG to have taken place, it should be concluded that the vernacular Xiāng and G àn were already distanced within this range of time.

Notwithstanding, the vernacular Hakka is found to contrast T án (覃) and T án (談) rhymes in all environments, despite its close affinity with G àn. As many as eighteen examples have been uncovered in Lóngchuān (龍川) Hakka carrying the special final -em for T án (覃) rhyme, and ten more are attested as -ep for H é(合) rhyme (Yan & Yu, 2013). Among these etymons, a few have been discussed in this chapter as well, such as 塸, 坎, 恰, and 罍. Unlike Xiāng, however, T án (覃) rhyme syllables in Hakka have not undergone the glide \*u- epenthesis. In fact, most Hakka dialects observed carry a front and unrounded vowel of either [ɛ] or [e] for their vernacular T án (覃) rhyme syllables (Yan & Yu, 2013). This kind of nucleus indicates a distinct path of innovation against the one of Xiāng.

The Common Dialectal Chinese (CDC), reconstructed by Jerry Norman (2006) based on several representative Chinese dialects (usually from major cities) excluding the Mǐn (閩語), reserves no room for a distinct T án (覃) rhyme in contrast to T án (談) rhyme after back consonants. The CDC final \*-om contains all the T án (覃) rhyme syllables, together with those T án (談) rhyme syllables after velars and laryngeals such as 甘 \*kom (QYS \*kam) (Norman, 2006, pp. 243-244). Additionally, Norman's CDC has not incorporated the contrast of 知 (CMX \*tʃi; QYS \*triǎ) against 支 (CMX \*tʃi; QYS \*teiǎ) commonly attested among Xiāng dialects. The contrast has been illustrated in Table 2.4 of section 2.5 in this dissertation. Considering these factors, CDC must go through a major revision of its phonological system before it could be utilized for further comparative studies. Otherwise, CDC would not cater contrasts preserved by Xiāng and Hakka, diminishing to only encapsulate a much narrower range of Chinese dialects.

The dissimilar evolutions of vernacular T án (覃) rhyme syllables among these major Chinese branches suggest that the hypothetic shared innovation among Xiāng dialects is not only antique but also unique.

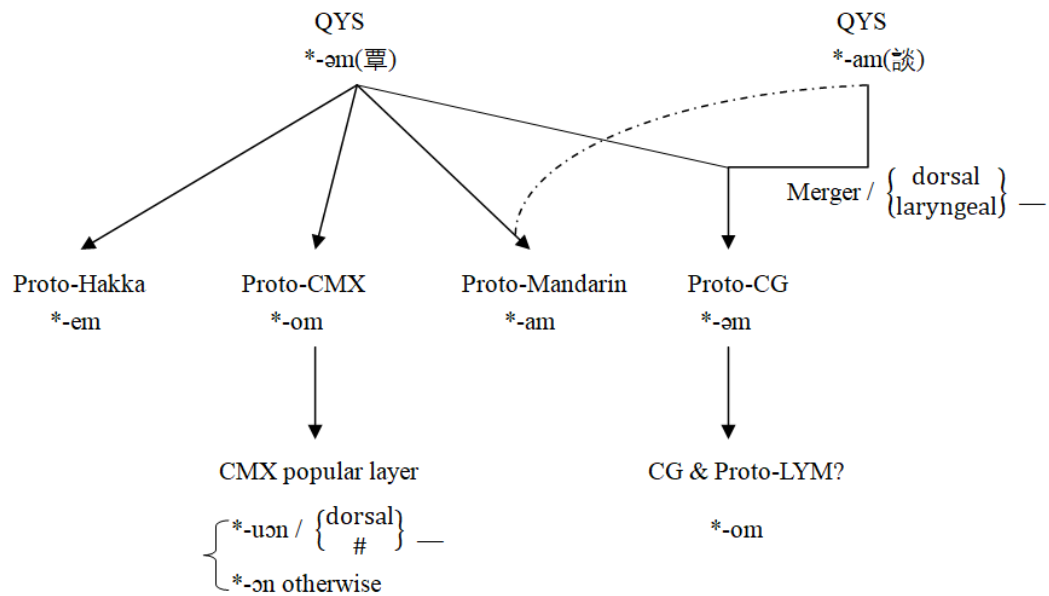
Surprisingly, the very distant southern Wú (吳語) has been attested to contrast

Tán (覃) and Tán (談) rhyme syllables after velars and initial zero (Shi, 2019). Though the examples are not large in number (less than ten), they form a most ancient layer among the dialects. Some examples of the lexical items constituting a distinct Tán (覃) rhyme are 含, 搯, 鹽, 坎 (Shi, 2019). Excitingly, we see the character 坎 again, which has been proposed in section 5.2.1 as one of the Tán (覃) rhyme syllables marking the milestone of early Xiāng Dialect. The linkage between the two families is unknown, yet an identical environment for the preservation of Tán (覃) / Tán (談) distinction is itself appealing. An important contribution of Shi is that he correctly recognizes the irrationality of a superficial division of Tán (覃) and Tán (談) rhymes after coronals in northern Wú dialects. He has pointed it out that earlier scholars have made comparisons using mismatched strata between sub-dialects. Although many northern Wú do have a specific final containing Tán (覃) rhyme but not Tán (談) rhyme syllables preceded by coronals, their corresponding final in southern Wú actually contains Tán (談) rhyme syllables following all types of initials. As a consequence, what has been thought as distinctive Tán (覃) rhyme finals are in a stratum that blends the two. This tremendous insight has inspired the analysis in this chapter. Shi has not discussed the situation of Hé (合) rhyme, so a thorough comparison between southern Wú and other dialects including Xiāng can only be conducted in the future.

Another question is thrown upon scholars. Is the superficial division of Tán (覃) and Tán (談) in Gán (that is, finals \*-om and \*-am of CG) after coronals really represent a layer distinctive for Tán (覃) rhyme? Attentive study on this question is required henceforth.

What is the implication? If we start from the phonetic value of QYS \*-əm (similar for \*-əp), there exists no direct motivation for an epenthesis of \*u- glide to take place. It is reasonable to assume an intermediate form \*-om to have existed in a possibly earlier prototype of CMX which, for the time being, can be dubbed as Proto-CMX. This \*-om, however, is essentially different from that of Norman's CDC, as the latter is a merged final of both QYS \*-əm and \*-am after velars and laryngeals. It was then, from this unique \*-om of Proto-CMX, that the \*u- epenthesis took place,

evolving to the CMX vernacular layer  $*-u\text{ɔ}n$ . On the contrary, for G ǎn, QYS  $*-am$  split up in the condition of following velar and glottal initials, then was raised and merged with  $*-ə\text{m}$ . At this stage the language became a prototype of Common G ǎn, or Proto-CG. Its  $*-ə\text{m}$  later unfronted and rounded to the CG final  $*-om$ . Some of Lower Yangtze Mandarin (LYM) such as T ǎzhōu (泰州) as well as N ǎntōng (南通) are questionably the same type with CG. These dialects have been reported to contrast QYS  $*-ə\text{m}$  with  $*-am$  after coronals (Yu, 1991; Zhang 2011). For the majority of Mandarin dialects, as Huang (1995) stated, QYS  $*-ə\text{m}$  has largely merged into  $*-am$  during Tang Dynasty. The envisaged pattern is depicted in Figure 5.3



**Figure 5.3: the evolution paths of vernacular T ǎn (覃)**

### 5.3 Other Candidates

Testing the hypothetic uniquely shared innovation of vernacular T ǎn (覃) and H é (合) rhymes in the previous section represents a top-down approach, where a feature is preliminarily proposed and then tested. The search could go bottom-up as well. By identifying the different sets of syllables in adjacent dialects that map into a single CMX set, a potentially shared innovation can be located. The neighboring dialects are mainly G ǎn and southern Mandarin.

When compared with Common G ǎn, the CMX final \*-u after alveolar sibilants seemingly has blended two CG finals, as shown in Table 5.27.

**Table 5.27: CMX \*-u mapped to CG**

	初	鋤	粗	蘇
CMX	*ts <sup>h</sup> u	*dzu	*ts <sup>h</sup> u	*su
CG	*ts <sup>h</sup> ɿ	*dzɿ	*ts <sup>h</sup> u	*su
QYS	*tɕ <sup>h</sup> iǎ	*dzɿǎ	*ts <sup>h</sup> ɔ	*sɔ

However, this merger is also observed for most southern Mandarin dialects such as D àyōng (大庸). Consequently, it is not a unique innovation of CMX.

**Table 5.28: CMX \*-u mapped to DY**

	初	鋤	粗	蘇
CMX	*ts <sup>h</sup> u	*dzu	*ts <sup>h</sup> u	*su
DY	ts <sup>h</sup> əu	ts <sup>h</sup> əu	ts <sup>h</sup> əu	səu

However, there is another merger in CMX system that seems to be unique both relative to D àyōng and to CG.

**Table 5.29: a promising CMX innovation**

	巢	抄	曹	草
CMX	*dzau	*ts <sup>h</sup> au	*dzau	*ts <sup>h</sup> au
DY	tɕ <sup>h</sup> au	tɕ <sup>h</sup> au	ts <sup>h</sup> au	ts <sup>h</sup> au
CG	*dzau	*ts <sup>h</sup> au	*dzou	*ts <sup>h</sup> ou
QYS	*dzɑ <sup>r</sup> w	*tɕ <sup>h</sup> ɑ <sup>r</sup> w	*dzaw	*ts <sup>h</sup> aw <sup>?</sup>

This is indeed a promising shared innovation of CMX in addition to that of T ǎn (覃) rhyme. Notwithstanding, it is possibly a recent one compared to the latter, as in the Late Middle Chinese system reconstructed by Pulleyblank (1984), the two sets are still distinctive both in terms of their initials and in terms of their finals. In this sense, instead of marking an ancient and decisive innovation of the CMX, the merger shown in Table 5.29 might be better treated as a supplementary indicator for the unique epenthesis of T ǎn (覃) rhyme syllables.

#### 5.4 Summary on Innovations

Up to this point, some major phonemic and phonological innovations among Xiāng dialects have been demonstrated in detail. Despite the extensive inter-dialect variations, the envisaged paths of individual innovations from CMX to each of the modern dialects are proved both feasible and faithful if gauged prudently. The MC Tán (覃) and Hé (合) rhymes after back initials in most Xiāng dialects have indeed undergone various subsequent innovations locally that may have covered up their true origin, yet they all conform to a merger with the finals corresponding to CMX \*-uən/t, or are traceable towards an early form that carries an epenthetic medial vowel [u]. So far, this is the oldest shared innovation identified for the Xiāng dialects. Remarkably, we can conclude with high confidence that an early epenthesis of glide \*u- exclusively for the vernacular Tán (覃) and Hé (合) rhyme syllables with velar and glottal initials marked a milestone in the history of Xiāng Dialect.

## 6. Discussions on Membership of Xiāng

The validity of CMX as a system or several layers of systems that can probably reflect certain prototype for the Xiāng Dialect has been justified in the previous chapters. Now, if Xiāng is to be regarded as a taxonomic group identifiable by a uniquely shared innovation, i.e. the glide \*u- epenthesis for MC Tán (覃) syllables following velars and laryngeals, the question would be to decide which dialects are possible members of Xiāng and which are not.

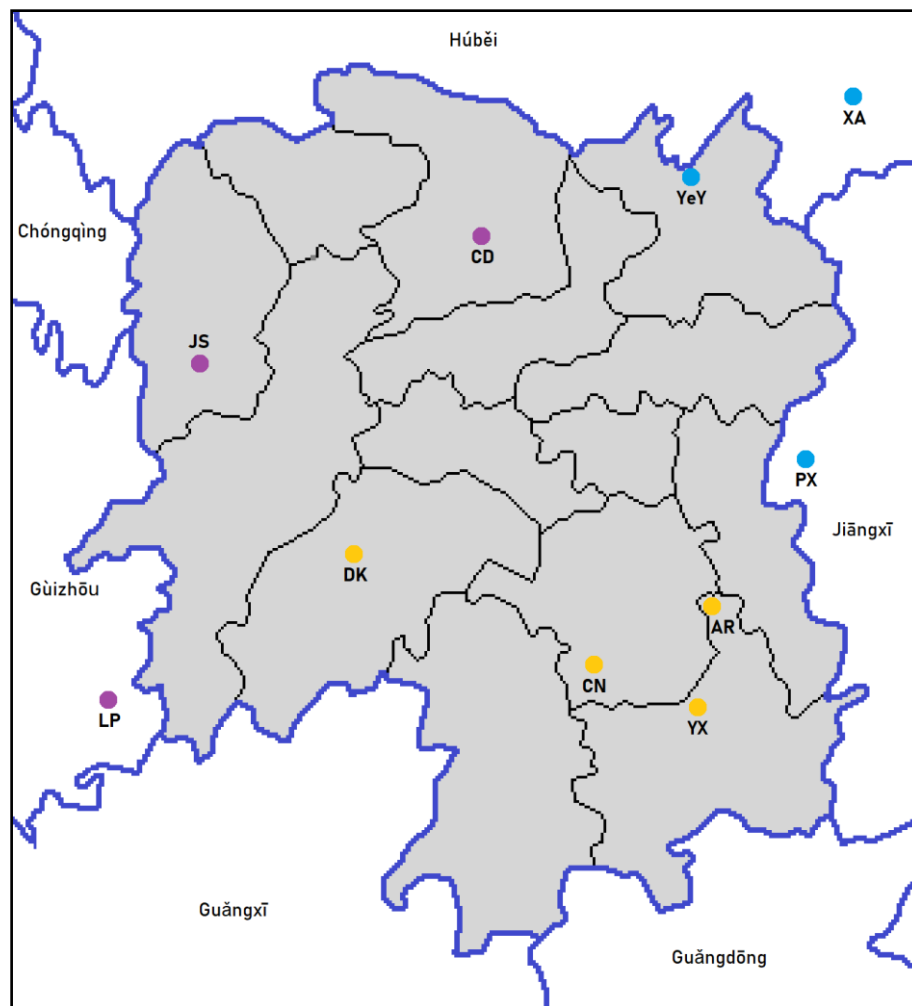
However, the number of dialects in and around Húnán Province is exceptionally huge. For this dissertation, though, a few dialects that are representative or have been faced with most fierce debates in the literature shall be picked for discussion, hoping it would throw more light on the delineation of Xiāng.

The selected dialects include: 1) three possibly Gàn-like ones at the border of Húnán with Jiāngxī and Húběi, namely Yuèyáng City (岳陽市), Píngxiāng City (萍鄉市), and Xián'ān District (咸安區) of Xiáníng (咸寧); 2) three Mandarin dialects located to the north and west, namely Chángdé (常德), Jíshǒu (吉首), and Lípíng (黎平); 3) four undecided dialects in central-southern Húnán, namely, Ānrén (安仁), Chángníng (常寧), Yǒngxīng (永興), and Dòngkǒu (洞口). Their locations have been specified in Map 6.1 below.

The intuitive approach for verifying membership within or outside Xiāng is to check the vernacular forms of MC \*Tán (覃) syllables in popular lexical cognates introduced in section 5.2 and eschew literary-only etymons. Unfortunately, due to insufficient records, some potential cognates have not been investigated or recorded. What can be done at present is to gather what is available and try to figure out a pattern on this basis. Thus, four etymons frequently attested in a number of materials are chosen as indices or the flagships. The first etymon is 塍, which means the brink of a plot of cropfield or of a pond, or the cliff (Wu, 2018). The second is 坎 in the cognate 碓坎, which should refer to the mortar under a pestle, introduced in section 5.2.1. The third is 恰, meaning to get on with someone (Luo, 2015). The fourth one is 合 which should refer to a unit of measurement. The last character 合 has some



homographs with different meanings that should not be confused with it.



**Map 6.1: dialects for comparison**

## 6.1 The Eastern G àn

P íngxiāng is located at the border of Jiāngxī with Hún án. In the material of this dialect, all four flagship etymons have been recorded. The etymon 坎 [k<sup>h</sup>ɔ̃<sup>上</sup>] within 確坎 was not identified by the authors (Li & Wei, 1998, p. 182), though from previous discussion we know it should be 坎. Xi án'ān dialect has only two etymons recorded. One is 塹 (Wang, 2015, p. 311), the other being 合 (Wang, 2015, p. 48). Yu èy áng City (岳陽市) is located in Hún án, and it is a different city from Yu èy áng County (岳陽縣), where two of the key Xiāng dialects discussed in Chapter 5, Bǎixi áng and Róngjiāwān, are located. In the lexicon list for Yu èy áng City, 塹 is

recorded as [k<sup>h</sup>an<sup>陰去</sup>], and 佻 is as [ko<sup>入</sup>] (Yueyangshi difangzhi bangongshi, pp. 174, 184). The unit 合 is found in its homosyllabic list. These etymons in the three dialects have been listed together with 寬 and 闊 for comparison in Table 6.1. If there has been an epenthesis of glide \*u-, one should expect the finals of the four etymons on the left merged with those of the two on the right.

**Table 6.1: examination of PX, XA, and YeY**

	塢	坎 mortar	佻	合 unit	寬	闊
PX	k <sup>h</sup> ɔ̃ <sup>陰平</sup>	k <sup>h</sup> ɔ̃ <sup>上</sup>	kɔ̃ <sup>陰平</sup>	kɔ̃ <sup>陰平</sup>	k <sup>h</sup> uɔ̃ <sup>陰平</sup>	k <sup>h</sup> ɔ̃ <sup>陰平</sup>
XA	k <sup>h</sup> ɔ̃ <sup>陰去</sup>	-	-	kə <sup>入</sup>	k <sup>h</sup> uɔ̃ <sup>陰平</sup>	k <sup>h</sup> ue <sup>入</sup>
YeY	k <sup>h</sup> an <sup>陰去</sup>	-	ko <sup>入</sup>	ko <sup>入</sup>	k <sup>h</sup> uan <sup>陰平</sup>	k <sup>h</sup> o <sup>入</sup>
CMX	*k <sup>h</sup> uɔ̃n <sup>陰平</sup>	*k <sup>h</sup> uɔ̃n <sup>陰上</sup>	*kuɔt <sup>陰入</sup>	*kuɔt <sup>陰入</sup>	*k <sup>h</sup> uɔ̃n <sup>陰平</sup>	*k <sup>h</sup> uɔt <sup>陰入</sup>

As shown in this table, no sign of \*u- epenthesis is observed for any one of the three dialects. In this regard, they are out as candidates for Xiāng Dialect. This result has largely supported the previous classification from the *Language atlas of China* (General Editors, 1987) on the eastern direction of Xiāng, with the only exception of Yuèyáng City which was considered at that time a Xiāng dialect at the periphery bordering Gǎn.

## 6.2 The Northern and Western Mandarin

The materials for Mandarin dialects are usually with fewer cognates recorded. The material of Chángdé reported a lexeme 塢 [k<sup>h</sup>aŋ<sup>上</sup>] (Zheng, 1999, p. 113). The Jǐhǒu material also records a [k<sup>h</sup>aŋ<sup>上</sup>] that the author identifies to be 坎 (Li, 2002, p. 103) for the lexeme that usually corresponds to 塢 in Xiāng dialects. Xiong (2014, p.95) again identifies the Lǐng syllable [k<sup>h</sup>an<sup>上</sup>] as 塢. This is fairly peculiar, as 塢 is supposed to be in the yīnqù(陰去) tone instead, and there is no evidence supporting a shift of yīnqù(陰去) syllables into shǎng(上) tone for these dialects. This shǎng(上) tone etymon is possibly a common lexeme for these western dialects. One thing is clear, though, that no matter it is in fact the etymon 塢, 坎 or a third candidate, it certainly bears no epenthetic glide \*u- found for Xiāng dialects.

L ǎ́ng's material reports another lexeme, written 碓𦍋 and read [tei<sup>去</sup>.k<sup>h</sup>on<sup>上</sup>] (Xiong, 2014, p. 318), which looks similar to 碓坎. However, it refers to the fulcrum of a lever-type pestle instead of a mortar, thus is unlikely a cognate.

**Table 6.2: examination of CD, JS, and LP**

	塼	坎 (mortar)	𦍋	合 (a unit)	寬	闊
CD	k <sup>h</sup> aŋ <sup>上</sup> ?	-	ko <sup>陰去</sup>	-	k <sup>h</sup> uan <sup>陰平</sup>	k <sup>h</sup> o <sup>陰去</sup>
JS	k <sup>h</sup> aŋ <sup>上</sup> ?	-	ko <sup>陽平</sup>	-	k <sup>h</sup> uan <sup>陰平</sup>	k <sup>h</sup> o <sup>陽平</sup>
LP	k <sup>h</sup> an <sup>上</sup> ?	-	ko <sup>入</sup>	-	k <sup>h</sup> on <sup>陰平</sup>	k <sup>h</sup> uə <sup>入</sup>
CMX	*k <sup>h</sup> uən <sup>陰去</sup>	*k <sup>h</sup> uən <sup>陰上</sup>	*kuət <sup>陰入</sup>	*kuət <sup>陰入</sup>	*k <sup>h</sup> uən <sup>陰平</sup>	*k <sup>h</sup> uət <sup>陰入</sup>

As data is extremely limited, no clear conclusion can be drawn from this simple comparison. Yet L ǎ́ng is probably not a member of Xiāng as it contrasts the finals of 𦍋 [ko] with 闊 [k<sup>h</sup>uə].

### 6.3 Southern Hún ǎ́n Dialects

For the southern half of Hún ǎ́n, debates for classification in the Dialectological literature are sharp. For example, the *Language atlas of China* (General Editors, 1987) on the one hand classified Ānr ǎ́n dialect as G ǎ́n, whereas Chen (1995, pp. 2-3) on the other hand suggested that no clear boundary shall be drawn and that Ānr ǎ́n dialect is a transitional dialect between G ǎ́n and Xiāng.

Despite numerous historical records such as family books (族譜) on Jiāngxī migrants into Hún ǎ́n that might have shaped the language picture (Luo, 2011, pp. 3-21), quotations on such influence should be taken very cautiously. This is, on the one hand, because of the possibility that language shift may have happened multiple times, and on the other, due to limited reliability on the records dating back to a long history. Liang points to the fact that it was not until the Northern Song (960 - 1127) that the common clans started to compile their own family books, whilst only after the Southern Song (1127 - 1276) that these family books began including lineages beyond five generations (Liang, 2021, pp. 252-253). As a consequence, data from first handed materials of this type may be useful when studying the history within 700 years from

present, while is largely questionable beyond that. By contrast, linguistic evidence is a more coherent indicator for dialectology study.

The material for Ānrén recorded the lexeme 函心 [huā<sup>陽平</sup>.sien<sup>陰平</sup>] (Chen, 1995, p. 130), though Chen did not identify its true etymon. The etymon of 涵 in the word 涵眼 [huā<sup>陽平</sup>.ŋā<sup>陰平</sup>] was not identified either (Chen, 1995, p. 90), so was 坎 in 碓坎 [tue<sup>去</sup>.k<sup>h</sup>uā<sup>上</sup>] (Chen, 1995, p. 94). The etymon 佻 [kua<sup>入</sup>] was falsely written 刮 at first, however he correctly changed it to 佻 a year later (Chen, 1996, p. 72). For detail of the etymons, please again refer to section 5.2.1. In Table 6.3 these lexemes are listed for comparison.

**Table 6.3: examination of AR**

	塹	坎 (mortar)	函 (heart)	涵	佻	合 (a unit)
AR	k <sup>h</sup> uā <sup>去</sup>	k <sup>h</sup> uā <sup>上</sup>	huā <sup>陽平</sup>	huā <sup>陽平</sup>	kua <sup>入</sup>	kua <sup>入</sup>
CMX	*k <sup>h</sup> uən <sup>陰去</sup>	*k <sup>h</sup> uən <sup>陰上</sup>	*y <sup>u</sup> ən <sup>陽平</sup>	*y <sup>u</sup> ən <sup>陽平</sup>	*kuət <sup>陰入</sup>	*kuət <sup>陰入</sup>

Ānrén is impressive in that it has the glide u- for all six etymons. While it is not impossible that all these glides are recently inserted between the initials and finals, the likelihood is relatively low. In the homosyllabic list of Ānrén dialect, there are only two syllables from CMX \*-ən carrying this glide. The others all end with final -ā.

**Table 6.4: evolution of CMX \*-ən in AR**

	塹	稈	汗	幹	甘	看
AR	k <sup>h</sup> uā <sup>去</sup>	kuā <sup>上</sup>	huā <sup>去</sup>	kā <sup>去</sup>	kā <sup>陰平</sup>	k <sup>h</sup> ā <sup>去</sup>
CMX	*k <sup>h</sup> uən <sup>陰去</sup>	*kən <sup>陰上</sup>	*y <sup>u</sup> ən <sup>陽去</sup>	*kən <sup>陰去</sup>	*kən <sup>陰平</sup>	*k <sup>h</sup> ən <sup>陰去</sup>
QYS	*k <sup>h</sup> əm <sup>h</sup>	*kan <sup>?</sup>	*yan <sup>h</sup>	*kan <sup>h</sup>	*kam	*k <sup>h</sup> an <sup>h</sup>

Table 6.5 lists the situation reported in Chángnín's material. The short level strokes indicate unrecorded lexemes.

**Table 6.5: examination of CN**

	塹	坎 (mortar)	函 (heart)	涵	佻	合 (a unit)
CN	k <sup>h</sup> uā <sup>去</sup>	-	-	-	kua <sup>入</sup>	-
CMX	*k <sup>h</sup> uən <sup>陰去</sup>	*k <sup>h</sup> uən <sup>陰上</sup>	*y <sup>u</sup> ən <sup>陽平</sup>	*y <sup>u</sup> ən <sup>陽平</sup>	*kuət <sup>陰入</sup>	*kuət <sup>陰入</sup>

Although Chánǐng has merely two records, it is very likely a member of Xiāng. This is because no evidence for MC finals \*-at or \*-ap evolving into -ua is found in the dialect, and this 恰 [kua<sup>^</sup>] is almost undoubtedly inherited from CMX \*kuot<sup>陰入</sup>. The other one, 塙 [k<sup>h</sup>uã], can thus be deduced as a reflection of CMX \*k<sup>h</sup>uon in a paralleling sound change.

Yǒngxīng has been tentatively recognized as a ‘rather curious’ Gàn by Coblin (2015, p. 347). This dialect has been included into discussion of this section. Data from Yǒngxīng is even thinner, since there is only one available list of homophony syllabary published by Hu (2009), without any lexicon lists. Even so, one should keep in mind that a lack of record never implies a lack of cognates.

**Table 6.6: examination of YX**

	塙	坎 (mortar)	函 (heart)	涵	恰	合 (a unit)
YX	k <sup>h</sup> uε <sup>去</sup>	-	-	-	-	-
CMX	*k <sup>h</sup> uon <sup>陰去</sup>	*k <sup>h</sup> uon <sup>陰上</sup>	*y <sup>u</sup> on <sup>陽平</sup>	*y <sup>u</sup> on <sup>陽平</sup>	*kuot <sup>陰入</sup>	*kuot <sup>陰入</sup>

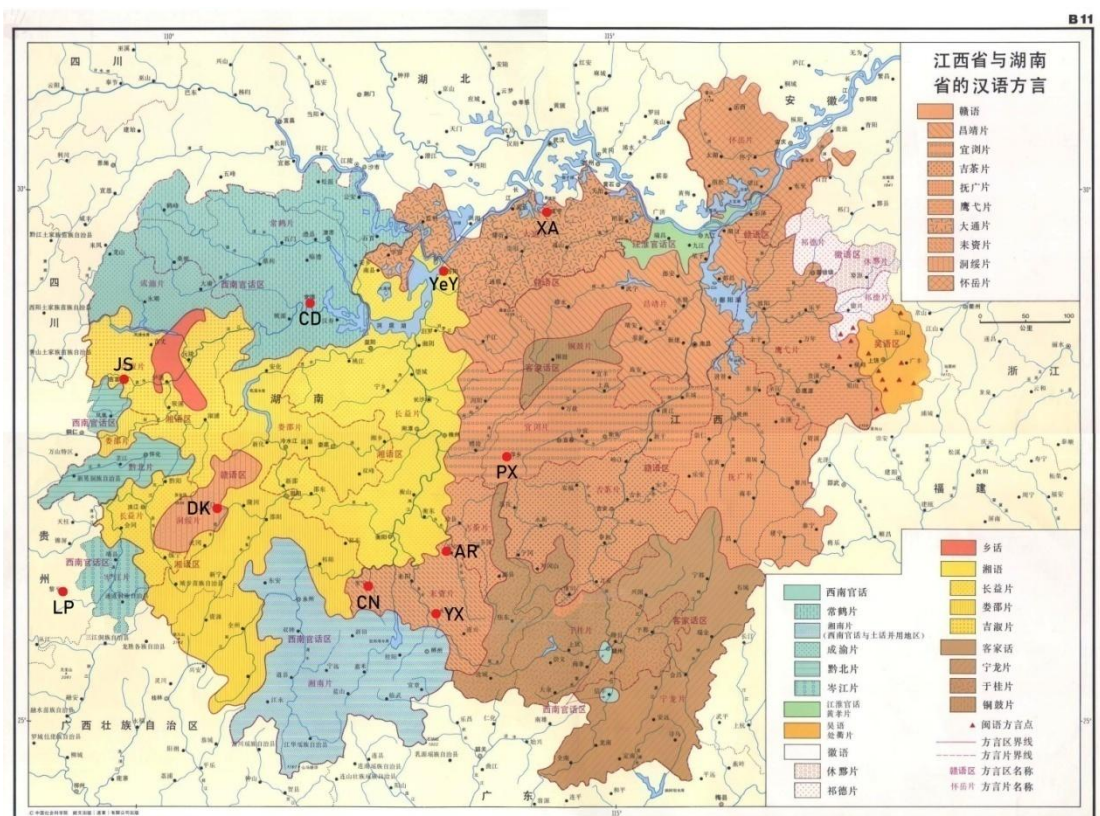
The only etymon recorded for Yǒngxīng seems not promising for the discussion. However, there is a lexicon list for another dialect in Yǒngxīng, the Zǐmù (梓木) dialect. In this dialect, 塙 is recorded as [kuã<sup>去</sup>] (the absence of aspiration might be a transcription error) while 函心 is [xuã<sup>陽平</sup>. eiē<sup>陰平</sup>] (Huang, 2017, pp. 130, 150). Zǐmù’s -uã corresponds to -uε in Yǒngxīng proper. It is very likely that once a detailed lexicon list for the latter is provided, we may be able to find a cognate for 函心 [xuã<sup>陽平</sup> eiē<sup>陰平</sup>]. Because there is no evidence supporting MC \*-an or \*-am shifting to -uã in Zǐmù, this dialect is also very likely a member of Xiāng.

**Table 6.7: examination of DK**

	塙	坎 (mortar)	函 (heart)	涵	恰	合 (a unit)
DK	k <sup>h</sup> uã <sup>上</sup>	k <sup>h</sup> uã <sup>陰平</sup>	fã <sup>陽平</sup>	-	kua <sup>陰平</sup>	-
CMX	*k <sup>h</sup> uon <sup>陰去</sup>	*k <sup>h</sup> uon <sup>陰上</sup>	*y <sup>u</sup> on <sup>陽平</sup>	*y <sup>u</sup> on <sup>陽平</sup>	*kuot <sup>陰入</sup>	*kuot <sup>陰入</sup>

Dòngkǒu is an important dialect for discussion. the *Language atlas of China* (General Editors, 1987) classifies this dialect as a language island of Gàn surrounded

by Xiāng on every direction (please refer to Map 6.2 below, where the flesh colored areas are recognized as Gàn and the yellowish areas are recognized as Xiāng by the atlas). This distribution is intuitively peculiar, of course, while linguistic evidence is required before any conclusion made. In Table 6.3, there are four cognates with glide u-. Notably, the tones for 塿 and 坎 are irregular. This can be attributed to the very complex tone sandhi system of this dialect. Additionally, the author has recognized these etymons incorrectly. She has chosen the character 坎 instead of 塿 for the second syllable in 田塿 [xiã<sup>24</sup>.k<sup>h</sup>uã<sup>21</sup>] (Wang, 2008, p. 113). Nonetheless, these syllables all bear the distinctive glide u-. Thus the result suggests a reconsideration of Dòngkǒu's status in relation with Gàn or Xiāng based on diachronic comparative results and more detailed field investigation evidence.



Map 6.2: location of dialects examined

#### 6.4 Summary on Membership

This chapter has discussed the status of 10 dialects at or near the periphery of Xiāng. A first finding is that P ńgxiāng and Xi án'ān are indeed out of the range of the

Xiāng Dialect, while Yuèyáng City should be excluded as a candidate for it. The second finding is that the dialects of Ānrén, Chángnín, Yǒngxīng, and Dòngkǒu in the south of Húán Province are very likely members of the Xiāng Dialect. However, the western boundary between Xiāng and Mandarin is relatively unclear. Nonetheless Lǐpín is possibly a true Mandarin rather than a Xiāng dialect.

Because of the asymmetry on sufficiency of available data for the dialects, most of the discussions here are not conclusive. Instead, this chapter serves as a pioneering exploration, trying to illuminate on how the reconstructed CMX system incorporating the hypothetic innovation of \*Tán (覃) rhyme could be applied in helping to solve the classification problem of some related dialects.

## 7. Conclusion

This thesis studies the taxonomic grouping for a long argued subgroup of the Sinitic languages - the Xiāng dialects (湘方言). An associated grouping proposed by Coblin (2011) delineating a taxonomic group in the central area of Húnán Province has been examined and largely rejected on empirical and theoretical grounds. The previous proposal is shown that it overestimates the ancientness of the identificatory feature and fails to identify a boundary between the dialects conforming to this feature with those surrounding them. Alternatively, this thesis has, based on much denser data, put forth a new hypothesis that Xiāng is very likely a taxonomic unit formed with the identificatory feature where an ancient epenthesis of glide \*u- occurred before the Early Middle Chinese finals \*-əm and \*-əp (i.e. Tán (覃) and Hé (合) rhymes) after velar and laryngeal initials in its popular lexical layer.

In order to justify the hypothesis, 10 basic dialects and 18 supplementary dialects that have been reported to carry this putative feature or in areas that carry it, are selected for reconstruction of a common phonological system. This system, named the Common Xiāng (CMX), is reconstructed strictly applying the historical comparative methodology. Altogether, thirty three syllabic initials (including the initial zero), seventy three syllabic finals, and eight tonemes have been reconstructed. The CMX system is a stratified one, with a popular layer constituted of the vernacular items together with an incomplete residual layer of ancient origin, and at least one literary layer on top of the popular layer. It turns out that CMX is a coherent system that is capable of explaining dialect variations. Examinations on the working hypothesis have revealed that an epenthetic medial \*u- is uniquely mapped to the vernacular finals of Early Middle Chinese Tán (覃) and Hé (合) rhymes following velar and laryngeal initials. The result has validated the working hypothesis that Xiāng is characterized by such a uniquely shared innovation in its popular layer and could be defined in such a way. It is also justified that the evolution patterns for the two rhymes in Xiāng, Gàn, Hakka, and Mandarin diverged no later than the 8th century. No even earlier shared innovation has been discovered for the Xiāng dialects.



The result implies that Xiāng is plausibly a separate branch derived from Early Middle Chinese besides the existing branches including Gǎn, Hakka, and Mandarin. Additionally, a suggestion on reconsideration for the affiliation of the dialects among Ānrén (安仁), Yǒngxīng (永興), Chángníng (常寧), and Dòngkǒu (洞口) in southern Húnnán Province is proposed based on their possibly shared innovation with CMX.

This is probably the first time that Xiāng Dialect, as an integrated whole, being verified and described diachronically as one homologous entity, since its first mention in the scholarly world 90 years ago. Due to the limited length, the CMX system has not been thoroughly presented with each and every word of spoken Xiāng available. Nevertheless, this system could be further augmented with lexemes and prospectively applied to future comparative studies in reconstruction and revision of even earlier protolanguages (e.g., Old Chinese). Besides, it is feasible to play a role in the research of Chinese dialectology on dialect classification in Southern China.

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